MANIKPUR ANCHALIK COLLEGE

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FIRST CYCLE OF NAAC ACCERDITATION, 2022

CRITERION VII

Institutional Values and Best Practices

7.1.3: Quality audits on environment and energy regularly undertaken by the Institution. The institutional environment and energy initiatives are confirmed through the following

1. Green audit / Environment audit
2. Energy audit
3. Clean and green campus initiatives
4. Beyond the campus environmental promotion activities

Submitted to

THE NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

GREEN AUDIT REPORT

Of

Manikpur Anchalik College

(2021-2022)

REPORT PREPARED BY:

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Words of Gratitude

Green Audit Committee of Manikpur Anchalik College offers special thanks to the College authority for giving the opportunity to prepare the Green Audit Report of the College.

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8/4/22

Green Audit Report

Manikpur Anchalik College

PREFACE

Green campus is a concept of educational institutions having sustainable practice of natural resource utilization and proper methods of waste management. To minimize the waste disposal in an educational institute, it is very necessary to keep the campus clean and green. Green audit is an important part of the process to determine the performance of an institution and analyse the possible options of making a campus ecologically acceptable for all kinds of living organisms. The Manikpur Anchalik College green audit team has find out an account of all environment related affairs performed and their possible natural impact.

This is for the first time a green audit of this college was conducted by the green audit team comprising the Principal as its president, a few selected faculties of the college, experts in the field of environment related works. The audit focused mainly on the waste management, water management, biodiversity and environment related activities. The information are collected from the sources available in the college campus and compiled in a systematic manner. The report has also made a few points of recommendations to solve some environment related issues of the campus and surroundings.

GREEN AUDIT TEAM

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INTRODUCTION

The Manikpur Anchalik College is the only premier higher educational institute of Manikpur sub-division in the district of Bongaigaon. Established in 1993 by people of greater Manikpur- Patiladoha area.ManikpurAnchalik College is the brainchild of a group of highly motivated social entrepreneurs who in the nineties dreamt of bringing the gospel of higher education to this relatively backward area of Manikpur. The initiative of some far-sighted personalities of the locality led to the establishment of the College. The college was inaugurated on 2nd August, 1993 in the premises of Gobinda Bhavan Geeta Satra with 37 students and 14 teachers. Ashiwini Talukdar was the first principal of Manikpur Anchalik College. The college is affiliated to Gauhati University and recognized by UGC under 2(f) and 12(B). It was provincialized by the govt. of Assam in 2013. With the motto of "Tamasho ma jyotirgamaya" (may the light of knowledge remove the darkness of ignorance), the ManikpurAnchalik College has been uninterruptedly working for fruitful dissemination of knowledge to its students with the solemn aim of making them worthy citizens of the country.

Green Audit is a process of systematic identification, quantification, recording, reporting and analysis of components of environmental diversity of any establishment. It aims to analyse environmental practices within and outside of a campus. Green audit can be a useful tool for a college to determine how and where they are using the most energy and water or other resources, efforts of carbon neutrality etc, the college can consider how to make savings of natural resources. The Green Audit Report of a particular institute gives a direction as to how to improve biodiversity and other environmental status. It can also be used to determine type and volume of waste, which can be used for recycling. It provides an opportunity for better understanding of green impact on campus.

The term *Green* acronymically is called Global *Readiness in Ensuring Ecological Neutrality* (GREEN).It is necessary to conduct a green audit in a college campus as a small step to save the planet. Green audit and sustainable development are intricately related to each other.

OBJECTIVES:

In recent times, the Green Audit of an institution has gained paramount importance for self-assessment of the institution which reflects the role of the institution in mitigating the present environmental problems. The ManikpurAnchalik College has been putting efforts to keep our environment clean since its inception. 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 the framework of Environment Sustainability in compliance with the applicable regulations, policies and standards. The main objectives of this green audit are:

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1. To create awareness among students about threats to the environment and importance of sustainability.
2. To document the floral and faunal diversity of the college.
3. To document the waste disposal system of the college.
4. To document the ambient environmental condition of air, water and soil of the college.
5. To estimate the energy consumption of the college.

METHODOLOGY:

In conducting the green audit, the following steps are followed:

1. Physical inspection of the college campus,
2. Observation and overview of the documentation,
3. Data analysis and recommendations.

The study covers the following areas.

1. Water management
2. Waste management
3. E-waste management
4. Green area management

Geographical location of the College $26^0 22' 25.33'' N$ & $90^0 47' 57.09'' E$

Total Open Area of the College:

Campus area: 53512.151sq meters

Build up area: 4694 sq meters

Open area: 18729.242 sq meters

Total area under green cover: 24761.044 sq meters

Water body: 137.803 sq meters

1. Water Audit

Quantitative analysis of water source and the use in the College campus was calculated during working days. It is an average estimation of water stored in tanks, different storages of drinking water like aqua guard, filters of various departments and its utilization in different activities like washing of hand, utensils, cleaning of urinal and toilet etc. A brief account of storage of water and its utilization is as follows.

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Type of Water Storage	Location	Water Storage capacity (litre)	Number of Water loadings on daily basis	Utilization of water (litre)
Tank	2	1000 ltr	2000 ltr	1500 ltr
Aqua guard for drinking water	2	--	--	--
Water Cool Storage	1	60 ltr	100 ltr	100 ltr

Objectives

Water is essential for every aspect of campus life on regular basis. Analysis of water is important to know how to use water judiciously and to conserve as well.

Benefits of Water Audit

1. Water audit improves the knowledge and documentation of the distribution system,
2. Leads to reduced water losses,
3. Improved financial performance,
4. Improved reliability of supply system
5. Efficient use of existing supplies
6. Better safeguard to public health and property and reduced legal liability,
7. Large potential cost savings that can be achieved by water harvesting, through the recycling of water and the use of rain water.

Rainwater Harvesting:

Rainwater harvesting is a process in which precipitation that falls on a site is diverted, captured, and stored for use on-site, as opposed to allowing it to run off, evaporate, or infiltrate into the soil. Depending on its intended use, the captured precipitation may require treatment. In a broad sense, rainwater harvesting can also include capture from surface water runoff.

Rainwater harvesting can be useful for installations with the following issues:

- Installations in areas with water stress due to drought and arid environments.
- Installations with on-site ground water wells that may require significant energy to use such as deep wells and challenging treatment. This could include groundwater, which has high solids or natural contaminants (arsenic and fluoride are common issues).

Rainwater can be harvested for a number of uses:

- Non-potable uses, such as toilet flushing, irrigation, dust control, and vehicle washing. Some of these applications may require specialized plumbing.
- Potable water uses including drinking water, food preparation, showering, and washing.

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The College campus has a pond of about 1 bigha land, which is a naturally store the run off water of the campus. During the winter season, pond water is used in the experimental medicinal plant garden and the flower gardens. To harvest the rain water, a few ground water recharge points are established in the college campus.

2. Waste Management Audit

Introduction

Waste is the discarded material, generated after its primary use. Based on its nature, waste is of two types – biodegradable and non-biodegradable; based on source waste are domestic, agricultural, industrial and commercial types; based on toxicity waste are hazardous and non-hazardous types. The processing of waste involves, sequentially, the collection, transportation, sorting, treatment, recycling for recovery of diverse value-added products and monitored/regulated final disposal in a landfill. There are different methods of disposal of waste, such asIncineration; Waste compaction(waste materials such as cans and plastic compacted into blocks and sent for recycling, which prevents oxidation of metals); Biogas generation (biodegradable waste converted into biogas, using micro-organisms); Composting (burial of organic waste under soil and left to decay under the action of microorganisms, resulting in a nutrient-rich manure for agriculture); Vermicomposting (degradation of organic matter into manure by using worms); and Landfill (the waste that cannot be recycled or reused spreads as a thin layer inlow-lying areas across human habitations). Waste management comprises five R's, viz., reduce, reuse, recycle, recover and residual management (Waste Management in India – An Overview R. Dhana Raju, 2021).

Solid waste management

The term "solid waste management" refers to the process of collecting, treating and recycling the solid wastes. By waste management we can change the solid waste to a valuable resource. The primary goal of solid waste management is reducing and eliminating adverse impacts of waste materials on human health and the environment. Solid waste includes of all wastages arising from human and animal activities that are normally solids and discarded as useless or unwanted. To maintain the solid waste management College Authority already installed green, yellow and blue dustbins in the college and hostel campus. Out of these most of the dustbins are green dustbins, a few are yellow and very few are blue dustbins. There is no black coloured dustbin in the college campus. Usually, the green-coloured dustbins are for wet and biodegradable waste. Blue dustbins are for papers and glass bottles. Investigation reveals that there are total 60 dustbins installed in the college campus.

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Table 1: Different colour of dustbins installed in college campus with location

Sl. No	Location of dustbins	No. of dustbins	Colour of dustbins
1	College Varanda,	40	Green & Blue
2	Girl's Common Room	02	
3	Departments Room	1 Each	
4	Office	3	
5	Principal's Office	1	
6	Canteen	2	
7	Entrance	2	Organic (Bamboo)
8	IQAC	1	
9	Teacher's Common Room	1	

A huge amount of paper waste is generated in the campus. An MoU with Bijni College for solid waste dispose is in progress. (MOU document attached as annexure).

Wastes are disposed of randomly all over the campus and there is open dumping of waste. The green colour dustbins are used for biodegradable wastes such as leaves, fruits, vegetables etc. and blue colour dustbins for paper and glass bottles.

Suggestions and recommendations

1. In the campus, we can keep a set colour coded dustbins such as green and blue colour for different waste materials whereas and these bins shall be properly labelled.
2. It is necessary to train up the students, faculties, office staff in order to segregate different types of waste which should be disposed.
3. The falling leaves, and other plant parts can be made into biofertilizer through composting method.
4. Vermicompost unit can be establish to manage the biodegradable waste.
5. Organic manure can be produced from biological waste generated in the college campus and further this can be used for the plants in the college campus.

2. GREEN AREA AUDIT

Introduction

Biodiversity is the key of a healthy ecosystem. Through the web of life, we all are interlinked with plant and animal. Green campus comprises clean air, pure water along with adequate number of plants and animal community. Rapid urbanization, agriculture growth, development activities like industrialisation are the main threat to the biodiversity. Global warming and climate change are the consequence of such environmental degradation.

The green audit team has visited and analysed the floral & faunal audit through observation. The identification of the species is done by consulting reference books and with the help of the technical experts of the audit committee.

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List of Trees in Manikpur Anchalik College Campus

Local Name	English Name	Scientific Name	Family	Total No.
1. Devdaru (Pendula)	Indian Mast Tree	*Polyalthia longifolia* var. *pendula* (Sonn.) Thw.	Annonaceae	
2. Australian Acacia	Ear Leaf Acacia	*Acacia auriculiformis* Benth.	Mimosaceae	
3. Radhasura	Peacock Flower	*Caesalpinia pulcherrima* (L.) Sw.	Caesalpiniaceae	
4. Arjun	Arjun	*Terminalia arjuna* (Roxb. ex DC.) Wight &Arn.	Combretaceae	
5. Chaitan	Indian Devil Tree	*Alstonia scholaris* (L.) R. Br.	Apocynaceae	
6. Kadam	Kadam	*Anthocephalus cadamba* (Roxb.) Miq.	Rubiaceae	
7. Sirish	Rain Tree	*Samanea saman* (Jacq.) Merr.	Mimosaceae	
8. Aam	Mango	*Mangifera indica* L.	Anacardiaceae	
9. Bogori	Indian plum	*Ziziphus mauritiana* Lam.	Rhamnaceae	
10. Sojina	Horseradish tree	*Moringa oleifera* Lam.	Moringaceae	
11. Bogi Koroi	White Sirish	*Albizzia procera*(Roxb.) Benth	Mimosaceae	
12. Gamari	Beechwood	*Gmelina arborea* Roxb.	Verbenaceae	
13.Krishnasura	Royal Poinciana	*Delonix regia* (Hook.) Raf.	Caesalpiniaceae	
14. Ghora Neem	Indian Lilac	*Melia azedarach* L.	Meliaceae	
15. Mahogony	West Indies Mahogany	*Swietenia mahagoni*(L.) Jacq.	Meliaceae	
16. Nageswar/ Nahor	Indian rose chestnut	*Mesua ferrea* L.	Clusiaceae	
17. Titasap	Champak	*Michelia champaca* L.	Magnoliaceae	
18. Aamlokhi	Indian gooseberry	*Phyllanthus emblica* L.	Euphorbiaceae	
19. Narasingha	Curry Tree	*Murraya koenigii* (L.) Spreng.	Rutaceae	
20. Dalim	Pomegranate	*Punica granatum* L.	Punicaceae	
21. Ponial	Indian plum	*Flacourtia cataphracta* Roxb. ex Willd.	Flacourtiaceae	
22. Paharia Odal	Buddha Coconut	*Pterygotaalata*(Roxb.) R. Br.	Sterculiaceae	
23. Khoksa	Fig Tree	*Ficus hispidaVahl.*	Moraceae	
24. Burikhojo	Koda tree	*Ehretia acuminate* (DC.)R.Br.	Boraginaceae	
25. Koroch	Indian beech	*Pongamia pinnata* (L.) Pierre	Fabaceae	
26. Sama	Ironwood	*Senna siamea*(Lam.) H.S Irwin Barneby	Fabaceae	
27. Teteli	Tamarind	*Tamarindus india*L.	Caesalpiniaceae	
28. Champa	Evergreen magnolia	*Magnolia grandiflora* L.	Magnoliaceae	
29. Sajina	Moringa	*Moringa oleifera* Lam.	Moringaceae	
30. Bokul	Bullet wood	*Mimusopaelengi*L.	Sapotaceae	
31. Bogipoma	White Cedar	*Chukrasiatabularis*A. Juss	Meliaceae	
32. Kodom	Burflower tree	*Neolamarckiacadamba* (Roxb.)Bosser	Rubiaceae	
33. Bogori	Indian Palm	*Ziziphus jujuba* Mill.	Rhamnaceae	

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34. Robab Tenga	Pomelo	*Citrus grandis* (L.) Osbeck	Rutaceae	
35. Leteku	Burmese grape	*Baccaurearamiflora*Lour	Phyllanthaceae	
36. Kolajam	Black Palm	*Syzygiumcumini*(L.) Skeels.	Myrtaceae	
37. Segun	Teak	*Tectona grandis L.f.*	Lamiacaea	
38. Sama	Kassod tree	*Senna siamea (*Lam.) H.S Irwin*Barneby*	Fabaceae	
39. Silikha	Tropical almond	*Terminalia chebula*Retz.	Combretaceae	
40.Madhuriam	Guava	*Psidium guajava* L.	Myrtaceae	
41.Poma	Mountain.Cedar	*Toona ciliate* M.Roem.	Meliaceae	
42. Sal	Sal tree	*Shorearobusta*Gaertn.	Dipterocarpaceae	
43.Neem	Neem	*Azadirachta indica* A.Juss.	Meliaceae	
44.Leechu	Litchi	*Litchi chinensis* Sonn.	Sceaeapinda	
45.Narikol	Coconut	*Cocos nucifera* L.	Arecaceae	
46. Bhatghila	Indian trumpet	*Oroxylum indicum* L. (Kurz.)	Bigoniaceae	
47. Soalu		*Litsea monopetala* (Roxb.) Pers	Lauraceae	
48. Simolu	Cotton tree	*Bombax ceiba* L.	Malvaceae	
49. Velkol	False white teak	*Mallotus nudiflorus* L. (Kulju & Welzen	Euphorbiaceae	
50. Bijuli Bah	Bamboo	*Bambua pallida* Munro.	Poaceae	
51. Jati Bah	Bamboo	*Bambusa tulda* Roxb.	Poaceae	
52. Soura	Toothbrush tree	*Streblus asper* Lour.	Moraceae	
53. Sishoo	Indian Rosewood	*Dalbergia sissoo* Roxb.	Fabaceae	
54. Omora	Hog plum	*Spondias pinnata* (L.f.) Kurz.	Anacardiaceae	
55. Chenichampa Kol	Lady's finger banana	*Musa champa* Hort.	Musaceae	
56. Bholuka Bah	Bamboo	*Bambusa balcooa* Roxb.	Poaceae	
57. Bhot Era	Physic nut	*Jatropha curcas* L.	Euphorbiaceae	
58. Taol	Areca palm	*Areca catechu* L.	Arecaceae	
59. Hisol	Indian Oak	*Barringtonia acutangula* (L.) Gaertn.	Baringtoniaceae	
60. Ahot	Peeple tree	*Ficus religiosa* L.	Moraceae	
61. Urium	Java cedar	*Bischofia javanica* Bl.	Euphorbiaceae	
62. Sal	Sal tree	*Shorea robusta* Roth.	Dipterocarpaceae	
63. Bel	Wood Apple	*Aegle marmelos* Correa	Rutaceae	
64. Jomlakhuti	Crape ginger	*Cheilocostus speciosus* (J.Konig) C.Spech	Costaceae	
65. Narikol	Coconut	*Cocos nucifera* L.	Arecaceae	
66. Khejur	Date palm	*Phoenix dactylifera* L.	Arecaceae	
67. Komola	Orange	*Citrus reticulata* Blanco	Rutaceae	
68. Lechu	Litchi	*Litchi chinensis* Sonn.	Sapindaceae	
60. Khoer	Black catechu	*Senegalia catechu* (L.f.) P.J.H.Hurter & Mabb.	Fabaceae	
70. Thuja	Northern White cedar	*Thuja occidentalis*	Cupressaceae	
71. Ashok	Ashoke tree	*Saraca asoca* (Roxb.) de Wilde	Fabaceae	

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List of Herbs in Manikpur Anchalik College Campus

Sl. No.	Name of Plant Species	Family Name
1	*Acmella paniculata*Wall.ex DC.	Asteraceae
2	*Ageratum houstonianum* Mill	Asteraceae
3	*A. conyzoides*L.	Amaranthaceae
5	*Alternanthera philoxeroides (*Mart.)	Asteraceae
6	*A. sessilis*(L.) R. Br. Ex DC	Asteraceae
7	*Axonopus compressus*L.	Poaceae
8	*Aerva sanguinolenta*(L.) Blume	Amaranthaceae
9	*Amaranthus viridis*	Amaranthaceae
10	*A. tricolor*	Amaranthaceae
11	*A spinosus*	Amaranthaceae
12	*Caladium bicolor*(Aiton) Vent.	Araceae
13	*Cestrum nocturnum L.*	Solanaceae
15	*Cleome gynandra*	Cleomaceae
16	*Cleome rutidosperma* DC.	Cleomaceae
17	*Commelina communis* L.	Commelinaceae
18	*crotalaria juncea* L.,	Leguminaceae
19	*Desmodium triflorum* (L.) DC.	Papilionaceae
20	*Dentelle repens* (L.) J.R.Forst.	Rubiaceae
21	*Drymaria cordata* (L.) Willd.exSchult	Caryophyllaceae
23	*Eclipta prostrate* L.	Asteraceae
24	*Euphorbia hirta* L.	Euphorbiaceae
25	*Evolvulus nummularius* (L.) L.	Convolvulaceae
26	*Heliotropium indicum* L.	Boraginacea
27	*Ixora chiinensis Lam.*	Rubiaceae
28	*Ixora finlaysoniana* Wall. ex G.Don.	Rubiaceae
29	*justicia gendarussa* Burm.f.	Acanthaceae
30	*kalanchoe pinnata (*Lam.) pers.	Crassulaceae
31	*Leucus aspera (*willd.) Link	Lamiaceae
32	*Leonurus sibiricus L.*	Lamiaceae
33	*Lippia alba* L.	Asteraceae
34	*Melastoma malabathricum L.*	Melastomataceae
35	*Mimosa pudica L.*	Fabaceae
36	*Ocimum gratissimum L.*	Lamiaceae
37	*Ocimum sanctum L.*	Lamiaceae
38	*Oxalis corniculate L.*	Oxalidaceae
39	*Oxalis debilis*	Oxalidaceae
40	*Paspalum conjugatum Berg.*	Poaceae
41	*P scorbiculatum L.*	Poaceae
42	*Persicaria chinensis*	Polygonaceae
43	*Persicaria hydropiper*	Polygonaceae
44	*Phyla nodiflora (L.)* Greene	Verbinaceae
45	*Plectranthusscutellarioides*	Lamiaceae
46	*Polygonum orientalis*	Polygonaceae
47	*Pulmonaria obscura* Dumort.	Boraginaceae
48	*Ravenia spectabilis* Engl.	Rutaceae
49	*Rungia parviflora*	Acanthaceae
50	*Rungia Pectinata (L.*) Ness	Acanthaceae

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51	*Senna alata*	Caesalpinaceae
52	*Senna occidentalis (*L.) Link	Caesalpinaceae
53	*Sida cordifolia*	Malvaceae
54	*Sida rhombifolia* L.,	Malvaceae
55	*Solanum nigrum*	Solanaceae
56	*Stellaria media* (L.) Villars	Caryophyllaceae
61	*Verninia cinerea* (L.)	Asteraceae
62	*Veronica serpylifolia* L.	Plantaginacea
63	*Rhynchostylis retusa* L. Blume.	Orchidaceae
64	*Boerhavvia diffusa* L. nom. cons.	Nyctaginaceae
65	*Aloe barbadensis* Mill.	Liliaceae
66	*Acorus calamus* L.	Araceae
67	*Pteris vittata*	Pteridaceae
68	*Pteris multifida*	Pteridaceae
69	*Diplazium esculentum*	Athyriaceae

List of Animal species in Manikpur Anchalik College

Sl No	Phylum	Class	Common Name	Scientific name
Invertebtara				
1	Annelida	Clitellata	Leech	*Hirudinaria manillensis*
2		Clitellata	Leech	*H. granulosa*
3		Clitellata	Earth worm (Pheretima)	*Pherotima prostuta*
4		Clitellata	Earthworm	*Eudril useuginiae*
5		Clitellata	Boda kechu	*Metaphirehouletti*
6	Arthropoda	Diplopoda	Milliped	*Trigoniuluscorallinus*
7		Chilopoda	Centiped	*Rhysida nuda emarginata*
9		Arachnida	Spider	*Telamonia dimidiata*
10			Spider	*Hyllus semicupreus*
11			Signature spider	*Argiope pulchella*
12		Insecta	Drosophila	*Drosophila melanogaster*
13			Mosquito	*Culex quinquefasciatus*
15				*Anopheles spp*
16			Dragon fly (common hooktail)	*Paragomphus lineatus*
17			Dragon fly (wandering glider)	*Pantala flavescens*
18			House fly	*Musca domestica*
20			Cockroach	*Periplanta americana*
21				*P orientalis*
24			Weaver ant	*Oecophyllasmaragdina*
25			Ant	*Myrmicariabrunnea*
26			Termite	*Isoptera spp*
27			Hornet	*Vespa affinis*
28			Vespa	*Vespa orientalis*
29			Ladybug beetle	*Harmonia axyridis*
30				*Micraspisdiscolor*
31				*Coccinella species*
32			Fire fly	*Photurislucicrescens*
34			Honey bee	*Apis indica*
35				*Apiscerna*
36			Red slug caterpillar	*Eterusiaaedea*
37			Praying mantis	*Mantis religiosa*
38			House Cricket	*Acheta domestica*

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39			Mole cricket	*Gryllotalpa brachyptera*
40			Grass hopper	*Ducetia japonica*
41			Grass hopper	*Trigonocorypha unicolor*
42			Common field grasshopper	*Chorthippusbrunneus*
43			Gundhi bug	*Macrocheraia grandis*
44			Gundhi bug	*Leptocorisavericornis*
45			Cow dung beetle	*Scarabaeus spp*
46				*Carabusconvexus*
47				*Onthophagus species*
48			Psyche	*Leptosianina*
49			Lemon Pansy	*Junonialemonias*
50			Grey Pansy	*J.atlites*
51			Blue Tiger	*Tirumala limniace*
53			Chocolate Pansy	*Jumoniaiphita*
54			Common Indian crow	*Euploeacora*
56	Mollusca	Gastropod	Pila	*Pila globusa*
57			Snail	*Cryptozonasspps*
Vertebrate				
59	Chordata	Amphibia	Bamunvekuli	*Rana tigrina*
61			Chuk Bhekuli	*Bufo melanotictus*
61			Pat beng	*Hyla*
62		Reptilia	Lizard	*Hemidactylus frenatus*
63			Oriental garden lizard	*Calotes versicolor*
65			Common Indian shink	*E. carinata*
69			Common wolf snake	*Lycodonaulicus*
70			Indian rat snake	*Ptyas mucosa*
72			Checkered keelback	*Xenochrophis piscator*
73		Aves	Red vented bulbul	*Pycnonotuscafer*
74			Common Myna	*Acridotheres tristis*
75			Jungle Myna	*Acridotheresfuscus*
76			Striated babbler	*Turdaidesearlei*
77			Spot belled owl	*Bubo nepalensis*
78			Indian Crow	*Corvus splendens*
79			Spotted Dove	*Streptopeliachiinensis*
80			Asian pied starling	*Gracupica contra*
82			White throated king fisher	*Halcyon smyrnensis*
83			Blue throated barbet	*Psilopogon asiaticus*
85			Common tailorbird	*Othotomussutorius*
86			Crimson sunbird	*Aythopygasiparaja*
87			Purple sunbird	*Cinnyris asiaticus*
88			House sparrow	*Passer domesticus*
90			Asian koel	*Eudynamys scolopaccus*
91			Asian open bill stork	*Anasto musoscitans*
92			Black drongo	*Dicrurus macrocercus*
95			Chestnut tailed starling	*Sturnia malabarica*
96			Black hooded oriole	*Oriolus xanthornus*
97			Oriental magpie robin	*Copsychus saularis*
98			Indian white eye	*Zosterops palpebrosus*
100			Assamese macaque	*Macaca assamensis*
102			Squirrel	*Scicurus carolinensis*
104			Rat	*Rattus norvegicus*
105			Bat	*Pipistrellus coromandra*

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106		Mammalia	Mouse	*Mus musculus*
107			Mongoose	*Herpestededwadsii*

Benefits of the Green Campus/ Floral Audit

i. To create a green campus.
ii. To provide a basis for improved sustainability
iii. Impart environmental education through systematic environmental management approach and improving environmental standards
iv. Benchmarking for environmental protection initiatives
v. Developing an environmental ethic and value systems in young people.

. **Green Campus Committees:**

1. Eco Club, a joint venture of Departments of Geography and History
2. Swaz Bharat Abhiyan Cell

Eco friendly initiatives of green campus by College:

Efforts of the NSS Unit, Eco Club and Student Union of the College:

a. The College has grown a mini forest comprising varieties of valuable plants.

b. The NSS Unit, Eco club and Students Union of the College regularly take plantation programs on occasions like World Environment Day, College Foundation Day and on other occasions.

c. Eco Club organized an extension activity on use of 3rd for sustainable environment in Bhandara market area.

d. Plantation drive was taken by the ex students of the College.

e. Cleanliness drive is a regular practice of the NSS unit and Social Service unit of the College.

f. It is a pride for the College of having Jadav Payeng, the Forest man of India, in our Silver Jubilee Celebration. His presence and speech elevated the spirit of not only fraternity of the College but also the locality.

f. The College organized Programme on “Say no to Plastics”.

f. A floral garden and a fruit orchard have been established under Chief Minister’s “Shyamali Dhara” scheme.

f. An experimental Herbal Garden (with 25 varieties of medicinal herbs) and a Vegetable Garden (with seasonal vegetables) have been set up.

f. A Mushroom production unit and a Vermicompost unit have been developed.

f. Extension Activities on Environment sustainability conducted by Deptt.s of Geography & Economics.

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Best Practices of Green policy of the College:

a. **Maintenance of a Mini Forest:**

The College has grown a Mini Forest comprising varieties of valuable plants. It has been maintained and sustained beautifully.

b. Single Use Plastic Free Zone:

The College has been adopting the principle of banning single use plastic. The College authority maintained a strict vigilance particularly on water bottles, packets of food items, and thermocol products.

c. Swach Campus Initiatitives:

Frequent cleanliness drives are taken in the College campus by Students Union, NSS and Eco Club. The Swach Bharat campaign by the Govt. is giving a boost to this practice. The best thing in the Swach Campus drives is the equal participation of both teachers and students.

d. Herbal Garden

A small experimental herbal garden is maintained on the College premises. Nearly thirty types of plants with medicinal values are in the garden. The main purpose of the garden is to introduce these plants to the students which are found in the backyard of almost every home. Students are taught medicinal values and uses of these plants.

e. Vermicompost Unit

A vermicompost Unit has been set up in the College to show paths of livelihood to our students and local people in these days of growing demand for organic farming. As it is not of commercial purpose, the manures are used in college gardens. A good number of people are benefitted from this unit and wished to set up such units on their own.

f. **Vegetable Garden:** A vegetable garden of seasonal vegetables is maintained in the College. The underlying cause of this is to use the lands lying vacant and encourage the students to make their kitchen gardens.

Ashoke Kumar Das

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GREEN AUDIT COMMITTEE

Manikur Anchalik College

The Green Audit Committee of ManikpurAnchalik College has been constituted as under:

Experts:

Alimuddin Ahmed, Rtd. Associate Professor, Dept. of Botany,Nabajyoti College, Kalgachia

Dr. Ashoke Kumar Das. Assistant Professor, Dept. of Botany, Abhayapuri College, Abhayapuri& Coordinator, Aaranyak West Assam Zone

Chairman: Martuz Ali Ahmed, Principal,i/c
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Convener: Riajee Sultana Islam, HoD, Dept. of History
ManikpurAnchalik College

Members:

Bodiud Zaman Ahmed, Assistant Professor, Dept of Education
ManikpurAnchalik College

Deva Kumar Das, Coordinator, IQAC
ManikpurAnchalik College

Biplab Sarkar, HoD, Dept. of Geography
ManikpurAnchalik College

Tulshi Ch. Dey, Assistant Professor, Dept of Pol. Science
ManikpurAnchalik College

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Ariel view of Green campus of the College

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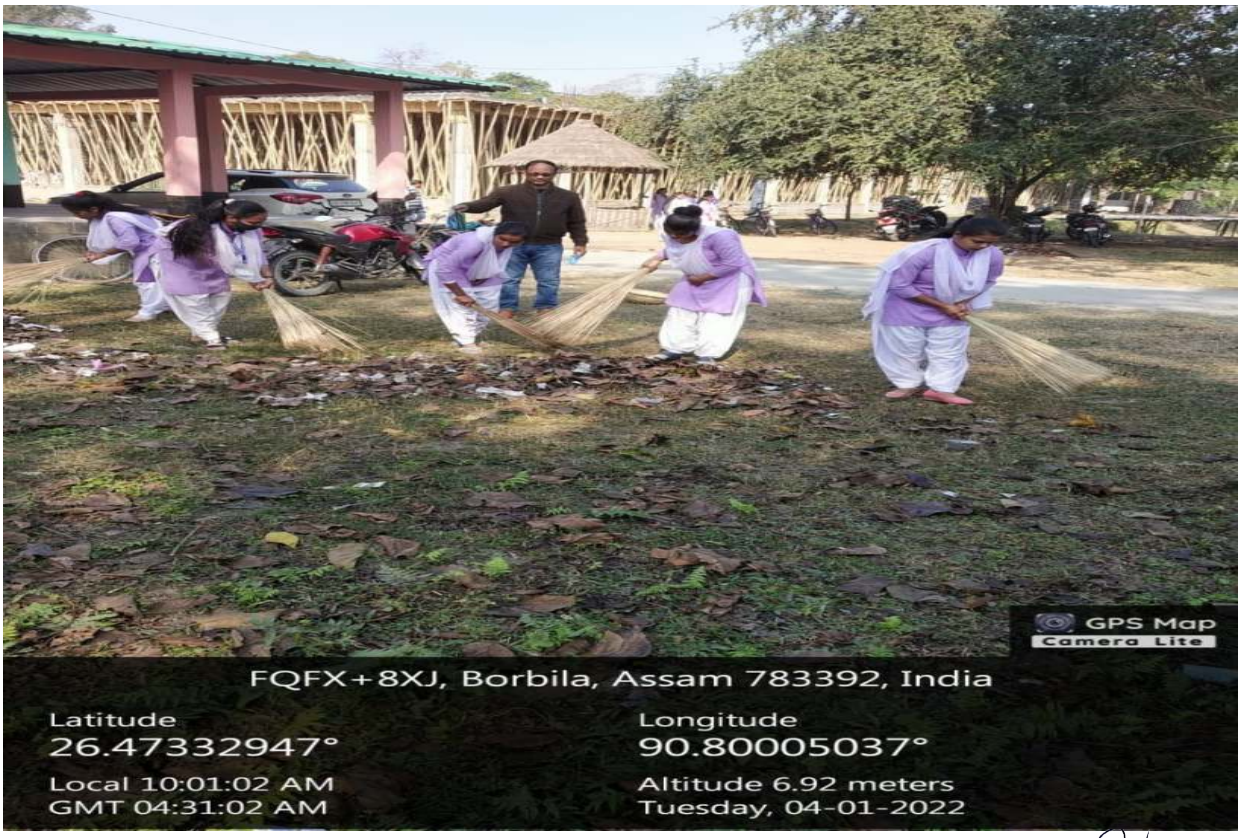
Plantation drive by NSS



Swach Campus campaign

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Swach Campus campaign

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Dragonfly

Dragonfly

Common Sailor

Three Spot Grass Yellow

Garden Lizard

Lymantrid Moth

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Mynah

Red-vented Bulbul

Black Drongo

House Sparrow

Spotted Dove

Oriental Magpie Robin

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Crimson Sunbird

Common Tailor Bird

Blue Throated Barbet

Black-Hooded Oriole

Asian Pied-Sterling

Asian Open Bill

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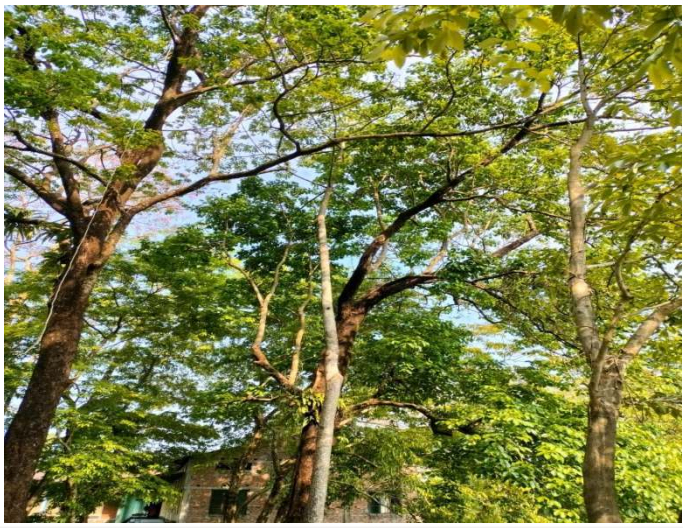
Boss

Nuni



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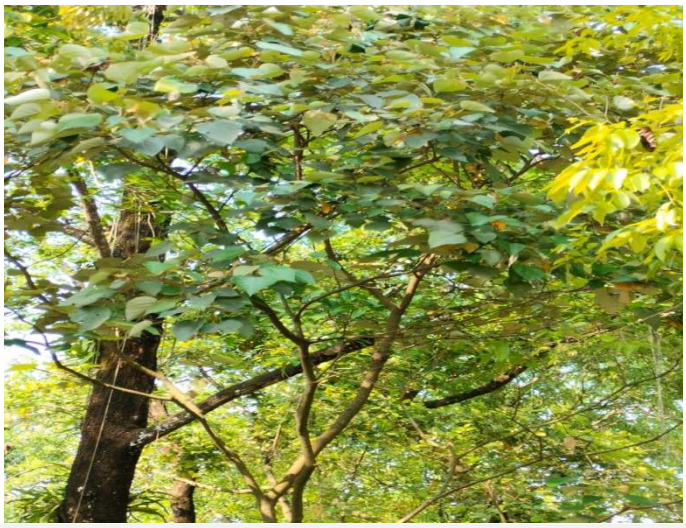

Segun

Gomari

Devodaru

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Fish harvesting in the pond

Duck farming in the pond.

Ashoke Kumar Das

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POLICY DOCUMENT ON ENVIRONMENT / GREEN CAMPUS

Manikpur Anchalik College

Manikpur, P.O. - Manikpur, Dist.-Bongaigaon
PIN-783392

Introduction:

The green campus initiative is to conserve and protect natural resources, sustainable use of energy through awareness, motivation and action research on the ground through experiential learning.

The Manikpur Anchalik College is located in a climatically suitable region which is rich in bio-diversity. The area is under tropical monsoon climate which helps to grow different species of flora and fauna in their natural habitats. The college campus is also a good habitat of these biotic components. To protect and preserve these valuable natural treasures, along with to maintain the natural beauty of the campus, the college has adopted various policies which are followed by each and every stakeholder of the college. The policy envisages setting a regional and national benchmark for a socially and environmentally sustainable campus, through action plans formulated by the college.

Objectives:

- To maintain a green and ecologically rich environmental conditions, especially within the campus and outside the campus in general.
- To keep the students and faculties of the college engaged in eco-friendly environmental activities.

The following are the green policies adopted by the Manikpur Anchalik College to make the campus green.

1. Sustainable Management of Water Resources

(a) Water Resource Management

The College has adopted the following measures for proper management groundwater, rainwater and wastewater in the campus.

i. Wise use of water with minimum loss

ii. Leak free water carrying pipes and instant repair of water leakage

iii. Use of appliances which reduce water consumption

iv. Use of efficient and hygienic water storage mechanism to minimize loss of water

v. Rainwater harvesting mechanism with proper use

vi. System of wastewater management

(c) Water based water conservation

i. Cultivation of fish in existing college pond

2. Energy Management & Sustainable Operations

i. Practice of green building concept during construction

ii. Use of energy efficient appliances, e.g., Led bulb

iii. Efficient use of power management features on electronic equipment

iv. Power off all electric switches when they are not used

3. Waste management

i. Paper waste disposal by selling through MOU with Bijni College

ii. Use of electronic communication as far as practicable including submission of student's assignment

iii. Minimum use of chemical fertilizers and pesticides in college campus.

iv. Electronic waste management system (Reuse and Selling of metals and plastics to vendors)

v. Use of dustbin for biodegradable, non-biodegradable and biomedical waste in college and hostel campus

vi. Recycle electronics and batteries in e-waste recycling bins located in college and hostel campus

vii. Use of single device with multiple functions

4. Disaster & Risk- preparedness and management

i. Awareness and orientation among all members of the college

ii. Announcement of early warning

iii. Assembly site during earthquake (Open field of the college)

iv. Mechanism to help students and nearby communities during & after disaster.

5. Go Green Initiative

i. Minimum use of plastic-based material

ii. Display of electricity bills everybody every month of every year so that we can understand the value

iii. Provision of permission from a competent authority to hold any kind of programme where there are chances of breaking green laws.

iv. Cleanliness drive in important public places

v. Photo gallery of natural places, flora, fauna, cultural heritage etc

vi. Five R- Refuse, Reduce, Reuse, Re-purpose, and then Recycle

6. Go Green Education

i. Orientation on Go Green to each new batch of students to address the ecological, social, and economic challenges that we are facing now and, will face in the future.

ii. Visit to natural place for green experience.

iii. Awareness and outreach programmes

Principal

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