Green and Environment Audit Report 2022

Jhanji Hemnath Sarma College

Prepared By:

Green Club
Jhanji Hemnath Sarma College
Jhanji-Jamuguri, Sivasagar Assam

Acknowledgement

Green Club of Jhanji Hemnath Sarma College hereby express our gratitude to the Principal, Jhanji Hemnath Sarma College for assigning this important work of preparing a reportfor conducting Green and Environment Audit by **Dr. Kalpataru Dutta**, Senior Scientist, NEIST, Jorhat, Assam and **Dr. Amulya Saikia**, Associate Professor, Department of Zoology, Moran College, Charaideo, Assam.

We appreciate the cooperation extended to our team during the entire process of study. Our special thanks are due to the teaching and non-teaching staff of the college for giving us necessary inputs to carry out this vital exercise of preparing the report for Green and Environment Audit. We are also thankful to other staff members who were actively involved in the process.

Principal
Jhanji Hemnath Sarma College

Foreword

Educational Institutes must aim to minimize waste discharge and use the available resources sustainably for a green environment, Jhanji Hemnath Sarma College is committed to clean and green college campus by incorporating sustainable and eco-friendly initiatives at the core of all its activities and endeavors. In order to assess the environmental performance of our institution and to analyse the possible solutions for converting the campus of Jhanji Hemnath Sarma College to an eco-campus, the college had decided to conduct an external Green Audit. The responsibility of conducting the same was entrusted to **Dr. Kalpataru Dutta**, Senior Scientist, NEIST, Jorhat and **Dr. Amulya Saikia**, Associate Professor, Department of Zoology, Moran College.

A committee was constituted in the college to prepare a report to be submitted to the auditing agency. Based on the study done, the report pertaining to environmental management plan with strength, weaknesses have been prepared for inspection and verification by the auditing agency.

Signature

Dr. Manjit Gogoi
Principal
Jhanji Hemnath Sarma College

Principal
Jhanji Hemnath Sarma College

Members of Green Club, Jhanji Hemnath Sarma College

Dr. Manjit Gogoi, (Advisor), Principal

Mr. Bidyadhar Baruah, (Advisor), IQAC Co-ordinator

Mr. Jibamoni Nath, (President), Assistant Professor, Department of Assamese

Dr. Montu Kumar Bora, (Secretary), Assistant Professor, Department of Assamese

Dr. Mridusmita Devi, (Secretary), Assistant Professor, Department of Sanskrit

Members:

Mr. Upen Chandra Das, Assistant Professor, Department of Assamese

Mr. Indra Sen Baro, Assistant Professor, Department of English

Miss Bidisha Sarmah, Assistant Professor, Department of Accountancy

Miss Nirmali Borkakoti, Assistant Professor, Department of Economics

Miss Pallabi Boruah, Assistant Professor, Department of Geography

Principal
Jhanji Hemnath Sarma College

Certificate

This is to certify that Jhanji Hemnath Sarma has conducted a detailed "Green and Environment Audit" for its campus during the academic year 2021-2022. The audit involves water analysis, green environment analysis, solid waste, etc., and gives an 'Environmental Management Plan', which the College can follow to minimize the impact on the institutional working framework. In an opinion and to the best of our information and according to the information given to us, said green audit gives a true and fair view in conformity with environmental auditing principles accepted in India.

Date: 11.06.2022.

Place: Sivasagar.

Authorized Signatory and Seal

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Associate Professor (Rtd)
Deptt. of Zoology
Moran College, Moranhat

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Jhanji Hemnath Nath Sarma College
For the Session: 2021-2022

I. ABOUT THE COLLEGE

Established on 25th July, 1964, Jhanji Hemnath Sarma College is a pioneer institute of higher education in Sivasagar district of Assam. The college has been imparting quality education since its inception. Students come to this college from far flung areas of the district and even from outside the district to pursue higher education in their chosen branches of knowledge.

Located in the peaceful lush environment of the plain bank of the river Jhanji, bordering Sivasagar and Jorhat districts, it has continued to be a shrine of enlightenment to the students.

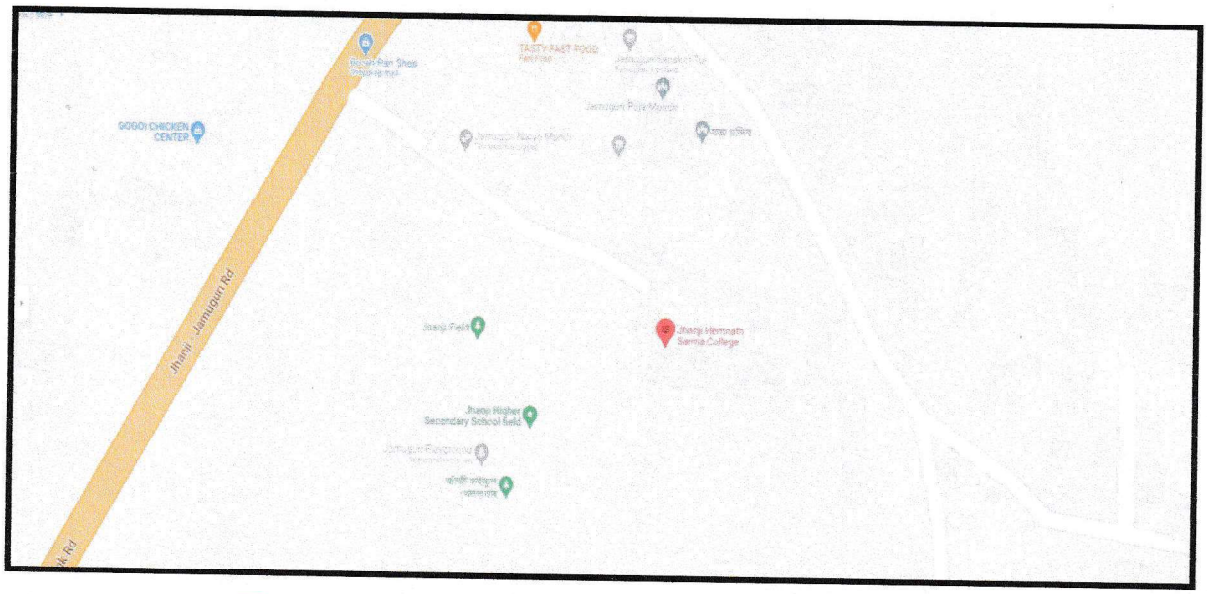

Figure-1: Location Map of Jhanji Hemnath Sarma College

a. Campus Infrastructure

The college campus has an administrative building, academic block, library, Rashtriya Uchchatar Shiksha Abhiyan (RUSA) building, NCC & NSS office, Facility for Yoga, Indoor stadium, canteen, Gymnasium, Indoor Stadium, Auditorium, Seminar Hall, Conference Hall, Gandhi Study Centre, KKHSOU, DODL, Sankardev Study Centre.

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The fundamental aim of the college is to provide sound learning to young minds under circumstances to ensure all round development of their personalities. It encourages students to achieve academic excellence to take up suitable career and also, to develop extracurricular activities and traits to contribute for enrichment of their family and society.

II. INTRODUCTION

Green Audit is a process of systematic identification, quantification, recording, reporting and analysis of components of environmental diversity of institute. It aims to analyse environmental practices within and outside of the concerned place, which will have an impact on the eco-friendly atmosphere. Green audit is a valuable means for a college to determine how and where they are using the most energy or water or other resources; the college can create heath consciousness and promote environmental awareness, values and ethics. It provides staff and students better understanding of green impact on the campus. If self-enquiry is a natural and nccessary outgrowth of a quality Education, it could also be started that institutional self-inquiry is a natural and necessary outgrowth of a quality educational institution. Thus it is imperative that the college evaluate its own contributions toward a sustainable future. As environmental sustainability is becoming an increasingly important issue for the nation, the role of higher educational institutions in relation to Environmental sustainability is more prevalent.

The 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 for sustainable Development and at the same time reduce a sizable amount of atmospheric CO_2 from the Environment. 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.

III. 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 institutions in mitigating the present Environmental problems. The college has been putting efforts to keep our environment clean since its inceptions. 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 map the Geographical Location of the college
- *To document the floral and faunal diversity of the college*
- To record the meteorological parameter of Jhanji where college is situated
- To document the ambient environmental condition of weather, air, water and noise of the college
- To document the waste disposal system
- To estimate the Energy requirements of the college
- To report the expenditure on green initiatives during the last five years

IV. METHODOLOGY

The purpose of the green audit of Jhanji Hemnath Sarma College is to ensure that the practices followed in the campus are in accordance with the Green Policy of the country. The methodology includes: collection of data, physical inspection of the campus, observation and review of the documentation and data analysis.

V. VISION & MISSION STATEMENT

OUR VISION

Jhanji Hemnath sarma will excel nationally and distinguish itself as a recognized pre-eminent leader to serve this 70% Brotherhood through its socioeconomic upliftment by exposure of the have-nots to Eng.& Technology thereby grooming them as technically competent and intellectually – vital Graduates through practically focused quality learning experience, and thus assuring productive Careers for them.

OUR MISSION

- Upliftment of Rural Students through Higher education.
- Respond to local societal needs by developing selected 'Students interested to Higher education.
- Quality training programs in need based in society aspect.
- To maintain state-of-the- art infrastructure in laboratories.
- To promote culture of self-employment.
- To impart non-formal education to unemployed youth.
- To inculcate moral, ethical, spiritual values in education at all levels.

VI. GREEN AUDITING

The college has adopted the "Green Campus" system for environmental conservation and sustainability. There is main three pillars i.e. zero environmental foot print, positive impact on occupant health and performance and 100% graduates demonstrating environmental literacy. The goal is to reduce CO_2 emission, energy and water use, while creating atmosphere where students can learn and be healthy.

LAND USE DATA OF JHANJI HEMNATH SARMA COLLEGE, SIVASAGAR

CATEGORIES OF LAND USE	AREA(M2)
Plantation area	3.8 bigha
Built up area (include roads)	10.95 bigha
Total area	14.75 bigha

LAND USE (BUILT UP AREA) ANALYSIS

The southern region of Jhanji Hemnath Sarma College is densely built up having main administrative Block. Eastern part College canteen, central part consists with Auditorium Northern region with college library. College area consists with three separate blocks. Eastern block is comprised of new RCC girl's hostel. The southern block comprises of old girl's hostel

College auditorium and tea garden and Agaru plantation area:
Total area of Jhanji Hemnath Sarma college out of 14.75 Bigha which the built-up area include (Roads) is 75 % (10.95) Bigha and plantation area is 25 % (3.8 Bigha).

VII. FINDINGS

Jhanji Hemnath Sarma College which was established in the year 1964 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 about 75% of the total area is occupied by open land and plantation that generates a better and sustainable campus environment.

TREE DIVERSITY OF JHANJI HEMNATH SARMA COLLEGE

Jhanji Hemnath Sarma College is within the geo-position between latitude 26.867465 N and Longitude 94.503757 E in Ludhiana, Punjab, India. It encompasses an area of about 14, 75 Bigha. 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 m 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 the people around of the college in terms of contributing to our environment by providing oxygen, improving air quality, climate amelioration, conversation of water, preserving soil, sand 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 SUMMER. Many species of birds are dependent on these trees mainly for food and shelter. Nectar of flowers and plants 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 colours. Even individual trees vary their appearance throughout the course of the year as the season's changes. 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 in particular. 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 out down dust and storms. Thus, the college has been playing a significant role in maintaining the environment of the entire Ludhiana town in its surrounding areas.

Table:List of Plant Species of Jhanji Hemnath Sarma College Campus

Sl. No.	Scientific Name	Vernacular Name	Family	Habit
1	*Abelmoschus moschatus*	Kasturi vende	Malvaceae	SH
2	*A. esculentus L. Moench*	Vende	Malvaceae	SH
3	*Abroma augusta L.F*	Garakhia Koroi	Malvaceae	ST
4	*Abrus precatorius L*	Latumoni	Fabaceae	Cl
5	*Abutilon indicum L. sweet*	Jopa	Malvaceae	H
6	*Actinodaphn angustifolia Nees*	Baghnola	Lauraccae	T
7	*A. obovata Blume*	Patihunda	Lauraceae	T
8	*Acacia farnesiana L. Willd*	Taruakadam	Mimosaceae	SH
9	*Adenanthera padellina Linn.*	Ku- Sandan	Mimosaceae	T
10	*Acacia sinuata (Lour) Merrill*	Kuchia kait	Mimosaceae	Cl
11	*Acalypha indica L.*	Mukta Jhuri	Euphorbiaceae	H
12	*Achasma lorogloussum larsew*	Karful	Zingiberaceae	SH
13	*Achyranthus aspera L.*	Uobhat kata	Amaranthaceae	H
14	*Acorus calamus L.*	Boch	Araceae	H
15	*Adenanthera pavonina Linn.*	Ku- sandan	Mimosaceae	T
16	*Adhatoda vasica Nees*	Bahak	Acanthaceae	SH
17	*Adina cordifolia Benth & Hook. f.*	Halodhisopa	Rubiaceae	T
18	*Aegle marmelos L. corr.*	Bel	Rutaceae	T
19	*Aychynomene aspera Linn*	Sola	Papilionaceae	SH
20	*A. Indica Linn*	Kuhila	Papilionaceae	SH
21	*Aesculus assamica*	Roman bih	Sapindaceae	ST
22	*Agapetes Kanjilali A. Das*	Harugomoni	Vaccinaceae	EPSH
23	*Agalia edulis Gray*	Mamoilateku	Meliaceae	T
24	*Agave americana*	Satabdi Goch	Agavaceae	H
25	*Ageratum conyzoides L*	Gandhali Bon	Asteraceae	H
26	*Ailanthus grandies Prain*	Borpat	Simaroubaceae	T
27	*Alangium chinense (Lour)*	Bogaamrulia	Alangiaceae	ST
28	*Albizia lucida Benth*	Sam koroi	Mimosaccae	T
29	*A. lebbeck Benth*	Siris tree	Mimosaceae	T
30	*Alocasia acuminate*	kachu	Araceae	H
31	*Alocasia cucullata schott*	Mukhi Kachu	Araceae	H
32	*fornicate Schott*	Kachu	Araceae	H
33	*Indica Schott.*	Kola kachu	Araceae	H
34	*Alocasia macrorrhiza schott*	Mankachu	Araceae	H
35	*Aleurites acuminate Wall*	Panihales	Euphorbiaceae	H
36	*Aleurites moluccana (L) Willd*	Motavela	Euphorbiaceae	T
37	*Alphonsea ventricosa Hook*	Nogakola	Annonaceae	T
38	*Alpinia galanga L. willd*	Tarabaghini	Zingiberaceae	H
39	*A. nigra (Geartu) Burtt*	Tora	Zingiberaceae	H
40	*Alstonia scholaris L.R. Br.*	Satiana	Apocynaceae	T
41	*Alternanthera sessilis L*	Matikanduri	Amaranthaceae	H

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42	*Altingia excelsa Noronha*	Jutuli	Altingiaceae	T
43	*Amomum aromaticum Roxb.*	Moran elaichi	Zingiberaceae	H
44	*Amoora cuculata Roxb.*	Amari	Meliaceae	T
45	*Amorphophallus companulatus*	ulkachu	Araceae	H
46	*Amorphophallus companulatus*	Ulkachu	Araceae	H
47	*Ampelocissus latifolia planch*	Gualialata	Vitidaceae	Cl
48	*Anamirta coculus L. Wight Arn*	Kakomeri	Menispermaceae	Cl
49	*Ananus comosus L. Merrill*	Anarash	Bromeliaceae	H
50	*Andrographis paniculata wall ex Nees*	Kalmegh	Acanthaceae	H
51	*Anisomeles indica (Linn)*	Bontil	Lamiaceae	H
52	*Antidesma acuminatum wall*	Pani halach	Euphorbiaceae	ST
53	*A. ghaesembilla Gaertn*	Halach	Euphorbiaceae	T
54	*Anthocephalus chinensis Rich. Ex. Walp.*	Kadam	Rubiaceae	T
55	*Aporusa dioica Muell*	Barhalach	Euphorbiaceae	T
56	*Aquilaria agallocha Roxb.*	Sasi	Thymelaeaceae	T
57	*Aphanamixis polystachya (Wall) Parker*	Bogaamari	Meliaceae	T
58	*Argemone mexicana Linn*	Sialkati	Papaveraceae	H
59	*Aristolochia indica Linn*	Arkamu	Aristolochiaceae	ST
60	*Artocarpus chaplasha Roxb.*	Samkathal	Moraceae	T
61	*Arundo donax Linn*	Nal	Poaceae	H
62	*Asclepias curassavica Linn*	Bhadaitita	Asclepiadaceae	H
63	*Asparagus racemosus willd*	Shatmul	Liliaceae	Cl
64	*Atrilex hortensis Linn*	Pahari paleng	Chenopodiaceae	H
65	*Averrhoa bilimbi Linn caranbula*	Kardoi	Oxalidaceae	ST
66	*Azadirachta indica A. Juss*	Neem	Meliaceae	T
67	*Baccaurea ramiflora Lour*	Lateku	Euphorbiaceae	ST
68	*Bacopa monnieri L*	Brahmisak	Scrophulariaceae	H
69	*Barringtonia acutangulaGaertn*	Paniomora/ Hijal	Barringtoniaceae	ST
70	*Basella alba L stewart*	Puraishak	Basellaceae	ST
71	*Bauhinia malabarica Roxb.*	Katara	Caesal piniaceae	ST
72	*B. Purpurea Linn*	Ranga Kanchan	Caesal piniaceae	ST
73	*B. vahlii Wight Arn*	Lata Kanchan	Caesal piniaceae	Cl
74	*Benincasa hispida Thumb*	Sal Kumura	Cucurbitaceae	Cl
75	*Boerhaavia diffusa Linn.*	Ponounua	Nyctaginaceae	H
76	*Bombax ceiba Linn*	Simalu	Bombacaceae	T
77	*Borreria articularis (Linn)*	Gaharibon	Rubiaceae	H
78	*Brassica campestres Linn*	Hariah	Cruciferae	H
79	*Bridelia monoica (Lour)*	Patkuhir	Euphorbiaceae	T
80	*B. retusa Spring*	Kuhir	Euphorbiaceae	T
81	*Bryophyllum pinnatum (Lam)*	Dupartanga	Crassulaceae	H
82	*Buddlija asiatica*	Bonsini	Buddlijaceae	SH
83	*Butea monosperma (Lam)*	Palash	Papilionaceae	T
84	*Byttneria aspera colebr*	Tikaniborua	sterculiaceae	Cl
85	*Caesalpinia bunduc L. (Roxb)*	Lataguti	Caesalpiniaceae	ST

86	*C.. cucullata Roxb.*	Baghansur	Fabaceae	H
87	*Calamus erectus Roxb.*	Jangbet	Palmae/ arecaceae	Cl
88	*C. flagellum Griff*	Raidang bet	Palmae/ arecaceae	Cl
89	*C. Grandis Kurz*	Sulibet	Arecaceae	Cl
90	*C. guruba Buch- Ham*	Sandi bet	Arecaceae	Cl
91	*C. tenuis Roxb.*	Jatee bet	Arecaceae	Cl
92	*Callicarpa arborea Roxb.*	Ganmola/ Khoja	Verbenaceae	Sh
93	*C. macrophylla Vahl*	Tang loti	Verbenaceae	Sh
94	*Callistemon lanceolatus D.C*	Bottle Brass	Myrataceae	ST
95	*Calophyllum polyanthum Wall.*	Dieng-la-kuru	Guttiferae	ST
96	*Camellia sinensis (Linn)*	Shahgoch	Theaceae	ST
97	*Canarium bengalense Roxb.*	Dhunagoch	Burseraceae	T
98	*Canna indica Linn*	Parijat	Cannaceae	H
99	*Capsicum annum Linn*	Jalakia	Solanaceae	H
100	*Carallia raciata (Lour)*	Kanthekera	Rhizophoraceae	ST
101	*Carica papaya Linn*	Amita	Caricaceae	H
102	*Carissa carendas L*	Karaja tenga	Apocynaceae	SH
103	*Caryota urens L*	Shau Tamul	Arecaceae	T
104	*Cassia alata L*	Kharpat	Caesalpiniaceae	US
105	*C. fistula L*	Hunaru	Caesalpiniaceae	T
106	*C. tora L*	Haru medalua	Caesalpiniaceae	H
107	*Castanopsis indica spach*	Hingari	Fagaceae	T
108	*C. tribuloides A.DC*	Phul Hingari	Fagaceae	T
109	*Catharanthus roseus G-Don*	Nayantara	Apocynaceae	H
110	*Cedrela toona Roxb.*	Poma	Meliaceae	T
111	*Celosia cristata Linn*	Kukurajaba	Amaranthaceae	H
112	*Celtis australis Linn*	Mauhita	Ulmaceae	T
113	*Centella asiatica Linn*	Haru manimoni	Umbelliferae	H
114	*Centipeda minima (Linn)*	Hasia Bon	Asteraceae	H
115	*Centratherum anthelminicum*	Kulajira	Asteraceae	H
116	*Cestrum nocturnum L*	Hasnahana	Solanaceae	US
117	*Chlorophytum borivillianum Santapu & Fernondes*	bogamusli	Liliaceae	H
118	*Chrysophyllum roxburghii G. Don*	Bonpitha	Sapotaceae	T
119	*Chukrasia tabularis A. Juss*	Sakari poma	Meliaceae	T
120	*Clitoria ternatea L*	Aparajita	Papilionaceae	Cl
121	*Cinnamomum camphora (Linn)*	Kaphur	Lauraceae	ST
122	*C. glanduliferum Meissn*	Gondhkhoroi	Lauraceae	ST
123	*C. obtusifolium Nees*	Nagadalsini	Lauraccac	ST
124	*C. tamala Nees*	Tejpat	Lauraceae	ST
125	*Cissampelos pareira Linn*	Tubuki Lata	Menispermaceae	Cl
126	*Cissus quadrangularis Linn*	Harjura Lata	Vitaceae	Cl
127	*Citrullus colocynthis schrad*	Kuabhaturi	Cucurbitaceae	Cl
128	*C. vulgaris schrad*	Tarmuj	Cucurbitaceae	Cl
129	*Citrus aurantifolia (Christm)*	Kajinemu	Rutaceae	Sh
130	*C. decumana Watt*	Robabtenga	Rutaceae	ST
131	*C. Limon (Linn)*	Jaratenga	Rutaccac	Sh
132	*C. paradise Macf*	Golnemu	Rutaceae	Sh

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133	*C. sinensis (Linn)*	Mushambi	Rutaceae	Sh
134	*Clitora ternatea Linn*	Aparajita	Papilionaceae	Cl
135	*Coccinia cordifolia Cogn*	Kurula	Cucurbitaceae	Cl
136	*Cocos nucifera Linn*	Naricol goch	Arecaceae	T
137	*Colocasia esculenta (Linn)*	Kalakachu	Arecaceae	H
138	*Coix lachymajobi Lin.*	Kumarika	Poaceae	H
139	*Commelina benghalensis Linn*	Kanahimalu	Commelinaceae	H
140	*Coptisteeta Wall*	Misimitita	Ranunculaceae	H
141	*Corchorus capsularis Linn*	Morapat	Tiliaceae	H
142	*Cordia dichotoma Forst. f*	Katara	Boraginaceae	T
143	*Costus speciosus (Koenig) Sm.*	Jamlakhuti	Zingiberaceae	H
144	*Couroupita guianensis Aubl*	Nagchampa	Lecythidaceae	T
145	*Crinum asiaticum Linn*	Bonnaharu	Amaryllidaceae	H
146	*C.defixum Kargula*	Bon pianj	Amaryllidaceae	H
147	*C. latifolium Lin.*	Bon naharu	Amaryllidaceae	H
148	*Crotalaria Juneea Linn Buch – Ham*	Han	Papilionaceae	SH
149	*C. mucronata Desv*	Jhunjhunia	Papilionaceae	SH
150	*Cryptocarya amygadalina Nees*	Bonsum	Lauraceae	T
151	*Cryptolepis buchanani Roem & Schutt*	Kola anantamul	Asclepiadaceae	H
152	*Crypteronia paniculata Blume*	Gorumora	Sonneratiaceae	H
153	*Cucumis melo Linn*	Siral	Cucurbitaceae	Cl
154	*Cucurbita moschata Duchesne*	Rangalau	Cucurbitaceae	Cl
155	*Curcuma angustifolia Roxb.*	Barli	Zingiberaceae	II
156	*C.caesia L*	Haldhi	Zingiberaceae	H
157	*C.zeoderica Roxb.*	Kochura	Zingiberaceae	H
158	*Curcuma amada Roxb.*	Aamada	Zingiberaceae	H
159	*C. aromatica Salisb*	Katuri	Zingiberaceae	H
160	*C. longa L*	Haldi	Zingiberaceae	H
161	*Cuscuta reflexa Roxb.*	Akakhi Lata	Con volvulaceae	Cl
162	*Cyathula prostrate Blume*	Bonhath	Amaranthaceae	H
163	*Cymbopogon citrates stopf*	Nemugandhi Bon	Poaceae	H
164	*Cynodom dactylon L Pers*	Dubari Bon	Poaceae	H
165	*Cyperus Kyllingia Endl*	Mutha Bon	Cyperaceae	H
166	*C. rotundus Linn*	Kaya Bon	Cyperaceae	H
167	*Dalbergia Pinnata (Lour)*	Lulangchali	Papilionaceae	Li
168	*D. sissoo. Roxb.*	Sisoogoch	Papilionaceae	T
169	*Dalhousiea bracteata Garh*	Paharilata	Papilionaceae	Li
170	*Datura metel Linn*	Dhatura	Solanaceae	SH
171	*Debregeasia wallichiana wedd*	Mechaki	Urticaceae	SH
172	*Deeringia amaranthoides Merrill*	Menmani	Amaranthaceae	H
173	*Delonix regia Rafin*	Radhachura	Caesalpiniaceae	T
174	*Dendropthae falcate (Linn. f)*	Raghumala	Loranthaceae	Sh
175	*Desmodium velutinum (willd) DC*	Bionihabota	Papilionaceae	US
176	*Dillenia indica Linn*	Outanga	Dillenaceae	T
177	*Dioscorea alata Linn*	Kathalu	Dioscoreaceae	Cl

178	*D. bulbifera L*	Gosh alu	Dioscoreaceae	Cl
179	*D.. esculenta Lour*	Moa Alu	Dioscoreaceae	Cl
180	*D.. sativa L.*	Kata alu	Dioscoreaceae	Cl
181	*D. pentaphylla Linn*	Pashpatia alu	Dioscoreaceae	Cl
182	*Dolichos lableb*	Uroahi	Papilionaceae	Cl
183	*Drimycarpus racemosus Hook. f*	Amshia	Ancardiaceae	T
184	*Drymaria cordata willd*	Laijabori	Caryophyllaceae	H
185	*Duabanga sonneratiodes Buch-Ham*	Khukan	Sonneratiaceae	T
186	*Echinocarpus assamica Benth*	Joba hingori	Elaeocarpaceae	T
187	*Eclipa alba (Linn)*	Kaharaj	Asteraceae	H
188	*Ehretia acuminata R. Br.*	Puruja	Boraginaceae	T
189	*Elaeagnus pyriformis Hook. f*	Doukhi guti	Elaeagnaceae	SH
190	*Elaeocarpus aristatus Roxb.*	Garelasopa	Elaeagnaceae	T
191	*E. serratus Linn*	Jalpai	Elaeagnaceae	T
192	*Elephantopus scaber Linn*	Bondhapat	Asteraceae	H
193	*Elettaria cardamomum Maton*	Haro elachi	Zingiberaceae	H
194	*Elusine indica Gaertn*	Bobosha	Poaceae	H
195	*Embella nagushia D. Don*	Bon	Myrsinaceae	Cl
196	*Emblica officinalis Gaertn*	Bonpoi amlakhi	Euphorbiaceae	T
197	*Engelhardtia polystachya Radlk*	Shalbih	Juglandaceae	T
198	*Enhydra fluctuans Lour*	Halenchi	Asteraceae	H
199	*Entada scandens Benth*	Ghila	Mimosaceae	Li
200	*Erioglossum rubiginosum Bleme*	Abigran	Sapindaceae	T
201	*Eryngium foetidum Linn*	Mandhania	Apiaceae	H
202	*Erythrina stricta Roxb.*	Madar	Fabaceae	T
203	*Erythropsis colorata (Roxb)*	Kath udal	Sterculiaceae	T
204	*Eugenia Formosa Wall*	Bhukura cheap	Myrtaceae	T
205	*E. malaccensis Linn*	Panijame	Myrtaceae	SH
206	*E. Kurzii Duthie*	Bogijamu	Myrtaceae	SH
207	*Eupatorium cannabinum Linn*	Tongloti	Asteraceae	H
208	*E. odoratum L*	Jarmani bon	Asteraceae	H
209	*Euphorbia hirta Linn*	Gakhirati Bon	Euphorbiaceae	H
210	*E. neriifolia Linn*	Hiju	Euphorbiaceae	SH
211	*Eurya acuminata*	Murmua	Theaceae	T
212	*E. japonica Thunb*	Shasani	Theaceae	SH
213	*Euryale ferox salisb*	Nikari	Nymphaeaceae	H
214	*Fagopyrum esculentum Moench*	Dhamachi Hak	Polygonaceae	H
215	*Ficus auriculata Lour*	Mondemoru	Moraceae	T
216	*F. benghalensis Linn*	Borgoch	Moraceae	T
217	*F. benjamina Linn*	Jarigoch	Moraceae	T
218	*F. hirta Vahl*	Khagnal demaru	Moraceae	T
219	*F. religiosa Linn*	Ahat goch	Moraceae	T
220	*Farmiana. colarata R. Br*	Jariudal	Sterculiaceae	T
221	*Flacourtia. cataphracta Roxb.*	Panial	Flacourtiaceae	T
222	*Flemingia. strobilifera R. Br.*	Makhiyoti	Papilionaceae	T
223	*Foeniculum. vulgare Mill*	Sof	Apiaceae	H
224	*Fumaria. indica Pugsley*	Bonhula	Fumariaceae	H

225	*Garciana. cowa Roxb.*	Kauri thakera	Guttiferae	T
226	*G. paniculata Roxb.*	Shasapatcnga	Guttiferae	T
227	*G. assamica (King & Prain) Kost*	Shia Nahar	Guttiferae	T
228	*G. morella (Gaertn) Desv*	Kuji thakera	Guttiferae	T
229	*Gardenia. campanulata Roxb.*	Bitmora	Rubiaceae	SH
230	*G. gumifera Linn*	Tagar	Rubiaceae	SH
231	*Glochidion. arbo rescens Blume*	Panimori	Euphorbiaceae	T
232	*G. assamicum Hook. f*	Pani chitiki	Euphorbiaceae	T
233	*Gloriosa. superba Linn*	Agnishikha	Liliaceae	Cl
234	*Grewia multiflora Juss.*	Kukurhita	Tiliacea	SH
235	*Gnetum gnemon L*	Major guti	Gnetaceae	SH
236	*Gossypium. barbadense Linn*	Kopah	Malvaceae	SH
237	*Gouania. leptostachya D.C*	Jharpat	Rhamnaceae	SH
238	*Grewia elastica Royle*	Fubura	Tiliaceae	T
239	*Gynocardia odorata R. Br*	Lemtem	Flacourtiaceae	T
240	*Hedyotis corymbosa (Linn)*	Harpojiva	Rubiaceae	H
241	*H. diffusa Willd*	Bonjaluk	Rubiaceae	H
242	*H. scandens*	Bhadali lot	Rubiaccae	Cl
243	*Hemidesmus indicus R. Br*	Anantamul	Asclepiadaceae	SH
244	*Heptapleurum venulosum Seem*	Jakhini lata	Araliaceae	SH
245	*Heteropanax fragrans Seem*	Keseru	Araliaceae	T
246	*Heterophragma adenophyllum Seem*	Dhopa paroli	Bignoniaceae	T
247	*Hibiscus macrophyllus Roxb*	Udal	Malvaceae	T
248	*Hibiscus fragrans Roxb.*	Pishal lata	Malvaceae	T
249	*H. rosa-sinensis Roxb.*	Joba	Malvaceae	T
250	*H. mutabilis L*	Stal padina	Malvaceae	SH
251	*Hiptag benghalensis Kurtz*	Karaklata	Malpighiaceae	Cl
252	*Hodgsonia. macrocarpa (Blume)*	Thabon lata	Cucurbitaceae	Cl
253	*Homalomena. aromatica Schott*	Gankachu	Araceae	H
254	*Horsfieldia. kingii (Hook. f)*	Amol	Myristicaceae	T
255	*Houttuynia. cordata Thumb*	Mashundari	Saururaceae	H
256	*Hovenia. dulcis Thumb*	Chetia bola	Rhammaceae	T
257	*Hydrilla. verticillata (Linn. f)*	Shial Bhubura	Hydrocharitaceae	H
258	*Hydrolea. zeylanica Vahl*	Lahati Bon	Hydrophyllaceae	H
259	*Hygroryza. aristata Nees*	Dolgah	Poaceae	H
260	*Hymenachne. Acutigluma Gill (Rudge)*	Dolgah	Poaccae	H
261	*Hyptis. suaveolens Poit*	Tukma Tita	Lemiaceae	H
262	*Impatiens. balsamina Linn*	Kerruful	Balsaminaceae	H
263	*I. glandulifera Royle*	Dam dewka	Balsaminaceae	H
264	*Imperata. cylindrical Beauv*	Ulubon	Poaceae	H
265	*Ipomoea aquatica Forsk*	Kalmou	Convolvulaceae	Cl
266	*I. batatas (Linn)*	Mitha alu	Convolvulaceae	Cl
267	*Ixora. coccinea Linn*	Rangial phul	Rubiaceae	SH
268	*Jatropha. curcas Linn*	Bongaliera	Eupharbiaceae	Sh
269	*J. gossypifolia Linn*	Ara	Eupharbiaceae	SH
270	*Jussica. repens Linn*	Panikhutura	Onagraceae	H

271	*Justicia adhota Medik*	Bogabahak	Acanthaceae	SH
272	*Kaempferia. galangal Linn*	Gathion	Zingiberaceae	II
273	*K. rotunda L.*	Bhuin champa	Zingiberaceae	H
274	*Kayea. assamica King & Prain*	Sia-nahar	Guttiferae	T
275	*Kydia. calycina Roxb*	Pisala	Malvaceae	T
276	*Lagerstroemia. parviflora*	Jorali	Lythraceae	ST
277	*Lantana camara L*	Guphool	Verbenaceae	SH
278	*Laporte crenulata Gaudich*	Suratgoch	Urticaceae	SH
279	*Lasia spinosa Thw*	Sangmora	Araceae	H
280	*Lathyrus sativus Linn*	Khesari	Papilionaceae	II
281	*Lawsonia inermis Linn*	Jatuka	Lythraceae	ST
282	*Leea. indica Merrill*	Kukurathengia	Vitaceae	SH
283	*Leersia. hexandra Sw*	Arali ghah	Poaceae	H
284	*Leucas. aspera Spreng*	Durum	Lamiaceae	II
285	*Licuala. peltata Roxb.*	Japipat	Arecaceae	Sh
286	*Lindera. assamica Kurtz*	Motabhe	Lauraceae	ST
287	*Linum. usitatissimum Linn*	Tisi	Linaceae	H
288	*Litchi. chinensis (Gaertn)*	Lisu	Sapindaccac	ST
289	*Litsea. eubeba Pers*	Mejankari	Lauraceae	ST
290	*Livistona. jenkinsiana Griff*	Tokopat	Arecaceae	Palm
291	*Luvunga. scandens (Roxb)*	Longphul	Rutaceae	SH
292	*Macaranga. indica Wight*	Jagol	Euphorbiaccac	T
293	*Macropanax. undulatum Seem*	Bon-kesaru	Araliaceae	ST
294	*Maesa. ramentaceae Wall*	Seketia	Myrsinaceae	SH
295	*M. velutina II. Wendl & Drud*	Ramkol	Musaceae	SH
296	*Manglietia. insignis Blume*	Pan-sopa	Magnoliaceae	T
297	*Maranta arundenacea L*	Bonketuri	Marantaceae	H
298	*Marata dichotoma Willd.*	Patidoi	Marantaceae	H
299	*Medinilla rubicunda Blume*	Bogitenga	Melastomataceae	SH
300	*Melastoma. malabathricum Linn*	Phutuka	Melastomataccac	SH
301	*Meliosma pinnata Roxb*	Hengunia	Sabiaceae	T
302	*Melochia corchorifolia Linn*	Bonmorapat	Sterculiaceae	SH
303	*Memecylon ceraciforme*	Kakoi-chera	Melastomataceae	T
304	*Mentha arvensis Linn*	Padina	Lamiaceae	H
305	*Merremia vitifolia (Burm.f)*	Dighilowa	Convolvulaceae	Cl
306	*Mesua ferrea L*	Nahar	Clusiaceae	T
307	*Meyna spinosa Roxb*	Kutkura	Rubiaceae	T
308	*Mimosa pudica Linn*	Nilajibon	Mimosaceae	SH
309	*Mimusops elengi Linn*	Bakul	Sapotaceae	T
310	*Mitrephora tomentosa Hook.f*	Koliori	Annonaceae	T
311	*Morinda augustifolia Roxb*	Ashugoch	Rubiaceae	T
312	*Moringa oleifera Lam*	Sajina	Moringaceae	T
313	*Morus indica L*	Nuni	Moraceae	T
314	*Mucuna nigricans Steud*	Mekurighila	Papilionaceae	Cl
315	*Murraya koenigii (Linn)*	Narashinga	Rutaceae	SH
316	*Musa bulbisiana Colla*	Vimkol	Musaceae	H
317	*Myrica esculenta Buch-Ham*	Nagatenga	Myricaceae	T
318	*Myristica fragrans Houtt*	Jaiphol	Myristicaceae	T

319	*Myxopyrum smilacifolium C.B*	Lohoralata	Oleaceae	SH
320	*Naravelia zeylanica DC*	Gorap. Choi	Ranunculaceae	Cl
321	*Natsiatun herpeticum Buch*	Ou-pat	Icacinaceae	AH
322	*Nelumbo nucifera Gaertn*	Padum	Nympheaceae	AH
323	*Nephelium litchi cambess*	Nagalichu	Sapindaceae	ST
324	*Nicotiana plumbaginifolia Viv*	Ululai	Solanaceae	H
325	*Nymphea nouchali Burm.*	Boga vet	Nympheaceae	AH
326	*N. rubra Roxb.*	Ronga vet	Nympheaceae	AH
327	*Ocimum americana L*	Bontulashi	Lamiaceae	H
328	*O. sanctum L*	Kaliatulshi	Lamiaceae	H
329	*Ophiuros megaphyllus Stapt*	Bahpatea Bon	Poaceae	H
330	*Oroxylum indicum (L) Vent*	Bhatghila	Bigoniaceae	ST
331	*Oxalis corniculata L*	Harutengachi	Oxalidaceae	H
332	*O. debilis Var*	Bartengachi	Oxalidaceae	H
333	*Paederia scandens (Lour) Merr*	Paduri lawa	Rubiaceae	Cl
334	*Palaquium obovatum Clarke*	Kathalua	Sapotaceae	T
335	*Panax ginseng Meg*	Ginshang	Araliaceae	SH
336	*Pandanus odorotissimus Lamk*	Ketakiphul	Pandanaceae	SH
337	*P. assamensis St. Jhon*	Jangliketki	Pandanaceae	SH
338	*P. minuta St. Jhon.*	Joha pat	Pandanaceae	SH
339	*Papilionanthe teres (Roxb)*	Bhatouphul	Orchidaceae	EP.H
340	*Peperomia pellucida (L) H.B.K*	Ponownua	Piperaceae	H
341	*Pegia nitida Colibr*	Bogari lata	Anacardiaceae	Cl
342	*Piper longum L*	Pipoli	Piperaceae	Cl
343	*Plumbago. zeylanica L*	Agiochit	Plumbaginaceae	SH
344	*P. sylvaticum Roxb.*	Pahari pipoli	Piperaceae	Cl
345	*P. thomsonii (C.DC) Hook.f*	Aunipan	Piperaceae	Cl
346	*Polyalthia jenkinisii Hook.f & Th*	Titahasi	Annonaceae	T
347	*Polygonum chinensis L*	Madhuhaleng	Polygonaceae	H
348	*Persea americana Mill*	Avocado	Lauraceae	ST
349	*P. bombycina (King ex Hook.f) Kost*	Soom	Lauraceae	T
350	*Phoebe cathia (D. Don) Kost*	Mekhali	Lauraceae	T
351	*P. goal parensis Hutchinson*	Bonsoom	Lauraceae	T
352	*Phragmites karka (Retz) Trin*	Khagori	Poaceae	H
353	*Phrynium pubinerve Bl*	Kaupat	Marantaceae	H
354	*Phyllanthus – fraternus Webster*	Mati Amlakhi	Euphorbiaceae	H
355	*Physalis minima L*	Pokmou	Solanaccac	II
356	*Piper longum L*	Pipali	Piperaceae	Cl
357	*Pinanga gracilis*	Garuka tamul	Arecaceae	SH
358	*Pithecellobium. monadelphum Kostern*	Moj	Mimosaceae	T
359	*Pogostemon plectranthoides Dest*	Hukloti	Leminaceae	H
360	*Poikilophalus suaveolens (Bl)*	Saemlata	Urticaceae	ST
361	*Pterygota alata (Roxb) R. Br*	Nagahul	Sterculiaceae	T
362	*Pygeum glaberrimum Hook. f*	Gandhigoch	Rosaceae	T
364	*Pyrenaria baringtoniaefolia Seem*	Bon Maduri	Theaceae	ST

365	*Rauvolfia serpentine Benth*	Sharpogandha	Apocynaceae	Sh
366	*Rhyncostylis retusa (L) Bl*	Kapauphul	Orchidaceae	Ep H
367	*Ricinus communis L*	Aragoch	Euphorbiaceae	US
368	*Rubus alcerifolius Poir*	Jutuli poka	Rosaceae	SH
369	*Sagittaria sagittifolia L*	Pani kachu	Alismaceae	H
370	*Sambucus javanica Bl*	Hukati	Caprifoliaceae	SH
371	*Santalum album L*	Bogachandan	Santalaceae	ST
372	*Sapindus mukorossii Gaertn*	Monichal	Sapindaceae	St
373	*Sapium baeeatum Roxb*	Shalang	Euphorbiaceae	T
374	*Saracea asoca (Roxb) de Wilde*	Ashok goch	Caesal piniaccae	T
375	*Sehima wallichii (D.C) Kuntz*	Nagaver	Theaceae	T
376	*Scirpus articulatus L*	Sasu Bon	Cyperaceae	H
377	*Schumannianthus dichotomus (Roxb) Gagnep*	Patidoi	Marantaceae	H
378	*Scoparea dulcis L*	Bondhania	Scrophulariaceae	H
379	*Sensevieria roxburghiana Schult f*	Gumoni	Liliaceae	H
380	*Sesamum orientale L*	Til	Pidaliaceae	H
381	*Shorea robusta Gaertn*	Shal	Dipterocarpaceae	T
382	*Sida cordifolia L*	Hunborial	Malvaceae	Sh
383	*Sloanea sterculiacea*	Phulhingori	Elaeoearpaceae	T
384	*Smilax macrophylla L*	Baghasuralata	Smilacaceae	Cl
385	*Spilanthus paniculata DC*	Maha vingharaj	Asteraceae	H
386	*Sterospermum chelonoides (L) DC*	Parali	Bigoniaceae	T
387	*Swertia chirata (Wall) Cl*	Sirata	Gentianaceae	H
388	*Symplocos oxyphylla Wall ex DC*	Tem	Symplocaceae	T
389	*Tamarindus indica L*	Tatali	Caesalpinaceae	T
390.	*Tamarix dioica Roxb. ex. Roth*	Jhau Bon	Tamaricaceae	Sh
391	*Tectona grandis L.f*	Sagon	Verbenaceae	T
392	*Terminalia arjuna (DC) W & A*	Arjungoch	Combretaceae	T
393	*Tetracera sermentosa (L) Vahl*	Oulata	Dilleniaceae	Cl
394	*Thunbergia grandiflora (Rotlb). Roxb.*	Cowari lata	Thunbergiaceae	Cl
395	*Tinaspora cordifolia (Willd) Hook.f & Th*	Haguni lata	Menispermaceae	Cl
396	*Trapa natans L*	Panihingari	Trapaceae	H
397	*Typhonium trilobatum (L). Schott*	Samkachu	Araceae	H
398	*Uncaria macrophylla Wall*	Borokhilata	Rubiaceae	Cl
399	*Uraria rufescens (DC). Schindl*	Hikatimah	Papilionaceae	Sh
400	*Urena lobata L*	Honborolua	Malvaceae	Sh
401	*Vallaris solanacea (Roth) O. Ktze.*	Gandhali lata	Apocynaceae	Sh
402	*Vitex negundo L*	Panchatia	verbenaceae	Sh
403	*Walsura robusta Roxb*	Lali	Meliaceae	ST
404	*Wedellia calendulaceae Lees*	Bhringgoraj	Asteraceae	H
405	*Withania somnifera Dun*	Ashagandha	Solanaceae	Sh
406	*Xanthium strumarium L*	Agara	Asteraceae	H
407	*Zanthoxylum nitidum (Roxb) DC*	Tajmoi	Rutaceae	Sh
408	*Zingiber zerumbet Rose ex Sm*	Bonada	Zingiberaceae	H

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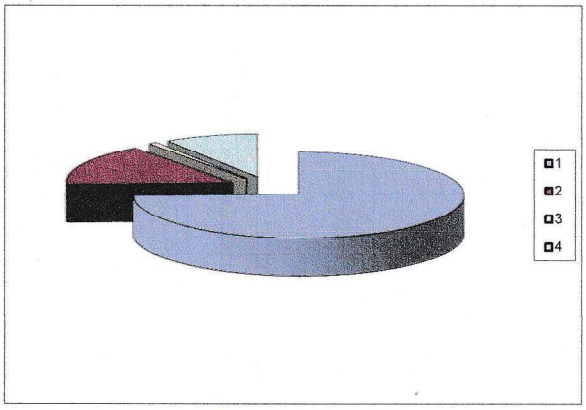
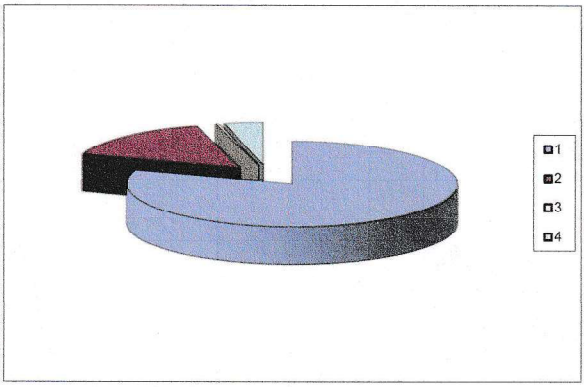
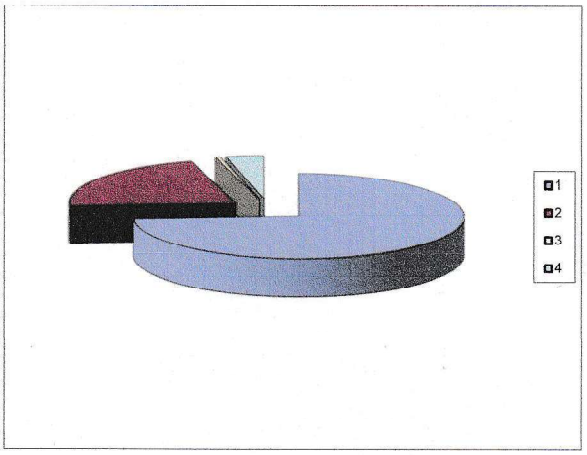
Diagrammatic representation of plant species of Jhanji Hemnath Sarma College campus



1.Dicotyledonous 2. Monocotyledonous 3.Gymnosperms 4. Pteridophytes Percentage of families



Percentage of Genera



Percentage of Species

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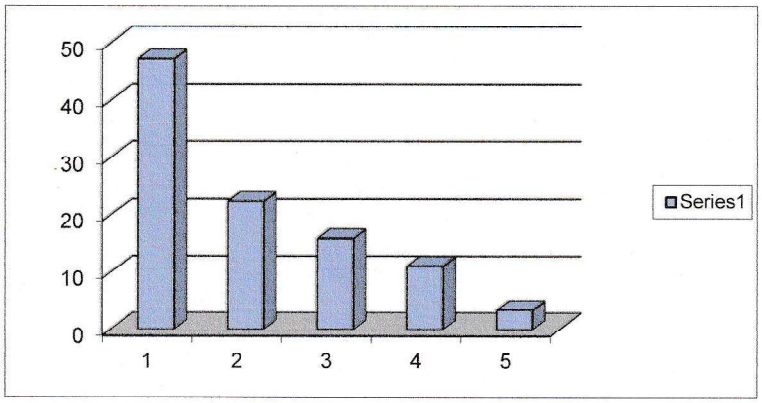
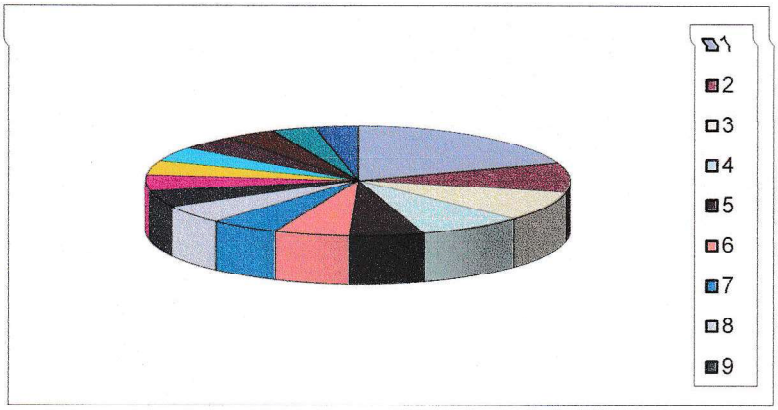
Distribution of species according to habit in Jhanji Hemnath Sarma College campus



Predominant families of Jhanji Hemnath Sarma College campus



1.Poaceae 2. Papilionaceae 3. Euphorbiaceae 4. Lauraceae 5. Asteraceae 6. Caesalpiniaceae 7. Cyperaceae 8. Verbenaceae 9. Moraceae 10. Rutace 11. Apocynaceae 12. Lamiaceae 13. Rubiaceae 14. Mimosaceae 15. Malvaceae 16. Convolvulaceae

Predominant families of Jhanji Hemnath Sarma College campus

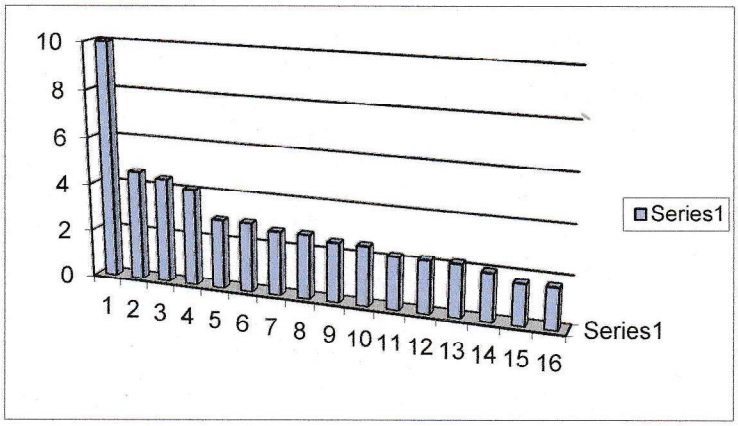


Table: List of Avian Diversity of Jhanji Hemnath sarma college campus

SL.No.	ZOOLOGICAL NAME	COMMON NAME	LOCAL NAME	FAMILY
1	*Acrocephallus slertorecus*	Assam Great Reed Warbler	Nalchmpi	Muscicapidae
2	*Accipeter nisscu melaschistas*	Sparrow hawk	Saru sen sorai	Accipitridae
3	*Anas clypeata*	Shoveller	Nak dungora	Anatidae
4	*Anas creca creca*	Comon teal	Chila hanh or Pilari hanh	Anatidae
5	*Anas guerquedula*	Gargeny	Ghila hanh	Anatidae
6	*Anas penelope*	Wigeon	Satria hanh	Anatidae
7	*Anas platyrhyncos*	Hallard	Bonoria Pati Hanh	Anatidae
8	*Anas poecilorhyncha poecilorhyncha*	Spotbill duck	Barmugi hanh	Anatidae
9	*Anas poecilorhycha garingtoni*	Spotbill duck	Barmugi hanh	Anatidae
10	*Ansor erythropus rubrirostris*	Grey lagged goose	Dhrita Raj	Anatidae
11	*Anser indiues*	Bar headed goose	Boga Rajhansa or Bonmuria hanh	Anatidae
12	*Anthus novae Celandiae richardi*	Grey Wagtail Richard's pipit	Balimahi	Motacillidae
13	*Anus acuta*	Pintailed duck	Dighal neji hanh	Anatidae
14	*Alhya ferrina*	Common pochard	Ranga muria hanh	Anatidae
15	*Athopyga gouldi isolate*	Manipur Yellow backed Sunbird	Monpiya	Nectorimidae
16	*Attya fulligulla*	Tufted pochard	Bamunia hanh	Anatidae
17	*Calidris minuta Caprimulgus*	Little Stint	Bali Khosora	Choradridae
18	*Caprimulgus asciaticus asciaticus*	Little night jar	Dinkona	Caprimul gidae
19	*Caprinulgus macrurus albanotatus*	Long tail Night jar	Dinkona	Caprimulgidae

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20	*Carpodacus erythrinus And Roseatus*	Indian rose Finch or Scarlet grosbeak		Freingillidae
21	*Chaetoriuis striatus*	Bristled grass hopper	Nalchupi	Muscicapidae
22	*Chaimarronis leucocephalus*	Warbler White capped red start or riverchat		Muscicapidae
23	*Ciconia episcopus episcopus*	White necked stork	Konua	Ciconidae
24	*Dendrogyra javanica*	Lesser whistling Teal	Shorali hang	Anatidae
25	*Ephippia rhyncus asciaticus asciaticu*	Black necked stork	Telia sareng	Ciconidae
26	*Gallinag gallinago gallinago*	Common/fantail snipe	Choha, chorai	Charadridae
27	*Gallinago solitaria solitaria*	Solitary snips	Choha Chorai	Charadridae
28	*Glareola lactea*	Small Indian Pranticole	Soru Sotakloriote	Glareolidae
29	*Gyps fulvus fulvascens*	Indian Griffon Vulture	Shagoon	Accipitridae
30	*Haliacetus leucoryphus*	Palla's fishing eagle	Kurua	Accipitridae
31	*Hiereatus fasciatus fasciatus*	Bonellis Howk eagle		Accipitridae
32	*Hirunda rustica gutt urallis*	Common swallow	Satak lorioli	Hirundidae
33	*Lanius schach tricolor*	Black headed or rufous backed shrike	Erakhati or kasai charai	Lanidae
34	*Lanius tephronotus tephrorotus*	Grey backed shrike or Tibetian shrike	Era khata	Lanidae
35	*Lanius colluroides*	Chestnut rumped shrike	Erakhati	Lanidae
36	*Locustella certhiola rubiscence*	Pallas Siberian grass hopper Warbler	Nalchupi	Muscicapidae
37	*Locustella naevia Stentoreus*	Eastern grass hopper warbler	Naldupi	Muscicapidae
38	*Lorus burnicephalus*	Brown headed gull	Rampara	Laridae
39	*Megalurus pluvialis toklao*	Striated margh Warbler	Narchupi	Muscicapida

40	*Mergus merganser orientalis*	Eastern mergenser		Anatidae
41	*Motacilla alba alboides*	Hodgson's Pied Wagtail	Phutuki Balimahi	Motacillidae
42	*Motacilla alba dukhunelisis*	White wagtail	Balimahi	Motacillidae
43	*Motacilla caspica caspica*	Grey wagtail	Balimahi	Motacillidae
44	*Muscicapa nigrirufa*	Yellow headed wagtail	Balimahi	Motacillidae
45	*Muscicapa super citiaris aestigma*	Black and orange flycatcher	Pakhikhowa	Muscicapidac
46	*Muscicapa thalassina thalassina*	Littleblus and white flycatcher	Pakhikhowa	Muscicapidae
47	*Mylophonous caerulus timmicky*	Verditer flycatcher	Pakhikhowa	Muscicapidae
48	*Nectorinia zylonica sola*	Whisting turush	Monpiya	Muscicapidae
49	*Netta ruffina*	Indian Purple rumpled Sun Bird	Deo hanh	Nectarimidae
50	*Numenius arquata orientalis*	Red crested pochard Curlew	Bijia ghok	Anatidae
51	*Pamdion haliaetus haliatus*	Osprey	Ukah	Charadridea

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VIII. WASTE MANAGEMENT OF JHANJI HEMNATH SARMA COLLEGE

Waste management system includes the activities or action required to manage waste from its inception to its final disposal. This includes the collection, transport, treatment and disposal of waste, together with monitoring and regulation of the waste management process.

Waste from all around the college is separated daily as degradable and non-degradable waste in different bags which are disposed separately. Degradable waste includes tree leaves, paper, card board, organic waste such as vegetable, left-over food etc. On the other hand, non-degradable waste refers to glass, tin cans, plastic etc. Separation of waste is essential as the amount of waste being generated today causes immense problem. The materials are composted and evaluated as a fertilizing material. Disposal of these waste results in the production of good quality organic manure that can be used as soil amendments and source of plant nutrients.

With smart initiatives like "Think Green Campus model, waste management is helping colleges and universities to achieve a higher level of environmental performance. By reusing or recycling we are contributing to the conservation of natural resources, saving energy, helping to protect the environment. We will also reduce our impact on the environment by minimizing the carbon emission associated with both disposing of old product and obtaining new ones. Jhanji Hemnath Sarma College adopts environment friendly practices and takes necessary actions such as – energy conservation, waste recycling, etc. The biological re-useable waste is processed as organic manure for the plants available in the college campus and the other solid waste generated in the college campus is taken to the community bin of Amguri Municipality for recycling and disposal.

Photos: Few wastes management clicks from the college premises

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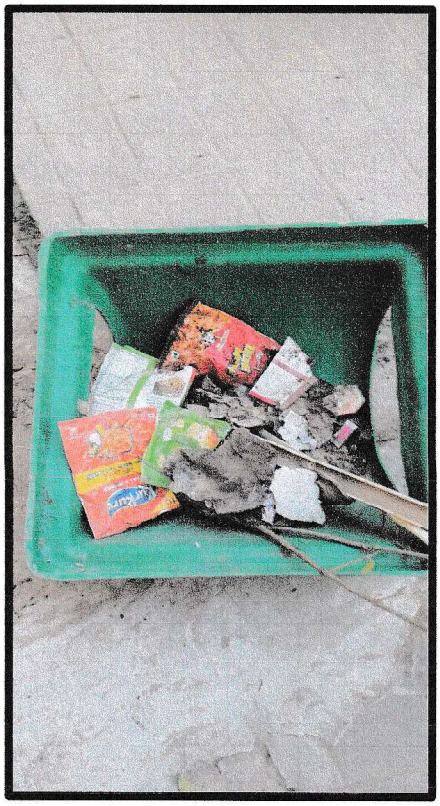

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CSIR-NEIST, Jorhat-6, Assam : India

a) E- WASTE MANAGEMENT

Electronic and electrical equipment generate e-waste in the college. The defective items are being stored and given to scrap agents for disposal. The e-waste generation in the college is very few. Damaged computers and other electronic items are being handed over to authorized agents. Old computers are repaired and reused.

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IX. AIR QUALITY IN JHANJI HEMNATH SARMAH COLLEGE:

The ambient air quality data for Jhanji Hemnath Sarma College for the last one year shows that there are very less polluted particles in ambient air, AQI for SO2 & NOx parameters are within the range of Indian living standards, there are a number of factors responsible for this cleanliness, calmness and serenity in this area. To begin with, population which is most responsible for all the problems and hurdles in smooth living is lowest here of Sivasagar district. Secondly, in this area more trees have been planted as compared to other cities. Furthermore, no air polluting industry is established near here. The ambient air quality of Jhanji Area falls in between moderate to rich quality state. The Assam Pollution Control Board is pondering over the various possibilities to reduce the air pollution for the improvement of ambient air quality with respect to AQI is concerned. However, the annual average value of PM10, SO2, NOx in the ambient air quality of Jhanji, Amguri falls in the range of 50-62 ug/m3,3-3 ug/m3, 10-12 ug/m3 for most of the months, as such, the graded response action plan to eradicate the problem.

AIR QUALITY DETERMINATION

Satisfactory Air Quality Index (Overall = 51) Jhanji Sivasagar Assam, India on dated 27th September 2021.

Parameter	Result (Range)
NO_2	1.72 ug/m^3
SO2	2.88 ug/m^3
O_3	99.42 ug/m^3
$PM_{2.5}$	15.52 ug/m^3
PM_{10}	22.41 ug/m^3
CO	162.13 ug/m^3
Humidity	50%
Barometric Pressure	1010.57 mbar
Wind Speed	*Average 3 km/h*
Wind Direction	South west
Sun Rise	5.31 a.m
Sun Set	5.05 p.m

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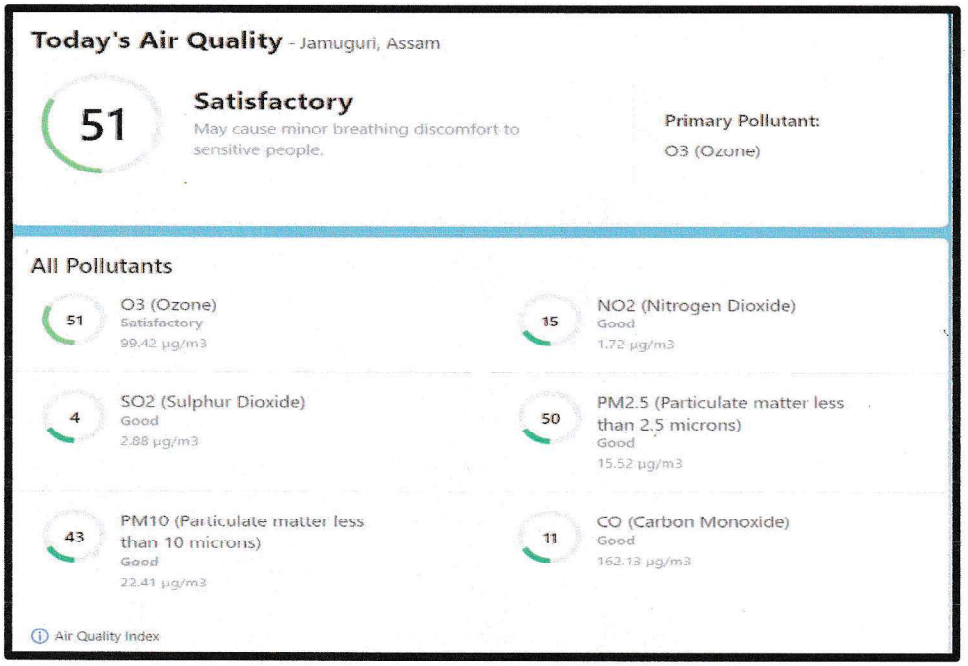

Photo: Air Quality Index as per weather.com

X. WATER ANALYSIS REPORT OF JHANJI HEMNATH SARMA COLLEGE

Water quality testing is important because it identifies contaminants and prevents water-borne diseases. Drinking or using contaminated water can result in severe illness or death. That is why it is important to ensure that drinking water is safe, clean and free from bacteria and disease. The parameters for water quality are determined by the intended use. Work in the area of water quality tends to be focused on water that is treated for human consumption or in the environment.

Drinking water indicators:

The following is a list of indicators often measured by situational category:

- Alkalinity
- Colour of water
- pH Value
- Taste and Odor (Geosmin, 2-Methylisoborneol (MIB), Etc.)
- Dissolved metals and salts (Sodium Chloride, Potassium, Calcium, Manganese, Magnesium)

- Microorganisms such as fecal coliform bacteria (Escherichia coli), Cryptosporidium, and Giardia lamblia; see Bacteriological water analysis.
- Dissolved metals and metalloids (Lead, mercury, arsenic, etc)
- Dissolved organics: Colored dissolved organic matter (CDOM), Dissolved Organic Carbon (DOC)
- Heavy metals

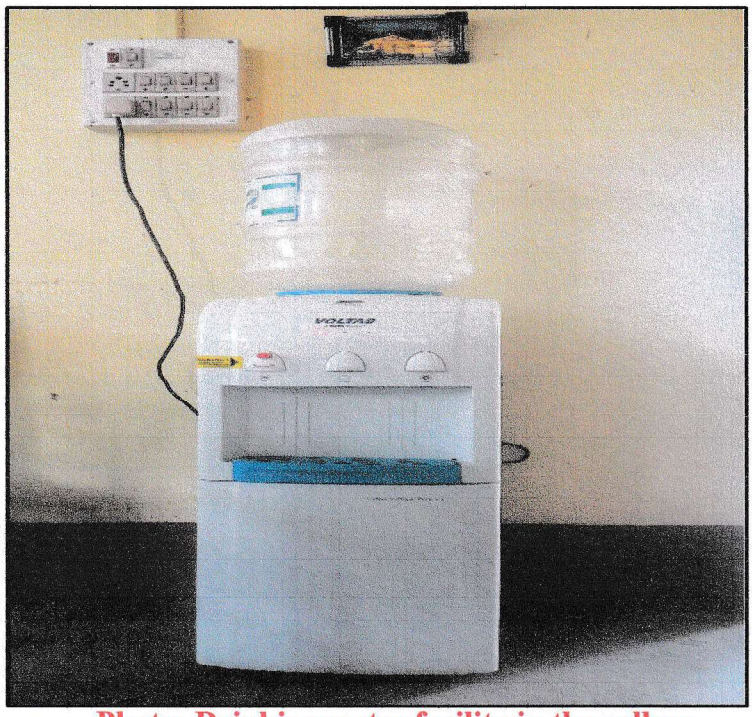

Photo: Drinking water facility in the college

Photo: Rain Water Harvesting in the College

GOVT. OF ASSAM

SUB-DIVISIONAL LEVEL LABORATORY,AMGURI
PUBLIC HEALTH ENGINEERING DEPARTMENT
Amguri Sub-Division,Dist. Sivasagar,Assam,785680
E.mail:- sdllamguri@gmail.com

WATER ANALYSIS REPORT

Test Report No. PHE/AMG/RG-26/A- 1775 **Date:** 10-11-22

Name of Organization	:- Jhanji Hemnath Sarma College.
Pin point Location	:- College Campus.
Name of Block	:- Gaurisagar.
Name of G.P	:- Muhabazar.
Name of Village	:- Jamuguri.
Name of Habitation	:- Jamuguri.
Source of Sample	:- D.T.W
Date of Collection	:- 7-11-22
Date of Testing	:- 7-11-22
Nature of Test	:- Physical / Chemical / Bacteriological
Name of Collector	

Sl No	Parameters	Test Methods	IS10500:2012 (2nd Revision)			
			Desirable Limits	Permissible Limit	Results	Units
	PHYSICAL TEST					
1	Colour	IS 3025(Part 4):2017			10	Hazen Units
2	PH	IS 3025(Part 11):2017	6.5 to 8.5	No relaxation	7.2	Hazen Units
3	Odour	IS 3025(Part 5):2018	Agreeable	Agreeable	Agreeable	Hazen Units
4	Taste	IS 3025(Part 8):2017	Agreeable	Agreeable	Agreeable	Hazen Units
5	Turbidity	IS 3025(Part 10):2017	1	5	7.1	NTU
6	Total Dissolved Solids	IS 3025(Part 16):2017	500	2000	113	mg/l
	CHEMICAL TEST					
7	Iron	APHA23rd Ed- Fe : 2017	0.3	No relaxation	0.38	mg/l
8	Total Alkalinity	IS 3025(Part 23) : 2019	200	600	115	mg/l
9	Total Hardness	IS 3025(Part 21) : 2019	200	600	96	mg/l
10	Nitrate	IS 3025 (Part 34) : 2019	45	No relaxation	0	mg/l
11	Chloride	IS 3025(Part 32) : 2019	250	1000	11.36	mg/l
12	Magnesium	APHA23rd Ed-Mg : 2017	30	100	—	mg/l
13	Sulphate	IS 3025(Part 24) : 2019	200	400	—	mg/l
14	Flouride	APHA23rd Ed-F 2017	1	1.5	0.16	mg/l
15	Arsenic	IS 3025 (Part 37) : 2019	0.01	No relaxation	BDL	mg/l
16	Calcium	IS 3025 (Part 40) : 2019	75	200	—	mg/l

17 **BACTERIOLOGICAL:-** Absent.

a. Total Basall Coliform MPN/ 100 ml :- .....

b. Total F.E Coliform MPN/ 100 ml :- .....

Opinion:- The Parameter Tested at Sr. No ..... in the test report does not meet the requirment of IS 10500: 2012(Second revision)

(BDL :- Below Detection Limit)

Asstt. Chemist
Amguri Sub-Division (PH.E)
Amguri

Nodal Officer
SDLIS/Deputy Amguri

Associate Professor (Rtd)
Deptt. of Zoology
Moran College, Moranhat

Kalpadeep Dutta
वरिष्ठ तकनीकी अधिकारी (३)
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सी.एस.आई.आर-नार्थ ईस्ट इंस्टीट्यूट ऑफ साइंस एंड टेक्नोलॉजी
CSIR-NEIST, Jorhat-6, Assam : India

XI. NOISE LEVEL IN THE SURROUNDING OF JHANJI HEMNATH SARMA COLLEGE

The human ear is constantly being assailed by man –madc sounds from all sides, and there remain few places in populous areas where relative quiet prevails. There are two basic properties of sound:

- Loudness and
- 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 10 dB, a whisper about 20 dB, library place 30dB, Normal concersation about 35-60 dB, Heavy Street Traffic 60-0 dB boiler factories 120 dB, jet planes during tale- off is about 150 dB, Rocket engine about 180 dB. The loudest sound a person can stand without much discomfort is about 80 dB. Sounds beyond 80 dB can be safely regarded as Pollutant as it harms hearing system. The WIIO has fixed 45 dB as the safe noise level for a city. For international standards a noise level up to 65 dB is considered tolerate. Loudness is also expressed in sones. One sone equals the loudness of 40 dB sound pressure at 1000 Hz. Frequency is defined as the number of vibrations per second. It is denoted as Hertz (Hz).

MATERIALS AND METHODS

Noise level meter or noise measuring app, Noise test pro (Version: 1. 0. 2), was used to measure the noise level. Noise test pro detect of any noise, music or sound in your surrounding. It will tell you maximum, minimum and average decibels.

DESCRIPTION OF THE COLLEGE SITE

The site of the Jhanji HNS College is bounded to the North by tea garden and public playground. Residential area and women hostel east, 37 no national highway besides various books Stalls, shops, restaurants, hawkers etc. to the West South Jangya mondir.

MEASUREMENT PROCEDURE

The noise level was recorded at the different Important Locations of Jhanji Hemnath Sarma College. At each spot, the measurements were taken for 60 seconds during Day time (6 AM-6 PM)

and noted down the measurements. Screen shots of the measurement of noise were taken immediately on the app at the time of 60th second of each measurement.

RESULTS

The results of the experiments at different places have been tabulated in the following table: Source: Data collected by student of 5th semester, Department of Electrical Engineering. After the study, the measurements of noise have been recorded in and outside of Hemnath Sarmah College Area:

Inside the Campus: 35-90 dBA,
Outside the Campus: 54-93 dBA.

TRANSPORTATION

Being a largest Campus in the region and located centrally, Jhanji Hemnath Sarma 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 cycles, two wheelers rather than four wheelers which leads to fuel saving and also the contribution of pollutants to atmosphere is less.

XII. SOIL QUALITY MANAGEMENT

It involves practices and treatments to protect soil and enhance its performance. In order to conserve and improve soil quality, plantation programmes are being conducted by the college on regular interval and most of the lands in the college are covered by grasses to avoid soil erosion. During gardening organic wastes arc added in the soil to maintain soil quality. The use of plastic and paper is minimized within the college campus.

GRAIN SIZE DISTRIBUTION, SOIL CONSISTENCY PARAMETER, MOISTURE CONTENT, DENSITIES, SPECIFIC GRAVITY VOID RATIO, SHEAR & CONSOLIDATION PARAMETERS

(As per IS: 2720, Part-IV & Part-V, Part-III & Part-IX, Part-XI, Part-XII, Part-XIII & Part-XV)

BH. No.	Disturbed Soil Samples parameter										Undisturbed Soil Samples parameter									
	Depth below EGL in meter	Particle Size Distribution					Atterberg's Limit			Shrinkage Limit	Depth Below the EGL in meter	In-Situ Properties of Soil					Shear parameter		Consolidation parameter C_c	UCC in t/m²
		Clay		Sand	Gravels	IS Classification	Liquid limit (%)	Plastic limit (%)	Plastic Index (%)			Moisture Content in %	Bulk Density in t/m³	Dry Density in t/m³	Specific Gravity	VoidRatio	Cohesion in t/m²	ϕ in degree		
1	1.50	8.00	34.00	58.00	0.00	SC	---	---	---	---	2.00	21.02	1.91	1.57	2.63	0.67	0.69	20.5	---	---
	4.50	5.00	30.00	65.00	0.00	SC	---	---	---	---	5.00	18.95	1.91	1.61	2.63	0.63	0.51	21	---	---
	7.50	6.00	28.00	66.00	0.00	SC	---	---	---	---	8.00	13.01	1.93	1.71	2.64	0.55	0.00	28.5	---	---
	10.50	0.00	5.00	95.00	0.00	SP	---	---	---	---	11.00	12.87	1.93	1.71	2.64	0.54	0.00	29	---	---
	13.50	0.00	2.00	98.00	0.00	SP	---	---	---	---	15.00	12.14	1.94	1.73	2.64	0.53	0.00	30	---	---
2	3.00	6.00	31.00	63.00	0.00	SC	---	---	---	---	2.00	21.23	1.91	1.57	2.63	0.67	0.54	21	---	---
	6.00	7.00	28.00	65.00	0.00	SC	---	---	---	---	5.00	19.14	1.92	1.61	2.63	0.64	0.42	21.5	---	---
	9.00	0.00	7.00	93.00	0.00	SP	---	---	---	---	8.00	12.88	1.93	1.71	2.64	0.55	0.00	28	---	---
	12.00	0.00	5.00	95.00	0.00	SP	---	---	---	---	11.00	12.74	1.93	1.71	2.64	0.54	0.00	29	---	---
	15.00	0.00	2.00	98.00	0.00	SP	---	---	---	---	14.00	12.02	1.93	1.73	2.64	0.53	0.00	30	---	---

XIII. HUMAN HEALTH AND SAFETY

The college along with its different wings like NSS, NCC and Women's Cell has been conducting different programmes for improving the health and safety of the nearby community in collaboration with different government departments. The college held Covid Vaccination Camp and Blood Donation Camp in the college campus. A one-day Traffic Rules Awareness Programme was organised by the institute on 25th October, 2019.

The list of programmes conducted relating to human health is as follows:

SL.No.	Event	Venue	Date
1	Traffic Rules Awareness Programme	A.T Road, Jhanji	25th October, 2019
2	Awareness Programme on Corona Virus	Jhanji Hemnath Sarma College	11th March, 2020
3	Covid-19 Awareness Programme		20th March, 2020
4	Covid-19 Vaccination Programme		5th August, 2021

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XIV. BEST PRACTICES

The best practices adopted by the college for preserving the environment are as follows:

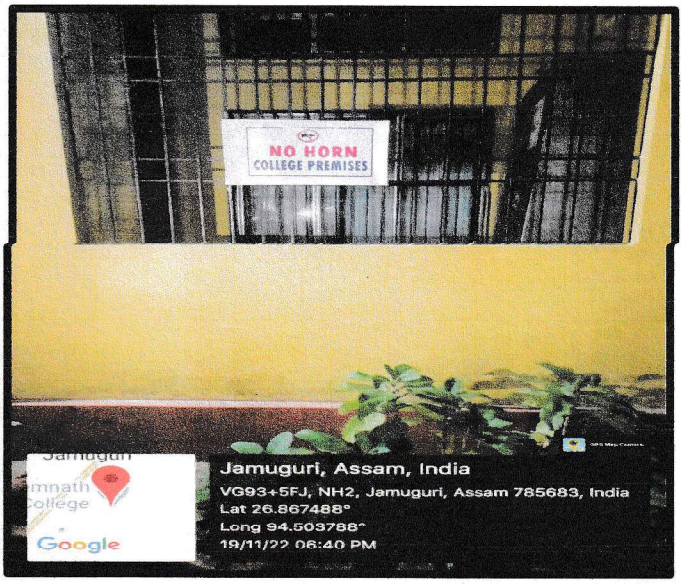
(a) The vermicompost measure is a good initiative taken by college for waste management.

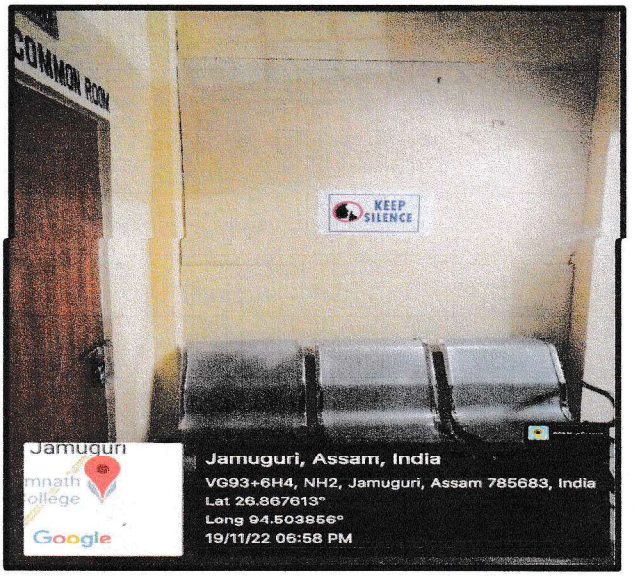
(b) Planting of trees on different occasion by the college each year contributes in reduction of greenhouse gas.

(c) College has taken a step towards using alternate renewable energy by setting up solar lights.

(d) The regular participation of NCC, NSS and students of different departments along with their teachers is a good move towards cleanliness and creating awareness.

(e) Setting up informational posters in every nook and corner of the college campus.





XV. PLANTATION PROGRAMMES

Time to time various plantation programmes have been organised by the Jhanji Hemnath Sarma College on different occasion. The plantation programmes have been done within as well as outside the college campus. All the students and teachers of the College actively participate in the programme.


Chief Minister's Institutional Plantation Programme
Jamuguri
emnath College
Google
Jamuguri, Assam, India
VG93+5FJ, NH2, Jamuguri, Assam 785683, India
Lat 26.867634°
Long 94.503533°
27/07/22 10:22 AM
GPS Map Camera


WORLD ENVIRONMENT DAY

XVI. VERMICOMPOST PLANT

A project of vermicompost and organic pesticide preparation centre was established in the Jhanji Hemmnath Sarma College after the covid pandemic. The production of vermicompost and organic pesticides are conducted here. The initiative is taken under the leadership of Green Club. Classes are conducted by Principal Sir, as well as various resource person who visit for the same purpose on time-to-time basis. Already a batch of students have completed the course and certificate for the same has been distributed to them.

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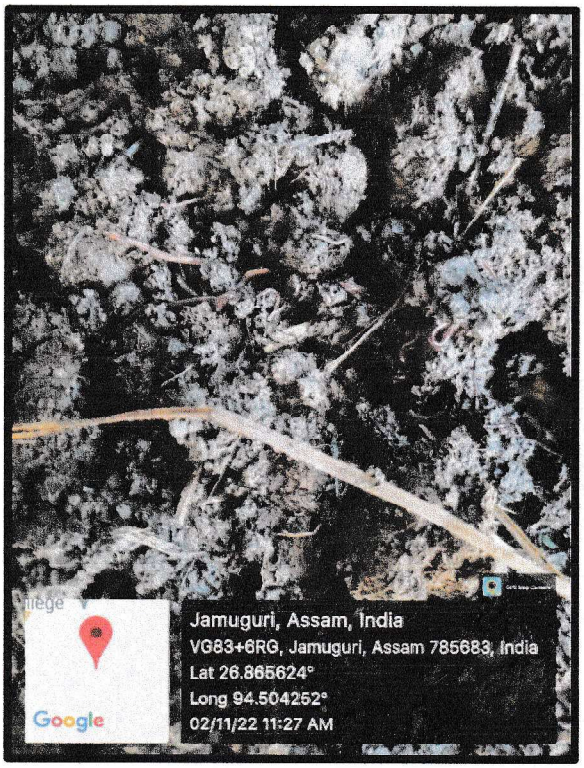
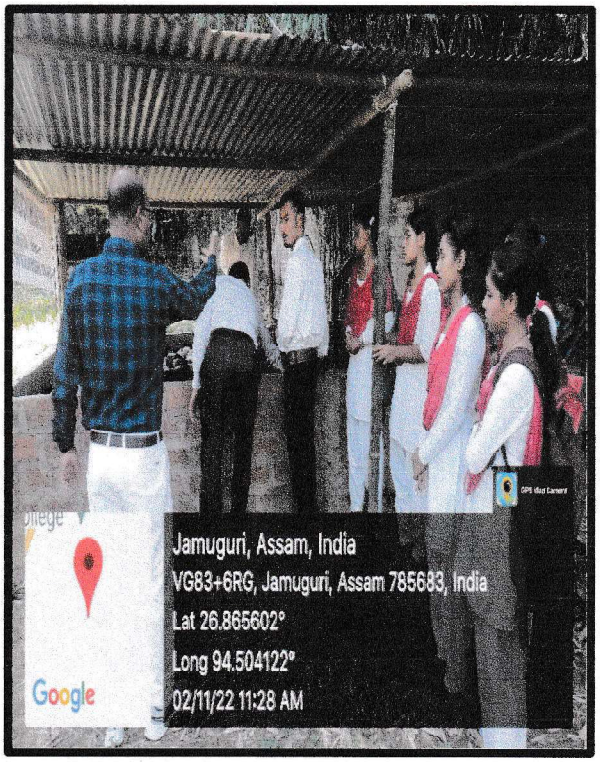
Margan College, Margherita





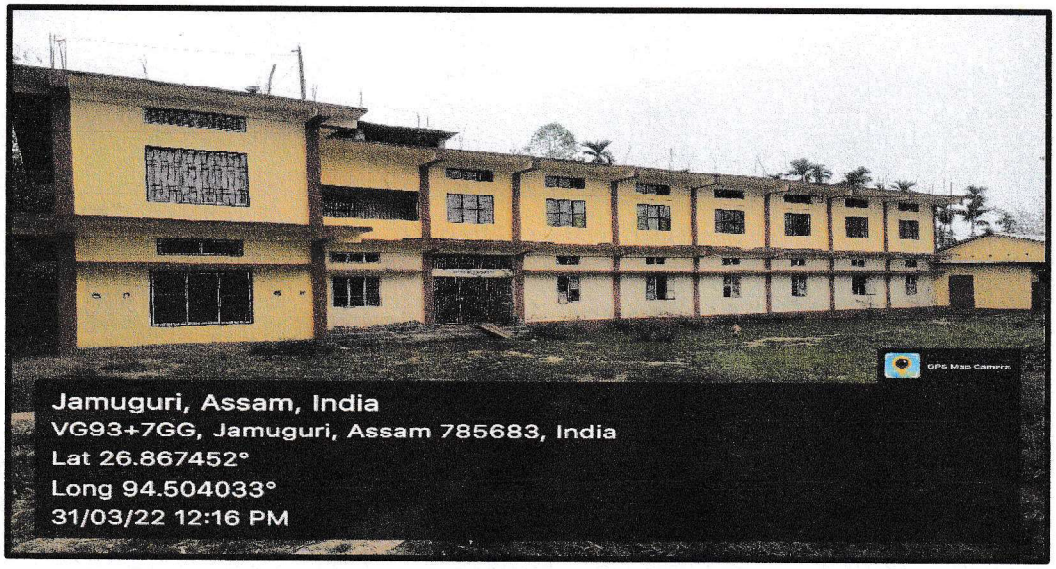
XVI. CONCLUSIONS

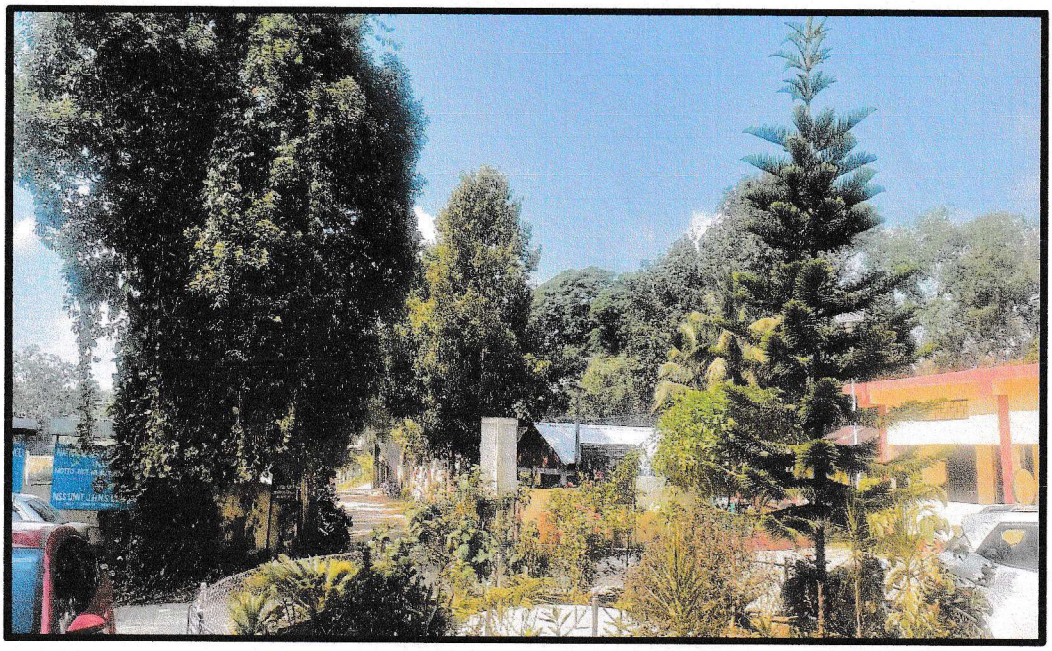
Green Audit is one of the important tools to check the balance of natural resources and their judicial use. Green auditing is the process of identifying and determining whether institutional practices are eco-friendly and sustainable. It is a process of regular identification, quantification, documenting, reporting and monitoring of environmentally important components in a specified area. The main objective to carry out a green audit is to check the green practices followed by the College and to conduct a well-defined audit report to understand whether the institute is on the track of sustainable development. After completing the audit procedure of the College for Green Practices, there are the following conclusions, recommendations, and Environmental Management Plan (EMP) which can be followed by the college in the future for keeping campus environment friendly.

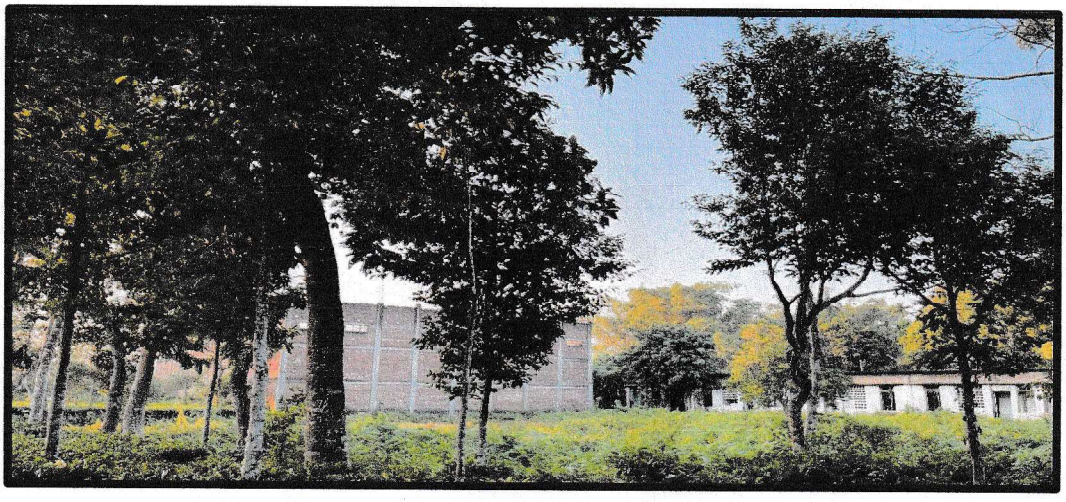
Kalpakam Dutta

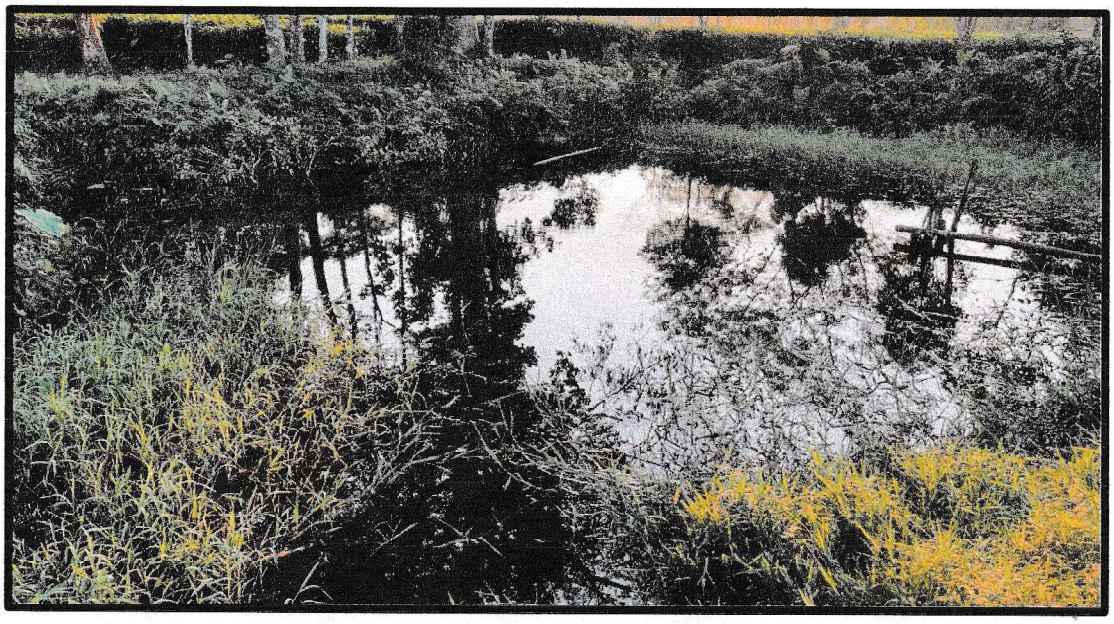
वरिष्ठ तकनीकी अधिकारी (३)
SENIOR TECHNICAL OFFICER (3)
CSIR-NEIST, Jorhat-6, Assam, India

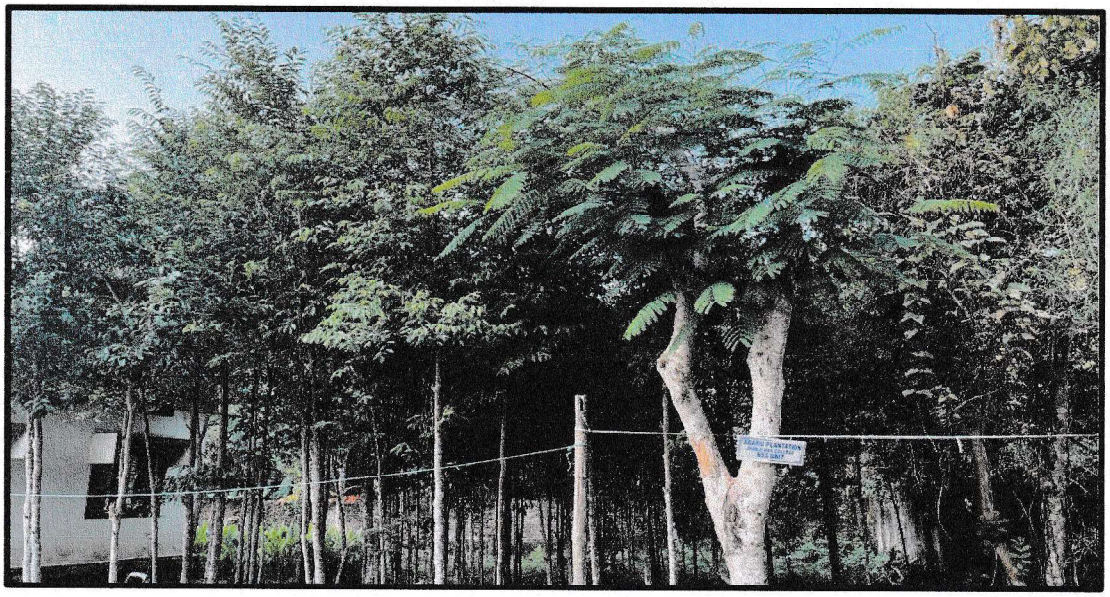
Annexure I: Picturesque View of Green Avenue of the College

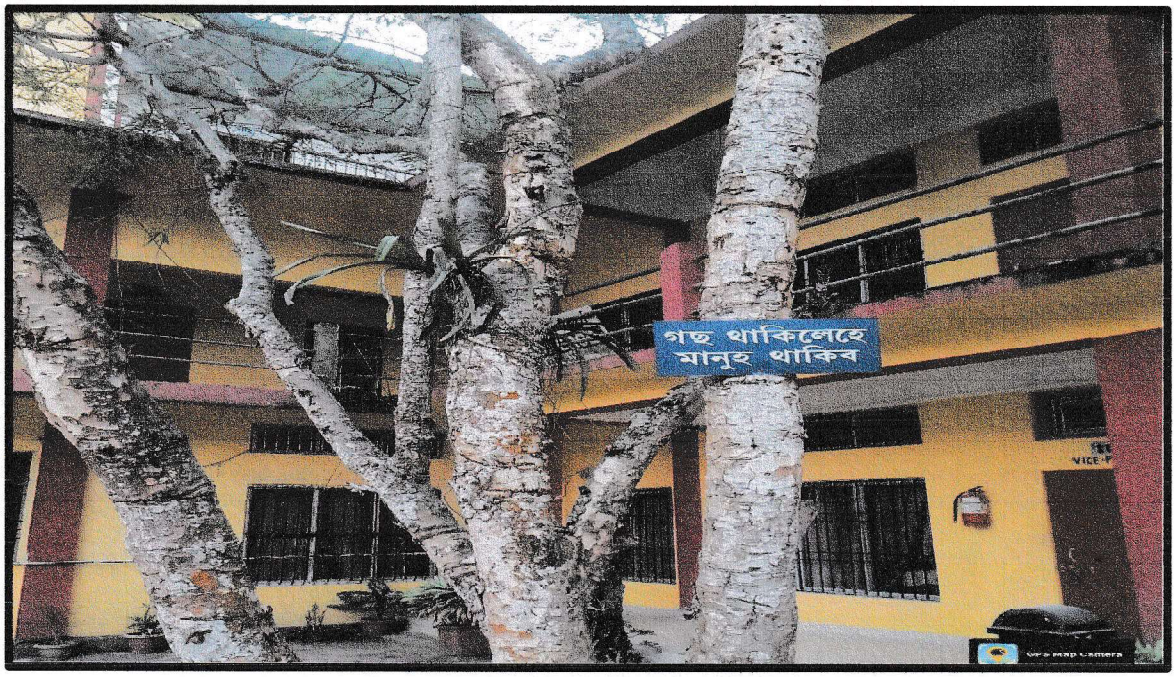












"Teach our children to love nature and the rest will happen on its own"

-Padmashree Jadav Payeng (The Forest Man)

Kalpataru Dutta

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