1. Introduction

Environmental sustainability has become a global priority due to increasing pollution, climate change, and depletion of natural resources. Educational institutions, especially colleges, play a crucial role in shaping environmentally responsible citizens. A **Green Audit** is an effective tool that helps colleges assess their environmental practices and improve sustainability. It evaluates how efficiently an institution uses resources such as energy, water, and land while minimizing environmental harm.

A Green Audit is a systematic examination of an institution's environmental performance. It focuses on areas such as:

- Energy consumption
- Water usage
- Waste management
- Biodiversity and greenery
- Use of renewable resources

The Green Audit is an essential tool for promoting environmental sustainability in colleges. It not only helps conserve natural resources but also creates awareness, reduces costs, and improves the overall quality of campus life. By conducting regular Green Audits, colleges can become role models for sustainable development and contribute positively to a greener future.

Students and staff play a vital role in the success of a Green Audit. Their cooperation in adopting eco-friendly practices ensures the effectiveness of sustainability initiatives. Environmental clubs and committees can actively support audit activities.

1.1 Importance of Green Audit

1. Promotes Environmental Awareness

Green Audits help students, teachers, and staff understand the importance of protecting the environment. Awareness programs conducted during audits encourage eco-friendly habits such as saving electricity, reducing waste, and conserving water.

2. Encourages Sustainable Resource Management

Colleges consume large amounts of electricity, water, and paper. A Green Audit helps monitor usage and suggests measures to reduce wastage, such as using LED lights, rainwater harvesting, and digital documentation.

3. Reduces Environmental Impact

By identifying sources of pollution and waste, Green Audits help institutions adopt cleaner and greener alternatives. Proper waste segregation, recycling, and composting reduce landfill waste and environmental damage.

4. Improves Campus Biodiversity

Green Audits encourage colleges to maintain green spaces, plant trees, and protect local biodiversity. A green campus improves air quality and creates a healthier learning environment.

5. Supports Compliance with Environmental Standards

Many accreditation bodies and government agencies emphasize sustainability. Conducting a Green Audit helps colleges meet environmental guidelines and improves their institutional ranking and reputation.

6. Enhances Student Learning and Responsibility

Green Audits provide practical learning experiences for students. Participation in environmental assessments develops problem-solving skills and instill a sense of social and environmental responsibility.

7. Cost Savings in the Long Run

Efficient use of resources reduces operational costs. Energy-efficient appliances, water-saving techniques, and waste reduction lead to long-term financial savings for the institution.

About the College:

Salbari College is a Government College in Salbari, under the Department of Higher Education, Government of Assam. It was established on 14 November 1983 with the efforts of local public and conscious educationists of the area. It was registered under sections 2(f) and 12(B) of the UGC Act 1956, vide notification No. 8-371/2006 (CP), and obtained government concurrence and certified by AISHE (All India Survey of Higher Education). Initially the college consisted of Arts stream only. Recently the Science stream was established in the college on 2023. With

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the inclusion of Science stream and introduction of NEP, the college now offers Four Year Degree Course (FYUGP) In B.A and BSc.

Salbari College is located in Salbari sub-division of Baksa district in the Bodoland Territorial Council of Assam, India. It is about 10 km south of the Indo-Bhutan Border and 25 km to the north from the No. 31 National Highway. It is well connected by road and railways. The highlight of the region is the famous Manas National Park which is a UNESCO World Heritage Site, Project Tiger reserve, an elephant reserve and a biosphere reserve. The campus is spread over 38 bighas and 17 lessas of land (2600 square meters). The college campus is beautiful, consisting of a host of green cover, local flora and fauna.

The college has a host of well qualified teachers and support staff to provide best quality education to the students. It is well equipped with smart classrooms, virtual classrooms, language lab, computer lab, library, auditorium, conference hall, science laboratories, canteen, hostel and staff quarters. The campus also provides WiFi facilities, clean drinking water and student hub for the benefit of the students. The college also undertakes regular parent-teacher meetings, meetings with the student union and alumni meetings for development of the college. Our college focuses on all round development of the students and therefore routine events are carried out such as College week, Science week, speech competition, debate and educational field trip for the benefit of the students.

Methodology

Taking these into consideration, a detailed environmental audit has been prepared of Salbari College campus focusing on the following aspects:

- Energy consumption
- Water consumption
- Waste management
- Biodiversity
- Carbon Footprint

The aim is to identify eco-friendly practices, detect areas of improvement, and promote sustainable development within the campus.

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2. Energy Consumption Audit.

2.1. Introduction and College Energy Profile:

Salbari College, Salbari, with a built-up area of approx. 2600 sq. metres, is equipped with modern institutional facilities such as smart boards in smart classrooms, computers in administrative units, a digital library, electronic laboratory units, broadband internet connectivity, CCTVs for monitoring and security, and basic electrical utilities like LED tube lights, mounted/ceiling fans, solar street-lights, etc., installed across the campus. To meet the overall energy requirements, power is drawn through an overhead line from the State Electricity Department (APDCL). A 100kVA transformer is installed within the college campus, from which power is distributed to different units of the college. During load shedding or unexpected power cuts, the backup power is provided through a diesel fuel-based generator, along with inverters installed at selected offices to ensure essential services.

The college has been undertaking energy audits under the green audit process for the past several years. This aligns with NAAC accreditation framework, which directs institutions to carry out annual audits on different aspects of the college, including green audit. The purpose of such audits is to identify potential gaps and inefficiencies in power consumption, which can guide the authority in addressing the shortcomings identified. In the same manner, an energy audit for the session 2025–26 **(March, 2025 to February, 2026)** has been conducted, and the findings are presented in the following sections.

2.2. Scope, Audit Period, and Data Sources:

This energy audit was conducted at Salbari College, Salbari for the period from March 2025 to February 2026. The scope of the audit covers the assessment of electricity consumption, electrical infrastructure, and energy management practices within the college campus. The audit has been prepared on the basis of monthly electricity bills, physical verification of electrical fittings and equipment installed across the campus, and field observations of energy use practices. The collected data includes the major electronic installations, month-wise electricity consumption, and observations regarding the use of electronic units.

The aim of this audit is to identify the pattern of electricity consumption, understand the major load centres within the campus, and assess the effectiveness of existing energy conservation practices. It also aims to highlight areas where further improvement can be made in order to strengthen energy efficiency, reduce unnecessary consumption, and support sustainable campus management.

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2.3. Electrical Assets and Energy Consumption Data:

Sl. No.	Type	LED	Tube	CCTV	Ceiling/ Mounted Fan	Comp uter	Printer/ Xerox machine	LCD/ Smart Board	A.C.	Other Electronic Equipment	Total Installed Electronic units
1	Administrative Offices/Units	37	-	7	18	8	5	4	4	1 Generator, 1 Inverter	85
2	Departments	27	-	1	28	-	-	-	-		56
3	Class Rooms	34		13	39	-	-	-	-		86
4	Smart Classrooms	8	-	2	9	2	-	2	4		27
5	Library	60	-	2	13	5	1		6	1 Photocopy	88
6	Laboratories (All science labs, Computer lab, Language lab etc.)	15	-	2	17	30	-	-	-	1 Electron Microscope, 1 pH metre.	66
7	Girls Hostel	109	-	-	52	-	-	1	-		162
8	Auditorium	16	-	-	11	-	-	-	-		27
9	Indoor Stadium	6	4	-	-	-	-	-	-		10
10	Other rooms (Students hub, Corridors, Washrooms etc.)	21	-	12	5	-	1	-	-	4 Solar Street lights	43

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Total Installed Electronic Units	333	4	39	192	45	7	7	14	9 other equipment	650

Table 1: Electrical fittings in various buildings.

Sl. No.	Months	Energy consumed (kWh)	Bill Amount (Rs.) (Including Fixed Charge and Electricity Duty)
1	March, 2025	2165	₹ 21,203.59
2	April, 2025	2095	₹ 19,968.28
3	May, 2025	2165	₹ 20,635.28
4	June, 2025	2095	₹ 19,968.00
5	July, 2025	2054	₹ 19,704.05
6	August, 2025	5106	₹ 45,308.80
7	September, 2025	4707.66	₹ 41,807.53
8	October, 2025	3096.55	₹ 28,450.69
9	November, 2025	2363.1	₹ 22,217.65
10	December, 2025	2071.02	₹ 19,846.99
11	January, 2026	1502.33	₹ 15,076.00
12	February, 2026	1911.87	₹ 18,272.56
	Total	**31332.53**	**₹ 2,92,459.42**

Table 2: Monthly Energy Consumption (March, 2025 to February, 2026) as per Electricity Bill

Sl No.	March, 2025 to February, 2026	Average Energy Consumed (kWh)	Average Bill Amount (Rs.)
1	Average Consumption	**2611.04**	**₹ 24,371.62**

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Table 3: Average Energy Consumption across 12 months, March 2025 to February, 2026

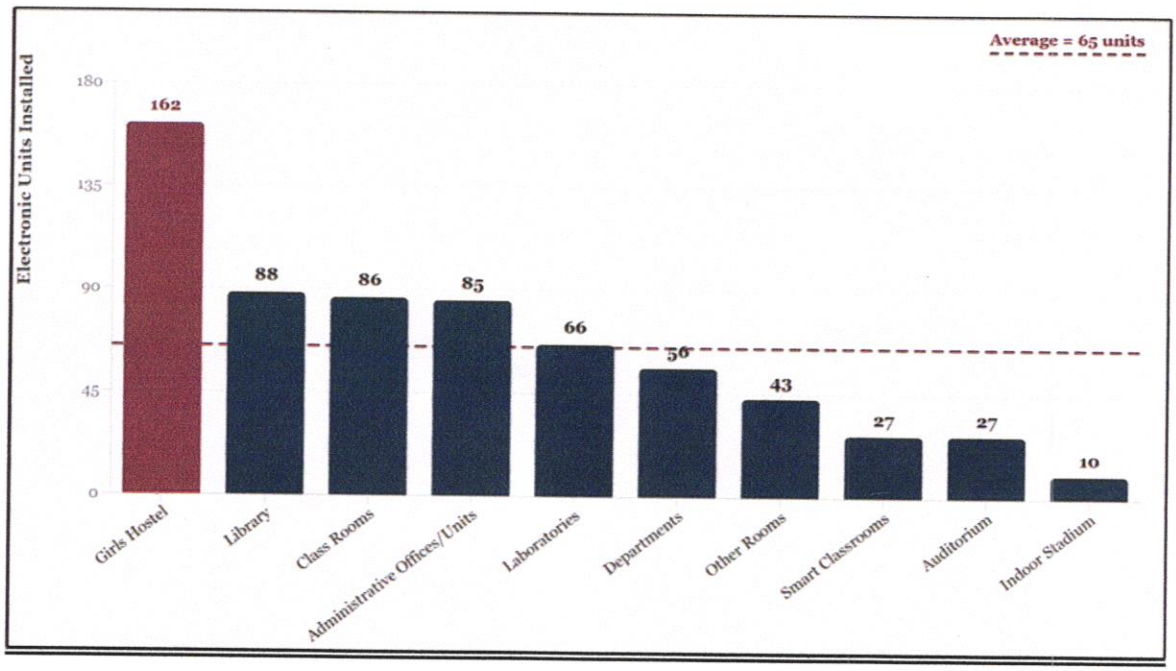

Fig 1: Facility-wise Count of Installed Electronic Fittings

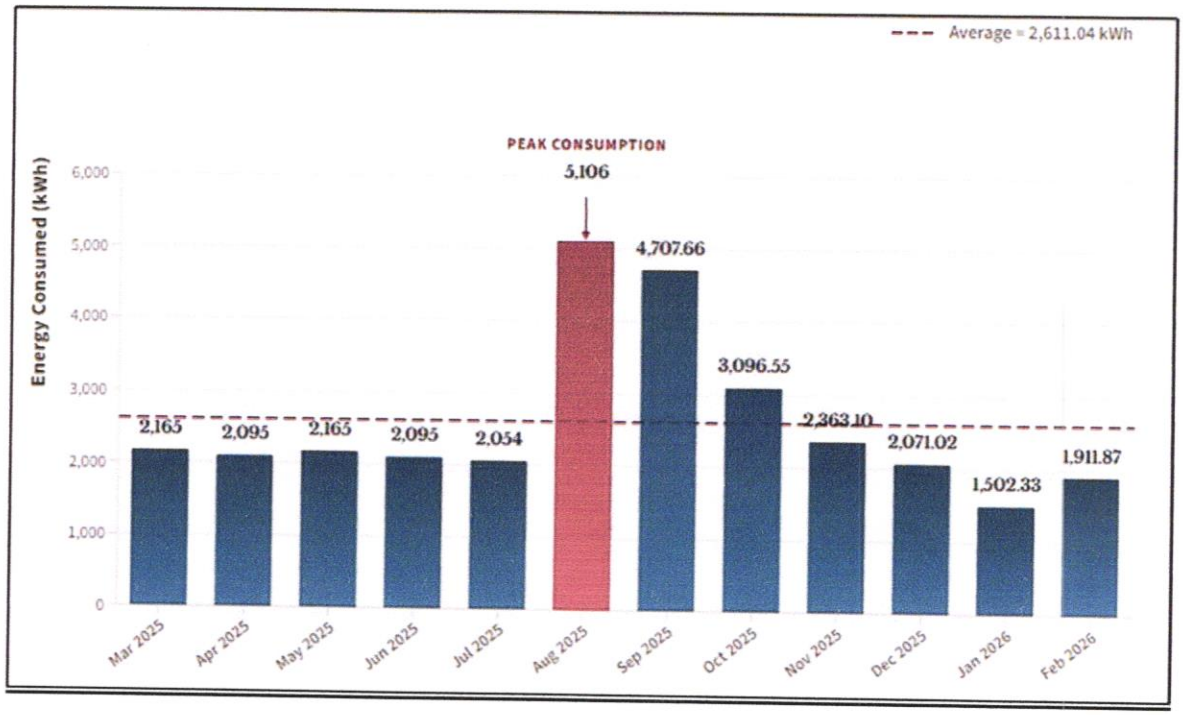

Fig 2: Monthly Electricity Consumption from March 2025 to February 2026

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2.4. Quantitative Observation from Energy Consumption Data:

1. The college campus is reasonably well equipped with the basic electrical and digital infrastructure necessary for its academic, administrative, and institutional activities, as reflected in the installation of 333 LED lights, 45 computers, 39 CCTV units, and other essential electrical fittings across various sections of the campus.
2. In terms of electrical fitting, the Girls Hostel was found to have the highest concentration of electrical fittings among all campus units, with 109 LED lights, 52 ceiling or mounted fans, and 1 LCD TV. This indicates that the hostel is one of the major probable load centres of the college, particularly during periods of high occupancy and extended use of lights and fans.
3. During the period from March 2025 to February 2026, the college recorded a total electricity consumption of 31,332.53 kWh. The average monthly electricity consumption during this period was 2611.04 kWh.
4. As per the previous year's published Green Audit, the estimated average monthly electricity consumption of the college was 3520 kWh per month. In comparison, the present audit period shows an average monthly consumption of 2611.04 kWh, indicating a reduction of 908.96 kWh per month, or about 25.82%. This clearly shows an improvement in the overall electricity-consumption pattern of the institution over the previous year.
5. For the present year, a significant rise in electricity consumption was observed in August 2025, when the energy consumption reached 5106 kWh, which was the highest monthly consumption recorded during the entire audit period.
6. The sharp rise in electricity consumption during August and September may be due to the combined effect of seasonal increase in the use of fans and air-conditioners, greater occupancy and increased institutional activities in campus such as the Girls Hostel, library, classrooms, smart-classrooms, and administrative units.
7. The lowest electricity consumption was recorded in January 2026, when the college consumed 1502.33 kWh. A slight increase was again noticed in February 2026, with the consumption rising to 1911.87 kWh, suggesting a modest increase in energy use after January.

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2.5. General Observations:

1. During day time, there is little use of electric lighting in classrooms, as the building structure allows enough day light to illuminate the interior space. As a routine practice, lights are switched on only during cloudy weather or when specific classroom activities require additional brightness.
2. Almost all electrical light fittings (except in Indoor Auditorium) have been upgraded to energy-efficient LED tubes and bulbs, replacing older, energy-intensive non-LED fixtures. This change has reduced avoidable power consumption and supported efficient energy use during after-hours administrative duties.
3. The open green spaces of the campus are illuminated at night through sensor-based solar street-lights installed across the campus. This aligns with NAAC direction on promoting alternate energy sources in Educational Institutions.
4. The college has transitioned from a postpaid electricity billing system to a prepaid electricity payment mode, enabling closer tracking of energy consumption and timely monitoring of usage.
5. All the digital utilities like computer, printer and other equipment, except for CCTVs, are switched off by the end of the day. This practice helped prevent unnecessary standby power draw.
6. In terms of energy consumption, the college nurtures an energy-conscious culture by encouraging faculties, staff and students to use electrical utilities responsibly and only as per requirement.
7. All the electrical equipment in the college is properly operated, routinely monitored and regularly maintained to ensure safe and efficient functioning.
8. The diesel power generator and inverters are rarely required, as the college and the surrounding region experience power cuts only infrequently.

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2.6. Recommendations:

1. The use of Air-conditioners may be avoided as far as possible, and the use of low energy–consuming electrical fans may be maximized to reduce overall energy consumption.
2. Regular monitoring of monthly electricity consumption may be undertaken, especially during high-consumption months such as August and September, so that unusual increases in energy use may be identified early and suitable corrective measures may be adopted in time.
3. Special attention may be given to major probable load centres such as the Girls Hostel, Library, Administrative Units, and Smart Classrooms, where a comparatively high concentration of lights, fans, computers, CCTV units, and air-conditioners has been observed. Periodic monitoring of these units may help identify avoidable or excessive consumption.
4. A simple "Switch Off When Not in Use" sign-drive may be implemented across classrooms and offices to reinforce responsible energy behaviour on a daily basis.
5. The college may replace the overhead power supply line with an underground system, since frequent storms and heavy monsoon rains in Assam often damage overhead lines and lead to added costs for generator diesel and repeated repair work, thereby increasing recurring expenditure.
6. The college may also consider expanding the use of renewable and alternative energy sources, wherever feasible, in order to reduce dependence on grid electricity and further improve its environmental sustainability profile.

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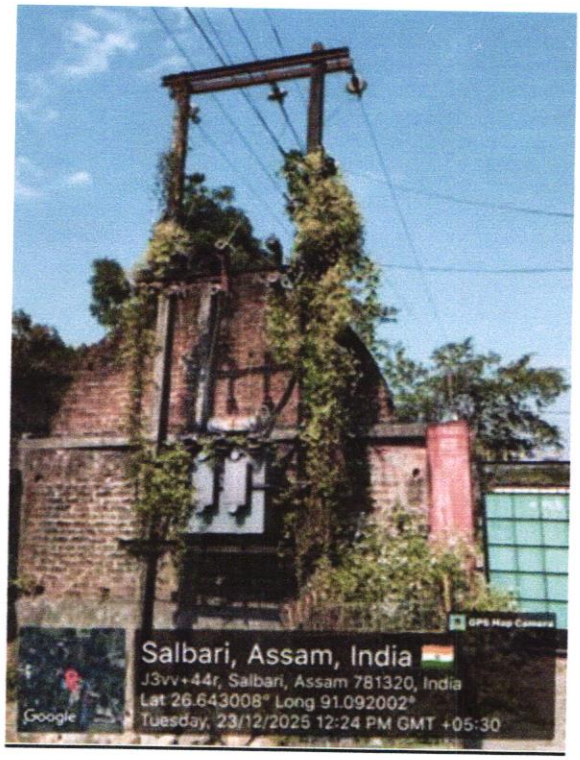
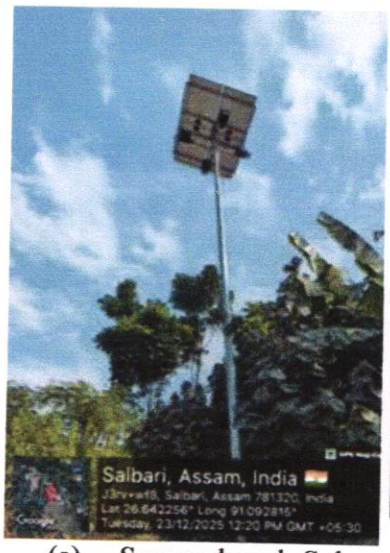


Fig 3: 100kVA Transformer installed within college campus.



(a) Sensor based Solar Street Light system turned off at day time

(b) Sensor based Solar Street Light system turned on at night time - 1

(c) Sensor based Solar Street Light system turned on at night time - 2

Fig 4: *Sensor based Solar Street Light system*

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3. WATER CONSUMPTION AUDIT

Water is one of the most vital natural resources, essential for life and sustainable development. With increasing population and climate change, water scarcity has become a serious global concern. Colleges consume a significant amount of water daily for drinking, sanitation, laboratories, hostels, gardens, and other activities. Under a **Green Audit**, assessing water usage is crucial to ensure conservation, reduce wastage, and promote sustainable water management practices on campus.

The main objectives are:

- To understand water consumption patterns
- To identify sources of water wastage and leakage
- To promote efficient water use
- To suggest conservation and reuse measures

Under the present study we examined the following areas of water consumption in the campus:

Sl. No.	**Water used for**
1	Drinking water facility
2	Washroom and sanitation
3	Laboratory
4	Hostel
5	Canteen
6	Gardening
7	Construction work

Water in the campus is supplied by tube-well for college, hostel and garden and stored in tanks at various locations.

The following is the table for water utilisation in the campus:

Unit	Water source	Water storage capacity	Drinking water installed	No. of fixtures (Taps/flush)	Avg. consumption per day (L)	Water fixture storage cleaning frequency
Administrative Unit	Ground water	2000 L		2	1000	Twice a year
Main college Building	Ground water	2000 L	2	10	1500	Do
Girls Hostel Unit	Ground water	4000 L	2	12	3000	Do
Canteen	Ground water			3	1000	Do

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Library	Ground water	1000 L		2	500	Do
Science Laboratory	Ground water			6	500	Do
Indoor Stadium		500 L		2	500	Do

Rain water Harvesting

The college also has a rain water harvesting tank (2500 L), which is used for gardening activities.

Water Consumption:

- Number of pumps- 6
- Number of tanks- 10
- Total amount of water stored- 9500 L
- Total water used per day- 8000 L

3.1. Audit Observation:

- Few non-functional taps were observed
- No loss of water has been observed because of leakage
- The college has set up one rain water harvesting unit having 2500 L capacity in the garden area

3.2. Recommendations and Action Plan

- Few faulty taps need to be repaired immediately
- Although we do have rainwater harvesting method, expansion of rainwater harvesting to more areas is needed
- Reusing wastewater for non-drinking purposes is needed to minimize wastage of water
- We also need to conduct more awareness programs to sensitize students and staff about water conservation.

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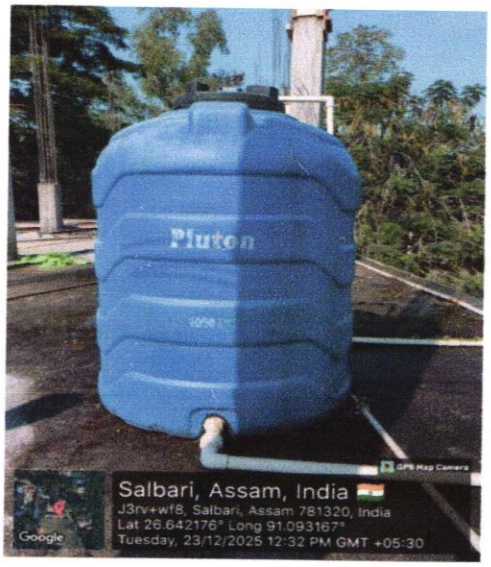

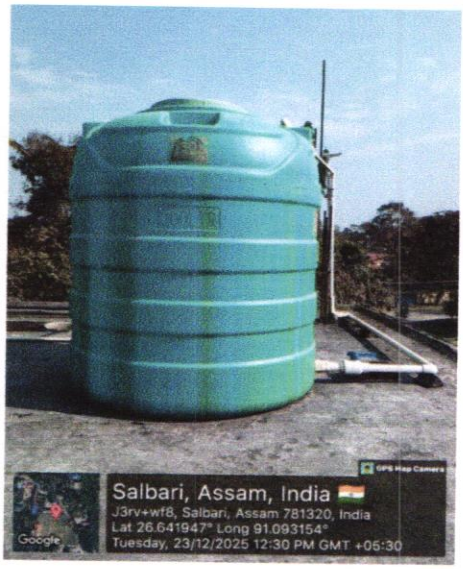

Fig 1: Water storage tanks in the college campus

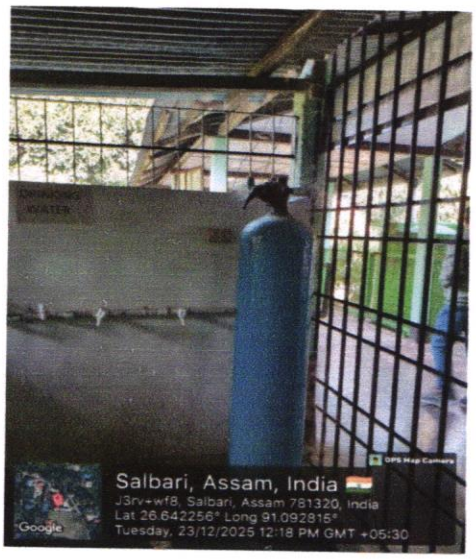

Fig 2: Water filtration unit

Fig 3: Water Cooler

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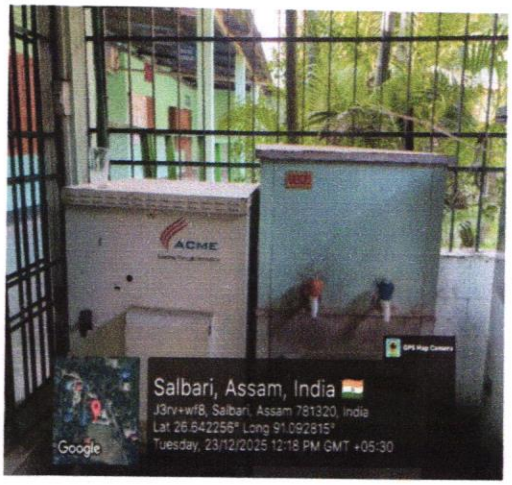

Fig 4: Drinking water facility

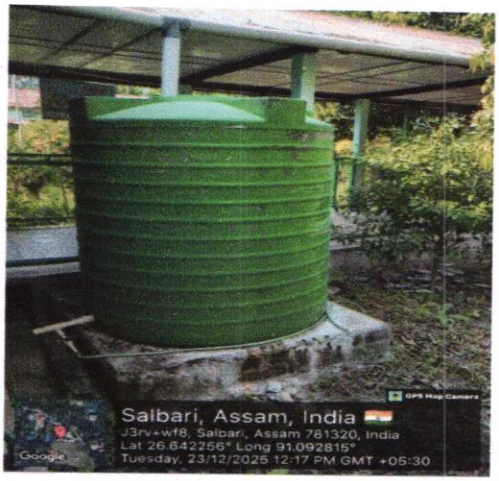

Fig 5: Rain water harvesting tank

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4. Waste Management Audit

Salbari College has adopted systematic measures to manage solid waste generated within the campus in an environmentally responsible manner. The college recognizes that improper handling of solid waste can lead to soil, water, and air pollution, and therefore emphasizes waste minimization, segregation, recycling, and safe disposal practices.

4.1.Sources and Types of Solid Waste

Solid waste generated in Salbari College primarily originates from academic, administrative, and support activities. The major sources include classrooms, staff rooms, administrative offices, library, laboratories, canteen area, toilets, and open campus spaces.

The types of solid waste generated on the campus include:

- **Biodegradable waste**: food waste from canteen and staff rooms, garden litter such as dry leaves and grass clippings.
- **Non-biodegradable waste**: plastic wrappers, polythene bags, disposable cups, packaging materials, and stationery waste.
- **Paper waste**: examination-related papers, office files, notices, and old books.
- **E-waste (limited)**: discarded electronic items such as old computers, printers, keyboards, and electrical fittings.

Origin	Type of Waste	Approximate Waste Generation
Classrooms/ Department	Paper, chalk dust, plastic wrappers	3–5 kg/day
Administrative Offices	Paper, cardboard, printer cartridges	2–3 kg/day
Library	Paper waste, old books, packaging materials	1–2 kg/day
Laboratories	Chemical waste, glassware, plastic tubes, paper	1–3 kg/day
Canteen	Food waste, vegetable peels, plastic bottles, disposable plates	8–12 kg/day
Girls Hostel	Food waste, plastic, paper, sanitary waste	10–15 kg/day
Gardens and Landscaping Areas	Dry leaves, grass clippings, branches	5–8 kg/day
Washrooms	Tissue paper, sanitary waste, plastic containers	1–2 kg/day

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Campus Events/Functions	Food waste, plastic cups, plates, decorations	5–10 kg/event
Parking Area	Plastic bottles, wrappers, dust, vehicle-related waste	1–2 kg/day

4.2. Waste Segregation Practices

Salbari College follows the principle of **segregation at source**, which is a key recommendation of the Green Audit framework. Separate dustbins are placed at strategic locations across the campus to encourage segregation of waste into biodegradable and non-biodegradable categories. Students, teaching staff, and non-teaching staff are sensitized to use designated bins properly.

Dry waste such as paper and plastic is collected separately, while biodegradable waste is handled in an eco-friendly manner. Periodic monitoring by the internal Green Audit or Eco-Club committee ensures compliance with segregation practices.

i) Waste Collection and Disposal Mechanism

The college has a routine waste collection system maintained by cleaning staff. Collected waste is temporarily stored in designated areas before final disposal. Biodegradable waste such as garden litter is often composted or disposed of through natural decomposition within campus premises, reducing the load on municipal waste systems.

Non-biodegradable waste is handed over to local municipal or authorized waste collectors for safe disposal. Open burning of waste is strictly avoided, in line with environmental safety norms.

ii) Paper and Plastic Waste Management

Efforts are made to minimize paper usage by promoting digital communication, online notices, and reuse of one-sided printed paper for internal purposes. Old newspapers and unusable paper waste are periodically sold to authorized recyclers.

The college discourages the use of single-use plastics within the campus. Awareness programs are conducted to promote a **plastic-free campus**, and alternatives such as reusable bottles and eco-friendly materials are encouraged among students and staff.

iii) E-Waste Management

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Although the generation of e-waste is minimal, Salbari College ensures that obsolete electronic items are not disposed of along with regular solid waste. E-waste is stored safely and disposed of through authorized vendors or recycling agencies whenever possible, in accordance with environmental guidelines.

iv) Awareness and Participation

The college actively involves students and staff in solid waste management through awareness campaigns, cleanliness drives, poster competitions, and observance of important environmental days such as World Environment Day and Swachhata Pakhwada. These initiatives help inculcate environmental responsibility and sustainable waste-handling practices among stakeholders.

4.3.Observations

The solid waste management system at Salbari College reflects a positive commitment toward environmental sustainability.

4.4.Recommendations

However, further improvement can be achieved through:

- Introduction of color-coded bins as per Solid Waste Management Rules
- Establishment of a fully operational small-scale composting unit for biodegradable waste
- Formal tie-up with authorized recyclers for plastic and e-waste
- Regular training and monitoring of waste management practices

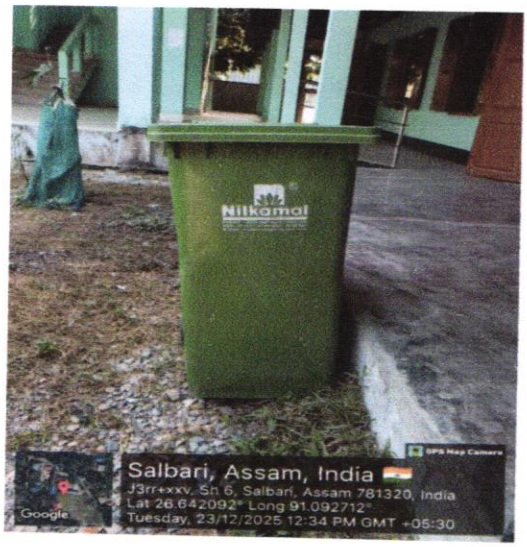

Fig 1: Dustbin for biodegradable waste

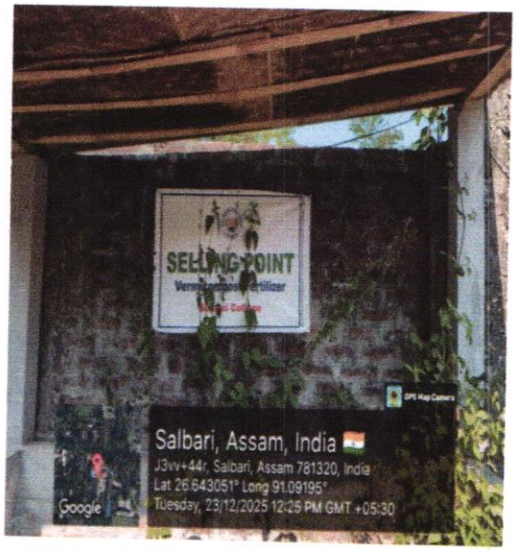

Fig 2: Vermicompost selling unit in college

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5. Green Campus Audit Report

Salbari College maintains a naturally enriched campus that plays an important role in supporting the local ecosystem. The presence of diverse plant species within the campus and its surrounding areas contributes significantly to environmental sustainability. The green cover not only enhances the visual appeal of the institution but also provides shelter and food resources for various bird species, thereby supporting avian diversity. An assessment of the campus biodiversity has been undertaken with special emphasis on floral and bird diversity.

The college actively promotes environmental conservation through the coordinated efforts of its NSS unit, NCC unit, Eco Club, IQAC, and other institutional committees. Regular plantation drives are organized both within the college campus and in nearby villages. These initiatives focus on planting a wide range of ornamental, fruit-bearing, and medicinal plants. Plantation activities are primarily carried out during the early monsoon months of May and June to ensure better survival and growth of saplings. These efforts collectively aim to create and sustain a green, healthy, and eco-friendly environment in and around the campus.

To cultivate environmental awareness and instill a sense of social responsibility among students, Salbari College undertakes several green initiatives throughout the academic year. The institution emphasizes sustainable practices such as nurturing plants within the campus, ensuring systematic waste disposal, and minimizing environmental pollution. The college also adopts eco-conscious approaches in its administrative functioning by promoting paperless documentation wherever feasible.

Salbari College regularly observes significant environmental days such as World Environment Day, Earth Day, and International Biodiversity Day. These occasions are marked by awareness programs, expert lectures on environmental issues, sapling distribution, poster-making competitions, and student-led campaigns. Such activities help sensitize students, faculty members, and staff about the importance of environmental protection and sustainable living.

As part of its green practices, the college encourages the use of potted indoor plants in various departments, subject to space availability. Additionally, the institution follows the practice of welcoming guests with plant saplings, reinforcing its commitment to environmental stewardship.

5.1. Plantation Programmes

The college organizes plantation programmes at regular intervals through the NSS unit and the Environment Cell. These programmes involve planting ornamental, medicinal, and fruit-bearing species both inside the campus and in nearby community areas. Conducted mainly during the onset of the monsoon season, these plantation drives contribute to improving air quality, conserving biodiversity,

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and maintaining ecological balance. The initiatives also promote student participation and community engagement in environmental conservation.

5.2. Routine Green Practices

Salbari College integrates environmental responsibility into its routine academic and administrative activities. Awareness programs, interactive talks, eco-club activities, and student participation in green campaigns are regularly conducted. Through these sustained efforts, the institution strives to foster an environmentally conscious campus culture and contribute positively to sustainable development goals.

Plants available in the College Campus:

Plant name	**Scientific name**
Aloe vera	*Aloe barbadensis miller*
Peppers	*Capsicum annuum*
Ashwagandha	*Withania somnifera*
Lemon	*Citrus limon*
Cinnamon	*Cinnamomum verum*
Clove	*Syzygium aromaticum*
Mint	*Mentha*
Clove	*Syzygium aromaticum*
Curry tree	*Murraya koenigii*
Turmeric	*Curcuma longa*
Neem	*Azadirachta indica*
Butterfly pea	*Clitoria ternatea*
Holy basil	*Ocimum tenuiflorum*
Skunk Vine	*Paederia foetida*
Ginger	*Zingiber officinale*
Indian pennywort	*Centella asiatica*
Malaysian Sal	*Shorea borneensia*
Nageswar	*Melodorum fruticosum*
Areca palm	*Dypsis lutescens*
Debabaru	*Polyalthia longifolia*
Bokul	*Mimusops elengi*
Bougainvillea	*Bougainvillea glabra*

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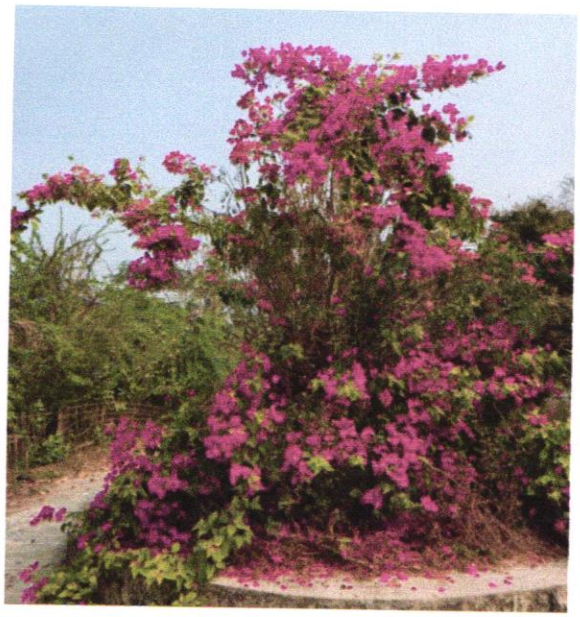

Fig 1. Bougainvillea

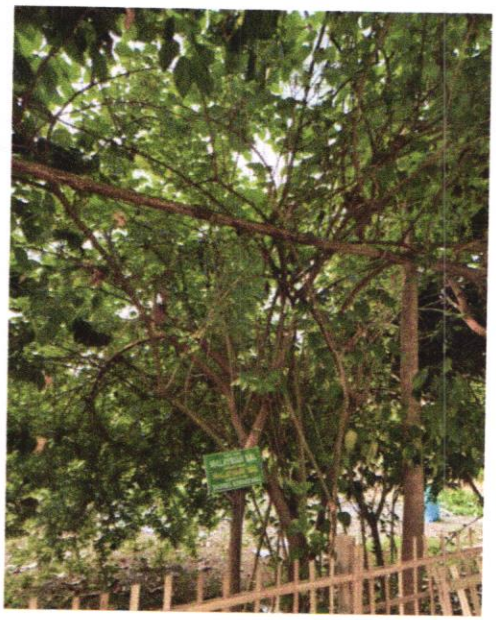

Fig 2. Mulberry tree

Fig 3. Areca palm

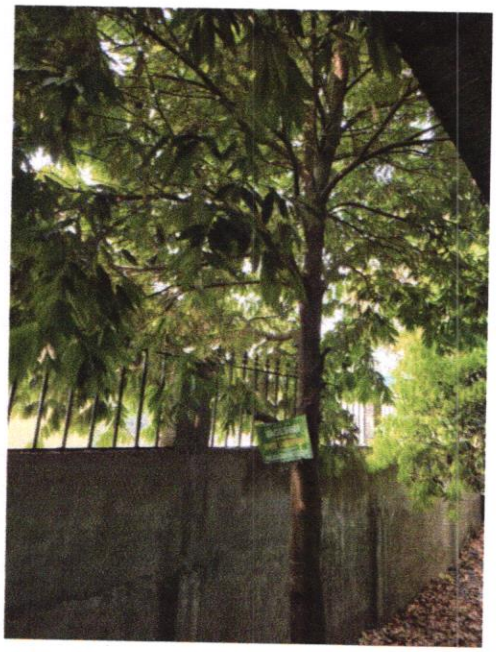

Fig. 4. Nageswar

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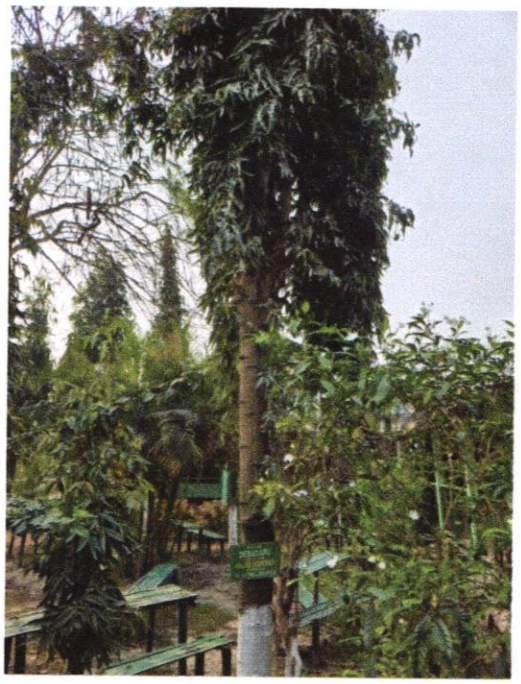

Fig. 5. Debadaru

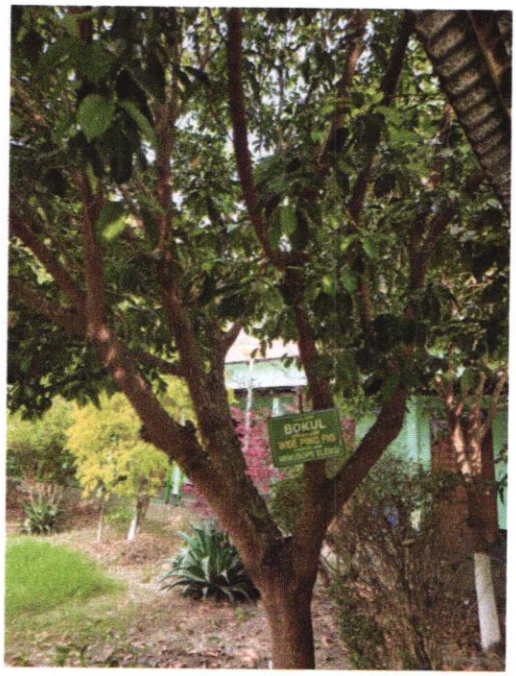

Fig. 6. Bokul

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List of Fauna in the College Campus:

Common Name	Scientific Name
Domestic Dog	*Canis lupus familiaris*
House Crow	*Corvus splendens*
Rock Pigeon	*Columba livia*
Red-vented Bulbul	*Pycnonotus cafer*
Jungle Myna	*Acridotheres fuscus*
Asian Koel	*Eudynamys scolopaceus*
Cattle Egret	*Bubulcus ibis*
Indian Roller	*Coracias benghalensis*
Common Mongoose	*Herpestes edwardsii*
Rhesus Macaque	*Macaca mulatta*
Golden Jackal	*Canis aureus*
House Rat	*Rattus rattus*
Indian Bullfrog	*Hoplobatrachus tigerinus*
Common Asian Toad	*Duttaphrynus melanostictus*
Indian Garden Lizard	*Calotes versicolor*
Common House Gecko	*Hemidactylus frenatus*
Indian Rat Snake	*Ptyas mucosa*
Spectacled Cobra	*Naja naja*
Checkered Keelback	*Fowlea piscator*
Monitor Lizard (Bengal Monitor)	*Varanus bengalensis*

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5.3.Recommendations:

- More green spaces should be established in the college campus for benefit of the students and staff as it boosts fresher air quality, provides shade and is an effective way to reduce heat
- More green cover also benefits in increasing the biodiversity in and around the campus
- Observance of awareness programme and plantation drives should be carried out more frequently to sensitize the students about environmental conservation

Fig 1: Observance of World Environment day at Salbari College, 5th June 2025

5.4.Environmental Awareness and Practices in Salbari College, Assam

5.4.1. Introduction

Environmental awareness has become an essential part of modern education. Educational institutions play an important role in promoting sustainable practices and encouraging students to protect natural resources. Salbari College, located in Baksa district of Assam, actively promotes environmental consciousness through various programmes, campaigns, and sustainable campus initiatives. The college encourages students, faculty, and the surrounding community to participate in environmental conservation activities.

i) Environmental Awareness Programmes

Salbari College regularly organizes awareness programmes to educate students and local communities about environmental protection. These programmes are conducted through seminars, workshops, and campaigns. Activities such as World Environment Day celebrations,

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awareness sessions on solid waste management, and environmental seminars are organized to increase knowledge about ecological sustainability.

The college also conducts community-oriented awareness programmes to promote cleanliness, hygiene, and sustainable living practices among nearby villages.

ii) Role of NSS and Student Participation

The National Service Scheme (NSS) unit of the college plays a significant role in spreading environmental awareness. NSS volunteers participate in different activities such as:

- Tree plantation drives
- Cleanliness campaigns under Swachh Bharat Abhiyan
- Awareness rallies on environmental protection
- Community service programmes in nearby villages

Through these activities, students develop a sense of social responsibility and environmental stewardship.

iii) Tree Plantation and Green Campus Initiative

Tree plantation is one of the major environmental practices followed in the college. Faculty members and students regularly participate in plantation drives to increase green cover in the campus and surrounding areas. These programmes help address issues such as deforestation, climate change, and biodiversity conservation.

iv) "No Vehicle Day" Initiative

As part of the green campus initiative, the college observes "No Vehicle Day" every Thursday, encouraging students and staff to avoid motor vehicles within the campus. This initiative helps reduce air pollution and promotes environmentally friendly transportation habits among the college community.

v) Village Adoption and Community Environmental Awareness

Salbari College has adopted Gyati Gaon village to promote environmental awareness and cleanliness. The objective of this initiative is to educate villagers about maintaining a clean and eco-friendly environment and reducing the use of harmful materials such as plastics.

Through this programme, students conduct awareness campaigns and interact with villagers to encourage sustainable practices.

vi) Cleanliness and Waste Management

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9	Biodiversity Awareness Seminar	NCC Environmental Awareness	10 February 2025	70 students participated; discussion on conservation of local flora
10	Plantation and Campus Greening Programme	NSS Environmental Activity	15 March 2025	80 saplings planted and maintained by student volunteers

6. Carbon foot print

Carbon footprint refers to the total amount of greenhouse gases, mainly carbon dioxide (CO_2), released into the atmosphere as a result of human activities. Educational institutions such as colleges contribute to carbon emissions through electricity consumption, transportation, fuel use, waste generation, and other daily activities. Assessing the carbon footprint of a college campus helps identify major sources of emissions and encourages sustainable environmental practices. Salbari College, located in Baksa district of Assam, has various activities that contribute to its carbon footprint, but the institution also promotes environmental awareness and green initiatives to reduce its environmental impact.

6.1. Sources of Carbon Emissions in the Campus

The major sources of carbon emissions in Salbari College campus include electricity usage, transportation by students and staff, generator fuel consumption, LPG use in the canteen, waste decomposition, paper usage, and laboratory activities. Electricity consumption for lighting, fans, computers, and other electronic devices forms one of the largest sources of carbon emissions. Transportation also contributes significantly, as many students and staff use motorcycles, cars, and buses to travel to the campus. In addition, diesel generators used during power cuts release carbon dioxide into the atmosphere.

The college canteen uses LPG for cooking, which also contributes to greenhouse gas emissions. Organic waste generated from the canteen and campus decomposes and releases methane and carbon dioxide. Administrative work and academic activities require the use of paper, which indirectly contributes to carbon emissions through paper production and disposal. Laboratory chemicals and related activities also have a small environmental impact.

6.2. Estimated Carbon Footprint

Based on approximate estimates, electricity consumption contributes the largest share of carbon emissions, followed by transportation. Generator fuel, LPG use, waste decomposition, and paper consumption contribute comparatively smaller amounts. The estimated total carbon footprint of the Salbari College campus is around 45–46 tonnes of CO_2 per year. This value may vary depending on campus population, electricity use, and fuel consumption.

6.3.Measures to Reduce Carbon Footprint

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The college regularly conducts campus cleanliness drives and waste management activities. These initiatives aim to maintain a hygienic environment in the campus and spread awareness about proper waste disposal and sanitation practices among students and the community.

Sl. No.	Activity	NSS / NCC Activity Type	Date	Measurable Outcome
1	Tree Plantation Drive	NSS Environmental Activity	5 June 2024	120 saplings planted in the college campus and nearby areas
2	World Environment Day Celebration	NSS Awareness Programme	5 June 2024	150 students participated; awareness on biodiversity and climate change
3	Campus Cleanliness Drive	NSS Community Service	12 July 2024	60 volunteers cleaned the campus; about 35 kg waste collected
4	Plastic-Free Campus Campaign	NSS Environmental Campaign	20 August 2024	100 students participated; reduction of single-use plastics in campus
5	Swachh Bharat Abhiyan Rally	NSS Awareness Rally	2 October 2024	Awareness rally with 120 students in nearby village
6	No Vehicle Day Initiative	NCC Environmental Practice	10 October 2024	Reduction of vehicle use in campus by about 40% on that day
7	Village Environmental Awareness Programme	NSS Community Outreach	15 November 2024	Awareness programme conducted in Gyati Gaon with 80 villagers
8	Waste Management Awareness Workshop	NSS Environmental Education	20 January 2025	90 students trained on waste segregation and composting

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Salbari College undertakes several initiatives to reduce its carbon footprint and promote environmental sustainability. Tree plantation programmes are regularly organized to increase green cover and absorb carbon dioxide. The college encourages students and staff to participate in environmental awareness campaigns and cleanliness drives. The campus also promotes waste management practices and discourages the use of single-use plastics.

Activities such as No Vehicle Day, awareness rallies, and community outreach programmes help promote eco-friendly behavior among students and local communities. Maintaining gardens and green spaces within the campus also contributes to improving air quality and reducing the overall environmental impact.

Sl. No.	Source of Emission	Activity Description	Estimated Energy/Fuel Use	Approximate CO_2 Emission (kg CO_2/year)
1	Electricity Consumption	Use of lights, fans, computers, projectors in classrooms and offices	31332.53 kWh/year	~22,026.77 kg CO_2
2	Transportation	Motorcycles, cars, and buses used by students and staff	~8,000 litres petrol/diesel/year	~18,400 kg CO_2
3	Solid Waste Decomposition	Organic waste from canteen and campus	~2,000 kg waste/year	~1,000 kg CO_2 equivalent
4	Paper Consumption	Printing and administrative paper use	~250 kg paper/year	~900 kg CO_2
5	Laboratory Chemicals	Use and disposal of chemicals in laboratories	Small scale use	~300 kg CO_2

6.4.Recommendation:

1. The Annual energy consumption is at 31332.53 kWh/year which releases approximately 22,026.77 kg CO2. It can be reduced by adopting conscious consumption habits.
2. Sustainable transportation should be chosen such as use of Public transport, car-pooling for the case distant resident, cycles and walking.
3. The waste produced should be minimized through composting and recycling.
4. The use of paper should be reduced by adopting more digital approaches.
5. Laboratory waste are minimal however, the chemical waste should be properly disposed and advanced disposing methods should be implemented.

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