GREEN CUM ENVIRONMENTAL AUDIT REPORT 2021-2022

HAJI ANFAR ALI COLLEGE

Doboka, Hojai, Assam

Pin- 782440

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Principal & Secretary

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P.O. Doboka : Pin : 782440 :: Hojai :: Assam
NAAC Reaccredited : Grade 'B'
UGC 2 (f) & 12 B Recognised
(Permanently affiliated to Gauhati University, Guwahati)
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Ref. No. Date :

Acknowledgement

We would like to express our heartfelt gratitude and appreciation to Dr. Sanjeeb Kumar Nath, External Evaluator, for his invaluable contribution, guidance, and expertise in the preparation of the Green cum Environment report of Haji Anfar Ali College for the session 2021-22.

Dr. Nath's extensive knowledge and profound understanding of environmental issues have been instrumental in shaping the report and ensuring its accuracy and relevance. His dedication to the cause of environmental sustainability has truly inspired us throughout this journey.

We also extend our sincere thanks to all the members involved in this endeavor: Mr. Pijush Chakraborty, Mr. A. R. Laskar, Mr. S. A. Osmani, Mr. Debangshu Bhowmick and Mr. S. H. Barbhuiya . Your unwavering support, cooperation, and active participation have played a pivotal role in the successful completion of this report. Each member's unique perspective and expertise have enriched the content and made it comprehensive and insightful.

Lastly, we would like to extend our gratitude to all the individuals and Departments who provided us with valuable insights, data, and information during the Audit period. We are honored to have worked with such exceptional individuals who are committed to making a positive impact on the environment.

Thank you once again to Dr. Sanjeeb Kumar Nath, the External Evaluator, all the members, and everyone who contributed to the completion of this report.

Principal
Haji Anfar Ali College

Principal
Haji Anfar Ali College
Doboka : Nagaon : Assam

Doboka, Hojai

DHING COLLEGE

Dhing: Nagaon: Assam

Department of Botany

CERTIFICATE

This is to certify that Haji Anfar Ali College has conducted a detailed "Green cum Environmental Audit 2021-22" of their campus and successfully established eco friendly practices and management systems for conservation of environment at all levels. The environment awareness initiatives are praiseworthy. This will surely boost the new generation to take care of environment and propagate this view for many generations to come. The efforts undertaken by the Principal, Green cum Environmental Audit Team, faculty members, non-teaching members and students of Haji Anfar Ali College towards environment and sustainability are highly appreciated and commendable.

External Auditor

Green Audit

Dr. Sanjeeb Kumar Nath
HOD & Associate Professor
Department of Botany
Dhing College : Dhing : Nagaon : Assam


ADMINISTRATIVE BLOCK
HAJI ANFAR ALI COLLEGE

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Introduction

Green audit is a process of systematic identification, quantification, recording, reporting and analysis of components of flora and fauna diversity within the campus. It aims to analyze green practices inside an outside of the concerned sites, which will have an impact on. the eco-friendly environment. Green audit provides direction for improvement of the condition of environment. It is carried out with the aid performing tasks like waste management, energy saving and tree plantation to turn into a better environment friendly institute. Green audit can be a useful tool for univerities and colleges to determine their consumption of energy or water or other resources and then plan to implement changes and make savings. It can create health consciousness and promote environmental awarness, values and ethics. It allows faculty members, students, other staff members to better understand the impact of green activities on the premises.

The rapid urbanization and economic development at local, regional and global level has led to several environmental and ecological crises. The biodiversity is facing serious threats from habitat loss, pollution, over consumption and invasive species. Species are disappearing at an alarming rate and each loss affects nature's delicate balance and our quality of life. Without this variability in the living world, ecological system and functions would break down with detrimental consequences for all form of life, including human beings. In this context, it is necessary to adopt a green campus system for the

institute, which will lead to sustainable development while reducing the large amount of atmospheric Co_2 emission to the environment.

The National Assessment and Accreditation Council, New Delhi (NAAC) has made it mandatory that all Higher Educational Institutions should submit an annual Green Audit Report. Moreover, it is part of Corporate Social Responsibility of the Higher Educational Institutions to ensure that they contribute towards the reduction of global warming through carbon footprint reduction measures. Government of India through its National Environment Policy (2006) has made mandatory for all higher educational institution to conduct green audit in order to ensure a clean and healthy environment within and outside the institution. As environmental sustainability is becoming an increasingly important issue for the nation, the role of higher educational institutions in relaion to environment sustainability is more prevalent. Accordingly, realizing the need of being responsible towards environment.

Overiew of the College

Haji Anfar Ali College is the only provincialised college in the entire Jamunamukh Constituency of Hojai district under Nagaon parliamentary constituency. The college was started in 1986 and was provincialised in 1998. The College has been consistently maintaining high academic standards and good institutional social responsibilities. The college is permanently affiliated to the Gauhati University, Assam and it had gone for the NAAC assessment and accredited with

a prestigious C++ Grade in the year 2005 for the first time and brought the prestigious Grade B in its 2nd Cycle of Assessment and Accreditation by the NAAC in 2016. Hope we shall have the pleasure of getting a better grade in the 3rd cycle of Assessment that is under progression.

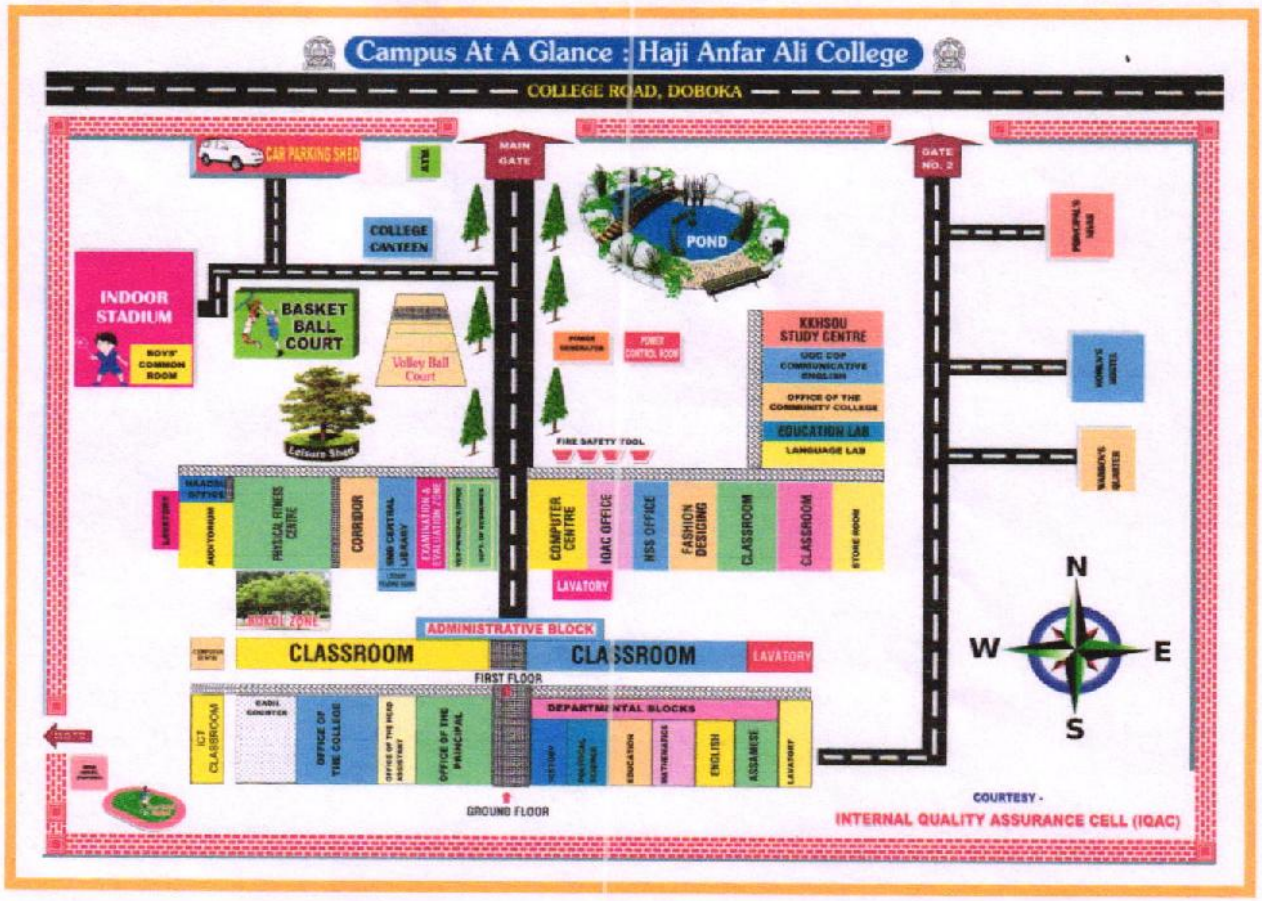
OBJECTIVES:

In recent time, the Green Audit of an institution has been becoming a paramount important for self-assessment of the institution which reflects the role of the institution in mitigating the present environmental problems. The college has been putting efforts to keep our environment clean since its inception. 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:

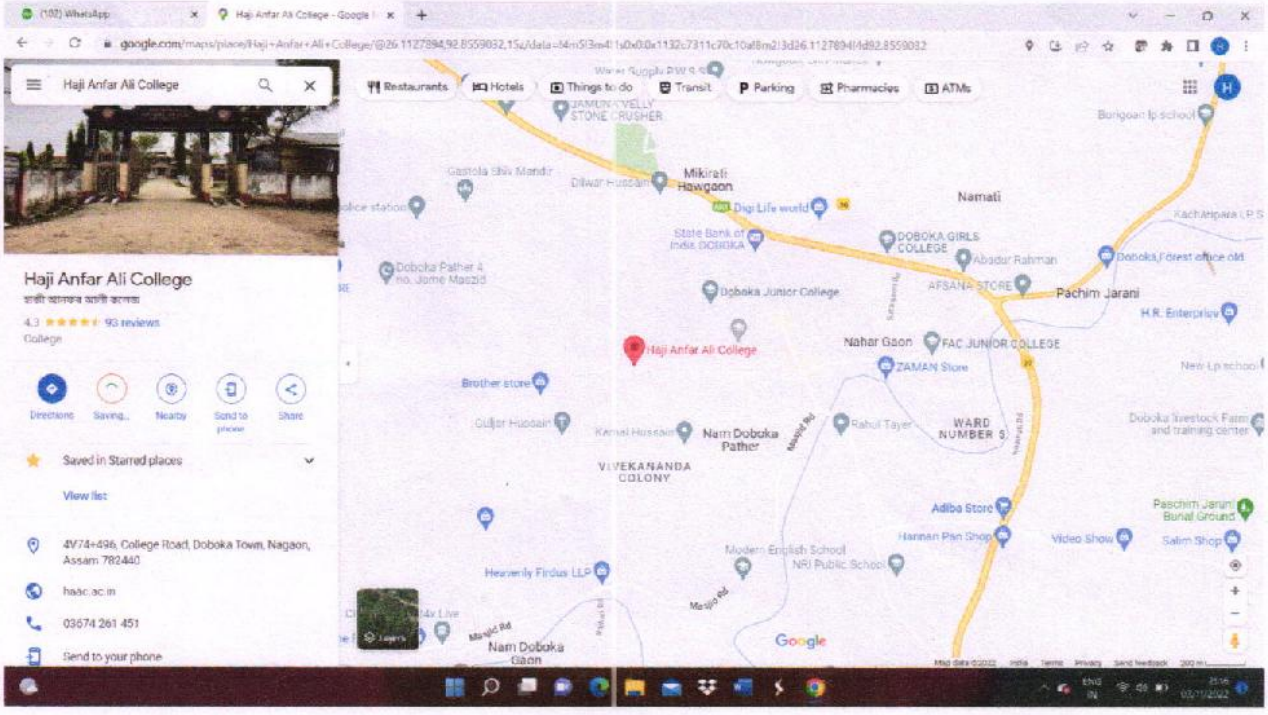
- To document the floral and faunal diversity of the college.
- To map the Geographical Location of the college
- To ensure environment friendly activities and review the implementation of policies.
- To secure the environment and cut down the threats posed to human health by ensuring optimum utilization of resources
- To record the meteorological parameter of Haji Anfar Ali college where it is situated

- To document the ambient environmental condition of weather, air, water and noise of the college.
- To promote environmental awareness among students and staff members.
- To establish a baseline data to assess future sustainability by avoiding the interruptions in environment.

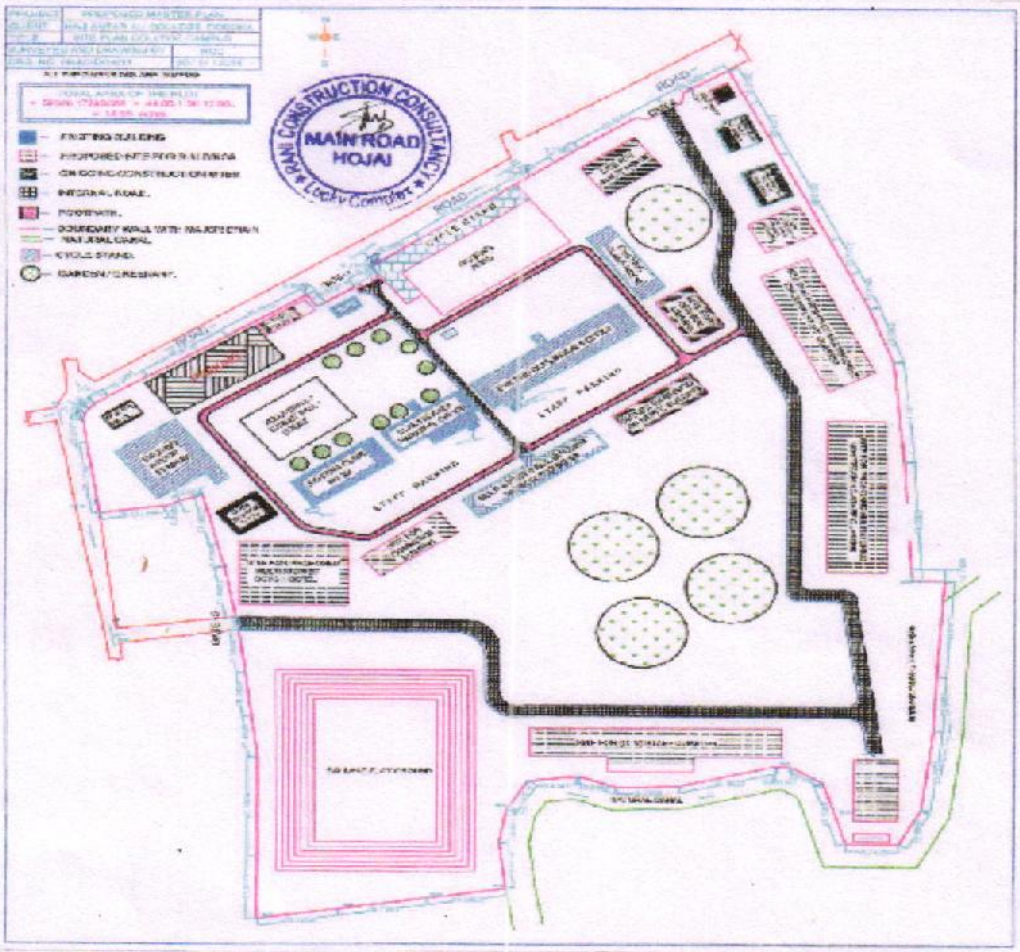
Honourable Principal, Dr. Mamun Azam Barbhuiya with a discussion with all the satff members formed a Green cum Environmental Audit Committee (including both teaching and non-teaching staff). The need for a Green cum Environment Audit Report was raised in the meeting organized by the Green Audit Team of the College. In order to perform green audit, the methodology included physical inspection of the campus, observation, measurements and documentation. The methods of plant identification include expert determination, recognition, comparison and use of keys, manuals, monographs and E-flora. The present report covered the areas like green area management, water management, waste management, environment friendly practices etc.



Haji Anfar Ali College, Doboka (Campus at a galance)



Haji Anfar Ali College (Google Map)



Haji Anfar Ali College (Master Plan)

Green cum Environmental Audit Committee

A Green cum Environmental Audit Committee has been formed to perform the task of Green and Environment Audit of Haji Anfar Ali College with effect from the year 2021-22

External Member:

1. Dr. Sanjeeb Kumar Nath, HOD & Associate Professor, Department of Botany, Dhing College, Dhing, Nagaon , Assam

Internal members:

2. Dr. Mamun Azam Barbhuiya, Principal, Haji Anfar Ali College
3. Abdul Rouf Laskar, Associate Professor, Dept. of History, Haji Anfar Ali College.
4. Pijush Chakraborty, Associate Professor, Dept. of Mathematics, Haji Anfar Ali College.
5. Sibbir Ahmed Osmani, Assistant Professor, Dept. of Education, Haji Anfar Ali College.
6. Debangshu Bhowmick, Junior Assistant, Haji Anfar Ali College.
7. Samsul Haque Borbhuyan, Library Bearer, Haji Anfar Ali College.

Green cum Environmental Audit Committee, Haji Anfar Ali College Campus Biodiversity

Haji Anfar Ali College harbors rich plant diversity having a vast area of 45 bighas of land situated 1.5 Km in the western direction of the Doboka town. All the way through the preliminary research and survey different species of plants were identified and these are listed below herewith.

The species were classified and listed as medicinal, fruit plant, ornamental plants. In addition, some of species have more potential and used as insecticide, biodiesel, air purifier etc. The plant diversity is explored during March and April months of this year as we know the rainy season more species richness. More diversity exploration work in different seasons of the year is necessary to have a complete flora list of campus. It is a continuous work and the college had already initiated a digital biodiversity register involving students and all the staff members with a noble idea to help the local community.

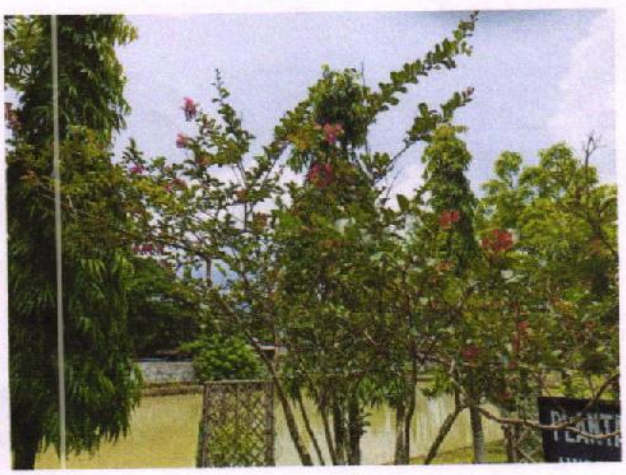


Table 1.

	Name of medicinal plants	Family
1.	*Aegle marmelos* Lour,	Rutaceae
2.	*Ageratum conyzoides* L.	Asteraceae
3.	*Amaranthus sessilis* (L.) R. Br. Ex DC	Amaranthaceae
4.	*Andrographis paniculata* (Burm. F.) Wall. ex Nees	Acanthaceae
5.	*Asparagus racemosus* Wild.	Liliaceae
6.	*Azadirachta indica* A. Juss.	Meliaceae
7.	*Bombax ceiba* L.	Bombacaceae
8.	*Canna indica* L. var. orientalis Rosc.	Cannaceae
9.	*Cardiospermum halicacbum* L.	Sapindaceae
10.	*Cassia fistula* L.	Caesalpiniaceae
11.	*Cassia tora* L.	Caesalpiniaceae
12.	*Centella asiatica* (L.) Urban	Ulmaceae
13.	*Chenopodium album* L.	Chenopodiaceae
14.	*Chromolaena odorata* (L.) King & Robinson	Asteraceae
15.	*Clerodendrum viscosum* Wall.	Verbenaceae
16.	*Colocasia esculenta* (L.) Schott.	Araceae
17.	*Cuscuta reflexa* Roxb.	Cuscutaceae
18.	*Cynodon dactylon* (L) Pers.	Poaceae

19.	*Cyperus rotundus* L.	Cyperaceae
20.	*Datura metel* L.	Solanaceae
21.	*Dioscorea alata* L.	Dioscoreaceae
22.	*Euphorbia hiria* L.	Euphorbiaceae
23.	*Ficus benghalensis* L.	Moraceae
24.	*Ficus religiosa* L.	Moraceae
25.	*Gmelina arborea* Roxb.	Verbenaceae
26.	*Ipomoea aquatica* Forssk.	Convolvulaceae
27.	*Leucas plukenetii* (roth) Spreng.	Lamiaceae
28.	*Mangifera indica* L.	Anacardiaceae
29.	*Mikania micrantha* Kunth ex H.B.K.	Asteraceae
30.	*Mimosa pudica* L.	Mimosaceae
31.	*Monochoria hastata* (L.) Solms.	Pontederiaceae
32.	*Moringa oleifera* Lam.	Moringaceae
33.	*Musa paradisica*	Musaceae
34.	*Ocimum. basilicum* L.	Lamiaceae
35.	*Ocimum sanctum* L.	Lamiaceae
36	*Paederia foetida* L.	Rubiaceae
37.	*Peperomia pellucida* (L.)	Piperaceae
38.	*Polygonum hydropiper* L.	Polygonaceae
39.	*Psidium guajava* L.	Myrtaceae
40.	*Ricinus communis* L.	Euphorbiaceae
41.	*Scoparia dulcis* L.	Scrophulariaceae
42.	*Sida acuta* Burm. f.	Malvaceae
43.	*Solanum nigrum* L	Solanaceae
44.	*Solanum torvum* Sw.	Solanaceae
45.	*Spilanthes paniculata* Wall. ex DC	Asteraceae
46.	*Spondias pinnata* (L. f.) Kurz	Anacardiaceae
47.	*Tephrosia purpurea* (L.) Pers.	Papilionaceae

48.	*Terminalia arjuna* (DC) W & A	Combretaceae
49.	*Terminalia chebula* Retz.	Combretaceae
50.	*Tridax procumbens* L.	Asteraceae
51.	*Zizyphus mauritiana* Lamk	Rhamnaceae

Medicinal plant photo (s)

Table 2.

List of Fruit Plants

Sl. No.	Scientific Name	Family Name	Common Name
1	*Averrhoa carambola*		Kordoi
2	*Litchi chinensis*		Lichu
3	*Artocarpus heterophyllus*		kothal
4	*Zizyphus jujuba*		Bogori
5	*Syzygium cumini*		Jamuk
6	*Mangifera indica*		Aam
7	*Punica granatum*		Dalim
8	*Musa paradisica*		Kol
9	*Cocos nucifera*		Narikol
10	*Carica papaya*		Omita
11	*Aegle marmelos*		Bael
12	*Phyllanthus emblica*		Amlokhi
13	*Spondius mangifera*		Amora
14	*Terminalia chebula*		Silikha
15	*Dillenia indica*		Ou-tenga

Fruit plants photo

Table 3. **List of plants Timber yielding plants**

1.	Segun	*Tectona grandis*
2.	Gamari	*Gmelina arborea*
3.	Kadam	*Anthocephalus chinensis*
4.	Neem	*Azadirachta indica*
5.	Outenga	*Dillenia indica*
6.	Mango	*Mangifera indica*
7.	Simalu	*Bombax ceiba*
8.	Sonaru	*Cassia fistula*
9.	Banyan	*Ficus bengalensis*
10.	Peepal	*Ficus religosa*
11.	Bhatgilha	*Oroxylum indicum*
12.	Debdaru	*Polyalthia longifolia*

List of bird species of the College

Sl. No	English Name	Local Name	Scientific Name
1	Brown Hawk owl		*Ninox scutulata*
2	House Crow	Kauri	*Corvus splendens*
3	House Sparrow	Ghanchirika	*Passer domesticus*
4	Koel	Kuli	*Alcedo hercules*
5	Little Cormorant	Pani Kauri	*Phalacrocorax niger*
6	Pigeon		*Columba livia*

Common Fishes of the College

Sl.No.	Local Name	Scientific Name
1	Bhangon	*Labeo bata*
2	Bhakua	*Labeo katla*
4	Goroi	*Channa punctatus*
5	Kandhuli	*Notopterus notopterus*
6	Kaoi	*Anabas testudineus*
7	Kholihona	*Colisa fasciatus*
8	Kuhi	*Labeo gonius*
9	Magur	*Charius batrachus*
10	Puthi	*Puntius sophore*
11	Rou	*Labeo rohita*
12	Sol	*Channa striatus*


MEDICINAL PLANT GARDEN
HAJI ANFAR ALI COLLEGE
Inaugurated by
Dr. Dibyajyoti Mahanta
Dean, KKHSOU, Guwahati
In presence of
Dr. Mamun Azam Barbhuiya
Principal, HAAC
&
Sibbir Ahmed Osmani, Co-Ordinator
Study Centre, KKHSOU
3rd September 2022


This campus is under
CCTV Surveillance


PLANTATION
(BOKUL ZONE)
UNDER CMIPP
MAINTAINED BY
ENVIRONMENT CELL
HAJI ANFAR ALI COLLEGE

Water Management

The major sources of water in the college campus are ground water produced by bore wells and large pond. Water is mainly used for drinking, gardening, conducting practical in the laboratories, construction activities, bathrooms, toilets, hand wash basins, cooking and washing in the canteen, hostel and residential quarters. Aqua guards have been installed for drinking purposes in different locations through the entire campus. A large water cooler cum filter is installed for common use especially for students.

DRINKING WATER SUPPLY

Haji Anfar Ali College has well equipped drinking water facilities. The aqua Guard has been installed in all the Departments of the College including Office, Teachers Common Room, Boys Common Room, Girls Common Room, Boys and Girls Hostel etc for drinking purpose of students, teachers and those visit the College.

The water installations available in the college are -

Water cooler with drinking water filtration facility

Urinals and toilets

Bathrooms

Water taps in teachers common room, Boys and Girls common room, canteen etc.

Water taps in laboratories

Water consumption

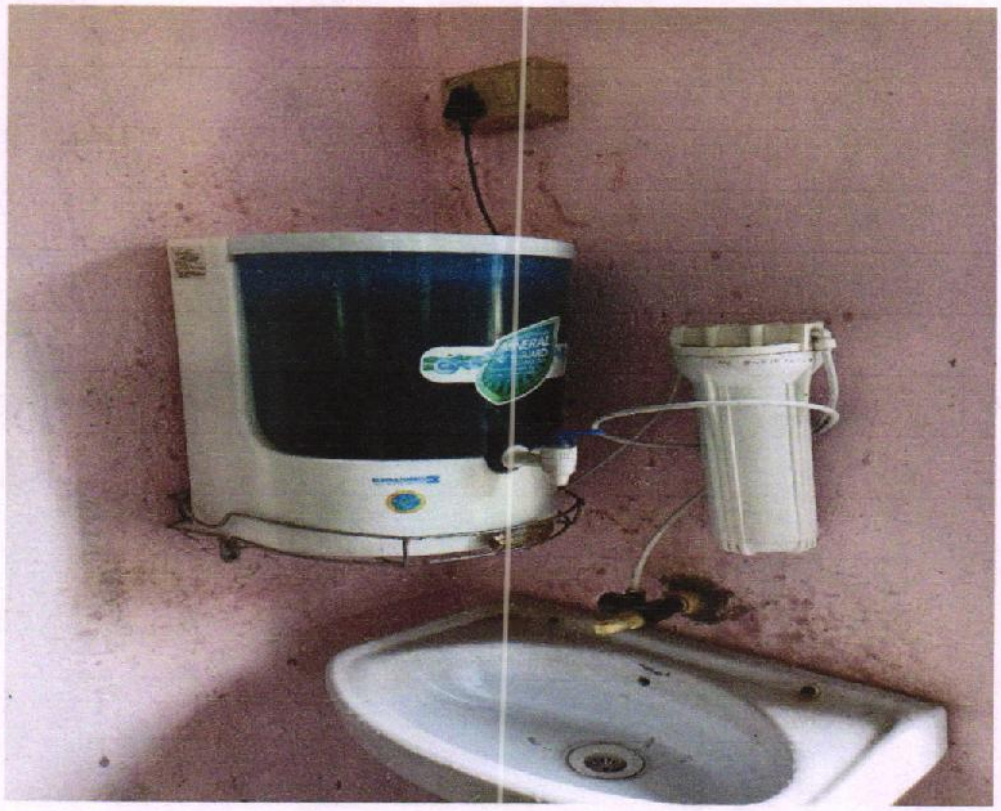
Quantity of water pumped – 15 K. litr./day
Amount of water stored –5000 L Water audit observations

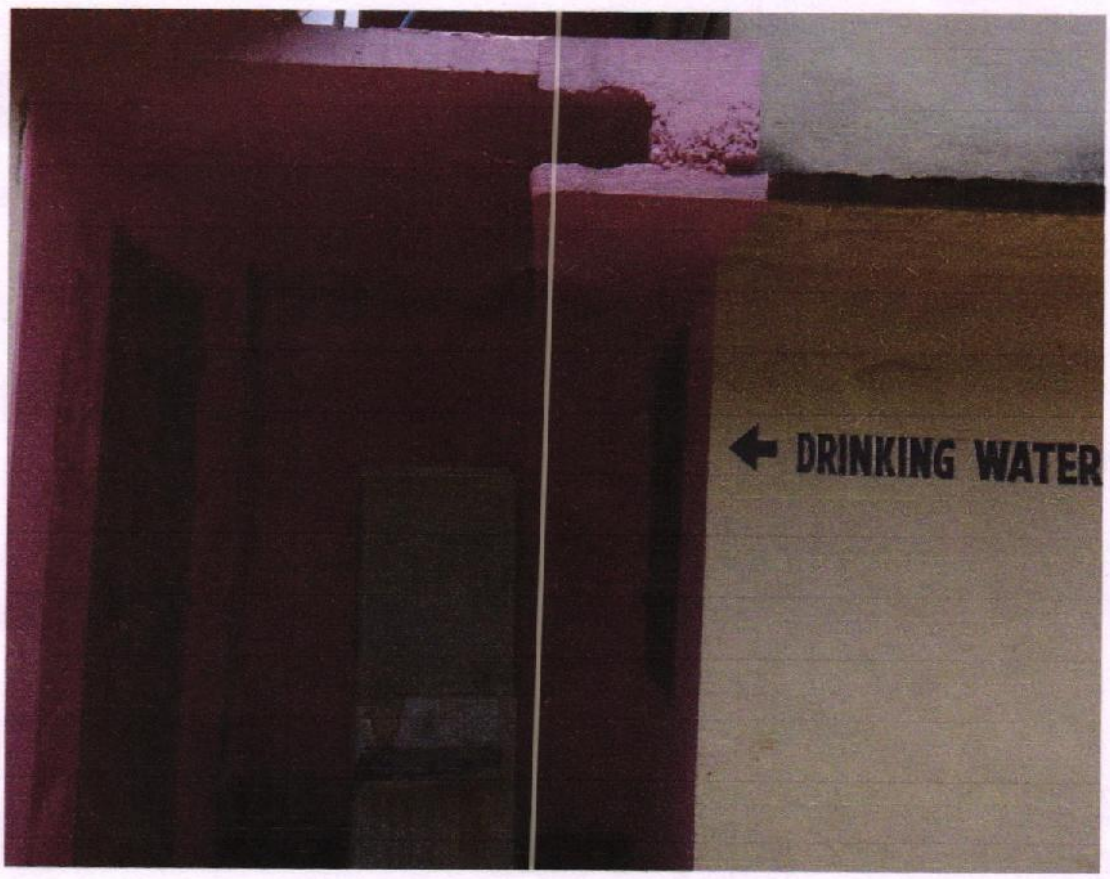
The reasons of water wastage

Water taps left open after use.
Leakages from taps
Over use of water.

Recommendations

Leakage in tapes to be repaired.
Establishment rain water harvesting system
Awareness programme on water conservation





Drinking water facilities

Rain Water harvesting

All living things including plants, animals and human beings need water to live and carry out different kind of activities. It is impossible to think a single day for man, animal or plant without water. We use water for different kinds of day to day activities such as drinking, cleaning, washing, bathing, cocking, gardening and other domestic and industrial use. So, water is precious, essential and an abiotic component of the eco-system. Today we all are heading toward a scarcity of water. This is mainly because of lack of water conservation and pollution of water bodies. So, let us not to waste water and start conservation of water for future use.

There are different kinds of methods used for water conservation. One of such methods is rain water harvesting. This is the easiest and cheap method to conserve water for future use. Rain water harvesting is the simple process used to conserve rain water by collecting, storing, and purifying rain water that runs off from roof tops, roads, open grounds etc. for later use. It is a process of accumulation and storage of rain water for reuse rather than allowing it to run off. Generally, it is collected from the roof top through pipe and stored in over ground tank or underground storing structure.

The Haji Anfar Ali College has a rain water harvesting unit over the library reading hall where the rain water gets collected from the roof tops through a pipe and accumulated in a 1000-liter reserve tank used basically gardening and construction activities.

Waste Management

The solid waste generated within the campus is isolated at source by providing a number of concrete dustbins. Furthermore, the waste also isolated by separate dustbins for biodegradable a non-biodegradable dust bins too. The college has a Memorandum of Understanding (MOU) with the Doboka municipality Board for disposal of waste generated in the campus. The waste generated by news papers, magazines, cartoons and examination related papers are reused as far 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 is dumped in pits and used as fertilize.

We are in dire need of sustainable alternatives to dispose sanitary napkins in India. An effort to promote proper disposal of menstrual waste and promote the Swach Bharat Mission, sanitary and vending machines and ecofriendly incinerators are installed in our Girl's Hostel.

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

Ecofriendly Practices

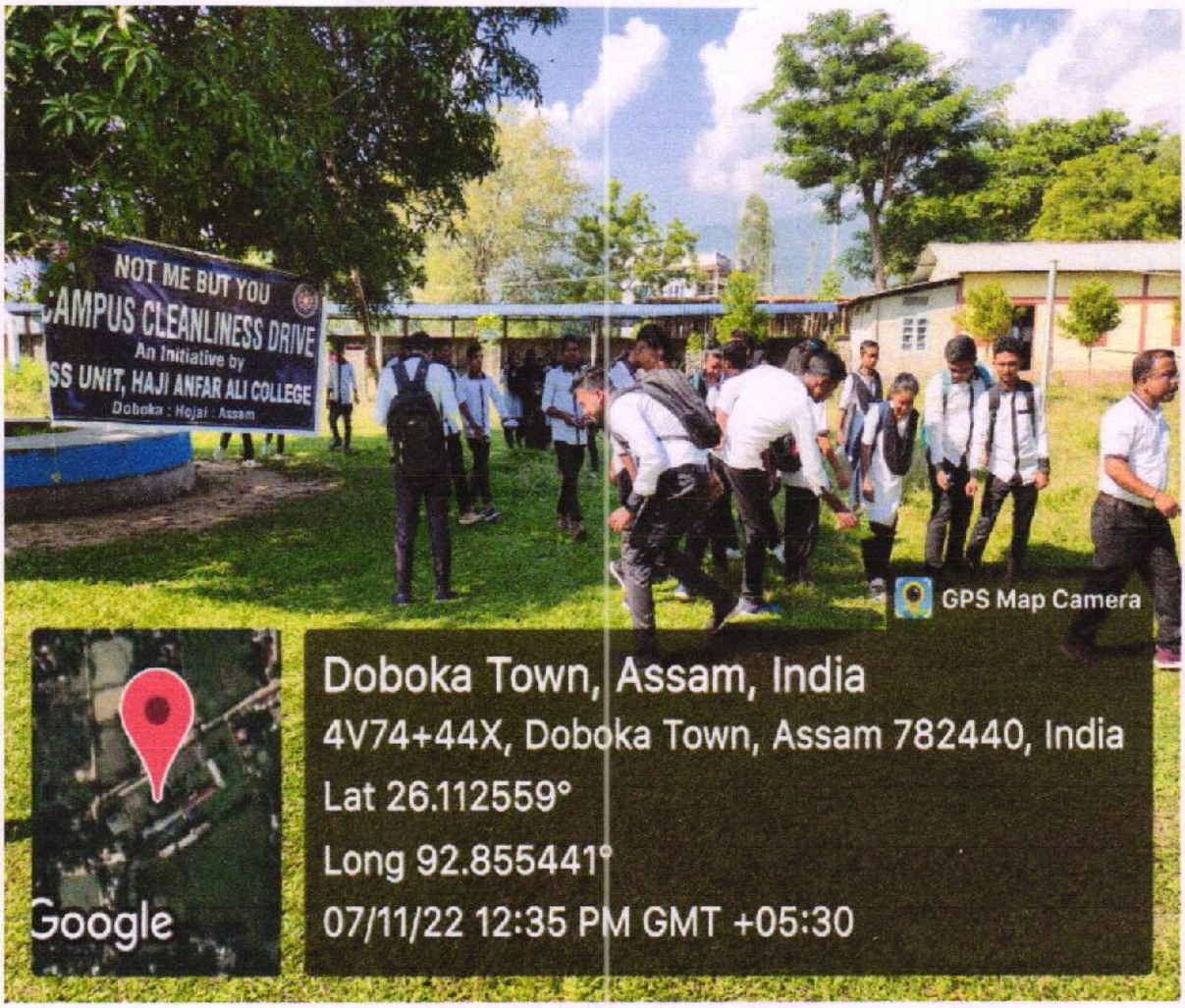
1.Plantation programme

The college goes through a number of plantation programme every year on various occasions like World Environment Day, Teachers Day, College week and annual plantation day etc. the plantation programme includes plantation of various types of air purifying plants, economically important plants, ornamental plants, fruit plant, medicinal plant etc. this type of programme help to maintain ecofriendly and green environment in the surrounding area and within the campus. It also helps the conservation of biodiversity as well.

Encourage to reuse, refill, replenish

The college has been trying to make the campus plastic free by creating awareness among the students and staff members through displaying boards, hoardings and other programs. Another practice of the college is the use of reusable utensils which help in keeping the campus plastic free. Students are encouraged to incorporate reusable

bottles use as well as other sustainable practices in their day to day lives such as using their own reusable service-ware for take-out and use reusable bags instead of disposable plastic or paper.



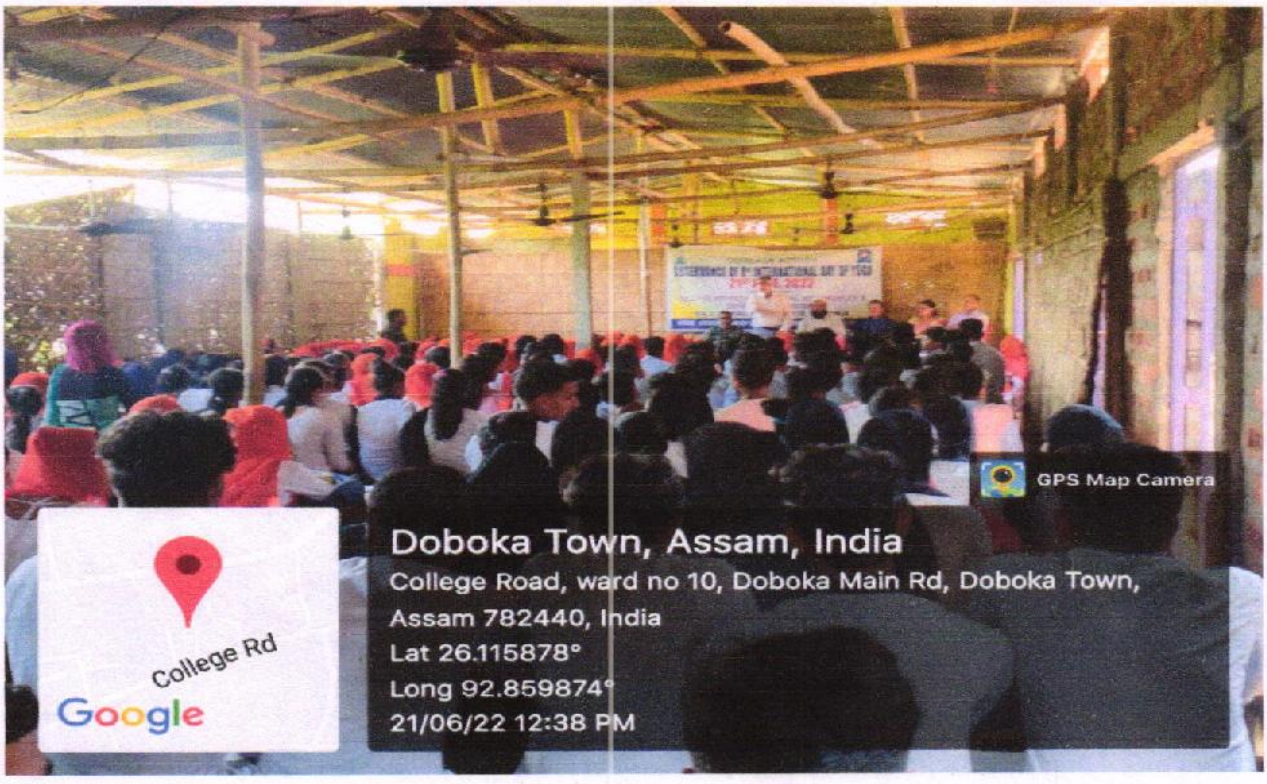
Cleanliness Drive

The college authority maintains a regular cleanliness drive in the campus including students, teachers and office staff. The student union and NSS unit play a vital role in this regard.

Awareness Programs:

The college have been organizing Seminars, discussions, awareness programs on different environmental issues from time to time with the objectives to aware the students and college staff. The College has observed the World Environment Day by plantation drive with teachers, students and office staff within the campus. The College has conducted an open stage discussion and inaugurated a medicinal plant garden in collaboration with KKHSOU, study centre, Haji Anfar Ali College on 04-09-2022. On 07-11-2022 the NSS Unit carried out a

cleanliness drive within the campus. A number of such other activities are evident for awareness programs.



Digital Biodiversity Register:

The College has prepared an institutional biodiversity register to record all ecofriendly activities conducted within and outside the campus including plantation, cleanliness drive, awareness programme etc. The college tries it's utmost to convey a message to the society about various environmental issues like global warming, deforestation, Pollution etc. and their impact on human lives.

Recommendation:

The committee feels to recommend following activities for the next year.

1. A garden for medicinal plant should be established within the college campus.
2. Further air purifying trees are to be planted.
3. Ornamental plants are to be planted for beautification.

CONCLUSION

This audit involved extensive survey work as well as information gathered from stakeholders with key personnel on wide range of issues related to Environmental aspects. Haji Anfar Ali College has Environmental Committee for sustainable use of resources. The audit has identified several observations for making the campus premise more eco-friendly. The recommendations are also mentioned with observations for campus team to initiate actions.

The audit team opines that the overall site is maintained well from environmental perspective.

REFERENCE

The Environment [Protection] Act – 1986 (Amended 1991) & Rules-1986 (Amended 2010)

The Water [Prevention & Control of Pollution] Act – 1974 (Amended 1988) & the Water (Prevention & Control of Pollution) Rules – 1975

The Air [Prevention & Control of Pollution] Act – 1981 (Amended 1987) The Air (Prevention & Control of Pollution) Rules – 1982

The Hazardous Waste (Management and Handling and Trans-boundary Movement) Rules, 2008 (Amended 2016)

The Batteries (Management and Handling) rules, 2001 (Amended 2010)

Internal Records of the Campus