
Ghanshyamdas Jalan College,

Upper Govind Nagar, Malad (East)



GREEN & ENVIRONMENT AUDIT REPORT

January 2022



A 92 2ND FLOOR, SHIVSHAKTI BLDG,
OLD TELIGALI, CHINCHPOKLI, MUMBAI,
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The Environment & Green Audit study team also acknowledges the Professors of Department of Botany & Department of Zoology for providing all the necessary information and coordination during the study that helped us to complete the Environment & Green Audit successfully.

(Name of Team Members)

Mr. Sachin Rane

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Authorized Signatory

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EXECUTIVE SUMMARY

The Green and Environment Audit refers to the greenery and environmental analysis around the campus. Rapid Urbanization around the city has made many colleges to shrink in the green cover. The College is taking constant initiatives for maintain its greenery. The maximum care is taken to minimize the environment pollution by implementation of policy. Waste management is done on regular basis, with the help of segregation and disposal in the tuned way. The Green campus Policy are made and implemented for maintaining the greenery and cleanliness of the campus area. The 119 trees has sequestered 4.5317 kg of Carbon. In all 26 medicinal plant species and 52 species of plants including Trees, Shrubs, Herbs and Climbers are present in the campus. The Water Management is taking place by means of rainwater harvesting technique and awareness activities.

SN	Area	Observations
1.	Green Management	Well maintained greenery in the campus
2.	Water Management	Rain water Harvesting technique and by creating awareness with signboards and activities.
3.	Solid Waste & E waste Management	The Dry and wet waste collection bins are present in all the floors and around the campus. Deposition of waste into the collection centers

ABOUT THE COLLEGE

The college is located at the Malad (East) with the geographical coordinates with Latitude 19.1758177°N & Longitude 72.8519272°E.

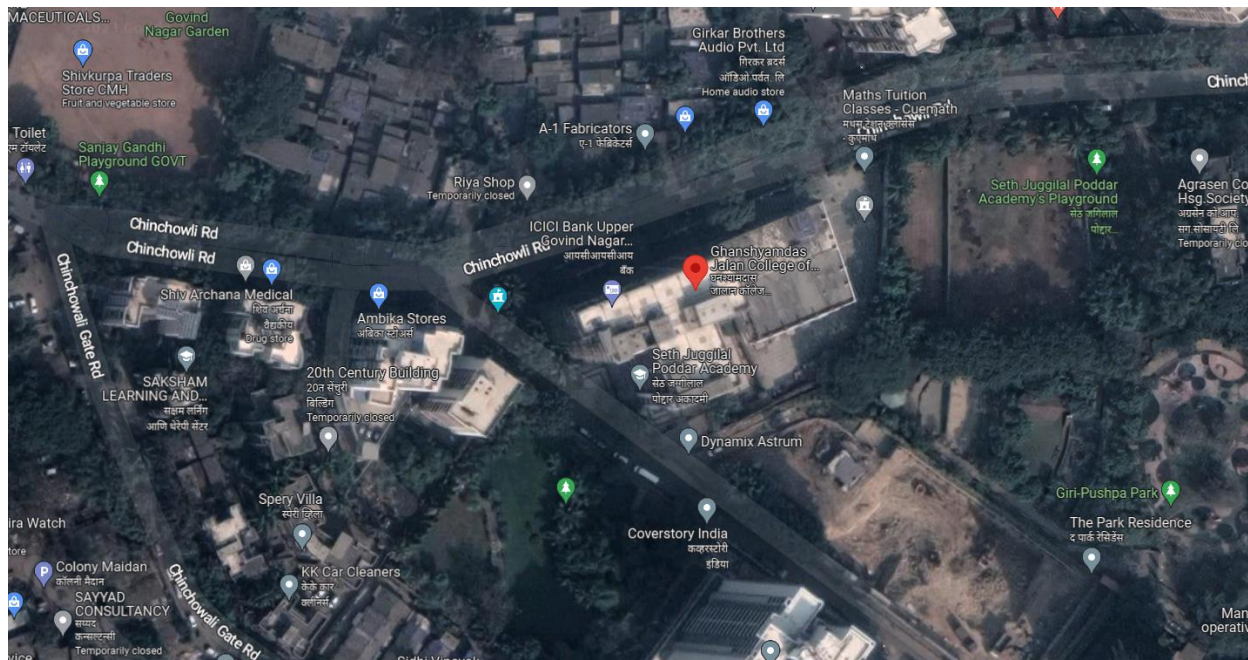


FIGURE 1: COLLEGE LOCATION

OBJECTIVES:

The Objectives of the Audit are:

- To promote the environment & green management in the college campus.
- To document the floral and faunal diversity of the college
- To document carbon sequestration within the campus location.
- To identify the loopholes and provide recommendations on that basis for smooth management.

METHODOLOGY

In order to conduct the environment & green audit the following tools were used;

- ✚ Preparation of Questionnaire
- ✚ Collection of Primary Data
- ✚ Analysis of the collected data
- ✚ Recommendations.

For audit analysis the following components were considered

1. Greenery management
 - Listing of Floral & Faunal Diversity
 - Number of species present & their Attributes
2. Water Management
 - Rainwater Harvesting system
3. Solid & E-waste Waste management
 - Collection & segregation system

The policies which are already made and implemented by the college for maintenance are attached in the **Annexure V**.

GREEN AUDIT

1.1. INTRODUCTION

The Green Audit describes the greenery in and around the area. The audit involves the listing of flora & fauna around the campus. Carbon sequestration is the process of capture and long-term storage of atmospheric carbon dioxide (CO₂) in the biosphere such as the oceans, terrestrial biomass, soils and geologic formation. The Carbon sequestration could be estimated with the help of biomass. To estimate biomass the height and girth is measured. To study the diversity each tree in the campus is counted.

1.2. METHODOLOGY

The formulas were used for the calculations of the carbon sequestration:

Aboveground Tree Biomass (AGTB)

Above ground tree biomass (AGTB) allometric equations were developed for 47 tree species. A mixed-species tree equation based on breast height diameter (DBH) and tree height (H) provides acceptable estimates of stem plus branch (>10 cm in diameter over bark) volume (Chave *et al.*, 2008; Beets *et al.*, 2012). For AGTB biomass calculation IPCC recommended methodology was used following formula given by (Ravindranath and Ostwald, 2007; Hangarge *et al.*, 2012)

$$AGTB = V \times \rho$$

AGTB = above-ground tree biomass [kg];

- V = Volume of tree [m³]
- ρ = wood density [g cm⁻³] specific to each tree species;
- The wood densities were obtained from the www.worldagroforestrycentre.org

Volume, V , is calculated using formula

$$V = \pi r^2 H$$

- r = radius of the tree trunk at breast height [m]
- D = tree diameter at breast height [cm]; and
- H = tree height [m]

Below Ground Biomass (BGB)

The following relationship is used to estimate the root biomass developed by (Hangarge *et al.*, 2012).

$$\text{Belowground biomass} = 0.25 \times \text{AGTB}$$

$$\text{Total Biomass} = \text{AGTB} + \text{BGB}$$

Dried Weight

The net dried weight is, 73.4 % of the Total Biomass stated by (De Filippis *et al.*, 2015).

$$\text{Dried Weight} = 73.4\% \times \text{Total biomass}$$

Carbon content

According to the (Ma *et al.*, 2018) the net carbon content in the plant is 50% and vary in accordance.

$$\text{Carbon content} = 50\% \times \text{Dried mass}$$

1.3. OBSERVATION & RESULTS

The campus has good diversity and maintains good bio-diversity. Various plants in the campus are planted by the volunteers in tree plantation programs. The college has taken an initiative to introduce medicinal garden which comprises of various plants potted and displayed with their botanical names, common names, family & medicinal uses. To promote the biodiversity in the college, college has also taken the initiative to construct the butterfly garden within the campus. This attracts lots of butterflies in the campus. The results of the listed flora is mentioned in the **Annexure I**, List of medicinal plants planted in pots are in **Annexure II** and fauna in **Annexure IV** & carbon sequestered is encountered in the **Annexure III**. 119 trees are recorded in the campus. In total **4.5317 kg** of Carbon sequestration is calculated.



A.B.V.M. AGRAWAL JATIYA KOSH'S
GHANSHYAMDAS JALAN COLLEGE OF SCIENCE, COMMERCE & ARTS
Affiliated to University of Mumbai
ACADEMIC YEAR: 2019-2020

Date: 18/09/2019

Notice

All the students of the college are hereby informed and requested to keep the campus green and clean. The students should promote green and healthy campus.

Dr. Sunanda Narayan Bhatt
Principal

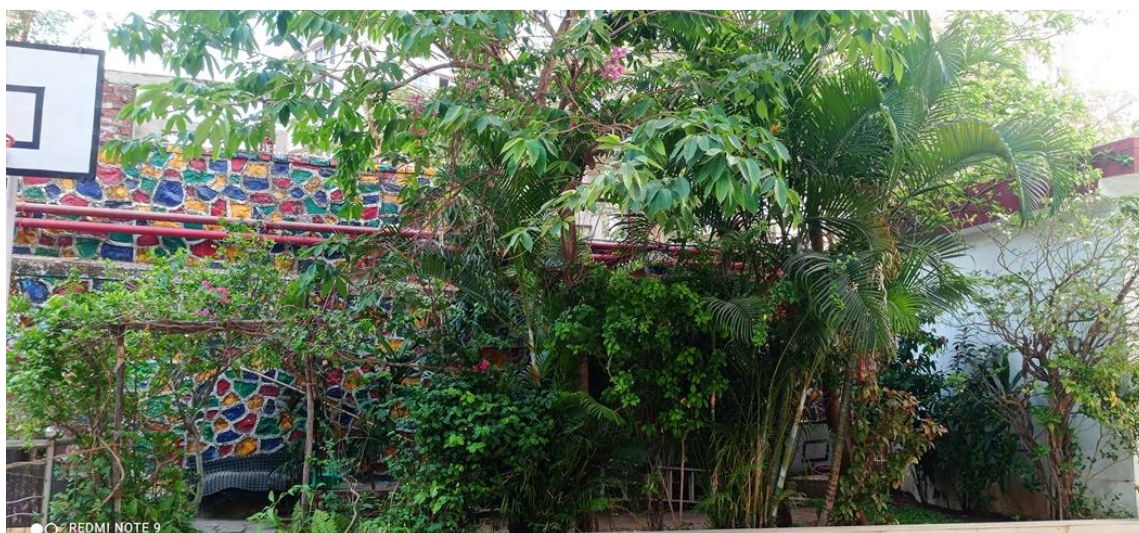


FIGURE 2: GREENERY IN THE CAMPUS

1.4. RECOMMENDATIONS

- To promote the awareness regarding plants the scientific names must be assigned to all the plants.
- Plantation of more indigenous species of plants in the campus
- To promote biodiversity fruit bearing trees must be planted to attract birds & insects.
- Promoting more awareness activities related to medicinal plants & economically important plants.



FIGURE 3: TREE PLANTAION DRIVE

WATER MANAGEMENT

1.1. INTRODUCTION

The rapid decrease in water level has led to water shortage problems in the urban areas. Water is necessary for all the living being so, it becomes significant to save or use it in the effective technique. The Water management refers to the management of water in the formatted and effective methods. This involves the activities undertaken to lower the wastage of water. This may involve the development of plan to save the water usage.

1.2. METHODOLOGY

The survey was taken to understand the main source of water and usage pattern. The questions were asked for the assessment.

1.3. OBSERVATION & RESULTS

It was observed that the college has rainwater harvesting system to channelize the flow of Rain water to underground earth. This also help to recharge the ground water levels. The system is properly working. The borewell water is used for toilets and other usage. The college is also undertaking various promotional activities to save water wastage by placing signboards & notices regarding Save water, turning off the tap, etc. The liquid chemical waste disposal is done with the help of standard guidelines recommend by the United Nations (Anonymous, 2006).

1.4. RECOMMENDATIONS

- The sprinklers could be installed to save the wastage of water while watering the plants.
- More activities must be undertaken to promote the save water activities.
- Installation of sensor based tapes to save the water.
- Use of bio-degradable and non-toxic detergents for cleaning purpose & as an insecticide & pesticides.



FIGURE 4: RAIN WATER HARVESTING

SOLID WASTE MANAGEMENT

1.1. INTRODUCTION

The solid waste can be further divided into degradable and non-degradable waste. The degradable waste refers to fruit waste, vegetable waste, edible waste, which is organic and could be easily decomposed. The type of waste also generated in the college is biohazardous & biomedical. The non-degradable waste can be indicated as Plastic, Glass, paper etc. The non-degradable waste is bifurcated into recyclable and non-recyclable waste. The management of all kinds of waste in the channelized format is called as Solid waste management. This could be done by implementation of policies & proper planning.

1.2. METHODOLOGY

The questions were asked for the assessment. The observation were recorded and analysed for recommendations.

1.3. OBSERVATION & RESULTS

The bins are installed on all the floors in the college, which makes easy college and segregation of solid waste. The collected waste is given to BMC (Brihamumbai Municipal Corporation) collection system in the segregated form. The bio-hazardous waste collected from the laboratories is disposed in the hospitals or pathology for systematic decomposition. The college has also installed Sanitary Pad Incineration machine which helps in disposal of biomedical waste. The college is also undertaking various awareness programs to reduce waste and plastic usage. The E waste collection bins are also installed and college steadily handovers to the collection centers. The Radioactive waste is not generated in the college.

1.4. RECOMMENDATIONS

- The Organic waste decomposition is recommended by installation of vermicomposting.
- More initiatives could be made towards plastic free campus or to reduce the plastic usage in the campus.
- More recyclable waste collection bins & E Waste collection bins to be installed and publicise.



FIGURE 5: INCINARATOR FOR SANITORY PADS



FIGURE 6: WET AND DRY COLLECTION BINS ON EACH FLOOR



FIGURE 7: E -WASTE COLLECTION POINT IN COMPUTER LAB

REFERENCES

- Annoymous.(2006). *Guideliness for the Safe Handling And Disposal of Chemical Used in The Illicit Manufacture of Durgs*, Supply reduction and centrol section Inter-American Drug Abuse Control Commission, United Nations, 1-88.
- Beets, P. N., Kimberley, M. O., Oliver, G. R., Pearce, S. H., Graham, J. D., & Brandon, A. (2012). Allometric equations for estimating carbon stocks in natural forest in New Zealand. *Forests*, 3(3), 818-839.
- De Filippis, P., De Caprariis, B., Scarsella, M., & Verdone, N. (2015). Double distribution activation energy model as suitable tool in explaining biomass and coal pyrolysis behavior. *Energies*, 8(3), 1730-1744.
- Chave, J., Olivier, J., Bongers, F., Châtelet, P., Forget, P. M., van Der Meer, P., ... & Charles-Dominique, P. (2008). Above-ground biomass and productivity in a rain forest of eastern South America. *Journal of tropical Ecology*, 24(4), 355-366.
- Hangarge, L. M., Kulkarni, D. K., Gaikwad, V. B., Mahajan, D. M., & Chaudhari, N. (2012). Carbon Sequestration potential of tree species in Somjaichi Rai (Sacred grove) at Nandghur village, in Bhor region of Pune District, Maharashtra State, India. *Annals of Biological Research*, 3(7), 3426-3429.
- Ma, Suhui, Feng He, Di Tian, Dongting Zou, Zhengbing Yan, Yulong Yang, Tiancheng Zhou, Kaiyue Huang, Haihua Shen, and Jingyun Fang. (2018). Variations and determinants of carbon content in plants: a global synthesis. *Biogeosciences*, 15(3), 693-702.
- Ravindranath, N. H., & Ostwald, M. (2007). *Carbon inventory methods: handbook for greenhouse gas inventory, carbon mitigation and roundwood production projects* (Vol. 29). Springer Science & Business Media.

ANNEXURE I: LIST OF FLORA IN CAMPUS

SN	Name	Family	Common	Habit
1	<i>Allamanda cathartica</i> L.	Apocynaceae	Common Trumpetvine	Climber
2	<i>Alstonia scholaris</i> (L.) R. Br.	Apocynaceae	Scholar Tree, Devil tree, Saptaparni	Tree
3	<i>Artocarpus heterophyllus</i> Lam.	Moraceae	Jackfruit, Katahal, Phanas	Tree
4	<i>Asparagus racemosus</i> Willd.	Asparagaceae	Buttermilk Root	Herb
5	<i>Azadirachta indica</i> A.Juss.	Meliaceae	Neem	Tree
6	<i>Bambusa</i> sp.	Poaceae	-	Shrub
7	<i>Bougainvillea glabra</i> Choisy.	Nyctaginaceae	Booganel	Climber
8	<i>Calotropis procera</i> (Aiton) W.T. Aiton.	Apocynaceae	Rubber Bush	Shrub
9	<i>Catharanthus roseus</i> (L.) G. Don.	Apocynaceae	Periwinkle	Herb
10	<i>Chlorophytum comosum</i> (Thunb.) Jacques.	Asparagaceae	Spider Plant	Herb
11	<i>Citrus limon</i> (L.) Osbeck	Rutaceae	Lemon, Nimbu	Tree
12	<i>Cocos nucifera</i> L.	Arecaceae	Coconut, Nariyal	Tree
13	<i>Combretum indicum</i> (L.) DeFilipps	Combretaceae	Rangoon creeper	Climber
14	<i>Commelina</i> sp.	Commelinaceae	-	Herb
15	<i>Costus</i> sp.	Costaceae	Spiral Ginger	Herb
16	<i>Cynodon dactylon</i> (L.) Pers.	Poaceae	Bermuda Grass	Herb
17	<i>Dieffenbachia seguine</i> (Jacq.) Schott.	Araceae	Dumbcane	Herb
18	<i>Dracaena reflexa</i> Lam.	Asparagaceae	Song of India	Herb
19	<i>Eclipta alba</i> L.	Asteraceae	False Daisy	Herb
20	<i>Epipremnum aureum</i> (Linden & André) G.S.Bunting.	Araceae	Money plant	Climber
21	<i>Ficus benghalensis</i> L.	Moraceae	Banyan tree, Bargad	Tree

SN	Name	Family	Common	Habit
22	<i>Ficus benamina</i> L.	Moraceae	Benjamin tree, Nandaruk	Tree
23	<i>Ficus microcarpa</i> L.f.	Moraceae	Laurel Fig, Indian Laurel, Kamarup	Tree
24	<i>Ficus racemosa</i> L.	Moraceae	Cluster fig, Goolar, Udumbara, Umber	Tree
25	<i>Ficus religiosa</i> L.	Moraceae	Peepal, Pipal, Pimpal, Bodhivriksha	Tree
26	<i>Gardenia jasminoides</i> J.Ellis	Rubiaceae	Gardenia, Cape jasmine	Tree
27	<i>Hibiscus rosa-sinensis</i> L.	Malvaceae	Rose of China	Shrub
28	<i>Hibiscus schizopetalus</i> (Dyer) Hook.f.	Malvaceae	Chinese lantern	Shrub
29	<i>Ipomoea quamoclit</i> L.	Convolvulaceae	Cypress Vine	Climber
30	<i>Ixora</i> sp.	Rubiaceae	-	Shrub
31	<i>Jasminium</i> sp.	Oleaceae	-	Climber
32	<i>Lagerstroemia speciosa</i> (L.) Pers.	Lythraceae	Pride of India, Queen Crape Taman	Tree
33	<i>Mangifera indica</i> L.	Anacardiaceae	Mango, Amba, Aam	Tree
34	<i>Manilkara hexandra</i> (Roxb.) Dubard	Sapotaceae	Ceylon Iron Wood, khirni,	Tree
35	<i>Manilkara zapota</i> (L.) P.Royen	Sapotaceae	Chikoo, Noseberry	Tree
36	<i>Mimusops elengi</i> L.	Sapotaceae	Spanish cherry, Bakul	Tree
37	<i>Neolamarckia cadamba</i> (Roxb.) Bosser	Rubiaceae	Kadam, Kadamb	Tree
38	<i>Nephrolepis</i> sp.	Nephrolepidaceae	-	Herb
39	<i>Nyctanthes arbor-tristis</i> L.	Oleaceae	Parijat/ Parijatak, Har singar,	Tree
40	<i>Peltophorum pterocarpum</i> (DC.) K.Heyne	Caesalpiniaceae	Copperpod, Sonmohar, Peela Gulmohar	Tree
41	<i>Phyllanthus acidus</i> (L.) Skeels	Phyllathaceae	Star Gooseberry, Rai Awala	Tree
42	<i>Platycladus orientalis</i> (L.) Franco	Cupressaceae	Morpankhi, Mayurpankhi	Tree
43	<i>Plumeria rubra</i> L.	Apocynaceae	Plumeria, Golenchi/Golachin, Champa	Tree
44	<i>Polyalthia longifolia</i> (Sonn.) Thwaites	Annonaceae	False Ashok, Mast Tree,	Tree
45	<i>Psidium guajava</i> L.	Myrtaceae	Guava, Amrood, Peru	Tree

SN	Name	Family	Common	Habit
46	<i>Sphagnetiola trilobata</i> (L.) Pruski.	Asteraceae	Trailing Daisy	Herb
47	<i>Swietenia macrophylla</i> King	Meliaceae	Big-Leaf Mahogany	Tree
48	<i>Syzygium cumini</i> (L.) Skeels	Myrtaceae	Java plum, Jamun	Tree
49	<i>Tabebuia heterophylla</i> (DC.) Britton	Bignoniaceae	Pink Tabebuia	Tree
50	<i>Terminalia catappa</i> L.	Combretaceae	Indian Almond, Jangli badam	Tree
51	<i>Tradescantia spathacea</i> Sw.	Commelinaceae	Boat Lilly	Herb
52	<i>Tridax procumbens</i> L.	Asteraceae	Tridax Daisy	Herb

ANNEXURE II: LIST OF PLANTS IN MEDICINAL GARDAN

SN	Botanical Name	Family	Common Name
1	<i>Tinospora sinensis</i> (Lour.) Merr.	Menispermaceae	Gulvel, Giloy
2	<i>Mansoa alliacea</i> (Lam.) A.H.Gentry	Bignoniaceae	Garlic vine, Lasun vel
3	<i>Mesua ferrea</i> L.	Clusiaceae	Ceylon ironwood, Nag keshar
4	<i>Chrysopogon zizanioides</i> (L.) Roberty	Poaceae	Khas, Vettiver
5	<i>Saraca asoca</i> (Roxb.) Willd.	Caesalpiniaceae	Sita Ashok, Sorrowless tree
6	<i>Cissus quadrangularis</i> L.	Vitaceae	Bone setter, Hadjode
7	<i>Tylophora indica</i> (Burm. f.) Merr.	Apocynaceae	Indian ipecac, Dum vel
8	<i>Datura innoxia</i> Mill.	Solanaceae	Datura, Recurved thorn-apple
9	<i>Sauropus androgynus</i> (L.) Merr.	Phyllanthaceae	Multi vitamin plant
10	<i>Chamaecostus</i> sp.	Costaceae	Insulin plant
11	<i>Centella asiatica</i> (L.) Urb.	Apiaceae	Indian Pennywort, Brahmi
12	<i>Piper longum</i> L.	Piperaceae	Indian long pepper, Lendi pimpli
13	<i>Justicia adhatoda</i> L.	Acanthaceae	Malabar Nut, Adulsa
14	<i>Bryophyllum pinnatum</i> (Lam.) Oken	Crassulaceae	Miracle leaf, Panfuti
15	<i>Vitex negundo</i> L.	Verbenaceae	Five-Leaf Chaste Tree, Nirgundi
16	<i>Euphorbia tithymaloides</i> L.	Euphorbiaceae	Japanese Poinsettia, Slipper Spurge
17	<i>Ocimum tenuiflorum</i> L.	Lamiaceae	Holy basil, Tulsi
18	<i>Mentha spicata</i> L.	Lamiaceae	Pudina
19	<i>Eclipta prostrata</i> (L.) L.	Asteraceae	False Daisy, Bhringaraj
20	<i>Cymbopogon citratus</i> (DC.) Stapf	Poaceae	Lemon Grass, Gavati chaha
21	<i>Mentha × piperita</i> L.	Lamiaceae	Peppermint, Vilayati pudina
22	<i>Pongamia pinnata</i> (L.) Pierre	Fabaceae	Pongame Oil Tree, Karanj
23	<i>Aloe vera</i> (L.) Burm.f.	Liliaceae	Aloe vera, Khorpad, Gheekumari
24	<i>Clitoria ternatea</i> L.	Fabaceae	Butterfly Pea, Gokurna
25	<i>Murraya koenigii</i> (L.) Spreng.	Rutaceae	Curry leaf, Kari patta
26	<i>Plectranthus amboinicus</i> (Lour.) Spreng.	Lamiaceae	Patta Ajwain, Pan ova, Patharchur

ANNEXURE III: LIST OF TREES WITH THEIR ATTRIBUTES AND CARBON SEQUESTRATION

SN	Name	Density	Height (m)	DBH (m)	Carbon Sequestration
1	<i>Alstonia scholaris</i> (L.) R. Br.	0.3	28	0.03	0.0004
2	<i>Citrus limon</i> (L.) Osbeck	0.3	2	0.16	0.0008
3	<i>Ficus racemosa</i> L.	0.413	1	0.12	0.0003
4	<i>Ficus racemosa</i> L.	0.413	2	0.11	0.0005
5	<i>Ficus racemosa</i> L.	0.413	2	0.29	0.0035
6	<i>Swietenia macrophylla</i> King	0.42	8	0.28	0.0133
7	<i>Swietenia macrophylla</i> King	0.42	3	0.1	0.0006
8	<i>Swietenia macrophylla</i> King	0.42	4	0.27	0.0062
9	<i>Swietenia macrophylla</i> King	0.42	4	0.24	0.0049
10	<i>Swietenia macrophylla</i> King	0.42	6	0.39	0.0194
11	<i>Swietenia macrophylla</i> King	0.42	7	0.31	0.0143
12	<i>Swietenia macrophylla</i> King	0.42	6	0.27	0.0093
13	<i>Ficus religiosa</i> L.	0.443	2	0.1	0.0004
14	<i>Cocos nucifera</i> L.	0.5	7	0.84	0.1249
15	<i>Cocos nucifera</i> L.	0.5	7	1	0.1770
16	<i>Cocos nucifera</i> L.	0.5	6	0.72	0.0786
17	<i>Cocos nucifera</i> L.	0.5	5	0.92	0.1070
18	<i>Cocos nucifera</i> L.	0.5	5	0.99	0.1239
19	<i>Cocos nucifera</i> L.	0.5	121	0.02	0.0012
20	<i>Cocos nucifera</i> L.	0.5	2	0.6	0.0182
21	<i>Cocos nucifera</i> L.	0.5	2	0.58	0.0170
22	<i>Cocos nucifera</i> L.	0.5	2	0.38	0.0073
23	<i>Cocos nucifera</i> L.	0.5	5	1.12	0.1585
24	<i>Cocos nucifera</i> L.	0.5	2	0.84	0.0357
25	<i>Cocos nucifera</i> L.	0.5	2	0.64	0.0207
26	<i>Cocos nucifera</i> L.	0.5	3	1.17	0.1038

SN	Name	Density	Height (m)	DBH (m)	Carbon Sequestration
27	<i>Cocos nucifera</i> L.	0.5	2	0.3	0.0046
28	<i>Mangifera indica</i> L.	0.52	9	0.8	0.1514
29	<i>Mangifera indica</i> L.	0.52	10	1.01	0.2682
30	<i>Mangifera indica</i> L.	0.52	5	0.47	0.0290
31	<i>Mangifera indica</i> L.	0.52	2	0.16	0.0013
32	<i>Mangifera indica</i> L.	0.52	5	0.76	0.0759
33	<i>Mangifera indica</i> L.	0.52	9	0.83	0.1630
34	<i>Mangifera indica</i> L.	0.52	2	0.12	0.0008
35	<i>Mangifera indica</i> L.	0.52	2	0.1	0.0005
36	<i>Mangifera indica</i> L.	0.52	4	0.33	0.0115
37	<i>Mangifera indica</i> L.	0.52	4	0.27	0.0077
38	<i>Mangifera indica</i> L.	0.52	7	0.93	0.1592
39	<i>Mangifera indica</i> L.	0.52	3.5	0.13	0.0016
40	<i>Mangifera indica</i> L.	0.52	2	0.11	0.0006
41	<i>Mangifera indica</i> L.	0.52	6	1.07	0.1806
42	<i>Mangifera indica</i> L.	0.52	3	0.4	0.0126
43	<i>Mangifera indica</i> L.	0.52	7	0.53	0.0517
44	<i>Mangifera indica</i> L.	0.52	7	1.1	0.2227
45	<i>Terminalia catappa</i> L.	0.52	9	0.99	0.2319
46	<i>Lagerstroemia speciosa</i> (L.) Pers.	0.53	3	0.38	0.0116
47	<i>Lagerstroemia speciosa</i> (L.) Pers.	0.53	3	0.14	0.0016
48	<i>Lagerstroemia speciosa</i> (L.) Pers.	0.53	4	0.22	0.0052
49	<i>Lagerstroemia speciosa</i> (L.) Pers.	0.53	5	0.27	0.0098
50	<i>Tabebuia heterophylla</i> (DC.) Britton	0.58	1	0.1	0.0003
51	<i>Ficus benghalensis</i> L.	0.59	2	0.11	0.0007
52	<i>Polyalthia longifolia</i> (Sonn.) Thwaites	0.59	8	0.46	0.0505
53	<i>Polyalthia longifolia</i> (Sonn.) Thwaites	0.59	6	0.14	0.0035

SN	Name	Density	Height (m)	DBH (m)	Carbon Sequestration
54	<i>Polyalthia longifolia</i> (Sonn.) Thwaites	0.59	4	0.2	0.0048
55	<i>Polyalthia longifolia</i> (Sonn.) Thwaites	0.59	4	0.14	0.0023
56	<i>Polyalthia longifolia</i> (Sonn.) Thwaites	0.59	7	0.35	0.0256
57	<i>Polyalthia longifolia</i> (Sonn.) Thwaites	0.59	6	0.28	0.0140
58	<i>Polyalthia longifolia</i> (Sonn.) Thwaites	0.59	7	0.3	0.0188
59	<i>Polyalthia longifolia</i> (Sonn.) Thwaites	0.59	7	0.25	0.0131
60	<i>Polyalthia longifolia</i> (Sonn.) Thwaites	0.59	2.5	0.21	0.0033
61	<i>Polyalthia longifolia</i> (Sonn.) Thwaites	0.59	6	0.15	0.0040
62	<i>Polyalthia longifolia</i> (Sonn.) Thwaites	0.59	4	0.16	0.0031
63	<i>Polyalthia longifolia</i> (Sonn.) Thwaites	0.59	3	0.17	0.0026
64	<i>Polyalthia longifolia</i> (Sonn.) Thwaites	0.59	4	0.15	0.0027
65	<i>Polyalthia longifolia</i> (Sonn.) Thwaites	0.59	2	0.13	0.0010
66	<i>Polyalthia longifolia</i> (Sonn.) Thwaites	0.59	2	0.12	0.0009
67	<i>Polyalthia longifolia</i> (Sonn.) Thwaites	0.59	4	0.35	0.0146
68	<i>Polyalthia longifolia</i> (Sonn.) Thwaites	0.59	3	0.18	0.0029
69	<i>Polyalthia longifolia</i> (Sonn.) Thwaites	0.59	6	0.38	0.0258
70	<i>Polyalthia longifolia</i> (Sonn.) Thwaites	0.59	6	0.38	0.0258
71	<i>Polyalthia longifolia</i> (Sonn.) Thwaites	0.59	5	0.38	0.0215
72	<i>Polyalthia longifolia</i> (Sonn.) Thwaites	0.59	4	0.36	0.0155
73	<i>Polyalthia longifolia</i> (Sonn.) Thwaites	0.59	7	0.37	0.0286
74	<i>Polyalthia longifolia</i> (Sonn.) Thwaites	0.59	5	0.38	0.0215
75	<i>Polyalthia longifolia</i> (Sonn.) Thwaites	0.59	6	0.39	0.0272
76	<i>Polyalthia longifolia</i> (Sonn.) Thwaites	0.59	4	0.58	0.0401
77	<i>Polyalthia longifolia</i> (Sonn.) Thwaites	0.59	6	0.49	0.0430
78	<i>Polyalthia longifolia</i> (Sonn.) Thwaites	0.59	7	0.38	0.0302
79	<i>Artocarpus heterophyllus</i> Lam.	0.6	2	0.07	0.0003
80	<i>Peltophorum pterocarpum</i> (DC.) K.Heyne	0.62	4	0.28	0.0098

SN	Name	Density	Height (m)	DBH (m)	Carbon Sequestration
81	<i>Peltophorum pterocarpum</i> (DC.) K.Heyne	0.62	1	0.11	0.0004
82	<i>Gardenia jasminoides</i> J.Ellis	0.64	2	0.18	0.0021
83	<i>Ficus benjamina</i> L.	0.65	4	0.45	0.0266
84	<i>Ficus microcarpa</i> L.f.	0.67	2	0.21	0.0030
85	<i>Ficus microcarpa</i> L.f.	0.67	4	0.13	0.0023
86	<i>Ficus microcarpa</i> L.f.	0.67	1	0.12	0.0005
87	<i>Neolamarckia cadamba</i> (Roxb.) Bosser	0.67	4	0.35	0.0166
88	<i>Azadirachta indica</i> A.Juss.	0.69	11	0.95	0.3463
89	<i>Azadirachta indica</i> A.Juss.	0.69	5	0.61	0.0649
90	<i>Azadirachta indica</i> A.Juss.	0.69	2	0.14	0.0014
91	<i>Azadirachta indica</i> A.Juss.	0.69	2	0.13	0.0012
92	<i>Syzygium cumini</i> (L.) Skeels	0.7	8	0.61	0.1053
93	<i>Syzygium cumini</i> (L.) Skeels	0.7	11	0.72	0.2018
94	<i>Syzygium cumini</i> (L.) Skeels	0.7	3	0.24	0.0061
95	<i>Syzygium cumini</i> (L.) Skeels	0.7	4.5	0.44	0.0308
96	<i>Syzygium cumini</i> (L.) Skeels	0.7	4	0.29	0.0119
97	<i>Syzygium cumini</i> (L.) Skeels	0.7	7	0.95	0.2236
98	<i>Syzygium cumini</i> (L.) Skeels	0.7	2	0.11	0.0009
99	<i>Syzygium cumini</i> (L.) Skeels	0.7	5	0.54	0.0516
100	<i>Syzygium cumini</i> (L.) Skeels	0.7	2	0.12	0.0010
101	<i>Mimusops elengi</i> L.	0.72	4	0.37	0.0199
102	<i>Mimusops elengi</i> L.	0.72	3	0.17	0.0032
103	<i>Mimusops elengi</i> L.	0.72	3	0.15	0.0025
104	<i>Mimusops elengi</i> L.	0.72	3	0.14	0.0021
105	<i>Mimusops elengi</i> L.	0.72	3	0.13	0.0018
106	<i>Psidium guajava</i> L.	0.8	5	0.39	0.0308
107	<i>Psidium guajava</i> L.	0.8	5	0.39	0.0308

SN	Name	Density	Height (m)	DBH (m)	Carbon Sequestration
108	<i>Psidium guajava</i> L.	0.8	4	0.24	0.0093
109	<i>Psidium guajava</i> L.	0.8	4	0.25	0.0101
110	<i>Psidium guajava</i> L.	0.8	2	0.2	0.0032
111	<i>Nyctanthes arbor-tristis</i> L.	0.88	7	0.38	0.0450
112	<i>Manilkara hexandra</i> (Roxb.) Dubard	0.89	2	0.13	0.0015
113	<i>Manilkara zapota</i> (L.) P.Royen	0.89	4.5	0.1	0.0020
114	<i>Manilkara zapota</i> (L.) P.Royen	0.89	5	0.35	0.0276
115	<i>Manilkara zapota</i> (L.) P.Royen	0.89	3	0.29	0.0114
116	<i>Manilkara zapota</i> (L.) P.Royen	0.89	3	0.55	0.0408
117	<i>Phyllanthus acidus</i> (L.) Skeels	0.5	7	0.64	0.0725
118	<i>Platycladus orientalis</i> (L.) Franco	0.5	1	0.23	0.0013
119	<i>Plumeria rubra</i> L.	0.5	3.5	0.32	0.0091
Total					4.5317

ANNEXURE IV: LIST OF FAUNA

BUTTERFLIES	
1	Blue Mormon [State Butterfly of Maharashtra]
2	Red Pierrot Butterfly
3	Common Crow Butterfly
4	Striped Tiger Butterfly
5	Plain Tiger Butterfly
6	Lemon Pansy Butterfly
7	Common Grass Yellow Butterfly
8	Common Mormon (Male)
9	Common Mormon (Form stichius)
BIRDS	
1	Indian golden oriole
2	White-throated Fantail Flycatcher
3	Ashy Prinia
4	House Sparrow
5	Asian Koel (Male)
6	Asian Koel (Female)

ANNEXURE V:

GREEN CAMPUS POLICY