A REPORT
ON
GREEN AUDIT FOR THE YEAR-2021-22
SWAMI YOGANANDA GIRI COLLEGE
DIST: KOKRAJHAR (BTR) ASSAM

SWAMI YOGANANDA GIRI COLLEGE
SAKTI-ASHRAM
SATYAM SHIVAM SUNDAROM
ESTD : 1994

SUBMITTED TO

THE PRINCIPAL, SWAMI YOGANANDA GIRI COLLEGE

PO: SAKTI ASHRAM, DIST: KOKRAJHAR (B.T.R) ASSAM

SUBMITTED BY

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GREEN AUDIT, SWAMI YOGANANDA GIRI COLLEGE, SAKTIASHRAM

CERTIFICATE

This is to certify that the Green Audit Report of Swami Yogananda Giri College is based on original data collected during the period of study. The content of the baseline data has been personally verified by me for validity and authenticity. The data used in the study are original in character and have not been presented or published elsewhere. Snapshots/photographs used in the report are taken directly by me and the members of the Green Audit Committee of the institution. Further, it is certified that the baseline data is prepared by me with the help of Green Audit Committee.

21-02-2023

Mr. Sahidul Islam
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INTRODUCTION:

Green Audit or Environmental Audit is a step-by-step review process that helps in the systematic identification, quantification, recording, reporting and analysis of the critical aspect that matter in the environmental assessment of a site. It can be a useful tool for a college to determine how and where they are using the most energy or water or resources. It can create health consciousness and promote environmental awareness, value, and ethics. It provides the staff and students; better understanding of green impact on campus. Environmental sustainability is a growing concern throughout the country. Especially in colleges and universities where young minds dwell, ensuring an ecosystem with endurable qualities is the need of the hour. The green influence on the campus is vital to guarantee the best learning environment and healthy ecosystem for everyone associated with it. So, it becomes essential to adopt the system of the Green Campus for the institutes which will lead for sustainable development and at the same time reduce a sizeable amount of atmospheric CO2 from the environment.

The Green audit is a requirement mentioned in the 7th criterion of NAAC. In the current situation, it is mandatory for all Higher Educational Institutions to deliver the yearly Green Audit Report. Moreover, it is a 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. After all, it ensures clean and green campus of the institution.

Objectives:

Green Audit or environmental audit gives an opportunity for the development of ownership, personal and social responsibility for the students and teachers of the institution. The main objective of the green analysis is to promote the Environment Management and Conservation in the college Campus. It is imperative that the college evaluate its own contributions toward a sustainable future. The basic objectives of the Green Audit are:

a. To promote/ ensure safe and clean environment of the college campus.
b. To promote the Environment Management and Conservation in the College Campus.
c. To identify, quantify, describe, and prioritize framework of Environment Sustainability.
d. To map the Geographical Location of the college.
e. To document the floral and faunal diversity of the college.
f. To determine metrological parameter where the college is located.
g. To reduce energy consumption to foster pollution free environment.
h. To measure the ambient environmental condition of air and noise of the college.
i. To protect ecological sustenance within the college campus.
j. To document the Waste disposal system.

Methodology of Green Auditing:

The criteria, methods and recommendations used in the audit are based on the identified risks. The methodology includes: preparation and filling up of questionnaire, physical inspection of the campus, observation, and review of the documentation, interviewing responsible person and data analysis, measurements, and recommendations. It is mainly based on primary data.

Swami Yogananda Giri College: At a Glance:

Swami Yogananda Giri College is a Degree (Arts) College which was established in 1994 in the village Sakti Ashram (Mukhigaon), P.O. Sakti Ashram in the western part of the district of Kokrajhar, (BTR) Assam. The College accorded the Govt. concurrence in 2005 and was brought under Deficit Grant-In-Aid System by the B.T.C Govt. W.E.F. 01.01.2009. The UGC enlisted The College U/S 2 (F) And 12(B) of the UGC act in 2007 and 2009 respectively. Now the College is permanently affiliated to Bodoland University, Kokrajhar. The core subjects offered by B.U. in the college are: Assamese, English, Political Science, History, Economics, Education, and Assamese second language Major Course are also available maximum of subjects. The College has been included under sections 2(f) & 12(B) of the UGC Act 1956. The College is situated at the distance of 19 KM from Kokrajhar Govt. College, 5 KM from Fakiragram College, Fakiragram and 25 Km from Bilashipara College. Conditions of roads are very fine. Since its inception, it has been dedicated to cater to the needs of higher education to the poor and needy students of the area. Now, the college is the centre of excellence in imparting and expanding education among the rural poor students.

GREEN AUDITING OF THE SWAMI YOGANANDA GIRI COLLEGE:

The college sets a goal to ensure 'Green and Clean Campus' for environmental conservation and sustainability. There are three main pillars i.e., zero environmental foot print, positive impact on occupant health and performance and 100% graduates demonstrating environmental literacy. The aim is to reduce CO_2 emission energy and to create an atmosphere where students can learn in a healthy environment.

LAND USE ANALYSIS OF SWAMI YOGANANDA GIRI COLLEGE:

Basically, land use refers to man's activities and the various uses which are carried on and derived from land. Viewing the earth from space, it is now very crucial in man's activities on natural resource. In situations of rapid changes in land use, observations of the Earth from space give the information of human activities and utilization of the landscape (Howarth 1981).

As we are aware that Remote sensing and GIS techniques are presently providing new tools for advanced land use mapping and planning. The collection of remotely sensed data facilitates the

synoptic analysis of earth. Satellite imagery particularly is a valuable tool for generating land use map.

Three types of data that are GPS points, field survey data and Google earth data for Geo-referencing have been used in this study. Land use map of the study area have been prepared using the above three type of data with the help of Arc GIS 10.2.2 software. Land use map preparation is executed through the following steps:

Acquisition of data, Geo-coding and Geo-referencing of satellite imageries by extracting the ground control point. Supervised classification was carried out with the aid of ground truth data collected during field survey. Scanning and digitalization of maps and editing of all the Geo-referenced maps were done using GIS. Data manipulation and analysis and linking the spatial data with the attribute data for creation of topology was carried out using GIS software. Creation of GIS output in the form of land use map showing various land use have been prepared.

In this study an attempt has been made to map land use for Swami Yogananda Giri College, Sakti Ashram, Kokrajhar, (BTR) Assam in order to detect the land consumption in the built-up land area using both remote sensing and GIS techniques.

LAND USE DATA OF THE COLLEGE:

Categories of land use	**Area in square meters**
Plantation and open space	26,512.49
Construction area	18,100.25
Total	44,612.74

The total area of Swami Yogananda Giri College is 50585.70 sq meters (20 Bigha) out of which the construction area is about 40% (i.e., 20234.28 sq. meters) and opens space & plantation area is 60% (i.e., 30351.42 sq. meters).

On the North side of the Swami Yogananda Giri College, lies the Mukhigaon village, on its south side lies the Sakti Ashram H.S. & VOC School, on its east side lies Hell River and on its west side lies Dotma and Serfanguri link road. Inside the premises of the Swami Yogananda Giri College, the Girls Hostel as well as the Boundary Wall lies in the southern direction, the Statue of Swamiji and Auditorium lies on its western side, the northern side is occupied by the Indoor Stadium, the Gym cum Skill and development Block with the College Entrance lying on the north. Moreover, the College Playground lies in the Southern side of the College Administrative Block.

FLORAL DIVERSITY OF THE COLLEGE

Swami Yogananda Giri College encompasses an area of about 20 bighas (sq meters) of land. The area is immensely divers with a verity of tree species performing a functions. Most of these tree species are planted in different periods of time through various plantation programmes organized by the authority and have become an integral part of the college. The trees of the college have increased the quality of life, not only the college fraternity but also for the people around of the college in terms of contributing the environment by providing oxygen, improving air quality, climate amelioration, conservation of water, preserving soil and supporting wildlife controlling climate by moderating the effects of the sun, rain and wind. Leaves absorb and filter the sun's radiant energy, keeping things cool in the summer. Flowers and fruits are eaten by birds and serve human consumption and uses in religious ceremonies and nectar are favorite of birds and many insects. A recent study has revealed that the rich diversity of tree species. After all the college has been playing a significant role of maintaining the clean and healthy environment of the entire Sakti Ashram and its adjoining areas.

Sl. No.	Common/ Local Name	Family	Scientific Name	Number
1	Devdaru	Annonaceace	Poyalthia Longifolia	12
2	Arjun	Combretace	Termineliaarjuna	1
3	Gomari	Verbenaceae	Gmelinaarborea	1
4	Titasopa	Magniliaceae	MicheliaChampa	10
5	Amlakhi	Phyllanceae	Phyllanthusemblica	3
6	Ghoraneem	Meliaceae	Meliaazedarach	1
7	Neem	Meliaceae	AzedirachtaIndica	1
8	Kalajam/ Jaam	Myrtaceae	Syzygiumcumini	2
9	Agaru	Thymelaeaceae	AquilariaAgallocha	1
10	Nahor	Calophyllaceae	Mesuaferrea	3
11	Bagori/ Indian jujube	Rhamnaceae	Zizyphusjujuba	5
12	Simalu	Bombacaceae	Bombaxceiba	5
13	Khoksha/ Dimoru	Moraceae	Ficus hispida	4

14	Bhelli			1
15	Siris/	Mimosaceae	Albizia lebbeck	6
16	Burflower-tree/ Kadam	Rubiaceae	Neolamarckia cadamba	1
17	Sona Alu			5
18	Jiga/ Indian Ash Tree		Lannea Coromandelioca	7
19	Krishnachura	Fabaceae	Delonix regia	1
20	Patbahar	Euphorbiaceae	CadiaeumVariegatum	1
21	Bottle Palm	Arecaceae	Hyophorbe lagenicaulis	3
22	Rose	Rosaceae	Rosa Sinensis	25
23	ShoyonakTree (Kanaidinga)	Bignoniaceae	Oroxylum indicum	2
24	Rain Gauge Tree			20
25	Others			20

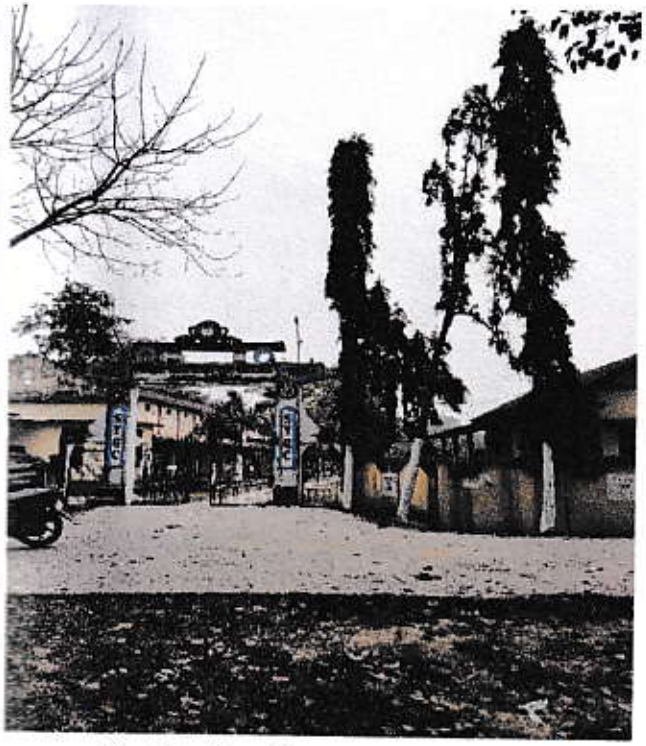

Fig: Devdaru Tree

Fig: Bottle Palm Tree

Fig: Indian Jujubee

Fig: Bur flower-tree/ Kadam

Fig: Siris Tree

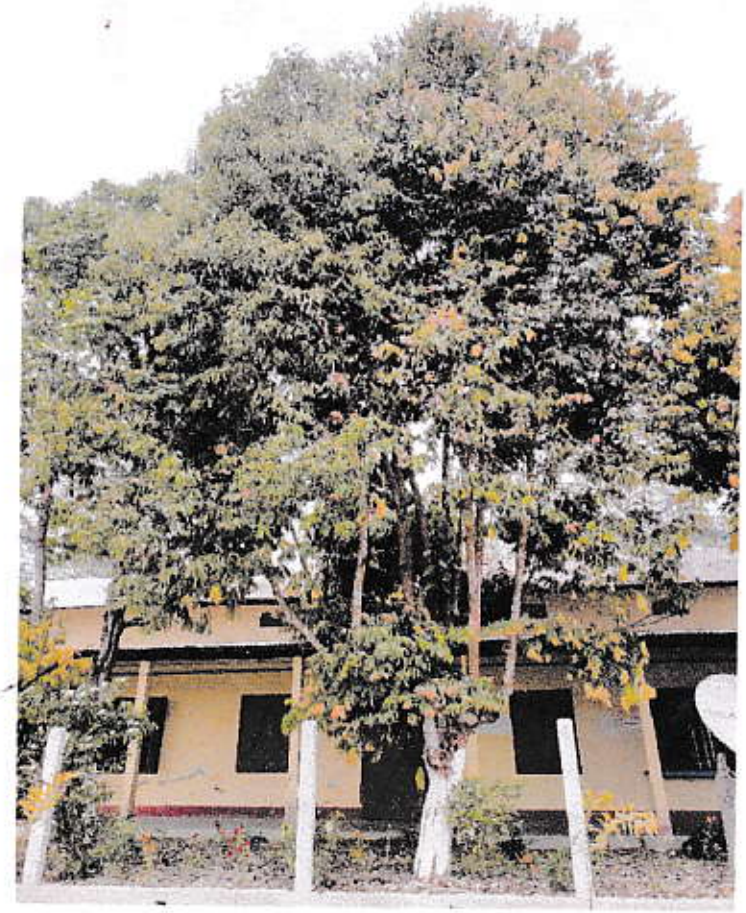

Fig: Nahor Tree

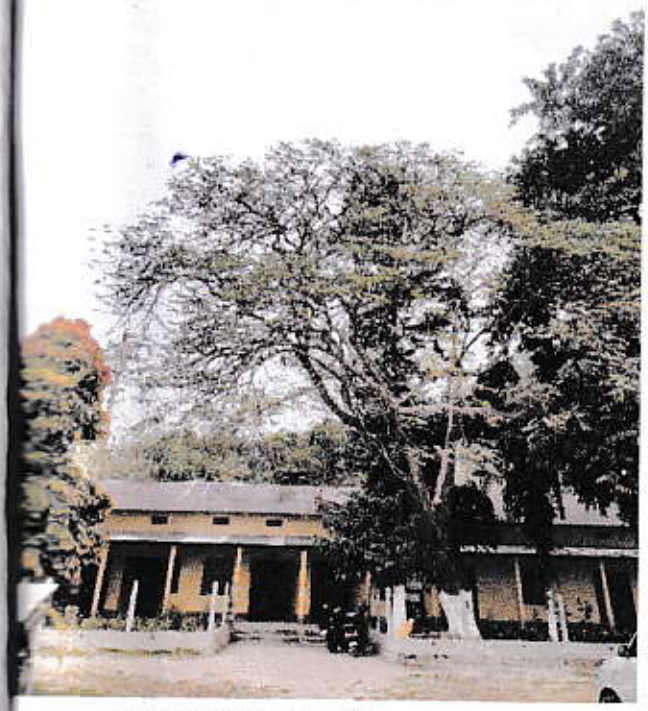

Fig: Krishnachura Tree

Fig: Arjun Tree

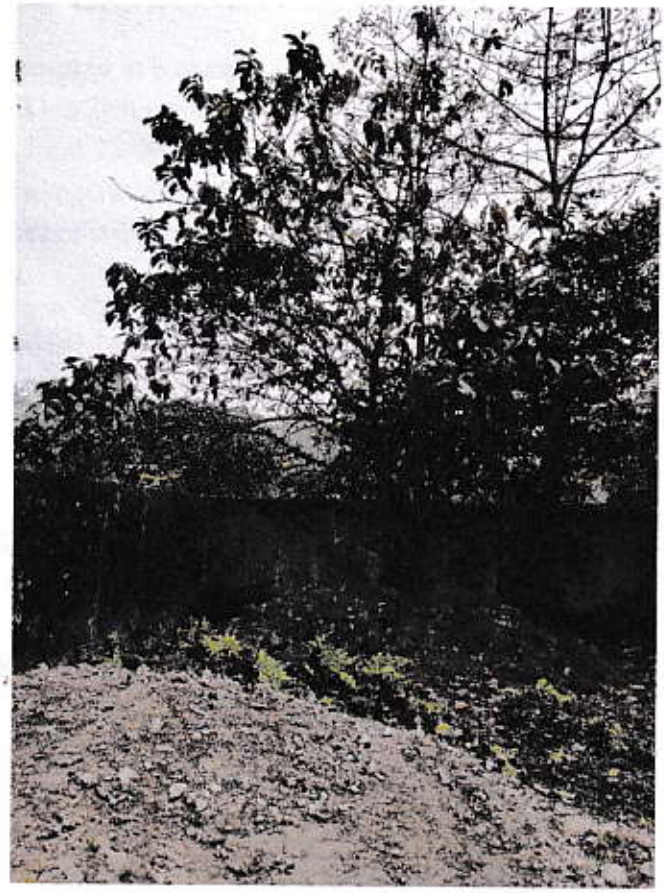

Fig: Kokhsha Tree

NOISE LEVELAND WASTE DISPOSAL OF SWAMI YOGANANDA GIRI COLLOGE:

The climate of Swami Yogananda Giri College campus located in Kokrajhar District of Assam in sub-tropical in nature and temperature varies from 5.1" C in January and highest 37.23" in May. The average maximum temperature of the district varies from 23.09" C in the month of January to 31.12" C in the month of August. Average minimum temperature varies between 12.35" C in January to 24.34" C in the month of August. This indicates that, the coldest month during winter is January and warmest month during summer is August.

There are two basic properties of sound, (I) loudness and (2) frequency. Loudness is the strength of sensation of sound perceived by the individual. It is measured in terms of Decibels, just audible sound is about 10dB, a whisper about 20 dB, library place 30 dB, normal conversation about 35-60 dB, heavy street traffic 60-0 dB, boiler factories 120 dB, Jet plans during take-off is about 150 dB, rocket engine about dB. The loudest sound a person can stand without much discomfort is about 80 dB. Sound beyond 80 dB can be safely regarded as Pollutant as it harms hearing system. The WHO has fixed 45 dB as the safe noise level for a city. Noise level of the college is normal.

Noise level meter or noise measuring app, Noise Tube (version 2.0.2), was used to measure the noise level. Noise Tube is a participatory noise

Waste Disposal: Waste Management is helping colleges and university to achieve a higher level of environmental performance. We are trying to reduce our impact on the environment by minimizing the carbon emissions associated with both disposing of old products and obtaining new ones. Swami Yogananda Giri College adopts environment friendly practices and taken necessary actions such as – energy conservation, waste collection and disposal of waste etc. The institution has initiated different regarding Solid Waste Management and has been relatively successful in the endeavor.

FINDINGS:

Swami Yogananda Giri College, which was established in the year 1994, has an eco-friendly environment. It has a healthy environmental practice including periodic plantation, their preservation and maintenance. Its land use is such that about 60% of the total area is occupied by plantation and open land that generates a better and sustainable campus environment. We can consider it as pollution free clean and green campus.