



# GOVERNMENT COLLEGE KASARAGOD

VIDYANAGAR, KASARAGOD, KERALA, 671123

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NAAC 3RD CYCLE ACCREDITATION

## ENVIRONMENT AUDIT REPORT



# GOVERNMENT COLLEGE KASARAGOD

VIDYANAGAR, KASARAGOD, KERALA 671123

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## Environmental Audit Team

### External Environmental Auditor

Dr. Manoj K

Coordinator - Division of Green Audit

Department Of Environmental Studies, Kannur University

### Local Body member

Baby Balakrishnan

District Panchayat President, Kasaragod

Savitha B

Municipal Ward Councillor, Kasaragod Municipality

## Internal Environmental Audit Team

### Convenor

Dr. Biju P

Assistant Professor, Department of Botany, Government College Kasaragod


### Members

- Dr. Josekutty EJ  
Assistant Professor, Head, Department of Botany, Government College Kasaragod

- Dr. Mini PV  
Associate Professor, Head, Department of Zoology, Government College Kasaragod

- Dr. Manoharan A.J.



  
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**Dr. Ananthapadmanabha A.L.**





Assistant Professor, Head, Department of Geology, Government College Kasaragod

- Asif Iqbal Kakkassery

Assistant Professor, Department of Geology, Government College Kasaragod

- Dr. Ashalatha C K

Assistant Professor, Department of Kannada, Government College Kasaragod

- Arun Kumar K

Assistant Professor, Department of Zoology, Government College Kasaragod

- Gayathri AM

Assistant Professor, Department of Zoology, Government College Kasaragod

- Ayishath Safwana A

Assistant Professor, Department of Zoology, Government College Kasaragod

- III Year BSc Botany & BSc Zoology Students, NSS Volunteers, Bhumithrasena Club Members



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## Authentication

This is to certify that we have conducted an Environmental Audit for Government College Kasaragod to assess eco-friendly initiatives and sustainable development in the campus. The measures and action taken by the college to maintain the campus green are highly appreciable.

Savitha B

(Municipal Ward Councilor)

**SAVITHA.**  
Municipal Councillor  
Kasaragod Municipality

Dr. Biju P

(Internal Audit Team Convenor)



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**Dr. Ananthapadmanabha.A.L**

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## ACKNOWLEDGMENTS

*The team responsible for this audit, comprised of Dr. Biju P, Assistant Professor, Department of Botany, Government College Kasaragod, under the supervision and direction of Name & Designation, would like to thank those individuals who contributed to this project, particularly, Dr. V. S. Anilkumar, Principal, Government College Kasaragod, all the faculties and staff who provided insights and comments as part of this audit.*



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## STATEMENT OF ASSURANCE

*This audit has been conducted in accordance with the International Standards for the Professional Practice of Internal Auditing. In our professional judgement, sufficient and appropriate audit procedures were completed, and evidence was gathered to support the accuracy of the conclusions reached and contained in this report. The conclusions are based on a comparison of the situations as they existed at the time of the audit with the established criteria.*



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## EXECUTIVE SUMMARY

*An Environmental audit is a systematic tool within the management system that is employed for the purpose of safeguarding and preserving the environment, as well as ensuring its long-term sustainability. This audit provides guidelines in the form of standardised parameters, methodologies, and projects aimed at environmental protection. Its primary objectives include identifying and monitoring sources of environmental pollution, managing various types of waste, tracking energy consumption, assessing water quality and quantity, hazard monitoring, ensuring stakeholder safety, and even disaster management. The application of Environmental auditing at Government College Kasaragod allows us to evaluate our way of life and its impact on the environment. To compile a comprehensive report, we utilised a methodology that involved distributing questionnaires, conducting group discussions, and carrying out interviews. The information gathered, along with the resulting recommendations and suggestions, served as the basis for the preparation of the Environmental audit report.*



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## 1. INTRODUCTION

### About the College

Government College Kasaragod was established in 1957 by the Government of Kerala, as a need was felt for a college in this underdeveloped area. The College commenced functioning early in August 1957. The College was declared open by the Honourable Minister of Finance, Sri. C. Achutha Menon on 07-08-1957. Now, the college offers 14 undergraduate courses, 8 postgraduate courses and 6 PhD programmes. College is re-accredited with NAAC 'A' grade in 2013. In 2021, the college was ranked 82 among all colleges in India under the National Institution Ranking Framework (NIRF).

### Mission

“Our Mission is to achieve the overall development of the students with a focus on knowledge, skill and the right social attitudes and service-mindedness required for attaining excellence in personal as well as social life.”

### Vision

“We are guided and inspired by a glorious vision to use our physical, mental and Intellectual energies to the advancement of the individual and the society, to strive for the noble cause of education, truth and righteousness, to instil a sense of pride and emotional belongingness in the mind of every individual.”



*[Handwritten Signature]*

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## Courses offered by the College

### Undergraduate Courses

BA Arabic	BSc Botany	BSc Chemistry	BCom Co-operation
BA Economics	BA English	BSc Computer Science	BSc Geology
BA History	BA Kannada	BA Malayalam	BSc Mathematics
BSc Physics	BSc Zoology		

### Post Graduate Programmes

MA Arabic	MSc. Chemistry	MA Economics	MA English
MSc Geology	MA Kannada	MSc Mathematics	MSc Physics with Computational and Nano Science Specialization

### Ph.D. Programs

PhD in Chemistry	PhD in Economics	PhD in Geology	PhD in Kannada
PhD in Zoology	PhD in Statistics	PhD in Arabic	

### Student and faculty strength:

Total number of Students	1953
Teachers	99
Non-teaching staff	42
<b>Total</b>	<b>2094</b>



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## 2. PHYSICAL AREAS

Government College Kasaragod has a total area of 30.26 Acres. Out of the total area, 10153.81 square metres is the built-up area, and the rest of the area is used for various purposes. The following table provides a detailed breakdown of the built-up area within the campus:

### Area details of the Government College Kasaragod:

Sl. No	AREA DETAILS	BUILT-UP AREA (in m <sup>2</sup> )
1	Science block	177.5
2	Main block	436.85
3	Auditorium	124.80
4	Open auditorium	90.30
5	Library	190
6	Canteen	52
7	Maths block	100.70
8	T block	207.43
9	Old PG block	76.46
10	Kannada-Arabic block	167.83
11	New tank	39.66



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### 3. OBJECTIVES OF THE AUDIT

- Acknowledge the institution's proactive steps in addressing environmental concerns.
- Safeguard the environment and mitigate threats to human health.
- Provide foundational information to assist institutions in assessing and managing environmental changes, threats, and risks.
- Recognize, diagnose, and effectively address environmental issues.
- Understand the reciprocal impacts between institutions and the environment.
- Identify and manage the influence of an institution's activities on the environment.
- Propose optimal guidelines for sustainable development within organisations and for environmental conservation.
- Evaluate environmental performance and the efficiency of measures in achieving specified objectives and targets.
- Identify various factors pressuring institutions to enhance their environmental performance.
- Ensure the responsible utilisation of natural resources in accordance with national environmental policies.
- Establish criteria for maintaining the well-being of the institution's community.
- Establish procedures for the safe disposal of all forms of hazardous waste.

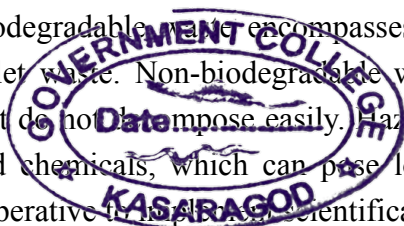
### 4. TARGET AREAS OF ENVIRONMENTAL AUDITING

#### 4.1 Water Audit

This indicator evaluates the amount of water within a system, how it is used, and any losses or wastage, offering a means to promote water conservation. Given our institution's current situation, conducting a water audit becomes crucial as a proactive step to conserve water using the most effective methods.

#### 4.2 Waste Management Audit

The institution faces a significant challenge in managing waste effectively. Waste can be categorised into three main types: biodegradable, non-biodegradable, and hazardous. Biodegradable waste encompasses materials like food scraps, waste from the canteen, and toilet waste. Non-biodegradable waste includes items like plastics, glassware, and tin cans that do not decompose easily. Hazardous waste consists of materials such as electronic waste and chemicals, which can pose long-term health and environmental risks. Therefore, it is imperative to implement scientifically sound waste management practices.



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## 4. METHODOLOGY FOR AUDITING

### 1. Field Visit

The field visit serves the objective of assessing biodiversity conditions, the utilisation of various resources, and the methods employed for waste management. The Environmental audit team carried out periodic field visits to gather data on diverse indicators.

### 2. Group Discussion

Group discussions were held with Bhoomithrasena, Eco club, Nature club, NSS, faculties, office staff, and management of the various strategies of target areas.

### 3. Survey

The Environmental audit team conducted surveys on various aspects of target areas by preparing, distributing, and collecting survey forms with different headings. All the departments, offices, canteen, and libraries participated in the detailed questionnaire survey study.

### 4. Audit Stage

Environmental auditing at Government College Kasaragod was carried out collaboratively by both students and faculty members. Evaluating waste management practices, encompassing biodegradable, non-biodegradable, electronic waste, hazardous materials, and more, also involved collective efforts. The accuracy of all data was cross-referenced with the college's existing documentation.



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## 5. AUDIT REPORT

### Water Management

The college uses four wells, one open well and three bore wells, pumping 68000 L of water daily. To reduce water waste, we adopted microscale analysis. The water usage of college hostels are also considered in this analysis.

**Table - Water Audit - College**

Indicators	Response
<b><u>Source of Water</u></b>	
No. of Well	Open well: 1, Bore well: 3
Horsepower – Motor	3 HP & 2 HP
Depth of well –Total	300 feet
Water level	150 feet
<b><u>Storage of Water</u></b>	
Number of water tanks	16
Capacity of tank	45000 L - in use 100000 L (constructed & ready for future usage)
Quantity of water pumped every day	68000 L
<b><u>Wastage of water</u></b> Any water wastage/Why?	
Wastewater sources	Laboratories, Washrooms & Canteen
Use of wastewater	Nil
The fate of wastewater from the lab	Neutralised and dumped through pipes into the waste tank
Whether wastewater from labs mixed with groundwater	No
Any treatment for lab water Whether any eco-friendly methods are used in labs	Neutralising only, no relevant methods
Any leaky taps	No, leaky taps repair on time to save water loss.
Date.....	Name and Signature of the Principal <b>Dr. Ananthapadmanabha.A.L</b>





<b><u>Alternate sources</u></b>	Rainwater harvesting tank available
Capacity of storage	
Groundwater recharge is available	Yes
<b>Water management</b> Any water conservation strategies carried out	Rainwater harvesting is the prior method. Well-recharging units are established.

Table - Water Audit - College Hostels

<b>Indicators</b>	<b>Response</b>
<b><u>Source of Water</u></b>	
No. of Well - Total	2
Horsepower - Motor	2 x 1.5 HP
Depth of well - Total	350 feet
Water level	150 feet
<b><u>Storage of Water</u></b>	
Number of water tanks	13
Capacity of tank	24000 L - Total
Quantity of water pumped every day	35000 L - Total
<b><u>Alternate sources</u></b>	No
Capacity of storage	NA
Groundwater recharge is available	-
Water management Any water conservation strategies carried out	-



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## Waste Management

This poses a significant challenge for a campus striving to be environmentally friendly. Both the gathering and proper disposal of waste present substantial hurdles for the institution. The following categories represent the primary types of waste generated within the campus.

**Table - Categories of Waste**

Sl. No.	Types of Waste	Items	Disposal Method
1.	E-Waste	Computers, electricals, electronics	Moving to centralised points and hand over to Haritha Karma Sena of Kasaragod Municipality
2.	Plastics	Pen. wrappers, bags	Hand over to Haritha Karma Sena of Kasaragod Municipality
3.	Chemicals	Laboratories	Neutralised with water and collected in waste water tanks
4.	Food	Stakeholder's lunch, snacks	Collected and dumped in pits. Pipe compost available
5.	Canteen wastes	Canteen	As raw materials for biogas Plant

## 6. KEY ATTRIBUTES OF Environmental CAMPUS

### Minimise water consumption

We conduct routine inspections and maintenance of pipelines to prevent water wastage. This involves promptly addressing sources of water leakage, such as dripping taps and showers, and conducting regular checks and maintenance on pipelines. We are also actively pursuing the installation of water-efficient appliances. We promote water conservation among staff, students, and conference attendees, and we employ an efficient and sanitary water storage system to minimise water loss during storage. Additionally, the college has strategically placed water filters with coolers for students and ensures their regular maintenance.



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## **Establishment of Rainwater harvest and Water Recharging System**

A rainwater harvesting system has been set up, and they are meticulously maintained to prevent any leaks. Additionally, distinct water recharging systems have been implemented for both borewells and open wells.

## **Optimise the percentage of waste that undergoes recycling while reducing the volume of non-recyclable items.**

The college implements special measures for occasions like cultural events, internal and external seminars, conferences and other on-stage/off-stage programmes, during which a substantial amount of recyclable waste is expected. These measures aim to minimise waste generation and maximise recycling/reuse. The promotion of item reuse and waste recycling is encouraged among faculty, students, and conference attendees.

## **Implementation of Biogas Plant**

In order to decrease the amount of biodegradable waste generated by the canteen and to fulfil energy needs, an operational biogas facility was implemented. This serves as a consistent and renewable energy source.

## **Optimising the use of Chemical Pollutants**

We ensure that all cleaning products utilised by college staff are environmentally friendly, characterised by biodegradability and non-toxicity. In the chemistry laboratory, most waste generated is water-soluble and significantly diluted, minimising biomagnification concerns, aligning with the principles of Environmental Chemistry. Proper disposal of chemical laboratory waste is a priority.

NSS units of the college are constantly maintaining different gardens like RET garden, Fruits and Herbal Park, Biodiversity Park. Periodic reviews of the campus tree inventory are conducted, with oversight from the Botany department. Various clubs, including the Bhoomithrasena and Nature clubs, spearhead initiatives related to these activities.

Ensure that environmental awareness is created



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NSS, Bhoomithrasena Club and NCC unit of college are frequently conducting different programmes to promote environmental awareness among students and other stakeholders. Departments such as Botany and Zoology have a continuous track record of Seminars and awareness programs conducted for the conservation of Biodiversity and promote environmental awareness as a part of the coursework in various curricular areas, and student research projects. Along with that College does not directly or indirectly participate in the depletion and degradation of natural resources.

### **‘ZERO WASTE’ - WASTE MANAGEMENT PROGRAMME by NSS**

Here submitting the details of various activities conducted by the NSS Units 02 & 03 of Government College Kasaragod as a part of ‘Zero Waste’ waste management programme. Various cleaning programmes and awareness programmes were organised under this campaign. The activities organised under this project are as follows.

#### CAMPUS WALK

As a part of ‘Treat The Plastic’ Programme NSS Units 02 & 03 of Government College Kasaragod conducted a campus walk. Volunteers in groups collected the dry plastic waste from the campus premises. Maximum volunteers participated in this activity.

#### PLASTIC WASTE WERE HANDOVERED

As a part of ‘Treat The Plastic Programme’, NSS Units 02 & 03 of Government College Kasaragod handed over the collected plastic waste materials to Haritha Karma Sena. It was a part of the Clean India Programme. With this department wise competition was also conducted. Sri Asif Iqbal Kakkassery Programme Officer Welcomed the programme. Dr Rema M (Principal, Government College Kasaragod) addressed the key points related to this programme. Sri Rupesh (Junior Health Inspector, Kasaragod Municipality), Dr. Ashalatha C K (Programme Officer) also interacted with the students. Students were instructed to collect a maximum amount of waste materials from the campus premises and from their home. Around 200 kg of materials were handed over to the Haritha Karma Sena.



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**TREAT THE PLASTIC COMPETITION PRIZE DISTRIBUTION**

As a part of Treat The Plastic Programme NSS Units 02 & 03 of Government College Kasaragod conducted department wise competition. The History Department was chosen as the winner. They collected the maximum amount of waste materials. Prize distribution was held at the college where Dr. Rema M (Principal, Government College Kasaragod) handedover the cash prize to the history department. The cash prize was sponsored by Sri. Sunny Joseph (RTD Librarian).

**PLASTIC AWARENESS CAMPAIGN**

NSS Units 02 & 03 of Government College Kasaragod conducted plastic awareness campaign as a part of ‘Treat The Plastic’ programme. Volunteers interacted with the students about its aim and encouraged them to collect maximum amount.

**STARTED THE WORK OF ‘ZERO WASTE’ WASTE MANAGEMENT PROGRAMME**

NSS units 02 & 03 of Government College Kasaragod started the work on a waste management programme named ‘Zero Waste’. The volunteers also cleaned the four pits currently installed in the college. Through the ‘Zero Waste’ programme, it was decided to deposit only food waste in the existing pits. All the pits were painted and their surroundings cleaned. Volunteers actively participated in it.



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## INAUGURATION CEREMONY OF 'ZERO WASTE' WASTE MANAGEMENT PROGRAMME

NSS Units 02 & 03 of Government College Kasaragod conducted the inauguration ceremony of a Waste Management programme named 'Zero Waste'. NSS started the Zero Waste programme with the aim of reducing the amount of waste in the campus and keeping the campus clean. Dr. Rema M (Principal, Government College Kasaragod) inaugurated the programme. As a part of this, zero waste boards were installed in all the four dumping pits. Pits are made for food waste and bins in classrooms are made for plastic and paper materials. Teachers and students of the college also appreciated this activity. All the volunteers were very actively involved in the activities.



## WASTE MANAGEMENT AWARENESS CAMPAIGN

NSS Units 02 & 03 of Government College Kasaragod conducted a waste management campaign at the college. 'Zero waste' is an NSS initiative programme which aims to reduce the amount of waste in the campus and make a clean campus. As a part of this dustbins were kept at every block with stickers and boards indicating the plastic, non-plastic waste. Separate pits were made for the food waste at each corner of the college. Many students were unaware of the importance of proper waste management and it is seen that proper disposal of the waste was not there which created trouble while taking out the waste. Volunteers were split into



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groups and went to all the classes. They made the students aware of the Zero Waste programme and also reminded the staff and students to maintain the cleanliness of the campus and proper disposal of food waste, plastic and non-plastic waste. There was a positive response from the students and staff about the initiative taken by the NSS Units.

DECLARATION OF 'ZERO WASTE' CAMPUS

Zero waste Programme was initiated by the NSS Units 02 & 03 of Government College Kasaragod with an aim to reduce the amount of waste in the campus and keep the campus clean. Pits and bins were made for the collection of waste separately. The programme was well maintained by the volunteers through monitoring and recording the situation of the waste disposal. The college was officially declared as a Zero Waste Campus by Dr. Ananthapadmanabha A L (Principal, Government College Kasaragod) on World Environment Day. Teachers and students also took part in this programme and appreciated the work of volunteers.



INAUGURATION  
SRI N A NELLIKKUNNU M.A., KASARAGOD



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## 7. SUMMARY OF FINDINGS

The primary findings of the audit indicate that, in general, the college has enough sources of water, and water storage facilities to meet the requirements of the stakeholders. When it comes to waste management, students are aware of the importance of maintaining a plastic-free campus, and the efforts made to establish a plastic free campus and the 'Zero Waste' campaign initiated by the NSS Volunteers of the college are highly appreciable.

However, upon closer examination, it becomes evident that while the college has been implementing an Environmental Policy for an extended period, some of the practices within the institution do not align with the relevant standards. Furthermore, certain processes could benefit from a more thorough review to enhance their efficiency, fairness, and consistency.

## 8. RECOMMENDATIONS AND SUGGESTIONS FROM THE EXTERNAL AUDIT TEAM

1. Change the campus into carbon neutral campus in near future
2. Adopt proper mechanisms to dispose of chemical waste from laboratories.
3. Increase the number of rainwater recharge pits to enhance groundwater levels.
4. Plant more trees and plants to enhance biodiversity level and increase the water-holding capacity of the ground.
5. Conduct awareness activities among students about proper waste management systems.
6. Implementation of cloth carry bags instead plastics.
7. Distribution of more waste bins inside the campus.
8. Use paper pen in the campus
9. Follow 3 R's to save our environment.



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# Photo Gallery:



**water source: borewell**



**water pump**

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**water storage tank**



**rainwater harvest system**



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vermi-compost

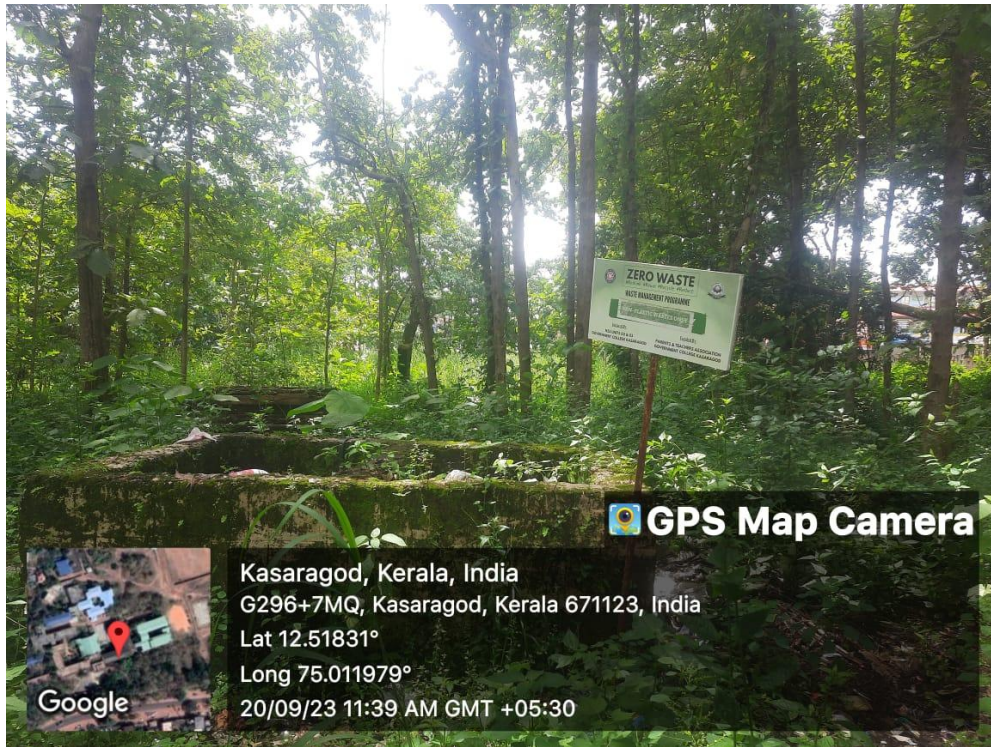


biogas plant



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waste dumping pit



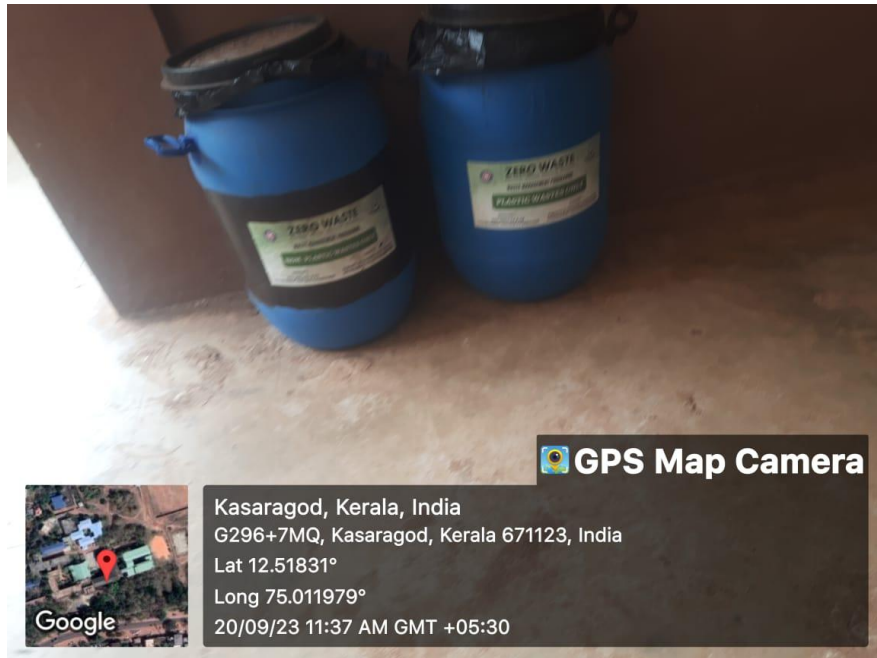
used plastic bottle collection booth



*(Handwritten Signature)*

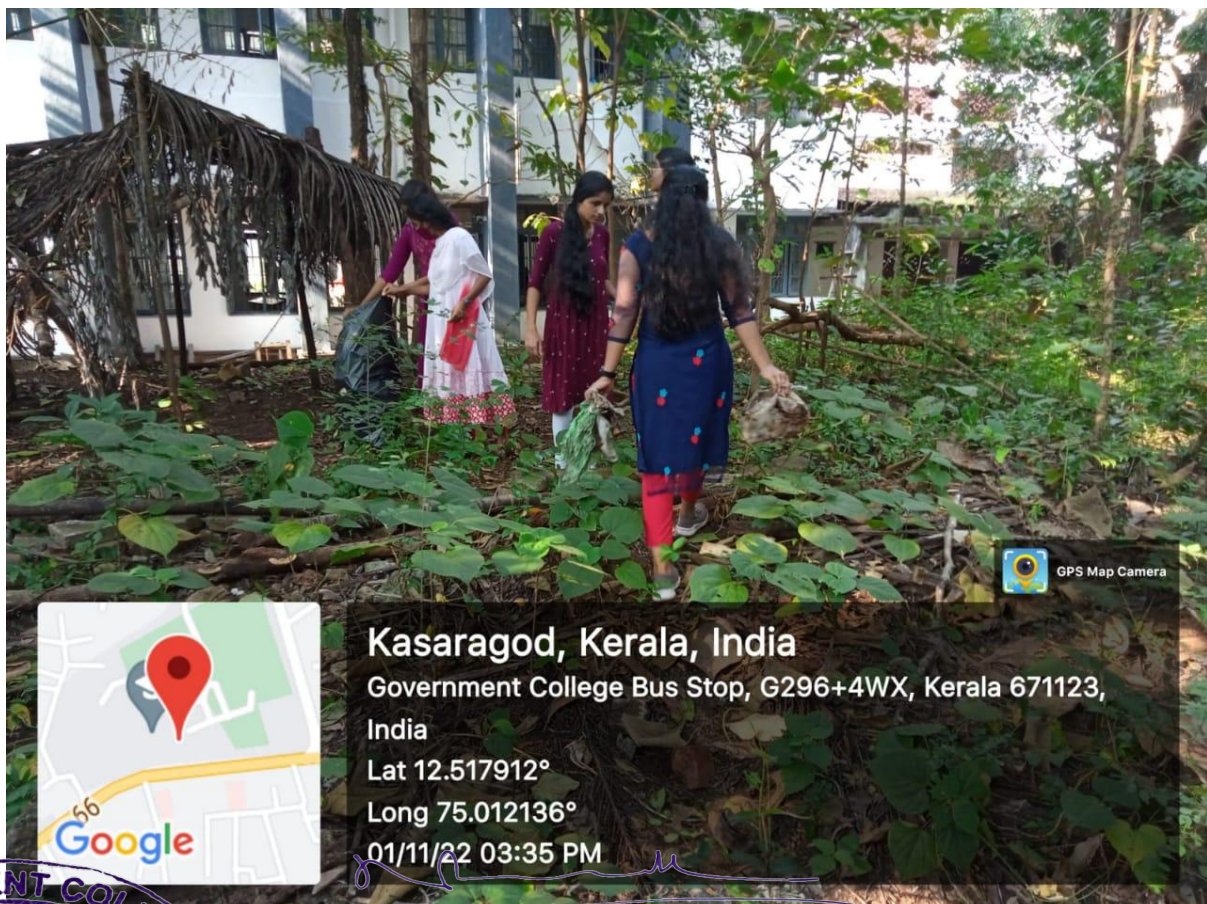
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plastic waste (non-biodegradable) and paper waste (biodegradable) bins

### Photos of Zero Waste Campaign by NSS



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*[Handwritten Signature]*

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*[Handwritten Signature]*

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**BABY BALAKRISHNAN**

PRESIDENT

DISTRICT PANCHAYATH

KASARAGOD

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Koolom Road, Madikai

Madikai (P.O.) - 671314

Cell No.: 9447691837

9400069364

e-mail : pbabythayath@gmail.com

Ref:-

Date:.....

26.09.2023

## Certificate of Appreciation

This is to certify that the Government College Kasaragod had conducted a Green Audit & Environment audit to assess the efficacy of green initiatives by the college to maintain the college eco-friendly. The measures and action taken by the college towards the development of a sustainable green environment are highly appreciable and commendable.



Baby Balakrishnan

President,

District Panchayath Kasaragod



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