



**JAYARAJ ANNAPACKIAM COLLEGE FOR WOMEN
(AUTONOMOUS)**
PERIYAKULAM – 625 601, THENI DISTRICT

GREEN AUDIT REPORT

2021 – 2022



DEPARTMENT OF ENVIRONMENTAL SCIENCES
Bishop Heber College (Autonomous)
Tiruchirappalli, Tamilnadu – 620 017

CAMPUS ENVIRONMENT AUDIT CERTIFICATE

Issued under the Green Campus Certification Process



JAYARAJ ANNAPACKIAM COLLEGE FOR WOMEN
(Autonomous),
Periyakulam, Theni District

Has successfully conducted the **GREEN AUDIT** in accordance with the Sustainable Development Goals (SDGs) and standards of regulatory agencies in India.

Based on the Scope of Green Audit we hereby acknowledge and certify that :

The Management, Teaching fraternity, students and support staff of the **Jayaraj Annapackiam College for Women (Autonomous)** have taken efforts to create a strategic change in attaining holistic Environmental Sustainability.

Period of Audit : 2021 - 2022

Date of Certification : 22 May 2022


Prof. A. Alagappa Moses
Ecology and Biodiversity Consultant
Functional Area Expert - NABET



CAMPUS ENVIRONMENT AUDIT

Centre for Environmental Sustainability
Department of Environmental Sciences
Bishop Heber College (Autonomous)
Tiruchirappalli, Tamilnadu

Towards Clean and Green Campus

GREEN AUDIT

CAMPUS GREEN AUDIT PERSONNEL

Prof. A. ALAGAPPA MOSES

Principal Consultant

Functional Area Expert (FAE)

Ecology and Biodiversity (EB)

(Accredited by Quality Council of India - NABET)

Category A Projects

(*vide AC MOM III, 2010*

New Delhi.

SA- 270th AC Meeting February 28 ,2020_Rev.01)

Vice Principal

Associate Professor and Head

Department of Environmental
Sciences

Bishop Heber College,

Dr. D. J. S. ANAND KARUNAKARAN

FAE - Land and Energy Audit

Associate Dean, IQAC

Associate Professor

Department of Physics

Bishop Heber College

Dr. V. ANAND GIDEON

FAE – Flora

Associate Professor and Head

Department of Botany

Bishop Heber College

Dr. D. UDHAYA BANU

FAE – Air, Waste & Hygiene Audit

Part V: Coordinator – Eco Restoration Services

Assistant Professor

Department of Environmental

Sciences,

Bishop Heber College

Dr. R. TENESON

FAE – Water, Food Audit

Part V: Coordinator – Student’s ExNoRa

Assistant Professor

Department of Environmental

Sciences

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Bishop Heber College



PREFACE

An Environmental Audit is a tool comprising a systematic, documented, periodic and objective evaluation of how well a project, organization or equipment is performing with the aim of helping to safeguard the environment. The audit should facilitate management control of environmental practices and assess compliance with policy objectives and regulatory requirements.

A clean and healthy environment aids effective learning and provides a conducive learning environment.

Green audit is an official examination of the effects a college on the environment. It helps to improve the existing practices with the aim of reducing the adverse effects of these on the environment concerned.

Higher Educational Institutions are committed to preserve the environment within the campus through promotion of energy savings, recycling of waste, water use reduction, water harvesting etc.

Green audit visualizes the documentation of all such activities taking stock of the infrastructure of the college, their academic and managerial policies and future plans in the form of an environmental audit report.

Green audit can be a useful tool for a college to determine how and where they are using the most energy or water or resources; the college can then consider how to implement changes and make savings. It can also be used to determine the type and volume of waste which can be used for a recycling project or to improve waste minimization plan. It can create health consciousness and promote environmental awareness, values and ethics. It provides staff and students better understanding of green impact on campus.

Green audit promotes financial savings through reduction of resource use. It gives an opportunity for the development of ownership, personal and social responsibility for the students and teachers. Thus, it is imperative that the college evaluate its own contributions toward a sustainable future. As environmental sustainability is becoming an increasingly important issue for the nation, the role of higher educational institutions in relation to environmental sustainability is more relevant.

The audit process in Jayaraj Annapackiam College, Periyakulam involved initial interviews with management to clarify policies, activities, records and the co-operation of staff and students in the implementation of mitigation measures. Staff and students were given training how to collect the data for the green audit process. This was followed by staff and student interviews, collection of data through the questionnaire-based survey, review of records, observation of practices and observable outcomes. In addition, the approach ensured that the management and staff are active participants in the green auditing process in the college.

The baseline data prepared for the College will be a useful tool for campus greening, resource management, planning of future projects, and a document for implementation of sustainable development of the college. Existing data will allow the college to compare its programs and operations with those of peer institutions, identify areas in need of improvement, and prioritize the implementation of future projects. The green audit reports assist in the process of attaining an eco-friendly approach to the sustainable development of the college.

The results presented in the green audit report will serve as a guide for educating the college community on the existing environment related practices and resource usage at the college as well as spawn new activities and innovative practices. The Green Audit team expects the management to express their commitment to implement the recommendations.




Prof. A. ALAGAPPA MOSES
Associate Professor & Head
Department of Environmental Sciences
BISHOP HEBER COLLEGE (Autonomous)
Tiruchirannalli - 620 017

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CHAPTER I

INTRODUCTION

Jayaraj Annapackiam College for Women (Autonomous), Periyakulam, renowned for its yeoman service in the field of Higher Education exclusively for women, was established on 5th July 1971. It is a pioneering institution committed to the cause of women empowerment through academic excellence and formation of character. Named after the parents of the donors, the philanthropic members of the illustrious family of Mr. Jayaraj & Mrs. Annapackiam, the college is run by the Sisters of St. Anne of Tiruchirappalli.

The college was affiliated to Madurai Kamaraj University, Madurai up to September 2002 and to Mother Teresa Women's University, Kodaikanal since October 2002.

Besides the unique distinction of being the FIRST AUTONOMOUS COLLEGE IN THENI DISTRICT, JAYARAJ ANNAPACKIAM COLLEGE FOR WOMEN enjoys the prestigious status of the FIRST GRADE COLLEGE among the Colleges affiliated to Mother Teresa Women's University, Kodaikanal.

The potential of the college manifested through academic excellence, productive and need based research and effective governance was duly recognized and rewarded with Institutional Autonomy in 2004 and has extended the autonomous status of the College for five years from 2018-2019. .

Recognition of UGC under Sec. 2(f) & Sec. 12(B) enabled the College to be brought into the purview of the schemes of financial assistance of UGC.

The college was supported by DST-FIST in the year 2015-16 to enrich the research activities in the college.

The College is the proud recipient of 8 prestigious National and State Level Awards.

The college received **Excellence in Swachh Bharat Summer Internship Programme - 2018** from Mother Teresa Women's University, Kodaikanal on completion of the summer internship programme by NSS

Volunteers, received certificate from the Ministry of Human Resource Development for **SWACHHTA RANKING 2017** and selected for Unnat Bharat Abhiyan scheme in the year 2018.

VISION

Empowerment of rural women to be the agents of social change and liberation of women, with special reference to the poor, the marginalized and the destitute, from all forms of shackles in life, through quality and value based education.

MISSION

Holistic formation of students by developing intellectual, emotional, physical, social, cultural and spiritual dimensions of their personalities, to make them competent, self-reliant, employable and service-oriented with love and faith and with the futuristic perspective of social transformation, ecological, national and global consciousness.

MOTTO OF JAC: “SERVE WITH LOVE”

The Luminant Lamp on the hillock signifies the College on Mount St. Anne, the beacon of knowledge dispelling fumes of darkness. The Open Book with the inscribed motto ‘Serve with Love’ highlights inculcation of Service through Love. The Sheaf of Grains symbolizes the mighty humanities while atom represents Titanic Science. The Cross and the Dove are the Symbols of sacrifice and the Prince of Peace for human redemption. The Crown denotes celestial benediction from the King of kings.

GOALS OF JAC

Besides academic excellence, the College aims at personalized education and strives to form spiritually inspired, morally upright, socially committed, academically excellent and intellectually honest women with an awareness of the dignity of womanhood, to face the challenges of the globalized world, taking their rightful place in developing a new world and to be instruments of Love, Peace and Justice.

COAT OF ARMS



Fig. 1 College Logo

The Luminant Lamp on the hillock signifies the College on Mount St. Anne, the beacon of knowledge dispelling fumes of darkness. The Open Book with the inscribed motto '**Serve with Love**' highlights inculcation of Service through Love. The Sheaf of Grains symbolizes the mighty humanities while atom represents Titanic Science. The Cross and the Dove are the Symbols of sacrifice and the Prince of Peace for human redemption. The Crown denotes celestial benediction from the King of kings.



Fig. 2 JAYARAJ ANNAPACKIAM COLLEGE FOR WOMEN

CHAPTER II

CAMPUS ENVIRONMENTAL AUDIT

2.1 Campus Environmental Audit

An Environmental Audit is a tool comprising a systematic, documented, periodic and objective evaluation of how well a project, organization or equipment is performing with the aim of helping to safeguard the environment. The audit should facilitate management control of environmental practices and assess compliance with policy objectives and regulatory requirements. (European Environment Agency, European Commission 1999, Brussels).

Environmental auditing is a systematic, documented, periodic and objective process in assessing an organization's activities and services in relation to:

- Assessing relevant statutory and internal requirements
- Facilitating understanding of good environmental practices
- Promoting good environmental management
- Maintaining credibility with the public/clients
- Raising staff awareness and commitment to departmental environmental policy
- Exploring improvement opportunities
- Establishing the performance baseline for developing good sustainable practices.

2.2 Green Audit towards Sustainable Development

Sustainable Development (SD) is one of the biggest challenges of the twenty-first century and there can be no sustainability where educational

institutions (Universities, Institutions of Higher Education, and Schools) promote un-sustainability. In modern society 'No institutions are better situated and more obliged to facilitate the transition to a sustainable future than schools, Colleges and Universities'.

Sustainable Development Goals (SDGs)

The 17 Sustainable Development Goals and 169 targets which has been proposed demonstrates the scale and ambition of this new universal agenda. They seek to build on the MDGs and complete has not been achieved. They seek to realize the human rights of all and to achieve gender equality and the empowerment of all women and Girls. They are integrated and in and indivisible and balance the three dimensions of Sustainable Development: the economic, social and environmental. The Goals and Targets will stimulate action over the next 15 years in areas of critical importance for humanity and the planet.



Fig. 3: SUSTAINABLE DEVELOPMENT GOALS

In spite of a number of SDGs and an ever increasing number of Universities / Institutions of Higher Educations and Schools becoming engaged with the principles and concepts of SD, especially in the developed world, most of them to be traditional in India.

2.3 Environmental Audit

Environmental auditing has become a valuable tool in the management and monitoring of environmental and sustainable development programs. The information generated from audit exercise provides important information to many different stakeholders.

Although seen primarily as a tool in commerce and industry, creative application of environmental auditing techniques can improve transparency and communication in many areas of society where there is a need for greater understanding of environmental and ecosystem interactions. The environmental audit is a systematic process that must be carefully planned, structured and organized. As it is part of a long term process of evaluation and checking, it needs to be a repeatable process which can be readily replicated and can reflect change in both a quantitative and qualitative manner.

Universities and Colleges are regarded as “Small Cities” due to their size, population and the multifarious activities, which have some serious direct and indirect impacts on the local environment.

2.4 Campus Green Audit

The campus environmental audit is a common tool that many colleges and universities have employed in recent years. A campus environmental audit is both a summary and a report card for a campus and a way to evaluate where and how resources are being used. An environmental audit is also the first step in being able to quantify whether or not current and/or future environmental efforts are actually making a difference. As such, an environmental audit is the beginning of the sustainability planning process. The results can be used to quantify what kinds of impacts the campus community has on the environment and what steps the college can take to reduce these impacts.

2.5 Green Audit

Green Audit is defined as systematic identification, quantification, recording, reporting and analysis of components of environmental diversity. The 'Green Audit' aims to analyse environmental practices within and outside the Institute, which will have an impact on the eco-friendly ambience and sustainable ecosystem. It is a useful tool that can be used to understand existing practices and resource use to highlight the prospects of introducing resource efficiency in the ecosystem. Green audit provides cognizance on scope for improvement of environment and ecosystem of the campus. Thus, it is imperative that Jayaraj Annapackiam College for Women, Periyakulam, Theni District evaluate its own status on environmental sustainability and contributes towards sustainable future.

2.6 Pre Audit Stage

The process of Green Audit started with a pre-audit meeting that has provided an opportunity to reinforce the scope and objectives of the audit. The deliberations focused on the procedures to be followed in conducting the audit. This meeting is an important prerequisite for conducting green audit as it provides the first opportunity to meet and interact with the auditee and deal with any matters of concerns. The audit protocol and audit plan were discussed in detail and a Green Audit team was constituted with a staff adviser and student members.

- a) Preliminary literature review of concepts and methodologies related to green audit.
- b) Discussion with the management staff on various systems installed in the campus.
- c) Awareness creation and interaction with the staff and students on the concept of green audit. Walk through the entire campus to understand the nature of water use, energy use and waste management systems in the campus.

2.7 Commitment of the College

The College has shown the commitment and keen interest towards conducting green audit and encourages green practices. The College is committed towards Education for sustainability and implementation of sustainable strategies, reducing carbon foot print and effective utilization of waste into wealth.

2.8 Goals and Objectives

The goal of Green audit is *“Ensuring Environmental Sustainability (EES) through reducing environmental foot print such as carbon, water, food, and land, management and conservation of the natural resource base, and the orientation of Education for Sustainable Development (ESD) by evolving Institutional policies on various environmental attributes in such a manner as to ensure the attainment and continued satisfaction of human needs for present and future generations”*.

2.9 Objectives:

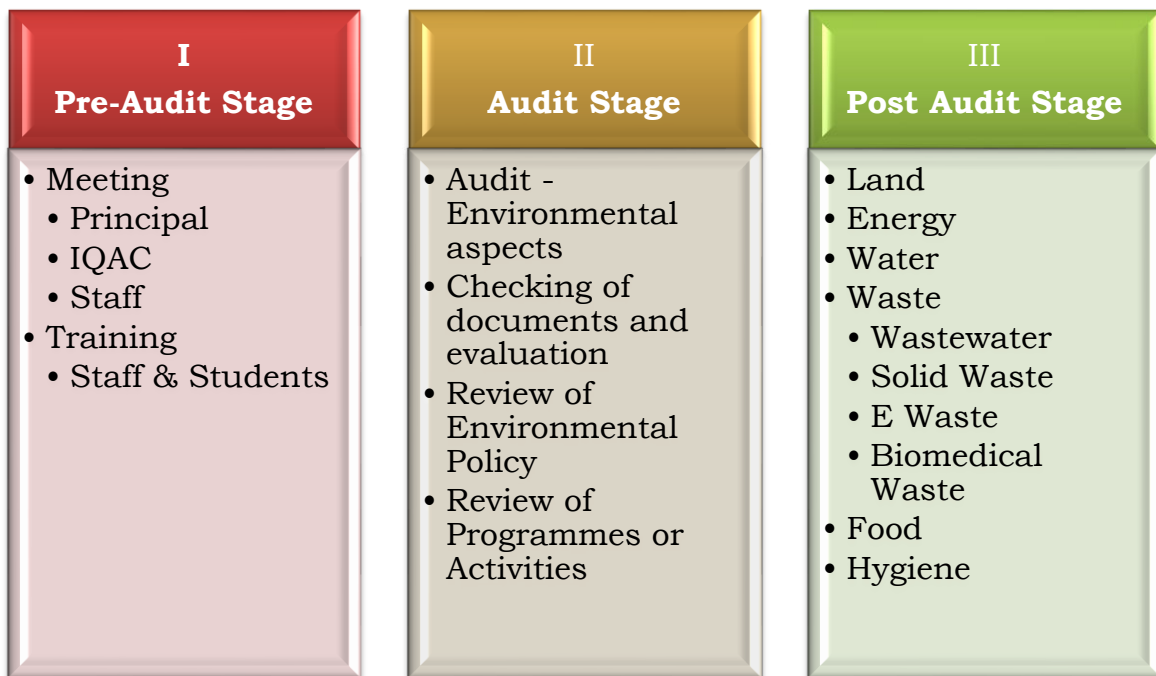
- To evolve institutional policies on various environmental attributes such as water, waste and sanitation and to assess the patterns of consumption of energy and water
- To measure the quantum of generation of wastes and hazardous substances
- To evaluate the level of awareness among the students regarding environmental resources
- To inculcate the concepts of 5 R principle such as Reduce, Refuse, Recover, Recycle and Repurpose among the stakeholders, thus making the organization as a better steward,
- To implement environmental management strategies so as to reduce overall environmental foot print.

2.10 Benefits of the Green Auditing

- More efficient resource management
- To provide basis for improved sustainability
- To create a green campus
- To enable waste management through reduction of waste generation, solid- waste and water recycling
- To create plastic free campus and evolve health consciousness among the stakeholders
- Recognize the cost saving methods through waste minimizing and managing
- Point out the prevailing and forthcoming complications
- Authenticate conformity with the implemented laws
- Empower the organizations to frame a better environmental performance
- Enhance the alertness for environmental guidelines and duties
- Impart environmental education through systematic environmental management approach and Improving environmental standards
- Benchmarking for environmental protection initiatives
- Financial savings through a reduction in resource use
- Development of ownership, personal and social responsibility for the College and its environment
- Enhancement of college profile
- Developing an environmental ethic and value systems in youngsters.
- Green auditing should become a valuable tool in the management and monitoring of environmental and sustainable development programs of the college.

2.11 Modules of Campus Green Audit

Campus Green Audit (CGA) is a process of resource management. They are individual modules carried out in a defined interval illustrating an overall improvement or change in the institution over a period of time. The concept of Eco-friendly campus mainly focuses on the efficient use of energy and water; minimize waste generation, economic efficiency and reduction in environmental foot print. All these indicators are assessed in the process of Campus Green Audit. The CGA promotes conservation energy, water and waste management. The audit stages are as follows:



Data Collection

- a. Development of questionnaire to identify all water/energy using fixtures/ equipment and examine water or energy use patterns for individual buildings in the campus.
- b. Collection of secondary data from compilation of electricity bills, collecting records of pumps, generators, water quality analysis reports, civil and electrical etc.
- c. Semi-structured interview with maintenance manager, technicians,

plumber and housekeeping staff on current situation and the past trends in water consumption, electricity consumption, waste management, waste generation etc.

II. Data Processing and analysis

The existing trends and patterns in water usage, energy usage and waste generation and management is analyzed in this step from the data collected from the previous step.

III. Audit Recommendations and Reporting

Recommendation – On the basis of results of data analysis and observations, some steps for reducing power and water consumption were recommended. Proper treatments for waste were also suggested. Use of fossil fuels has to be reduced for the sake of community health.



Pre-Audit Meeting with Secretary



Pre-Audit Meeting with the The Principal



Welcome Address



Environment Audit Prof. Alagappa Moses



Green Audit Dr. V. Anand Gideon



Energy Audit Dr. Anand Karunakaran



Participants of the Environmental Audit Orientation Programme

CHAPTER III

METHODOLOGY

3.1 Campus Green Audit Methods

The Campus Green Audit is an exercise that ensure the extent of implementation green policies adopted by the institution. The methodologies for the green audit are as follows:

1. Preparation of Campus Green Audit questionnaire based on the objectives
2. Constitution of Campus Green Audit Team with staff and students for each module
3. Data Collection:
 - a. Primary Data collection for each module by respective teams
 - b. Secondary Data collection by the team members
 - c. Collection of samples, observation, interviews and discussion with various staff members
 - d. Steps in primary and secondary data collection

3.2 Green Audit Components

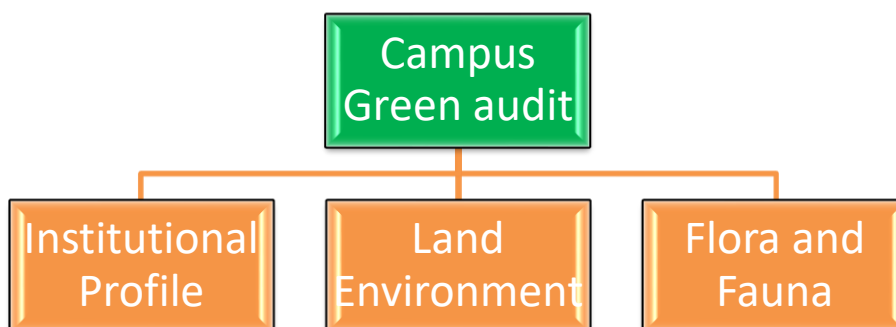


Fig. 4: Green Audit Components

CHAPTER IV

AUDIT STAGE

The Campus Green Audit (CGA) was carried out by the Post Graduate and Research Department of Environmental Sciences, Bishop Heber College (Autonomous), Tiruchirappalli, Tamilnadu. The CGA team constituted by the management during the pre-audit has done extensive data collection covering all the modules of green audit. The Campus Green Audit team comprises of Co-coordinators, Staff in-charge for each module and student volunteers.

4.1 Green Audit Team

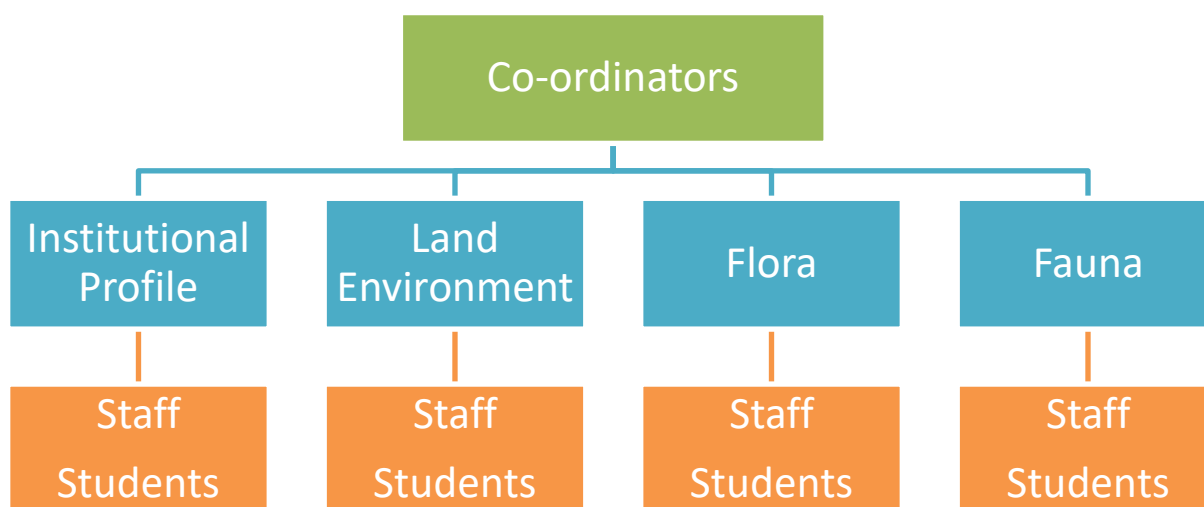


Fig. 5: Campus Green Audit Team

Campus Green Audit Assessment Team: 2021-2022

S.No.	Name	Designation	Department	Aspect
1.	Dr. M.R Delphine Rose	Associate Professor	Zoology	Team Head
2.	B. Mary Suba	Asst.Prof.	English	Land
3.	Dr. K. Jennifer	Asst.Prof.	History	Flora and Fauna
4.	Dr. A. Jancy Mary	Asst.Prof.	Tamil	Air & Noise
5.	Dr. V. Jemima Florence Borgia	Asst.Prof.	Zoology	Energy
6.	Mrs. A. Anitha Mary	Asst.Prof.	Zoology	Water
7.	Mrs. A. Monika	Asst.Prof.	English	Wastewater
8.	Mrs. S. Poornalakshmi	Asst.Prof.	Chemistry	Solid & E-Waste
9.	Dr. T. Girija Bai	Asst.Prof.	Economics	Food
10.	Mrs. K. Rani	Asst.Prof.	Computer Science	Campus Hygiene

Air and Noise Team

Environmental Aspects	Air and Noise
Name of the coordinator	Dr. A. Jancy Mary
Designation and Department	Assistant Professor, Tamil

Audit Team –Students /Scholars

S.No	Name of The Students	Class	Department
1.	Antony Silvia .X	II B.Sc	Physics
2.	Deepa .Y	II B.Sc	Physics
3.	Divya .J	II B.Sc	Physics
4.	Lalitha .M	II B.Sc	Physics
5.	Raja Priya .T	II B.Sc	Physics

Land Team

Environmental Aspects	Land
Name of the coordinator	B. Mary Suba
Designation and Department	Assistant Professor, English

Audit Team –Students /Scholars

S.No	Name of The Students	Class	Department
1.	Akliandeshwari .R	II BA	English
2.	Bhavatharini .M	II BA	English
3.	Birundha .M	II BA	English
4.	Keerthi Lakshmi .T	II BA	English
5.	Vijayasri .R.S	II BA	English

Flora and Fauna - Audit Team

Environmental Aspects	Flora and Fauna
Name of the coordinator	Dr. K. Jennifer
Designation and Department	Assistant Professor, History

Audit Team –Students /Scholars

S.No	Name of The Students	Class	Department
1.	Abarna .M	II BA	History
2.	Anjana Shree .G	II BA	History
3.	Maha Lakshmi .D	II BA	History
4.	Meenakshi .L	II BA	History
5.	Yogalakshmi .S	II BA	History

Water Audit Team

Environmental Aspects	Water
Name of the coordinator	Mrs. A. Anitha Mary
Designation and Department	Assistant Professor, Zoology

Audit Team –Students /Scholars

S.No	Name of The Students	Class	Department
1.	Alagammal .P	II B.Sc	Zoology
2.	Bharathi .S	II B.Sc	Zoology
3.	Neelambigai .S	II B.Sc	Zoology
4.	Sri Pathmavathi .I	II B.Sc	Zoology
5.	Surya Lakshmi .P	II B.Sc	Zoology

Waste Water Audit Team

Environmental Aspects	Wastewater
Name of the coordinator	Mrs. A. Monika
Designation and Department	Assistant Professor, English

Audit Team –Students /Scholars

S.No	Name of The Students	Class	Department
1.	Aarthi .S	II B.Sc	Maths
2.	Deepika .R	II B.Sc	Maths
3.	Girija .S	II B.Sc	Maths
4.	Hema Easwari .M	II B.Sc	Maths
5.	Jayanthika .J	II B.Sc	Maths

Solid and E Waste Audit Team

Environmental Aspects	Solid Waste and E Waste
Name of the coordinator	Mrs. S. Poornalakshmi
Designation and Department	Assistant Professor, Chemistry

Audit Team –Students /Scholars

S.No	Name of The Students	Class	Department
1.	Deepa .T	II B.Sc	Chemistry
2.	Janani Devi .R	II B.Sc	Chemistry
3.	Nihida Sri P.V	II B.Sc	Chemistry
4.	Ragavi .S	II B.Sc	Chemistry
5.	Yuvarani .M	II B.Sc	Chemistry

Food Team

Environmental Aspects	Hygiene
Name of the coordinator	Dr. T. Girija Bai
Designation and Department	Assistant Professor, Economics

Audit Team –Students /Scholars

S.No	Name of The Students	Class	Department
1.	Bairavi Shree .S	II B.Com	Commerce
2.	Bhuvaneswari .M	II B.Com	Commerce
3.	Jana Preethi .P	II B.Com	Commerce
4.	Jenifer .E	II B.Com	Commerce
5.	Kavya .S	II B.Com	Commerce

Campus Hygiene Audit Team

Environmental Aspects	Hygiene
Name of the coordinator	Mrs. K. Rani
Designation and Department	Assistant Professor, Comp.Science

Audit Team –Students /Scholars

S.No	Name of The Students	Class	Department
1.	Abinaya .M	II B.Sc	Computer Science
2.	Indu .K	II B.Sc	Computer Science
3.	Keerthiga .M	II B.Sc	Computer Science
4.	Kohilavani .V	II B.Sc	Computer Science
5.	Shalini .V	II B.Sc	Computer Science

CHAPTER 5

Institutional Profile

Bishop Heber College has a total strength of students and staff during the period 2021 – 2022 is 2500. The details are given in Table 1

Table 1: Total Population of the College (2021 – 2022)

Category	Total
Students	2074
Teaching	133
Non-Teaching Staff and Others	82
Total	2289

Table 2: Student's Strength

Year	Total No. of Students
2021 – 2022	2074
Total	2074

Table 3: Staff Strength

Year	Teaching		Non-Teaching		Total (A+B)
	A		B		
	Aided	SF	Aided	SF	
2021 – 2022	72	61	38	44	215
Total	72	61	38	44	215

CHAPTER 6

LAND AUDIT

Jayaraj Annapackiam College has a total land holding of 58.74 acres, of which 60 % of the total area is under green cover. The College is located in a partially hilly terrain with green cover augmenting the aesthetic value of the college.

The Campus includes a building housing administrative office, faculty offices, classrooms, conference halls, auditorium, guest house, library, number of small syndicate rooms (separate) and student dormitories within the campus. Faculty residences are situated just adjacent to the campus.

6.1 Land Use pattern

The Land Use attributes were identified as Built-up area, Ground area, cultivated area growing seasonal crops, dump yard, barren land / drainage, Pond and storm water drains and green cover.

Table 4: Land Use / Land Cover Details of JAC

Particulars	Acre	Square meter
Built-up Area	5.08	20558.03
Ground Area	4.50	18210.90
Road Area	5.00	20234.30
Cultivation land (Seasonal crops)	3.00	12140.60
Dump yard/ Barren land/ Drainage	3.26	13192.75
Pond/ Drainage	1.14	4613.40
Green cover	36.76	148762.44
Total	58.74	237712.42

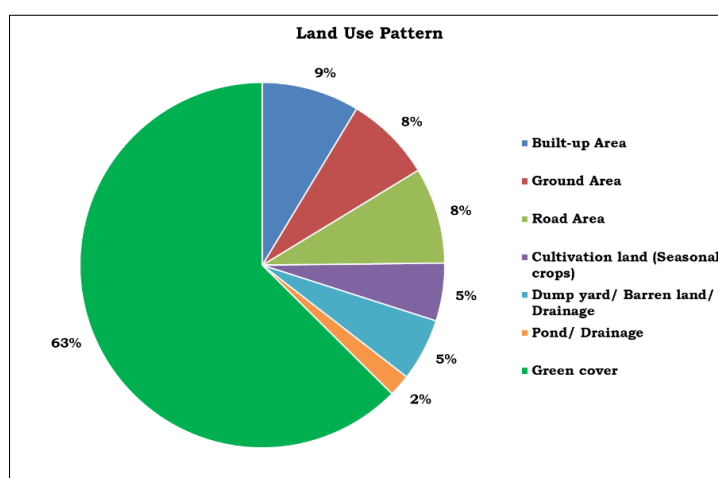


Fig. 6: Land Use Pattern

Table 5: Campus Infrastructure

S. No.	Building / Block	Area in Sq. M
1	Lilly Bai Block	448.00
2	Damian Block	146.00
3	Eliza Block	650.00
4	Arockia Block	698.00
5	Paul Venny Block	972.00
6	Clarence Block	1007.00
7	Annai Annammal Block	292.00
8	Lucy Crecentia Block	222.00
9	Chelladurai Library	465.00
10	St. Joseph's Management Block	1500.00
11	Agnes Block	136.00
12	Stannes Auditorium	693.00
13	Hostel	436.00
14	Sports Hostel	1341.00

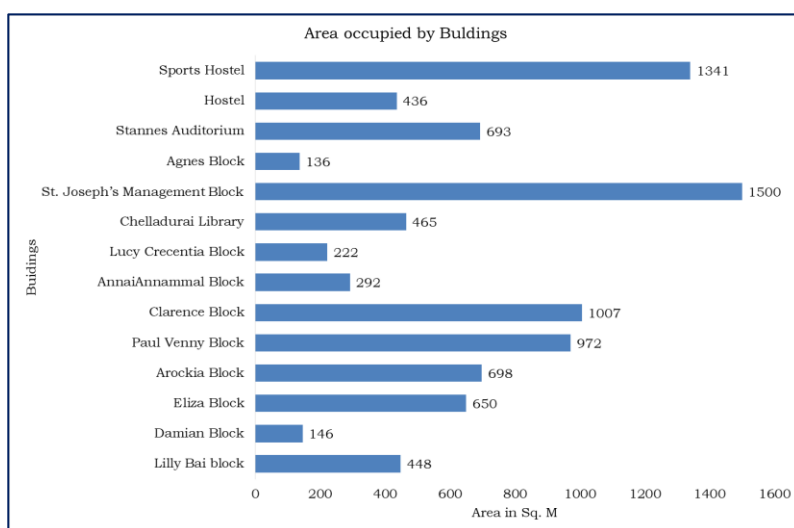
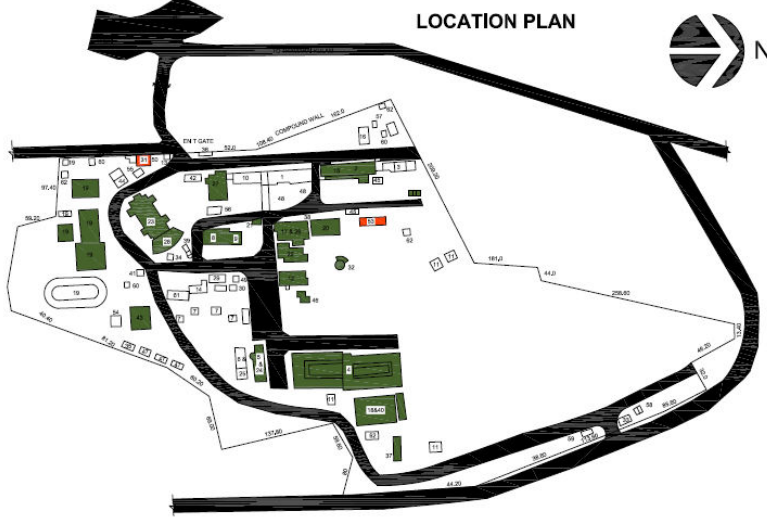


Fig. 7 Area occupied by Buildings

**JAYARAJ ANNA PAKKIAM COLLEGE FOR WOMEN (AUTONOMOUS)
PERIYAKULAM, THAMARAIKULAM TOWN PANCHAYAT, THENI DISTRICT**



36	PROPOSED BUILDING	G/FLOOR	Student Cycle Shed	43	EXISTING BUILDING	G/FLOOR	Convent	49	EXISTING BUILDING	G/FLOOR	Hostel	55	EXISTING BUILDING	G/FLOOR	Hostel
37	EXISTING BUILDING	G/FLOOR	Class Room	44	EXISTING BUILDING	G/FLOOR	Conference Hall	50	EXISTING BUILDING	G/FLOOR	Hostel	56	EXISTING BUILDING	G/FLOOR	Library
38	EXISTING BUILDING	G/FLOOR	Shed	45	EXISTING BUILDING	G/FLOOR	Hostel	51	EXISTING BUILDING	F/FLOOR	Proposed Hostel	57	EXISTING BUILDING	G/FLOOR	Hostel
39	EXISTING BUILDING	G/FLOOR	Class Room	46	EXISTING BUILDING	G/FLOOR	Gateways Shed	52	EXISTING BUILDING	G/FLOOR	Computer Lab	58	EXISTING BUILDING	G/FLOOR	Hostel
41	EXISTING BUILDING	G/FLOOR	Talking Center	47	EXISTING BUILDING	G/FLOOR	Verandah	53	EXISTING BUILDING	G/FLOOR	Hostel	59	EXISTING BUILDING	G/FLOOR	Hostel
42	EXISTING BUILDING	G/FLOOR	Office	48	EXISTING BUILDING	G/FLOOR	Hostel	54	EXISTING BUILDING	F/FLOOR	Hostel	60	EXISTING BUILDING	G/FLOOR	Hostel

1	PROPOSED BUILDING	G/FLOOR	Staff Room	17 & 26	EXISTING BUILDING	G/FLOOR	Computer Lab
2	EXISTING BUILDING	G/FLOOR	Class Room	18 & 40	EXISTING BUILDING	G/FLOOR	Hostel
3	EXISTING BUILDING	G/FLOOR	Class Room	19	EXISTING BUILDING	G/FLOOR	Hostel
4	EXISTING BUILDING	G/FLOOR	Class Room	20	EXISTING BUILDING	G/FLOOR	Hostel
5 & 24	EXISTING BUILDING	G/FLOOR	Class Room	21	EXISTING BUILDING	G/FLOOR	Hostel
6 & 25	EXISTING BUILDING	G/FLOOR	Class Room	22	EXISTING BUILDING	G/FLOOR	Hostel
7	EXISTING BUILDING	G/FLOOR	Class Room	23	EXISTING BUILDING	G/FLOOR	Hostel
8	EXISTING BUILDING	G/FLOOR	Class Room	27	EXISTING BUILDING	G/FLOOR	Hostel
9	EXISTING BUILDING	G/FLOOR	Class Room	28	EXISTING BUILDING	G/FLOOR	Hostel
10	EXISTING BUILDING	G/FLOOR	Class Room	29	EXISTING BUILDING	G/FLOOR	Hostel
11	EXISTING BUILDING	G/FLOOR	Class Room	30	EXISTING BUILDING	G/FLOOR	Hostel
12	EXISTING BUILDING	G/FLOOR	Class Room	31	EXISTING BUILDING	G/FLOOR	Hostel
13	EXISTING BUILDING	G/FLOOR	Class Room	32	EXISTING BUILDING	G/FLOOR	Hostel
14	EXISTING BUILDING	G/FLOOR	Class Room	33	EXISTING BUILDING	G/FLOOR	Hostel
15	EXISTING BUILDING	G/FLOOR	Class Room	34	EXISTING BUILDING	G/FLOOR	Hostel
16	EXISTING BUILDING	G/FLOOR	Class Room	35	EXISTING BUILDING	G/FLOOR	Hostel

- PROPOSED BUILDING
- EXISTING BUILDING
- EXISTING ROAD
- BOUNDARY

Fig. 8. JAC Campus Lay out



Fig. 9 Aerial View of JAC

6.2 Observation and Comments

- 1 The land use attributes include built-up area, playground area, sacred temple garden, plantation, green cover, open space, road network and storm water drains.
- 2 The campus has a green cover of 36.76 acres which include avenue trees, shrubs, herbs, ornamental plants, and garden with green cover. The green cover in the campus is 63 % of the total area.
- 3 As per the National Forest Policy, 1988 the institutions in plain area should have 33% green cover and hilly areas should have 60%. The campus comply with the National Forest Policy 1988, as it has **63 %** green cover with avenue trees, and gardens. The terrain of the campus is plain.
- 4 The campus has 3.00 acres of cultivation land growing seasonal crops. Area occupied by water body and drainage network constitutes 1.14 acres.
- 5 The campus has a total built up area of 5.08 acres i.e., 20558.03. Sq. M. with buildings meant for academics, hostel, rest rooms, parking and open air auditorium. The playground area constitutes 4.50 acres with a road network area of 5. 00 acres and a barren area of 3.26 acres.

CHAPTER 7

CAMPUS BIODIVERSITY

The natural landscape of the College campus includes green vegetation, tree canopy cover, small lentic system and artificial rain water harvesting pond provides a unique environmental setting conducive for a wide range of floral and faunal diversity. Totally 3205 number of plants belonging to 143 species are present in the College campus. There are 57 species of Medicinal plants and 37 species of ornamental plants are present in the campus. The particulars of floral diversity are given in the following Tables and Figures:

7.1 Assessment of Flora

Table 6: Campus Biodiversity

S. No.	Habit	Number
1	Herbs	39
2	Shrubs	37
3	Climbers	11
4	Grass	02
5	Trees	54
	Total	143

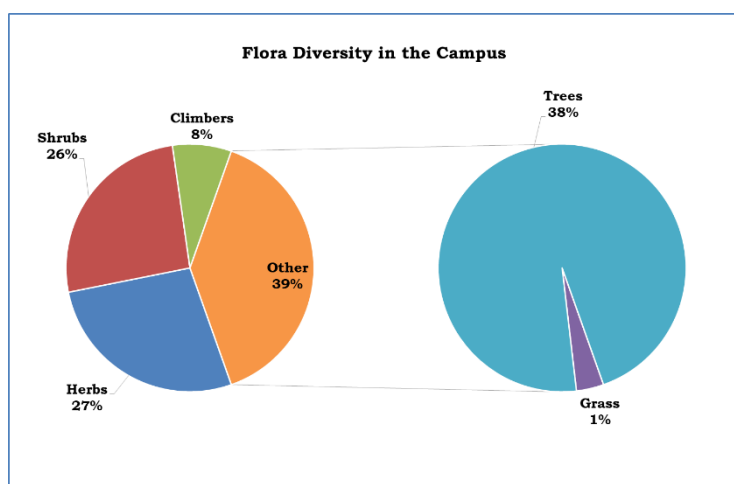


Fig. 10 Diversity of Flora

Table 7: Campus Flora

S NO	BOTANICAL NAME	FAMILY	VERNACULAR NAME	NUMBERS
1	Albizialebeck	Mimosaceae	Vagai	63
2	Acacia catechu	Fabaceae	Karunkali	56
3	Anacardiumoccidentate	Anacardiaceae	Mundiri	6
4	Annonacherimola	Annonaceae	Malaisita	34
5	Annonasquamosa	Annonaceae	Sitapalam	58
6	Araucaria heterophylla	Araucariaceae.	Christmas tree	7
7	Areca catechu	Arecaceae	Paaku	1
8	Artocarpushirsutus	Moraceae	Aiyinipila	2
9	Azadirachtaindica	Meliaceae	Vembu	957
10	Bauhinia purpurea	Leguminosae	Mandharai	1
11	Borassusflabellifer	Areaceae	Panaimaram	1
12	Bougainvillea berberidifolia	Nyctanginaceae	Kagitha poo	5
13	Calliandrahaematocephala	Mimosaceae	Powder-puff	4
14	Carcia papaya	Caricaceae	Pappali	54
15	Combretumindicum	Combretaceae	Rangoon malli	1
16	Cordiasebestena	Boraginaceae	Aechinarvihli	8
17	Cassia fistula	Caesalpiniaceae	Sarakkontrai	7
18	Citrus limon	Rutaceae	Elumicchai	12
19	Citrus sinensis	Rutaceae	Orange	1
20	Cocosnucifera	Arecaceae	Thennaimaram	170
21	Dypsislutescens	Arecaceae	Areca palm	5
22	Ficusbenghalensis	Moraceae	Aalamaram	1
23	Delonixregia	Caesalpiniaceae	Cemmayirkonrai	17
24	Ficusreligiosa	Moraceae	Arasamaram	1
25	Lawsoniainermis	Lythraceae	Menhdi	21
26	Manilkarazapota	Sapotaceae	Sapota	371
27	Mangiferaindica	Anacardiaceae	Maamaram	38
28	Millingtoniahortensis	Bignoniaceae	Mara malli	15
29	Moringaoleifera	Moringaceae	Murungai	57
30	Muntingiacalabura	Muntingiaceae	Thean Kai	8
31	Murrayakoenigii	Rutaceae	Karuveppilai	65
32	<i>Musa paradisiaca</i>	Musaceae	Vaazha	63
33	Peltophorumpterocarpum	Leguminosae	IyalVaghai	2
34	Phyllanthusacidus	Phyllanthaceae	Arunelli	17
35	Phyllanthusemblica	Phyllanthaceae	Malainelli	16
36	Pithecellobiumdulce	Leguminosae	Kodukkapuli	2
37	Plumeriaobtusa	Apocynaceae	NelaSampangi	3
38	Polyalthialongifolia	Annonaceae	Nettilingam	73
39	Pongamiapinnata	Fabaceae	Pungai	312
40	Pouteria lucuma	Sapotaceae	Egg fruit	2
41	Prosopis juliflora	Fabaceae	Seemaikaruvelam	35
42	Psidium guajava	Myrtaceae	Guava	60
43	Punica granatum	Lythraceae	Maadhulai	32
44	Santalum album	Santalaceae	Santhanam	1
45	Syzygium cumini	Myrtaceae	Naaval	7
46	Tamarindus indica	Leguminosae	Puliyamaram	237
47	Tectona grandis	Lamiaceae	Thekku	133

48	<i>Terminalia catappa</i>	Combretaceae	Nattuvadumai	11
49	<i>Thespesia populnea</i>	Malvaceae	Poovarasu	27
50	<i>Tocoma stans</i>	Bignoniaceae	Sonnapatti	64
51	<i>Vachellia nilotica</i>	Mimosaceae	Nattukaruvelam	54
52	<i>Ziziphus mauritiana</i>	<i>Rhamnaceae</i>	Elandhai	1
53	<i>Casuarina equisetifolia</i>	Casuarinaceae	Savukku.	5
54	<i>Ceiba pentandra</i>	Malvaceae	Pancu	1
				3205

Table 8: Campus Medicinal Flora

S No.	BOTANICAL NAME	FAMILY	REGIONAL NAME
1	<i>Hibiscus rosa-sinensis</i>	Malvaceae	<i>Sembaruthi</i>
2	<i>Ocimum sanctum</i>	Lamiaceae	<i>Tulsi</i>
3	<i>Ocimum basilicum</i>	Lamiaceae	<i>Basil</i>
4	<i>Achyranthes aspera</i>	Amaranthaceae	Naayuruvi
5	<i>Catharanthus roseus</i>	Apocynaceae	<i>Nithyakalyani</i>
6	<i>Phyllanthus niruri</i>	Phyllanthaceae	<i>Keelanelli</i>
7	<i>Solanum trilobatum</i>	Solanaceae	<i>Thuthuvalai</i>
8	<i>Aloe vera</i>	Asphodelaceae	<i>Kathalai</i>
9	<i>Sensevieria trifasciata</i>	Asparagaceae	<i>Snake kathalai</i>
10	<i>Datura metel</i>	Solanaceae	<i>Karu umathai</i>
11	<i>Acalypha indica</i>	Euphorbiaceae	<i>Kuppaimeni</i>
12	<i>Tridax procumbens</i>	Asteraceae	<i>Thatha poo</i>
13	<i>Plectranthus amboinicus</i>	Lamiaceae	<i>Oomavalli</i>
14	<i>Solanum nigrum</i>	Solanaceae	<i>Manathakkali</i>
15	<i>Abelmoschus esculentus</i>	Malvaceae	<i>Vendaikkaay</i>
16	<i>Amaranthus viridis</i>	Amaranthaceae	<i>Kuppai keerai</i>
17	<i>Manihot esculenta</i>	Euphorbiaceae	<i>Kappa kizhangu</i>
18	<i>Cissus quadrangularis</i>	Vitaceae	<i>Perandai</i>
19	<i>Euphorbia hirta</i>	Euphorbiaceae	<i>Ammam paccharisi</i>
20	<i>Cucumis sativus</i>	Cucurbitaceae	<i>Vellarikkay</i>
21	<i>Coccinia cordifolia</i>	Cucurbitaceae	<i>Kovakkay</i>
22	<i>Mimosa pudica</i>	Mimosaceae	<i>Thota sinungi</i>
23	<i>Cyamopsis tetragonoloba</i>	Fabaceae	<i>Cheeni Avaraikay</i>
24	<i>Trichosanthes cucumerina</i>	Cucurbitaceae	<i>Pudalangai</i>
25	<i>Cleome viscosa</i>	Capparaceae	<i>Naikkadugu</i>
26	<i>Cleome gynandra</i>	Capparaceae	<i>Nalvelai</i>
27	<i>Abutilon indicum</i>	Malvaceae	<i>Thuthi</i>
28	<i>Senna auriculata</i>	Caesalpiniaceae	<i>Aavaram</i>
29	<i>Citrullus lanatus</i>	Cucurbitaceae	<i>Tharpoonsani</i>
30	<i>Lablab purpureus</i>	Fabaceae	<i>Avarai</i>
31	<i>Vitex negundo</i>	Lamiaceae	<i>Notchi</i>
32	<i>Cynodon dactylon</i>	Poaceae	<i>Arugampillu</i>
33	<i>Alternanthera sessilis</i>	Amaranthaceae	<i>Ponnanganni keerai</i>
34	<i>Sorghum bicolor</i>	Poaceae	<i>Cholam</i>
35	<i>Zea mays</i>	Poaceae	<i>Macca cholam</i>

36	<i>Arachis hypogaea</i>	<i>Fabaceae</i>	<i>Verkadali</i>
37	<i>Basella alba</i>	<i>Basellaceae</i>	<i>Kodi pasalai</i>
38	<i>Saccharum officinarum</i>	<i>Poaceae</i>	<i>Karumbu</i>
39	<i>Adhatoda vasica</i>	<i>Acanthaceae</i>	<i>Adathodai</i>
40	<i>Calotropis gigantea</i>	<i>Apocynaceae</i>	<i>Erukkam ilai</i>
41	Crepe jasmine	<i>Apocynaceae</i>	<i>Nandhiyavattam</i>
42	<i>Tabernaemontana divaricata</i>	<i>Apocynaceae</i>	Nandiar vattai
43	<i>Centella asiatica</i>	<i>Apiaceae</i>	<i>Vallarai keerai</i>
44	<i>Cyperus rotundus</i>	<i>Cyperaceae</i>	<i>Korai pul</i>
45	<i>Leucas aspera</i>	<i>Lamiaceae</i>	<i>Thumbai</i>
46	<i>Solanum lycopersicum</i>	<i>Solanaceae</i>	<i>Thakkali</i>
47	<i>Physalis peruviana</i>	<i>Solanaceae</i>	<i>Sodakku thakkali</i>
48	<i>Commelina benghalensis</i>	Commelinaceae	Kanangkozai
49	<i>Boerhavia diffusa</i>	Nyctaginaceae	Mukkurttaikkoti
50	<i>Andrographis paniculata</i>	<i>Acanthaceae</i>	Nilavembu
51	<i>Lantana camara</i>	Verbenaceae	Unni sedi

Table 9:Campus Ornamental Flora

S NO	BOTANICAL NAME	FAMILY	REGIONAL NAME
1	<i>Codiaeum variegatum</i>	Euphorbiaceae	<i>Croton</i>
2	<i>Crossandra infundibuliformis</i>	Acanthaceae	<i>Kanakambaram</i>
3	<i>Jasminum grandiflorum</i>	Oleaceae	<i>Jathi malli</i>
4	<i>Jasminum sambac</i>	Oleaceae	<i>Malligai</i>
5	<i>Ixora coccinea</i>	Rubiaceae	<i>Idli poo</i>
6	<i>Euphorbia milii</i>	Euphorbiaceae	<i>Jesus thorn</i>
7	<i>Brugmansia suaveolens</i>	Solanaceae	<i>Angel's trumpet</i>
8	<i>Epipremnum aureum</i>	<i>Araceae</i>	<i>Money plant</i>
9	<i>Duranta erecta</i>	<i>Verbenaceae</i>	<i>Pigeon berry</i>
10	<i>Mirabilis jalapa</i>	<i>Nyctaginaceae</i>	<i>Andimandarai</i>
11	<i>Rosa chinensis</i>	<i>Rosaceae</i>	<i>Rose poo</i>
12	<i>Nerium oleander</i>	<i>Apocynaceae</i>	<i>Arali</i>
13	<i>Canna indica</i>	<i>Cannaceae</i>	<i>Kalvalai</i>
14	<i>Coreopsis grandiflora</i>	<i>Astraceae</i>	<i>Tick seed</i>
15	<i>Portulaca grandiflora</i>	<i>Portulacaceae</i>	<i>Table rose</i>
16	<i>Tagetes erecta</i>	<i>Asteraceae</i>	<i>Tulukka samandi</i>
17	<i>Chrysanthemum morifolium</i>	<i>Asteraceae</i>	<i>Sevanthi flower</i>
18	<i>Gomphrena globosa</i>	<i>Amaranthaceae</i>	<i>Vadamalli poo</i>
19	<i>Dahlia pinnata</i>	<i>Asteraceae</i>	<i>Dahlia</i>
20	<i>Bryophyllum pinnatum</i>	<i>Crassulaceae</i>	Ranakalli
21	<i>Asparagus officinalis</i>	<i>Asparagaceae</i>	<i>Thanneervittaankizhangu</i>
22	<i>Celosia cristata</i>	<i>Amaranthaceae</i>	<i>Kozhi poo</i>
23	<i>Pentalinon luteum</i>	<i>Apocyanaceae</i>	Wild allamanda
24	<i>Allamanda blanchetii</i>	<i>Apocyanaceae</i>	<i>Allamanda</i>

25	<i>Chlorophytum comosum</i>	<i>Asparagaceae</i>	<i>Spider Plant</i>
26	<i>Zephyranthus sulphurea</i>	<i>Amaryllidaceae</i>	<i>Rain lillies</i>
27	<i>Coleus forskohlii</i>	<i>Lamiaceae</i>	<i>Coleus</i>
28	<i>Tradescantia spathacea</i>	<i>Commelinaceae</i>	<i>Boatlily</i>
29	<i>Zantedeschia aethiopica</i>	<i>Araceae</i>	<i>Arum lili</i>
30	<i>Dieffenbachia seguine</i>	<i>Araceae</i>	<i>Dumbcane</i>
31	<i>Dracaena marginata</i>	<i>Asparagaceae</i>	<i>Dragon</i>
32	<i>Dracaena reflexa</i>	<i>Asparagaceae</i>	<i>Dragon</i>
33	<i>Alocasia cucullata</i>	<i>Araceae</i>	<i>Aberrant form</i>
34	<i>Syngonium podophyllum</i>	<i>Araceae</i>	<i>Arrowhead plant</i>
35	<i>Hypoestes phyllostachya</i>	<i>Acanthaceae</i>	<i>Measles plant.</i>
36	<i>Cordyline terminalis</i>	<i>Asparagaceae</i>	<i>Good luck plant</i>
37	<i>Helxine soleirolii</i>	<i>Urticaceae</i>	<i>Irish moss</i>

Table 10: Check list of Flora with Vernacular Names, Medicinal uses and Nativity

S No	Botanical Name	Common Name	Tamil Name	Family	Medicinal Uses	Nativity
Herbs						
1	<i>Acalypha indica</i>	Indian mercury	<i>Kuppaimeni</i>	Euphorbiaceae	Asthma	South Asia
2	<i>Achyranthes aspera</i>	Chaff-flower	Naayuruvi	Amaranthaceae	Asthma	America
3	<i>Alternanthera sessilis</i>	Dwarf copper leaf	<i>Ponnanganni</i>	<i>Amaranthaceae</i>	Lung troubles	United States
4	<i>Aloe vera</i>	Indian <i>aloe</i>	<i>Kathalai</i>	Asphodelaceae	Antioxidant	Southern Africa
5	<i>Amaranthus viridis</i>	Slender amaranth	<i>Kuppai keerai</i>	Amaranthaceae	Urinary disorders	Manipur
6	<i>Andrographis paniculata</i>	Green chireta	Nilavembu	<i>Acanthaceae</i>	Influenza	India
7	<i>Arachis hypogaea</i>	Ground nut	<i>Verkadali</i>	Fabaceae	Anti-inflammatory	America
8	<i>Asparagus officinalis</i>	Sparrow grass	<i>Thanneervittaankizhangu</i>	<i>Asparagaceae</i>	Joint pain	Asia
9	<i>Boerhavia diffusa</i>	Spreading hogweed	Mukkurttaikkoti	Nyctaginaceae	Anti-diabetic	India
10	<i>Bryophyllum pinnatum</i>	Goethe plant	Ranakalli	<i>Crassulaceae</i>	Insect bites	Asia
11	<i>Catharanthus roseus</i>	Madagascar periwinkle	<i>Nithyakalyani</i>	Apocynaceae	Cancer	Australia
12	<i>Celosia cristata</i>	Cockscomb	<i>Kozhi poo</i>	<i>Amaranthaceae</i>	Uterine bleeding	India
13	<i>Centella asiatica</i>	Centella	<i>Vallarai keerai</i>	<i>Apiaceae</i>	Spinal injury	Asia
14	<i>Cleome gynandra</i>	African cabbage	<i>Nalvelai</i>	Capparaceae	Rheumatism	Africa
15	<i>Commelina benghalensis</i>	Tropical spiderwort,	Kanangkozai	Commelinaceae	Sore eyes	Asia

16	<i>Cleome viscosa</i>	Asian spiderflower	<i>Naikkadugu</i>	Capparaceae	Malarial fever	Asia
17	<i>Coleus forskohlii</i>	<i>Coleus</i>	<i>Coleus</i>	<i>Lamiaceae</i>	Heart disorders	India
18	<i>Coreopsis grandiflora</i>	Goldenwave	<i>Tick seed</i>	<i>Astraceae</i>	Diarrhoea	South America
19	<i>Chlorophytum comosum</i>	St. Bernard's lily,	<i>Spider Plant</i>	<i>Asparagaceae</i>	Herbal Medicine	South Africa
20	<i>Chrysanthemum morifolium</i>	Hardy garden mum	<i>Sevanthi flower</i>	<i>Asteraceae</i>	Prostate cancer	Asia
21	<i>Cyamopsis tetragonoloba</i>	Cluster bean	<i>Cheeni Avaraikay</i>	Fabaceae	High cholesterol	Asia
22	<i>Dahlia pinnata</i>	Garden dahlia	<i>Dahlia</i>	<i>Asteraceae</i>	Epilepsy	Mexico
23	<i>Euphorbia hirta</i>	Asthma-plant	<i>Ammam paccharisi</i>	Euphorbiaceae	Asthma	India
24	<i>Gomphrena globosa</i>	Globe amaranth	<i>Vadamalli poo</i>	Amaranthaceae	Diabetes	America
25	<i>Helxine soleirolii</i>	Angel's tears	Irish moss	Urticaceae	Cleaning	Italy
26	<i>Lantana camara</i>	Arch man	Unni sedi	Verbenaceae	ulcers	America
27	<i>Leucas aspera</i>	Leucas	<i>Thumbai</i>	<i>Lamiaceae</i>	Antioxidant	India
28	<i>Mimosa pudica</i>	Sensitive plant	<i>Thota sinungi</i>	Mimosaceae	Piles	America
29	<i>Ocimum basilicum</i>	Sweet basil	<i>Karunthulsi</i>	Lamiaceae	Loss of appetite	Africa
30	<i>Ocimum sanctum</i>	Holy basil	<i>Tulsi</i>	Lamiaceae	Insect bites	Asia
31	<i>Phyllanthus niruri</i>	Gale of the wind	<i>Keelanelli</i>	Phyllanthaceae	Cancer & jaundice	Srilanka
32	<i>Physalis peruviana</i>	Cape gooseberry	<i>Sodakku thakkali</i>	<i>Solanaceae</i>	Cancer	South America
33	<i>Plectranthus amboinicus</i>	Coleus amboinicus	<i>Oomavalli</i>	Lamiaceae	Rheumatoid arthritis	Africa
34	<i>Portulaca grandiflora</i>	Ten o'clock	<i>Table rose</i>	<i>Portulacaceae</i>	Hepatitis	Brazil

35	<i>Solanum lycopersicum</i>	Tomato	Thakkali	<i>Solanaceae</i>	Rheumatism	South America
36	<i>Senseviiera trifasciata</i>	Mother-in-law's tongue	Snake kathalai	Asparagaceae	Ringworm	Africa
37	<i>Solanum trilobatum</i>	Thai nightshade	Thuthuvalai	Solanaceae	Anti inflammatory	India
38	<i>Tridax procumbens</i>	Tridax daisy	Thatha poo	Asteraceae	Wound healing	America
39	<i>Zephyranthus sulphurea</i>	Zephyr lily	Rain lillies	Amaryllidaceae	Breast cancer	Mexico
Shrubs						
40	<i>Abelmoschus esculentus</i>	Lady's fingers	Vendaikkaay	Malvaceae	Catarrhal infections	West Africa
41	<i>Abutilon indicum</i>	Country mallow	Thuthi	Malvaceae	Leprosy and ulcers	Asia
42	<i>Adhatoda vasica</i>	Malabar nut	Adathodai	<i>Acanthaceae</i>	Blood disorders	Asia
43	<i>Alocasia cucullata</i>	Chinese taro	Aberrant form	<i>Araceae</i>	Snakebite	China
44	<i>Brugmansia suaveolens</i>	Angel's trumpet	Madulam	Solanaceae	Asthma	South America
45	<i>Calotropis gigantea</i>	Crown flower	Erukkam ilai	<i>Apocynaceae</i>	Respiratory	Cambodia
46	<i>Canna indica</i>	Purple arrowroot	Kalvalai	<i>Cannaceae</i>	Nose bleeding	South america
47	<i>Chrysanthemum morifolium</i>	Hardy garden mum	Sevanthi	Asteraceae	Prostate cancer	China
48	<i>Cissus quadrangularis</i>	Devil's backbone	Perandai	Vitaceae	Bone loss	Asia
49	<i>Codiaeum variegatum</i>	Variegated croton	Croton	Euphorbiaceae	Anticancer	Indonesia
50	<i>Cordyline</i>	Good luck plant	Good luck plant	<i>Asparagaceae</i>	Asthma	New Zealand

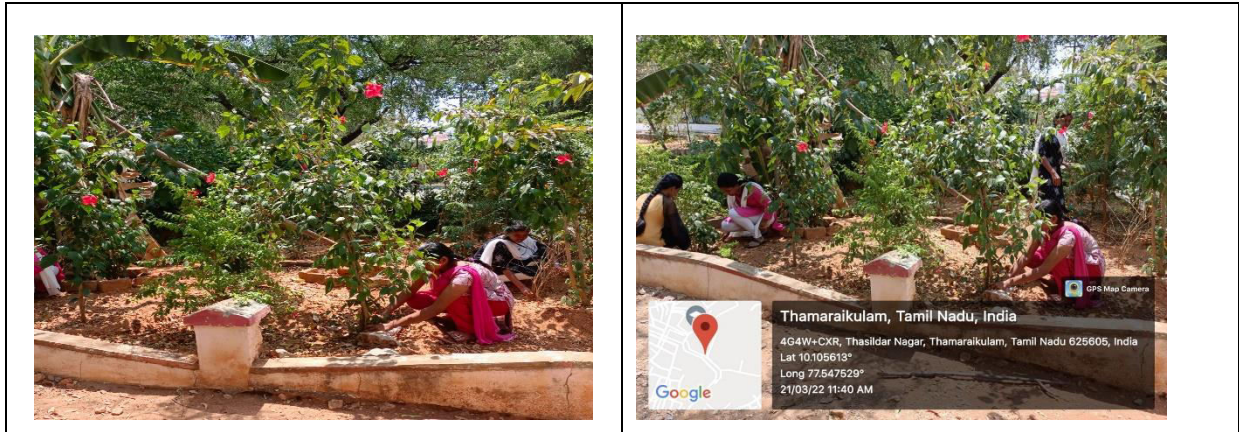
	terminalis					
51	Crepe jasmine	Crepe jasmine	<i>Nandhiyavattam</i>	<i>Apocynaceae</i>	Abdominal pain	India
52	<i>Crossandra infundibuliformis</i>	Firecracker flower	<i>Kanakambaram</i>	<i>Acanthaceae</i>	Wound healing	India
53	<i>Datura metel</i>	Devil's trumpet	<i>Karu umathai</i>	<i>Solanaceae</i>	Mumps and leprosy	China
54	<i>Dieffenbachia seguine</i>	Dumbcane	Dumbcane	<i>Araceae</i>	Analgesic agents	America
55	<i>Dracaena marginata</i>	Dragon	Dragon	<i>Asparagaceae</i>	Rheumatism	India
56	<i>Dracaena reflexa</i>	<i>Dragon</i>	<i>Dragon</i>	<i>Asparagaceae</i>	Dysentery	Island
57	<i>Duranta erecta</i>	<i>Pigeon berry</i>	<i>Aagaya poo</i>	<i>Verbenaceae</i>	Antioxidant,	Mexico
58	<i>Euphorbia milii</i>	Crown of thorns	Kritak kalli	<i>Euphorbiaceae</i>	Tumors	Madagascar
59	<i>Hibiscus rosa-sinensis</i>	Chinese hibiscus	<i>Sembaruthi</i>	<i>Malvaceae</i>	Menstruation	China
60	<i>Hypoestes phyllostachya</i>	Polka dot plant	Measles plant	<i>Acanthaceae</i>	Antioxidant	Africa
61	<i>Ixora coccinea</i>	Jungle flame	<i>Idli poo</i>	<i>Rubiaceae</i>	Sedative	India
62	<i>Manihot esculenta</i>	Cassava	<i>Kappa kizhangu</i>	<i>Euphorbiaceae</i>	Hypertension	South America
63	<i>Mirabilis jalapa</i>	Four o'clock flower	<i>Andimandarai</i>	<i>Nyctaginaceae</i>	Purgative	South america
64	<i>Nerium oleander</i>	Oleander	<i>Arali</i>	<i>Apocynaceae</i>	Ringworm	China
65	<i>Rosa chinensis</i>	Chinese rose	<i>Rose poo</i>	<i>Rosaceae</i>	Wounds	China
66	<i>Saccharum officinarum</i>	Sugarcane	<i>Karumbu</i>	<i>Poaceae</i>	Jaundice	Asia
67	<i>Senna auriculata</i>	Avaram senna	<i>Aavaram</i>	<i>Caesalpiniaceae</i>	Constipation	India
68	<i>Solanum nigrum</i>	Black nightshade	<i>Manathakkali</i>	<i>Solanaceae</i>	Pneumonia	Eurasia
69	<i>Sorghum bicolor</i>	Great millet	<i>Cholam</i>	<i>Poaceae</i>	Lung cancer	Africa
70	<i>Tabernaemontana</i>	Pinwheel flower	Nandiar vattai	<i>Apocynaceae</i>	Anti-epileptic	India

	divaricata					
71	Tagetes erecta	African marigold	<i>Tulukka samandi</i>	<i>Asteraceae</i>	Severe constipation	Mexico
72	Tradescantia spathacea	Moses-in-a-basket	Boat lily	<i>Commelinaceae</i>	Sore throat	Mexico
73	<i>Vitex negundo</i>	Chinese chaste tree	<i>Notchi</i>	Lamiaceae	Anti-ulcer	Asia
74	Zantedeschia aethiopica	Calla lily	<i>Arum lili</i>	<i>Araceae</i>	Asthma	Africa
75	Zea mays	Corn	<i>Macca cholam</i>	Poaceae	Fatigue	Mexico
76	Syngonium podophyllum	Arrowhead plant	Arrowhead plant	<i>Araceae</i>	Deep wounds	America
Climbers						
77	Allamanda blanchetii	Purple allamanda	<i>Allamanda</i>	<i>Apocyanaceae</i>	Antifungal	Brazil
78	Basella alba	Red vine spinach	<i>Kodi pasalai</i>	<i>Basellaceae</i>	Dysentery	Asia
79	<i>Citrullus lanatus</i>	Watermelons	<i>Tharpoosani</i>	Cucurbitaceae	Diabetic	West Arfrica
80	<i>Coccinia cordifolia</i>	Scarlet gourd	<i>Kovakkay</i>	Cucurbitaceae	Intestinal troubles	India
81	<i>Cucumis sativus</i>	Cucumber	<i>Vellarikkay</i>	Cucurbitaceae	Blemished skin	Asia
82	Epipremnum aureum	Scindapsus aureus	<i>Money plant</i>	<i>Araceae</i>	Anti-termite	Island
83	Jasminum grandiflorum	Spanish jasmine	<i>Jathi malli</i>	Oleaceae	Skin diseases	Asia
84	Jasminum sambac	Arabian jasmine	<i>Malligai</i>	Oleaceae	Antiseptic	India
85	<i>Lablab purpureus</i>	Hyacinth bean	<i>Avarai</i>	Fabaceae	Cholera	Africa
86	Pentalinon luteum	Yellow dipladenia	Wild allamanda	<i>Apocyanaceae</i>	Snake bites	Island
87	<i>Trichosanthes</i>	Serpent gourd	<i>Pudalangai</i>	Cucurbitaceae	Abdominal	Asia

	<i>cucumerina</i>				tumors	
Grasses						
88	<i>Cynodon dactylon</i>	Bermuda grass	<i>Arugampillu</i>	Poaceae	Laxative	North America
89	<i>Cyperus rotundus</i>	Nut grass	<i>Korai pul</i>	<i>Cyperaceae</i>	Intestinal parasites	Africa
Trees						
90	<i>Acacia catechu</i>	Cutch Tree	Karunkali	Fabaceae	Dressing wounds	Asia
91	<i>Albizia lebeck</i>	Woman's tongue tree	Vagai	Mimosaceae	Cough	Indomalaya
92	<i>Anacardium occidentale</i>	Cashew	Mundiri	Anacardiaceae	Ulcer	Brazil
93	<i>Annona cherimola</i>	Chirimoya	Malai sita	Annonaceae	Cancer	America
94	<i>Annona squamosa</i>	Custard apple	Sitapalam	Annonaceae	Anti- oxidant	America
95	<i>Araucaria heterophylla</i>	Norfolk Island pine	Christmas	Araucariaceae.	Anti- ulcer	Island
96	<i>Areca catechu</i>	Areca palm	Paaku	Arecaceae	Relieve pain	Malaysia
97	<i>Artocarpus hirsutus</i>	Wild jack	Aiyinipila	Moraceae	Cancer	Kerala
98	<i>Azadirachta indica</i>	Indian lilac	Vembu	Meliaceae	Piles	India
99	<i>Bauhinia purpurea</i>	Hawaiian orchid tree	Mandharai	Leguminosae	Diarrhea	India
100	<i>Borassus flabellifer</i>	Palmyra palm	Panai maram	Areaceae	Antidiabetic	India
101	<i>Bougainvillea berberidifolia</i>	Bougainvillea	Kagitha poo	Nyctanginaceae	Cough	South America
102	<i>Calliandra haematocephala</i>	Powder-puff Tree	Powder-puff	Mimosaceae	Blood purifier	America
103	<i>Cassia fistula</i>	Indian laburnum	Sarakkontrai	Caesalpiniaceae	Laxative	Asia
104	<i>Casuarina equisetifolia</i>	Coast sheoak	Savukku	Casuarinaceae	Facial pimples	Asia

105	<i>Carcia papaya</i>	Pawpaw	Pappali	Caricaceae	Blood pressure	Mexico
106	<i>Ceiba pentandra</i>	Kapok tree	Pancu	Malvaceae	Headache	Mexico
107	<i>Combretum indicum</i>	Honeysuckle	Rangoon malli	Combretaceae	Hiccup	Asia
108	<i>Cordia sebestena</i>	Scarlet cordia	Aechinarvihli	Boraginaceae	Cough	America
109	<i>Citrus limon</i>	Lemon	Elumicchai	Rutaceae	Stomach upset	Asia
110	<i>Citrus sinensis</i>	Sweet oranges	Orange	Rutaceae	Blood pressure	China
111	<i>Cocos nucifera</i>	Coconut tree	Thennai maram	Arecaceae	Dysentery	Island
112	<i>Dypsis lutescens</i>	Butterfly palm	Areca palm	Arecaceae	Air purifier	Asia
113	<i>Delonix regia</i>	Flame tree	Cemmayirkonrai	Caesalpiniaceae	Anti-diabetic	Madagascar
114	<i>Ficus benghalensis</i>	Indian banyan	Aalamaram	Moraceae	Leprosy	India
115	<i>Ficus religiosa</i>	Peepal tree	Arasamaram	Moraceae	Gastric problems	India
116	<i>Lawsonia inermis</i>	Henna tree	Menhdi	Lythraceae	Anti - cancer	Asia
117	<i>Manilkara zapota</i>	Sapodilla	Sapota	Sapotaceae	Hemorrhage	Mexico
118	<i>Mangifera indica</i>	Mango tree	Maamaram	Anacardiaceae	Rheumatism	India
119	<i>Millingtonia hortensis</i>	Indian cork tree	Mara malli	Bignoniaceae	Antipyretic	Asia
120	<i>Moringa oleifera</i>	Horseradish tree	Murungai	Moringaceae	Anti-oxidants	India
121	<i>Muntingia calabura</i>	Jamaica cherry	Thean Kai	Muntingiaceae	Headache	Maxico
122	<i>Murraya koenigii</i>	Curry leaf	Karuveppilai	Rutaceae	Skin eruptions	India
123	<i>Musa paradisiaca</i>	French plantain	Vaazha	Musaceae	Dysentery	Asia
124	<i>Peltophorum pterocarpum</i>	Yellow-flamboyant	Iyal Vaghai	Leguminosae	Swelling	Asia
125	<i>Phyllanthus acidus</i>	West India	Arunelli	Phyllanthaceae	Purgative	Asia

		gooseberry				
126	Phyllanthus emblica	Emblic myrobalan	Malai nelli	Phyllanthaceae	Jaundice	India
127	Pithecellobium dulce	Madras thorn.	Kodukkapuli	Leguminosae	Toothache	Mexico
128	Plumeria obtusa	Pagoda tree	Nela Sampangi	Apocynaceae	Carious teeth	America
129	Polyalthia longifolia	False ashoka tree	Nettilingam	Annonaceae	Skin diseases	India
130	Pongamia pinnata	Indian beech	Pungai	Fabaceae	Skin diseases	Asia
131	Pouteria lucuma	Egg fruit	Egg fruit	Sapotaceae	Anti-oxidants	Peru
132	Prosopis juliflora	mesquite	Seemai karuvelam	Fabaceae	Skin lesions	Mexico
133	Psidium guajava	Common guava	Guava	Myrtaceae	Hypertension	America
134	Punica granatum	Pomegranate	Maadhulai	Lythraceae	Arthritis	India
135	Santalum album	Indian sandalwood	Santhanam	Santalaceae	Heart ailments	Asia
136	Syzygium cumini	Black plum	Naaval	Myrtaceae	Ulcer	Bangladesh
137	Tamarindus indica	Tamarind tree	Puliyamaram	Leguminosae	Skin cleanser	India
138	Tectona grandis	Teak	Thekku	Lamiaceae	Leprosy	India
139	Terminalia catappa	Tropical almond	Nattuvadumai	Combretaceae	Skin diseases	Brazil
140	Thespesia populnea	Portia tree	Poovarasu	Malvaceae	Cholera	Island
141	Tocoma stans	Trumpetflower	Sonnapatti	Bignoniaceae	Digestive problems	America
142	Vachellia nilotica	Gum arabic tree	Nattu karuvelam	Mimosaceae	Antimalarial	Africa
143	Ziziphus mauritiana	Indian jujube	Elandhai	Rhamnaceae	Sedative	China



Flora Assessment



Team Assessing the Compost

7.2 Green Cover in the Campus

The campus has a green area of 63% which fulfill the norms of green area recommended by the National Forest Policy of India, 1988 and is well within the limits.

7.3 Tools to Measure Carbon Absorption

Assumptions

1. Number of mature trees in 1 acre = 700
2. Carbon absorption capacity of 700 trees is equivalent to carbon emitted by a speeding car for 26,000 miles
3. 26,000 miles = 41,843 km
4. Average km. covered by a car per litre of petrol is 20 km
5. Total quantity of petrol consumed by the car (41,843/20) = 2092L

7.4 Observation and Comments

- 1 The campus has 54 grown trees, the carbon emitted by a car due to consumption of 1 litre of petrol is 2.3 kg CO₂.
- 2 At this rate the total quantity of carbon emitted by 2092 litres of petrol (2092 × 2.3 kg) = 4812 kg CO₂ or 4.8 tonnes of CO₂.
- 3 Therefore, the carbon absorption of **One full-grown tree is 4812/25 192.48 kg CO₂.**

The footprint calculation is based on
The standard unit of 1 litre petrol = 2.3 kgCO₂.

7.5 Carbon absorption by flora in the Institution

Carbon absorption capacity of one full-grown tree = 192.48 kg CO₂.

1. Therefore the carbon absorption capacity of 30 full-grown trees in the Campus is (54 × 192.48 kg CO₂) = **10394 kg of CO₂.**

7.6 ASSESSMENT OF FAUNA

The animal life of an area is dependent upon the vegetation and there are countless relationships between the species composing an animal community. Fauna assessment involves more problems than flora assessment by virtue of the greater variety of animal types, their mobility

and behavior. Faunal assessment provides a basis for determining relative abundance and evaluating commonness or rarity of each species encountered.

In the college campus, the animal survey was conducted along with the plants. The study includes surveys of the animal communities such as aquatic organisms, insects, molluscs, reptiles, fishes, amphibians, birds and mammals. The details of fauna found in campus are given in the following tables:

Table 11: Diversity of Fauna

S. No.	Faunal Group	No. of Species
	INVERTEBRATA	
1	Arthropoda	
	a. Butterfly	8
	b. Ants	06
	c. Spiders	04
2	Mollusca	02
	CHORDATA	
3	Reptiles	09
4	Birds	21
5	Mammals	06

INVERTEBRATA: PHYLUM: ARTHROPODA

Table 12: BUTTERFLY

S.NO	Common Name	Scientific Name	Status/schedule
1.	Plain tiger	<i>Danaus chrysippus</i>	Common
2.	Common tiger	<i>Danaus genutia</i>	Common
3.	Common crow	<i>Euploea core</i>	Common
4.	Tawny coster	<i>Acraea violae</i>	Common
5.	Blue tiger	<i>Tirumala limniace</i>	Common
6.	Common emigrant	<i>Catopsilia pomona</i>	Common
7.	Common blue jay	<i>Graphium doson</i>	Common
8.	Common Mormon	<i>Papilio polytes</i>	Common

Table 13: ANT

S.No.	Common Name	Scientific Name	Status
1.	<i>Fire ant</i>	<i>Solenopsis geminata</i>	Common
2.	<i>Samyerumbu</i>	<i>Paratrechina longicornis</i>	Common
3.	<i>Ghost ant</i>	<i>Tapinomame lanocephalum</i>	Common
4.	<i>Carpenter ant</i>	<i>Camponotus angusticollis</i>	Common

5.	<i>Soo Erumbu</i>	<i>Tetrapo nerarufonigra</i>	Common
6.	<i>Bug</i>	<i>Probergrothissanuinolens</i>	Common

Table 14: SPIDER

S.No.	Common Name	Scientific Name	Status/schedule
1.	Jumping spider	<i>Menemerus fulvus</i>	Common
2.	Grey wall jumper	<i>Menemerus bivittatus</i>	Common
3.	Grass cross spider	<i>Argiope catenulate</i>	Common
4.	Orb weaver spider	<i>Argiope anasuja</i>	Common

Table 15: PHYLUM: MOLLUSCA

S.NO	Common Name	Scientific Name	Status/schedule
1.	Apple snail	<i>Pila globosa</i>	Common
2.	Ariophanta	<i>Ariophanta bristrialis</i>	Common

Table 16: CLASS: REPTILIA

S.No.	Common Name	Scientific Name	Status/schedule
1.	Calotes	<i>Calotes versicolor</i>	Common
2.	Varanus	<i>Varanus varius</i>	Common
3.	Non poisonous snake	<i>Lycodon aulicus</i>	Common
4.	Cobra	<i>Naja naja</i>	Common
5.	Krait (Kattu viriyan)	<i>Bungarus caeruleus</i>	Common
6.	Rat snake	<i>Ptyas mucosa</i>	Common
7.	Chameleon	<i>Chameleo chameleon</i>	Rare
8.	Green snake	<i>Primeresureus gramineus</i>	Common
9.	Common wall Lizard	<i>Podarcis muralis</i>	Common

Table 17: CLASS: AVES (BIRDS)

S.No.	Common Name	Scientific Name	Status
1.	Brahminy kite	<i>Halioster indus</i>	Least concern
2.	Shikra	<i>Accipiter badius</i>	Least concern
3.	Rock pigeon	<i>Columba livia</i>	Least concern
4.	Spotted dove	<i>Spilobelia chinensis</i>	Least concern
5.	Rose ringed Parakeet	<i>Psittakulla krameri</i>	Least concern
6.	Asian koel	<i>Eudymamys scolobaceus</i>	Least concern
7.	Greater Coucal	<i>Centropus sinensis</i>	Least concern
8.	Spotted owlet	<i>Athene brama</i>	Least concern
9.	Little Green Bee Eater	<i>Merops oriental</i>	Least concern
10.	Indian Roller	<i>Coracius benghalensis</i>	Least concern
11.	Hoopoe	<i>Upupa epops</i>	Least concern
12.	Black Drongo	<i>Dierurus macrocerus</i>	Least concern

13.	Common Mynah	<i>Acridotherus tristis</i>	Least concern
14.	House crow	<i>Corvus splendens</i>	Least concern
15.	Treepie	<i>Dendrocitta vagabunda</i>	Least concern
16.	Jungle babbler	<i>Argya striata</i>	Least concern
17.	Indian Robin	<i>Copsichus fulicatus</i>	Least concern
18.	White browed wagtail	<i>Motacilla maderasunbatensis</i>	Least concern
19.	Purple rumped Sunbird	<i>Leptocoma zeylonica</i>	Least concern
20.	House sparrow	<i>Passer domesticus</i>	Least concern
21.	Indian Peafowl	<i>Pavo cristatus</i>	Least concern

Table 18: CLASS: MAMMALIA

Sl. No.	Common Name	Scientific Name	IUCN status / Schedule
1	Indian palm squirrel	<i>Fumambulus palmarum</i>	<i>Lower risk/III</i>
2	Grey mongoose	<i>Herpestes edwardsii</i>	<i>Lower risk/II</i>
3	Indian gerbils	<i>Tatera indica</i>	<i>Lower risk/III</i>
4	Large bandicoot – rat	<i>Bandicota indica</i>	<i>Lower risk/III</i>
5	House rat	<i>Rattus rattus</i>	<i>Lower risk/III</i>

7.7 Observations – Fauna

The fauna observed and recorded in the study area are as follows:

Invertebrates	Chordates	Birds
<p>The insects in the study area are interrelated with each other and other organisms. Invertebrates recorded in the study site include 8 species of butterflies, 6 species of ants, 2 species of molluscans, and 4 species of spiders.</p>	<p>The chordates include 5 species of mammals, 21 species of birds, 9 species of reptiles, 1 species of amphibians.</p> <p>Reptiles</p> <p>The reptiles recorded in the study area include lizards, and snakes. Totally 9 species of reptiles were recorded in the study sites.</p>	<p>Birds play an important role in understanding the ecological balance and its interrelationships. Totally 22 species of birds were recorded in the campus.</p> <p>Mammals</p> <p>The mammals present in the study area include Mongoose, Indian palm Squirrel, etc. These mammals are spread over the study area. Totally 6 species of mammals were recorded in the campus.</p>

CHAPTER 8

CONCLUSION

8.1 Conclusion

Green Audit is the most efficient way to identify the strength and weakness of environmental sustainable practices and to find a way to solve problem. Green Audit is one kind of professional approach towards a responsible way in utilizing economic, financial, social and environmental resources. 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). There is scope for further improvement, particularly in relation to waste, energy and water management. The college in recent years considers the environmental impacts of most of its actions and makes a concerted effort to act in an environmentally responsible manner. Even though the college does perform fairly well, the recommendations in this report highlight many ways in which the college can work to improve its actions and become a more sustainable institution.

8.2 Observations and Comments

Land

- 1 The land use attributes include built-up area, playground area, sacred temple garden, plantation, green cover, open space, road network and storm water drains.
- 2 The campus has a green cover of 36.76 acres which include avenue trees, shrubs, herbs, ornamental plants, and garden with green cover. The green cover in the campus is 63 % of the total area.
- 3 As per the National Forest Policy, 1988 the institutions in plain area should have 33% green cover and hilly areas should have 60%. The campus comply with the National Forest Policy 1988, as it has **63 %**

green cover with avenue trees, and gardens. The terrain of the campus is plain.

- 4 The campus has 3.00 acres of cultivation land growing seasonal crops. Area occupied by water body and drainage network constitutes 1.14 acres.
- 5 The campus has a total built up area of 5.08 acres i.e., 20558.03. Sq. M. with buildings meant for academics, hostel, rest rooms, parking and open air auditorium. The playground area constitutes 4.50 acres with a road network area of 5.00 acres and a barren area of 3.26 acres.

Flora

The campus has 54 fully grown trees, shrubs, herbs, ornamental plants, and green cover spread over an area of 36.76 acres. The campus has a good landscape with signed buildings and gardens. Seasonal crops are cultivated in 3.00 acres of land.

Carbon absorption by flora in the Institution

Carbon absorption capacity of one full-grown tree = 192.48 kg CO₂.

1. Therefore the carbon absorption capacity of 25 full-grown trees in the Campus of the Institution ($54 \times 192.48 \text{ kg CO}_2$) = **10394 kg of CO₂**.

Fauna

Invertebrates

The insects in the study area are interrelated with each other and other organisms. Invertebrates recorded in the study site include 8 species of butterflies, 6 species of ants, 2 species of molluscs, and 4 species of spiders.

Chordates

The chordates include 6 species of mammals, 21 species of birds, and 9 species of reptiles.

Reptiles

The reptiles recorded in the study area include lizards, and snakes. Totally 9 species of reptiles were recorded in the study sites.

Birds

Birds play an important role in understanding the ecological balance and its interrelationships. Totally 21 species of birds were recorded in the campus.

Mammals

The mammals present in the study area include Mongoose, Indian palm Squirrel, etc. These mammals are spread over the study area. Totally 6 species of mammals were recorded in the campus.

Comments

- ❖ The campus complies with the prescribed standards of the National Forest Policy, 1988.
- ❖ The green initiatives of the campus is good and highly appreciated.
- ❖ The Biodiversity in the campus is well maintained through sacred garden, temple with family God and ethically bound students and staff.

SPIDERS



MOLLUSCA



REPTILES



AVES



MAMMALS



Fig. 11: Fauna in the Campus

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