Sreekrishnapuram
V.T. Bhattathiripad College

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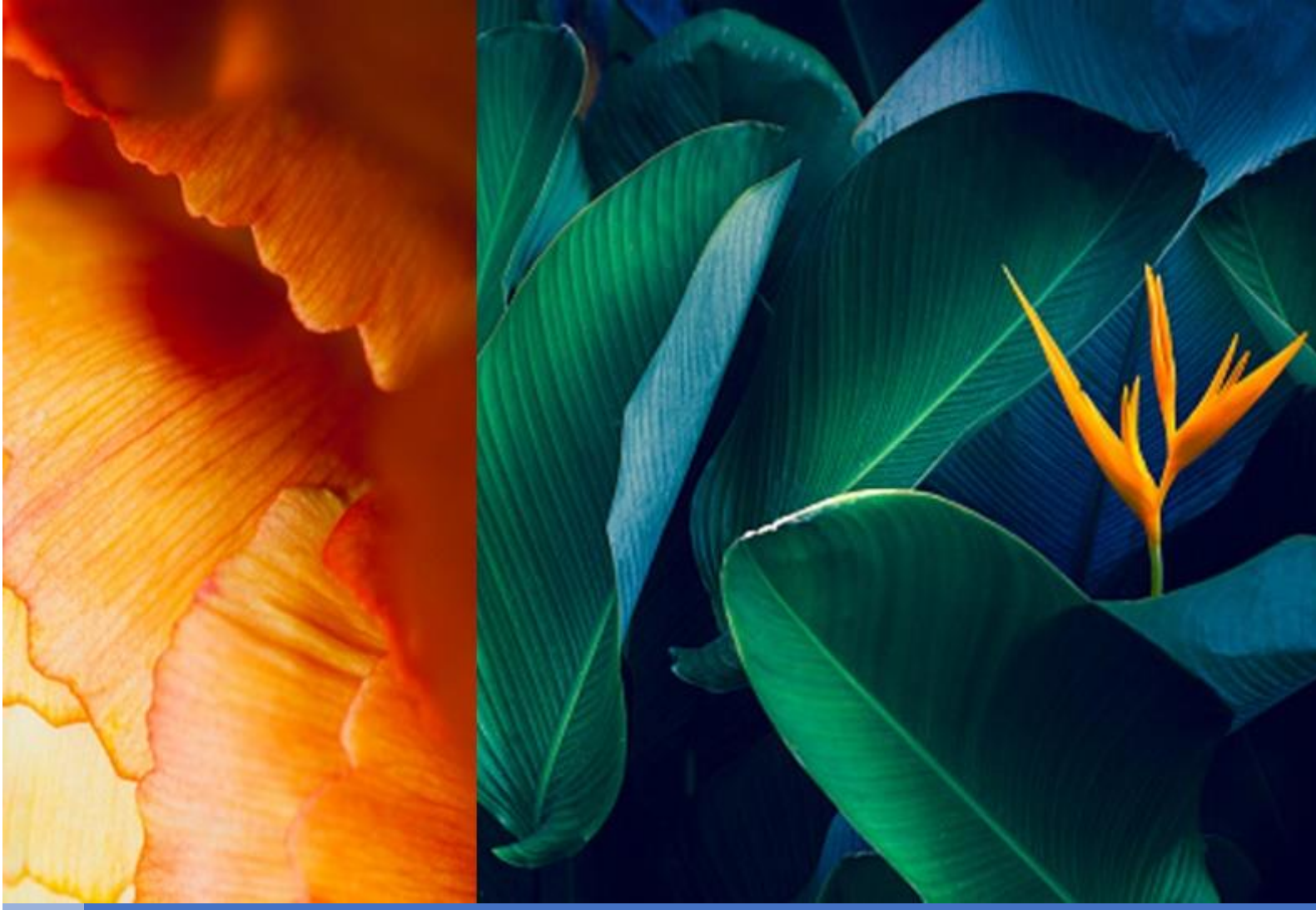

Green, Energy and Environment Audit Report 2023-2024

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ACKNOWLEDGEMENT

The Audit Assessment Team extends its sincere appreciation to Sreekrishnapuram V.T. Bhattathiripad College, for entrusting us with the significant responsibility of conducting the Green, Energy, and Environment Audit. We deeply value and acknowledge the college's cooperation throughout the entire assessment process. Your collaborative approach and unwavering support have played a crucial role in facilitating a thorough and effective audit.

We commend Sreekrishnapuram V.T. Bhattathiripad College, for its commitment to sustainability and environmental consciousness by initiating the Green, Energy, and Environment Audit. This dedication to evaluating and enhancing eco-friendly practices reflects a commendable step toward fostering a more environmentally responsible campus.

Our team eagerly anticipates presenting comprehensive findings and recommendations that align with Sreekrishnapuram V.T. Bhattathiripad College's commitment to sustainability. We are grateful for the opportunity to contribute to the university's ongoing endeavors to promote green initiatives and energy efficiency. Thank you for your continued cooperation and dedication to cultivating a more sustainable and environmentally friendly academic environment.

Our special thanks to:

- *Dr.Saritha Namboodiri , Principal*
- *Dr. Asish, Assistant professor*
- *Madhava Sadasivan P, Assistant professor*
- *Kamal Raj Mohan, Assistant professor*
- *Mini K, Assistant Professor*

We express gratitude for providing us with the essential inputs required to conduct the crucial Green, Energy, and Environment Audit. Additionally, we extend our thanks to the other staff members who actively participated in data collection and field measurements.

Audit Assessment Team

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CONCEPT

An environmental management system (EMS) is a data system that tracks air, water, and waste to improve performance. It helps maintain a clean and green environment that leads to partnerships. EMS provides a 360-degree view of the surrounding campus, making it easier for owners, managers, and environmentalists to collaborate, measure, control, and mitigate environmental impacts. Ultimately, it leads to raising the living standards of humans, animals, and plants. Due to changes in environmental conditions, global warming, and the growing human population, green campus initiatives are needed around the world. The goal is to create a sustainable and eco-friendly campus for participants.

Environmental management audits, such as green campus audit and energy audit, are well-developed processes for extracting information about an organization's environmental impact. These audits provide an actual assessment of how organizations are taking action to protect the environment. To save the eco-friendly atmosphere of an institution, well-developed environmental objectives and targets should be undertaken to reduce harmful effects. These audits can significantly reduce environmental pollution on campus, which in turn reduces the overall impact of global warming. According to government law, all institutions and organizations must comply with environmental legislation and ensure that their activities do not harm the environment.

INTRODUCTION

The foundation of a nation's development lies in its educational institutions, where ecological considerations are pivotal for environmental progress. Today, educational establishments are increasingly attuned to environmental concerns, advocating eco-friendly initiatives such as energy conservation, waste management, and water conservation. These efforts aim to mitigate environmental impacts stemming from college activities. Environmental auditing evaluates an organization's adherence to environmental policies and objectives, providing insights into campus environmental performance. Through internal audits, colleges assess their environmental footprint and identify opportunities for improvement. Such audits offer valuable data on resource consumption, waste generation, and enable colleges to implement effective conservation measures, benefiting both the institution and its students

OVERVIEW OF INSTITUTION

Vision

The vision of our college is based on The Upanishad Mantra *Tamasõma Jŷotiṛ Gamaya* which means – Lead me from darkness to light – From Ignorance to Knowledge/Wisdom. This mantra has always had the power to lead our students to attain knowledge, inculcate values and helped to nurture them to become good human being.

Mission

- Provide access to Higher Education opportunities to students in rural area.
- Propagate and inculcate value education based on Indian culture and heritage to the student community and thereby to the society at large.
- To update society with modern technological innovations and provide knowledge and personnel for developmental needs.
- Protect our environment and ecology for the generations to come.

Total Campus area	32 Acres
Year of establishment	1982
Total students strength:	998
Total number of boys	303
Total number of girls	695
Total number of girls	695
Total teaching staff	39
Total non-teaching staff	12
Total male staff	15
Total female staff	36
Total employees including management people	52
Previous year of NAAC Accreditation:	B+
Total area on campus covered forest vegetation	29 Acres
Total vehicle (including staff)	48

COURSES OFFERED

The institutes offer six undergraduate programs and three postgraduate programs under the affiliation of University of Calicut. At present institution also offer several addon courses and certificate courses along with the university affiliated programmes.

UNDERGRADUATE PROGRAMME	POSTGRADUATE PROGRAMME
B.A Sanskrit	M.Sc. Computer Science
B.A History	M.Com Finance
B.Sc. Mathematics	M.Sc. Mathematics with Data Science
B. Com Finance	
B A Economics	
B.B.A (Bachelor of Business Administration)	

Sl No	Name of the Department	Name of Certificate / Value Added Course
1	PG Department of Commerce	Travel and tourism
2	PG Department of Commerce	Basics of Entrepreneurship
3	PG Department of Computer Science	Machine Learning
4	Department of Sanskrit	An opening to Indian Astronomy
5	PG Department of Mathematics	Certificate Course in AI and Data Science

Green Campus Audit-Report

INTRODUCTION

The Green Audit serves as a valuable tool in pinpointing opportunities for sustainable development practices, enhancing environmental quality, bolstering health, hygiene, and safety standards, mitigating liability, cutting costs, and embodying virtuous values. It involves a methodical process of identifying, measuring, documenting, reporting, and analyzing the various facets of an institution's environmental diversity.

The primary objective of Green Auditing is to assist organizations in adopting sustainable development practices while also setting exemplary standards for the wider community and upcoming generations. It fosters health consciousness and fosters awareness about environmental values and ethics. This cultivates a heightened understanding among staff and students regarding the ecological footprint within the campus environment.

If the pursuit of self-examination is seen as a natural progression of quality education, then institutional introspection can be viewed as the inherent evolution of a distinguished educational establishment. Given the escalating significance of environmental sustainability within the nation, the role of higher education institutions concerning environmental stewardship is gaining increasing prominence.

General and specific objectives of green auditing

The primary aim of the Green Audit is to compile a foundational report on biodiversity and other resources, proposing strategies to reduce wastage and enhance resource quality and sustainability. Outlined below are the specific objectives:

- Create a checklist detailing the flora and fauna present on and around the college campus.
- Propose initiatives to enhance biodiversity within the college premises.
- Monitor the energy consumption patterns of the college.
- Evaluate the levels of water usage within the campus.
- Recommend sustainable methods for energy use and water conservation.
- Investigate various sources of organic and solid waste, along with potential mitigation approaches.
- Foster the principles of sustainable development through the implementation of a green audit system.
- Identify sources of organic and solid waste generation, alongside potential mitigation strategies.
- Document the expenditure on green initiatives over the past five years.

METHODOLOGY

The objective of the Green Audit is to verify that the campus practices align with the nation's green policy. The methodology involves data collection, physical inspections of the campus, monitoring and reviewing documentation, and thorough data analysis.

Best practice green initiatives for a sustainable community

Green campus / environment policy

Green Campus Policy

A Green Campus is a place where environmental friendly practices and education combine to promote sustainable and eco-friendly practices in the campus. The green campus concept offers an institution the opportunity to take the lead in redefining its environmental culture and developing new paradigms by creating sustainable solutions to environmental, social, and economic needs of the mankind.

Introduction

Sreekrishnapuram V.T. Bhattathiripad college, is committed to cultivating a green campus atmosphere with a strong emphasis on environmental protection, conservation, and safety. This policy document delineates our strategy for establishing a sustainable and environmentally aware campus. The Green policy of Sreekrishnapuram V T Bhattathiripad College encompasses both Green/Environment and Energy policies.

Objectives

Green Campus Environment Conservation Policy aims to:

- To encourage students/Faculties to keep environment clean.
- Set forth a Green Campus Mission and a Statement of Principles.
- To educate students/Faculties to create awareness amongst public about clean and green energy.
- To make students/Faculties understand the importance of environment and its problem areas.

Conservation Measures

To materialize the GREEN CAMPUS initiative, the following are required.

- To sensitize the students/Faculties to minimize the use of polluting product.
- Phase out the CFL and conventional light source such as bulbs and tube lights, halogen and mercury street/campus lights and get them replace by the LEDs.
- To improvise the waste handling methods so that the waste disposed from campus do not create any sort of pollution to the environment.
- The E-waste of the college must be properly handed over to approved E-waste handling agencies so that they do properly discard and dispose them.
- The water conservation facilities of the college such as ¬ rainwater harvesting pits campus ¬ proper water distribution system in the campus.
- To motivate students/Faculties to adopt environment friendly practices which include paper bags, save electricity, etc.
- Purchase only Energy Efficient Computers viz: "ENERGYSTAR" or any other equivalent.
- Improving the green system of the campus in all aspects like ¬ To reduce the use of vehicles ¬To promote the usage of bicycles and walking culture which makes everybody fit. ¬ Make the campus Green gradually increasing the green cover of the College.
- To take necessary steps to protect the environment.

The College promotes "Save Energy Tips" in and outside the institute through.

- Activate power management features on the computer and monitor so that it will go into a low power "sleep" mode when not working on it.
- Turn off the monitor when it is left on the Table not functioning.
- Activate power management features on the laser printer.
- Whenever possible, shut down rather than logging off.
- Turn off unnecessary lights and use daylight instead. Avoid the use of decorative lighting.
- Use LED or compact fluorescent bulbs.
- Keep lights off in conference rooms, classrooms, lecture halls when they are not in use.
- Use the fans only when they are needed.

Other major green campus initiatives of the College comprise of the following:

- Installation of Solar Power Station
- Displayed poster on E-waste Management, save water and save energy.
- Initiatives to make paperless administration.
- Plastic free Campus
- Tree Plantation Drive /Cleanliness Drive
- Digital Library/ E-Learning Centre
- Restricted entry of automobiles.

A. Biodiversity Conservation

Sreekrishnapuram V.T. Bhattathiripad college recognizes the importance of biodiversity in maintaining a healthy environment. Colleges' conservation measures will include:

- Establishing green spaces with native plants to support local biodiversity.
- Implementing sustainable landscaping practices to preserve natural habitats.
- Conducting various awareness programmes

B. Waste Reduction and Recycling

- To minimize our impact on the environment, college will focus on waste reduction and recycling initiatives:
- Implementing a campus-wide recycling program for paper, plastics, and other recyclables.
- Encouraging the reduction of single-use plastics and promoting reusable alternatives.
- Separate waste collection bins
- Using biogas plant
- Tie up and Mou with various NGO'S and Schemed

C. Water Conservation

Sreekrishnapuram V.T. Bhattathiripad college *is committed to responsible water usage and conservation:*

- Installing water-efficient fixtures and irrigation systems.
- Rainwater harvesting pond.
- Promoting water conservation awareness campaigns among students and staff.

D. Sustainable Transportation

To reduce carbon emissions and promote sustainable transportation,

- Encourage the use of public transportation, EV's, cycling, and carpooling.
- Provide designated areas and facilities for bicycle parking.

E. Safety and Well-being

Ensuring the safety and well-being of the college community is paramount. College includes the following measures:

- Conducting regular safety drills and emergency preparedness training.
- Implementing sustainable construction and maintenance practices to create safe environments.
- Functioning of NSS, Nature club.
- Implementation of nature policies

Responsibility and Accountability

Every member of the college community shares the responsibility for creating a green campus environment. To ensure accountability, specific roles and responsibilities will be assigned. A designated Green Campus Committee will oversee the implementation of this policy and report progress to college leadership and stakeholders.

Effective Measures for Environment Protection and Conservation

1. Renewable Energy Integration
   - Implement renewable energy sources such as solar or wind power to meet a significant portion of the college's energy needs.
2. Sustainable Lighting Practices
   - Utilize energy-efficient lighting solutions for all buildings and outdoor spaces.
     Replace conventional lighting fixtures with LED bulbs to reduce energy consumption and promote sustainable illumination.
3. Sustainable Infrastructure
   - Give precedence to the utilization of eco-friendly materials in construction and renovation endeavours.
   - Integrate green building design principles to improve energy efficiency and lessen the environmental footprint of structures.
4. Effective Electronic Devices
   - Embrace energy-efficient electronic gadgets with high STAR ratings to decrease power usage.
   - Routinely maintain and upgrade electronic equipment to uphold optimal energy efficiency.
   -

5. Environmental Monitoring Committee

- Establish an Environmental Monitoring Committee comprising student and staff representatives from all departments.
- Task the committee with overseeing the implementation of environmental protection and conservation programs.

6. Resource Use and Waste Reduction

- Regularly monitor and benchmark the college's resource use, emphasizing reduction and optimization.
- Implement waste reduction initiatives, including recycling programs and proper waste disposal practices.

7. Training Programs for Environmental Conservation

- Provide training sessions for faculty and students to raise awareness about environmental conservation.
- Offer workshops on sustainable practices, waste management, and biodiversity preservation.

8. Annual Environmental Audits

- Conduct annual environmental audits to assess the college's impact on the surrounding ecosystem.
- Evaluate the effectiveness of conservation measures and identify areas for improvement based on audit findings.

These measures aim to enhance environmental protection and conservation within the college, fostering a commitment to sustainable practices among students, faculty, and staff. The implementation of these initiatives will contribute to the overall well-being of the environment and support the college's dedication to creating a green and eco-conscious campus.

Continuous Improvement

Acknowledging that environmental preservation is a continuous journey, this policy will undergo periodic reviews and updates to integrate emerging technologies and best practices. We are committed to continual enhancement in our endeavours to establish a sustainable and eco-conscious campus. Sreekrishnapuram V.T. Bhattathiripad college, is devoted to setting a precedent in environmental conservation. Through initiatives like biodiversity preservation, waste reduction, and sustainable practices, we aspire to build a campus that prioritizes the welfare of our community while making positive contributions to the environment.

CONCLUSION

The Green Audit Report conducted for **Sreekrishnapuram V.T. Bhattathiripad college** reflects the institution's strong commitment to fostering a sustainable and environmentally conscious campus. Through the implementation of various conservation measures and initiatives, the college has made significant strides towards achieving its objectives of environmental protection, biodiversity conservation, waste reduction, water conservation, sustainable transportation, and ensuring safety and well-being.

Key Achievements:

Biodiversity Conservation: The establishment of green spaces with native plants and sustainable landscaping practices demonstrates the college's commitment to preserving natural habitats and supporting local biodiversity.

Waste Reduction and Recycling: The implementation of a campus-wide recycling program, reduction of single-use plastics, and utilization of biogas plants showcase the college's efforts to minimize its ecological footprint and promote sustainable waste management practices.

Water Conservation: Initiatives such as installing water-efficient fixtures, implementing rainwater harvesting ponds, and promoting water conservation awareness campaigns highlight the college's dedication to responsible water usage and conservation.

Sustainable Transportation: Encouraging the use of public transportation, electric vehicles, cycling, and carpooling underscores the college's commitment to reducing carbon emissions and promoting sustainable commuting practices.

Safety and Well-being: The implementation of safety drills, sustainable construction practices, and the functioning of NSS and Nature Clubs reflect the college's focus on ensuring the safety and well-being of its community while maintaining environmental sustainability.

Continuous Improvement:

The college's commitment to continuous improvement is evident through its participation in various activities such as nature treks, webinars, World Environment Day celebrations, and training programs on green auditing. By periodically reviewing and updating its policies and practices, the college aims to stay abreast of new technologies and best practices in environmental conservation.

Future Outlook

Moving forward, **Sreekrishnapuram V.T. Bhattathiripad college** will continue its efforts to create a greener and more sustainable campus environment. By leveraging renewable energy sources, implementing eco-friendly infrastructure, promoting resource efficiency, and conducting regular environmental audits, the college aims to further enhance its environmental performance and contribute positively to the well-being of the environment and its community.

In conclusion, the Green Audit Report underscores **Sreekrishnapuram V.T. Bhattathiripad college** steadfast commitment to environmental stewardship and sustainability. Through concerted efforts and ongoing initiatives, the college is poised to serve as a beacon of environmental responsibility and inspire positive change within its campus and beyond.

Energy Audit-Report

INTRODUCTION

Energy efficiency involves conserving energy without compromising economic growth and development. This encompasses enhancing the efficiency of energy extraction, transmission, and distribution, as well as maximizing the effectiveness of energy utilization.

An Energy Audit is described as "the process of verifying, monitoring, and analyzing energy usage, including the submission of a technical report containing suggestions for enhancing energy efficiency with cost-benefit analysis and an action plan to reduce energy consumption."

Objectives

The Energy Audit aimed to achieve the following objectives:

- Perform a basic walk-through audit or observation of the energy usage of electrical appliances across the campus of Sreekrishnapuram V.T. Bhattathiripad college.
- Review and analyze the institution's energy usage history to establish a baseline against which savings can be assessed in the audited buildings.
- Recommend actions to decrease energy consumption throughout the buildings and propose feasible options for system enhancements within budget constraints.
- Identify and assess measures that could enhance the environmental sustainability of the buildings/areas and offer corresponding recommendations.

Methodology

Energy Audit comprises three phases:

1. Pre-audit Phase
2. Audit Phase
3. Post-audit Phase

Each of these phases includes specific stages as follows:

Data Collection:

During the initial data collection stage, various tools were utilized to gather executive data. This involved activities such as observation, surveys, communication with responsible individuals, and measurements. The following steps were undertaken for data collection:

- The team visited each department, classroom, office, library, canteen, hostel, etc.
- General information was collected through observations and interviews.
- Power consumption of appliances was recorded by averaging values in certain cases.

Audit Phase:

At Sreekrishnapuram V.T. Bhattathiripad college, the energy audit was conducted in collaboration with faculty members. The audit commenced with the team conducting a thorough walkthrough of all college facilities. This included identifying various types of appliances and utilities such as lights, fans, taps, fridges, air conditioners, etc. Additionally, the team measured the usage per item, indicated in Watts on the appliances, and analyzed relevant consumption patterns and their impacts. Staff members were interviewed to gather details on usage frequency and general characteristics of specific appliances.

Energy Conservation Policy

The college is committed to maximizing conservation and energy efficiency, especially in light of the climate crisis and the increasing public concern for the environment. This policy aims to help the institution create a campus that is both economically and environmentally sustainable.

Strategies for the efficient use of Environment & Energy include:

- Planning the institution's development, communications, purchases, curriculum, research, and campus activities with consideration for their impact on the environment.
- Expanding its responsibility to encompass environmental education through various extension activities.
- Reducing environmental impacts by promoting best practices for recycling, reusing, and reducing waste.
- Encouraging the preservation of natural habitats on campus whenever possible.
- Promoting the use of environmentally friendly modes of transportation, such as carpooling and public transit.
- Collaborating with government organizations to improve best practices for energy conservation in campus activities.
- Implementing practices such as turning off computers and other office and lab equipment when not in use.
- Conducting green audits and developing policies to ensure proper compliance with sustainability measures.

Responsibility

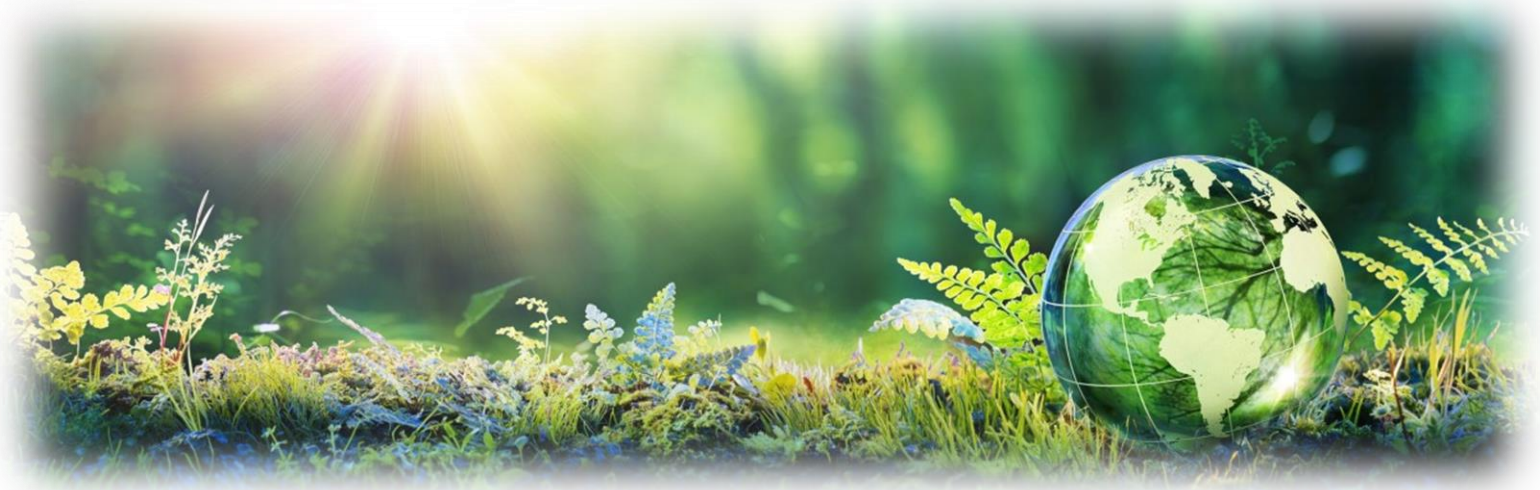
The Energy Management Team comprises of:

- Head of the institution
- Staff and Students Representatives
- Faculty familiar with Energy auditing
- Technical Staff

Recommendations:

Based on the findings of the energy audit, the following suggestions are put forward to enhance energy efficiency at Sreekrishnapuram V.T. Bhattathiripad college - Explore additional renewable energy sources such as solar energy to further decrease reliance on conventional power.

- Extend LED lighting retrofitting initiatives to encompass all campus facilities for optimal energy savings.
- Implement energy-efficient practices across all operational aspects, including climate control and water facility management.
- Strengthen awareness and training programs for students and staff to foster a culture of energy conservation.
- Periodically review and update the energy conservation policy to integrate emerging technologies and best practices.



ENVIRONMENT Audit-Report

INTRODUCTION

Environmental Audit is a thorough process designed to gather information about an Institution or Organization, providing a realistic assessment of their efforts in protecting the environment. To preserve the eco-friendly ethos of an Institution or Organization, well-defined environmental objectives and targets should be implemented to minimize harmful effects. These audits can significantly reduce environmental pollution on campus, thereby contributing to a broader reduction in global warming effects. They are instrumental in maintaining a clean, green environment that benefits stakeholders.

By offering a comprehensive 360˚ view of the surrounding campus, Environmental Audits facilitate collaboration among Owners, Managers, and Environmentalists. They aid in measuring, controlling, and reducing environmental impacts systematically. Ultimately, these audits contribute to enhancing the quality of life for humans, animals, and plants alike.

This audit process involves a systematic, documented, periodic, and objective review conducted by a regulated entity of facility operations and practices related to meeting environmental requirements. It entails observing, measuring, recording data, and collecting and analyzing various components within an organization concerning the environment.

Objectives of Environmental Auditing

- Identify sources and quantify the types of waste generated.
- Gather data on unit operations, raw materials, products, water usage, and waste.
- Identify process inefficiencies and areas of inadequate management.
- Assist in establishing targets for waste reduction.
- Facilitate the development of cost-effective waste management strategies.
- Raise awareness among the workforce about the advantages of waste reduction.
- Aid in enhancing process efficiency.
- Evaluate the volume of water usage within the institution.
- Identify various sources of organic and solid waste generation along with mitigation options.
- Document the waste disposal system.

- Provide a status report on environmental compliance.

Methodology

Methodology includes data collection, campus physical inspection, monitoring and review of documentation, and data analysis.

Plastic ban policy

The college developed the policy based on the UGC Guidelines for Ban of Plastic Use in Higher Education Institutions. The policy aims to make our campus 'plastic-free' by systematically banning use of plastics and replacing the same with suitable environment- friendly substitutes.

The policy aims at:

- Prohibiting the use of single-use plastics at the college's canteen and other treas.
- Conducting sensitization and awareness campaigns on the negative impacts of single-use plastics.
- Using alternate materials, such as paper l:nr, cloth bags, dnd drinking water facilities, can help reduce the amount of plastic water bottles on campus.
- Segregating the wastes at the point of generation and then transferred, via authorized trash collection service, to approved waste processing centers, disposal sites, or deposition centers.
- All events organized inside the campus should strictly follow plastic ban guidelines.

CONCLUSION

Introduction:

This environmental audit report aims to evaluate the environmental management practices and initiatives undertaken by [Institution/Organization Name] based on the provided documents. The audit focuses on assessing waste management, biodiversity conservation efforts, plastic ban policy implementation, and overall environmental sustainability practices.

1. Waste Management:

The audit identified comprehensive efforts towards waste management within the institution. The institution has diligently documented sources of waste generation, quantified waste types, and highlighted areas of inefficiency. Notably, there is a focus on setting targets for waste reduction, promoting cost-effective waste management strategies, and raising awareness among the workforce. The waste disposal system is well-documented, indicating a structured approach towards waste handling and disposal.

2. Plastic Ban Policy:

The institution has developed and implemented a robust plastic ban policy aligned with UGC guidelines. The policy encompasses various measures to reduce single-use plastics on campus, including prohibition at canteens and events, awareness campaigns, and the promotion of alternative materials. The emphasis on waste segregation and authorized waste processing centers demonstrates a systematic approach to plastic waste management.

3. Biodiversity Conservation Initiatives:

The institution has actively engaged in biodiversity conservation through a series of workshops, competitions, and nature-related activities. Collaborations with external organizations and government bodies indicate a concerted effort to raise awareness and empower stakeholders in biodiversity management. Events such as World Wetland Day celebrations and Wildlife Week activities contribute significantly to fostering a deeper understanding of ecological issues among students and faculty.

4. Student Engagement and Participation:

A notable aspect of the audit is the high level of student engagement and participation in environmental initiatives. Various activities such as quiz competitions, faunal hunts, and flash mobs demonstrate student involvement in environmental conservation efforts. These activities not only enhance students' knowledge but also instill a sense of responsibility towards environmental stewardship.

5. Collaborations and Partnerships:

The institution has established collaborations and partnerships with external organizations, sponsors, and government bodies to support its environmental initiatives. These collaborations have facilitated knowledge exchange, resource sharing, and the amplification of impact in environmental conservation efforts.

Conclusion

Overall, the environmental audit findings indicate that [Institution/Organization Name] has demonstrated a commendable commitment to environmental sustainability. Through effective waste management practices, implementation of a plastic ban policy, biodiversity conservation initiatives, and active student engagement, the institution has made significant strides towards creating a cleaner, greener campus environment. Continued efforts in these areas, along with ongoing monitoring and improvement, will further enhance the institution's environmental performance and contribute to a better quality of life for all stakeholders.

Recommendations

- Continuously monitor and evaluate waste management practices to identify further opportunities for improvement and waste reduction.
- Expand awareness campaigns and educational initiatives to promote broader participation in environmental conservation efforts.
- Strengthen partnerships with external organizations and stakeholders to leverage resources and expertise for enhanced impact.
- Regularly review and update the plastic ban policy to adapt to changing regulations and best practices in plastic waste management.
- Integrate sustainability principles into academic curricula to foster a culture of environmental responsibility among students and faculty.

LIST OF ACHIEVEMENTS

- Three state awards for best NSS unit for the year 2021-22.
- Four awards for best NSS unit in Calicut university for the year 2021-2.
- Recognition from Kerala forest department for introducing a library at *Moolakombu ooru* ,Attapadi in connection with *kathir* project.
- Certification from Kerala bio-diversity board Palakkad district coordinator.
- Award from jaivorg *karshaka koottayma* NGO.
- Runner up in short video competition organized by Parambikkulam tiger reserve 2021-22.
- Runner up in short video competition organized by Parambikkulam tiger reserve 2022-23.
- Recognition from Sreekrishnapuram Gramapanchayath.
- Recognition for best nature conservation activities by *Bharatheeya Oushada Paripalana Samithi* for best nature conservation services.
- Recognition from *Kadambazhippuram Krishi Bhavan* - nattunanma for best agricultural services.
- Recognition from *Kadambazhippuram Krishi Bhavan* for best agricultural services.

ACTIVITIES COORDINATED BY THE COLLEGE FOR THE FOLLOWING OBJECTIVES.

FOOD FOREST

- By upholding the message that the Earth is for all, the Food Forest creates an environment that is beneficial to the preservation of Biodiversity and existence of all living beings including, man, animals, birds, plants, etc.
- To protect the indigenous tree varieties and seed varieties and their fruits and make them aware among the new generation people.
- To preserve the water sources through rainwater harvesting,
- To improve the fertility of the soil,
- To inculcate the values of nature conservation in the NSS volunteers,
- To encourage the Perma-culture agricultural methods,
- To ensure the availability of sustainable food products for the people and all other living beings,
- To inculcate the culture of farming in the day-to-day life of the volunteers,
- To encourage organic agricultural methods.

KAKKACHI@VTB - WASTE MANAGEMENT SYSTEM

- To develop a habit of waste management in the general people,
- To protect the nature from the evils of plastics and other toxic elements,
- To manage the waste in the most scientific manner,
- To uphold the values of Reduce, Reuse and Recycle,
- To get the financial resources from the management of waste.

VAMSHA (Sanskrit name for Bamboo) – URAVINORU KAVAL

- To protect the water sources and its shores and surrounded people by planting the bamboo saplings, in the context of environmental pollution and climatic change,
- To propagate the importance of bamboo in oxygen circulation and soil conservation in the context of environmental pollution and climatic change.

JEEVANI – AGRICULTURAL DEPARTMENT PROJECT

- To propagate the importance of organic agricultural methods.
- To introduce the indigenous agricultural methods among the new generation people.

BUTTERFLY GARDEN

- To preserve the biodiversity of the nature,
- To provide the natural conditions to the butterflies so as to preserve the existence of the rare butterflies,
- To ensure the survival of the mother plants of the butterflies,
- To identify the butterflies existing in the campus,
- To beautify the campus.

NATURE CAMP

- To develop the knowledge and understanding regarding the invaluable contributions of the nature to the existence of the mankind,
- To develop in volunteers positive values and attitudes towards the conservation of nature,
- To go deep into the nature to know the living habitants of the wild animals.

NATURE SURVEY (PLANTS SURVEY AND BUTTERFLY SURVEY)

- To identify the biodiversity of our college campus
- To educate the students regarding the details of the plants existing in our college,
- To identify the medicinal plants existing in our college, and also understand the medicinal value of these plants,
- To identify the existence of rare butterfly species in our college campus,
- To educate others regarding the bio resources of our college.

GOTHRAYAN – KATHIR PROJECT - A PROJECT TO HELP TRIBAL PEOPLE

- To uplift the tribal people through reading and other educational experiences,
- To understand the lifestyle of tribal people,

AWARENESS/ORIENTATION PROGRAMMES

- To impart the knowledge regarding the health, education, personality development among the people,
- To encourage the people to be a good human being,
- To make the volunteers more social and interactive with others,

DAY CELEBRATIONS

- To give awareness regarding the importance of various Day Celebrations and understanding the vision behind that days,
- To enhance the general knowledge of the students through various quiz series,
- To give awareness to the general public through posters, rallies, street plays, etc.

SURVEYS

- To make an enquiry into the nature to know the valuables of nature existing in and around our environment,
- To collect the data regarding the nature and use these data for further studies

TRAINING ON SUSTAINABLE FOOD FOREST

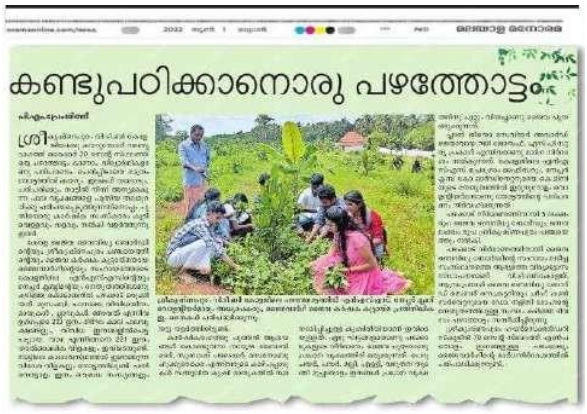
- To develop the skill essential for making a sustainable and systematic agricultural environment,
- To propagate the culture of organic farming among the participants.

DOCUMENTORIES

- To give awareness to the people through various social media,
- To enhance the public communication skill among the volunteers by making them technically efficient in using multimedia equipment

ARANYAKAM FOOD FOREST

Aranyakam is a project initiated in collaboration with the Kerala State Biodiversity Board and Sreekrishnupuram Grama Panchayath, inaugurated in a college on October 15, 2021. It aims to establish a food forest, combining traditional and modern agricultural methods to address biodiversity conservation, food security, ecosystem restoration, and more. Led by the Organic Farmers' Organization, JAIVORG, the project incorporates principles of permaculture and canopy management. Live mulching and shading are highlighted techniques. The project spans 1.25 acres, with 457 tree saplings of various varieties. Maintenance involves tasks such as managing live mulching, removing alien plants, and making organic fertilizer. Notable figures have endorsed the project. The second phase focuses on further development and preservation of existing natural forests. Additionally, efforts are made to educate visitors about the campus greenery through QR code-equipped name boards.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ARANYAKAM PART-11

Protection of existing natural forest

The V.T.B College in Sreeknshnapuram, Mannampatta, Palakkad, through its nature club, is implementing measures to ensure that visitors respect the greenery on campus. Each tree or plant species is equipped with a QR code containing detailed information about it. This initiative aims to enhance awareness and appreciation of the campus's natural environment among visitors.

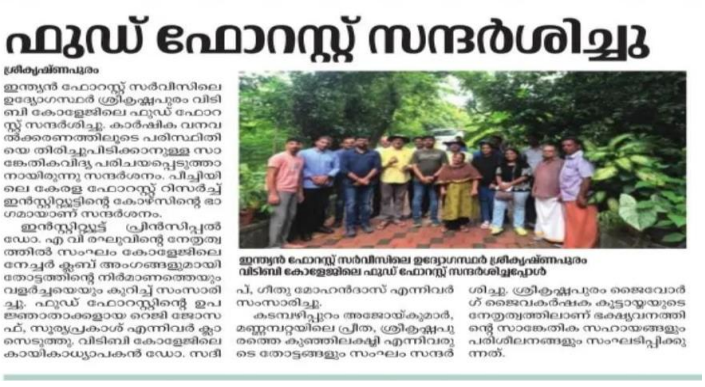
MAKING OF JEEVAMRUTHAM

(Organic fertilizer)

Jeevamrutham is a very effective organic fertilizer which is made off 20 kg cow dug, 10 litres of cow urine, 2 kg vellam and 2 kg cherupayar podi and a handful of mud. It is diluted and fermentized with three days so that it enhancec the population of microms in the fertilizer. With this, we can make 400 litres of jeevamrutham. Once in every month we apply Jeevamrutham to the plants.

KFRI VISIT

As part of a one-week compulsory refresher course organized by the Kerala Forest Research Institute, Peechi to familiarize them with techniques for reclaiming the environment through Agro-Forestry, the officers of Indian Forest Service (IFS) from around twelve different states of India visited the Food Forest of Srikrishnapuram VT B College, a best model of Agro-Forestry under the leadership of Dr A V Raghu, Principal Scientist, KFRI, Peechi. The team held a detailed discussion with the Nature Club



ഫുഡ് ഫോറസ്റ്റ് സന്ദർശിച്ചു

ശ്രീകൃഷ്ണപുരം

ഇന്ത്യൻ ഫോറസ്റ്റ് സർവീസിലെ ഇരുപത്തിയഞ്ച് ഉദ്യോഗസ്ഥർ ശ്രീകൃഷ്ണപുരം വിടിബി കോളേജിലെ ഫുഡ് ഫോറസ്റ്റ് സന്ദർശിച്ചു. കാർഷിക വനവൽക്കരണത്തിലൂടെ പരിസ്ഥിതിയെ തിരിച്ചുപിടിക്കാനുള്ള സാങ്കേതികവിദ്യ പരിചയപ്പെടുത്താനായിരുന്നു സന്ദർശനം. പീച്ചിയിലെ കേരള ഫോറസ്റ്റ് റിസർച്ച് ഇൻസ്റ്റിറ്റ്യൂട്ടിന്റെ കോഴ്സിന്റെ ഭാഗമായാണ് സന്ദർശനം.

ഇൻസ്റ്റിറ്റ്യൂട്ട് പ്രിൻസിപ്പൽ ഡോ. എ വി രഘുവിന്റെ നേതൃത്വത്തിൽ സംഘം കോളേജിലെ നേച്ചർ ക്ലബ് അംഗങ്ങളുമായി തോട്ടത്തിന്റെ നിർമാണത്തെയും വളർച്ചയെയും കുറിച്ച് സംസാരിച്ചു. ഫുഡ് ഫോറസ്റ്റിന്റെ ഉപജ്ഞാതാക്കളായ റെജി ജോസഫ്, സൂര്യപ്രകാശ് എന്നിവർ ക്ലാസെടുത്തു. വിടിബി കോളേജിലെ കായികാധ്യാപകൻ ഡോ. സതീഷ്, ശിവപ്രസാദ്, ശ്രീകൃഷ്ണപുരം ജൈവോർഗ് ജൈവകർഷക കൂട്ടായ്മയുടെ നേതൃത്വത്തിലാണ് ഭക്ഷ്യവനത്തിന്റെ സാങ്കേതിക സഹായങ്ങളും പരിശീലനങ്ങളും സംഘടിപ്പിക്കുന്നത്.

ഇന്ത്യൻ ഫോറസ്റ്റ് സർവീസിലെ ഉദ്യോഗസ്ഥർ ശ്രീകൃഷ്ണപുരം വിടിബി കോളേജിലെ ഫുഡ് ഫോറസ്റ്റ് സന്ദർശിച്ചപ്പോൾ

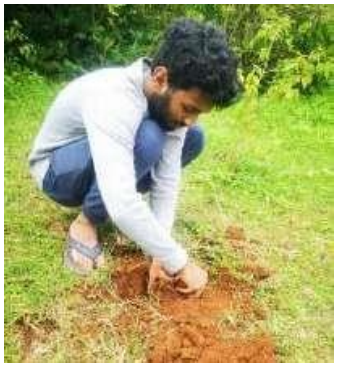
പി. ശീതു മോഹൻദാസ് എന്നിവർ സംസാരിച്ചു.

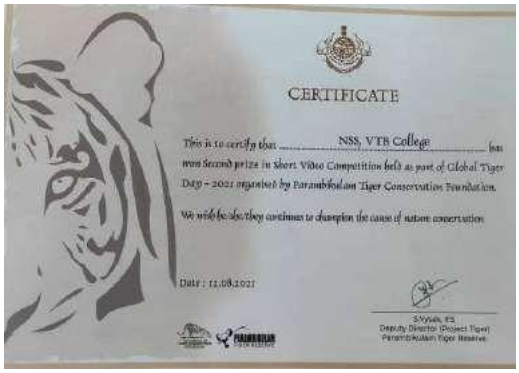
കടമ്പഴിപ്പുറം അജോയ്കുമാർ, മണ്ണമ്പറ്റയിലെ പ്രീത, ശ്രീകൃഷ്ണപുരത്തെ കുഞ്ഞിലക്ഷ്മി എന്നിവരുടെ തോട്ടങ്ങളും സംഘം സന്ദർ

members of the college about the construction and growth of the garden. The team assessed the Nature Club's work as exemplary and highlighted the need to implement such exemplary activities in all Educational institutions. Mr. Reji Joseph Mr. Suryaprakash, the founder of Food Forest, led the classes. Dr.Sadeep(HOD, Physical Education Dept, SVTB College) and Geethu Mohandas (Founder of Let us go for a camp) participated.

VAMSHA - URAVINORU KAVAL

The "VAMSHA - URAVINORU KAVAL" project, launched in association with the Social Forestry Division in Palakkad, aims to protect the people and nature of Karimpuzha Puliyakkattu Theruvu from recurring flood-related challenges. Inaugurated by Ottappalam MLA Adv. K Premkumar, Dr. G Harikrishnan Nair, Assistant Conservator of Forest in Palakkad, Kum. Nina Febin, and MulayudeThozhi, the project focuses on planting bamboo saplings along the Karimpuzha River. With support from the Kerala Social Forestry Department, Sreekrishnapuram Grama Panchayath, and the Nature Club of SVTB College, the project seeks to mitigate flood risks in the region. Additionally, efforts include planting bamboo saplings at ThrithalaKotharmana Forest and within the college campus. The initiative is crucial for an area vulnerable to flooding, exacerbated by illegal encroachment on riverbanks, which has led to significant displacement of locals during rainy seasons, notably during the devastating floods of 2019.



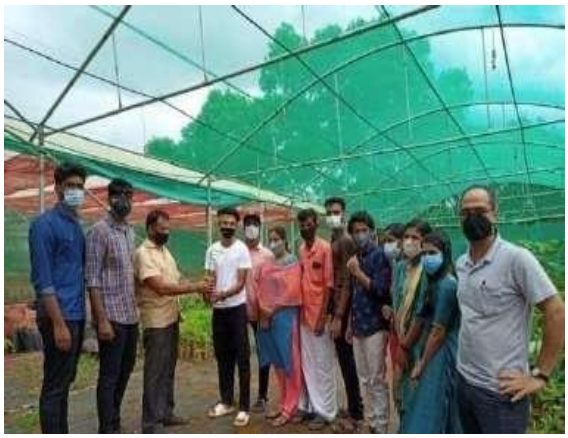


BUTTERFLY GARDEN

VTB College is rich in variety and various butterflies because the college is situated in the forest area. We have started the project of Butterfly Garden in the college campus with the noble objective of preserving the ecosystem of butterflies by providing food and shelter. This project is implemented in association with Thanal Paristhithi Kootayma. There are more than 20 varieties of butterflies and moths in our college campus including the largest butterfly in India – GARUDA SHALABHAM – and second largest butterfly – KRISHNA SHALABHAM and ATLAS MOTH, one of the largest Moths in the world - NAGA PADA SHALABHAM.

PLANTING THE BAMBOO SAPLINGS

Collecting Bamboo saplings from Social Forestry Department.



ARANYAKAM – PART V

CONSTRUCTION OF FIRELINE PROJECT

This is the project is implemented by the Kerala Social Forestry and Wildlife Department andWestern Ghats Nature Club, Palakkad. The NSS Volunteers of our college associated the project for the successful competition. As part of this project, the volunteers constructed the fire line to prevent forest fire to prevent fire breaking.

Date of Work	Place of Work	No. of Volunteers involved
13.03.2022	Malambuzha, Kava	8

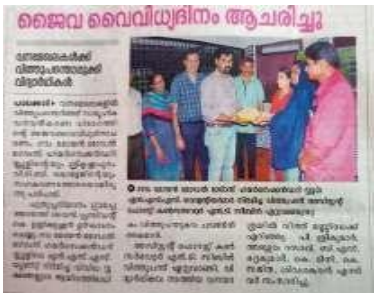



ARANYAKAM – PART VI

BIO-DIVERSITY DAY CELEBRATIONS

In order to celebrate the bio-diversity day on 22.05.2022, there was a program organized by the Kerala Social Forestry Department and as part of the programme, the NSS Volunteers participated, and the programme was throwing the seed balls (mud balls which contains seeds of various trees) in the forest. Also, we have participated in the Trucking at Dhoni Waterfall.

Date of Work	Place of Work	No. of Volunteers involved
22.05.2022	Dhoni Forest	25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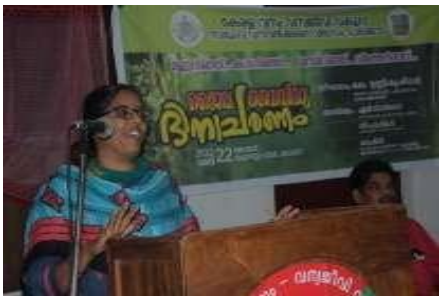



ARANYAKAM – PART VII

NATURE CAMP PARAMBIKULAM

In collaboration with Forest Department, we conducted a Nature Camp for the NSS Volunteers. We conducted 2 days Nature Camp during F. It was a nice experience to the volunteers that helped them to know more about the nature.

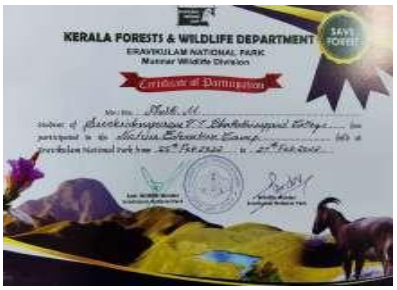
Date of Work	Place of Work	No. of Volunteers involved
26th Feb to27th Feb 2020	Parambikkulam Tiger Reserve	40

NATURE CAMP DR. SALIM ALI BIRD SANCTUARY, THATTEKAD:

Date of the Camp: April 09, 10 and 11, 2021
Place of Camp: Dr. Salim Ali Bird Sanctuary, Thattekad
Number of Volunteers involved: 40.

NATURE CAMP ERAVIKULAM NATIONAL PARK:

Date of Work	Place of Work	No. of Volunteers involved
26th Feb to28th Feb 2022	Eravikulam National Park	40



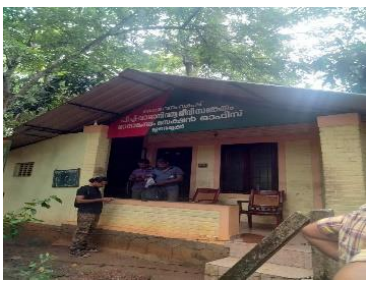
TRUCKING IN DHONI WATERFALL

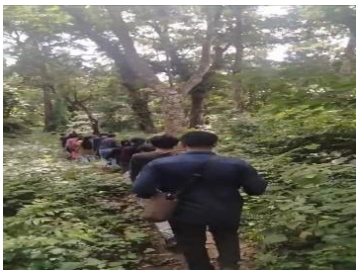
In order to celebrate the bio-diversity day on 22.05.2022, there was a program organized by the Kerala Social Forestry Department and as part of the programme, the NSS Volunteers participated and the programme was throwing the seed balls (mud balls which contains seeds of various trees) in the forest.Also we have participated in the Trucking at Dhoni Water Fall.

Date of Work	Place of Work	No. of Volunteers involved
22.05.2022	Dhoni Forest	25

PEECHI VAZHANI WILDLIFE SANCTUARY

Date of Work	Place of Work	No. of Volunteers involved
18th -20th August 2022	PEECHI VAZHANI WILDLIFE SANCTUARY	40





ARANYAKAM VIII

Plantation and survey (plant survey and plants survey and butterfly survey)

There are 40 acres of land in which there are vide variety of plants, animals, birds, butterflies, etc. The bio-diversity of our college is so wide that we need an in depth survey to identify the varieties. For that we had a nature lover and social worker Prof. M Krishnan Namboothiri Sir, a former professor of ourcollege and we had identified 60 varieties of trees and also, we had planted the name board for these trees.



KAKKACHI@VTB - WASTE MANAGEMENT SYSTEM

(In association with IRTC Mundur)

The Waste Management System initiated at VTB College aims to cultivate a culture of waste management among the public while safeguarding the environment from the harmful effects of plastics and other toxins. Its objectives include promoting scientific waste management practices and adhering to the principles of Reduce, Reuse, and Recycle, as well as generating financial resources from waste management activities.

The system comprises several components:

Bio Waste Management System: Managed by NSS volunteers, it involves collecting bio waste from the canteen and various departments and processing it in a Bio Waste Management Plant using INOCULUM to produce bio fertilizer. Guidance and assistance are provided by the Integrated Rural Technology Centre (IRTC), Palakkad.

Plastic Waste Management System: Plastic waste from Kadambazhippuram town is collected and handed over to the Sreekrishnapuram Panchayath, where it is converted into reusable raw materials such as tar for road construction. The funds generated from the sale of these materials are utilized for the panchayath's development projects.

Other Waste Management System: Less harmful wastes are managed through traditional disposal techniques.

The system, named "കാക്കച്ചി@വി.ടി.ബി," was inaugurated by the President of Sreekrishnapuram Panchayath, Sri Sabu Sankar, on October 31, 2019. Additionally, two bio bins were donated to an adopted village, inaugurated by Sri. Valsarajan Sir, Former NSS Programme Coordinator, University of Calicut. The initiative involves 200 volunteers and continues to operate effectively.

VAYALKILIKAL

(In association with agricultural department Kerala
and Kerala statebiodiversity board)

The project aims to promote organic and traditional agricultural methods, as well as indigenous agricultural practices among the new generation. It also seeks to introduce traditional agricultural techniques based on Njattuvela, seeds, and grains, along with traditional agricultural equipment. The activities undertaken include:

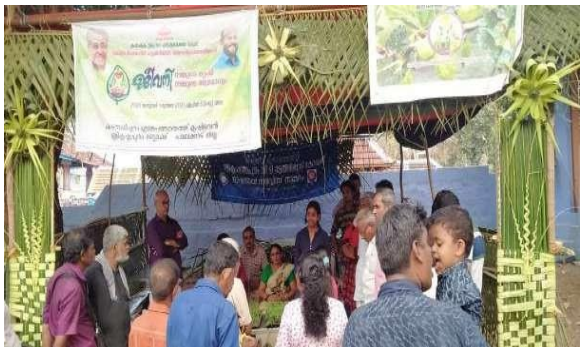
JEEVANI: A project initiated by the Kerala Government to promote organic agriculture. Activities include the sale of organic agricultural products, with proceeds used for palliative works of NSS units. A stall was set up at VayyillyamKunnu Festival, and donations were collected for a dialysis patient named Soumya.

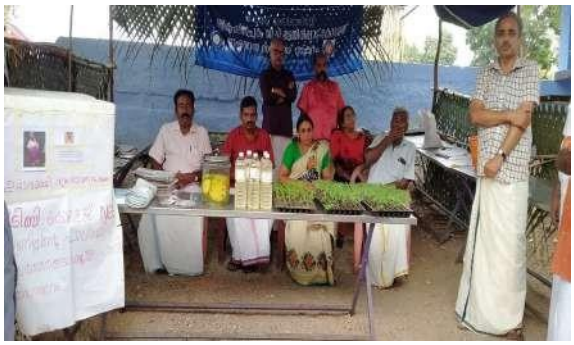
TRANSPLANTING OF RICE SEEDS: Collaborative activity with the Kerala Agricultural Department, involving the transplantation and reaping of paddy seeds.

KOYTHULSAVAM: A cultural program organized by Kadampazhipuram Krishi Bhavan, focusing on activities related to sowing and cropping of paddy fields.

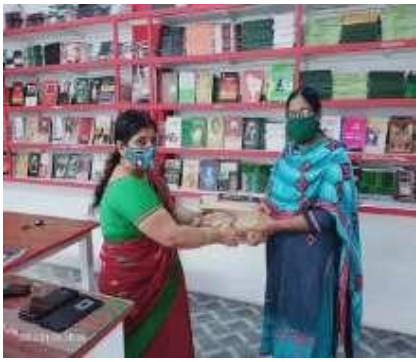
VITHULSAVAM: A program organized by the State Biodiversity Board to conserve and introduce indigenous crops, seeds, and value-added products. Volunteers set up a stall displaying products from their Food Forest at Yuvakshetra Institute of Management Studies, Palakkad.

These activities involve the participation of volunteers, with each activity having a specific number of volunteers involved. Overall, the project aims to educate and involve people in sustainable agricultural practices while contributing to social welfare through palliative works.





GOTHRAYAN



The "Project to Help Tribal People" aims to uplift tribal communities across various dimensions and provide them with basic necessities like clothing and medicines. As part of this project:

The second phase of the KATHIR PROJECT, in collaboration with the Kerala Forest and Wildlife Department and Higher Education Institutions, saw Attappadi Moolakombu village donating around one thousand books worth one and a half lakh rupees to establish a library in the village. This initiative represents the second library established in the state under the project.

TRAINING ON SUSTAINABLE FOOD FOREST

In order to enhance the attitude in the students regarding the organic agriculture, we have conducted a one day Work Shop on on November 7, 2021. As part of training we have conducted workshop on Making of Organic Fertilizer – Jeevamrutham – and Food Forest Technology, Live Mulching, Live Shading etc. Also students have the opportunity to tastethe traditional food items with organic food products.

CONCLUSION AND RECOMMENDATIONS

Green Audit

- Increase MoU with Govt and Non-Governmental organizations to ensure a green campus.
- QR-coded labelling for plants and trees.
- Butterfly, Zodiac, Vegetable and ornamental plant garden on the campus to be established.
- Sign boards and green quotes display in campus.
- The number of indoor plants needs to be increased.
- List of names of visiting birds and names of visiting animals on the campus to be displayed.
- Collaborate with government agencies for E-waste disposal.
- Keep soft copies of student's projects to reduce paper waste.
- Highlight some viewpoints and space for bird watching.
- Fruit Forest concept is highly appreciated. Labelling of existing fruit plants may be updated.
- Open Group discussion points to be demarked.
- Strengthen Organic waste management and reuse methods.
- Project and dissertation work on environmental science and management carried out by students and staff members.
- New UG programs in Life sciences (Zoology, Botany, etc.) recommended.
- Establishment of Open Class.
- Purchase environmental studies-related books and Journals to the library.
- Establishment of freshwater fish aquarium and aquatic plants.
- Increase the number of flowering plants.
- Strengthen the vermicompost unit.

Environment Audit

- Sign boards indicating the following to be created.
    - Plastic free campus
    - Tobacco-free campus
    - Don’t pluck the flowers.
- Separate boards to be used for the following (with names in English, Malayalam and scientific name). A QR code also can be implemented with short descriptions.
    - Vegetable garden
    - Butterfly garden
    - Herbal garden
- Some schemes of Government can be implemented for environmental protection of the campus like Swatch Bharath Abhiyan and Clean India Mission
- Recycling of kitchen wastes collected from Canteen and other places should implemented properly.
- Steps should be taken for organic waste management, segregation of waste and reuse methods.
- Projects or dissertation works on environmental science and management can be carried out by students and teachers in collaboration with concerned bodies.
- Methods should be adopted for E-waste management in the campus.
- Digital or automatic technology to reduce the consumption of paper, gas, water, and energy can implemented.
- Number of Tri-Colour Waste bins to be increased.
- As the institution has a wide variety of trees and plants, a list of trees and their variety can be prepared as a biodiversity register.
- Keep details of services and maintenance on the drinking water machines to ensure its credibility among users.
- Ensure proper cleanliness and maintenance in classrooms and Labs.
- Rainwater harvesting Facility and Well recharge should be systematized.
- Biogas plant make functional.
- Media room may be used for environmental awareness programmes.
- Sufficient staff should be designated for waste management.

Energy Audit

- Solar Energy generation may be improved up to 30% of the total connecting load.
- Sensor-based lights and water taps to be implemented.
- Ventilation in Labs to be improved.
- Refrigerators, Air conditioners, and other electrical equipment to be assured five-star category in the coming purchases.
- Awareness boards need to be displayed near switches and water taps.
- Solar streetlights are suggested.
- E-waste management should be strengthened in association with LSG agencies or Private bodies.

Reference

- The Environment [Protection] Act – 1986 (Amended 1991) & Rules-1986 (Amended 2010)
- The Petroleum Act: 1934 – The Petroleum Rules: 2002 13
- The Central Motor Vehicle Act: 1988 (Amended 2011) and The Central Motor VehicleRules: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 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
- Internal Records of the Campus