GREEN AUDIT REPORT

2016 - 2017

by

Department of Botany

Kongunadu Arts and Science College (Autonomous)

[Re-accredited by NAAC with 'A' Grade 3.64 CGPA out of 4 (3rd cycle)

College of Excellence (UGC)

Coimbatore – 641 029, Tamil Nadu

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Kongunadu Arts and Science College (KASC) is one of the oldest colleges in Coimbatore, the western part of Tamil Nadu where agriculture and industrial developments are very progressive in Tamil Nadu. In addition to best education to the rural students, the college provides best research opportunities and provision for extension activities for the interest of the common public. More than 50% of the students is mainly female gender almost in all subjects. The college is situated at the foot hills of Western Ghats at the altitude of 400 meters MSL. It indicates that it is very access to the vegetation and other landscapes of Western Ghats particularly the Nilgiris. College administration is having keen interest in maintaining green campus, an ecofriendly approach towards getting sustainable ecosystem service. "Green auditing" is practiced in the every year in order to improve environmental protection. The Department of Botany of KASC has been doing green auditing process since 2014 – 2015. It includes auditing of the flora and fauna, rain water harvesting units, plastic free zone, solar energy, and green cover.

Flora

The list of trees, shrubs, climbers and herbs available in the year 2016 - 2017 is given below.

S. No.	Scientific Name	Family
1.	*Acacia nilotica*	Mimosaceae
2.	*Acalypha indica*	Euphorbiaceae
3.	*Acanthospermum hispidum*	Asteraceae
4.	*Aegle marmelos*	Rutaceae

5.	*Achyranthes aspera*	Amaranthaceae
6.	*Aerva lanata*	Amaranthaceae
7.	*Albizia amara*	Mimosaceae
8.	*Alternanthera pungens*	Amaranthaceae
9.	*Alternanthera sessilis*	Amaranthaceae
10.	*Alysicarpus monilifer*	Fabaceae
11.	*Alysicarpus rugosus*	Fabaceae
12.	*Amaranthus spinosus*	Amaranthaceae
13.	*Azadirachta indica*	Meliaceae
14.	*Bauhinia malabarica*	Caesalpinaceae
15.	*Blumea obliqua*	Asteraceae
16.	*Boerhaavia diffusa*	Nyctaginaceae
17.	*Boerhaavia erecta*	Nyctaginaceae
18.	*Bougainvillea glabra*	Nyctaginaceae
19.	*Brachiaria ramosa*	Poaceae
20.	*Callistemon lanceolatus*	Mytraceae
21.	*Calotropis gigantea*	Asclepidaceae
22.	*Cardiospermum halicacabum*	Sapindaceae
23.	*Cassia fistula*	Caesalpinaceae
24.	*Cassia siamea*	Caesalpinaceae
25.	*Chloris barbata*	Poaceae
26.	*Cleome pentaphylla*	Capparidaceae
27.	*Clitoria juncea*	Fabaceae
28.	*Clitoria ternatea*	Fabaceae
29.	*Coccinia indica*	Cucurbitaceae

30.	*Commelina benghalensis*	Commelinaceae
31.	*Corchorus tridens*	Tiliaceae
32.	*Croton bonplandianum*	Euphorbiaceae
33.	*Cuscuta chinensis*	Convolvulaceae
34.	*Cynodon dactylon*	Poaceae
35.	*Cyperus iria*	Cyperaceae
36.	*Cyperus rotundus*	Cyperaceae
37.	*Dactyloctenium rotundus*	Poaceae
38.	*Datura metel*	Solanaceae
39.	*Delonix regia*	Caesalpinaceae
40.	*Digera arvensis*	Amaranthaceae
41.	*Digitaria longiflora*	Poaceae
42.	*Eragrostis riparia*	Poaceae
43.	*Eucalyptus tereticornis*	Mytraceae
44.	*Eupatorium odoratum*	Asteraceae
45.	*Euphorbia heterophylla*	Euphorbiaceae
46.	*Euphorbia microphylla*	Euphorbiaceae
47.	*Euphorbia hirta*	Euphorbiaceae
48.	*Evolvulus alsinoides*	Convolvulaceae
49.	*Gisekia pharnaceoides*	Aizoaceae
50.	*Gloriosa superba*	Liliaceae
51.	*Gomphrena decumbens*	Amaranthaceae
52.	*Hibiscus micranthus*	Malvaceae
53.	*Ichnocarpus frutescens*	Apocynaceae
54.	*Indigofera enneaphylla*	Fabaceae

55.	*Indigofera viscosa*	Fabaceae
56.	*Ipomoea obscura*	Convolvulaceae
57.	*Justicia tranquebariensis*	Acanthaceae
58.	*Lantana camara*	Convolvulaceae
59.	*Malvastrum coromandelianum*	Malvaceae
60.	*Millingtonia hortensis*	Bignoniaceae
61.	*Mimosa pudica*	Mimosaceae
62.	*Mimusops elengi*	Sapotaceae
63.	*Mollugo nudicaulis*	Aizoaceae
64.	*Morinda tinctoria*	Rubiaceae
65.	*Mukia maderaspatana*	Cucurbitaceae
66.	*Murdannia dimorpha*	Commelinaceae
67.	*Oldenlandia umbellata*	Rubiaceae
68.	*Parthenium hysterophorus*	Asteraceae
69.	*Passiflora foetida*	Passifloraceae
70.	*Pavonia zeylanica*	Malvaceae
71.	*Peltophorum ferrugineum*	Caesalpinaceae
72.	*Pergularia daemia*	Asclepidaceae
73.	*Peristrophe bicalyculata*	Acanthaceae
74.	*Perotis indica*	Poaceae
75.	*Phyllanthus amarus*	Euphorbiaceae
76.	*Phyllanthus maderaspatensis*	Euphorbiaceae
77.	*Physalis minima*	Solanaceae
78.	*Polygala bulbothrix*	Polygalaceae
79.	*Pongamia pinnata*	Fabaceae

80.	*Prosopis spicigera*	Mimosaceae
81.	*Prosopis glandulosa*	Mimosaceae
82.	*Quisqualis indica*	Mimosaceae
83.	*Rhynchosia minima*	Fabaceae
84.	*Samanea saman*	Mimosaceae
85.	*Setaria intermedia*	Poaceae
86.	*Sida acuta*	Malvaceae
87.	*Solanum nigrum*	Solanaceae
88.	*Spermacoce hispida*	Rubiaceae
89.	*Sporobolus coromundelianus*	Poaceae
90.	*Spathodea campanulata*	Bignoniaceae
91.	*Tabernaemontana divaricata*	Apocynaceae
92.	*Tecoma stans*	Bignoniaceae
93.	*Tephrosia procumbens*	Fabaceae
94.	*Tephrosia purpurea*	Fabaceae
95.	*Tinospora cordifolia*	Menispermaceae
96.	*Trianthema portulacastrum*	Aizoaceae
97.	*Tribulus terrestris*	Zygophyllaceae
98.	*Trichodesma indicum*	Boraginaceae
99.	*Tridax procumbens*	Asteraceae
100.	*Vernonia cinerea*	Asteraceae
101.	*Vicoa indica*	Asteraceae
102.	*Waltheria indica*	Sterculiaceae

Fauna

Since the campus is having a high degree of green cover mainly due to trees, many number of avian fauna inhabit the institution. In addition, reptiles and rodents are also common in the campus. Grains and water are also provided to the birds and other wild species by the students of biodiversity conservation interest. Some of the common fauna available in the college campus is given below.

S. No.	Scientific Name	Common Name
1.	*Clamator jacobinus*	Pied Crested Cuckoo
2.	*Merops orientalis*	Small green Bee-eater
3.	*Merops philippinus*	Blue tailed Bee-eater
4.	*Tephrodornis* sp.	Common Wood-Shrike
5.	*Acridotheres tristis*	Common myna
6.	*Dicrurus macrocercus*	Black drongo
7.	*Corvus splendens*	House crow
8.	*Corvus macrorhynchus*	Jungle crow
9.	*Rana luteiventris*	Frog
10.	*Tyto alba*	Barn owl
11.	*Athene brama*	Spotted owl
12.	*Orthotomus sutorius*	Common Tailor bird
13.	*Pteropus giganteus*	Flying fox
14.	*Funambulus palmarum*	Indian Palm Squirrel
15.	*Spilopelia senegalensis*	Little-Brown Dove
16.	*Accipiter badius*	Shikra
17.	*Columba livia*	Blue-rock Pigeon
18.	*Canis lupus familiaris*	Dog

19.	*Felis catus*	Cat
20.	*Aphis pomi* DeGreer	Aphids
21.	*Solenopsis* sp.	Ants
22.	*Acanthepeira stellata*	Spider
23.	*Argiope florida*	Florida garden spider
24.	*Calotes versicolor*	Garden lizard
25.	*Rattus norvegicus*	Brown rat
26.	*Passer domesticus*	House sparrow
27.	*Coptotermes formosanus*	Termite
28.	*Apis dorsata*	Indian bee
29.	*Apis florea*	Small bee
30.	*Papilio machaon*	Butterfly
31.	*Ampullariidae* sp.	Apple snail
32.	*Junonia lemonias*	Lemon pansy
33.	*Danaus chrysippus*	Plain tiger
34.	*Danaus genita*	Striped tiger
35.	*Acraea terpsicore*	Tawny coaster
36.	*Tirumala limniace*	Blue tiger
37.	*Neptis hylas*	Common sailer
38.	*Papilio paris*	Paris peacock
39.	*Graphium doson eleius*	Common blue bottle
40.	*Melanitis leda*	Common evening brown
41.	*Papilio romulus*	Common mormon
42.	*Catopsilia pomona*	Common emigrant
43.	*Aedes, Culex, Anopheles*	Mosquito
44.	*Sympetrum flaveolum*	Dragonfly
45.	*Phylliidae*	Leaf insect

46.	*Phasmatodea* sp.	Stick insect
47.	*Charidotella* sp.	Golden Beetle
48.	*Lepisma saccharina*	Silverfish
49.	*Pavo cristatus*	Peacock
50.	*Periplaneta americana*	Cockroach
51.	*Lumbricus terrestris*	Earthworm
52.	*Diplopoda*	Millipedes
53.	*Chilopoda*	Centipedes

Green cover

It is assessed that tentatively 40% of the geographical area of the campus was occupied by green cover of the tree species. It is well beyond the standard prescribed by the Indian forest policy, 33%.

Rain water harvesting

All over the campus at eight different places, rain water harvesting units each with the size of 12’ x 8’ x 10’ for roof top water harvesting. As per the information of college administration, it is known that for the students and staffs members and for laboratory usage, the bore well situated in the college provided complete supply of water. No amount of water was purchased for this purpose. However, before the construction of rain water harvest unit to meet the demand, an average of 20,000 liters of water was purchased every day. Apart from the rain water harvest unit, the surface water during rainy days was permitted to percolate in the soil to augment ground water at maximum extend. This is mainly due to non-sealing of the earth surface by the tiles, cement concretes, etc. wherever it is possible. The average annual rain water harvesting during the year 2016-2017 was 26,07,150 L.

Water purifying system

A total of 23 water doctors have been installed in the campus for supplying pure drinking water both at cold and hot conditions to students and other categories of peoples.

Plastic free zone

In order to reduce the usage of non-biodegradable materials, the eco-club volunteers were frequently involved to remove the plastic items in the college campus. Students and other peoples were advised to use non-plastic materials only. Segregation of the waste materials was made separately for non-biodegradable and biodegradable materials.

Solar Energy

Solar energy production is the approach towards green energy. Thus it reduces pollution hazardous in general and college environment in particular. The solar energy can be used for different purposes like water heating, laboratory uses, lighting the bulbs, etc. Solar panel with the capacity of 150 KW installed within the campus in January 2017. The power production for the institution use was 500 units per day during summer season

Awareness Programmes

Awareness programme on Hygienic and cleaning in the environment was organized by Eco Club of our college (14.10.2016). During this programme, non- biodegradable materials were collected in our college campus. Additionally, drawing competition on “Drought Management” was conducted (10.02.2017).

Solar roof panels in the college campus

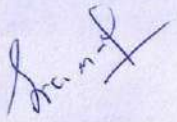
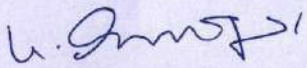
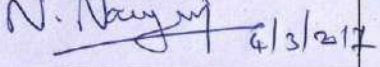
Expenditure made on green campus: Rs. 75,06,308/-

Suggestions and Recommendations

1. Maintenance of rain water harvesting unit by adopting suitable methods.
2. LED bulbs can be installed at maximum extent in the college campus.
3. Awareness programs may be organized about flora and fauna.

Signature of the committee members

S. No.	Committee members	Signature
1.	Dr. S. Paulsamy	S.P.7

2.	Dr. V. Balasubramaniam	
3.	Dr. K. Arumugasamy	
4.	Dr. N. Nagarajan	
5.	Dr. T. Muthukumar