

# **GREEN AND ENVIRONMENT AUDIT REPORT**

**Anandaram Dhekial Phookan College**

**2023-2024**

During the academic year 2023-2024, a Green and Environment Audit were conducted in the college campus. A committee comprised of the following members was created for that objective.

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|--------------------------------|------------------|
| <b>1. Mr. Bijumoni Borah</b>   | <b>-Convenor</b> |
| <b>2. Dr. Sonjira Hazarika</b> | <b>-Member</b>   |
| <b>3. Dr. Rajib Kagyung</b>    | <b>-Member</b>   |
| <b>4. Dr. Bhaswati Kakati</b>  | <b>-Member</b>   |
| <b>5. Dr. Bhaswati Sarma</b>   | <b>-Member</b>   |

## **INTRODUCTION**

Green audit implies the systematic identification, quantification, recording, and analysis of various establishments. It strives to examine environmental practices both in and around of the campus that have an impact on the eco-friendly environment. A green audit can be a beneficial tool for a college to establish where and how much energy, water and other resources are being used; so that further policies and strategies can be formulated and adapted. It's main aim is to raise awareness of health issues and advance ethics, values, and environmental consciousness. Higher education institutions' involvement in connection to environmental sustainability is growing more essential as environmental sustainability becomes a national priority. Numerous environmental and ecological problems have been brought on by the rapid urbanization and economic development at the local, regional, and worldwide levels. In light of this, it is imperative that institutions implement the Green Campus concept, which will promote sustainable development and significantly lower atmospheric carbon dioxide emissions. Every Higher Education Institution is required by law to submit an annual Green Audit Report to the National Assessment and Accreditation Council (NAAC), New Delhi. Furthermore, ensuring that higher education institutions take steps to reduce their carbon footprint and therefore help to mitigate global warming is part of their Corporate Social Responsibility.

## **OBJECTIVES**

In recent time, the Green and Environment Audit of an institution has become an integral part of self-assessment of the institution and reflect the role of the institution in mitigating the present environmental problems. Therefore, the purpose of the present green audit is to identify, quantify, describe and prioritize framework of Environment Sustainability in compliance with the applicable regulations, policies and standards. The main objectives of carrying out Green Audit are:

1. To map the Geographical Location of the college
2. To document the floral and faunal diversity of the college
3. To record the meteorological parameter of Nagaon where the college is situated
4. To document the green Energy initiatives of the college
5. To document the Waste disposal system
6. To document the ambient environmental condition of air, water and noise of the college

## **METHODOLOGY**

The purpose of the green audit of Anandaram Dhekial Phookan College is to ensure that the practices followed in the campus are in accordance with the Green Policy adopted by the institution. The methodology include: preparation and filling up of questionnaire, physical inspection of the

campus, observation and review of the documentation, interviewing key persons and data analysis, measurements and recommendations. Some data have also been taken from the students' research works carried out by various science departments of the college.

## **ABOUT THE COLLEGE**

Established in 1959 by the people of Nagaon, Anandaram Dhekial Phookan College is permanently affiliated to Gauhati University. Anandaram Dhekial Phookan College has an adequate academic and physical infrastructure catering to the 21 subjects in Under Graduate Classes and PG courses. Anandaram Dhekial Phookan College has regular PG courses in 3 departments: Assamese, History and Herbal Science and Technology under Gauhati University.

## **VISION & MISSION STATEMENT**

Anandaram Dhekial Phookan College stands firm to reach the top among the best institutions of the country by generating fruitful social, economic, cultural and human resources through promotion of quality education and thus to mould the society to cope with changing need of time

## **GREEN AUDITING**

The college has adopted the motto „Green Campus“ for environmental conservation and sustainability. There are main three pillars i.e. zero carbon foot print, positive impact on occupant health and performance and 100% graduates demonstrating environmental literacy. The goal is to reduce CO<sub>2</sub> emission, energy and water use, while creating atmosphere where students can learn and be healthy.

## **LAND USE ANALYSIS, ANANDARAM DHEKIAL PHOOKAN COLLEGE, NAGAON, ASSAM (As on 15-06-2023)**

### **CLASSIFICATION SCHEME FOR LAND USE ANALYSIS OF BUILT UP AREA**

Level I	Level II
1. Built-up land area	Dense Moderate Sparse

An attempt has been made to map land use for Anandaram Dhekial Phookan College, Nagaon, Assam with a view to detect the land consumption in the built-up land area using both remote sensing and GIS techniques.

## **LAND USE DATA OF ANANDARAM DHEKIAL PHOOKAN COLLEGE, NAGAON, ASSAM**

Categories of Land Use	Area in Sq. meter
1. Open Space and Plantation	7144.66
2. Built Up Area	7023.00
3. Total Area	14167.66

## LAND USE (BUILT UP AREA) ANALYSIS

BLOCK	Categories of Land Used (Built Up Area)	Area (in Sq. Feet)
A	<b>Ground floor</b> i. Principal's Chamber ii. Vice Principal's Chamber (Administrative) iii. Vice Principal's Chamber (Academic) iv. IQAC v. Office room vi. Canteen vii. Photostat cum store room viii. Teachers common room ix. Meeting room x. Botany department, laboratory, smart classroom, tissue culture lab xi. Biometric attendance room xii. Governing Body Meeting Room xiii. Drinking water xiv. Washroom	11171
	<b>First floor</b> i. Department of English and Language lab ii. Class room (no 05,06,07,08,09,10,11,16,17) iii. Confidential room iv. Department of Computer Science, Computer laboratory v. Department of Arabic vi. Department of fashion designing vii. Department of Bengali viii. Department of Hindi ix. Department of Sanskrit x. Department of Philosophy xi. Class room under constraction	9671
	<b>Second Floor</b> i. PG Department of Assamese ii. Assamese department library cum reading room iii. Folklore Museum iv. <b>Classrooms (Room nos. 18,19.20,21,22,23,24,25)</b>	9251
	<b>Ground Floor:</b> i. Career counseling & placement cell office ii. Class room (Room No. 1, 2 & 3)	7595
B	<b>First Floor:</b> i. Department of Zoology. Laboratory, smart class room, class room & museum ii. Department of Geography, Laboratory, smart class room & class room. iii. Wash room.	7595
	<b>Second Floor:</b> i. Department of Physics, Laboratory, smart class room, reading room & class room. ii. Conference Hall. iii. Wash room.	7595
C	<b>Ground Floor:</b> i. Department of Political Science & Smart class room. ii. B. Voc. Laboratory. iii. Class room (Room No. 30, 31, 32)	5600

	iv. NCC Office.	
	<b>First Floor:</b> i. Department of Herbal Science & Technology & Laboratory ii. Class room (MSc. - 1, 2, 3 & 4). iii. Food processing center. iv. Eco club. v. Environmental cell.	5600
	<b>Second Floor:</b> i. Herbal Sc. Laboratory ii. Class room (Room No. 33 & 34)	5600
<b>D</b>	<b>Ground Floor:</b> i. Student's Union Office ii. Department of Education & Smart class room. iii. Department of Economics & Smart class room. iv. Class Room (Room No. 35 & 36). v. Wash room.	2382
	<b>First Floor:</b> i. Mathematics Digital Class room (Room No. 37). ii. Class Room (Room No. 38 & 39).	2382
	<b>Second Floor:</b> i. Class room (Room No. 40, 41 & 42).	2382
<b>E</b>	<b>Ground Floor:</b> i. Central Library ii. Chemistry Laboratory-1 iii. Smart class room iv. Store room-1 (Chemistry)	3565
	<b>First Floor:</b> i. Central Library Reading Room. ii. Chemistry Departmental library cum reading room. iii. Chemistry Laboratory - 2 & 3. iv. Department of Chemistry. v. Class Room (Room No. 50). vi. Store room-2 (Chemistry).	3565
	<b>Second Floor:</b> i. Class Room (Room No. 50, 51, 52 & 53). ii. Central Library Reading Room.	3565
<b>F</b>	<b>Ground Floor:</b> i. Retired Professor's Room-1 ii. Gymnasium-1 iii. Vivekananda Kendra, Gandhian Study centre, Ambedkar Study Centre & Women Study Centre iv. NSS Office v. Indoor Play Ground vi. Teacher's Council Office-1 vii. Wash Room for Divyangjan viii. Emergency Medical Room ix. Cycle stand behind indoor stadium	6960

	<b>First Floor:</b> i. Department of History ii. Department of Commerce iii. Guest Room iv. Gymnasium-2 v. Reading cum Counseling Room, PG History	2000
	<b>Second Floor:</b> i. Class Room (Room No. 43, 44, 45 & 46)	2000
G	<b>Ground Floor:</b> i. Girls' Common Room. ii. Agro Herb. iii. Meeting Room. iv. Class Room (Room No. 47).	3800
	<b>First Floor:</b> i. Computer Hub. ii. Smart class room and Finishing School & Skill Development center (Room No. 49).	3800
	<b>Second Floor:</b> i. Girls' Hostel-2 extension	2400
Assam Type-1	i. Department of Mathematics. ii. Mathematics Computer Laboratory. iii. Mathematical Reading Room. iv. Department of Statistics. v. Laboratory of Statistics Department.	3200
Assam Type-2	i. Department of Tea Technology	750
Heritage Building	<b>Ground Floor:</b> i. Bio Tech. Hub (IBT Hub) ii. Buy's Common Room.	2296
	<b>First Floor:</b> i. Permanent Evaluation Centre (Exam Zonal Office). ii. Class Rooms (two).	2296
Others	ATM	100
	Orchid Garden	225
	Cycle Stand (East)	500
	Cycle Stand (West)	500
	Go down of 8 <sup>th</sup> Assam Bn NCC office	1350
Assam type	Security quarter	450
Auditorium	Auditorium	6103
Girls'' Hostel no 1	Ground and first floor	6500
Girls'' Hostel no 2	Ground, first and second floor	14020

## FINDINGS

Anandaram Dhekial Phookan College, which was established in the year 1959, has an eco-friendly environment. It has a long legacy of healthy environmental practices including periodic plantation, their preservation and maintenance. Its land use is such that 58.76 % of the total area is occupied by open land and plantation that generates a better and sustainable campus environment.

## FLORAL DIVERSITY

Anandaram Dhekial Phookan College is within the geo-position of latitude 26.6528<sup>0</sup> N and longitude 92.7926<sup>0</sup> E in Nagaon, Assam, India. It encompasses an area of about 15.04 acres. The area is immensely diverse with a variety of tree species performing a variety of functions. Most of these tree species are planted in different periods of time through various plantation programme organised by the college authority and have become an integral part of the college. The trees of the college have increased the quality of life, not only for 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 of the trees absorb and filter the Sun's radiant energy, keeping things cool in summer. Many animals are dependent on these trees mainly for food and shelter. Flowers and fruits are eaten by monkeys, and nectar of the flower is a favorite 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 colors. Even individual trees vary in their appearance throughout the course of the year as the seasons change. The strength, long life-span and regal stature of trees give them a monument-like quality. They also remind us the glorious history of our institution. We often make an emotional connection with these trees and sometime become personally attached to the ones that we see every day. A thick belt of large shady trees in the periphery of the college have found to be bringing down noise and cut down dust and storms. A recent study has revealed that the rich diversity of 421 numbers of trees of 74 species belonging to 31 families. Thus, the college has been playing a significant role in maintaining the environment of the entire Nagaon town and its surrounding areas. The following are the tree species with whom we are being attached-

**Table: List of tree species of Anandaram Dhekial Phookan College, Nagaon**

S.No	Name of the plant species	Number	Family	Common Name
1.	<i>Anacardium occidentale</i> L.	2	Anacardiaceae	Kaju Badam
2.	<i>Areca catechu</i>	2	Arecaceae	Beetle nut
3.	<i>Artocarpus heterophyllus</i>	6	Moraceae	Jackfruit
4.	<i>Azadirachta indica</i>	15	Meliaceae	Neem
5.	<i>Borassus flabellifer</i>	1	Arecaceae	Tall Palm
6.	<i>Caesalpinia pulcherrima</i>	15	Fabaceae	Peacock Flower
7.	<i>Calliandra haematocephala</i> Hassk.	2	Fabaceae	Powder puff tree
8.	<i>Cassia fistula</i>	4	Fabaceae	Golden Rain Tree
9.	<i>Cocos nucifera</i>	10	Arecaceae	Coconut
10.	<i>Eucalyptus</i> sp.	1	Myrtaceae	Gums trees
11.	<i>Ficus benghalensis</i>	6	Moraceae	Banyan Tree
12.	<i>Gmelina arborea</i>	1	Verbenaceae	Gomari
13.	<i>Mangifera indica</i>	8	Anacardiaceae	Mango
14.	<i>Mimusops elengi</i>	40	Sapotaceae	Bakul
15.	<i>Phoenix sylvestris</i>	29	Arecaceae	Silver Date Palm
16.	<i>Phyllanthus emblica</i>	6	Phyllanthaceae	Amlakhi
17.	<i>Psidium guajava</i>	1	Myrtaceae	Guava
18.	<i>Samanea saman</i> Merr.	4	Fabaceae	Rain Tree
19.	<i>Syzygium cumini</i>	2	Myrtaceae	Jamun tree
20.	<i>Tectona grandis</i>	22	Lamiaceae	Teak

21.	<i>Zizyphus jujuba</i>	6	Rhamnaceae	Bogori
22.	<i>Aegle marmelos</i>	1	Rutaceae	Bael
23.	<i>Albizia lebbek</i>	8	Fabaceae	women's tongue tree
24.	<i>Alstonia scholaris</i>	6	Apocynaceae	Devil tree
25.	<i>Aquilaria agalocha</i>	10	Thymeliaceae	Sasi goch
26.	<i>Araucaria sp</i>	5	Araucariaceae	Christmas tree
27.	<i>Averrhoa carambola</i>	1	Oxalidaceae	Star fruit
28.	<i>Bombax ceiba</i>	1	Malvaceae	Red cotton Tree
29.	<i>Bougainvillea spectabilis</i> Willd.	8	Nyctaginaceae	Kagaz phul
30.	<i>Butea monosperma</i>	6	Fabaceae	Bastard Teak
31.	<i>Butea monosperma</i>	4	Fabaceae	Palash
32.	<i>Callistemon sp.</i>	2	Myrtaceae	Bottle Brush Tree
33.	<i>Calotropis gigantea</i>	1	Apocynaceae	Madar
34.	<i>Cedrus atlantica</i>	1	Pinaceae	Atlas
35.	<i>Citrus maxima</i>	1	Rutaceae	Pomello( Robab tenga)
36.	<i>Cupressus sempervirens</i>	10	Cupressaceae	Pencil pine
37.	<i>Cycas revoluta</i>	4	Cycadaceae	Japanese sago palm
38.	<i>Dalbergia sissoo</i>	2	Fabaceae	Sisu
39.	<i>Delonix regia</i>	14	Fabaceae	Krishnachura
40.	<i>Dracaena fragrans</i>	5	Asparagaceae	Jalukar Mahi
41.	<i>Elaeocarpus floribundus</i> Bl.	4	Elaeocarpaceae	Rudrakhsha
42.	<i>Grevillea robusta</i>	5	Proteaceae	Silver Oak
43.	<i>Lagerstroemia speciosa</i>	19	Lythraceae	Ajar Tree
44.	<i>Litchi chinensis</i>	1	Sapindaceae	Litchi
45.	<i>Mesua ferrea</i>	4	Calophyllaceae	Nahar
46.	<i>Michelia champaca</i>	2	Magnoliaceae	Tetachapa
47.	<i>Neolamarckia cadamba</i>	2	Rubiaceae	Kadam
48.	<i>Nyctanthes arbor-tristis</i> L.	3	Nyctaginaceae	Sewali phul
49.	<i>Olea europaea</i>	1	Oleaceae	Olive
50.	<i>Polyalthia longifolia</i>	4	Annonaceae	Ashoka Tree
51.	<i>Pterospermom acerifolium</i>	1	Sterculiaceae	Hatipolia
52.	<i>Sapthodea campanulata</i>	4	Bignoniaceae	Fountain Tree
53.	<i>Syzygium cumini</i> (L.) Skeels	2	Myrtaceae	Jamu gach
54.	<i>Syzygium myrtifolium</i> (Roxb.) Walp.	5	Myrtaceae	Ornamental syzygium
55.	<i>Tamarindus indica</i>	1	Fabaceae	Tamarind
56.	<i>Tecoma stans</i> (L.) Juss. ex Kunth	2	Binoniaceae	Yellow Bells
57.	<i>Terminalia arjuna</i>	2	Combretaceae	Arjun
58.	<i>Terminalia bellirica</i> (Gaertn.) Roxb.	2	Combretaceae	Bhomora
59.	<i>Terminalia chebula</i>	2	Combretaceae	Xilikha ( Haritaki)
60.	<i>Thuja occidentalis</i>	5	Cupressaceae	Thuja
61.	<i>Embllica officinalis</i>	3	<u>Phyllanthaceae</u>	Amlokhi
62.	<i>Butea monosperma</i>	3	<u>Fabaceae</u>	Palash
63.	<i>Cycas</i>	4	Cycadaceae	Cycas

## GLIMPSES OF ANANDARAM DHEKIAL PHOOKAN COLLEGE CAMPUS



Fig: Main entry of college campus



Fig: View of the college campus.



Fig: Green campus of the college



## FAUNAL DIVERSITY

Anandaram Dhekial Phookan College is situated in the Assamese district of Nagaon, close to the meeting point of the Indo-Malayan and Himalayan biodiversity hotspots, on the northern bank of the Brahmaputra River. The College campus experiences a monsoon-like climate due to its Sub-Tropical climate. The peak temperature is measured in early May or early June, right before the monsoon season begins. The wet South-West Monsoon that strikes the northern Himalayan foothills from late June to August is the main source of the heavy summer rains. The climate of the college and the Nagaon district as a whole is ideal for a diverse range of flora and wildlife to support the area's rich biodiversity. The faunal Diversity of college campus has been studied and documented as below-

FAUNAL GROUP	SCIENTIFIC NAMES
SPIDERS	<i>Myrmachne orientalis</i> (Family Salticidae); <i>Nephila plipes</i> (Family-Nephilidae); <i>Heteropoda sp</i> (Family-Sparassidae); <i>Phintella vitatta</i> (Family Salticidae)
MOTHS & BUTTERFLIES	<i>Antheria assmensis</i> ; <i>Bombyx mori</i> ; <i>Philosamia ricini</i> ; <i>Junonia atlites atlites</i> ; <i>Commander (Moduza procris procris)</i> ; <i>Ethope himachala</i> ; <i>Melanitis leda leda</i> ; <i>Paltoporia paraka paraka</i> ; <i>Ypthima baldus</i> ; <i>Acraea terpsicore</i> ; <i>Elymnias hypermnestra undularis</i> ; <i>Mycalesis perseus blasius</i> ; <i>Tanaecia lepidea lepidea</i> ; <i>Euploea core core</i>
OTHER INSECTS	<i>Apis indica</i> ; <i>Apis dorsata</i> ; <i>Apis florae</i> , <i>Crocothemis erythraea</i> (Scarlet dragonfly); <i>Pantala flavescens</i> (wandering glider)
AMPHIBIANS	<i>Duttaphrynus melanostictus</i> (Assian common toad), <i>Leptobrachium smithi</i> ; <i>Fejervarya pierrei</i> ; <i>Hoplobatrachus tigerinus</i> ; <i>Hylarana tytleri</i> ; <i>Humerana humeralis</i> ; <i>Hylarana leptoglossa</i> ; <i>Polypedates leucomystax</i> .
REPTILES	<i>Calotes versicolor</i> ; <i>Hemidactylus frenatus</i> ; <i>Hemidactylus brookii</i> ; <i>Hemidactylus platyurus</i> ; <i>Hemidactylus flaviviridis</i> ; <i>Gekko gekko</i> ; <i>Eutropis multifasciata</i> ; <i>H. Sphenomorphus maculatus</i> ; <i>Enhydryis enhydryis</i> ; <i>Xenochrophis schnurrenbergeri</i> ; <i>Xenochrophis cerasogaster</i> ; <i>Rhabdophis subminiatus</i> ; <i>Amphiesma stolatum</i> ; <i>Chrysopelea ornate</i>
BIRDS	<i>Acridotheres tristis</i> (Common myna); <i>Streptopelia orientalis</i> (Oriental Turtle Dove); <i>Athene noctua</i> ( little owl ); <i>Pycnonotus cafer</i> (Red-vented Bulbul)
MAMMALS	<i>Macaca mulatta</i> (The rhesus macaque); <i>Sciurus carolinensis</i> (Eastern gray squirrel); <i>Pteropus giganteus</i> (The Indian flying fox)

## Waste management

The solid waste generated in the campus is segregated at source by providing separate dustbins for biodegradable and non-biodegradable. The college has a tie up with Nagaon Municipal Corporation (NMC) for disposal of waste generated. The waste generated by newspapers, magazines, cartoons and examination oriented waste are reused as possible and stored in the proper places. The plastic waste generated in the campus is regularly put in the 'plastic tank'. Metal waste, concrete waste and wooden waste are stored and given to scrap agents for further processing. Kitchen waste of hostel

are dumped in pits and used as fertilizer.

We are in dire need of sustainable alternatives to dispose sanitary napkins in India. In an effort to promote proper disposal of menstrual waste and promote the Swachh Bharat Mission, Sanitary pad vending machines and eco-friendly incinerators were installed in Girls' hostel of our college. Separation of waste is essential as the amount of waste being generated today causes immense problem. The material was composted and evaluated as a fertilizing material. Disposal of this waste results in the production of good quality production material that can be used as soil amendments and source of plant nutrients.

The electronic wastes like obsolete computer, laptops, monitors, compact discs, printers, scanners, calculators etc. are repaired and reused and those irreparable are sold out. The college tries to reduce the volume of e-waste by upgrading the software at the right time and periodic checking of electronic items.

### **Water management**

The major sources of water in the college campus are ground water produced by bore wells and stored in reservoirs. Water is mainly used for drinking, conducting practicals in the laboratories, bathroom, toilet, gardening and cooking in hostel and canteen. Aqua-guards have been installed for drinking purposes in different locations throughout the entire college. A large cooler cum filter is installed for common use, especially for students.

### **Rain Water Harvesting**

All living things including plants, animals and human beings need water to live and to carry out different kinds of activities. It is hard to imagine a day without water. We use water for different kinds of day to day activities such as cleaning, washing, bathing, cooking, drinking, gardening and other domestic and industrial use.

There are different kinds of methods used for conserving water. One such method is rain water harvesting. Rain water harvesting is the simple process used to conserve rainwater by collecting, storing, purifying of rain water that runs off from rooftop, roads, open ground etc. for later use.

It is a process of accumulation and storage of rainwater for reuse rather than allowing it to run off. Rain water harvesting is a method of collecting rainwater for further use on reuse before it reaches the ground. Generally rainwater is collected from the rooftop through pipe and stored in over ground tank or underground storing structure. Present rainwater harvest plant is with capacity of 2000 Lt. and water collected is regularly used for gardening and other outdoor purposes.

### **Environment friendly practices**

#### **Tree plantation programme**

The college undertakes tree plantation programmes every year on various occasions like Environment Day, Teachers day etc. The plantation programme includes plantation of various types of air purifying plants (like Neem), economically important plants, ornamental, fruit plants and medicinal plant species. The NCC, NSS unit and department of Botany of the college conducted tree plantation programme at our adopted village, Mahariati Kamarkuchi Tribal Village time to time. This activity is done particularly during the rainy season of the year. These types of programme help to maintain a green environment and helps in the conservation of biodiversity of the college in particular and the surrounding area.

## **Encouraged to “reuse, refill, replenish”**

The college has been trying to make it plastic free campus by creating awareness regarding the same among the students and staff members by displaying boards and other programmes. Another practice of the college is the use of reusable utensils which help in keeping the campus plastic free. Students were encouraged to incorporate reusable bottles use as well as other sustainable practices into their lives, such as using their own reusable service-ware for takeout and using reusable bags instead of disposable plastic or paper.

## **Cleanliness Drive**

The college authority has maintained cleanliness throughout the college campus and nearby adopted village. The students and other members have been actively taking part in cleanliness drives mobilized through NCC and NSS unit of our college.

## **Awareness programs**

Seminars and popular talks on environmental problems are organised from time to time with an aim to aware the students and college staff about climate change and its impact. A climate clock was also installed on December, 2023 in the college entrance to regularly create awareness in climate change mitigation activities to save our environment among students.

## **Vermicomposting unit**

A vermicomposting set up was started few years back and is regularly maintained in the college and the product is sold to employees and outsourced.

## **Transportation**

Being a largest campus in the region and located centrally, A.D.P. College faculty, staff and students commute on their own. The college is dedicated to provide its students and staff all the comfort and convenience to help them to achieve their targets. The students are encouraged to use bicycles, two wheelers rather than four wheelers which leads to fuel saving and also the contribution of pollutants to atmosphere is less.

## **ELECTRICAL POWER CONSUMPTION**

Anandaram Dhekial Phookan College, being one of the largest colleges of Assam, consumes on an average 8125 kW-hr (units) of electricity per month which turns out to be 97500 kW-hr per year only to maintain its volumetric activities throughout the year.

There are total of 838 nos. of LED bulbs, 163 nos. of tubes, 171 nos. of computers and laptops, 25 ACs, 15 Digital Boards and 629 nos. of fans in the entire college campus. The authority keeps on replacing the old filament bulbs, CFL bulbs and tube lights by low energy consuming LED bulbs and LED tubes and bulky high power consuming fans by energy efficient fans in order to keep the electricity consumption of the college as low as possible.



Fig: Grid connected solar plant



Fig: Power Generator Unit



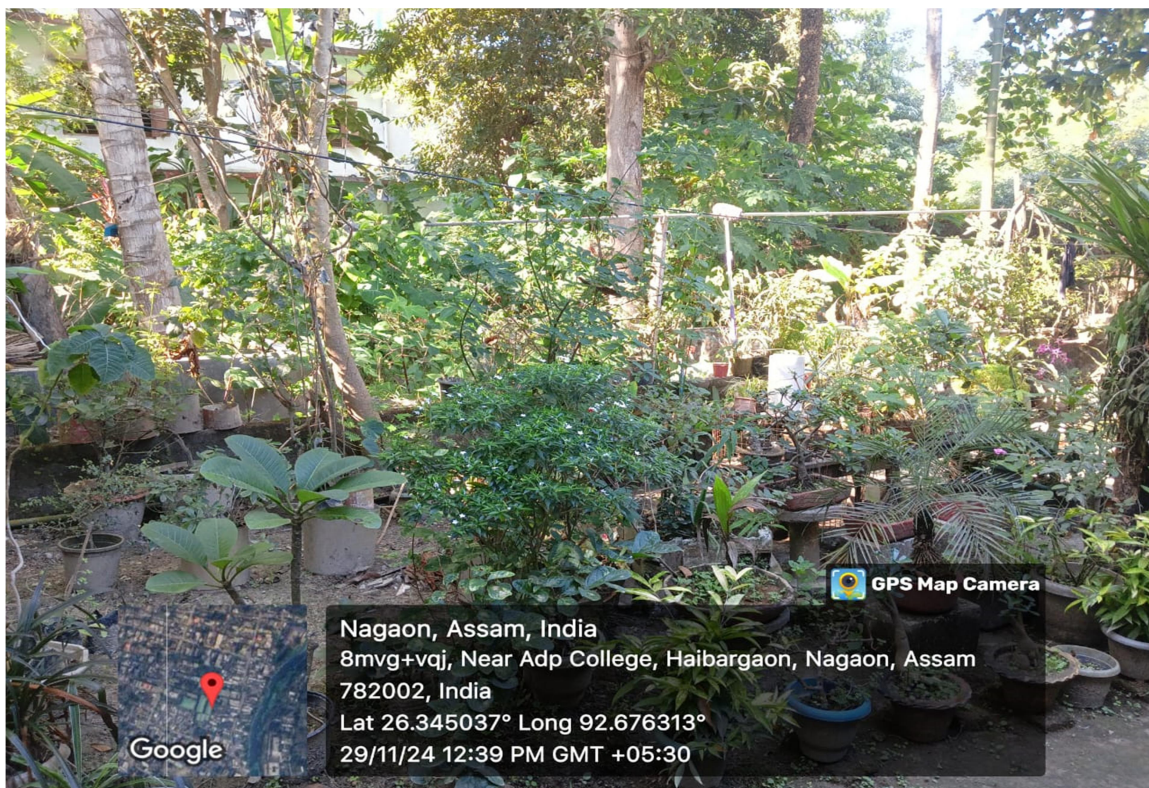


Fig: Medicinal plant garden



Fig: Orchidarium





Fig: Rain water harvest plant



Fig: Waste management system

## Orchidarium

The department of Botany has been maintaining a botanical garden and an Orchidarium which harbors various medicinal plants and orchids.

Sl.NO.	Orchid Names
1	<i>Eria flava</i> Linds
2	<i>Aerides multiflorum</i> Roxb.
3	<i>Coelogyne nitida</i> Lindley
4	<i>Dendrobium fimbriatum</i> Hook
5	<i>Dendrobium moschatum</i> SW
6	<i>Dendrobium</i> sp.
7	<i>Acampe papillosa</i> Lindl
8	<i>Eria stricta</i> Lindl
9	<i>Pholidota imbricate</i> (Roxb) Lindl.
10	<i>Vanda teres</i> (Roxb) Schlir
11	<i>Rhynchostylis retusa</i> (L.) Blume
12	<i>Dendrobium aphyllum</i> (Roxb) Fisch.
13	<i>Dendrobium primulinum</i> Li.
14	<i>Aerides odoratum</i> Lour
15	<i>Cymbidium aloifolium</i> (L.) SW.
16	<i>Vanila planifolia</i> Jacks
17	<i>Ranunthera imschootiana</i> Rolfe
18	<i>Cymbidium pendulum</i> (Roxb) Sw
19	<i>Micropera rostrata</i> (Roxb) Balakr
20	<i>Acampe regida</i> (Buch. –Ham.) Hunt
21	<i>Bulbophyllum xylophyllum</i> Parish
22	<i>Phaius tankarvilleae</i>

## Medicinal Plant collection:

The department of Zoology has been collecting a number of medicinal plants in pots.

Sl. No.	Common name	Botanical Name
1	Tulsi	<i>Ocimum sanctum</i>
2	Saguni lota	<i>Tinospora cordifolia</i>
3	Sal konwari	<i>Aloe vera</i>
4	Kol	<i>Musa paradisiaca</i>
5	Panaunowa	<i>Boerhaavia diffusa</i>
6	Sewali	<i>Nyctanthes arbor-tritis</i>
7	Dupartenga	<i>Bryophyllum</i>
8	Tengesi Tenga	<i>Oxalis corniculata</i>
9	Aparajita	<i>Clitoria tinctoria</i>
10	Jamu	<i>Syzygium cumini</i>
11	Nayan tora	<i>Vinca rosea</i>
12	Narasingha	<i>Murayya coenigii</i>
13	Lajuki lota	<i>Mimosa pudica</i>
14	Durun	<i>Leucas aspera</i>

15	Bongali Dhania	<i>Eryngium foetidum L.</i>
16	Manimuni	<i>Centella asiatica</i>
17	Gima sak	<i>Glinus oppositifolius (L.) Aug. DC.</i>
18	Dalim	<i>Punica granatum L.</i>
19	Pirali paleng	<i>Talinum fruticosum (L.) Juss.</i>

### Rearing of local fishes in aquarium collected by Zoology Department

Sl. No	Scientific Name	Local Name
1	<i>Channa punctata</i>	Goroi
2	<i>Mystus fengara</i>	Singara
3	<i>Clarius batraws</i>	Magur
4	<i>Donio retio</i>	Darikona
5	<i>Heteropneustis fasciala</i>	Khalihona
6	<i>Puntius sophore</i>	Puthi
7	<i>Puntius ticto</i>	Puthi
8	<i>Anabas testudineus</i>	Kawoi
9	<i>Mystus vittatus</i>	Singara

### Suggestions:

1. Solar plant should revive into working state.
2. More medicinal plants should be planted in botanical garden.
3. Incinerator should be setup to reduce the hazardous contaminates.
4. Create awareness among students and faculties to use minimum nonrenewable energy to reducing carbon footprint.
5. Plantation of valuable plants in and around the college campus.

### Action taken on the Green Audit Report:

1. Solar plant has been repaired and connected to power grid and Solar plant is maintained in good condition
2. Botanical garden is maintained in good condition with high diversity of medicinal and aromatic plants.
3. Incinerator has been set up in Girls' Hostels.
4. The college administration has replaced all existing CFL bulbs with LED bulbs in phases, regular awareness programme has been conducted regarding reducing carbon foot print, and climate clock has been installed to aware people about climate change.
5. A large number of plants are plated in and around the college campus along with around 30 different types of orchids.

### Report Prepared and submitted by Department of Botany, ADP College, Nagaon.

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|-------------------------|-----------|
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