









Environment Audit Report 2022-2023



**Thunchan Memorial Govt. College
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(Affiliated to University of Calicut)**

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Date: 16.06.2023

Office Seal



Principal seal with signature

Principal,
T.M. GOVT COLLEGE
TIRUR

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1. Concept

An environment management system is a quantitative and qualitative data system for tracking air, water, and waste and obtaining operational statistics to improve performance. It is used to maintain a clean and green environment that leads to partners. It provides a solution with a 360 view of the surrounding campus, making it easier for owners / managers / 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. It aims to create a sustainable and eco-friendly campus for participants.

Environmental management audits, such as environmental audit, green campus audit, energy audit are well-developed processes for extracting information about an organization and organization that provide an actual assessment of how organizations and organizations are taking action to protect the environment. In order to save the eco-friendly atmosphere of an institution, well developed environmental objective and targets should be undertaken to reduce the harmful effects to some extent. 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.

2. Introduction

The growth of a country starts from its educational institutions, where ecology is considered as an important component of development related to the environment. Educational institutions today are becoming more sensitive to environmental factors and presenting more ideas to make them eco-friendly. In order to protect the environment within the campus, many educational institutions adopt different perspectives on promoting energy savings, recycling waste, reducing water and addressing environmental issues such as water storage. Various types of adverse environmental impacts to the activities pursued by colleges. Environmental auditing is the process of examining the environmental performance of an organization against its environmental policies and objectives. An environmental audit is a formal examination of the impact on a college environment. As part of such training, an internal environmental audit is conducted to assess the actual situation on campus. Environmental audit is a useful tool for determining how and where a college uses the most energy, water or resources; The college can then think about how to implement the changes and make savings. It can also be used to

determine the type and amount of waste, be it used for a recycling project or to improve a waste reduction plan. Environmental auditing and implementation of mitigation measures is a win-win situation for all colleges and students.

3. Overview of Institution

VISION

To be an institution that strives for excellence in higher education, to create a just and vibrant society through the development and promotion of knowledge upholding the values envisaged by Thunchath Ezhuthachan, the father of modern Malayalam.

MISSION

We endeavour to facilitate the creation and promotion of socially relevant education, towards creation of a society that is sensitive to human rights, ecology, environment and sustainable development.

The college was set up in the year 1980 and supported the student community a long way in their pursuit of dreaming the hike of the sky in acquiring knowledge. The Institute has a standing of about 43 years, dedicated and glorious service to the cause of higher education in one of the most socially and economically backward area, Vettom Panchayath of the District of Malappuram, Kerala. The establishment of the College owes to the keen desire of a group of people of this area, since the establishment of a centre for higher education in this area was the need for the economic empowerment of all socially marginalized groups who had so far been deprived of their right to education and employment. The college works for creating a breed of qualified, innovative and dynamic professionals for different sect of the society, industry, for self-employment, for academic & research institutions and to hearten them for vibrant contributions in their respective field. Thunchan Memorial Government College, Tirur was started as a junior college with Pre-Degree course in the year 1980 and has maintained its affiliation with the University of Calicut for more than 42 years since its inception. The enrolment over the years reveals that the college has made substantial contribution for the education of women, especially girls from educationally and socially backward and minority communities. The college was upgraded into a Degree College in the year 1991, into P.G. College in the year 1995 by introducing M.Sc. Mathematics and now looks forward in establishing research canter. Admissions to the Under-Graduate and post graduate courses are purely based on merit as per the criteria suggested by the affiliated University time to time. At present College has eleven academic departments and two skill acquisition centers supported

by the several service centres like LAN lab, INFLIB Net, Audio Visual Lab, Language labs and Central Library. The college offers six Under-Graduate programmes in different subjects viz Mathematics, Physics, Commerce, Arabic and Malayalam and four Post-Graduate courses, viz Mathematics, Commerce, Arabic and Malayalam. 930 students, 45 qualified and competent teachers and 17 non-teaching staff form part of the teaching learning process. The college has made enviable progress in terms of physical infrastructure and learning resources. Apart from academic activities, the co-curricular activities, sports, cultural and social- service activities form very important parts of the life of the students. College has a rich Alumni base that has significantly contributed to the development of the college over the years. The Institute takes pride in alumni, have done remarkably well in all spheres of life at both national and international levels and brought name and fame for themselves as well as to their Alma Mater. The college welcomes you to explore the website for more information about the facilities and the programmes and request you to use the suggestion link in the home page for all your opinions and comments, to feel free in sharing new ideas that may inspire us to do better and hope this will help us to full fill our vision and mission.

4. Courses offered.

The institutes offer various undergraduate programs and 3 Post graduate 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.

SL NO	PROGRAMMES	UG/PG
1	M.A. ARABIC LANGUAGE & LITERATURE	POST GRADUATE PROGRAMME
2	M.A. MALAYALAM LANGUAGE & LITERATURE	
3	M.COM. (FINANCE)	
4	M.SC. MATHEMATICS	
5	INTEGRATED M.A. ENGLISH & MEDIA STUDIES	
6	B.A. ARABIC LANGUAGE & LITERATURE	UNDER GRADUATE PROGRAMME
7	B.A. MALAYALAM LANGUAGE & LITERATURE	
8	B.COM. (CO-OPERATION)	
9	B.SC. MATHEMATICS	
10	B.SC. PHYSICS	

DETAILS OF UG & PG PROGRAMMES

5. List of Clubs

Name of the club	DESCRIPTION
NATURE CLUB	<ol style="list-style-type: none"> 1. Day observation related to Nature 2. Awareness Programmes 3. Nature conservation programmes 4. Nature Education Camp <p>The activities under this club include:</p> <ul style="list-style-type: none"> • Motivate the students to keep their surroundings green and clean by undertaking plantation of trees. • Observing environmentally important days like World Ozone day, World Forestry Day, World water day, World Environment Day etc by displaying banners. • Motivate students to imbibe habits and life style for minimum waste generation, source separation of waste and disposing the waste to the nearest storage point. • Sensitize the students to minimize the use of plastic bags, not to throw them in public places as they choke drains and sewers, cause water logging and provide breeding ground for mosquitoes. • Organize tree plantation programmes, awareness programmes such as Quiz, Essay, Poster competitions regarding various environmental issues. • Organize Nature Trail in Wildlife Sanctuaries/Parks/Forest areas to know about the biodiversity.
NSS (National Service Scheme)	<ul style="list-style-type: none"> • Environment Day Celebration • Regular beach cleaning Drive • Campus Cleaning Drive • Several community-based extension activities in association with Panchayath and Municipalities • 7-day NSS camp
ED CLUB	<ul style="list-style-type: none"> • Students Tea Shop • Workshop on Hand embroidery • Entrepreneurship orientation class • Workshop on art of waste material • Commerce Fest- COMMERA • ED club student's shop • Workshop on resin art
SCIENCE CLUB	<ul style="list-style-type: none"> • Campus beautification committee • Seminar on energy consumption & workshop and hands-on training on led bulb making and repair. • Night sky watch and hands on training in telescope handling

CERTIFICATE

This is to certify that a “Green Campus Audit” for **Thunchan Memorial Govt. College Vakkad P.O, Malappuram Dist. Kerala, India PIN-676502** has been conducted in June 2023 to assess sustainable development practices on biodiversity and other resources, measures to reduce resource wastage, and improve resource quality and sustainability.

Malappuram
16.06.2023



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Green Campus Audit

Introduction

The Green Audit is a tool for identifying opportunities for sustainable development practices, improving environmental quality, improving health, hygiene and safety, reducing liability, saving money, and achieving values of virtue. Green audit is a process of systematic identification, measurement, recording, reporting and analysis of the components of the institute's environmental diversity. The goal of Green Auditing is to help the organization implement sustainable development practices and to establish role models for the community and young learners. It can create health awareness and promote environmental awareness, values and ethics. This makes staff and students better aware of the green impact on campus. If self-inquiry is the natural and inevitable growth of quality education, then institutional self-inquiry can be said to be the natural and inevitable growth of a quality educational institution. As environmental sustainability is becoming more and more important issue for the country, the role of higher education institutions in relation to environmental sustainability is becoming more and more prevalent.

General and Specific Objectives of Green Auditing

The general objective of the Green Audit is to prepare a basic report on biodiversity and other resources, measures to reduce resource wastage, and improve resource quality and sustainability.

The specific goals are:

- To prepare a checklist of flora and fauna on and around the college campus.
- To suggest measures to improve biodiversity within the college campus.
- To monitor the energy consumption pattern of the college.
- To assess the level of water usage within the college campus.
- To suggest sustainable energy use and water conservation methods.
- To explore different sources and mitigation possibilities for the production of organic and solid waste.
- Develop the values of sustainable development activities through a green audit system.
- To find out various sources of organic and solid waste generation and mitigation possibilities.
- To report the expenditure on green initiatives during the last five years

Methodology

The aim of the Green Audit is to ensure that the practices followed by the campus are in line with the country's green policy. Methodology includes: data collection, campus physical inspection, monitoring and review of documentation, and data analysis.

Best Practice: Green Initiatives for a Sustainable Community

Objectives of the Practice

The objective behind the practice was to orient the students and staff towards sustainable goals of development institutionally viable green initiatives. The underlying principle of the enterprise was mutual cooperation to create tangible community linkages between the institution and the neighbourhood with an aspiration to see similar models replicated by the participants in their own local communities with limited resources. The conceptual foundation of this practice relied on the ecological wisdom found in indigenous knowledge systems as well as in modern day science that humankind can survive and flourish only through maintaining interconnectedness with one another and with nature.



The Context

The design and implementation of the practice met with some practical challenges: Firstly, it required some formal and informal deliberations to fix a suitable area within the campus for organic farming and herbal tree planting. Secondly, the unsuitability of the sandy soil of the coastal region for cultivation presented some difficulty. Thirdly, considering the fact that most of the students were day scholars who were mostly unavailable after college timings,

consistent student involvement had to be ensured beforehand. Fourthly, a lack of expert knowledge in farming and related matters necessitated external guidance, and fifthly no funds were available for the institution for the easier execution of the project. Sixthly, finding a local market for selling the produce was crucial. Finally, the farming had to be undertaken without the use of plastic, and any non-degradable waste generated had to be processed in an environment friendly manner.



The Practice

The cultivation of an organic vegetable garden was done in two phases under the leadership of NSS volunteers. The plot of almost one hundred square feet for the garden was laid near the main entrance of the college for maximum visibility, involvement and ease of supervision. The Krishi Bhavan nearby, a wing of the Department of Agriculture on request extended their expert guidance during every stage of the cultivation, and following their advice drip irrigation method was adopted for effective water management. The first phase started in November and the crop was harvested in January followed by a local sale of the produce by the students themselves. Altogether, the plot yielded vegetables for some four harvests which were all sold locally. The second phase, started by the end of January, ended in March, but the outbreak of Covid-19 made it impossible to hold sales. Hence, the vegetables were provided to the community kitchen in the neighbourhood. Concerns of plastic waste management with regard to the farming and selling proved to be minimal, and besides a system of plastic waste disposal was put in place through the Vettom Gramapanchayath Shuchithwa Padhathi, a project of the governing local body funded by the government. The plastic waste in the campus was collected by the workers of this project and effectively processed and disposed. The initial steps for another green initiative, planting herbal trees, were also set in motion with a request for

permission submitted before the Forest department. As the project required clearing some Casuarina trees in the campus, their prior permission had to be obtained.

Discussions for dry land paddy cultivation in the campus too were initiated with the Krishi Bhavan. All of the green initiatives received consistent supervision and assistance from the NSS Programme coordinators of the college. Today, in the Higher Education Sector in India experiential learning is valued over mere theoretical knowledge; a good evidence for this is Ability Enhancement Course/ Audit Course which are mandatory for many an undergraduate and post graduate programmes. In the syllabi of University of Calicut to which the college is affiliated, it is customary to include an audit course on Environmental Studies. It would be in the best interest of the students if such a course was supplemented with an opportunity for hands-on- training through organic farming and Perhaps, knowledge and values that endures are best imbibed on ground.



Evidence of success

The organic farming was a success in the first phase. The vegetable yield was large enough for four successive harvests and brought a modest profit. The profit was in turn utilized for starting the second phase of cultivation in a larger area. The collaboration with Krishi Bhavan enhanced the success as they lend the expertise and a small financial assistance to the project. Enthusiastic participation of the other students in the programme apart from the NSS volunteers, including the College Union, showed that the programme was greatly appreciated. Even though the second phase of the programme was not as huge a success financially as the first phase, yet the fact that we were able to contribute to the community kitchen during the pandemic remains a gain. The vegetables were also bought by the staff and the local

Kudubhashree unit who ran the college canteen which affirmed their goodwill cultivation environmental and cooperation towards the project. Preliminary discussions with Krishi Bhavan on dry land paddy cultivation indicated their willingness in partnering with the college on future projects. The positive reviews and cooperation received for the project suggest that these and similar initiatives can be undertaken by the institution on a larger scale successfully.

Problems encountered and resources required.

One of the main problems encountered was the lack of sufficient funds for the organic farming programme. It was difficult to take care of the garden during vacations as the students and staffs were not available. Planting of herbal trees in the campus got postponed because of the delay in procuring permission from the Forest department due to lengthy official procedures, Soon after, the unexpected outbreak of Covid 19 caused the project to be set aside along with the other one on dry land paddy cultivation. Implementation of the practice required the pooling together of human, natural and financial capital available to the institution to promote a model of sustainable living.



First time green audit was conducted in the campus. Some of the best practices followed by the campus was examined by campus physical inspection. Outreach programmes are conducting for dissemination of green campus initiatives, natural resources, environmental pollution and biodiversity conservation.

Existing waste management methods Practiced.

Waste disposal activities and actions required from the beginning to the final disposal of waste. This includes waste collection, transportation, treatment and disposal, and monitoring and control of the waste treatment process. The waste around the college is separated daily into wet and dry waste and disposed of separately in different bags. Dry waste includes paper, cardboard, and glass tin cans; Wet waste refers to organic waste such as vegetable waste and leftover food. Waste segregation is essential as the amount of waste generated today poses major problems. The material was composted and evaluated as a fertilizer material. By removing this waste, good quality manure is produced which can be used as a modifier of the soil and as a source of plant nutrients. Through smart initiatives like "biogas plants", waste treatment enables campus to achieve higher environmental performance. Through recycling or reuse, we contribute to the conservation of natural resources, energy conservation, environmental protection and landslide reduction. Eco-friendly practices and necessary measures such as energy conservation, waste recycling and carbon neutral are adopted. Organic recyclable waste is treated as compost for plants available on college campus and other solid waste generated on college campus.

Conclusion and Recommendations

Each Year a plan for the Green Campus Audit is prepared by the college and ensure that the environmental management system and ecosystem service are implemented in the campus.

- Role of Indian Green Building Council in green campus initiatives
- Establishment of aquarium and aquatic plants
- Labelling of common name and botanical name of plants
- Establishment of kitchen garden
- Maintained of existing Garden (Record maintenance)
- Herbal, zodiac, medical and ornamental plants garden in the campus
- List of plants and animals included birds in the campus
- Ensure drinking water facilities in all buildings
- Control measures taken for mosquitos, vectors and predators
- Landscape design and campus beatification
- Collaborate with government agencies for E-waste disposal
- Direction boards and indoor plants for better understanding
- Awareness programmes for students by introducing how to nurture indoor and outdoor plants
- Keep soft copies of student's project to reduce paper waste.
- Viewpoints and space for bird watch
- Ensure Sufficient number of waste bins
- Maintain Drip irrigation / automatic irrigation for gardens
- Eco friendly canteen
- Miyawaki
- Student involvement in sustainable green campus should be improved.
- International eco club incorporate with exist
- Group discussion points and stone benches
- MoU with Govt and Non-Governmental organizations to ensure green campus
- Natural topography or Vegetation.
- Organic waste management and reuse methods
- Increase the use of natural resources in the campus
- Solid waste management facility
- Implementation of Government schemes (Swatch Bharath Abhiyan-Clean India Mission)
- Implications of advanced methods for watering plantations
- Waste water treatment plants and facility
- Establish sufficient number of lawns, trees, herbs, shrubs and climbers in the campus
- Project and dissertation work on environmental science and management carried out by students and staff members
- Initiate to constitute Bhumithrasena in College
- Biodiversity Register
- New UG programs in Life sciences (Zoology, Botany, etc _
- Establishment of Open Class
- Purchase environmental studies related books and Journals to library
- Prepare a Revised Green Campus Policy .
- Extension & Out reach Activities in connection with Environmental sustainability

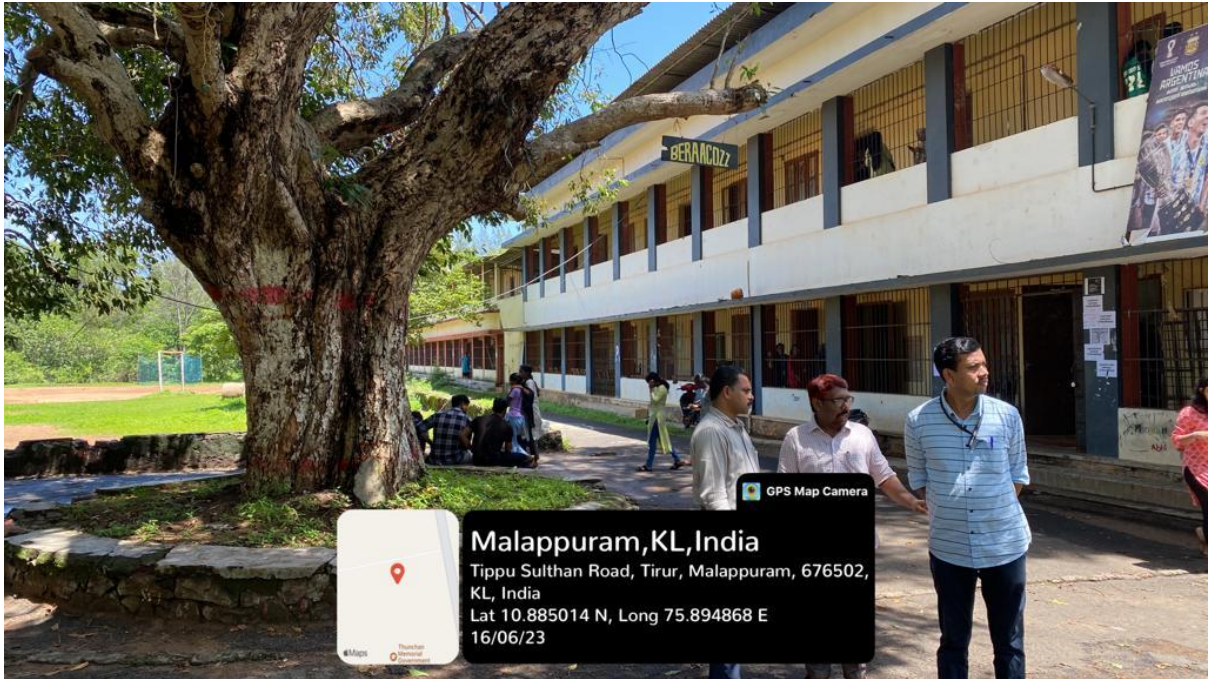
Reference

1. The Environment [Protection] Act – 1986 (Amended 1991) & Rules-1986 (Amended 2010)
2. The Petroleum Act: 1934 – The Petroleum Rules: 2002 13
3. The Central Motor Vehicle Act: 1988 (Amended 2011) and The Central Motor Vehicle Rules:1989 (Amended in 2005)
4. Energy Conservation Act 2010.
5. The Water [Prevention & Control of Pollution] Act – 1974 (Amended 1988) & the Water (Prevention & Control of Pollution) Rules – 1975
6. The Air [Prevention & Control of Pollution] Act – 1981 (Amended 1987) The Air (Prevention & Control of Pollution) Rules – 1982
7. The Gas Cylinders Rules – 2016 (Replaces the Gas Cylinder Rules – 1981
8. E-waste management rules 2016
9. Electrical Act 2003 (Amended 2001) / Rules 1956 (Amended 2006)
10. The Hazardous Waste (Management and Handling and Trans-boundary Movement) Rules, 2008 (Amended 2016)
11. The Noise Pollution Regulation & Control rules, 2000 (Amended 2010)
12. The Batteries (Management and Handling) rules, 2001 (Amended 2010)
13. Relevant Indian Standard Code practices
14. Internal Records of the Campus

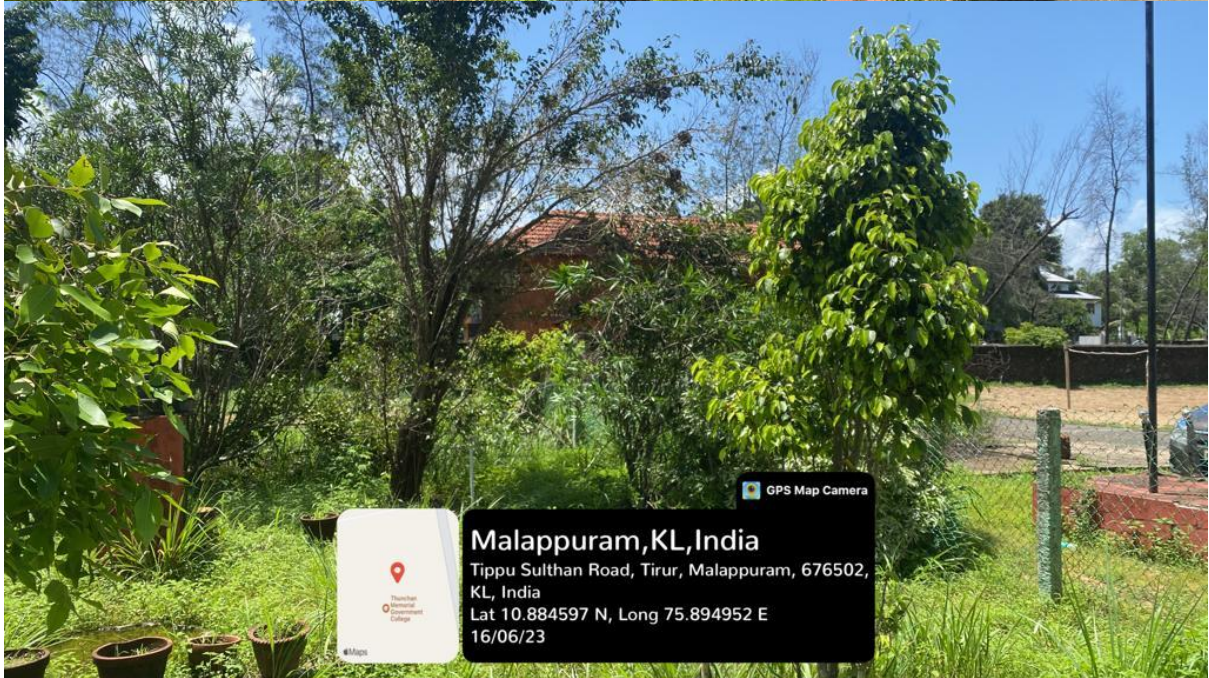
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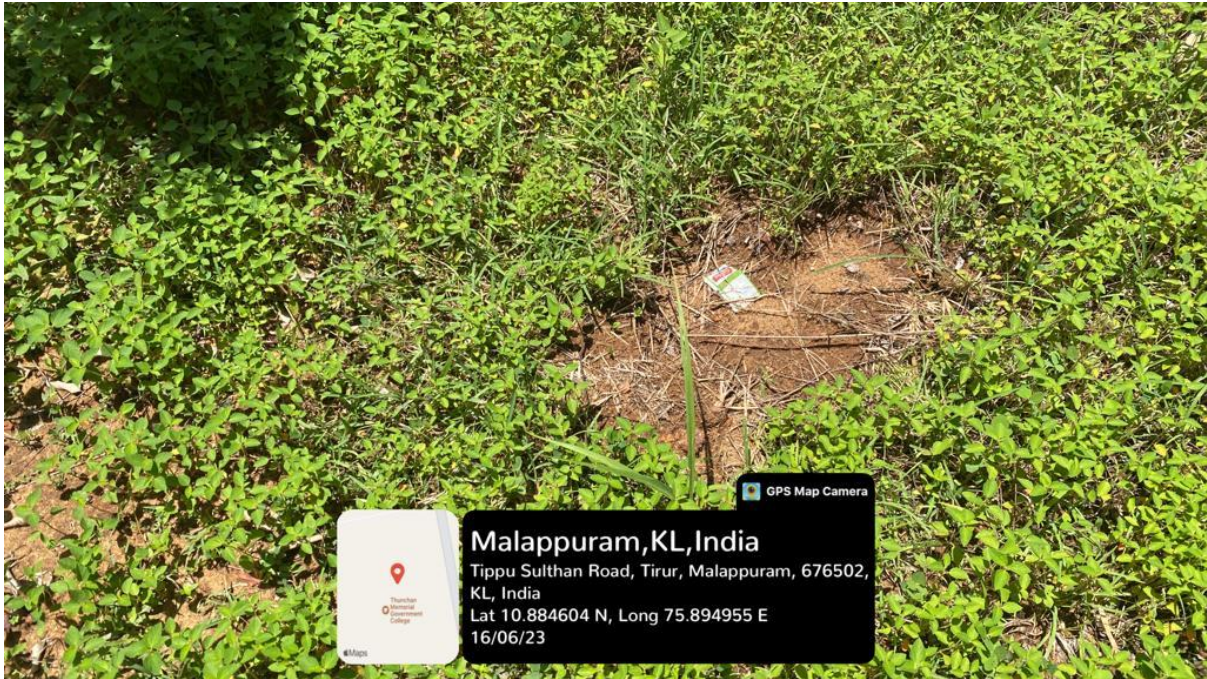










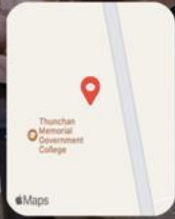












Malappuram, KL, India

Tippu Sulthan Road, Tirur, Malappuram, 676502, KL, India

Lat 10.884567 N, Long 75.895292 E

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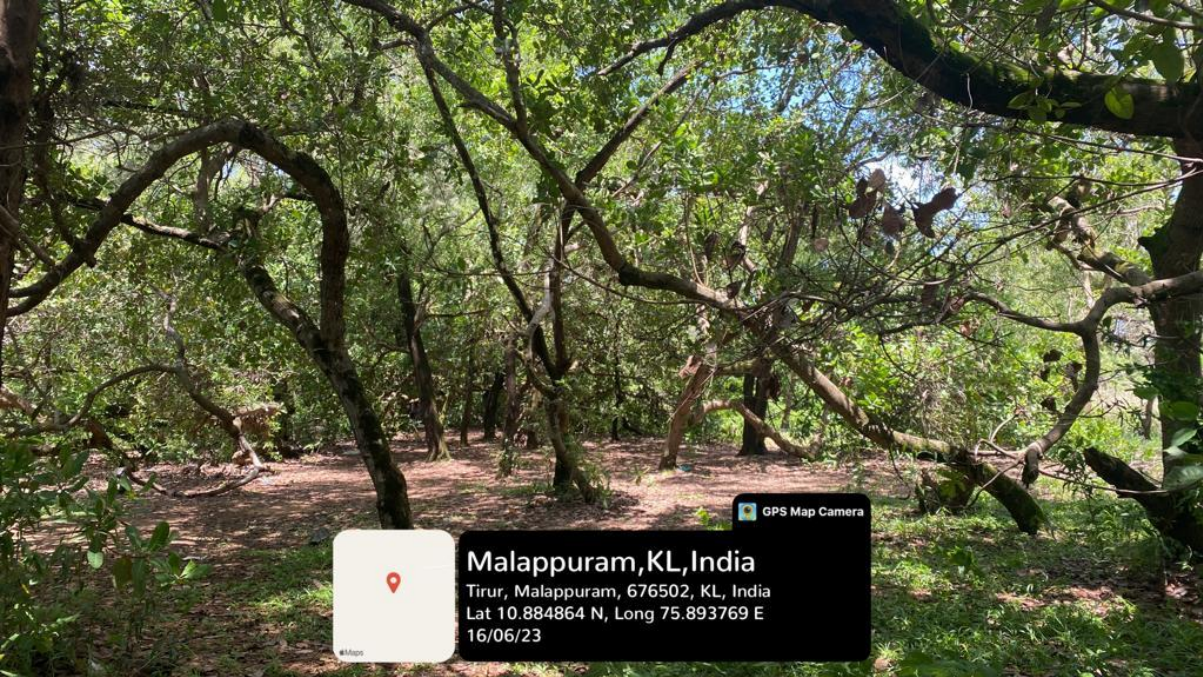
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