

GREEN AUDIT REPORT

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DEPARTMENT OF BOTANY

JANGAREDDIGUDEM

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GREEN AUDIT REPORT

1 .INTRODUCTION:

The term “Green” means Eco-friendly or not damaging the Environment. This can acronymically is called as “Global Readiness in Ensuring Ecological Neutrality” (GREEN). Green accounting can be defined as systematic identification, quantification, recording, reporting and analysis of components of ecological diversity and expressing the same in financial or social terms. “Green Auditing”, an umbrella term, is known by another name “Environmental Auditing”. There is a provision of green audit in college campus. As per the suggestions made by IQAC, Botany Department taken the responsibility to do Green Audit with cooperation of Principal. A report on green audit has been prepared by the Department of Botany, C.S.T.S GOVERNEMENT KALASALA JANGAREDDIGUEDEM. Total area of the college campus is of which 30 percent is covered by herbs, shrubs and trees, including valuable medicinal flora. The plants have been systematically identified by the Dept. of Botany. There are more than 85 plant species were audited. Extra efforts have been taken by the college to create environment consciousness amongst students. One major step in this regard is the extensive plantation program organized by NSS, U.G students of Botany Department. Plantation is encouraged by the Principal and all Departments Faculty members to increase greenery and reduce carbon dioxide emission effects. Renovation of the garden at the entrance was done. Existing gardens are also maintained by the Dept. of Botany of this college. Extension programs also organized to create environment awareness and conservation of Biodiversity amongst the students and public. In this regard extension program was organized.

2. Activities organized to create greenery and its conservation at college campus is as follows:

1. Plantation of diversified species
2. Vegetative propagation
3. Uses of Medicinal plants
4. Identification of Plant species

2.1 Plantation of diversified species:

To create green cover, Eco-friendly atmosphere, pure oxygen at the college campus, plantation program is organized every year with involving all Students, Principal and all faculty members of various Departments. In this session VanamManam, Janmabhoomi, VanaMahotsav and Neeru-chettu programs were organized and Ornamental, Medicinal plants and beautiful trees were planted in Botanical garden and other parts of college campus. To keep the greeneries in the campus, we regularly maintain the gardens which are looked after by students under the guidance of Department of Botany and NSS. Moreover, every year we try to plant new Plants.

2.2 Vegetative propagation:

To learn how to propagate vegetative garden, training program is organized for students every year. Students learned various propagation techniques like cutting, grafting, etc.

2.3 Uses of Medicinal plants:

There are many Medicinal plants in the Botanical garden which have Medicinal value. However the students are unaware of their use and they can't identify the particular plants. Therefore faculty of Botany department helps the students in identifying different medicinal plants with their scientific names and also their Medicinal use.

2.4 Identification of Plant species:

There are so many plant species present in the college campus. The faculty of Botany department audited and identified various plant species with the help of flora.

3. General Steps:

1. Systematic and comprehensive data collection.
2. Documentation with physical evidences.
3. Independent periodic evaluation with regulatory requirements and appropriate standards.
4. Systematic and comprehensive improvement and management of existing system

4. Procedure followed:

The students were divided into three groups and under the guidance of the teaching staff of the Department of Botany, each group collected data on the assigned topics. The assigned topics were as follows.

1. Identification of Plant species and Bio-diversity.
2. Analysis of Water quality and usage.
3. Analysis of Energy consumption and costs.
4. Analysis of waste generation and disposal all the data were united and based on these, a report was formulated.

5. Report :

Identification of Plant species and Bio-diversity in the college campus, based on our data collected, there are 102 plants in the college campus. In this 33 are trees, 21 are shrubs, 48 are herbs in our college contribute to the Oxygen supply that we utilize. Being situated in the urban area, our college is exposed to various atmospheric pollutants from vehicles as well as by other external means. Based on our calculation, the different sources of carbon-dioxide emitted to our college are:

1. Vehicles
2. Refrigerators
3. Air conditioners
4. RO water Plants
5. Mobiles etc.

1. Vehicles on the days of data collection, there were 5 cars, 25 bikes and 10 scooties in our campus, which in turn proves us that these vehicles may contribute to high carbon-dioxide emission. There are 1 refrigerators, 1 air conditioners in our campus. The students, teaching and non-teaching staff and the visitors also contribute to carbon-dioxide emission.

2. Analysis of water quality and usage of the college campus possesses many water outlets. Our students have counted the total number of taps, rain water harvesting pits. We have found that in total, there are 27 taps, 1 RO water Plant.

6. In addition to these equipment, our college also has

- 10 exhaust fans
- A table fan
- 1 Telephone
- LCD Projectors
- Hand mikes
- A bell

5. Analysis of waste generation and disposal wastes cannot be avoided in any environment. Wastes can be classified as biodegradable and non-biodegradable wastes. Biodegradable wastes include food wastes; which can be easily decomposed by the bacteria in soil. But non-biodegradable wastes are those which cannot be degraded by any organism and remain as such for many years.

Library: The most generated waste is paper waste. It is taken for recycling.

Office: Paper waste generated are recycled and reused.

Garden: Plastic and paper waste is comparatively less. Fallen leaves are collected and used in vermi-compost unit

Seminar hall: The wastes are collected after each programed and dumbered it.

Bathroom: The wastes are collected and burned in an incinerator behind the convent.

Classrooms: Paper wastes are collected in the waste basket and recycled.

Laboratory: The broken glass wastes and the useless instruments are disposed for recycling after thorough washing.

College Premises: Plastic waste generated is usually less. But paper waste is generated in a larger amount.

7.Observations:

1. There are sufficient water outlets for the students, staff and all the departments. But it is essential to check whether all these are working or not and whether the taps are leaking or not.
2. Fortunately, the students, Teaching and Non-Teaching staff of the college is available to clean the college campus.

List of the Audited Plants

<u>S.NO</u>	<i>Scientific Name of Plant</i>	Herb/Shrub/Tree	Local Name	Family	Uses
1	<i>Acalypha indica</i>	Herb	Muripindi	Euphorbiaceae	Anti Venomous & Anti Diabetic properties
2	<i>Achyranthus aspera</i>	Herb	Uttereni	Amaranthaceae	To treat cough,bronchitis,Malaria ,Fever
3	<i>Amaranthus viridis</i>	Herb	Slender amaranth	Amaranthaceae	To treat fever, pain, asthma
4	<i>Agave americana</i>	Herb	American aloe	Aspargaceae	To treat Burns,Injuries and Skin irritation
5	<i>Ageratum conyzoides</i>	Herb	Goat weed	Asteraceae	To treat pneumonia ,to cure wounds & burns
6	<i>Annona squamosa</i>	shrub	Custard apple	Annonaceae	Used to make medicine
7	<i>Aloevera barbedence</i>	Herb	Kalabanda	Liliaceae	Used to treat skin diseases
8	<i>Andrographis paniculata</i> (Burm.f.) NEAS	Herb	Bitter weed	Acanthaceae	To treat cancer,Ulcers,Leprosy
9	<i>Asystasia gangetica</i>	Herb	Coromandel	Acanthaceae	To treat hypertension,asthama,diabetis
10	<i>Azadiricta indica</i>	Herb	Neem	Meliaceae	Natural medicine and pesticides
11	<i>Borassus flabellifera</i>	Herb	Toddy palm	Aracaceae	Mats, baskets,fans
12	<i>Bougainvillea glabra</i>	Shrub	Paper flowers	Nyctaginaceae	Anti cancer drug
13	<i>Bougainvillea spectabilis</i>	Shrub	Paper flowers	Nyctaginaceae	Anti diabetic drug
14	<i>Calotropis gigantea</i>	Shrub	White Jilledu	Asclepiadaceae	To cure mucus
15	<i>Calotropis procera</i>	Shrub	Jilledu	Asclepiadaceae	To cure respiratory disorders
16	<i>Carica papaya</i>	Tree	Papaya	Caricaceae	Control blood sugar
17	<i>Cassia mimosoides</i>	Tree	Nela ponna	Caesalpinaceae	To treat diarrhea,wounds
18	<i>Capparis spinosa</i>	Herb	Flinders rose	Capparaceae	treatment of gout, arthritis
19	<i>Chloris barbata sw.</i>	Shurb	Purple top chloris	Poaceae	skin disorders
20	<i>Chlorophytum comosum</i>	Herb	Spider plant	Asparagus	weakness, arthritis
21	<i>Cleome viscosa</i>	Herb	Spiderflower	Cappparidaceae	traditionalmediceine,indian mediciene
22	<i>Clitoria ternata</i>	Shurb	Asianpigeon wings,bluebellvine	Fabaceae	memoryenhancer ,nootropic

23	<i>Catharanthus roseus</i>	Tree	Vinca rosea	Apocynaceae	Treatment of diabetes
24	<i>Croton banplandianum</i>	Herb	Bontulshi	Euphorbiaceae	treat liver disorders, skin diseases
25	<i>Cyanthiluum cinereum (l)</i>	Herb	Little iron weed	Asteraceae	asthama, cancer, cholera, night blindness
26	<i>Cycas revoluta thumb</i>	Herb	Sagopalm	Cycad	tonic high blood pressure, headaches, bone pain
27	<i>Cynodon dacctylon (l) pers</i>	Herb	Bermudagrass	Poaceae	colant, laxative, brain and heart tonic
28	<i>Casuarina equitifolia</i>	Tree	She oak	Casuarinaceae	Diarrhea, stomach ache
29	<i>Cassia occidentalis</i>	Shrub	Senna	Caesalpinaceae	Anti fungal and anti bacterial
30	<i>Cassia cordifolia</i>	Herb	Giloy	Caesalpinaceae	Snake bite
31	<i>Datura stramonium</i>	Shrub	Thorn apple	Solanaceae	Toothache, fever from inflammation
32	<i>Diefferbachia seguine</i>	Shrub	Cane	Araceae	anti dote, snake bites, rheumatism
33	<i>Duranta erecta l.</i>	Tree	Golden dew	Verbenaceae	mosquito acidil cyto toxic, anti viral, anti fungal
34	<i>Drymaria cordata</i>	Herb	Tropical chick weed	Caryophyllaceae	Treating respiratory ailments and bronchitis
35	<i>Elaeis guineensis</i>	Tree	Oil palm	Arecaceae	headaches, pains, rheumatism
36	<i>Emilia fosbergi nicolson</i>	Herb	Florida tasselflower	Asteraceae	tree unspecified medicinal disorders
37	<i>Euphorbia hirta</i>	Herb	Asthma weed	Asteraceae	Treatment of bleeding hemorrhoids
38	<i>Euphorbia pulcherima</i>	Herb	Mexican flame leaf	Euphorbiaceae	Used as a medicinal plant
39	<i>Erigeron bonariensis</i>	Tree	Flax leaf fleabane	Asteraceae	treatment of bleeding hemorrhoids
40	<i>Euphorbia prostrata aiton</i>	Shrub	Prostrate spurge	Euphorbiaceae	tree, improve bio markers for inflammation but not glucose
41	<i>Euphorbia tithymaloides l.</i>	Shrub	Seashell devil's backbone	Euphorbiaceae	ringworm, skin cancer, toothache, insect stings
42	<i>Euterpe oleracea mart</i>	Tree	Acai palm	Arecaceae	anti oxidant, diabetes, hypertension, inflammatory
43	<i>Ficus hispida</i>	Tree	Hairy fig	Moraceae	purgation and emesis to remove excess pitta dosha

44	<i>Ficus religiosa</i>	Tree	Pepal tree	Moraceae	astham diarrhea,diabetes,sexual disorders
45	<i>Ficus species</i>	Tree	Fig trees	Mulberry family	treat vrious ailments such as gastric problems,cancer
46	<i>Gardenia jasminoides</i>	Herbs	Cape jasmines	Rubiaceae	disorders,diabetes,and other conditions
47	<i>Glechoma hederacea</i>	Herb	Ground ivy	Lamaiceae	treat inflimations of the eyes
48	<i>Gomphrena celosioidesmart</i>	Shurb	Bachelor's button	Amaranthaceae	Skin infections,respiretory problems,ect...
49	<i>Gomphrena celosisioides mart</i>	Shrub	Prostrate Globe-amaranth	Amaranthaceae	Skin infections,respiretory problems,ect...
50	<i>Hibiscus rosa</i>	Tree	hibiscus	Malvaceae	shoe polish ,women black hair dry
51	<i>Hyptis suaveolens</i>	Herb	Mesosphaerum suaveolens	Lamaiceae	gastric ulcer,infections,and inflamations
52	<i>Hemidesmus indicus</i>	herb	Sarasaparilla	Apocyanaceae	Used in traditional medicine
53	<i>Indigofera tinctoria</i>	Herb	True indigo	Fabaceae	fever,liver,greay hairs,spleen disorders ETC....
54	<i>Ixora chinensis lan</i>	Herb	Viru	Rubiaceae	Treat dysentery and tuberculosis
55	<i>Jatropha gossypiiifolia</i>	Shrub	Bellyache bush	Euphorbiaceae	Anti inflammatory,insecticidal properties
56	<i>Kalanchoe ceratophylla</i>	Shrub	Chrismastree plant	Crassulae	cure injuries, pain, fever
57	<i>Kalmia lalifolia</i>	Shrub	Mountain laurel	Ericales	joints pain
58	<i>Luffa acutangula</i>	Herb	Ridged gourd	Cucurbitaceae	Treating and preventing colds
59	<i>Lawsonia inermis</i>	Tree	Henna	Lythraceae	Used as dye for skin and hair
60	<i>Ligustarum japonicumthumd</i>	Shrub	Ching kundo	Oleaceae	digestive problems
61	<i>Liris foetidissima l.</i>	Herb	Roast beef plant	Lridaceae	antispasmodic and cathartic
62	<i>Melothria pendula</i>	Shrub	Creeping cucumber	Cucurbitaceae	Sores and gastric treatment
63	<i>Manikara zapota</i>	Tree	Sapodilla	Sapotaceae	To treat cold and caught
64	<i>Moeinga olifera</i>	Tree	Drumstick tree	Moringaceae	increase sex drive,prevent pregnancy
65	<i>Momordica charantia</i>	Herb	Bitter gourd	Cucurbitaceae	used in folk medicine for treatment of diabetes mellitus

66	<i>Morinda tinctoria</i>	Shurb	Indian mulberry	Rubiaceae	wound healing
67	<i>Mangifera indica</i>	Tree	Mango	Anacardiaceae	To treat asthma and hypertension
68	<i>Murayya koenigii</i>	Herb	Curryleaf	Rutaceae	treating piles, inflammation edema
69	<i>Nerium oleander</i>	Herb	Rose bay	Apocynaceae	To treat ringworm,herpes
70	<i>Nyctanthus arbor-tristis</i>	Tree	Night blooming jasmine	Oleaceae	Piles,intestinal worms
71	<i>Ocimum tenuifbrum</i>	Herb	Tulasi	Lamiaceae	used in ayurveda,tradition of hinduism
72	<i>Phaseolus vulgaris</i>	Herb	Snap bean	Fabaceae	Delaying the digestion of complex cabohydrate
73	<i>Prunus dulcis</i>	Tree	Almond	Rosaceae	Lower blood sugar levels
74	<i>Phyllanthus emblica</i>	Tree	Indian gooseberry	Phyllanthaceae	To treat jaundice and inflammation
75	<i>Psidium guajava</i>	Tree	Guava	Myrtaceae	To treat diarrhea
76	<i>Passiflora foetida</i>	Shurb	Love in a mist	Passifloraceae	help with stress,sleep
77	<i>Pithacalobium dulci</i>	Tree	Cheema chintha	Mimosaceae	To treat diabetes
78	<i>Peltophorum pterocarpum</i>	Herb	Yellow flame.	Fabaceae	required petroleum
79	<i>Phoenix reclinata</i>	Tree	Date palm	Areceae	urinary infections
80	<i>Phoenix theophrasti greuter</i>	Herb	Date palm	Arecacea bercht	food for oil
81	<i>Phyllanthus amarus schumach</i>	Herb	Child pick A-back	Phyllantheceae	treat ulcer
82	<i>Phyllanthus tenellus roxb</i>	Herb	Mascarein island leave	Phyllantheceae	liver disease
83	<i>Phyllanthus urinaria</i>	Shurb	Chamber bitter	Phyllantheceae	jundice,daibets
84	<i>Plectranthu arboinicus</i>	Herb	Indian boarge	Mexian mint	skin infection, digestive
85	<i>Plumeria rubra</i>	Tree	Fraunga pani	Apocynaceae	anti-fertility -anti inflimatory
86	<i>Polyscias fruticosa (l) .harms</i>	Tree	Umbrella tree	Ariliaceae	anti-toxin, anti-bacterial onitmen
87	<i>Pongamia pinnata</i>	Tree	Poungam	Fabaeceae	treatment of fumors piles and skin disease

88	<i>Psidium guajava(l)</i>	Tree	Jama	Myrtaceae	diabetes, fever
89	<i>Plumaria alba</i>	Shrub	Camboja	Apocyanaceae	Anti fertility
90	<i>Rhapis excelsa</i>	Tree	Bamboo palm	Arecaceae	removing air bone toxin
91	<i>Ruellia simplex</i>	Herb	Desart penuta	Acanthaceae	treatment of flu asthma
92	<i>Ruellia tuberosa (l) - medicinal plant</i>	Herb	Meadow weed	Acanthaceae	anti-pyretic bladder diseases
93	<i>Solanum nigrum</i>	Tree	Black nightshade	Solanaceae	To treat stomach irritation
94	<i>Senna occidentalis</i>	Herb	Coffee senna	Caesalpinaceae	Anti bacterial, Anti fungal
95	<i>Sida acuta burm. F</i>	Herb	Wire weed	Mallows	sore mouth, cough, wheezing, common cold etc...
96	<i>Syzygium cumini</i>	Tree	Java plum	Myrtaceae	To treat kidney problems
97	<i>Solanum paniculatum</i>	Tree	Jurubebas	Nightshade	treatment of gastritis, bronchitis and fever
98	<i>Solanum torum</i>	Herb	Turkey berry	Solanaceae	fever, wound, hyper tension etc...
99	<i>Sterculia foetida</i>	Tree	Java olive tree	Malvaceae	stamina booster, cure diarrhea, anti cancer
100	<i>Syndrella nodiflora</i>	Herb	Cindrella weed	Asteraceae	inflammatory diseases, asthma, liver problems
101	<i>Sida cordifolia</i>	Shrub	Flannel weed	Malvaceae	To treat cold and headache
102	<i>Tridax procumbens</i>	Herb	coatbuttons	Asteraceae	To treat diarrhea, liver diseases
103	<i>Tectona grandis</i>	Tree	Teak	Lamaiceae	laxative, cooling, wood is acrid, dysentery
104	<i>Tephrosia purpuria</i>	Herbs	Vempali	Legumes	liver, spleen, heart and blood
105	<i>Terminalia catappa</i>	Tree	Indian almond	Combretaceae	treat of scabies, leprosy, wounds and other skin diseases
106	<i>Vicia faba</i>	Herb	Broad bean	Fabaceae	Used to make soups, stews, pastes
107	<i>Vinca alba</i>	Shrub	Periwinkle	Apocynaceae	Used to treat cancer
108	<i>Vinca rosea</i>	Shrub	Periwinkle	Apocynaceae	Used to treat cancer
109	<i>Withania somnifera</i>	Shrub	Ashwagandha	Solanaceae	To treat various CNS disorders
110	<i>Ziziphus jujube</i>	Tree	Indian jujube	Rhamnaceae	To treat heart burn, diuretic and nausea







