Green Audit Report

Prepared By

GREEN AUDIT TEAM
Majuli College

Submitted To

NAAC

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PRINCIPAL (DDO) & SECRETARY
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MAJULI COLLEGE

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No. MC/ *Date* 24/01/2023

FOREWORD

Green Audit is one of the important tools to check the balance of natural resources and its judicial use. It is a process of regular identification, quantification, documenting, reporting and monitoring of environmentally important components in a specified area. It will create health consciousness and promote environmental values and ethics and also provides a better understanding of the impact of eco-friendly practices on campus. Green auditing will promote financial savings through reduction of resource use. It is very important that the college evaluates its own contributions toward a sustainable future.

The main objective to carry out green audit is to check the green practices followed and to prepare a well-defined audit report to understand whether the institute is on the track of sustainable development. Majuli College conducted an Internal Green Audit in the session 2017-21. This audit, carried out with numerous limitations and bottlenecks, proved instrumental in assessing the green practices followed so far in the college and paved the way for a more comprehensive Green Audit at the external level. This Green Audit in the session 2017-23 is the result of a sustained attempt at quality assurance and sustenance of the college. I sincerely appreciate the hard work put in by the Green Audit Team in making this project a success.

24/01/2023

Principal
Majuli College

PRINCIPAL
MAJULI COLLEGE

Acknowledgement

Green Audit Report of Majuli College has been prepared by the Environment and Green Audit committee and examined & certified by External Audit Team. The audit covered the green initiatives conducted during the period 2017-2023. The Green Audit Report presents green initiatives followed and taken up by the college and provides suggestions and recommendations to improve the environmental sustainability of the college premises.

The Green Audit team thanks the Management and the Principal of Majuli College, Majuli for entrusting us the green audit in the College campus. We wholeheartedly thank the teaching and non-teaching staff and students for their timely support rendered to the green audit team at different stages of the process that helped us to complete the audit in time. We also thank heads of various departments and the teacher in charge from each department for sharing documents and information in time.

24.1.23

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24/01/2023

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No. RFRI/FECC/ENV-AUD/2021 दिनांक/Date: 28/06/2023

'Green and Environment Audit Report 2022-23'
Majuli College, Kamalabari, Majuli, Assam

The Green and Environment Audit Team, Majuli College, Kamalabari, Majuli, Assam prepared the **'Green and Environment Audit Report-2022-23'** incorporating all the activities/achievements done from 2017-18 to 2022-23. The report was submitted to ICFRE-Rain Forest Research Institute, Jorhat for comments and suggestions. A 3rd party Green Audit monitoring committee from ICFRE-RFRI was constituted including Dr. Dhruba Jyoti Das, Scientist-F, Dr. Girish Gogoi, STO and Shri Pradeepen Rai, TA, RFRI, Jorhat. The committee went through the report and provided pertaining suggestions and comments which were duly incorporated in the Green and Environment Audit Report. The ICFRE-RFRI committee visited the college on 28th June, 2023 to inspect and monitor the various infrastructures, plantations and other green environment related management works mentioned in the 'Green and Environment audit report-2022-23'.

The Team interacted with Dr. Debajit Saikia, Principal; Dr. Juli Gogoi, Assistant Professor, Department of Botany and Co-ordinator; Shri Apurbajyoti Hazarika, Assistant Professor, Department of English and Co-ordinator, all members of Green and Environment Audit Team and faculties of various departments dealt with the preparation of Green and Environment Audit report. The principal of the college welcomed the monitoring team of ICFRE-RFRI. Dr. Dhruba Jyoti Das, team leader, ICFRE-RFRI monitoring team briefed about the objectives of Green and environment audit. The ICFRE-RFRI team was accompanied by all the aforesaid faculty members during visit of the college. The RFRI team visited the water collection sources, water purifying units, sources of air, noise and soil pollution, human health, medicinal garden, boys' and girls' hostels, library, Chemistry lab., Physics lab. and safety measures in the college. The RFRI team also visited the various departments, infrastructures, plantations, drainage system, different dustbins, signboards and other facilities available in the College campus related to environment. The monitoring team also interacted with the students of the college to make them aware about the environment.

The campus of the college is full of trees, shrubs and herbs including medicinal and ornamental plants. Various plants (trees, shrubs and herbs) were also planted in the campus from time to time for keeping the air in the campus pollution free and of good quality. Some of the important species found in the campus include *Gossypium arboretum, Samanea saman, Ficus religiosa, Ficus bengalensis, Dalbergia sisso, Polyalthia longifolia, Terminalia arjuna, Delonix regia, Mesua ferrea, Cryptomeria japonica, Mimusop elengi, Cassia fistula, Moringa oleifera, Litsea monopetela, Pseudosasa japonica, Gmelina arborea, Melia azedarach, Psidium guajava, Peltophorum pterocarpum, Cocos nucifera, Terminalia chebula, Phyllanthus emblica, Atrocarpus heterophyllus, Bauhinia variegate, Jasminum sambac, Litchi chinensis, Roystonea regia, Moras elba, Cassia tora, Syzygium cumini, Hibiscus-rosa sinensis* etc.

Various display boards for awareness located at important places were also checked. Dry and Wet dustbins in different locations of the college were also seen. In order to save and conserve energy, LED bulbs and tubes have been found used in almost all the classrooms, principal's office, administrative office, library of the college. The other initiatives as mentioned in the Green Audit report were visited as well.

Some of the photographs of the visit and inspection are given below:

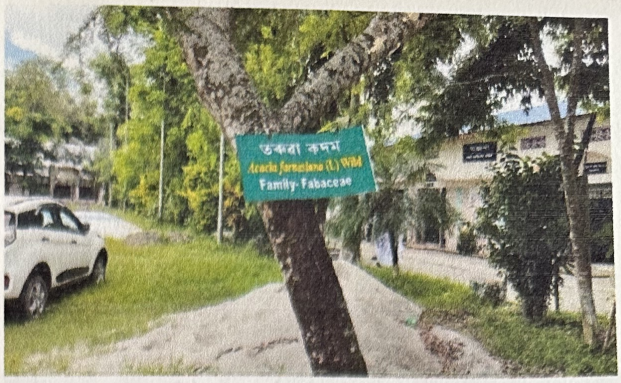
Group photo with the Grren Audit team

Interaction with the Principal & faculty members

A view of the college campus

Economic important trees *Aquilaria malaccensis*

Medicinal Plant Garden in the Campus



Big trees in the Campus

Open space in the Campus

Teak plantation in boundary of the Campus

Arjun tree plantation in the college campus

Guava plantation in the college campus

Rain Water harvesting system, capacity 5KL

Ground water purifying system in the college

Overhead water tanks in the college

Drinking water taps in the college

Dry and wet dustbins for segregation of solid wastes

Dustbins near classromms

Dustbins in the campus for collection of wastes

Bamboo made Dustbins in the library

Dustbins in the campus for collection of plastics

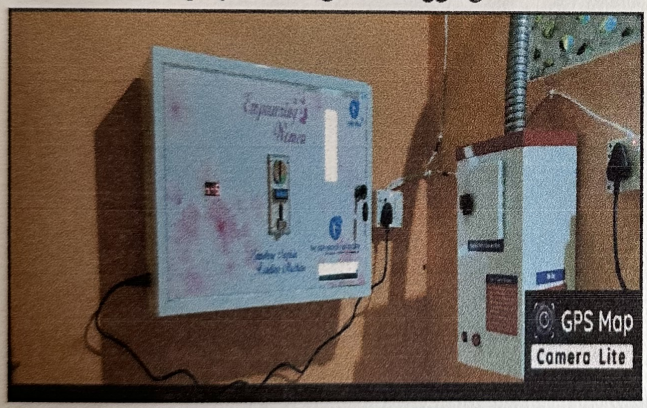
Interaction with faculities during monitoring

Bill for women safety

Awareness campaign against sexual harassment

Display board against Ragging

Display board against use of plastic



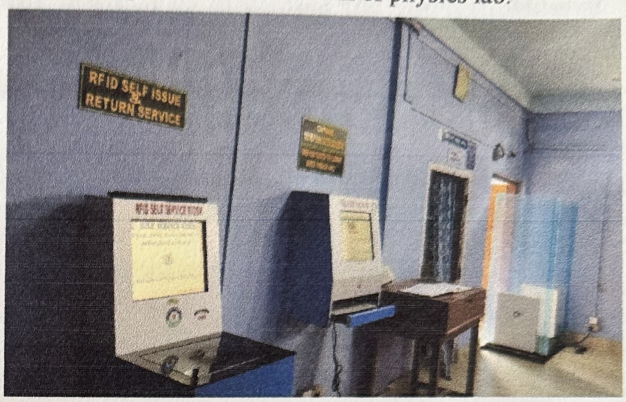
Sanitary Napkin Vending machine in the girls' common room

Vermi-composting system in the college campus

Interactions with students in chemistry lab.

Inspected the Dark room of physics lab.

Inspected the library of the college



Book borrowing machines in the library

Boys' hostel of the college

Girls' hostel of the college

Solar light in the college campus

Interactions with the students of the college

The overall activities as mentioned in the Green and Environment Audit Report were found quite satisfactory. However, the following recommendations are given to the Green and Environment Audit Team and college authority to be followed for further improvement in this regard:

Recommendations:

(1) Large solar panel should be installed in the college to minimize the conventional electricity consumption.

(2) Biogas units should be setup in the college campus to minimize the consumption of fossil fuel.

(3) More cleanliness drives should be carried out in the college campus to maintain the campus more neat and clean.

(4) Number of vermicompost unit in the campus may be increased. Treated bamboos may be used to prepare the base.

(5) More plantations of seedlings/samplings of economic and medicinal important should be done in open spaces of the campus.

Dr. Girish Gogoi, STO
RFRI, Jorhat
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Dr. Rajib Kr. Borah
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RFRI, Jorhat

निदेशक/Director
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जोरहाट, असम/Jorhat, Assam

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INTRODUCTION

1.1. About the College

Majuli College is situated in Majuli island of Assam, India. The largest and most populous river island in the world which is situated the river Brahmaputra was declared as a district in 2016.The island is connected to its nearby city Jorhat through ferry services. The island is known as a cultural hub of Assam. In the recent years there has been phenomenal spurt in the communication and transportation system of this island and its tourism sector also has got a boost. The total land area of the college is 3.91 hector.

Majuli College is one among the leading higher education institutions in the island district. Established on September 17, 1962 with a sacred mission of illuminating the river-island with the beacon of education, Majuli College is the premier institution of higher education situated at Kamalabari in Majuli, the only island district of Assam. Affiliated to Dibrugarh University, Majuli College has been imparting education at the Under Graduate level in both Arts and Science streams. While the Arts stream has been functioning since inception, the Science stream was started in the year 1978 and it came under Deficit Grants in Aid system in 1986. Presently, the college has 10 (ten) departments in Arts stream and 5 (five) departments in Science stream. Offering both Higher Secondary and Degree courses to about 1400 students per year, Majuli College is the first college in the island which has both Arts and Science streams. The college offers P.G. courses in Distance Learning Mode under Dibrugrah University and U.G. and P.G. courses in various subjects under Krishna Kanta Handiqui State Open University. Other than these, the college offers vocational as well as add-on courses for the benefit of the students in Tourism, Journalism, Computer Applications, performing art and Mask Making, Weaving, Web design and so on.

Figure 1: Aerial view of the College Campus (Source-Google Earth)

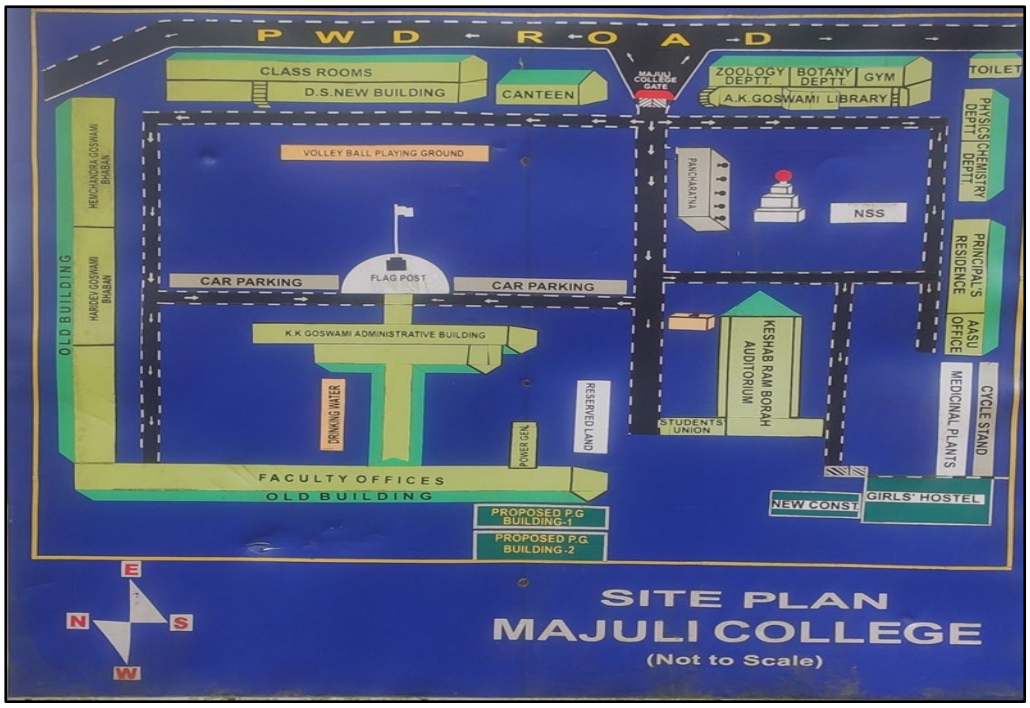

Figure 2: Site map of the College Campus

1.2. The vision of the college:

The vision of the college is to develop it into a centre of excellence at par with the best of the state and country by constantly promoting and stimulating intellectual and professional leadership among its stakeholders and creating a healthy research ambience commensurate with the demands of time through pursuit of quality research studies, introduction of cost-effective, value-based and career-oriented multi-disciplinary courses/programmes, and thus produce ideal citizens of the nation with an ability to lead every sphere of rational human activity and make holistic contributions to National Development.

1.3. The mission of the college:

- To make higher education available, accessible and affordable to the socially and economically underprivileged sections of the society by making them part of the global knowledge society.
- To create ideal human resources infusing them with a sense of high regard for and commitment to the rich heritage of the nation.
- To inculcate in them a rich democratic spirit, innovative thinking, creativity, self-evaluation and a sense of gender-sensitive coordination and cooperation thereby

helping them develop healthy leadership qualities to guide the society in different spheres.

- To prepare them in every possible way to cope with the challenges of the highly competitive educational scenario and employability market.
- To work for the conservation and promotion of the rich cultural heritage of the region.
- To associate itself with the national ambition of being a knowledge superpower.

1.4. Goals and Objectives of the College

The objectives of the College are:

- ✓ To create a gender friendly ambience in the college.
- ✓ To promote innovative methods of teaching-learning and evaluation.
- ✓ To render academic and financial assistance to the socially, economically and academically disadvantaged students of the society.
- ✓ To encourage the students to participate in various academic as well as extracurricular activities.
- ✓ To motivate and widen the horizon of knowledge and experience of the teachers of the institution through research activities, publications and other promotional activities.
- ✓ To provide comprehensive education, integrate professional knowledge and skills in the students.
- ✓ To provide experience and hands-on-training with state-of-the-art infrastructure and highly qualified teaching faculty.
- ✓ To impart moral values, social responsibilities and attribute of students to make them good citizens.
- ✓ To provide friendly excellence academic atmosphere for faculty, staff and students for self-development.
- ✓ To create a transparent environment that supports effective communication at all levels.

1.5. Strategic plan of the College

Majuli College prepared a **strategic Plan** for 10 years (2022-2032) after the Perspective Plan Design Committee was formed vide letter No. MC/03-2021 dated 17.08.2022. The plan was duly approved by the College Governing Body on 3rd February, 2023.

This plan is principally based on **SWOC** analysis of the college, **NAAC Peer team's suggestions** made in 2019 and **NEP-2020**. Contributing to nation-building and skills development of students, the College shall strive to develop itself into a centre of excellence by 2032. The 'Quest for Excellence' has been planned with the following aspects:

1.5.1. Academic and Administrative Aspects:

a. In the line of NEP-2020, the college shall strive to be a stand-alone institution in true sense of the word by 2032. Keeping this aspect in mind, multiple Add-on courses on skill-based education having professional demand will be offered to students.
b. All academic departments will attempt to offer PG courses fulfilling the required norms and with due approval from the authorities concerned.
c. National and International tie-ups with different organizations, industries and institutions will be made through MOUs for student and faculty exchanges.
d. Thrust will be given to conduct research works in all teaching departments. Ph.D. courses will be offered in various departments. Major and Minor research projects will be conducted in the College.
e. Resource mobilization of the College through organic farming, fishery, poultry etc. will be encouraged and facilitated.
f. Green Initiatives will be done in a massive way as a measure to maintain echo-friendly atmosphere.
g. The College will sincerely work for community engagement in its different social initiatives.
h. B.Ed. programme will be launched in next five years.

Student Support:

a. Enormous Campus Recruitment Drives will be conducted for Placement of students through government and non-government organizations, Industry, MNC linkage.
b. All classrooms will be transformed into smart classrooms.
c. Sophisticated language and computer labs will be launched.
d. Facilities for sports and extra-curricular activities will be augmented.
e. The mechanism to access the central Library will be channelized in such a way that this will remain open in all days of the week from morning to midnight.
f. Sophisticated and hygienic canteen facility will be made available for both resident and non-resident students.

g. Uninterrupted power supply with alternative sources of energy such as solar, bio-gas will be made functional.
h. One Indoor stadium will be constructed
i. A couple of more hostels for boys and girls shall be constructed
j. A pro-active Alumni association will work for all-round developments of the college

1.5.2. Support for Teaching and Non-teaching staff:

a. All teachers will have individual cabin with modular tools, computer, printer, wi-fi etc.
b. A fully functional Crèche for the children of teaching and non-teaching staff will be established in the college premise.
c. Residential houses for teaching staff will be constructed.
d. Teachers will be given financial support for attending national/international level workshops/seminars.

1.6. Environmental policy of the College

Government of India through its National Environment Policy in 2006 has made mandatory for every organization to conduct green audit / environmental audit in order to ensure a clean and healthy environment within and outside the organization. Further, it also helps in effective learning and provides a conductive learning environment. Efforts are taking place around the world in order to address various environmental issues. Green auditing or environmental auditing is one among them for educational institutions. Green auditing helps organization to understand various environmental issues of the organization and identify existing lacuna or gap towards meeting the objective of National Environmental Policy and thus, to plan accordingly.

The following are the environmental policy of our College

- To make efficient and environmentally responsible use of water, including identifying opportunities for water reuse
- Installation of Rain Water Harvesting unit.
- To raise awareness of staff and students of the College on environmental impact, activities and performance and good practice.
- To minimize the use of paper to go towards paperless office etc.
- Greenery is maintained in the campus by green landscaping with trees and plants.
- Use of bicycle/ Battery-powered vehicles

- Pedestrian-friendly pathways
- Solar energy units have been installed in the campus.
- The campus has been declared as tobacco free zone.
- The campus has been declared as plastic free zone.
- Regular cleanliness is maintained by volunteers of NSS and NCC Cadres.

GREEN AUDIT

Green Audit is a step-by-step reviewing process that helps in the systematic identification, quantification, analysis, and reporting of the critical aspects that matter in the environmental assessment of a site. It analyzes and determines the ideal environmental practices inside the concerned sites. In short, it is impactful for developing an eco-friendly ambiance.

The Green audit process was began in the 1970s with an intention of identifying the activities carried out in a given institution or company. This was initiated against the background of growing concern over changing climate and related aspects. Green audit can be a useful tool for a college to determine how and where they are using the most energy or water or resources; the college can then consider how to implement changes and make savings. It can also be used to determine the type and volume of waste, which can be used for a recycling project or to improve waste minimization plan. It can create health consciousness and promote environmental awareness, values and ethics. It provides staff and students better understanding of green impact on campus. If self-enquiry is a natural and necessary outgrowth of a quality education, it could also be stated that institutional self-enquiry is a natural and necessary outgrowth of a quality educational institution. Thus, it is imperative that the college evaluate its own contributions toward a sustainable future. As environmental sustainability is becoming an increasingly important issue for the nation, the role of higher educational institutions in relation to environmental sustainability is more prevalent. A continuous process of such audit might result in maintaining the quality of these aspects within the premises of any organisation.

2.1. Goals and objectives of Green Audit:

Green audit serves as a means to identify opportunities to sustainable development practices, enhance environmental quality, improve health, hygiene and safety, reduce liabilities and save money and achieve values of virtue. Environmental audits can be a highly valuable tool for college in a wide range of ways to improve their environmental and economic performance and reputation while reducing wastages and operating costs. The main aim objectives of this green audit is to assess the environmental quality and the management strategies being implemented in Majuli College, Majuli. The specific objectives are:

- To identify and quantify the present resources.

- To analyse the environmental practices within the college campus.
- To assess the quality of the water and soil in the college campus
- To monitor the energy consumption pattern of the college
- To quantify the liquid and solid waste generation and management plans in the campus.
- To assess the carbon foot print of the college
- To impart environment management plans to the college
- To assess whether extracurricular activities of the Institution support the collection, recovery, reuse and recycling of solid wastes.
- To identify the gap areas and suggest recommendations to improve the Green Campus status of the College.

2.2. Constitution of Green Audit

The Green Audit Committee will act as per the environmental policy and should the responsibility of maintaining and protecting environment surrounding the college. The aim of the committee is to provide advice for the development of environmental policy and practice in the areas of.

- Waste Management
- Soil Management
- Water management
- Energy use and conservations
- Eco-friendly techniques
- Noise Pollution
- Air Pollution
- Paper less operating procedure
- Green environment and clean campus

2.3. Focus Area of Study

Green audit forms part of a resource management process. Eco-campus focuses on the reduction of contribution to emissions, procure a cost effective and secure supply of energy, encourage and enhance energy use conservation, promotes personal action, reduce the institute's energy and water consumption, reduce wastes to landfill, and integrate environmental considerations into all contracts and services considered to have significant

environmental impacts. Target areas included in this green auditing are water management, energy management, waste management, biodiversity audit, green campus and carbon footprint.

2.3.1. Auditing for Water Management

Water is a natural resource; all living organisms depend on water. While freely available in many natural environments, in human settlements potable (drinkable) water is less readily available. Groundwater depletion and water contamination are taking place at an alarming rate. Hence it is essential to examine the quality and usage of water in the college. Water auditing is conducted for the evaluation of facilities of raw water intake and determining the facilities for water treatment and reuse.

2.3.2. Auditing for Energy Management

Energy conservation is an important aspect of campus sustainability which is also linked with carbon foot print of the campus. Energy auditing deals with the conservation and methods to reduce its consumption related to environmental degradation. It is therefore essential that any environmentally responsible institution examine its energy use practices.

2.3.3. Auditing for Waste Management

Human activities create waste, and it is the way these wastes are handled, stored, collected and disposed of, which can pose risks to the environment and to public health. Pollution from waste is aesthetically unpleasing and results in large amounts of litter in our communities which can cause health problems. Solid waste can be divided into three categories: bio-degradable, non-biodegradable and hazardous waste. Unscientific management of these wastes such as dumping in pits or burning them may cause harmful discharge of contaminants into soil and water supplies, and produce greenhouse gases contributing to global climate change respectively. Special attention should be given to the handling and management of hazardous waste generated in the college. Bio-degradable waste can be effectively utilized for energy generation purposes through anaerobic digestion or can be converted to fertilizer by composting technology. Non-biodegradable waste can be utilized through recycling and reuse. Thus the minimization of solid waste is essential to a sustainable college. The auditor diagnoses the prevailing waste disposal policies and suggests the best way to combat the problems.

2.3.4. Auditing for Green Campus Management

Trees play an important ecological role within the urban environment, as well as support improved public health and provide aesthetic benefits to cities. In one year, a single mature tree will absorb up to 48 pounds of carbon dioxide from the atmosphere, and release it as oxygen. The amount of oxygen released by the trees of the campus is good for the people in the campus. So, while all are busy studying and working all the trees in campus are also working hard to make the air cleaner for all.

2.3.5. Noise Level Management

Access to education is one of the most important opportunities in our lives, however there is increasing evidence that excessive noise levels can create a negative learning environment. Various noise management techniques adapted in the college campus to control noise.

2.3.6. Air Quality Assessment

The quality of the air on campus across a variety of time intervals and reports the results. It also examines the kind and number of pollutants created by the institution in order to discover efficient ways to minimise the carbon footprint and establish a sustainable environment.

METHODOLOGY

The purpose of the green audit of our institute is to ensure that the practices followed at the campus are in accordance with the Green Policy of the country. The methodology includes: physical inspection of the campus, observation, data collection and review of the documentation followed by data analysis.

The methodology adopted for this audit was a twostep process comprising of:

3.1. Data Collection

In data collection phase, exhaustive data collection was performed using different tools such as observation, survey communicating with responsible persons and measurements. Data collection was done from the primary sources.

Following steps were taken for data collection:

- The team visited each department, centres, Library, canteen, gardens, campus etc.
- Data on the general information was collected by observation.
- The power consumption of appliances was recorded by taking an average value in some cases.
- Plants were identified using standard taxonomic books.
- Waste generated was measured directly at the source of production.

3.2. Survey and Data Analysis

Detailed analysis of data collected include: computation of energy consumption, analysis of latest electricity bill of the campus. Data related to water usage were also analyzed using appropriate methodology.

WATER QUALITY ASSESSMENT AND MANAGEMENT

The primary water sources of the campus are rain water harvesting system and ground water through boring.

4.1. Rain water harvesting unit

As water is becoming scarce, there is need to attain self-sufficiency and water harvesting is one of the innovative and cost-effective technologies to achieve the same. Rain water harvesting involves the direct collection of rainwater which is can be stored for direct use or can be used to replenish the ground water sources. The college has rain water harvesting mechanism which is to be appreciated. The rain water coming from rooftops are collected in a tank of 5000 litre capacity and used for gardening, cleaning and other purposes. This will help generate awareness about the importance of water conservation.

Figure 4.1. Rain water harvesting Unit in College Campus

4.2. Ground water collection & Treatment

Ground water of the college does not contain any harmful elements. The major concern of the ground water in the campus is the high iron content. The ground water collected through boring and then passes through a filter which is made to take away particles from the water.

Figure 4.2. Fig-Ground water treatment plant

4.3. Water Quality

Water is one of the most fundamental needs to support people's livelihood. Water quality describes the condition of the water, including chemical, physical and biological characteristics, usually with respect to its suitability for drinking. Water quality testing is important because it identifies contaminants and prevents water borne diseases. Drinking or using contaminated water can result in severe illness or death. That is why it is important to ensure that drinking water is safe, clean and free from bacteria and disease. The parameters for water quality are determined by the intended use. Work in the area of water quality tends to be focused on water that is treated for human consumption, or in the environment.

The college organizes awareness programmes on water conservation frequently to spread the message of significance of conserving water. Students who are involved in green committees are doing a good job in water related awareness programmes.

ENVIROCON
Recognised By
Pollution Control Board, Assam

Envirocon Building, I.O.C.L (AOD) New Market
P.O.: Digboi, Dist.: Tinsukia, Assam – 786 171
Ph: 03751-264414, 9435008657, 8876028672
E-mail: envirocon@rediffmail.com

ISO 9001:2015 Certified
ISO 45001:2018 Certified

Format No.: ENV/R/TR/19/DW-01 Rev. No.: 00

TEST REPORT

ULR No.	NA		
Report No.	ENV/TR/23-24/MJC/W-01	**Issue Date**	05/05/2023
Order No.	MC/04-2023/196	**Order Date**	18/04/2023
Report Issued To	MAJULI COLLEGE P.O.: Kamalabari, Dist.: Majuli, Assam - 785106		

Sample Ref. No.:	MJC/2023/DW-2504/01	Sample Source:	Drinking Water Tap, Majuli College	Sample Type:	Drinking Water
Date of Sampling:	25.04.2023	Sample Receipt Date:	26.04.2023	Sample Quantity:	2 Litre
Analysis Start Date:	26.04.2023	Analysis End Date:	02.05.2023	Sampled By:	Bubu Mandal, Envirocon

TEST RESULTS

Sl. No.	Parameters	Test Method	Results	Units	Acceptable Limit*	Permissible Limit* in the Absence of Alternate Source
1.	Colour	IS 3025 (Part 4)	2	PCU	5	15
2.	Odour	IS 3025 (Part 05)	Odourless	-	Agreeable	Agreeable
3.	Taste	IS 3025 (Part 07)	Tasteless	-	Agreeable	Agreeable
4.	Turbidity	IS 3025 (Part 10)	0.13	NTU	1	5
5.	pH	IS 3025 (Part 11)	6.85	-	6.5 – 8.5	No Relaxation
6.	Total Dissolved Solids	IS 3025 (Part 16)	87	mg/l	500	2000
7.	Calcium (as Ca)	IS 3025 (Part 40)	14	mg/l	75	200
8.	Chloride (as Cl)	IS 3025 (Part 32)	3.9	mg/l	250	1000
9.	Copper (as Cu)	IS 3025 (Part 42)	BDL[MDL:0.001]	mg/l	0.05	1.5
10.	Fluorides (as F)	IS 3025 (Part 60)	BDL[MDL:0.01]	mg/l	1.0	1.5
11.	Free Residual Chlorine	IS 3025 (Part 26)	BDL[MDL:0.01]	mg/l	0.2	1
12.	Iron (as Fe)	IS 3025 (Part 53)	0.019	mg/l	0.3	No Relaxation
13.	Magnesium (as Mg)	IS 3025 (Part 46)	2	mg/l	30	100
14.	Manganese (as Mn)	IS 3025 (Part 59)	BDL[MDL:0.001]	mg/l	0.1	0.3
15.	Zinc (as Zn)	IS 3025 (Part 49)	BDL[MDL:0.01]	mg/l	5.0	15
16.	Nitrate (as NO_3)	IS 3025 (Part 34)	BDL[MDL:0.1]	mg/l	45	No Relaxation
17.	Sulfate (as SO_4)	IS 3025 (Part 24)	BDL[MDL:1.0]	mg/l	200	400
18.	Total Alkalinity(as $CaCO_3$)	IS 3025 (Part 23)	54	mg/l	200	600
19.	Total Hardness, (as $CaCO_3$)	IS 3025 (Part 21)	71	mg/l	200	600
20.	Total Arsenic (as As)	IS 3025 (Part 37)	BDL[MDL:0.001]	mg/l	0.01	0.05
21.	Total Chromium, (as Cr)	IS 3025 (Part 52)	BDL[MDL:0.001]	mg/l	0.05	No Relaxation
22.	Total Coliform Bacteria	CPCB Guidelines	Absent	MPN/100 ml	Absent	Absent
23.	E. Coli	CPCB Guidelines	Absent	MPN/100 ml	Absent	Absent

NA: Not Applicable, **BDL**: Below Detectable Limit, **MDL**: Minimum Detectable Limit

*** Limits as per IS 10500:2012**

ENVIROCON Date: DIGBOI, ASSAM

***********End of Report***********

Authorised Signatory: Mr. Pankaj Baroi (Director)

NOTE:
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A water audit can help save money by reducing the unnecessary usage of water. It makes the students and institutional work force more aware and responsible. A water audit can be a student project that encompasses a number of subjects. It is possible to cut the water usage by 10-30% by implementing simple conservation measures and optimum utilization of water. The main objectives of water audit committee are: To assess the quantity of water the institution currently uses, To find out the number of water devices the institution possesses, to identify how many litres per student per day could save and to find which areas of the college might have problems, like leaking taps that waste water.

14,500 L of water is used per day by the college for its different uses. 200 L of water per day is lost through the leaking of pipes. The water consumption in the summer season is significantly high compared to other months.

Table 1: The details of Majuli College Water using data and its utility

Sl. No.	Name of building	Water Source	Water Tap		Total	Remarks
			Wash basin	Latrine		
1	College canteen (Byanjon)	Water pump motor	2 (P) + 1(S)		3	
2	2 Storied building					
	Ground floor		4(P)		4	
	First floor		1(P)		1	
3	Girls' common room		2(P)		2	
4	Boys' common room		2(P)		2	Broken -1
5	Teachers common room		2(P)	1(P)	3	
6	Old building corridor latrine		1(P)	1(P)	2	
7	Examination room		2(P)		2	
8	Old building backside		4(P) +4(S)		8	
9	Administrative building					
	Ground floor		2(P)	5(P)	7	
	Kitchen		1(P)		1	
	Teachers conference room		3(P)		3	

Sl. No.	Name of building	Water Source	Water Tap		Total	Remarks
			Wash basin	Latrine		
	Filter tank nearby		3(S)		3	
	Gardening tap		2(P)		2	
	First floor					
	Principal sir chamber		2(P)		2	
	Digital class		3(P)		3	Broken-1
10	Auditorium					
	Inside			3(P)	3	
	Outside			3(P)	3	
11	Principal quarter					
	Diganta Hatiboruah quarter		1(P)	1(P)	2	
	Dinesh Pegu quarter		2(P)	1(P)	3	
12	Dept. of Chemistry building		1(P)		1	
13	Dept. of Physics Building		1(P)		1	Broken-1
14	Dept. of Botany building		2(P) +1(S)		3	
15	Library					
	Inside		3(P)		3	
	Outside		1(P)		1	
16	Jag Jibon Ram Boys' hostel					
	Ground floor		9(S)	3(S)	12	
	First floor		4(S)	2(S)	6	
17	Girls' hostel					
	Old building ground floor		2(S) +6 (P)		8	
	First floor		10(P)		10	
	New building grounds floor		4(S) + 2(P)		6	
	First floor		5(S) + 1(P)		6	

***S- Steel tap & P – Plastic tap**

Table 2: Source of Water Supply

Sl. No.	Nature of supply	Quantity	Tanks Used	Remarks
1.	Ground water pump &boring	4	12	Filter-4 Storage Tank-4

Table3: Water reuse and usage

Sl. No.	Nature of supply	Used for	Remarks
1.	Iron and arsenic free filter water	Drinking purposes	
		Kitchen purposes	
		Bathroom uses	
		Cleaning activities	
2.	Wastage water	Gardening purposes	
		Washing vehicles	
		Building purposes	

Table 4: Water amount utilized by Majuli College

Sl. No.	Building	Quantity	Storage tanks	Amount/Day	Remarks
1	College canteen	1000Ltr	1	2000 Ltr	
2	Administration building	2000Ltr	2	2000 Ltr	
3	Boys hostel	1000Ltrs	2	2000Ltrs	
4	Girls hostels	1000LtrsS	4	4000Ltrs	
5	Other activities	--	--	1000Ltrs	
6	Gardening			500 LTRS	
7	Building & Construction purposes			3000LTRS	While construction was done

4.4. Future plant of Water Audit

- ✓ There is no mechanism to find the water wastage. This must be dealt with utmost care without delay and must be included in the future action plan.
- ✓ The college does not have waste water treatment for waste water generated from laboratories, canteen, hostel kitchen, toilets, bathrooms, and office rooms.
- ✓ The waste water from canteen and kitchens is not suitably controlled and is not used for gardening. This has to be addressed and suitable action plans have to be evolved.
- ✓ No adequate facilities available in the college to treat the waste water from chemical laboratories.

AIR QUALITY ASSESSMENT AND MANAGEMENT

5.1. Air Quality assessment

Majuli college invited "Environcon"- an ISO 9001:2015 and 45001:2018 certified organisation recognised by Pollution Control Board, Govt. of Assam to make the Air Quality Assessment of the college campus. The Ambient Air Quality Test was done by the said organisation from various locations viz. backside of college campus, centre of college playground and entrance of administrative building.

Table 5: Results of air quality test

Sl. No.	Parameters	Limit*	Results		
			Backside of College campus	**College playground**	**Entrance to Administrative building**
1	$PM_{2.5}$	60	11.9	10.6	12.8
2	PM_{10}	100	42.4	38.2	40.6
3	SO_2	80	BDL (MDL 5.0)	BDL (MDL 5.0)	BDL (MDL 5.0)
4	NO_2	80	BDL (MDL 5.0)	BDL (MDL 5.0)	BDL (MDL 5.0)

BDL-Beyond detectable limit

MDL-Minimum

*Limits- Limits as per CPCS

ENVIROCON
Recognised By
Pollution Control Board, Assam

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ISO 9001:2015 Certified
ISO 45001:2018 Certified

Format No.: ENV/R/TR/19/AA-01 Rev. No.: 00

TEST REPORT

ULR No.	NA		
Report No.	ENV/TR/23-24/MJC/A-01	**Issue Date**	05/05/2023
Order No.	MC/04-2023/196	**Order Date**	18/04/2023
Report Issued To	MAJULI COLLEGE P.O.: Kamalabari, Dist.: Majuli, Assam - 785106		

Sample Ref. No.:	MJC/2023/A-2404/01	Sample Source:	Entrance to Admin Buliling, Majuli College (GPS- 26.953126^0, 94.171593^0)	Weather Condition:	Cloudy
Date of Sampling:	24.04.2023	Sample Receipt Date:	26.04.2023	Instrument Used:	FPS, RDS & Gaseous Attachment
Analysis Start Date:	27.04.2023	Analysis End Date:	03.05.2023	Sampled By:	Bubu Mandal, Envirocon

TEST RESULTS

Sl. No.	Parameters	Test Method	Results	Units	Limits*
1.	Particulate Matter (size less than 2.5 µm) or $PM_{2.5}$	IS 5182 (Part 24)	12.8	µg/m^3	60 (24 Hours Average)
2.	Particulate Matter (size less than 10 µm) or PM_{10}	IS 5182 (Part 23)	40.6	µg/m^3	100 (24 Hours Average)
3.	Sulphur Dioxide (as SO_2)	IS 5182 (Part 2)	BDL [MDL: 5.0]	µg/m^3	80 (24 Hours Average)
4.	Nitrogen Dioxide (as NO_2)	IS 5182 (Part 6)	BDL [MDL: 5.0]	µg/m^3	80 (24 Hours Average)

NA: Not Applicable, **BDL**: Below Detectable Limit, **MDL**: Minimum

*** Limits as per CPCB**

***********End of Report***********

ENVIROCON DIGBOI, ASSAM

Authorised Signatory: Mr. Pankaj Baroi (Director)

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Format No.: ENV/R/TR/19/AA-01 Rev. No.: 00

TEST REPORT

ULR No.	NA		
Report No.	ENV/TR/23-24/MJC/A-02	**Issue Date**	05/05/2023
Order No.	MC/04-2023/196	**Order Date**	18/04/2023
Report Issued To	MAJULI COLLEGE P.O.: Kamalabari, Dist.: Majuli, Assam - 785106		

Sample Ref. No.:	MJC/2023/A-2404/02	Sample Source:	Centre of College Playground, Majuli College (GPS- 26.953126°, 94.171592°)	Weather Condition:	Cloudy
Date of Sampling:	24.04.2023	Sample Receipt Date:	26.04.2023	Instrument Used:	FPS, RDS & Gaseous Attachment
Analysis Start Date:	27.04.2023	Analysis End Date:	03.05.2023	Sampled By:	Bubu Mandal, Envirocon

TEST RESULTS

Sl. No.	Parameters	Test Method	Results	Units	Limits*
1.	Particulate Matter (size less than 2.5 µm) or $PM_{2.5}$	IS 5182 (Part 24)	10.6	µg/m³	60 (24 Hours Average)
2.	Particulate Matter (size less than 10 µm) or PM_{10}	IS 5182 (Part 23)	38.2	µg/m³	100 (24 Hours Average)
3.	Sulphur Dioxide (as SO_2)	IS 5182 (Part 2)	BDL [MDL: 5.0]	µg/m³	80 (24 Hours Average)
4.	Nitrogen Dioxide (as NO_2)	IS 5182 (Part 6)	BDL [MDL: 5.0]	µg/m³	80 (24 Hours Average)

NA: Not Applicable, **BDL:** Below Detectable Limit, **MDL:** Minimum

*** Limits as per CPCB**

***********End of Report***********

ENVIROCON DIGBOI, ASSAM

Authorised Signatory: Mr. Pankaj Baroi (Director)

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Format No.: ENV/R/TR/19/AA-01 Rev. No.: 00

TEST REPORT

ULR No.	NA		
Report No.	ENV/TR/23-24/MJC/A-03	**Issue Date**	05/05/2023
Order No.	MC/04-2023/196	**Order Date**	18/04/2023
Report Issued To	MAJULI COLLEGE P.O.: Kamalabari, Dist.: Majuli, Assam - 785106		

Sample Ref. No.:	MJC/2023/A-2404/03	Sample Source:	Backside of College Campus, Majuli College (GPS- 26.953554^0, 94.170297^0)	Weather Condition:	Cloudy
Date of Sampling:	24.04.2023	Sample Receipt Date:	26.04.2023	Instrument Used:	FPS, RDS & Gaseous Attachment
Analysis Start Date:	27.04.2023	Analysis End Date:	03.05.2023	Sampled By:	Bubu Mandal, Envirocon

TEST RESULTS

Sl. No.	Parameters	Test Method	Results	Units	Limits*
1.	Particulate Matter (size less than 2.5 µm) or $PM_{2.5}$	IS 5182 (Part 24)	11.9	µg/m^3	60 (24 Hours Average)
2.	Particulate Matter (size less than 10 µm) or PM_{10}	IS 5182 (Part 23)	42.4	µg/m^3	100 (24 Hours Average)
3.	Sulphur Dioxide (as SO_2)	IS 5182 (Part 2)	BDL [MDL: 5.0]	µg/m^3	80 (24 Hours Average)
4.	Nitrogen Dioxide (as NO_2)	IS 5182 (Part 6)	BDL [MDL: 5.0]	µg/m^3	80 (24 Hours Average)

NA: Not Applicable, **BDL:** Below Detectable Limit, **MDL:** Minimum

*** Limits as per CPCB**

***********End of Report***********

ENVIROCON DIGBOI, ASSAM

Authorised Signatory: Mr. Pankaj Baroi (Director)

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5.2. Air Quality Management

We at college continuously are conducting awareness program for staff, students, and society for protecting and maintaining environment. The awareness is also done by arranging road shows, rallies on various issues related to environment and health. The college students and faculty members through NSS/NCC are involved in the activities.

Figure 5.1: Tree plantation by the NSS Volunteers near their home Areas, agricultural land etc on

Figure 5.2: Cleanliness drive and collection of plastics bottles in the ferry ghat was taken by the volunteers of NSS.

Figure 5.3: Tobacco free Campus.

NOISE POLLUTION ASSESSMENT AND MANAGEMENT

One of the most prevalent problems affecting people in their life is noise, which represents a recognized environmental problem and a social health concern. Noise by definition, is over-loud or disturbing sound. Sound levels are measured in decibels (Db). It is a unit for expressing the relative intensity of sound on a scale from 0 to 130. The World health Organization (WHO) defines noise above 65 decibels (DB) as noise pollution. Noise becomes harmful when it exceeds 75 decibels (dB)and is painful above 120 db. As per Indian standards the desirable noise pollution for educational institutions and hospitals in daytime is 50 dB.

6.1. The Noise Level at the Campus:

The Sound metre application was used to collect noise levels at different time intervals across the college campus. (Data source: Sound Meter App dated 13/05/2023). The software is capable of detecting any sound in the area and displaying its lowest, average, and maximum volumes. The noise level was determined in the college campus to be within acceptable safety levels. As a consequence, campus is peaceful and quiet, with minimal disturbance of academic activity, maintaining a favourable academic climate.

Table6: Ambient Noise Level Measurement Result

Sl. No	Locations	Date of Measurement	Day Time (dB-A)
1	In front of college main gate	25/04/2023	49
2	Near College Library	25/04/2023	46
3	Inside Canteen	25/04/2023	48
4	Near Auditorium	25/04/2023	48
5	Near College Girls' Hostel	25/04/2023	46
6	Near College Boys' Hostel	25/04/2023	49
7	In front of Administrative Building	25/04/2023	45
8	In front of Physics Department	25/04/2023	45
9	In front of Geography Department	25/04/2023	47
10	In front of Education Department	25/04/2023	47
11	Computer laboratory	25/04/2023	48

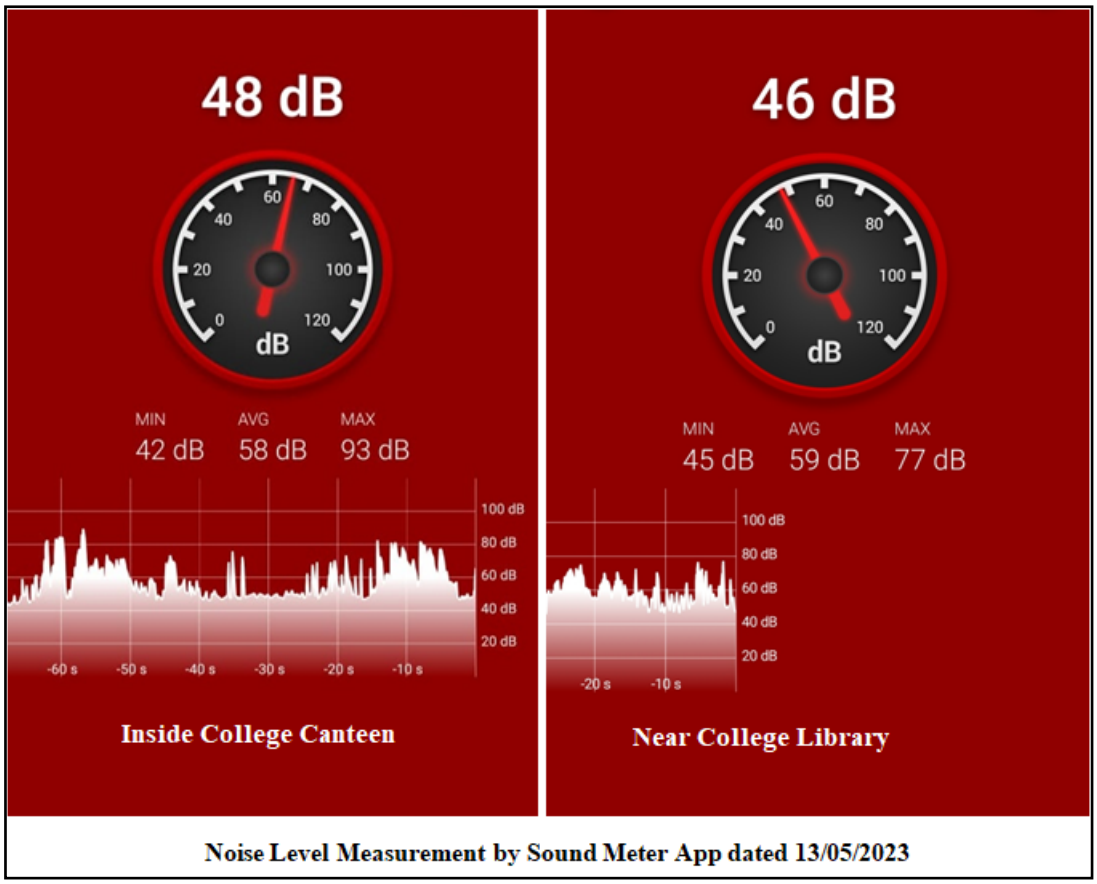

Figure 6.1: Noise Level Measurement by Sound Meter App.

6.2. Management of Noise level in College Campus

Access to education is one of the most important opportunities in our lives, however there is increasing evidence that excessive noise levels can create a negative learning environment. Background noise interferes with hearing and concentration in the classroom. In our college campus various strategies has been initiated to mitigate noise pollution. Pressure horns are not allowed in the campus, so no one of the staff and students use pressure horns to keep the college noise free. Besides various boards have been displayed in the library and other places in order to maintain silence in the college campus.

Figure 6.2: Photograph Display Boards in College Campus

SOIL QUALITY ASSESSMENT AND MANAGEMENT

Soil samples were collected from four locations of the campus and analysed for the basic parameters. The results are tabulated and presented in the table

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Format No.: ENV/R/TR/19/S-01 Rev. No.: 00

TEST REPORT

ULR No.	NA		
Report No.	ENV/TR/23-24/MJC/S-01	**Issue Date**	05/05/2023
Order No.	MC/04-2023/196	**Order Date**	18/04/2023
Report Issued To	MAJULI COLLEGE P.O.: Kamalabari, Dist.: Majuli, Assam - 785106		

Sample Ref. No.:	MJC/2023/S-2604/01	Sample Source:	Garden, Majuli College	Sample Type:	Soil
Date of Sampling:	24.04.2023	Sample Receipt Date:	26.04.2023	Sample Quantity:	1 KG
Analysis Start Date:	28.04.2023	Analysis End Date:	04.05.2023	Sampled By:	Bubu Mandal, Envirocon

TEST RESULTS

Sl. No.	Parameters	Test Method	Results	Units
1.	pH at 25°C	IS 2720 (Part 26)	7.73	-
2.	Conductance	IS 14767 (2000)	0.32	mS/cm
3.	Organic Carbon	IS 2720 (Part 22)	0.45	%
4.	Available Nitrogen	Soil testing manual, Department of Agriculture & Cooperation Ministry of Agriculture Government of India, 2011	0.029	%
5.	Available Phosphorous		0.017	%
6.	Available Potassium		0.022	%
7.	Available Sulphur		0.018	%
8.	Zinc		262	mg/kg
9.	Copper		298	mg/kg
10.	Iron		1301	mg/kg
11.	Manganese		183	mg/kg
12.	Boron		40.9	mg/kg

NA: Not Applicable, **BDL**: Below Detectable Limit, **MDL**: Minimum Detectable Limit

*********End of Report*********

ENVIROCON Date DIGBOI, ASSAM

Authorised Signatory: Mr. Pankaj Baroi (Director)

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Figure 7.1: Photograph-Plastic free Campus

WASTE MANAGEMENT

Waste management is the basic need for the proper functioning of an institution. Institutional operations generate a variety of wastes that must be properly handled, stored, collected, and disposed of in order to reduce dangers to the environment and public health. In some cases, waste can pose a threat to human health. Health issues are associated throughout the entire processes of waste management. So, the main aim of waste management is to reduce the dangerous effects of such waste on the environment and human health. Institutional wastes can be classified into three primary categories: solid, liquid, and e-waste and each type have different methods of disposal and management. Waste is collected by workers on daily basis from various sources and is separated as dry and wet waste. In the view of Swachha Bharat Abhiyan, volunteers of NSS, students and staff regularly organized campus cleaning drive to maintain the cleanliness of the campus.

8.1. Solid Waste Management

Solid wastes are of three forms- Biodegradable, non-biodegradable, and hazardous waste. Food trash, canteen garbage, and toilet waste are all examples of biodegradable waste. Plastic, tins, and glass bottles are all examples of non-biodegradable garbage. Hazardous trash includes cleaning chemicals, acids, and laboratory chemicals. Waste generated in the college campus managed by the following ways-

- To reduce waste at the college campus students and staff are educated on proper waste management practices through lectures, displaying slogan board in the college campus.
- Each building has multiple dustbins from which cleaning personnel collects wastes.
- Biodegradable wastes are used to prepare vermicompost. All possible dry leaves/branches/grass etc. are used for vermicompost preparation.
- This (vermicompost) fertilizer is utilised in the college's flower and medicinal plant garden.
- Majuli College strongly opposes the use of single use plastic to minimize plastic waste.
- To minimize non-biodegradable waste plastic cup, plates etc are replaced by paper made items.

- The college installed sanitary pad dispenser and vending machine at girl's common room.
- In canteen, dry and wet waste is separated and disposed of properly. The non-biodegradable wastage from all dustbins is collected and disposed of at dumping ground of village council.
- Waste papers, stationery, metal and other scraps are given to scrap collectors for recycling.

8.2 Liquid Waste Management

Hostel sewage, laboratory effluent waste, and canteen effluent waste are the most common liquid wastes created on campus. Liquid waste managed through the following way-

- Liquid waste generated from the college campus are dispose through proper drainage system to avoid stagnation.
- Toilets are properly connected with the main drainage system.
- Wastewater generated from canteen, boys and girls' hostel are dispose properly.
- Drinking water facility is available in the campus. Students are motivated towards judicious usage of water. Student and staff are required to turn the water taps off immediately after use.
- Waste water is properly drained out to maintain greenery and an ecologically aesthetic environment in the campus.

8.3. E-Waste Management

Electronic waste also known as e-waste, are electronic products that have over lived their usefulness and are due for disposal**.** Printers, lab instruments, charging and network cables circuits, desktops, laptops and accessories, Wi-Fi devices, cartridges, sound systems, display units, UPS, Biometric Machine, scientific instruments, and so on are all examples of e-waste. All of these wastes are put to the best possible use. With the increased use of e-mail, cloud storage and USB drives, the use of CDs and DVDs has become almost negligible. Useful parts of electronic gadgets are reused. The e-waste is reused whenever possible by repairing them. All of the equipment that cannot be reused or repurposed is disposed of by approved suppliers.

8.4. Waste Recycling Management:

Waste recycling management Majuli College involves the production of vermicompost from biodegradable solid waste.

8.5. Hazardous Chemical:

Hazardous chemicals like HCl, H_2SO4 and HNO_3 used in the labs are diluted before pouring into sink.

Table 7: Different types of waste generated in the college and their disposal

Sl. No	Types of Waste	Particulars	Disposal method
1	E-waste	Computers, electrical and electronic parts	Direct selling
2	Plastic Wastes	Pen, Refill, Plastic water bottles and other plastic containers, wrappers etc	Direct selling
3	Solid wastes	Damaged furniture, paper waste, paper plates, food wastes	Reuse after maintenance energy conversion
4	Chemical waste	Laboratory waste	Neutralise with water
5	Waste water	Washing, urinals, bathroom	Soak pit
6	Glass waste	Broken glass wares from the labs	Direct selling
7	Sanitary Napkin	----	Napkin Incinerator

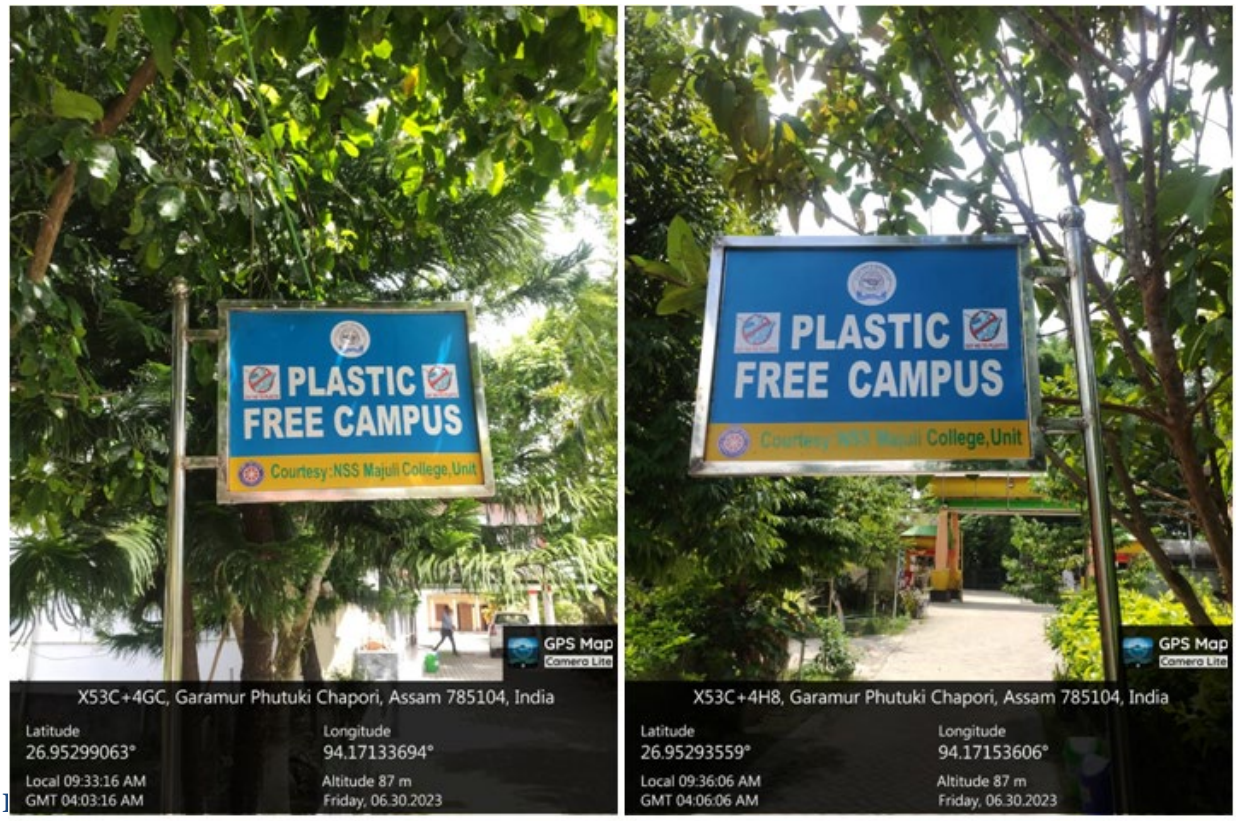


Figure 7.1: Plastic Free Campus

Figure 7.2: Pedestrian Friendly Pathway

Figure 7.3: Cleaning and Collection of waste by NSS Volunteer

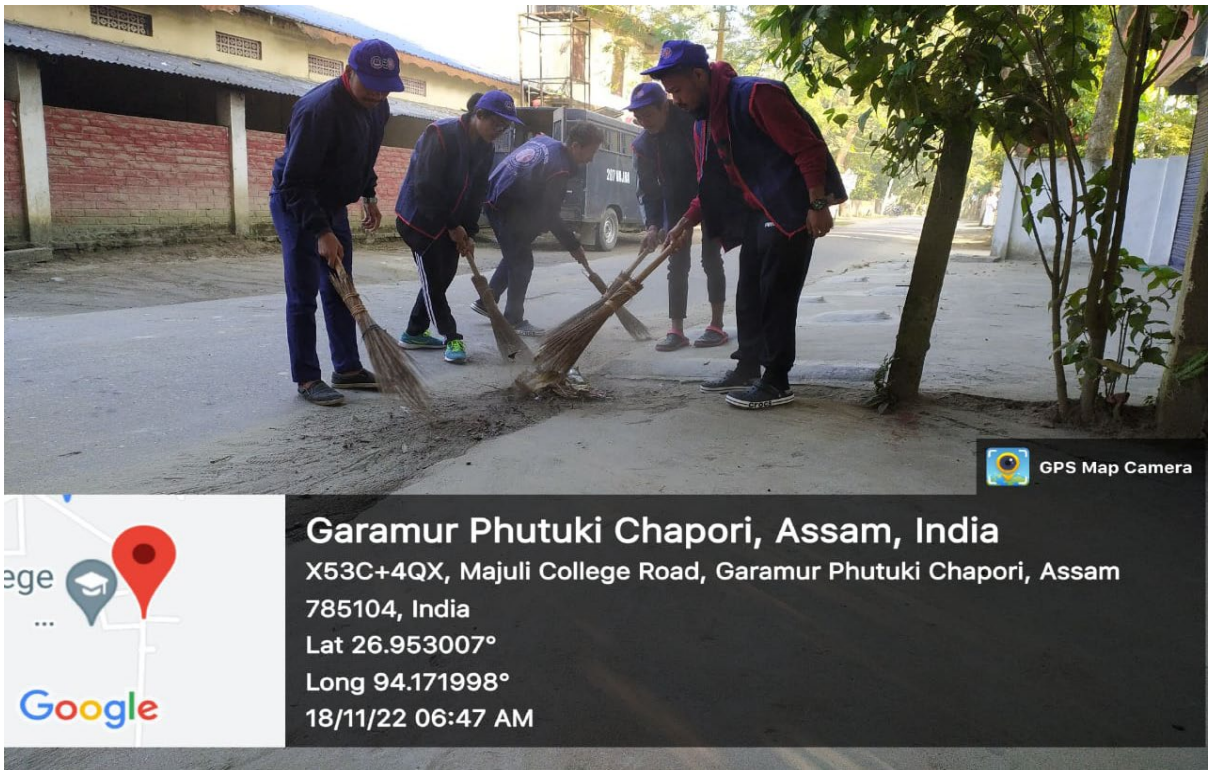


Figure 7.4: Cleaning and Collection of waste by NSS Volunteer

Figure 7.5: Cleaning and Collection of waste by NSS Volunteer

Figure 7.6: Cleaning and Collection of waste by NSS Volunteer

Figure 7.7: Cleaning and Collection of waste by NSS Volunteer

Figure 7.8: Cleaning and Collection of waste by NSS Volunteer

Figure 8.1: Napkin vending machine

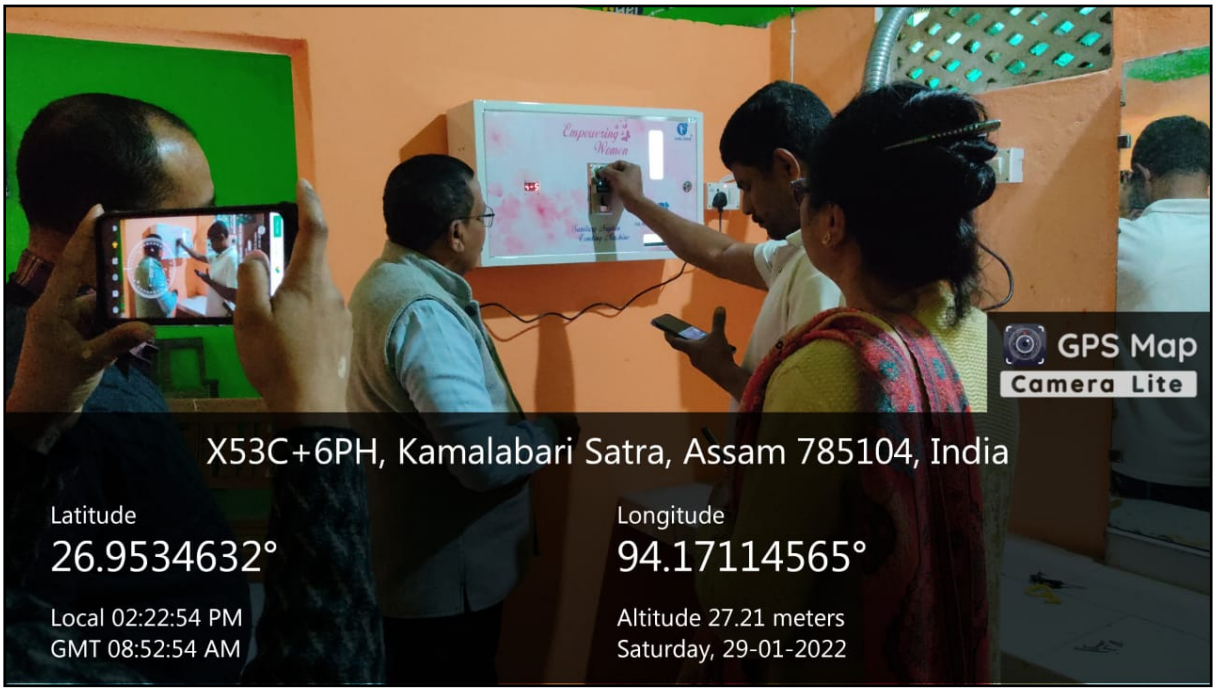


Figure 8.2: The installation of a Sanitary Napkin Vending and Incineratory Machine in the Girl's common room, Majuli College

ENERGY CONSUMPTION AND MANAGEMENT

An assessment of energy consumption, energy sources used, energy management, lighting devices used and other electrical appliances used by our college is an important aspect of sustainability of the community. Hence this is a relevant aspect of the assessment. The audit team assessed the number of electrical appliances and their respective uses in terms of consumption of energy per month in KWh. This indicates the energy management of the campus. Based on the assessment we made suggestions and recommendations.

In Majuli College energy auditing was done with the help of team-teaching staff. The energy audit began with the teams walking through all the different facilities at the college, determining different types of appliances and utilities and identifying the relevant consumption patterns (how often the appliance is used) and their impacts.

The management of the college decides to replace CFL and tube lights with low-energy consuming LED bulbs and tube lights. In addition, the college has its own functional electric generator in case of emergency.

Table 8: List of Electrical Instruments

Serial Number	Name of Instruments	Number of Instruments
1	Refrigerator	03
2	Exhaust Fan	04
3	Centrifuge	01
4	Mixer grinder	01
5	Stabilizer	05
6	Weighing balance	04
7	pH meter	04
8	Incubator	04
9	UV Spectrophotometer	01
10	Electric kettle	03
11	Microscope	08
12	Distilled water plant	02

Serial Number	Name of Instruments	Number of Instruments
13	Computer	12
14	Hot Air Oven	03
15	Autoclave	02
16	LCD TV	01
17	UPS	08
18	Street light (LED)	25
19	Street light (Sodium)	03
20	Speaker	04
21	Projector	06
22	Printer	06
23	Amplifier	02
24	AC	02
25	Aquarium	01
26	Scanner	04
27	Anderson bridge set up	01
28	Magnetic stirrer	01
29	Na lamp	01
30	Spectrometer	03
31	Tracing table	01

Table 9: Energy consumption is shown in the table

Year	Electricity Bill (INR)	Diesel Charges (INR)	Total
2018-19	85081.00	33777.00	118,858.00
2019-20	143416.00	35237.00	178,653.00
2020-21	98070.00	18408.00	116,478.00
2021-22	100682.00	51306.00	151,988.00
2022-23	202357.00	113409.00	315,766.00

Table 10: For Energy Audit (Account of Electrical Switch, fan, Light etc.)

Sl. No.	Class Room	Department	Fan	LED Light
1	1		3	2
2	2		2	2
3	3		2	2
4	4		2	2
5	5	B. Voc. (IT)	2	4
6	6	B. Voc. (IT)	2	4
7	7	Geography Lab	5	2
8	8		6	4
9	9		2	2
10	10		2	2
11	11	Environment Cell	1	1
12	12	NCC	1	1
13	13		5	3
14	14		5	3
15	15		5	3
16	16		5	3
17	17		5	3
18	18		3	1
19	19	Education Department	2	2
20	20	Education Department	1	2
21	21	Information room	1	2
22	22	Boys Common room	4	2
23	23	Girls' Common room	2	2
24	24	Conference room	4	2

Sl. No.	Class Room	Department	Fan	LED Light
25	25	Pol. Science Dept.	2	2
26	26	History Dept.	2	2
27	27	English Dept.	1	2
28	28	Sanskrit Dept.	1	2
29	29	Examination room	2	2
30	30	Mathematics Dept.	2	2
31	31	Assamese Dept.	2	2
32	32	Economics Dept.	2	2
33	33	Sociology Dept.	2	2
34	34		6	4
35	35		1	2
36	36		2	2
37	37		2	2
38	38	IQAC	2	2
39	39	IDOL, DU	1	2
40	40	Digital Class Room	4	2
41	41	KKHSOU	1	2
41	42	Administrative Co-ordinator	1	2
43	43	Teachers common room	2	4
44	44	Digital class room	2	2
45	45	Academic Co-ordinator	1	2
46	46	Accounce	1	2
47	47	Office	5	4
48	48	Zoology Lab.	6	6

Sl. No.	Class Room	Department	Fan	LED Light
49	49	Physics Lab.	4	4
50	50	Chemistry	3	4
51	51	Botany Lab.	5	4
P.G. Building				
52	1		2	2
53	2		2	2
54	3		2	2
55	4		1	2
56	5		2	2
57	6		3	2
58	7			2
59	8		2	2
60	9			2
61	10		3	2
62	11		1	2
63	12		1	2
Library				
64	13		17	4
Total	14		173	162

9.1 Key findings and Observations of Energy Usage

The essence of any energy audit is to find out how well energy management equipment is performing. Each of the components are crucial in ensuring that the organization's energy performance meets the goals set in its energy policy

- Electricity Charges / annum (2018-19) *= Rs 85081/-
- Number of Generators = 01

- Cost of generator Fuel (2018-19) = Rs 33777/-
- Total Cost of Energy / annum = Rs 118858/-
- Cost of Energy / Month* = Rs 9,904.83/-
- Electricity charges / annum (2022-23) ** =Rs 2,02357/-
- Cost of Generator Fuel (2022-23) = Rs 1,13,409/-
- Total Cost of Energy / annum = Rs 315,766/-
- Cost of energy / month** = Rs 26,313/

9.2. Electricity saving methods adopted in the college

- Turn off electrical equipment's when not in use
- Use energy efficient light-emitting diode (LED) bulbs instead of incandescent and CFL bulbs
- Maintain appliances and replace old appliances.
- Use computers and electronic equipment's in power saving mode.

Figure 9.1 -KOEL i GREEN Generator

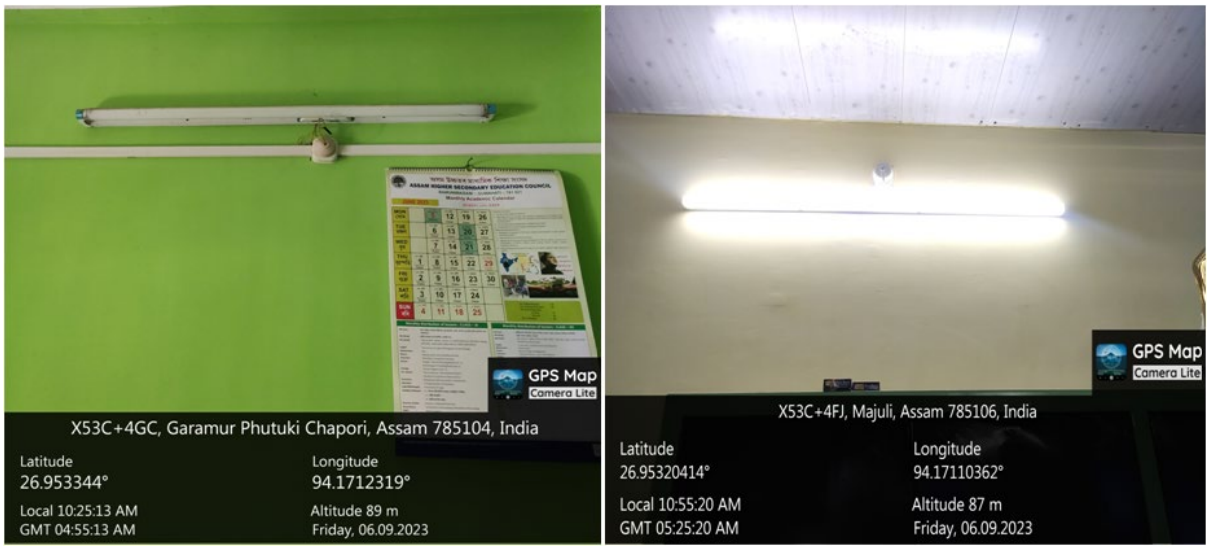


Figure 9.2 - Use of LED Tube light

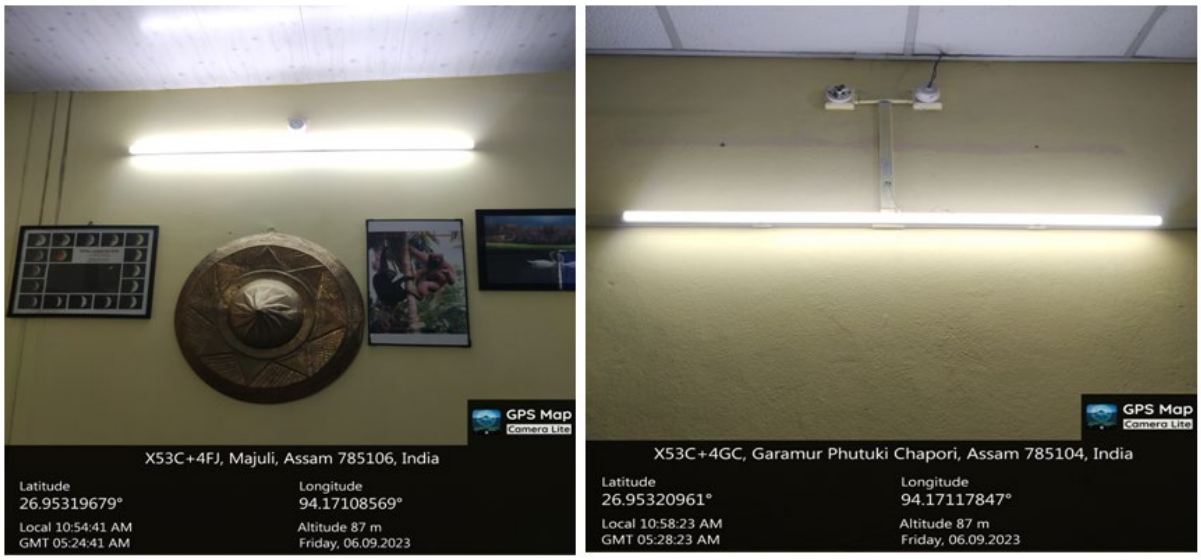


Figure 9.3 - Use of LED Tube light

BIODIVERSITY STATUS OF THE COLLEGE CAMPUS

Majuli College is within the geo-position between latitude 26°57'10" N and longitude 94°10'18" Ein Majuli, Assam, India. The area is immensely diverse with a variety of tree species performing a variety of functions. The College has performed different activities like cleanliness drive, plantation programme, plantation clearing programmes etc. Awareness campaign on sustainable development, plastic recycling, plastic free and biodiversity conservation are organized by NSS in collaboration with different bodies in regular manner. The faculties and students are also encouraged to plant trees in the campus and for this Plantation drives are performed in Environment Day of every year. Most of these tree species are planted in different periods of time through various plantation programmes organised by the authority and have become an integral part of the college. The college has also introduced the system of planting a sapling by the students who take free admission and also, they are responsible to take care of the saplings. However, the protection part of the saplings by fencing and all is maintained by college itself. The trees of the college have increased the quality of life, not only the college fraternity but also the people around of the college in terms of contributing to our environment by providing oxygen, improving air quality, climate amelioration, conservation of water, preserving soil, and supporting wildlife, controlling climate by moderating the effects of the sun, rain and wind. Leaves absorb and filter the sun's radiant energy, keeping things cool in summer. Many spices of birds are dependent on these trees mainly for food and shelter. Nectar of flowers and plants is a favourite of birds and many insects. Leaf – covered branches keep many animals, such as birds and squirrels, out of reach of predators. Different species display a seemingly endless variety of shapes, forms, texture and vibrant colours. Thus, the college has been playing a significant role in maintaining the environment of the entire surrounding areas.

Display of environmental awareness board such as: no littering, plastic free campus etc. and different colour coded waste bins to segregate waste and easy collection is provided in all the blocks of the campus. The institution also in collaboration with NSS and other departments observe various days of environmental values like world environment day, Earth Day, World wetland day, Van Mahatsav etc.

Figure 10.1: Data collection under the supervision of Dr. Juli Gogoi & Pollobi Duwara

Both the plants and the animals are equally important as there is an interaction between the plants and the animals. Teams for various auditing were formed in order to collect the information. With the expertise of the faculty of Botany and Zoology, flora and fauna diversity were identified. Total 41 species of butterflies,5 species of Ants and 3 species of spiders were found during the biodiversity audit (July 2020 to June 2021).

Table11: List of butterfly species in Majuli College campus

Sl. No.	Common Name	Scientific Name	Family
1	Common fourring	*Ypthimahuebneri*Kirby,1871	Nymphalidae
2	Common sailer	*Neptishylas*Linnaeus,1758	Nymphalidae
3	Common evening brown	*Melantisleda*Linnaeus,1758	Nymphalidae
4	Monarch	*Danaus plexippus*Linnaeus,1758	Nymphalidae
5	Large yeoman	*Cirrochroaaoris*Doubleday,1847	Nymphalidae
6	Lemon pansy	*Junonialemonias*Linnaeus,1758	Nymphalidae
7	Magpie crow	*Euploearadamanthus*Fabricius,1793	Nymphalidae
8	Striped blue crow	*Euploeamulciber*Cramer,1777	Nymphalidae
9	Common lascar	*Pantoporiahordonia*Stoll,1790	Nymphalidae
10	Common tiger	*Danaus genutia*Cramer,1779	Nymphalidae
11	Glassy tiger	*Paranticaaglea*Stoll,1782	Nymphalidae

Sl. No.	Common Name	Scientific Name	Family
12	Grey count	*Tanacea lepidea*Butler,1868	Nymphalidae
13	Common crow	*Euploea core* Cramer,1780	Nymphalidae
14	Dark blue tiger	*Tirumala septentrionis*Butler,1874	Nymphalidae
15	Grey pansy	*Junoniaatlites*Linnaeus,1763	Nymphalidae
16	Chocolate pansy	*Junoniaiphita*Cramer,1779	Nymphalidae
17	Chocolate tiger	*Paranticamelaneus*Cramer,1775	Nymphalidae
18	Commander	*Moduzaprocris*Cramer,1777	Nymphalidae
19	Leopard lacewing	*Cethosiacyane*Drury,1773	Nymphalidae
20	Tawny coster	*Acraea violae*Fabricius,1793	Nymphalidae
21	Great duffer	*Discophoratimora*Westwood,1850	Nymphalidae
22	Dark evening brown	*Melantisphedima*Cramer,1780	Nymphalidae
23	Common palmfly	*Elymniashypermnestra*Linnaeus,1763	Nymphalidae
24	Whitebarbushbrown	*Mycalesisanaxias*W.H. Evans,1920	Nymphalidae
25	Tawny rajah	*Charaxes bernardusFabricius,1793*	Nymphalidae
26	Common castor	*Ariadne merione*Cramer,1777	Nymphalidae
27	Yellow pansy	*Junoniahierta*Fabricius,1798	Nymphalidae
28	Great eggfly	*Hypolimnasbolina*Linnaeus,1758	Nymphalidae
29	Danaid eggfly	*Hypolimnasmissipus*Linnaeus,1764	Nymphalidae
30	Colour sergeant	*Athymanefte*Cramer,1780	Nymphalidae
31	Yellow coster	*Acraea issoria*Hubner,1819	Nymphalidae
32	Spring azure	*Celastrinaladon*Cramer,1780	Lycaenidae
33	Frosted elfin	*Callophrysirus*Godart,1824	Lycaenidae
34	Grass jewel	*Chiladestrochylus*Freyer,1845	Lycaenidae
35	Chesnut Angle	*Odontoptilumangulatum*Fedler,1862	Hesperiidae
36	Giant Red eye	*Gangarathyrsis*Fabricius,1775	Hesperiidae

Sl. No.	Common Name	Scientific Name	Family
37	Lime butterfly	*Papilio demoleus*Linnaeus,1758	Papilionidae
38	Great mormon	*Papilio memnon*Linnaeus,1758	Papilionidae
39	Red helen	*Papilio helenus*Linnaeus,1758	Papilionidae
40	Indian cabbage white	*Pieris canidia*Sparrman,1768	Pieridae
41	Chocolate albatross	*Appiaslyncida*Cramer,1777	Pieridae

kingdom:Animalia,Phylum:Arthropoda,Class:Insecta

Ypthima huebneri

Jononia iphita

Hypolimnias bolina

Pantoporia hordonia hordonia

Parthenos sylvia

Junonia atlites

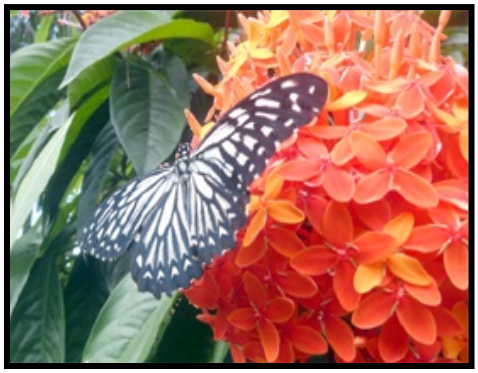
Cethosia cyane

Cirrochroa tyche

Papilio demoleus

Cethosia cyane

Moduza procris



Papilio clytia clytia

Papilio memnon

Pieris canidia

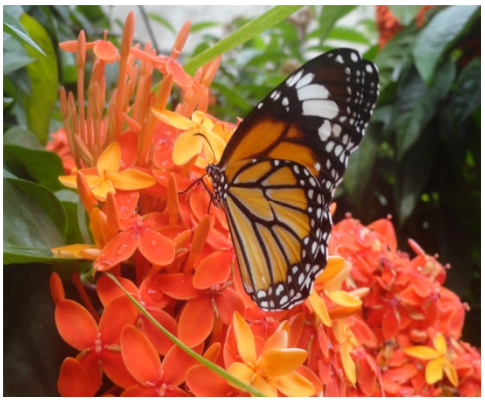
Cethosia cyane

Junonia atlites

Gangara thyrsis

Tinacea lepidea lepidea

P.almona



Danaus genutia

Table 12: List of Ant species in Majuli College Campus during Biodiversity Audit:

Sl. No.	Scientific Name	Common Name	Family
1	*Anoplolepisgracilipes*	Yelow crazy ant	Fomicidae
2	*Camponotusirritans*	Carpenter Ant	Fomicidae
3	*Paratrichinalongicurinus*	Black crazy Ant	Fomicidae
4	*Pheidole dentata*		Fomicidae
5	*Pheidolemegacephala*	Big headed ant	Fomicidae

Table 13:List of Spider species found in Majuli College Campus during Biodiversity Audit:

Sl.No	ScientificName	Common Name	Family
1	*Argiope pulchella*	Garden Cross spider	Araneidae
2	*Cyclosa species*	Cyclosa	Araneidae
3	*Amyciaeaforticeps*	Red ant spider	Thomisidae

Table 14: List of Medicinal Plant species found in Majuli College Campus during biodiversity audit

Sl. No	Scientific name	Common Name	Vernacular Name	Family
1	Alternatherasessilis L	Dwarf copperleaf	Mati kanduri	Amaranthaceae
2	Mimosa aculeaticarpa	Catclaw	Lajuki bon	Fabaceae
3	Amaranthus spinosus	Spiny amaranth	Khutura	Amaranthaceae
4	Vitex negundo		Posotiya	Verbenaceae
5	Melia azedarach L.	Chinaberry tree	Gohora	Meliaceae
6	Solanum torvum	Turkry berry	Hati bhekuri	Solanaceae
7	Alpinia nigra Gaertn.	Bamboo-leaved Galangal		Zingiberaceae
8	Alpinia galanga (L)Wild.)	Greater galangal	Tara baghani	Zingiberaceae
9				
10				
11	Chenopodium album	White goosefoot	Jilmilsaak	Chenopodiaceae
12	Mimosa pudica	Touch-me-not	Nilaji bon	Fabaceae
13	Cuscutareflexa	Giant dodder	Akashi lata	Convolvulaceae
14	Dillenia indica	Elephant apple	Outenga	Dillenieceae
15	Dioscoriaalata	Jackfruit	Kothal	Dioscoriaceae
16	Eupatorium audoratum	Siam weed	Jarmani bon	Asteraceae

Sl. No	Scientific name	Common Name	Vernacular Name	Family
17	Hedyotis scandens Roxb.	-	Bhadeli lota	Rubiaceae
18	Heliotropium indicum L.	Indian turnsole	Hatisur	Boraginaceae
19	Leea indica (Burm. F.) Merr.	-	Kukurathengia	Vitaceae
20	Leucas aspera (Wild.) Link	Thumba	Doron bon	Lamiaceae
21				
22	Mirabilis jalapa	Marvel-of -peru	Godhuligopal	Nyctaginaceae
23	Phoenix dactylifera	Date palm	Khajur	Arecaceae
24	Alocasia macrorrhizos	Giant taro	Man kachu	Araceae
25	Alstoniascholaris	Blackboard tree	Satiana	Apocynaceae
26	Blechnum orientale	Fern	Dhekia	Blechnaceae
27	Smilex zylanica L.	-	Tikanibarua	Smilacaceae
28	Calotropicprocera (Aiton)W.T.Aiton	Rubber bush	Akan	Asclepidaceae
29	Coccinia grandis	Ivy gourd	Kunduli	Cucurbitaceae
30	Lagerstroemia speciosa (L.) Pers.	Banaba plant	Aazar	Lythraceae
31	Cyperus rotundus L.	Java grass	Bahpotiya bon	Cyperaceae
32	Eleusine indica (L.) Gaertn.	Goosegrass	Bobosa bon	Poaceae
33	Cynodondactylon (L.) Pers.	Bermuda grass	Dubori bon	Poaceae
34	Crinum asiaticum L.	Spider lily	Bon nohoru	Amaryllidaceae
35	Erythrina stricta L.	Erythrina	Modar	Fabaceae
36	Eugenia kurzii	Eugenia	Bogijaluk	Myrtaceae
37	Mentha arvensis L.	Mint	Poduna	Lamiaceae
38	Coriander sativum L.	Coriander	Dhania	Apiaceae
39	Oxalis corniculata	Creeping wood sorrel	Horu tengesisaak	Oxalidaceae

Sl. No	Scientific name	Common Name	Vernacular Name	Family
40	Oxalis corymbosa	Pink wood sorrel	Bortengesi	Oxalidaceae
41	Acarus calamus L.	Sweet flag	Boch	Araceae
42	Centella asiatica	Indian pennywort	Bormanimuni	Apiaceae
43	Hydrocotylejavanica Thunb.	Java pennywort	Horu manimuni	Araliaceae
44	Phyllanthus niruri	Gale of the wind	Bhuiaamlokhi	Phyllanthaceae
45	Aegle marmelos L.	Bael	Bael	Rutaceae
46	Thelypterisnoveboracensis	New York fern	Bihlongoni	Thelypteridaceae
47	Kalanchoe pinnata	Bryophyllum	Duportenga	Crassulaceae
48	Acacia farnesiana L	Mimosa bush	Torua kadam	Mimosaceae
49	Aspargusracemosa	Aspergus	Satmul	Liliaceae
50	Azadirachta indica	Neem tree	Mahaneem	Meliaceae
51	Aloe barbadensis	Aloe	Sal konwari	Liliaceae
52	Costusspeciosus C. Specth.	Crepe zinger	Jomlakhuti	Zingiberaceae
52	Murrayakoenigii	Curry plant	Narahingha	Rutaceae
54	Ocimumbasilicum L.	Great basil	Tulakhi	Lamiaceae
55	Ocimum sanctum L.	Holy basil	Kola tulasi	Lamiaceae
56	Zinziber officinale L.	Ginger	Ada	Zingiberaceae
57	Bacopa monnieri (L.) Pennell	Brahmi	Brahmi	Plantaginaceae
58	Houttuynia cordata Thunb.	Heart leaf plant	Musondari	Sairuraceae
59	Alternanthera sessilis(L) R.Bx	Matikanduri	Matikanduri	Amaranthaceae
60	Alocasia indica (L). G Don.	Giant taro	Man kosu	Araceae
61	Amaranthus spinosus	Amaranthus	Hatikhutara	Amaranthaceae
62	BoerhaviadiffusaL.nom.cons.	Red spiderling	Pononua	Nyctaginaceae

Sl. No	Scientific name	Common Name	Vernacular Name	Family
63	Spilanthesacmella (L.)	Toothache plant	Maisung	Asteraceae
64	Aspargusracemosa	Aspergus	Satmul	Liliaceae
65	Ocimum sanctum L.	Basil	Tulokhi	Lamiaceae
66	Ocimumgratissimum L.	Clove basil	Ram tulokhi	Lamiaceae
67	Acacia farnesiana (L) Wild	Sweet acacia	Torua kadam	Mimosaceae
68	Cissampelospereira L.	Velvet leaf	Tubuki lota	Menispermaceae
69	Commenlinabenghalensis	Wandering jew	Kona himolu	Commelinaceae
70	Triphoniumtrilobatum L.	Bengal arum	Chema kochu	Araceae
71	Ajuga bracteosa Wall ex Benth	-	Nilakantha	Lamiaceae
72	Allium sativum	Garlic	Naharu	Liliaceae
73	Cannabis sativa L.	Purple kush	Bhang	Cannabinaceae
74	Cynodondactylon L.	Bermuda grass	Dubari bon	Poaceae
75	Cyperus rotundus L.	Purple nutsedge	Keya bon	Cyperaceae
76	Piper betel L.	Betel	Pan	Piperaceae
77	Eclipta prostrate L syn. E. elba	Bhringraj	Kehraj	Asteraceae
78	Curcuma aromaticaSalisb.	Wild turmeric	Bon haladhi	Zingiberaceae
79	Physalis angulata L.	-	Kopalphuta	Solanaceae
80	Curcima longa	Turmeric	Haladhi	Zingebaraceae
81	Elsholtziaciliata	Vietnamese balm	Bon tulasi	Lamiaceae
82	Eupatorium odorata L.R.M.King	Siam weed	Jarmani bon	Asteraceae
83	Jatropha curcas	Barbados Nut	Bongaliara	Euphorbiaceae
84	Piper longum L.	Indian long	Jaluk	Piperaceae

Sl. No	Scientific name	Common Name	Vernacular Name	Family
85	Urena lobata	Congo jute	Hunborolua	Malvaceae
86	Clerodendrumcolebrookianum Wall.	East Indian Glory Bower	Nephaphu	Lamiaceae
87	Phogacanthusthyrsiformis	Wild Nongmakha	Titabahok/Tita phool	Acanthaceae
88	Lippiajavanica Spreng	Bushy Lippia	Pikhas Bon	Verbenaceae
89	Pouzolziazeylancia (L.) Benn. & R.Br.	Graceful pouzolzsbush	BoraliBokuwa	Urticaceae
90	Drymaria cordata Willd.ex Schult.		Lai jabori	Caryophyllaceae
91	Potentilla indica (Andrews) Th. Wolf.	False strawberry	Gorokhiya	Rosaceae
92	Impatiens balsamina L.	Rose balsam	Dam deoka	Balsaminaceae
93	Lantana camara L.	Spanish flag	Gubon	Verbinaceae
94	Melastomamelabatricum L.		Phutuka	Melastomaceae
95	Micania scandens L.	Climbing hempwood	Prem lota/Jarmani lota/Bakdhoka	Asteraceae
96	Oldenlandiacorymbosa L.	Dimond flower	Bon jaluk	Rubiaceae
97	Paederiafoetida L.	Stinkvine	Bhedai lota	Rubiaceae
98	Portuleca oleracea L.	Common purslane	Malbhogkhutara	Portulaceae
99	Saccharum spontaneum L.	Wild sugarcane	Kahi bon	Poaceae
100	Solanum indicum		Tita bhekuri	Solanaceae
101	Solanum nigrum L.	Black nightshade	Los kochi	Solanaceae
102	Impatiens balsamina	Balsam	Dem deuka	Balsaminaceae
10	Ecliptaprostrata	False daisy	kehraj	Asteraceae

Sl. No	Scientific name	Common Name	Vernacular Name	Family
3				

Barleria prionitis

Mentha arvensis

Ocimum basilicum

Oxalis corniculata

Table 15: List of Ornamental Plants species found in Majuli College Campus during biodiversity audit

Sl. No	Scientific name	Common Name	Vernacular Name	Family
1	*Tabernaemontanadivaricata*	Crepe jasmine	Noyontora (White)	Apocynaceae
2	*Catharanthus roseus*	Madagascar periwinkle	Noyontara (Pink)	Apocynaceae
3	*Epipremnumaureum*	Devil's ivy	Money plant	Araceae
4	*Cestrum nocturnum*	Night blooming jasmine	Hasnahana	Solanaceae
5	*Datura metel*L	Datura	Kola Dhatura	Solanaceae
6	*Datura inoxia*	Dhatura	Dhatura	Solanaceae
7	*Thuja occidentalis*	Thuja	Thuja	Cupressaceae
8	*Jasminum multiflorum*	Star jasmine	Khorikajai	Oleaceae
9	*Bougainvillea glabra*	Bougainvillea	Bougainvillea	Nyctaginaceae
10	*Pandanus veitchii*	Variegated screw pine	Beliphul	Pandanaceae
11	*Acalypha wikesiana*	Copperleaf	-	Euphorbiaceae
12	*Durantaerecta*	Golden hadge	Hadge	Verbenaceae
13	*Hibiscus rosa sinensis*	Hibiscus	Joba	Malvaceae
14	*Nyctanthes-arbor-tristis*	Night jesmine	Xewali	Oleaceae
15	*Pterospermumacerifolium*	Kanak champa	Kanak champa	Malvaceae
16	*Jasminum sambac*	White jasmine	Tagar phul	Oleaceae
17	*Rosa meldomonac*	Rose	Gulap phul	Rosaceae
18	*Bauhinia acuminata*	Kanchan	Joba kanchan	Fabaceae
19	*Bauhinia variegata*	Orchid tree	-	Fabaceae
20	*Ixora coccinea*	Jungle geranium	Ashok	Rubiaceae

Sl. No	Scientific name	Common Name	Vernacular Name	Family
21	*Tabernaemontanadivaricata*	milkwood	Kathana	Apocynaceae
22	*Sansevieria trifasciata*	Snake plant or Black gold	-	Asparagaceae
23	*Dracasciatatrifasciata*	Mother-in-laws tongue	-	Asparagaceae
24	*Euphorbia milii*	Crown-of thorns	-	Euphorbiaceae
25	*Cascabelathevetia*	Yelloow oleander	Karabi	Apocynaceae
26	*Origanum syriacum*	Syrian oregano	-	Lamiaceae
27	*Parietariajudaica*	Spreading pellitory	-	Urticaceae
28	*Mussaendafrondosa*	Mussaenda or dhobi tree	Mussaenda	Rubiaceae
29	*Mussaendaphilipica*	Mussaenda red	Mussaenda	Rubiaceae
30	*Tradescantia zebrina*	Inch plant	Inch plant	Commelinaceae
31	*Tradescantia pallida*	Purple heart	Purple heart	Commelinaceae
32	*Combretum indicum (L.) DeFillipps*	Chineae honeysuckle	Madhabi lata	Combretaceae
33	*Codiaeum variegatum*	Croton	Croton	Euphorbiaceae
34	*Capsicum annum*	Chilly	Jolokia	Solanaceae
35	*Youngia japonica*	Oriental false hawksbeard	-	Asteraceae
36	*Dendrobium heterocarpum*	Dendrobium	Bhatowphul	Orchidaceae
37	*Rhynchostylis retusa*	Foxtail orchid	Kopowphul	Orchidaceae
38	*Catharanthus roseus*	Pink periwinkle	Nayantara	Apocynaceae
39	*Clitoriaternatea*L.	Blue pea	Aparajita	Fabaceae

Acalypha hispida

Jasminum sambac

Codiaeum variegatum

Codiaeum species

Rora meldomonac

Croton zanzibar

Cicus Circinalis

Cestrum nocturnum

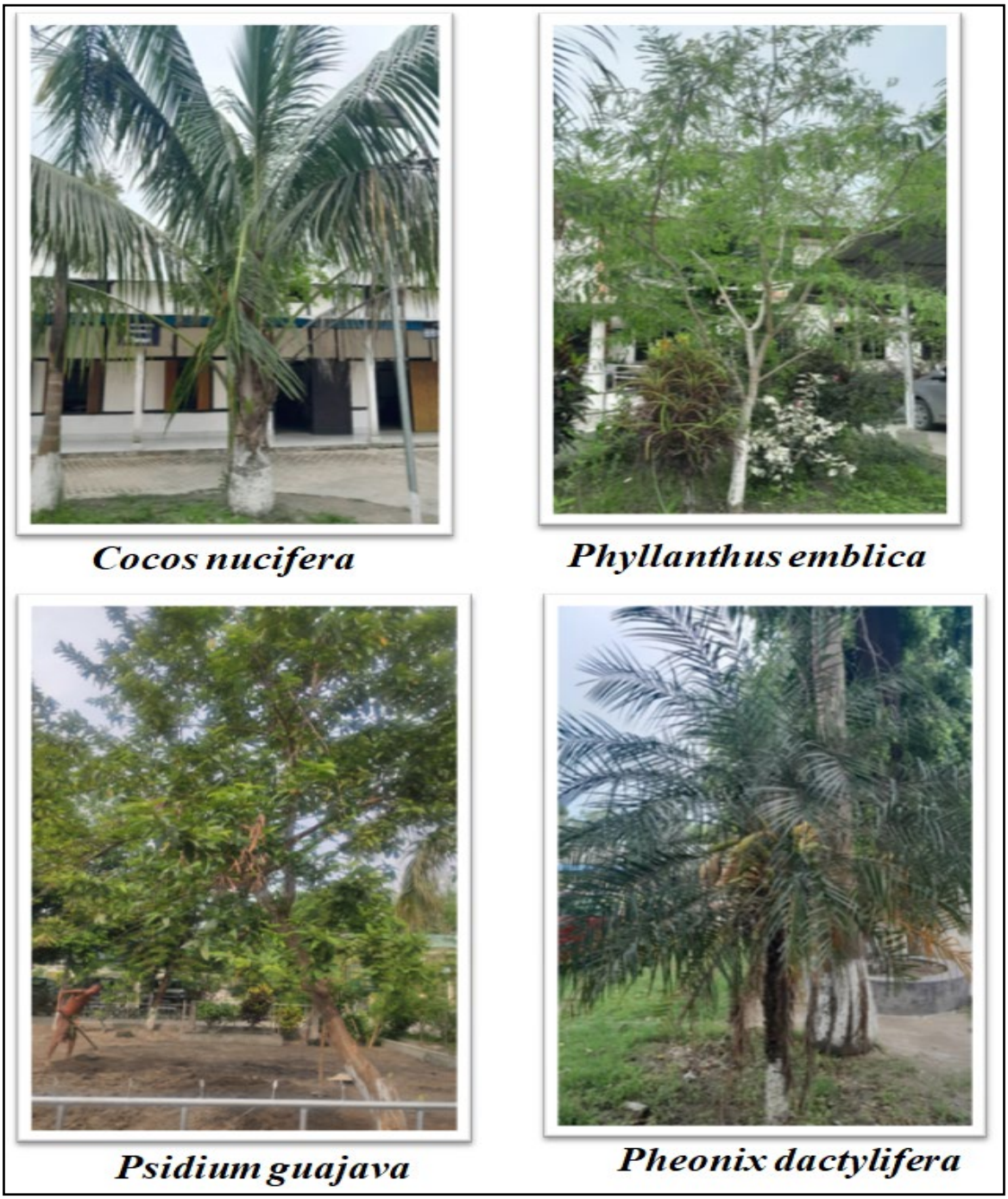
Table 16: List of fruit Plants species found in Majuli College Campus during biodiversity audit

Sl No	Scientific name	Common Name	Vernacular Name	Family
1	*Phyllanthus emblica*	Indian gooseberry	Aamlokhi	Phyllanthaceae
2	*Ziziphus mauritiana* Lam.	Indian Jujube	Bogori	Rhamnaceae
3				
4	*Atrocarpus heterophyllus* Lam.	Jack fruit	Kothal	Moraceae
5	*Terminatiachebula*	Tropical almond	Hilikha	Combrataceae
6	*Mangifera indica* L.	Mango	Aaam	Anacardiaceae
7	*Phyllanthus acidus* (L.) Skeels	Malay Gooseberry	Pora aamlokhi/Pom lokhi	
8	*Litchi chinensis* Sonn.	Lychee	Lichu	Sapindaceae
9	*Syzygiumcumini*(L.) Skeels.	Jamun	Jamu	Myrtaceae
10	*Psidium guajava*	Guava	Modhuri	Myrtaceae
11	*Cocos nucifera* L.	Coconut	Coconut	Arecaceae
12	*Eucalyptus oblique L'Her*	Eucalyptus	Eucalyptus	Myrtaceae
13	*Flacourtiajangomas* (Lour.) Raeusch	Indian coffee plum	Poniyol	Salicaceae
14	*Terminalia chebula* Retz.	Black myrobalan	Silikha	Combretaceae
15	*Solanum ptycanthum*	Eastern black night shade	Korosi	Solanaceae
16	*Ziziphus jujuba* Mill.	Indian jujuba	Bogori	Rhamnaceae
	Phoenix dactylifera	Date palm	Khajur	Arecaceae
	Spondias pinnata (Lf.) Kurz).	Wild mango	Amora	Anacardiaceae
	Moras elba	Mulberry	Nuni	Moraceae

Table 17: List of economically important Plants species found in Majuli College Campus during biodiversity audit

Sl. No	Scientific name	Common Name	Vernacular Name	Family
1	*Gossypium arboretum* L.	Cotton	Kopah	Malvaceae
2	*Samanea saman* (Jacq.) Merr.	Monkey pod tree	Rain tree	Fabaceae
3	*Ficus religiosa.*L.	Sacred fig	Aahot	Moraceae
4	*Ficus bengalensis* L	Banyan fig.	Jari gos	Moraceae
5				
6	*Dalbergia sisso*	Sisso	Sisso	Fabaceae
7	*Polyalthia longifolia*	False ashoka	Debodaru	Annonaceae
8	*Terminalia arjuna*	Arjun	Arjun	Combretaceae
9	*Delonix regia*	Royal poinciana	Krishnachura	Fabaceae
10	*Mesua ferrea*	Cobra saffron	Nahor	Callophyllaceae
11	*Cryptomeria japonica*	Japaneae cedar	Horol goss	Cupressaceae
12	*Mimusopelengi*	Spanish cherry	Bokul	Sapotaceae
13	*Peltophorumpterocarpum*	Gulmohar	Radhachura	Fabaceae
14	*HyophorbeLagenicaeelis*	Bottle palm	Bottle palm	Arecaceae
15	*Areaca catechu*	Areca palm	Tamul	Arecaceae
16	*Cassia fistula* L.	Golden shower	Sunaru	Caesalpiniaceae
17	*Moringa oleifera* Lam.	Drumstick tree	Sagina	Moringaceae
18	*Litseamonopetela* (Roxb) Pers.	Soalu	Soalu	Lauraceae
19	*Perseabobmycina*Kost.	Som	Som	Lauraceae
20	Cassia alata L.	Ringworm senna	Khor gos	Fabaceae
21	Cassia tora	Sickle senna	Horu medelua	Leguminaceae

Sl. No	Scientific name	Common Name	Vernacular Name	Family
22	*Pseudosasa japonica*	Bamboo	Bah	Poaceae
23	*Gmelina arborea*	Gomari	Gomari	Verbnaceae
24	*Melia azedarach*	Chinaberry	Ghora Neem	Meliaceae



Cassia fistula

Areca palm

Cryptomeria japonica

Dalbergia sisso

Table 18:Carbon Stock of the College Campus

Sl. No.	Scientific Name	Girth at breast height (cm)	Height of tree (m)	Approx. Age (Years)
1	*Polyalthia longifolia*	107	8	10
2		41	10	10
3		42	11	10
4	*Terminalia arjuna*	46	12	16
5	*Delonix regia*	35	10	10
6	*Peltophorumpterocarpum*	51	14	10
7	*Hyophorbelangenicaeelis*	61	7	6
8	*Samanea saman*	99	14	12
9		180	14	12
10	*Cocos nucifera*	46	06	05
11	*Terminalia chebula*	50	12	10
12	*Dalbergia sisso*	185	11	8
13		45	10	8
14		32	10	9
15		43	11	9
16		40	10	9
17		56	12	9
18		40	11	9
19		56	10	11
20	*Cassia fistula*	41	12	10
21	*Phyllanthus emblica*	30	10	10
22	*Roystonea regia*	60	7	10
23		56	6	6

Sl. No.	Scientific Name	Girth at breast height (cm)	Height of tree (m)	Approx. Age (Years)
24	*Roystonea regia*	128	7	6
25		39	6	6
26		41	7	6
27		45	7	6
28		58	7	6
29		62	7	6
30		65	8	6
31		66	7	6
32		70	8	6
33		68	7	6

AWARENESS PROGRAMMES ORGANIZED BY THE COLLEGE

Several significant and fruitful awareness programs both students and staff of the campus are arranged every year in the campus. Reflections from students are evident how effective such awareness programs conducted in the campus. Major programs conducted in the campus during the last five years are:

Table 19: List of Awareness programmes organized by the college

Sl. No.	Name of programmeconducted	Date/duration	No of participants
1	Covid awareness programme	4th Nov, 2020	23
2	National Science Day	1st March, 2021	186
3	Let's talk-I (A Gender Sensitization Programme), Women Cell, Majuli College	5th January,2022	300
4	International Yoga Day, NSS, Majuli College	10th May, 2022	20
5	Let's talk – II (An Interactive Session on Menstrual Hygiene on the occasion of International Menstrual Hygiene Day) Women Cell, Majuli College	28th May, 2022	155
6	Celebration of world Environment Day	5th June, 2022	
7	Plantation Drive	6th June,2022	25
8	Sexual Harassment at Workplace (Prevention, Prohibition and Redressal) Women Cell, Majuli College	8th June, 2022	82
9	Awareness programme on child kidnapping	7th July, 2022	65
10	NSS Special camping programme (Health Hygiene, Superstitious Beliefs, Agriculture and Rural Development)	23rd to 29th January,2023	45

Sl. No.	Name of programmeconducted	Date/duration	No of participants
11	Awareness programme on Save Water, Environment and Climate Cell, Majuli College	24th March, 2023	
12	A Week-long Campaign on Yoga	8th May to 15th May, 2023	35
13	First Majuli College Book Fair	5th April to 8th May	1300
14	Free medical health check-up camp at adapted village (Kamalpurgaon)	22nd May, 2023	52
15	Free medical health check-up camp at adapted village (Bhekulimarigaon)	24th May,2023	
16	Free medical health check-up camp at adapted village (Bhekulimarigaon)	25th May, 2023	

COVID AWARENESS PROGRAMME, 2021

Topic: A Gender Sensitization Programme

International Yoga Day, 2022 NSS, Majuli College

An Interactive Session on Menstrual Hygiene on the occasion of International Menstrual Hygiene Day

Celebration of world Environment Day,2022

AWARENESS PROGRAMME ON CHILD KIDNAPPING

NSS Special Camping programme, 2023

Awareness Programme on Save Water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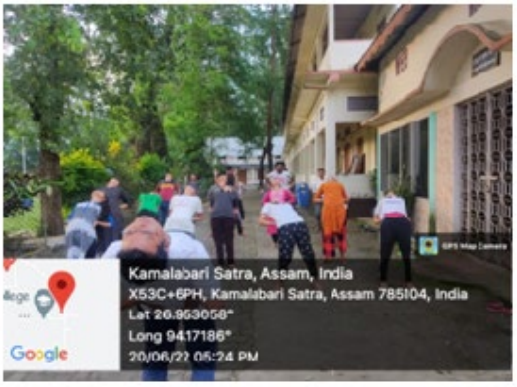
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A Week long Campaign on Yoga


FREE MEDICAL HEALTH CHECKUP CAMP

Organized by

Majuli College Adopted Village Committee & Unnat Bharat Abhiyan

In collaboration with IQAC, Majuli College

In Association with

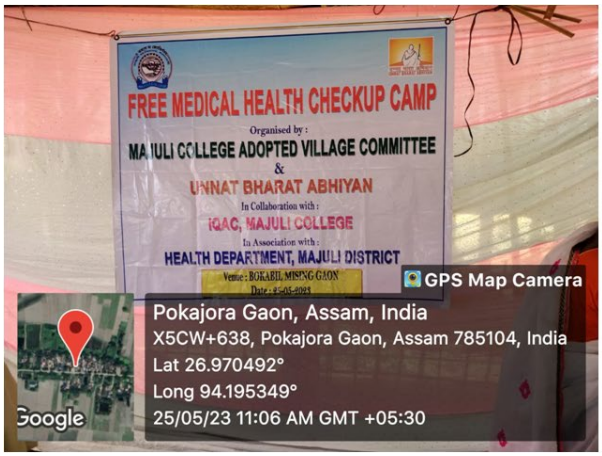
Health Department, Majuli District, Govt. of Assam

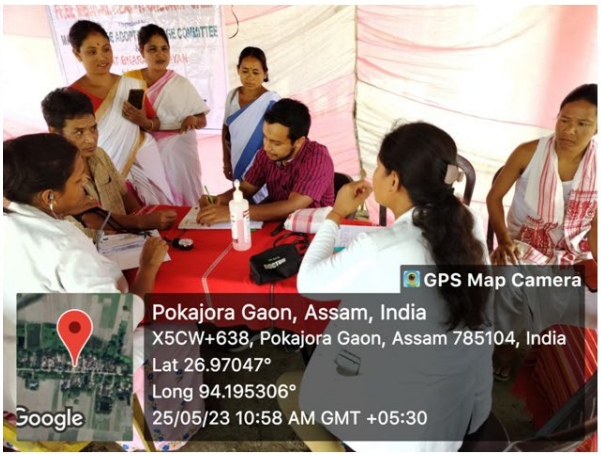
Date-22/05/2023

FREE MEDICAL HEALTH CHECKUP CAMP

Date-24/05/2023

Vanue-Bhekulimarigaon





FREE MEDICAL HEALTH CHECKUP CAMP

Date-25/05/2023

Vanue- Bokabil missing gaon

DISCUSSION AND CONCLUSIONS

After conducting the Environment & Green Audit, it can be concluded that this report assists in the process of attaining an eco-friendly approach for the sustainable development as well as institutional management. It is clear from the green audit of the institution that the campus is lush green with sufficient floral and faunal diversity. Apart from this, the level of noise is also minimalthatboosts the good environment of the campus. However, the use of five-star appliances should be increased as well as the use of LEDs to reduce electricity bills.

12.1.Recommendations:

The following environmental education programs and policies should be implemented in the institution before the next green audit:

- Establishment of more solar panel set ups so that the energy requirement of the college can be fulfilled in an eco-friendly manner.
- Awareness about carbon footprint generation among staff and students so that there must be a decrease in it.
- Development of more vermicompost pits and disposal of waste at the source of segregation itself.
- Create awareness on Water Conservation, Rain water Harvesting and Optimum utilization.
- Installations of recycling of waste water techniques.
- Involvement of students and staff in environmental awareness campaigns to spread awareness in society
- For non-Bio Degradable waste management Mass Awareness Camp should be undertaken for minimization of utilizing the non-biodegradable products, Alternatives should be preferred through research and innovation, timely check-up and strict laws must be initiated for reducing the generation of non-biodegradable waste.
- Total restriction of automobiles inside the campus with construction of parking areas are some measures to develop more eco-friendly environment.
- The food waste from Hostels and canteen can be used as food for piggery and other domesticated animals.

Image -Entrance of College Campus

Image-Aerial View of greenery in the College Campus

Image- An aerial view of the college campus

Image- Way to Administrative Building

Image-The Arts Blocks

Image-Way to Arts Block

Image- Pancharatnas of Majuli