

**GREEN AUDIT REPORT**  
**KOKRAJHAR GOVT. COLLEGE,**  
**KOKRAJHAR**  
**2018-2019**



**Submitted by**  
Green Audit Committee

**Convenor**  
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**Members**  
Dr. Mainul Hoque  
Mr. Ganesh Boro  
Mr. Bhisma N. Swargiari  
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# **GREEN AUDIT REPORT**

## **KOKRAJHAR GOVT. COLLEGE, KOKRAJHAR**

### **2018-19**

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A Green Audit was carried out in the college during 2018-19. The Green Audit Committee had Mr. Dipankar Basak as Convener. Other members of the committee were Dr. Mainul Hoque, Mr. Ganesh Boro, Mr. Bhisma N. Swargiari and Ms. Moromita Roy.

#### **INTRODUCTION**

Green Audit is a process of systematic identification, quantification, reporting and analysis of various components of environmental diversity of various establishments. It aims to analyze environmental practices within and outside the concerned sites, which will have an impact on the eco-friendly atmosphere. Green audit is an important tool for a college to determine how and where they are using the most energy or water or resources; the college can then consider how to implement changes and make savings of energy. It can also be used to determine the type and volume of waste, which can be used for a recycling project or to improve waste minimization plan. It can generate health consciousness and promote environmental awareness, values and ethics. It provides staff and students better understanding of green impact on the college campus. If self enquiry is a natural and necessary outgrowth of a quality education, it could also be stated institutional self enquiry is a natural and necessary outgrowth of a quality educational institution. Thus it is imperative that the college can value its own contributions towards a sustainable development in future. As environmental sustainability is becoming an important issue for the nation.

Rapid urbanization and economic development at local, regional and global level has led to several environmental and ecological crises. On this background, it becomes essential to adopt the system of the Green Campus for the institutes which will lead to sustainable development and at the same time reduce amount of atmospheric CO<sub>2</sub> from the environment. The National Assessment and Accreditation Council (NAAC) have 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 make sure that they contribute towards the reduction of global warming through Carbon Footprint reduction measures.

#### **OBJECTIVES:**

In recent time, the Green Audit of an institution has become a matter of great importance for self assessment of the institution which reflects the role of the institution in mitigating the present



environmental problems. Kokrajhar Govt. College has been putting efforts to keep our environment clean since its establishment. But the auditing of this non-scholastic effort of the college has not been documented. Therefore, the purpose of the present green audit is to identify, quantify, describe and prioritize framework of Environment Sustainability in accordance with the applicable regulations, policies and standards. The main objectives of carrying out Green Audit are as follows:

1. To map the Geographical Location of the college.
2. To document the biodiversity of the college.
3. To record the meteorological parameter of Kokrajhar where the college is situated.
4. To estimate the energy requirements 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 Kokrajhar Govt. College is to make sure 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:**

Kokrajhar Govt. College was established in 1959 by the people of Kokrajhar and was affiliated to Gauhati University. The college has an adequate academic and physical infrastructure catering to the 19 subjects in Under Graduate Classes. The College has regular PG courses in 4 Departments: Assamese, Chemistry, English and Mathematics under Gauhati University

### **VISION & MISSION STATEMENT:**

Kokrajhar Govt. 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 "*Discipline and Excellence*" 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, KOKRAJHAR GOVT. COLLEGE, KOKRAJHAR, ASSAM**

### **Classification Scheme for Land use analysis of built up area**

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

Therefore, attempt has been made in this study to map land use for Kokrajhar Govt. College , Kokrajhar, 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 KOKRAJHAR GOVT. COLLEGE, KOKRAJHAR, ASSAM**

Categories of Land Use	Area in acre
Campus area	5.42 acre
Hostel area	2.18 acre
Play Ground area	2.28 acre
Total Area	9.88 acre

### **FINDINGS:**

Kokrajhar Govt. College which was established in the year 1959, has an eco-friendly environment. It has along legacy of healthy environmental practices including periodic plantation, their preservation and maintenance. Its land use is such that 39.97 % of the total area is occupied by open land and plantation that generates a better and sustainable campus environment.

### **TREE DIVERSITY OF KOKRAJHAR GOVT. COLLEGE, KOKRAJHAR**

Kokrajhar Govt. College College is within the geo-position of latitude 26°24' N and longitude 90°16' E in Kokrajhar, Assam, India. It encompasses an area of about 9.88 acres. The area is rich with a variety of tree species maintaining a healthy environment. The plants were planted in different periods of time through various plantation programmes organized by the college authority and have become an integral part of the college. The plants have improved 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 improvement, conservation of water, preserving soil, and supporting wild life, controlling



climate by mediating 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 for food and shelter. Flowers and fruits are eaten by birds, and nectar of the flower is a favorite of birds and many insects. Different species display 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. A 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 40 tree species belonging to 25 families have sequestered a total of 225.15 ton of organic carbon. Thus, the college has been playing a significant role in maintaining the environment of the entire Kokrajhar town and its surrounding areas. The following are the tree species with whom we are being attached-

**TABLE: LIST OF TREE SPECIES OF KOKRAJHAR GOVT. COLLEGE, KOKRAJHAR**

S.No	Name of the plant species	Number	Family	Common Name
1.	<i>Albizia lebbek</i>	5	Fabaceae	women's tongue tree
2.	<i>Araucaria heterophylla</i>	2	Araucariaceae	Araucaria
3.	<i>Areca catechu</i>	1	Arecaceae	Betlenut
4.	<i>Azadirachta indica</i>	6	Meliaceae	Neem
5.	<i>Borassus flabellifer</i>	5	Arecaceae	Tall Palm (wine palm)
6.	<i>Bougainvillea glabra</i>	2	Nyctaginaceae	Kagoj phul
7.	<i>Caesalpinia pulcherrima</i>	2	Fabaceae	Radhachura
8.	<i>Callistemon sp.</i>	2	Myrtaceae	Bottle Brush Tree
9.	<i>Cassia fistula</i>	2	Fabaceae	Sonaru
10.	<i>Cassia roxburghii</i>	1	Fabaceae	Ceylon senna
11.	<i>Chrysalidocarpus lutescens</i>	10	Arecaceae	Cane palm (mamoï tamul)
12.	<i>Cocos nucifera</i>	1	Arecaceae	Coconut
13.	<i>Cycas revolute</i>	3	Cycadaceae	Japanese sagopalm
14.	<i>Dalbergia sissoo</i>	1	Fabaceae	Sisu
15.	<i>Delonix regia</i>	2	Fabaceae	Krishnachura
16.	<i>Elaeocarpus ganitrus</i>	2	Elaeocarpaceae	Rudraksha
17.	<i>Erythrina variegata</i>	1	Fabaceae	Madar
18.	<i>Eucalyptus maculata</i>	3	Myrtaceae	Eucalyptus
19.	<i>Ficus benjamina</i>	6	Moraceae	Ficus
20.	<i>Gmelina arborea</i>	3	Verbenaceae	Gomari
21.	<i>Grevillea robusta</i>	1	Proteaceae	Silver Oak
22.	<i>Lagerstroemia speciosa</i>	2	Lythraceae	Ajar Tree

23.	<i>Livistowa jenkinsiana</i>	1	Arecaceae	Tokou
24.	<i>Mesua ferrea</i>	27	Calophyllaceae	Nahar
25.	<i>Michelia champaca</i>	1	Magnoliaceae	Tetachapa
26.	<i>Mimusops elengi</i>	1	Sapotaceae	Bakul
27.	<i>Neolamarckia cadamba</i>	1	Rubiaceae	Kadam
28.	<i>Persea bombycina</i>	2	Lauraceae	Som
29.	<i>Pinus kesiya</i>	1	Pinaceae	Pine tree
30.	<i>Polyalthia longifolia</i>	15	Annonaceae	AshokaTree
31.	<i>Pongamia piñata</i>	20	Papilionaceae	Karas
32.	<i>Psidium guajava</i>	2	Myrtaceae	Guava
33.	<i>Ptychosperma macarthurii</i>	4	Arecaceae	Macarthur palm
34.	<i>Ravenala madagascariensis</i>	2	Strelitziaceae	Traveller's tree
35.	<i>Swietenia macrophylla</i>	12	Meliaceae	Mahogani
36.	<i>Syzygium cumini</i>	2	Myrtaceae	Kola jamu
37.	<i>Tectona grandis</i>	20	Lamiaceae	Teak
38.	<i>Terminalia arjuna</i>	1	Combretaceae	Arjun
39.	<i>Thuja orientales</i>	2	Cupressaceae	Thuja
40.	<i>Zizyphus jujuba</i>	2	Rhamnaceae	Bogori(Chinesedate)

## FAUNAL DIVERSITY AT KOKRAJHAR GOVT. COLLEGE CAMPUS

Kokrajhar Govt. College is located in the north eastern state of Assam in the Kokrajhar district. It is situated in the Kokrajhar town area along the bank of Gaurang river which is a tributary of river Brahmaputra. The college falls in the sub-tropical climatic zone and has wet monsoon and dry winter months. The wettest month being July with average annual rainfall of about 248 mm while the driest month being December. The temperature ranges from 25°C- 34°C. The college campus has a rich faunal diversity which is enlisted below-

ANIMAL GROUPS	NAME OF SPECIES FOUND
Annelida	Leech ( <i>Hirudinaria</i> sp.), Earthworm( <i>Pheretima</i> sp.)
Arthropoda	<i>Aphis</i> sp.(Order- Hemiptera), <i>Lasius niger</i> (Order- Hymenoptera), <i>Tettigonia</i> sp.(Order- Orthoptera), <i>Mecopoda</i> sp., <i>Anax</i> sp. <i>Agriocnemis</i> sp.(Order- Odonata), <i>Periplaneta</i> sp. <i>Apis florae</i> ., <i>Culex</i> sp., <i>Scarabaeus</i> sp., <i>Coccinella</i> sp., <i>Graphium</i> sp., <i>Princeps demoleous</i> , <i>Pieris</i> sp., <i>Catopsilia</i> sp., <i>Danaus genutia</i> , <i>Tirumala limniace</i>
Mollusca	<i>Achatina</i> sp.
Amphibia	<i>Duttaphrynus</i> sp., <i>Fejevaryia</i> sp.



Reptilia	<i>Hemidaactylus</i> sp., <i>Chamaeleo</i> sp.
Aves	Red-vented Bulbul, Spotted dove, House sparrow, common myna, Magpie- robin
Mammalia	<i>Bos</i> sp., <i>Rattus</i> sp., <i>Canis familiaris</i>

## ELECTRICAL POWER CONSUMPTION AT KOKRAJHAR GOVT. COLLEGE

Kokrajhar Govt. College, being one of the largest colleges of Assam, consumes on an average 5644kW- hr (units) of electricity per month which turns out to be 62341kW-hr per year only to maintain its volumetric activities throughout the year. There is one Solar Plant in the college but it is not functional at present. The college authority is planning to make it functional. The contribution of LED bulbs and LED tubes to the net power consumption is 5.3 %.

There are total of 80 nos. of LED bulbs, 157 nos. of tubes, 03 nos. of CFL bulbs, 01 nos. of filament bulbs, 232 nos. of fans and 11 nos. of AC 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.

## WASTE DISPOSAL SYSTEM AT THE COLLEGE CAMPUS

The following steps had been adopted by the college authority to make college campus environmentally benign.

1. Plastic free campus campaign.
2. Discouraging the use of disposable glasses and plates.
3. Installation of dust bin.
4. Disposal of biodegradable wastes into pits.

## SUGGESTIONS:

1. For power saving purposes, CFL bulbs should be replaced with LED bulbs.
2. Rain water should be harvested
3. Green area should be increased
4. Solar plant should be made working
5. More medicinal plants should be planted in botanical garden.

## ACTION TAKEN ON THE GREEN AUDIT REPORT:

1. The college administration has decided to replace all existing CFL bulbs with LED bulbs in phases.

- 2.Rain water will be harvested in the upcoming buildings.
- 3.Green area will be preserved as there is no space for increasing it.
- 4.Solar plants will be repaired.
- 5.More trees will be planted in the campus.

**Submitted by**

Green Audit Committee

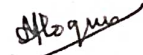
**Convenor**

Mr. Dipankar Basak

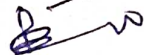


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