

# GREEN AUDIT – 2020



## CHRIST COLLEGE, IRINJALAKUDA (AUTONOMOUS) THRISSUR, KERALA

*EXECUTED BY*



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## PREFACE

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Every institution should impart knowledge about the campus and its surroundings through activities that follows the principles of sustainability. An evaluation is needed to understand its position as an environment friendly, talent nurturing educational institution. This Green Audit was done with the aim to assess and rate the sustainable nature of the campus. The college vision is *“mould an enlightened generation by developing the potential of individuals through quality higher education and moral value inculcation”*. This can be possible only through the realisation that living conditions and resources are to be used to meet human needs without undermining the integrity and stability of the natural system, and without compromising the ability of future generations to meet their needs.

This report is compiled by the BEE certified energy auditor along with the project engineers who are experienced in the field of energy, environment and management. The student volunteers made a mammoth contribution with data collection and preparing an initial skeleton for the report.



## ACKNOWLEDGEMENTS

We express our sincere gratitude to the management of M/s Christ College, Irinjalakuda (Autonomous) for giving us an opportunity to carry out the project of Green Audit. We are extremely thankful to all the staffs for their support in carrying out the studies and for input data, and measurements related to the project of Green audit.

We also congratulate our Green audit team members for successfully completing the assignment in time and making their best efforts to add value.

### GREEN AUDIT TEAM

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Yours faithfully

Managing Director  
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## GREEN AUDIT SUMMARY

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- ❖ Christ College Irinjalakuda (Autonomous) has taken considerable effort for maintaining a green and sustainable campus.
- ❖ Different varieties of trees and garden plants are present on the campus.
- ❖ Staff and student's collaboration of Environmental club is held responsible for maintenance of greenery inculcating a sustainable culture among the student's community.
- ❖ Recognizing the importance of moulding healthy youth, the management has taken initiative and built badminton and volleyball courts, football ground and a large cricket ground in the college, surrounded with lush greenery.
- ❖ Very rare species are protected in the college and its bio diversity is preserved.
- ❖ Information about each plant in the college premises is available and is mapped well.

### **Suggestions for improvement**

- ❖ Display boards are to be placed on the herbal, botanical trees with its importance
- ❖ Cordoned area to be provided for rare plants
- ❖ Name the grounds in the college with suitable names related with nature.
- ❖ Name certain areas in the college as silent zone, Oxygen park etc.
- ❖ Practice Institutional Ecology- Set an example of environmental responsibility by establishing institutional ecology policies and practices of resource conservation.
- ❖ Road map for the tree plantation to be done along with the master plan of the college. Give importance for the oxygen generating plants and lush green trees.
- ❖ Start the zodiac garden in the college. Most of the zodiac trees are available in the college. Few are missing.

## GENERAL DETAILS

The general details of Christ College Irinjalakuda are given below in table.

Sl. No :	Particulars	Details
1	Name of the College	Christ College (Autonomous)
2	Address	Christ Nagar, Irinjalakuda Thrissur -680125
3	Contact Person	Principal
4	Contact Phone number&E mail	0480-2825258 office@christcollegeijk.edu.in
5	Web site	www.christcollegeijk.edu.in
6	Type of Building	Educational Institution
7	Annual Working Days	210
8	No: of Shifts	Day Shift (One) (9AM -4PM)
9	No: of students enrolled	4514
10	No: of teaching staff	210
11	No: of non-teaching staff	46
12	No: of departments	27
13	No : UG courses	28
14	No: of PG courses	18
15	Total campus area	49 Acre
16	Total Built Up area	19600 Ft <sup>2</sup>
17	No: of hostel students	Boys 415 Ladies 203
18	No: of plants in college	2277
19	No: of various species	244
20	Carbon Sequestration (ton) per annum	119
21	Grounds and stadiums	Volleyball court -3No: and Basketball court-4No: Handball court -2 No: Hockey Field and, Netball, Tennis, Kho-Kho courts -1 No: each, Athletic or cricket stadium -1 No: Football field -1No: and Indoor stadium under construction.

**TABLE 1: GENERAL DETAILS**



## ABOUT CHRIST COLLEGE, IRINJALAKUDA (AUTONOMOUS)

Christ College was started in 1956, by the Devamatha Province of the Carmelites of Mary Immaculate (CMI), an indigenous religious congregation founded in 1831 by Saint Chavara Kuriakose Elias, a religious priest and versatile genius, who envisioned education as a tool for liberation and development. Founded as per the provisions of the Indian Constitution, part III, Article 30(1) and administered by Christ College Educational Society, (Regd. No. 137/75), this college is a minority institution, affiliated to Calicut University and re-accredited by NAAC with highest grade 'A'. Christ College is dedicated to Jesus Christ, and has as its motto "**Jeevitha Prabha**", which means "**Light of Life**". Following recommendation from state government, the college was conferred the "**Autonomous status**" by University Grants Commission (UGC) in 2015, the Diamond Jubilee year of the college. Christ College is part of a century-old tradition of CMI education that is at its heart, Christian and specifically catholic. It offers an ideal vision of education that is aware of and responsive to the challenges of the nation's present situation.

### **Vision**

Moulding an enlightened generation by developing the potential of individuals through quality higher education and moral value inculcation.

### **Mission**

To impart quality education, imbued with Indian ethos and enriched with universal values. To mould our youth as intellectually competent, psychologically integrated and morally upright social beings.

To train them as responsible citizens of our nation who champion the cause of justice, love, truth and peace.

To emancipate them from the clutches of "Adharma" and "Ahamkara" to true freedom and fraternity.

The management believes that the secret of success of our College is a community of teachers who are committed to their vocation by being professionally competent, spiritually mature, humane in dealings, and ever open to new horizons of knowledge



**FIGURE 1: SIDE & FRONT VIEW OF THE COLLEGE**



## GREEN AUDIT

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The whole world is on the path to a sustainable development, and environment conservation tops the priority list; as every human activity has its effect on the surroundings, ie.the environment. Hence, be it a house, a commercial building, an industrial building, or any other construction, it will disturb the balance of the environment. It is very important to do a detailed study about the effects on the environment. This is conducted under the name of Green Audit, which can be defined as the official examination of the effects a company or other organization has on the environment, especially the damage that it causes. The objectives of the green audit can be listed as follows:

Including participants from every section of the organization in the auditing process.

- Understanding the environment by drawing a simple sketch of the total area.
- Identifying the activities in the premises and listing them.
- Calculating the resource consumption like the land and water.
- Assessing the waste management and disposal.
- Studying the energy usage pattern.
- Identifying the good practices.
- Suggesting viable solutions to improve the sustainable nature of the organization.
- Compiling the report with the above-mentioned details.
- Conducting a walkthrough audit to check the suggestions implemented by the institution and suggesting further improvements
- Verifying all the points with actual measurements and giving suggestions for improvement



## CAMPUS ENVIRONMENT

The environment in and around the college campus plays an important part in maintaining a healthy atmosphere in nurturing talents. Trees are the major source of the oxygen we breathe, and receiver of the carbon dioxide we exhale. The sustainability of an ecosystem depends on the number of plants and trees in and around the surroundings. The open space in the college is used for gardening, teak plantations and buildings are built without disturbing the sustainable nature of landscape of that area.

Ultimately the campus is maintaining natural equilibrium with open spaces, buildings, trees, birds along with human interaction.



**FIGURE 2: CAMPUS VIEW**

Scientific studies have proved that nature can cure any disease and this will reduce the stress among students during their studies and also increase their compassion towards nature. Ultimately the campus is maintaining natural equilibrium with trees, birds, water bodies and human beings. Gardens and landscape are an aesthetic delight and promote attentiveness of students. Persons exposed to plants have higher level of positive feelings (pleasant, calm) as opposed to negative feelings (anger, fear)



## SUSTAINABLE CONSTRUCTION OF BUILDINGS

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Energy consuming devices installed for the comfort of the occupants of the building give rise to heat generation, which adversely affects the environment within the building and in the surroundings. Buildings are thus the major pollutants that affect the urban air quality and contribute to climate change. Buildings are the major consumers of energy during their construction, operation and maintenance.

Christ College has developed an ecological design in its buildings and adopted minimum negative impact on ecosystem. Its approach to constructional activities is to conserve energy and ecology and avoid the adverse effects of ecological damage.

Christ College management has constructed the buildings with optimum utilisation of land, and classrooms with abundant light and natural ventilation. Maximum daylight ingress and natural ventilation increase the indoor air quality and avoids the sick building syndrome. The whole facility and buildings are designed to maximum and optimum utilisation of land without affecting the natural hill area design and thus avoiding landslides.



**Womens Hostel**



**Mens Hostel**



**Physical education block**



**Chemistry and Geology Block**

**FIGURE 3: BUILDING VIEW**

## 1. BUILT UP AREA

There are 23 major buildings on the campus. The purpose and the built-up area of the buildings are given below. All these buildings have sufficient ventilation and natural sun light. The master plan of Christ College has been drawn to ensure and sustain harmonious blend of human and environmental well-being. Accordingly, spaces for academic, administrative and recreational areas are delineated in harmony with the topography to ensure an eco-friendly campus.

Sl.No:	Floor	No Of Floors	Total Built Up Area(M <sup>2</sup> )
1	New Block 1 and 2 Phase	G+6	3360.00
2	Zoology, Library, and Commerce	G+2	3185.00
3	Zoology New	G+2	550.00
4	Guest Room	G+2	486.00
5	Auditorium	G+1	1063
6	Ladies Retiring Rooms	G=1	282
7	Administrative Block	G+2	5437
8	Chavara Seminar Hall	G+2	128
9	Chemistry Block	G+2	2616
10	Chemistry Block ( New)	G+2	885
11	Carpentry Shed	G	128
12	Hotel Management	G+2	259
13	Physics Workshop	G+1	82
14	Main Block	G+2	1852
15	New Main Block	G+2	3612
16	Central Block	G+2	945
17	Main Hostel	G+2	4377
18	Mess Hall	G+1	1078
19	BPE Building	G+1	2196
20	New Physical Education	G+1	1586
21	Mary Rani Ladies Hostel	G+2	2078
22	Boys Hostel Play Hall	G	185
23	Boys Hostel	G+3	820
	<b>Grand Total</b>		<b>37190</b>

TABLE 2: BUILDING AREA

## 2. CARBON DIOXIDE LEVELS

Air quality is a major area of concern inside a building. The percentage share of oxygen and carbon dioxide should be such that the occupants are able to perform their tasks without any discomfort. This is generally done through a provision of fresh air ducts for the air conditioning systems or by providing windows. Numerous factors need to be considered for the design and fabrication of the fresh air supply system like the number of occupants, weather pattern and air quality of the location, and so on. For the human comfort, production of carbon-dioxide (CO<sub>2</sub>) within

a building space is the prime area of consideration. This is associated with respiration which produces CO<sub>2</sub>. As a result, the carbon-dioxide levels will increase if ventilation is not provided.

As per various standards (like the ASHRAE Standard 62.1-2016), indoor CO<sub>2</sub> concentrations up to 1200 ppm is considered acceptable. For a typical outdoor condition, this value may change from 300 to 500 ppm.

The measurements were recorded along different locations inside the campus and the peak values are given in the following sections. The key concentration was on the study of carbon dioxide levels.

Sl. No.	AREA	Measured CO <sub>2</sub> (ppm)	Standard CO <sub>2</sub> level (Range)ppm	Remarks
<b>New Building Block</b>				
1	Classrooms	600	300-500	Good
2	Corridors	700	300-500	Good
4	Faculty rooms	650	300-500	Good
5	Principal's Room	450	300-500	Good
6	Office	420	300-500	Good
7	Computer lab	500	300-500	Good
<b>Zoology Block</b>				
1	Classrooms	560	300-500	Good
2	Corridors	450	300-500	Good
3	Faculty rooms	550	300-500	Good
4	Library	550	300-500	Good
5	Zoology Lab	360	300-500	Good
6	Commerce Classroom	560	300-500	Good
<b>Chemistry Block</b>				
1	Classrooms	520	300-500	Good
2	Faculty rooms	450	300-500	Good
3	Laboratory	390	300-500	Good
4	Seminar Hall	400	300-500	Good
<b>Hotel Management Block</b>				
1	Class rooms	550	300-500	Good
2	Faculty rooms	500	300-500	Good
3	LAB	490	300-500	Good
4	Seminar Hall	450	300-500	Good
<b>Physical Education Block</b>				
1	Class rooms	470	300-500	Good
2	Faculty rooms	450	300-500	Good
3	Changing room	390	300-500	Good
4	Exercise area	350	300-500	Satisfactory
<b>Miscellaneous and others</b>				
1	Canteen	550	300-500	Good
2	Ladies Hostel	450	300-500	Good
3	Boys' hostel	460	300-500	Good
4	Ladies' Retiring Room	400	300-500	Good
5	Mess hall	410	300-500	Good
6	Auditorium	390	300-500	Good

TABLE 3: CARBON DIOXIDE LEVELS

### 3. HERBAL /MEDICINAL PLANTS

The literal meaning of Ayurveda is “science of life,” because ancient Indian system of health care focused on views of man and his illness. It has been pointed out that positive health means metabolically well-balanced human beings. Ayurveda is also called the “science of longevity” because it offers a complete system to live a long healthy life. It is an interactive system that is user-friendly and educational. It teaches the patient to become responsible and self-empowered. It is a system for empowerment, a system of freedom, and long life. A significant part of knowledge and tradition is currently being eroded due to modernization, acculturation and availability of alternatives. Therefore, there is urgent need to inculcate young minds to realize the fascinating knowledge and tradition associated with these resources, and help them understand the immense potential the Kerala medicinal plants possess for the future.

The “Promoting Herbal/medicinal trees in Schools and colleges” was a fun-filled learning activity for the students where they got the opportunity to learn about the medicinal plants by actually planting the medicinal herbs and watching them grow in their gardens, and by exploring information about them from various sources.

The task of identifying the trees itself was enriching in terms of making students realize the importance of teamwork such as detailed planning, and allocation of tasks within a team. For the teachers, herbal garden project has been useful in terms of ease with which they could integrate the concept with other subject matter activities, such as writing essays, poems and stories, making posters, drawing and painting, making herbariums, and even preparing recipes using some of the culinary herbs students planted in their gardens. Kerala Government is also taking lot of initiatives to develop and inculcate the practice of maintaining herbal gardens in schools and colleges.

Christ College has planted several herbal plants on its campus in various areas. There is no particular area designated for planting herbal/medicinal plants only. Most of the plants in nature have their own peculiarities and everything is useful in one way or another for human life. But certain plants have high therapeutic value especially in Ayurveda. The major plants in the Christ College:

Sl no:	Vernacular name	Botanical name of plant	Quantity	Importance
1	Kilinjavaal, kuzhimundan	Ardisia elliptica	3	Shade and medicinal plant
2	Irumban puli	Averreoha bilimbi	1	Fruits are edible and medicinal
3	Mulkayini	Bryenia retusa	1	Medicinal plant
4	Kanikkonna	Cassia fistula	9	Medicinal plant



Sl no:	Vernacular name	Botanical name of plant	Quantity	Importance
5	Vellakurinji	Chasalia curviflora	30	Medicinal plant
6	Channakkoova	Costus speciosus	12	Medicinal plant
7	Nagalinkamaram	Couropita guinensis	3	Medicinal plant. Rare one
8	Paadathali	Cyclea peltata(lam)	2	Medicinal plant
9	Nandyarvattam	Ervattamia divaricata	10	Garden plant, medicinal
10	Paarakam, paaroth	Ficus hispida	28	Medicinal for animals
11	Kumizhu	Gmelina arborea	7	Medicinal, timber yielding
12	Chembarathi	Hibiscus rosa-sinensis	16	Garden & medicinal plant
13	Neelamari	Indigofera tinctoria	1	Medicinal plant
14	Elengi	Mimusops elengi	8	Fruits are edible and medicinal
15	Jaathi	Myristica fragrans	8	Spice and medicinal
16	Nilanaaragam	Naregamia alata	2	Medicinal
17	Nelli	Phyllanthus emblica	7	Fruit tree, medicinal
18	Ungu	Pongamia pinnata	10	Medicinal
19	Asokam	Saraca asoka	9	Medicinal plant
20	Vayana	Cinnamomum verum	4	Medicinal and aromatic plant
21	Kolpuli	Tamarindus indica	15	Fruits are edible and medicinal
22	Thanni	Terminalia bellerica	7	Medicinal plant
23	Savanaari	Vinca rosea	19	Medicinal plant
24	Karinochi	Vitex negundo	2	Medicinal plant
25	Mullilam	Zanthoxylum rhetsa	4	Medicinal
26	Koovalam	Aegle marmelos	1	Medicinal
27	Aaryaveppu	Azadirachta indica	6	Medicinal plant
28	Anachuvadi	Blumea lacera	6	Medicinal
29	Mullu venga	Bridelia retusa	4	Medicinal
30	Pathimugam, chappangam	Caesalpinia sappan	3	Medicinal plant

TABLE 4: HERBAL &amp; MEDICINAL PLANTS



#### 4. KUTTIVANAM (SMALL FOREST)

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Christ College has developed an untouched and protected version of forest on its premises. This is maintained as a forest area where entry is restricted. The location of 'Kuttivanam', an untouched and silent zone in the college is behind on entrance to college area left side and also Teak plantation around the ground.

Such a place can have following benefits to the ecosystem

1. **Maintain the equilibrium of air and food:** Humans and animals need food and oxygen and excrete carbon dioxide and water. The plants, algae, etc, in the Kuttivanam use carbon dioxide and water and release or produce oxygen and food.
2. **Filter and store water, and drastically reduce storm-water runoff:** Forests filter and regulate the flow of water. The litter over the forest floor acts as a sponge which filters, stores and gradually releases the water to natural channels and ground water.
3. **Conserve valuable topsoil and reduce soil erosion:** A forest is like a protective green cloth over Mother Earth's fragile body.
4. **Conserve biodiversity and balance ecology:** In a natural environment, the populations of species are balanced to an optimum minimum level
5. **Reduce pollution:** Plants can remove and/or Phyto remediate pollutants and contaminants from soil and water.
6. **Arrest or reverse global warming:** Global warming can cause extinction of species, tropical cyclones, extreme weather, tsunamis, abrupt climatic change, sea level rise, increased human stress resulting in violence, etc. These are just a few of its catastrophic effects. Plants can lock CO<sub>2</sub> in their bodies to save our planet and the life on it.

Christ College has marked certain areas of the college as protected areas of plants where no human interaction is allowed. Biodiversity of these areas is remarkable and hence this "no man's land" acts as the lungs of the college.



FIGURE 4: KUTTIVANAM

## 5. VEGETABLE GARDEN

It is a garden that exists to grow vegetables and other plants useful for human consumption. Gardening can provide students with hands-on learning opportunities while increasing environmental awareness and vital experience in problem-solving. The gardens are changing the eating habits of the students. Gardens are a wonderful way to use the college campus as a classroom, reconnect students with the natural world and the true source of their food, and teach them valuable gardening and agricultural concepts and skills that integrate with several subjects, such as math, science, art, health and physical education, and social studies, as well as several educational goals, including personal and social responsibility. They gain self-confidence and a sense of "capableness" along with new skills and knowledge in food growing — soon-to-be-vital for the 21st century. Students become more fit and healthy as they spend more time actively outdoors and start choosing healthy food over junk food.

### **Suggestion**

We recommend to cultivate a vegetable garden in the college to depict the importance of vegetables in our food chain.



## 6. SOME INTERESTING PLANT SPECIES IN THE COLLEGE INCLUDING RET PLANTS

Lot of rare species are maintained in the college.



Artocarpus heterophyllus



Annona muricata



Aporosa lindleyana



Ardicia elliptica



Bauhinia finicea



Brownea grandiceps



Cassia javanica



Chasalia curviflora



Cetharexylum spinosum



sabeena ambalath

Clitoria ternatea



Colubrina oppositifolia



Couripita guinensis



*Evolvulus nummularis*



*Ficus hispida*



Filicium decipiens



Hibiscus rosa-sinensis



Hugonia mystax



Mallotus philippensis



Morinda umbellata



Morus alba



Naregamia alata



Polyalthia longifolia



Petrocarpus marsupium



Saraca asoka



*Syzygium cumini*



*Syzygium zeylanicum*



Tabernaemontana dichotoma



Turnera sabulata



Xanthoxylum rhesa



Zephyranthes candida

Figure 5 RARE SPECIES IN COLLEGE

## 6. ZODIAC TREES

In Vedic astrology, the zodiac is divided into 27 nakshatras or stars. An individual is born under a particular star, known as his or her birth star. From ancient times, particular trees have been associated with birth stars. The concept of a Nakshatra Vanam involves the planting of these trees in a grove and nurturing them, to help develop a place of sanctity. Gardening can provide students with hands-on learning opportunities while increasing environmental awareness and vital experience in problem-solving. Christ College developed planted a star trees. The details are given below.

**Every student and staff has a birth star which is related to a tree, animal and bird in Nature.**

Gardens are a wonderful way to use the college campus as a classroom, reconnect students with the natural world and the true source of their food, and teach them valuable gardening and agricultural concepts and skills that integrate with several subjects, such as mathematics, science, art, health and physical education, and social studies, as well as several educational goals, including personal and social responsibility. They gain self-confidence and a sense of "capableness" along with new skills and knowledge in food growing — soon-to-be-vital for the 21st century students become more fit and healthy as they spend more time active in the outdoors and start choosing healthy foods over junk food.

Sl No	Zodiac or star name	Vernacular Name	Botanical name
1	Aswathy	Kanjiram	Strychnos nux-vomica
2	Bharani	Nelli	Embllica officinalis
3	Karthika	Athi	Ficus racemosa
4	Rohini	Njaval	Syzygium cumini
5	Makayiram	Karngali	Acacia catechu
6	Thiruvathira	Karimaram	Diospyros ebenum
7	Punartham	Mula	Bambusa bambos
8	Pooyam	Arayal	Ficus religiosa
9	Ayilyam	Nangu	Mesua ferrea
10	Makam	Peral	Ficus benghalensis
11	Pooram	Plassu	Butea monosperma
12	Uthram	Ithi	Ficus tinctoria
13	Atham	Ambazham	Spondias pinnata
14	Chithira	Koovalam	Aegle marmelos
15	Chothi	Neer marauthu	Terminalia arjuna

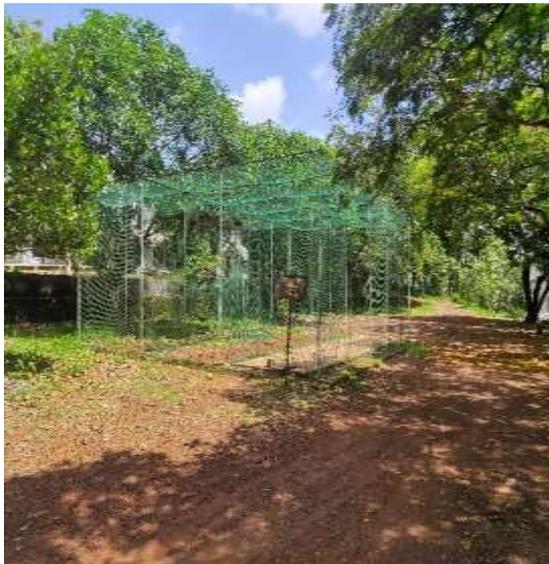


Sl No	Zodiac or star name	Vernacular Name	Botanical name
16	Vizakham	Vayam Kiatha	Flacourtia jangomas
17	Anizham	Elanji	Mimusops elengi
18	Thrikketta	Vetti	Aporosa lindleyana
19	Moolam	Vella Pine	Vateria indica
20	Pooradam	Vanchi	Salix tetrasperma
21	Uthradam	Plavu	Artocarpus heterophyllus
22	Thiruvonnam	Erukku	Calotropis gigantea
23	Avittam	Vanni	Prosopis juliflora
24	Chathayam	Kadambu	Anthocephalus cadamba
25	Pooruttathi	Mavu	Mangifera indica
26	Uthrattahi	Karimbana	Borassus flabellifer
27	Revathi	Ellippa	Madhuca longifolia

Table 5 ZODIAC TREES

## 7. OPEN GROUNDS

Education is incomplete without sports and games. Sports and games **are beneficial in teaching us punctuality, responsibility, patience, discipline, and dedication towards our goal.** The importance of games and sports in student's life is immense. It has proved to be very therapeutic in nature. Sports help improve social skills, such as dispute management and sport-based interaction. **Sports inculcate the feeling of fairness in a child and encourage them to be committed, taking defeat in a positive manner.** It teaches us to be joyful, united, and appreciative in life. Students are the youth of our nation, and they need to be energetic, physically active, and mentally fit. By understanding the responsibility to make its students healthy, Christ College has built and maintained football ground, cricket ground and volley and badminton courts in green surroundings.



**FIGURE 6 OPEN GROUNDS**



## 8. GREENERY AROUND THE COLLEGE

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Christ College is surrounded by a hilly terrain. The total area of 49 acres of land is mainly covered by trees and is well protected by the management. Educational institutions serve as important incubators for developing a 'green sense' among students and teachers and create a new generation of professionals to drive the future change. 'Green sense' is the sensitivity towards environment that is addressed in our decisions, practices and general lifestyle. In Christ College teaching sustainability and environment is demonstrated in the campus



**FIGURE 7: GREENERY AROUND COLLEGE**

## 9. LIST OF TREES IN THE CAMPUS

Trees release oxygen when they use energy from sunlight to make glucose from carbon dioxide and water. Like all plants, trees also use oxygen when they split glucose back down to release energy to power their metabolisms. Averaged over a 24-hour period, they produce more oxygen than they use up; otherwise there would be no net gain in growth.

The college campus is divided into various locations for listing out the trees. The college campus contains 2280 Plants in 247 various species. Most of the trees are Teak , Plavu, Mavu, Charakonna, Mahagani , Irimullu,etc.

### AREA 1A

#### Location: Church, Seminary, Garden (Girls), Retiring Room, Monastery Room

Sl.no.	Botanical Name	Family	Vernacular Name	Habit	No of Trees
1	Adenantha pavonina	Mimosaceae	Manchadi	Medium tree	1
2	Anacardium occidentale	Anacardiaceae	Kasumaavu	Medium tree	1
3	Annona muricata	Annonaceae	Mullatha	Small tree	2
4	Aquillaria malaccensis	Ebenaceae	Akil	Small tree	1
5	Arachis pintoii	Fabaceae	Kattu kappalandi	Herb	20
6	Ardisia elliptica	Primulaceae	Kilinjaval	Shrub	3
7	Areca catechu	Arecaceae	Kavungu	Tree	3
8	Artocarpus heterophylla	Moraceae	Plaavu	Large tree	9
9	Averrhoa bilimbi	Oxalidaceae	Irumban puli	Small tree	3
10	Bambusa bambos	Poaceae	Mula	Tree	2
11	Bambusa vulgaris	Poaceae	Manja mula	Tree	2
12	Barleria cristata	Acanthaceae	Kanambaram	Herb	1
13	Bauhinia acuminata	Caesalpiniaceae	Vella mantharam	Shrub	5
14	Bauhinia purpurea	Caesalpiniaceae	Mandaram	Small	1
15	Bryonia retusa	Phyllanthaceae	Attacherukola	Shrub	1
16	Caesalpinia pulcherrima	Caesalpiniaceae	Swarna malli	Tree	7
17	Calamus rotang	Arecaceae	Chooral	Tree	1



Sl.no.	Botanical Name	Family	Vernacular Name	Habit	No of Trees
18	Calamus travancoricus	Arecaceae	Arichooral	Small	1
19	Cananga odorata	Annonaceae	Langi langi	Tree	2
20	Cassia fistula	Caesalpiniaceae	Kanikkonna	Tree	5
21	Cassia javanica	Caesalpiniaceae	Pink cassia	Large	2
22	Chasalia curviflora	Rubiaceae	Vellakurinji	Herb	1
23	Chlorophytum comosum	Asparagaceae	Spider plant	Herb	10
24	Chrysanthemum indicum	Asteraceae	Jamanthi	Herb	2
25	Cocos nucifera	Arecaceae	Thengu	Tree	18
26	Codiaeum variegatum	Euphorbiaceae	Croton	Shrub	7
27	Costus speciosus	Zingiberaceae	Channakkoova	Small herb	1
28	Couropita guinensis	Lecithidaceae	Nagalinkamaram	Large tree	1
29	Cuphea hyssopifolia	Lythraceae	False heather	Herb	2
30	Cycas circinalis	Cycadaceae	Eenth	Small tree	1
31	Cyclea peltata	Menispermaceae	Paadathali	Climber	1
32	Dalbergia latifolia	Fabaceae	Eetti, veetti	Large tree	1
33	Delonix regia	Caesalpiniaceae	Poomaram	Large tree	2
34	Diospyros buxifolia	Ebenaceae	Malamuringa	Tree	1
35	Durio zibethinus	Malvaceae	Durian fruit	Tree	1
36	Dypsis lutescens	Palmae	Yellow palm	Tree	1
37	Epipremnum pinnatum	Arecaceae	Aanamakudam	Large climber	1
38	Ervattamia divaricata	Apocyanaceae	Nandyarvattam	Shrub	7
39	Eugenia jambolana	Myrtaceae	Champa	Tree	1
40	Eugenia malaccensis	Myrtaceae	Apple champa	Tree	1
41	Euphorbia milli	Euphorbiaceae	Euphorbia	Herb	6
42	Exoecaria cochinchinensis	Euphorbiaceae	Chinese croton	Shrub	8



Sl.no.	Botanical Name	Family	Vernacular Name	Habit	No of Trees
43	Ficus hispida	Moraceae	Paarakam,	Shrub	1
44	Flacourtia montana	Flacourtiaceae	Madhura loobi	Tree	1
45	Gmelina arborea	Verbenaceae	Kumizhu	Tree	1
46	Hibiscus rosasinensis	Malvaceae	Chembarathi		1
47	Hydrocleys nymphoides	Alismataceae	Watter poppy	Herb	2
48	Impatiens walleriana	Balsaminae	Kaasithumba	Herb	4
49	Indigofera tinctoria	Fabaceae	Neelamari	Shrub	1
50	Lagerstroemia speciosa	Lythraceae	Manimaruthu	Tree	5
51	Lantana camara	Verbenaceae	Aripoo, kongini	Shrub	4
52	Lemna perpusilla	Araceae	Duck weed	Aquatic herb	100
53	Leucaena leucocephala	Mimosaceae	Sibabul	Small	1
54	Licuala grandis	Arecaceae	Palm	Shrub	2
55	Litchi sinensis	Sapindaceae	Litchi	Tree	1
56	Macaranga peltata	Euphorbiaceae	Vatta, podiyeni, uzhunnundi	Small tree	6
57	Mangifera indica	Anacardiaceae	Maavu	Small	16
58	Mimusops elengi	Sapotaceae	Elengi	Large	2
59	Moringa oleifera	Moringaceae	Muringa	Tree	1
60	Myristica fragrans	Myristicaceae	Jaathi	Small	8
61	Naregamia alata	Meliaceae	Nilanaaragam	Herb	1
62	Nephelium lappaceum	Sapindaceae	Rambuttan	Tree	2
63	Nymphaea caerulea	Nymphaeaceae	Aambal	Aquatic	4
64	Ochlandra travancorica	Poaceae	Eetta	Tree	2
65	Ochna serratifolia	Ochnaceae	Mickey mouse	Shrub	1
66	Otacanthus caeruleus	Scrophulariaceae	Blue bird	Herb	12
67	Oxalis triangularis	Oxalidaceae	Oxalis	Herb	7
68	Peltophorum pterocarpum	Caesalpiniaceae	Coppershield, Charakkonna	Large tree	7
69	Pentalinon luteum B.F	Apocyanaceae	Wild allamanda	Climber	1
70	Pentas lanceolata	Rubiaceae	Pentas	Herb	7
71	Persea americana	Lauraceae	Avocado	Tree	1



Sl.no.	Botanical Name	Family	Vernacular Name	Habit	No of Trees
72	Phyllanthus acidus	Euphorbiaceae	Arinelli	Small tree	1
73	Phyllanthus emblica	Euphorbiaceae	Nelli	Small to medium	2
74	Pistia stratioides	Araceae	Poochandi	Aquatic	50
75	Pongamia pinnata	Fabaceae	Ungu	Medium	10
76	Portulaca grandiflora	Portulacaceae	Pathumani	Herb	27
77	P seuderanthemum crenulatum	Acanthaceae	Chattimulla	Shrub	1
78	Psidium guajava	Myrtaceae	Pera	Small	1
79	Pterocarpus marsupium	Fabaceae	Venga	Tree	1
80	Punica granatum	Lythraceae	Maathalam	Shrub	1
81	Rauwolfia tetraphylla	Apocyanaceae	Pambumkolli	Shrub	1
82	Rhaphidophora persuta	Araceae	Anamakudam	Climber	1
83	Rosa multiflora	Rosaceae	Rose	Shrub	25
84	Salvinia natans	Salviniaceae	African payal	Aquatic	100
85	Saraca asoka	Caesalpiniaceae	Asokam	Small tree	5
86	Spathyglottis plicata	Orchidaceae	Ground orchid	Herb	3
87	Spondias pinnata	Anacardiaceae	Ambazham	Tree	1
88	Sweitenia macrophylla	Meliaceae	Cheriyah mahagani	Medium tree	2
89	Sweitenia mahagoni	Meliaceae	Mahagani	Medium tree	14
90	Syzygium australe	Myrtaceae	Brush cherry	Medium tree	10
91	Syzygium cumini	Myrtaceae	Njaval	Large tree	2
92	Tabernaemontana divaricata	Apocyanaceae	Nandyarvattam	Shrub	4
93	Tabebuia argentea	Bignoniaceae	Golden bell	Small	2
94	Tamarindus indica	Caesalpiniaceae	Kolpuli	Large	2
95	Tecoma stans	Bignoniaceae	Manja kolambi	Small	6
96	Tectona grandis	Verbenaceae	Thekku	Large	1
97	Terminalia bellerica	Combretaceae	Thanni	Large tree	1



Sl.no.	Botanical Name	Family	Vernacular Name	Habit	No of Trees
98	Thunbergia grandiflora	Acanthaceae	Odichu kuthi	Herb	2
99	Tibouchina urvelliana	Melastomaceae	Melastoma	Shrub	31
100	Tithonia diversifoliaagray	Asteraceae	Manja kanjunni	Under shrub	1
101	Tradescantia spathacea	Commelinaceae	Purple heart	Herb	21
102	Tradescantia zebrina	Commelinaceae	Inch plant	Herb	17
103	Trema orientalis	Ulmaceae	Aamapetti	Small tree	1
104	Vinca major	Apocyanaceae	Savanaari	Herb	12
105	Vitex negundo	Verbenaceae	Karinochi	Small	1
106	Wattakkakka volubilis	Asclepiadaceae	Wattakkakkakkodi	Twiner	1
107	Zanthoxylum rhetsa	Rutaceae	Mullilam	Tree	1
108	Zephyranthes candida	Amaryllidaceae	Lilly	Herb	12

**Area 1B**

**Location: Auditorium, Garden (Mixed), Chemistry Block. Basketball court, Tennis Court, AC Seminar Hall, NSS garden Valley**

Sl.no.	Botanical Name	Family	Vernacular Name	Habit	No of Trees
1	Abelmoschus rugosus	Malvaceae	Mulaku Chembarathi	Shrub	2
2	Acacia longifolia	Mimosaceae	Acacia	Tree	1
3	Acacia mangium	Mimosaceae	Mangium	Tree	3
4	Aegle marmelos	Rutaceae	Koovalam	Tree	1
5	Ailanthus malabaricus	Simaroubaceae	Matti	Tree	6
6	Alstonia scholaris	Apocyanaceae	Ezhilampala	Tree	4
7	Anacardium occidentale	Anacardiaceae	Kasumaavu	Medium tree	1



Sl.no.	Botanical Name	Family	Vernacular Name	Habit	No of Trees
8	Annona muricata	Annonaceae	Mullatha	Small	1
9	Aquillaria malaccensis	Ebenaceae	Akil	Small tree	1
10	Artocarpus heterophylla	Moraceae	Plaavu	Large tree	6
11	Artocarpus hirsutus	Moraceae	Aini plavu	Large	4
12	Azadirachta indica	Meliaceae	Aaryavepu	Tree	2
13	Bambusa bamboo	Poaceae	Mula	Tree	6
14	Bambusa ventricosa	Poaceae	Budha mula	Tree	1
15	Bambusa vulgaris	Poaceae	Manja mula	Tree	6
16	Bauhinia acuminata	Caesalpiniaceae	Vella mantharam	Shrub	2
17	Bauhinia finicea	Caesalpiniaceae	Valli mantharam	Shrub	1
18	Bauhinia purpurea	Caesalpiniaceae	Mandaram	Small	2
19	Blumea lacera	Asteraceae	Anachuvadi	Herb	1
20	Borassus flabellifer	Arecaceae	Chethu pana	Tree	1
21	Bougainvillea spectabilis	Nyctaginaceae	Kadalaasu poov	Shrub	3
22	Bridelia retusa	Phyllanthaceae	Mullu veng	Tree	4
23	Brownea grandiceps	Fabaceae	Broenea	Shrub	3
24	Caesalpinia coriaria	Caesalpiniaceae	Divi divi	Tree	5
25	Caesalpinia pulcherrima	Caesalpiniaceae	Swarna malli	Tree	1
26	Caesalpinia sappan	Caesalpiniaceae	Pathimugam,	Small	1
27	Calamus rotang	Arecaceae	Arichooral	Small shrub	1
28	Calliandra haemetocephala	Mimosaceae	Powder puff, udayasooran	Small tree	1
29	Callistimon lanceolatus	Myrtaceae	Bottle brush	Tree	1
30	Carallia brachiata	Rhizophoraceae	Varangu	Tree	1
31	Caryota urens	Arecaceae	Anappana	Tree	1
32	Cassia fistula	Caesalpiniaceae	Kanikkonna	Tree	2
33	Cassia javanica	Caesalpiniaceae	Pink cassia Rainbow tree	Large tree	3
34	Casuarina equisetifolia	Casuarinaceae	Choola maram,	Tree	2
35	Ceratophyllum demersum	Ceratophyllaceae	Kaimbayal	Aquatic herb	1



Sl.no.	Botanical Name	Family	Vernacular Name	Habit	No of Trees
36	Chrysanthemum indicum	Asteraceae	Jamanthi	Herb	1
37	Cinnamomum verum	Lauraceae	Vayana	Small	2
38	Cocchlospermum religiosum	Bixaceae	Appa kudukka	Tree	3
39	Cocos nucifera	Arecaceae	Thengu	Tree	1
40	Codiaeum variegatum	Euphorbiaceae	Croton	Shrub	54
41	Colubrina oppositifolia	Rhamnaceae		Shrub	2
42	Couropita guinensis	Lecithidaceae	Nagalinkamaram	Large tree	2
43	Cryptostegia grandiflora	Apocyanaceae	`Rubber valli	Climber	1
44	Cycas circinalis	Cycadaceae	Eenth	Small	3
45	Cyclea peltata Hoarf	Menispermaceae	Paadathali	Climber	1
46	Dalbergia latifolia	Fabaceae	Eetti, veetti	Large tree	11
47	Diospyros buxifolia	Ebenaceae	Malamuringa	Tree	1
48	Dracaena marginata	Dracaenaceae	Dragon plant	Shrub	4
49	Duranta erecta	Verbenaceae	Durantha	Shrub	1
50	Elaeis guinensis	Palmae	Ennapana	Tree	2
51	Enterolobium saman	Mimosaceae	Mazha maram	Large tree	1
52	Ervattamia divaricata	Apocyanaceae	Nandyarvattam	Shrub	3
53	Evolvulus numularis	Convolvulaceae	Vishnukranthi	Herb	5
54	Ficus benjamina	Moraceae	Aal	Large tree	5
55	Ficus chakla	Moraceae	Chela	Large tree	1
56	Ficus elastica	Moraceae	Indian rubber	Tree	3
57	Ficus Hispida	Moraceae	Paarakam,	Shrub	1
58	Filicium disipiens	Sapindaceae	Fern tree	Tree	1
59	Flacourtia montana	Flacourtiaceae	Madhura loobi	Tree	3
60	Garcinia gummigutta	Clusiaceae	Kudampuli	Tree	3
61	Glyricidia sepium	Fabaceae	Seema konna,		2
62	Gmelina arborea	Verbenaceae	Kumizhu	Tree	2
63	Haemelia patens	Rubiaceae	Haemelia	Shrub	3
64	Heliconia wagneriana	Zingiberaceae	Helicornia	Herb	6



Sl.no.	Botanical Name	Family	Vernacular Name	Habit	No of Trees
65	Hibiscus rosasinensis	Malvaceae	Chembarathi	Shrub	15
66	Holarrena antidysentrica	Apocyanaceae	Kudakappala	Tree	1
67	Hydrilla verticillata	Hydrocharitaceae	Hydrilla	Aquatic herb	20
68	Impatiens walleriana	Balsaminae	Kaasithumba	Herb	2
69	Ixora coccinea	Rubiaceae	Chethi	Shrub	12
70	Jacaranta mimosifolia	Bignoniaceac	Jacarantha	Tree	3
71	Jasminum latifolium	Oleaceae	Pichakam	Shrub	1
72	Jasminum multiflorum	Oleaceae	Mulla	Shrub	1
73	Lagerstroemia speciosa	Lythraceae	Manimaruthu	Tree	14
74	Lantana camara	Verbenaceae	Aripoo, kongini	Shrub	3
75	Leucaena leucocephala	Mimosaceae	Sibabul	Small	1
76	Licuala grandis	Arecaceae	Palm	Shrub	1
77	Ludwegia sedioides	Capparidaceae	Mosaic plant	Aquatic herb	1
78	Macaranga peltata	Euphorbiaceae	Vatta, podiyeni, uzhunnundi	Small tree	6
79	Mallotus alba	Rubiaceae	Chindooram	Tree	2
80	Mangifera indica	Anacardiaceae	Maavu	Small tree	9
81	Mansoa alliacea	Bignoniaceae	Veluthullicheddi	Twiner	1
82	Mesua ferrea	Clusiaceae	Nagamaram, irul	Tree	2
83	Michelia champaka	Annonaceae	Chempakam	Large tree	2
84	Millingtonia hortensis	Bignoniaceae	Cork tree	Tree	4
85	Mimusops elengi	Sapotaceae	Elengi	Large tree	6
86	Morinda umbellata	Rubiaceae		Climbing	1
87	Murayya exotica	Rutaceae	Maramulla	Small	1
88	Mussenda erythrophylla	Rubiaceae	Mussenda	Shrub	3
89	Mussenda frondosa	Rubiaceae	Vellilam	Shrub	2
90	Naregamia alata	Meliaceae	Nilanaaragam	Herb	1
91	Neolamarkia cadamba	Rubiaceae	Kadambam	Small tree	1
92	Nerium oleander	Apocyanaceae	Arali	Shrub	2
93	Nymphaea caerulea	Nymphaeaceae	Aambal	Aquatic	3



Sl.no.	Botanical Name	Family	Vernacular Name	Habit	No of Trees
94	Ochna serratifolia	Ochnaceae	Mickey mouse plant	Shrub	3
95	Olea dioica	Oleaceae	Karivetti	Tree	2
96	Pavetta indica	Rubiaceae	Pavatta	Tree	3
97	Peltophorum pterocarpum	Caesalpiniaceae	Coppershield, charakkonna	Large tree	34
98	Pereskia bleo D.C	Cactaceae	Leaf cactus	Shrub	2
99	Platycladus orientalis	Cupressaceae	Thuja	Tree	1
100	Plumeria alba	Apocyanaceae	Eezha champakam	Tree	3
101	Plumeria rubra	Apocyanaceae	Eezha champakam	Tree	3
102	Polyalthia longifolia	Annonaceae	Arana maram	Large tree	39
103	Pongamia pinnata	Fabaceae	Ungu	Medium sized tree	1
104	Psidium guajava	Myrtaceae	Pera	Small tree	1
105	Pterocarpus marsupium	Fabaceae	Venga	Tree	2
106	Pterocarpus santalinus	Fabaceae	Raktha chandanam	Tree	2
107	Pterospermum acerifolium	Sterculiaceae	Karnikaram	Tree	1
108	Roystonea regia	Arecaceae	Bottle palm	Tree	9
110	Sansevieria roxburghiana	Asparagaceae	Ammayamma naak	Herb	5
111	Santalum album	Santalaceae	Chandanam	Tree	1
112	Saraca asoka	Caesalpiniaceae	Asokam	Small tree	3
113	Schefflera actinophylla	Araliaceae	Octopus tree	Tree	1
114	Simarouba glauca	Simaroubaceae	Lakshmi ttha	Tree	3
115	Spathoglottis plicata	Orchidaceae	Ground orchid	Herb	3
116	Sweitenia mahagoni	Meliaceae	Mahagani	Medium tree	78



Sl.no.	Botanical Name	Family	Vernacular Name	Habit	No of Trees
117	Syzygium cumini	Myrtaceae	Njaval	Large tree	2
118	Tabebuia argentea	Bignoniaceae	Golden bell	Small	6
119	Tamarindus indica	Caesalpiniaceae	Kolpuli	Large tree	6
120	Tecoma stans	Bignoniaceae	Manja kolambi	Small	1
121	Tectona grandis	Verbenaceae	Thekku	Large tree	26
122	Terminalia arjuna	Combretaceae	Neermaruthu	Large tree	8
123	Terminalia bellerica	Combretaceae	Thanni	Large tree	6
124	Terminalia catappa	Combretaceae	Badam, thallithenga	Tree	4
125	Thevetia polyfolia	Apocyanaceae	Manja arali	Shrub	2
126	Trema orientalis	Ulmaceae	Aamapetti	Small tree	1
127	Turnera subulata	Passifloraceae	Kalampotti	Herb	7
128	Utricularia aurea	Lentibulariaceae	Bladder wort	Aquatic herb	3
129	Vallisneria natans	Hydrocharitaceae	Eel plant	Aquatic herb	4
130	Vateria indica	Dipterocarpaceae	Kunthirikkam	Tree	1
131	Vinca major	Apocyanaceae	Savanaari	Herb	7
132	Wedelia trilobata	Asteraceae	Manja kanjunni	Runner	17
133	Wrightia tinctoria	Apocyanaceae	Dantha paala	Small	2
134	Zanthoxylum rhetsa	Rutaceae	Mullilam	Tree	3
135	Zephyranthes candida	Amaryllidaceae	Lilly	Herb	5

**Area 1C**

**Location: Administrative Block, Zoology Block, Fruit Garden, Hotel Management, Commerce Block, Botany, Canteen**

Sl.no	Botanical Name	Family	Vernacular Name	Habit	No of Trees
1	Abrus precatorious	Fabaceae	Kunnikkuru	Climber	1
2	Acacia longifolia	Mimosaceae	Acacia	Tree	30
3	Acacia mangium	Mimosaceae	Mangium	Tree	7
4	Achras sapota	Sapotaceae	Sapota	Small tree	2
5	Albiziasp.	Mimosaceae		Tree	7
6	Alstonia scholaris	Apocyanaceae	Ezhilampala	Tree	2
7	Anacardium occidentale	Anacardiaceae	Kasumaavu	Medium	3
8	Annona muricata	Annonaceae	Mullatha	Small tree	1
9	Annona reticulata	Annonaceae	Aatha chakka	Small tree	1
10	Annona squamosa	Annonaceae	Seethapazham	Small tree	2
11	Artocarpus heterophylla	Moraceae	Plaavu	Large tree	1
12	Artocarpus hirsutus	Moraceae	Aini plavu	Large tree	19
13	Bambusa bambos	Poaceae	Mula	Tree	1
14	Bauhinia finicea	Caesalpiniaceae	Valli mantharam	Shrub	1
15	Blumea lacera	Asteraceae	Anachuvadi	Herb	5
16	Caesalpinia coriaria	Caesalpiniaceae	Divi divi	Tree	2
17	Carallia brachiata	Rhizophoraceae	Varangu	Tree	6
18	Caryota urens	Arecaceae	Anappana	Tree	3
19	Cassia fistula	Caesalpiniaceae	Kanikkonna	Tree	1
20	Cassia javanica	Caesalpiniaceae	Pink cassia Rainbow tree	Large tree	2
21	Cassia siamea	Caesalpiniaceae	Cassia	Tree	1
22	Cinnamomum verum	Lauraceae	Vayana	Small tree	1
23	Citrus maxima	Rutaceae	Babloos	Tree	1



Sl.no	Botanical Name	Family	Vernacular Name	Habit	No of Trees
24	Costus speciosus	Zingiberaceae	Channakkoova	herb	1
25	Dillenia indica	Dilleniaceae	Elephant apple	Small tree	1
26	Enterolobium saman	Mimosaceae	Mazha maram	Large tree	1
27	Eugenia jambolana	Myrtaceae	Champa	Tree	1
28	Eugenia malaccensis	Myrtaceae	Apple champa	Tree	2
29	Eugenia uniflora	Myrtaceae	Surinam cherry	Small tree	1
30	Ficus benamina	Moraceae	Aal	Large	1
31	Ficus chakla	Moraceae	Chela	Large tree	2
32	Ficus Hispida	Moraceae	Paarakam,	Shrub	16
33	Flacourtia jangomas	Flacourtiaceae	Loobi	Tree	1
34	Flacourtia montana	Flacourtiaceae	Madhura loobi	Tree	1
35	Garcinia gummigutta	Clusiaceae	Kudampuli	Tree	4
36	Garcinia mangostana	Clusiaceae	Mangosteen	Tree	1
37	Glyricidia sepium	Fabaceae	Seema konna,		6
38	Hugonia mystax	Rhamnaceae	Mothiravalli	Climber	1
39	Jacaranta mimosifolia	Bignoniaceae	Jacarantha	Tree	2
40	Leea indica	Vitaceae	Njallu	Shrub	1
41	Livistona chinensis	Palmae	Fan palm	Tree	3
42	Macaranga peltata	Euphorbiaceae	Vatta, podiyeni, uzhunnundi	Small tree	43
43	Mangifera indica	Anacardiaceae	Maavu	Small tree	18
44	Memecylon umbellatum	Melastomaceae	Kayampoo	Shrub	1
45	Morus alba	Moraceae	Mulberry	Shrub	1
46	Neolamarkia cadamba	Rubiaceae	Kadambam		1
47	Nephelium lappaceum	Sapindaceae	Rambuttan	Tree	1
48	Odina wodier	Anacardiaceae	Kalashu	Tree	1
49	Olea dioica	Oleaceae	Karivetti	Tree	16
50	Peltophorum pterocarpum	Caesalpiniaceae	Coppershield, charakona	Large tree	61
51	Phyllanthus emblica	Euphorbiaceae	Nelli	Small to medium tree	4



Sl.no	Botanical Name	Family	Vernacular Name	Habit	No of Trees
52	Pongamia pinnata	Fabaceae	Ungu	Medium sized	3
53	Pouteria campuchiana	Sapotaceae	Mutta pazham	Small tree	1
54	Premma latifolia	Verbinaccae	Kozhi appa	Shrub	1
55	Pachira aquatica	Malvaceae	Malabar chest nut	Small tree	4
56	Psidium guajava	Myrtaceae	Pera	Small tree	2
57	Pterocarpus marsupium	Fabaceae	Venga	Tree	1
58	Roystonea regia	Arecaceae	Bottle palm	Tree	1
59	Spathodea campanulata	Bignoniaceae	Triumpet tree	Tree	5
60	Strychnos nuxvomica	Loganiaceae	Kaanjiram	Tree	2
61	Sweitenia mahagoni	Meliaceae	Mahagani	Medium tree	12
62	Syzygium caryophyllatum	Myrtaceae	Njara	Tree	3
63	Syzygium cumini	Myrtaceae	Njaval	Large tree	1
64	Syzygium zeylanicum	Myrtaceae	Poochappazham	Shrub	2
65	Tamarindus indica	Caesalpinaceae	Kolpuli	Large tree	1
66	Tectona grandis	Verbenaceae	Thekku	Large tree	13
67	Terminala paniculata	Combretaceae	Maruth	Large tree	3
68	Terminalia arjuna	Combretaceae	Neermaruthu	Large tree	1
69	Trema orientalis	Ulmaceae	Aamapetti	Small tree	27
70	Ziziphus mauritina	Rhamnaceae	Elantha	Shrub	1

**Area 1D****Location: New Block, Santhistal, Water tank, Boys Hostel, Jr. Hostel, Teak Forest,**

Sl. no.	Botanical Name	Family	Vernacular Name	Habit	No of Trees
1	Acacia longifolia	Mimosaceae	Acacia	Tree	3
2	Adenantha pavonina	Mimosaceae	Manchadi	Medium	2
3	Alstonia scholaris	Apocyanaceae	Ezhilampala	Tree	2
4	Anacardium occidentale	Anacardiaceae	Kasumaavu	Medium	2
5	Annona muricata	Annonaceae	Mullatha	Small tree	2
6	Aporosa cardiosperma	Euphorbiaceae	Vetti	Shrub	1
7	Artocarpus heterophylla	Moraceae	Plaavu	Large tree	33
8	Artocarpus hirsutus	Moraceae	Aini plavu	Large tree	6
9	Averrhoa bilimbi	Oxalidaceae	Irumban	Small tree	2
10	Azadirachta indica	Meliaceae	Aaryavepu	Tree	1
11	Bambusa bamboos	Poaceae	Mula	Tree	5
12	Bambusa tuldoidea	Poaceae	Mula	Tree	1
13	Caesalpinia sappan	Caesalpiniaceae	Pathimugam	Small tree	1
14	Cananga odorata	Annonaceae	Langi langi	Tree	2
15	Caryota urens	Arecaceae	Anappana	Tree	1
16	Ceiba pentandra	Bombacaceae	Poola panji	Tree	1
17	Cinnamomum verum	Lauraceae	Vayana	Small tree	1
18	Citharexylum spinosum	Verbenaceae	Parijatham	Tree	1
19	Citrus maxima	Rutaceae	Babloos	Tree	1
20	Cocos nucifera	Arecaceae	Thengu	Tree	2
21	Codiaeum variegatum	Euphorbiaceae	Croton	Shrub	5
22	Cola acuminata	Malvaceae	Kola nut	Tree	2
23	Dalbergia latifolia	Fabaceae	Eetti, veetti	Large tree	2
24	Delonix regia	Caesalpiniaceae	Poovaaka	Large tree	1
25	Dillenia pentagyna	Dilleniaceae	Vazha punna	Small tree	1
26	Eugenia jambolana	Myrtaceae	Champa	Tree	2
27	Evolvulus numularis	Convolvulaceae	Vishnukrant	Herb	5
28	Ficus hispida	Moraceae	Paarakam, Paaroth	Shrub	10
29	Glyricidia sepium	Fabaceae	Seema konna, pathal	Small tree	3



Sl. no.	Botanical Name	Family	Vernacular Name	Habit	No of Tree
30	Gmelina arborea	Verbenaceae	Kumizhu	Tree	3
31	Holoptelia integrifolia	Ulmaceae	Aaval	Tree	1
32	Macaranga peltata	Euphorbiaceae	Vatta, podiyeni, uzhunundi	Small tree	7
33	Mallotus alba	Euphorbiaceae	Chindoor	Tree	1
34	Mangifera indica	Anacardiaceae	Maavu	Small tree	18
35	Merrimia vitifolia	Convolvulaceae	Merrimia	Climber	10
36	Michelia champaka	Magnoliaceae	Chempakam	Large tree	2
37	Odina wodier	Anacardiaceae	Kalashu	Tree	1
38	Oroxylum indicum	Bignoniaceae	Palakapayya	Tree	1
39	Peltophorum pterocarpum Baker	Caesalpiniaceae	Coppershiel	Large tree	14
40	Polyalthia longifolia	Annonaceae	Arana	Large tree	2
41	Pongamia pinnata	Fabaceae	Ungu	Medium	12
42	Ricinus communis	Euphorbiaceae	Aavanakku	Shrub	1
43	Saraca asoka	Caesalpiniaceae	Asokam	Small tree	1
44	Spathodea campanulata	Bignoniaceae	Triumpet tree	Tree	1
45	Sweitenia macrophylla	Meliaceae	Cheriyahagani	Medium tree	1
46	Sweitenia mahagoni	Meliaceae	Mahagani	Medium tree	7
47	Syzygium cumini	Myrtaceae	Njaval	Large tree	1
48	Tabernamontana dichotama	Apocyanaceae	Kurudan paala	Small tree	1
49	Tamarindus indica	Caesalpiniaceae	Kolpuli	Large tree	3
50	Tectona grandis	Verbenaceae	Thekku	Large tree	9
51	Terminalia arjuna	Combretaceae	Neermaruthu	Large tree	2
52	Thespesia populnea	Malvaceae	Poovarasu	Tree	1
53	Trema orientalis	Ulmaceae	Aamapetti	Small tree	14
54	Vateria indica	Dipterocarpaceae	Kunthirikkam	Tree	2
55	Vitex negundo	Verbenaceae	Karinochi	Small tree	1

**Area II****Location: Football ground teak Forest, Bus stop side**

Sl. no.	Botanical Name	Family	Vernacular Name	Habit	No of Trees
1	Alstonia scholaris	Apocyanaceae	Ezhilampala	Tree	2
2	Annona reticulata	Annonaceae	Aatha chakka	Small tree	1
3	Artocarpus heterophylla	Moraceae	Plaavu	Large tree	12
4	Artocarpus hirsutus	Moraceae	Aini plavu	Large tree	13
5	Asystacia gangetica	Acanthaceae	Valliupudali	Herb	5
6	Azadirachta indica	Meliaceae	Aaryaveppu	Tree	2
7	Caryota urens	Arecaceae	Anappana	Tree	2
8	Cassia tora	Caesalpiniaceae	Takara	Herb	4
9	Chrysophyllum cainito	Sapotaceae	Velvet apple, star apple	Tree	1
10	Cinnamomum verum	Lauraceae	Vayana	Small tree	5
11	Enterolobium saman	Mimosaceae	Mazha maram	Large tree	4
12	Ficus benjamina	Moraceae	Aal	Large tree	1
13	Grewia tilifolia	Tileaceae	Kottakkaya	Shrub	1
14	Holoptelia integrifolia	Ulmaceae	Aaval	Tree	1
15	Jatropha integerrima	Euphorbiaceae	Jatropha	Shrub	1
16	Justicia simplex	Acanthaceae		Herb	5
17	Macaranga peltata	Euphorbiaceae	Vatta, podiyeni, uzhunnundi	Small tree	3
18	Mallotus alba	Euphorbiaceae	Chindooram	Tree	5
19	Mangifera indica	Anacardiaceae	Maavu	Small tree	8
20	Murayya koeniji	Rutaceae	Curryvepu	Small tree	1
21	Odina wodier	Anacardiaceae	Kalashu	Tree	1
22	Peltophorum pterocarpum	Caesalpiniaceae	Copershield, Charakkona	Large tree	5
23	Pennisetum polystachyom	Poaceae	Meesapullu	Herb	17
24	Polyalthia longifolia	Annonaceae	Arana maram	Large tree	2
25	Pongamia pinnata	Fabaceae	Ungu	Medium sized tree	1
26	Psidium guajava	Myrtaceae	Pera	Small tree	1



Sl. no.	Botanical Name	Family	Vernacular Name	Habit	No of Tree
27	Spathodea campanulata	Bignoniaceae	Trumpet tree	Tree	5
28	Sweitenia mahagoni	Meliaceae	Mahagani	Medium	2
29	Syzygium cumini	Myrtaceae	Njaval	Large tree	2
30	Tabernamontana dichotama	Apocyanaceae	Kurudan paala	Small tree	2
31	Tamarindus indica	Caesalpiniaceae	Kolpuli	Large tree	3
32	Tectona grandis	Verbenaceae	Thekku	Large tree	41
33	Trema orientalis	Ulmaceae	Aamapetti	Small tree	3

### Area III

#### Location: BPed dept, Forest Area, Ground, Athletic stadium, Girls' Hostel

Sl. no.	Botanical Name	Family	Vernacular Name	Habit	No of Trees
1	Acacia longifolia	Mimosaceae	Acacia	Tree	9
2	Artocarpus heterophylla	Moraceae	Plaavu	Large tree	23
3	Azadirachta indica	Meliaceae	Aaryaveppu	Tree	1
4	Bambusa bamboos	Poaceae	Mula	Tree	1
5	Bambusa vulgaris	Poaceae	Manja mula	Tree	9
6	Caesalpinia coriaria	Caesalpiniaceae	Divi divi	Tree	1
7	Caesalpinia sappan	Caesalpiniaceae	Pathimugam ,chapagamm	Small tree	1
8	Cassia fistula	Caesalpiniaceae	Kanikkonna	Tree	1
9	Cassia javanica	Caesalpiniaceae	Pink cassia Rainbow	Large tree	9
10	Cocos nucifera	Arecaceae	Thengu	Tree	6
11	Dalbergia latifolia	Fabaceae	Eetti, veetti	Large tree	2
12	Enterolobium saman	Mimosaceae	Mazha maram	Large tree	1
13	Eugenia jambolana	Myrtaceae	Champa	Tree	1
14	Glyricidia sepium	Fabaceae	Seema konna, pathal	Small tree	2
15	Gmelina arborea	Verbenaceae	Kumizhu	Tree	1
16	Grewia tilifolia	Tileaceae	Kottakaya	Shrub	1
17	Hopea parviflora	Dipterocarpaceae	Thampakam	Tree	1
18	Lagerstroemia speciosa	Lythraceae	Manimaruth	Tree	1



Sl. no.	Botanical Name	Family	Vernacular Name	Habit	No of Trees
19	Macaranga peltata	Euphorbiaceae	Vatta, podiyeni, uzhunudi	Small tree	2
20	Mangifera indica	Anacardiaceae	Maavu	Small tree	33
21	Murayya exotica	Rutaceae	Maramulla	Small tree	1
22	Nephelium lappaceum	Sapindaceae	Rambutan	Tree	1
23	Peltophorum pterocarpum	Caesalpiniaceae	Coppershield, Charakkonna	Large tree	1
24	Phyllanthus emblica	Euphorbiaceae	Nelli	Small to	1
25	Plumeria rubra	Apocyanaceae	Eezha champakam	Tree	3
26	Polyalthia longifolia	Annonaceae	Arana maram	Large tree	4
27	Pongamia pinnata	Fabaceae	Ungu	Medium	1
28	Psidium guajava	Myrtaceae	Pera	Small tree	4
29	Sapindus trifoliatus	Sapindaceae	Soap nut	Tree	1
30	Sclechera oleosa	Sapindaceae	Puvvam	Tree	2
31	Spathodea campanulata	Bignoniaceae	Triumpet tree	Tree	4
32	Sweitenia mahagoni	Meliaceae	Mahagani	Medium	2
33	Syzygium cumini	Myrtaceae	Njaval	Large tree	1
34	Tectona grandis	Verbenaceae	Thekku	Large tree	14
35	Terminalia catappa	Combretaceae	Badam, thallithenga	Tree	1
36	Trema orientalis	Ulmaceae	Aamapetti	Small tree	1
37	Xylia xylocarpa	Mimosaceae	Irul,	Tree	7

Table 6 LIST OF TREES



## Advantages of trees

1. **Maintain the equilibrium of air and food:** Humans and animals need food and oxygen and excrete carbon dioxide and water. The plants, algae, etc, in the forest use carbon dioxide and water and release or produce oxygen and food.
2. **Filter and store water, and drastically reduce storm-water runoff:** Forests filter and regulate the flow of water. The litter over the forest floor acts as a sponge which filters, stores and gradually releases the water to natural channels and ground water.
3. **Conserve valuable topsoil and reduce soil erosion:** A forest is like a protective green cloth over Mother Earth's fragile body.
4. **Conserve biodiversity and balance ecology:** In a natural environment, the populations of species are balanced to an optimum minimum level
5. **Reduce pollution:** Plants can remove and/or Phyto remediate pollutants and contaminants from soil and water.
6. **Arrest or reverse global warming:** Global warming can cause extinction of species, tropical cyclones, extreme weather, tsunamis, abrupt climatic change, sea level rise, increased human stress resulting in violence, etc. These are just a few of its catastrophic effects. Plants can lock CO<sub>2</sub> in their bodies to save our planet and the life on it.
7. **Acoustics of the college will give comfort zone for academic purpose.** : Green coverage around the building reduces the sound by absorption by leaves thus the echo and reverberation of sound will come down.

## 10. OXYGEN SUPPLIERS

Trees release oxygen when they use energy from sunlight to make glucose from carbon dioxide and water. Like all plants, trees also use oxygen when they split glucose back down to release energy to power their metabolisms. Averaged over a 24-hour period, they produce more oxygen than they use up; otherwise there would be no net gain in growth.

The following trees are giving 30% more oxygen as compared with other trees. The bamboo is considered as grass category but gives maximum amount of oxygen.

Malayalam Name	English Name	Botanical Name	Importance
<b>Aryaveppu</b>	Neem	Azadirachta indica	Ever green and suitable to us traditionally, Absorbs SO <sub>2</sub> , and Nitrogen and other pollutants
<b>Maruthu</b>	Maruthu	Terminalia arjuna	Important in Ayurveda, absorbs particulate matter along with CO <sub>2</sub>
<b>Njaval</b>	Jamun	Syzygium cumini	In Indian mythology it is called as Jamuna deep and absorbs SO <sub>2</sub> , Nitrogen, particulate matter
<b>Ezhilampala</b>	Devil's tree	Alstonia scholaris	Attracts honey bees and helps high pollination, absorbs pollutants
<b>Peraal</b>	Banyan	Ficus benghalensis	Highest oxygen supplier
<b>Aal</b>	Sacred fig	Ficus religiosa	In ficus family high oxygen supplier
<b>Curry Veppu</b>	Curry Tree	Murraya koenigii	Used in kitchen for helping digestion and toxin removal from air
<b>Asoka</b>	Asoka	Saraca asoka	Absorbs particulate matter and suitable for most areas
<b>Mula</b>	Bamboo	Bambusa bambos	Highest oxygen supplier, can be used as boundary or as cluster.

Table 7 LIST OF OXYGEN GENERATING PLANTS



## 11. OXYGEN PARK

Green space in the college where you can go for morning and evening walks, as well as for picnics. Oxygen Park is a location where we can rest and release all our stress naturally. This aesthetic location with ample ventilation takes us to heaven on earth. This park is anything but regular with its many sections for picnic lovers, children, fitness enthusiasts, and just about anyone who wants to spend some quiet time amidst nature. Fitness enthusiasts, come here for some fresh air and undisturbed yoga sessions. Undisturbed nature enhances your creativity due to the feeling of comfort to the mind along with abundant supply of oxygen.



Table 8 OXYGEN PARK



## 12. SILENT ZONE

Nowadays, silent zones are getting important in academic institutions. Noise pollution leads to stress and other medical and neurotic problems in children. Besides, creativity and knowledge absorption capacity is also going down. For reduction of academic stress level there is a place for complete relaxation. This is the importance of silence zone. Christ College has aerated certain silent zones in the college itself. Natural silence zones are also created in the college campus where there is no sound other than natural sound.



Figure 8 SILENT ZONE



### 13. CARBON SEQUESTRATION

Sustainably managed forests play an important role in mitigating climate change by taking carbon out of the atmosphere and storing it, as well as providing society with a natural and renewable resource

Carbon is cycled through ecosystems in several different forms. It has a tendency to be attracted to oxygen and form gaseous compounds such as carbon dioxide (CO<sub>2</sub>) and carbon monoxide (CO) which in high concentrations can be considered air pollutants and play a role in climate change. Carbon dioxide gas can be removed from the atmosphere by trees through photosynthesis. This process involves plant cells converting the carbon from carbon dioxide to a solid form in sugars (the carbohydrates glucose and starch) that can be stored in leaves, stems, trunks, branches and roots, and contribute to tree growth. Oxygen is released back into the atmosphere as a by-product of photosynthesis which animals depend upon for survival.

Starch is also stored in reproductive tissue including flowers, fruit, nuts, pods or cones, while glucose is used in respiration to help keep the tree alive. Cellulose is another sugar manufactured by the plant and is particularly important in plant cell walls to help maintain structure and keep plants upright. Wood is around 40% cellulose. Carbon constitutes approximately 50% the dry mass of trees and when wood from these trees is used to produce wood products the carbon is stored for life in that product. Carbon stored in wood is only released back to the atmosphere when the wood product is burnt or decays. The amount of carbon stored in trees depends on a number of things including tree species, growth conditions in the environment, age of tree and density of surrounding trees

#### **Calculation Methode adopted for carbon content in trees.**

The rate of carbon sequestration depends on the growth characteristics of the tree species, The conditions for growth where the tree is planted, and the density of the tree's wood.

1. Determine the total (green) weight of the tree.
2. Determine the dry weight of the tree.
3. Determine the weight of carbon in the tree.
4. Determine the weight of carbon dioxide sequestered in the tree
5. Determine the weight of CO<sub>2</sub> sequestered in the tree per year

For determine the Total weight of tree

$$W = 0.15D^2H$$

#### **Determine the dry weight of the tree**

To determine the dry weight of the tree, multiply the weight of the tree by

72.5%

**Determine the weight of carbon in the tree**

The average carbon content is generally 50% of the tree's total volume.<sup>5</sup> Therefore, to Determine the weight of carbon in the tree, multiply the dry weight of the tree by 50%.

**Determine the weight of carbon dioxide sequestered in the tree**

CO<sub>2</sub> is composed of one molecule of Carbon and 2 molecules of Oxygen.

The atomic weight of Carbon is 12.001115.

The atomic weight of Oxygen is 15.9994.

The weight of CO<sub>2</sub> is C+2\*O=43.999915.

The ratio of CO<sub>2</sub> to C is 43.999915/12.001115=3.6663.

Therefore, to determine the weight of carbon dioxide sequestered in the tree, multiply the Weight of carbon in the tree by 3.6663.

**Area wise**

Area	Location	CO <sub>2</sub> Sequestration (Kg)
<b>1A</b>	Monastery, Garden (Girls), Retiring Room, Monastery Room	21837
<b>B</b>	Auditorium, Garden (Mixed), Chemistry Block. Basketball court, Tennis Court, AC Seminar Hall, NSS garden Valley	13950
<b>C</b>	Administrative Block, Zoology Block, Fruit Garden, Hotel Management, Commerce Block, Botany, Canteen	11287
<b>D</b>	New Block, Santhistal, Water tank, Boys Hostel, Jr. Hostel, Teak Forest,	23454
<b>Area 2</b>	Football ground teak Forest, Bus stop side	18281
<b>Area 3</b>	B. Ed dept, Forest Area, Ground, Athletic stadium, Girls Hostel	29880
<b>Total</b>		<b>118689</b>

**TABLE 9 AREA WISE CARBON SEQUESTRATION**

**Tree Wise**

Sl No:	Vernacular Name of Tree	Name of tree	CO <sub>2</sub> Sequestration total (Kg)
1	Acacia	Acacia longifolia	1600
2	Mangium	Acacia mangium	960
3	Sapota	Achras sapota	55
4	Manchadi	Adenanthera pavonina	846
5	Koovalam	Aegle marmelos	18
6	Matti	Ailanthus malabaricus	1104
7	Ezhilampala	Alstonia scholaris	1346
8	Kasumaavu	Anacardium occidentale	270
9	Mullatha	Annona muricata	170
10	Aatha chakka	Annona reticulata	74
11	Seethapazham	Annona squamosa	6.1
12	Kavungu	Areca catechu	160
13	Plaavu	Artocarpus heterophylla	4000
14	Aini plavu	Artocarpus hirsutus	1304
15	Valliupudali	Asystacia gangetica	65
16	Irumban puli	Averrhoa bilimbi	6
17	Aaryaveppu	Azadirachta indica	106
18	Mula	Bambusa bambos	102
19	Mula	Bambusa tuldoidea	702
20	Budha mula	Bambusa ventricosa	666
21	Vella mantharam	Bauhinia acuminata	532
22	Valli mantharam	Bauhinia finicea	18
23	Mandaram	Bauhinia purpurea	702
24	Chethu pana	Borassus flabellifer	410
25	Kadalaasu poov	Bougainvillea spectabilis	419
26	Mullu venga	Bridelia retusa	277
27	Broenea	Brownea grandiceps	12
28	Divi divi	Caesalpinia coriaria	271
29	Pathimugam, chappangam	Caesalpinia sappan	34
30	Bottle brush	Callistemon lanceolatus	70
31	Langi langi	Cananga odorata	22
32	Varangu	Carallia brachiata	510
33	Anappana	Caryota urens	500
34	Kanikkonna	Cassia fistula	1152
35	Pink cassia Rainbow tree	Cassia javanica	1409
36	Cassia	Cassia siamea	207
37	Choola maram, kaattadi	Casuarina equisetifolia	165
38	Poola panji	Ceiba pentandra	431
39	Velvet apple, star apple	Chrysophyllum cainito	22
40	Vayana	Cinnamomum verum	262



Sl No:	Vernacular Name of Tree	Name of tree	CO <sub>2</sub> Sequestration total (Kg)
41	Parijatham	Citharexylum spinosum	12
42	Babloos	Citrus maxima	22
43	Appa kudukka	Cocchlospermum religiosum	564
44	Thengu	Cocos nucifera	3072
45	Nagalinkamaram	Couropita guinensis Aublet	230
46	Eetti, veetti	Dalbergia latifolia	2794
47	Poovaaka	Delonix regia	764
48	Elephant apple	Dillenia indica	1273
49	Malamuringa	Diospyros buxifolia	360
50	Mazha maram	Enterolobium saman	1124
51	Champa	Eugenia jambolana	26
52	Apple champa	Eugenia malaccensis	6
53	Aal	Ficus benjamina	3280
54	Indian rubber plant	Ficus elastica	58
55	Fern tree	Filicium disipiens	27
56	Madhura loobi	Flacourtia montana	41
57	Kudampuli	Garcinia gummigutta	264
59	Seema konna, pathal	Glyricidia sepium	167
60	Kumizhu	Gmelina arborea	208
61	Kudakappala	Holarrena antidysentrica	58
62	Aaval	Holoptelia integrifolia	202
63	Thampakam	Hopea parviflora	49
64	Manimaruthu	Lagerstroemia speciosa	726
65	Sibabul	Leucaena leucocephala	23
66	Palm	Licuala grandis	10
67	Fan palm	Livistona chinensis	216
68	Vatta, Podiyeni, Uzhunnundi	Macaranga peltata	3690
69	Chindooram	Mallotus alba	26
70	Maavu	Mangifera indica	2006
71	Nagamaram, irul	Mesua ferrea	73
72	Chempakam	Michelia champaka	6400
73	Cork tree	Millingtonia hortensis	603
74	Elengi	Mimusops elengi	218
75	Rambuttan	Nephelium lappaceum	15
76	Eetta	Ochlandra travancorica	88
77	Kalashu	Odina wodier	300
78	Karivetti	Olea dioica	62
79	Palakapayyani	Oroxylum indicum	53
80	Coppershield, charakkonna	Peltophorum pterocarpum	9341
81	Nelli	Phyllanthus emblica	58



Sl No:	Vernacular Name of Tree	Name of tree	CO <sub>2</sub> Sequestration total (Kg)
82	Eezha champakam	Plumeria alba	111
83	Eezha champakam	Plumeria rubra	1706
84	Arana maram	Polyalthia longifolia	2040
85	Ungu	Pongamia pinnata	35
86	Mutta pazham	Pouteria campuchiana	24
87	Malabar chest nut	Psachira aquatica	82
88	Pera	Psidium guajava	933
89	Venga	Pterocarpus marsupium	115
90	Raktha chandanam	Pterocarpus santalinus	464
91	Karnikaram	Pterospermum acerifolium	154
92	Bottle palm	Roystonea regia	6
93	Chandanam	Santalum album	137
94	Soap nut	Sapindus trifoliatus	308
95	Soap nut	Sapindus trifoliatus	46
96	Asokam	Saraca asoka	59
97	Octopus tree	Schefflera actinophylla	267
98	Lakshmi tharu	Simarouba glauca	86
99	Triumpet tree	Spathodea campanulata	5497
100	Ambazham	Spondias pinnata	10265
101	Cheriya mahagani	Sweitenia macrophylla	25
102	Mahagani	Sweitenia mahagoni	564
103	Brush cherry	Syzygium australe	239
104	Njaval	Syzygium cumini	1066
105	Golden bell	Tabebuia argentea	32
106	Kolpuli	Tamarindus indica	19807
107	Manja kolambi maram	Tecoma stans	453
108	Thekku	Tectona grandis	943
109	Maruth	Terminalia paniculata	6258
110	Neermaruthu	Terminalia arjuna	278
111	Badam, thallithenga	Terminalia cattappa	16
112	Poovarasu	Thespesia populnea	510
113	Aamapetti	Trema orientalis	91
114	Dantha paala	Wrightia tinctoria	2680
115	Irul, irumullu	Xylia xylocarpa	513
116	Mullilam	Zanthoxylum rhetsa	25
117	Elantha	Ziziphus mauritina	300
	<b>Total</b>		<b>118689</b>

TABLE 10 TREE WISE CARBON SEQUESTRATION



## 14. PETS AND BIRDS

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Animals play an important role in people's lives. Many studies indicate that pets reduce anxiety and blood pressure. Findings suggest that the social support to a pet makes a person feel more relaxed and reduces stress. Pet help to develop great empathy, higher self-esteem, and increases participation in social and physical activities. This promotes students' emotional development.

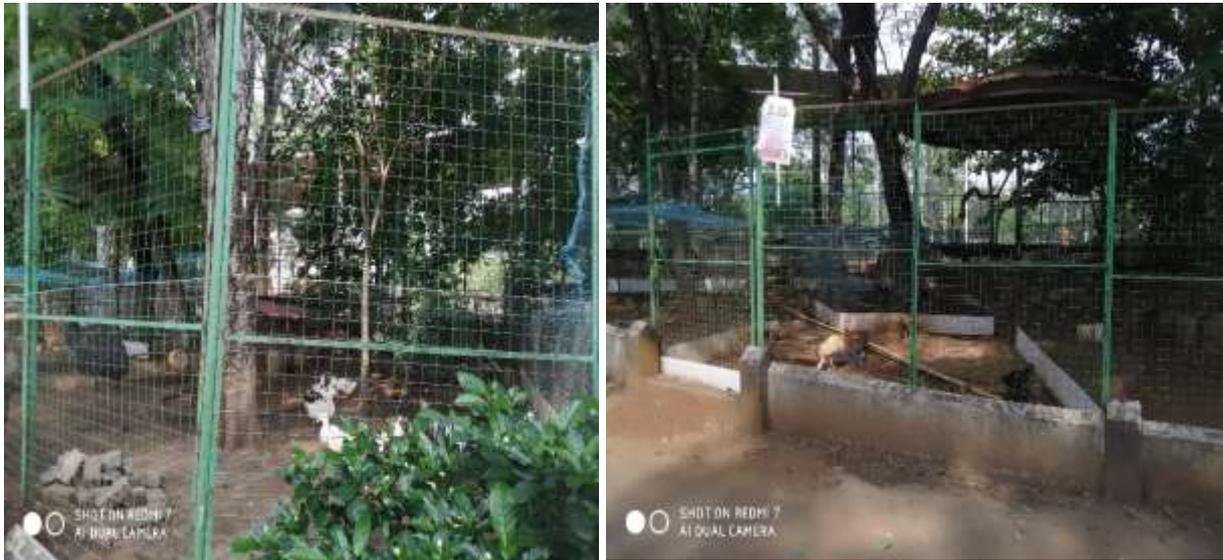


Figure 9 PETS AND BIRDS

## 15. SPECIAL INITIATIVES OF COLLEGE

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### ***I. DISABLED FRIENDLY:***

Disability is only disabling when it prevents someone from doing what they want or need to do. Government of India signed the UNCRPD (United Nations Convention on the Right of Persons with Disabilities) on 1st October 2007. In this article 9 says about the requirements of disabled persons on accessibility to buildings. As per the signed UNCRPD Indian Parliament passed an act as RPD (Right to Persons Disability) act on March 2016. As per new act, all buildings should have ramps at the entry, exit, lifts for higher floors, separate toilet with suitable arrangements such as hand rails etc.

### ***II. PARKING BAY FOR VEHICLES"***

To avoid air pollution vehicles are not allowed in the campus, but they are parked in the parking area, reasonably away from college buildings.



## RECOGNITIONS TO THE COLLEGE

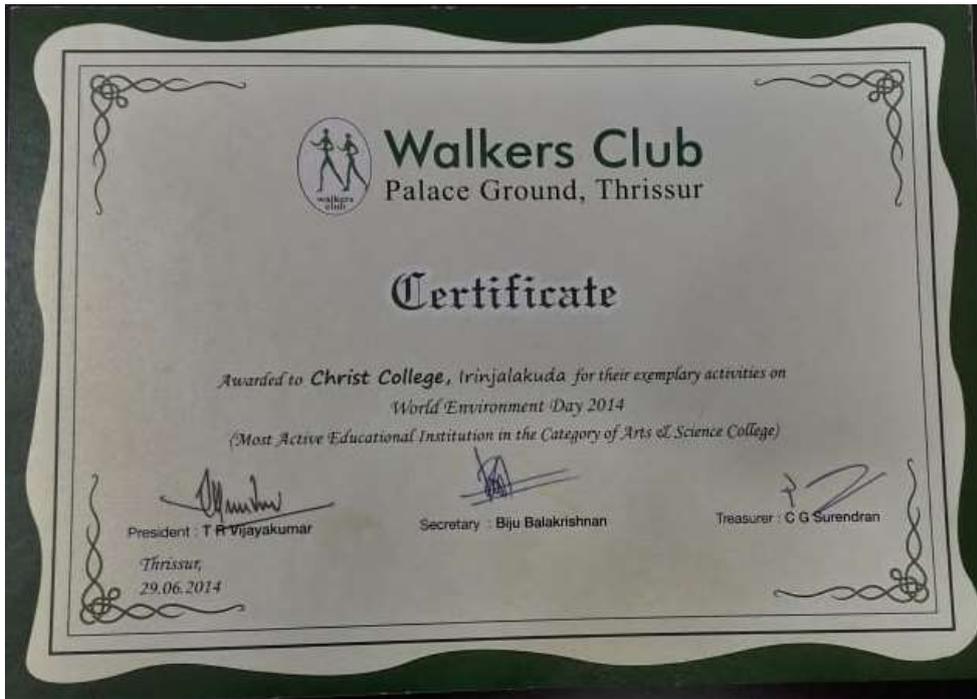


Figure 10 CERTIFICATE FROM WALKERS CLUB



Figure 11 GREEN CAMPUS AWARD FROM UNIVERSITY OF CALICUT



Figure 12 GREEN CAMPUS AWARD FROM KERALA STATE BIODIVERSITY BOARD



## CONCLUSION

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Green Audit is the most efficient & ecological way to solve an environmental problem. Green Audit is a kind of professional care which is the responsibility of each individual who is the part of economic, financial, social, environmental factor. Green audits can “add value” to the management approaches being taken by the college and is a way of identifying, evaluating and managing environmental risks (known and unknown). The green audit reports assist in the process of attaining an eco-friendly approach to the development of the college.

The auditors observed during the campus visit and after the conversation with the staff and students of M/s Christ College Irinjalakuda that they have taken continuous and considerable effort over several years for nurturing and maintaining the green coverage over the campus which is well appreciated by us. There is still opportunity to attain perfection through some of the identified suggestions listed in the executive summary.



ANNEXURE - 1

