Sir P. T. Science College, Modasa

A Green Auditing Report

Sir P. T. Science College, Modasa

Managed By: The M. L. Gandhi Higher Education Society

College Campus, Dhansura Road, Modasa-383315,Gujarat

A Green Auditing Report Committee

Dr. M. S. Jangid- Coordinator
Associate Prof., P. G. Centre in Botany

Team Members

Data Collection – Plantation Survey- Audit

1. ANJALI J. CHAUDHARI
2 .ARATI K . LEUVA
3 .BHUVAN K ASARI
4. BIJAL S . PARMAR
5. BRIJAL B . CHAUDHARI
6. BRIJAL M . PRAJAPATI

Data Collection – Land Use Survey- Audit

1. CHHAYA S .PATEL
2. DHARMISTA R . PATEL
3. DIMPLE K . CHAUDHARI
4. JANKI K .PATEL
5. JEEL G . BHATT
6. JIGNA G . MEGHA

Data Collection – Energy Survey- Audit

1. KINJALBA P . ZALA
2. KINJALBA P . ZALA
3. KUNTAL D. PATEL
4. MAITRI H. PATEL
5. MIJBA MO S. BANDI
6. NISHA B. PATEL

Data Analysis – Report Writing Photography

1. SWATI S. DAMOR
2. TAKVIM A. BHATT
3. TANVI A. DAMOR
4. UTTAM N. PARMAR
5. VISHVA K. SOLANKI

Data Collection – Photography

1. VISHVA N. PATEL
2. DIPALI R . DAMOR
3. HANI A . PATEL
4. JANKI B .PATEL

GREEN AUDIT

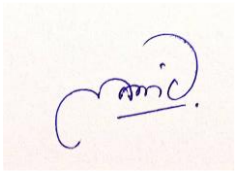
Certificate

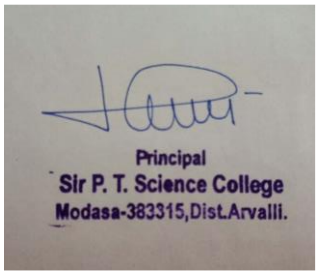
This is to certify that a "Green Audit" for Sir P. T. Science College, Modasa has been conducted in August-September 2021 to assess the green initiatives planning and efforts implemented in the college campus like Green campus management, Plantation, Rain water harvesting, Conservation of Energy.

This Green Audit is also aimed to assess the impact of green initiatives for maintenance of Eco-friendly Campus.

Place: College Campus, Modasa

Date:11th September 2021





Dr. M. S. Jangid

Coordinator

Dr. K. P. Patel

Principal

Concept

The term ‘Green audit’ means differently to different people. Terms like ‘assessment’, ‘survey’ and ‘review’ are also used to describe similar activities. Furthermore, some organizations/Institutions believe that an ‘environmental audit’ addresses only environmental matters, whereas others use the term to mean an audit of health, safety and environment-related matters. Although there is no universal definition of Green Audit, many leading companies/institutions follow the basic philosophy and approach summarized by the broad definition adopted by the International Chambers of Commerce (ICC) in its publication of Environmental Auditing (1989).

The ICC defines Environmental Auditing as:

“A management tool comprising a systematic, documented, periodic and objective evaluation of how well environmental organization, management and equipment are performing with the aim of safe guarding the environment and natural resources in its operations/projects.”

The outcome of Green Audit should be established with concrete evidence that the measures undertaken and facilities in the institution under green auditing.

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1. INTRODUCTION:-

Green Audit can be 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 college campus, which will have an impact on the eco-friendly ambience. It was initiated with the motive of inspecting the work conducted within the organizations whose exercises can cause risk to the health of inhabitants and the environment.Through Green Audit, one gets a direction as how to improve the condition of environment and there are various factors that have determined the growth of carrying out Green Audit.

❖ ABOUT US COLLEGE

The **M. L. Gandhi Higher Education Society** was started Sir P T **Science College,** Modasa in 1960. It was at that time only Science College in the whole district of Sabarkantha, where majority of population is schedule tribe, schedule cast and a few economically backward communities. It was one of the best of its kind in Sabarkantha District. . Our College has excellent infrastructure and congenital environment, which provides students a platform to exhibit their potentiality in the field of higher education. In the competitive environment of higher education, the institute has maintained its repute firmly. The institute boasts of big classrooms, well-equipped laboratories, prosperous library, huge sports campus, well designed and maintained botanical garden, biodiversity and highly qualified & well experienced faculty members. Besides education our students won so many championships in sports as well as cultural competitions such as drama, music and dance. The results of University examinations were excellent even 100%.

The taluka of Modasa is situated on 23^0 28'N latitude and 73^0 18'E longitude on the bank of river Mazum.The region of Modasa is flat and consists of mostaly sandy plains, although north and north eastern parts near Modasa are covered by the range of Aravalli hills.The total area of the taluka is 862.16 sq.km, total forest area is 6583.51 and total population is 2, 22,791.

♦ COLLEGE DETAILS:

- **ESTABLISHED IN 1960**
- **GRANT-IN-AID ONLY ONE SCIENCE COLLEGE IN ARVALLI DISTRICT AND AFFILIATED WITH THE HEMCHANDRACHARYA NORTH GUJARAT VERSITY, PATAN:**
- **IMPARTS EDUCATION UP TO B. SC. LEVEL:**

  MAIN SUBJECTS: CHEMISTRY, BOTANY, MATHEMATICS, PHYSICS (SEMV-VI SFI)

  SELF FINANCE COURSES: MICROBIOLOGY

  M. SC. LEVEL: CHEMISTRY, BOTANY AND PHYSICS,

  PH. D. LEVEL: CHEMISTRY AND BOTANY.
- **AWARDED "B+" GRADE BY NAAC IN 2007. (1ST CYCLE)**
- **AWARDED "B++" (CGPA 2.79) GRADE BY NAAC IN 2016 (2ND CYCLE)**

♦ VISION AND OUR GOAL

VISION

TO INCULCATE THE STUDENTS TO ANALYTICAL AND COMPASSIONATE, INTELLECTUALLY ASPIRANT AND REFLECTIVE SYNTHESIZING SCIENTIFIC TEMPERAMENT WITH HUMANISTIC WISDOM AND ESTHETICAL VALUES THAT BUILDS THE SPIRIT OF HUMANITY.

OUR GOAL

TO PROVIDE STUDENTS WITH AN ENVIRONMENT FOR THE ALL-ROUND DEVELOPMENT OF THEIR MENTAL, PHYSICAL, AESTHETIC, SOCIAL, AND SPIRITUAL POTENTIALS, TOGETHER WITH THE ATTITUDES OF INTEGRITY, HARD-WORK, HONESTY, FAIRNESS AND TOLERANCE, SO THAT THEY GIVE OF THEIR VERY BEST. EXCELLENCE IN THESE FIELDS IS TO BE INTERPRETED IN TERMS OF PUTTING THE SKILLS DEVELOPED IN EACH AT THE SERVICE OF THE SOCIALLY DISCRIMINATED GROUPS IN OUR COUNTRY WITH A VIEW TO SETTING UP A SOCIETY WHERE ALL HAVE EQUAL OPPORTUNITY AS CHILDREN OF GOD.

♦ OBJECTIVES

The main objective of the green audit is to promote the Environment Management and Conservation in the College Campus. The purpose of the audit is to identify, quantify, describe and prioritize framework of Environment Sustainability in compliance with the applicable regulations, policies and standards.The main objectives of carrying out Green Audit are:

- To introduce and aware students to real concerns of environment and its Sustainability.
- To secure the environment and cut down the threats posed to human health by analyzing the pattern and extent of resource use of the campus.
- To establish a baseline data to assess future sustainability by avoiding the interruptions in environment that are more difficult to handle and their corrections requiring high cost.
- To bring out a status report on environmental compliance

♦ PHYSICAL INFRASTRUCTURE IN COLLEGE CAMPUS:

- **AN OUTSTANDING CAMPUS:** 18.29 ACRES CAMPUS AREA
- **TOTAL BUILT UP AREA:** 3000 SQ. MT.
- **GREEN CAMPUS**
- **BOTANICAL GARDEN**
- **14 COLLEGES + 01 ENGLISH MEDIUM SCHOOL**

♦ CAMPUS INFRASTRUCTURE AND LAYOUT

CAMPUS INFRASTRUCTURE:

- Pleasant, eco friendly environment.
- Big, spacious and well furnished class-rooms
- **Laboratories:**

  The College has well equipped and well managed laboratories for physics, chemistry, biotechnology and biology. Generally, all the required equipments for each subject are available in good functioning condition.

- **Research Laboratory:**

  College offers research facility for the degree of Ph.D., which helps the students as well as the faculty members to undertake research project and to carry out research in the relevant subject.

- **Library:**

  A well-maintained and spacious library having the latest reference and text books on different subjects. Audio-visual e-lecture facility available. The library also provides some magazines & articles related to their fields and help the students to update on the courses, examination and competitive examination. Poor Boys Library scheme is also available.

- Audio-visual Seminar hall with smart board , LED display-LCD projector , internet facilities and DTH facilities .
- **U. G. C. Network Resource Centre with internet facilities.**
- **Hostels:**

  There are two hostels in the college campus. These hostels are maintained by the management directly. The hostels have spacious and airy rooms. The hostels are situated in a very educational and eco-friendly environment in the college campus itself. There are large playgrounds adjoining the hostels and hence the students residing in the hostels get ample space for recreational activities. As the hostels are in the internal parts of the college campus, complete safety of the students is assured. The students can avail the hostel facility at a very nominal rate per term. The management has appointed enough

staff for the maintenance of the hostels. There are 2 rectors, 1 Lady Superintendent (Resident), 1 clerk, 2 sweepers, a kitchen contractor and several servants for the mess.

- **Canteen:**

  The College has a well-furnished Canteen within the campus. The canteen is the most preferred place for every students and much time is spent around here. In addition to satisfying one's hunger and thirst, lot of serious discussion on topics of current interest happen here. Many are found here revising their interpersonal and communicative skills over a cup of tea. The Canteen offers delicious delicacies of different types to the taste of all.

- **Auditorium Hall:**

  The Hall having capacity of 1200 students with facilities of stage, green room, change room.

- **Sports Campus:**

  Well equipped and maintained huge sports campus, which includes several grounds for different games like Cricket, Hockey, Valley Ball, Basket Ball, Kho-Kho and Tennis Court.

- **DELL (Digital Equiped Language Lab)**
- **Lab and classroom contain A.V facility**
- **Mike system**
- **CCTV cameras**
- **Other Facilities: Common Xerox Center, Canteen, Telephone Booth and SBI ATM.**

- **SEMINAR HALL**

  The college has a seminar hall, equipped with audio-visual facilities for the smooth conduct of seminars, conferences and other activities.

- **CONFERENCE ROOM**

  There is a conference room aimed at providing space for the policy making bodies of the college.

- **MULTI-PURPOSE ROOM**

  The multi-purpose administrative room, which has the offices of the Assistant Director, Vice Principal, the Coordinators of IQAC, Academics and space for executive meetings and presentations.

- **LANGUAGE LAB**

  There is a language lab in the college which facilitates the students to fine tune their communication skills. It also doubles up as the venue for Add-On Courses like Graphic Designing and Animation as well as for training programs in SPSS.

- **COMPUTER LABS**

  There are two well-equipped computer labs associated with the Departments of Management, Computer Application, Physics and Chemistry.

- **BOTANICAL GARDEN**

  Botanical Garden: Well designed & maintained botanical garden in campus.

2. PRE AUDIT STAGE:-

♦ SCOPE AND GOALS OF GREEN AUDIT

A clean and healthy environment aids in effective learning and provides a conductive learning environment. There are various efforts around the world to address environmental education issues. Green Audit is the most efficient and ecological way to manage environmental problems. It is a kind of professional care which is the responsibility of each individual who is the part of economical, financial, social, environmental factor. It is necessary to conduct green audit in college campus because students become aware of the green audit, its advantages to save the planet and they become good citizen. Thus Green audit becomes necessary at the college level.

♦ BENEFITS OF GREEN AUDIT

- 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
- 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

♦ METHODOLOGY

In preliminary data collection phase, exhaustive data collection was performed using different tools such as observation, survey communicating with responsible persons and measurements.

Following steps were taken for data collection:

- The team went to each department, centers, Library, canteen etc.
- Data about the general information was collected by observation and interview.
- The power consumption of appliances was recorded by taking an average value in some cases.

♦ SURVEY FORM

In order to perform green audit, the methodology included different tools such as preparation of questionnaire, physical inspection of the campus, observation and review of the documentation, interviewing key persons and data analysis, measurements and recommendations. The study covered the following areas to summarise the present status of environment management in the campus:

Water management

Energy Conservation

Waste management

Green area management

Audit of carbon footprint

A) AUDIT OF WATER MANAGEMENT

1. List uses of water in your college.
2. What are the sources of water in your college?
3. How does your college store water?
4. If there is water wastage, specify why.
5. How can the wastage be prevented / stopped?
6. What are the uses of waste water in your college?
7. What happens to the water used in your labs? Whether it gets mixed with ground water?
8. Number of water coolers?
9. Number of water taps?
10. Number of bath rooms in staff rooms, common, hostels?
11. Number of toilet, urinals?
12. Does your college harvest rain water?
13. Is there any water management plan in the college?
14. Are there any water saving techniques followed in your college? What are they?
15. Please share Some IDEA for how your college could save more water.

B) AUDIT OF ENERGY MANAGEMENT

1. List the usage of energy in your college. (Electricity, electric stove, kettle, microwave, LPG, firewood, Petrol, diesel and others).
2. Electricity bill
3. Is there generator facility in the college?
4. How many CFL bulbs has your college installed?
5. How many tube lights, fans are installed in your college?
6. How many air conditioners are installed in your college?
7. How many electrical equipments including weighing balance are installed your college? Mention the use (Hours used/day for how many days in a month)
8. How many TV, CCTV and computers are there in your college?

C) AUDIT OF WASTE MANAGEMENT

1. Which of the following are found near your college?
   Municipal dump yard, Garbage heap, Public convenience, Sewer line, Stagnant water, Open drainage, Bus / Railway station, Market / Shopping complex / Public halls
2. Does your college generate any waste? (E-waste, Hazardous waste (toxic), Solid waste, Dry leaves, Canteen waste, Liquid waste, Glass, Unused equipment, Medical waste if any, Napkins, Others (Specify))
3. Is there any waste treatment system in the college?
4. How is the waste generated in the college managed, by composting or recycling or reusing or by other methods?
5. Do you use recycled paper in College?

D) AUDIT OF GREEN CAMPUS MANAGEMENT

1. Is there a garden in your college?
2. Do students spend time in the garden?
3. List the numbers of each plants species in the garden.

4. List the species planted by the students, with numbers.
5. Whether you have displayed scientific names of the trees in the campus?
6. Is there any plantation in your campus? If yes specify area and type of plantation.
7. Is there any medicinal garden in your college? If yes how much area?
8. Who is in charge of gardens in your college?
9. Are you using any type of recycled water in your garden?
10. Do you have any composting pit in your college?
11. What do you doing with the vegetables harvested?
12. Is there any botanical garden in your campus? If yes give details of campus flora.
13. Give the number and names of the medicinal plants in your college campus.
14. Any threatened plant species planted/conserved?
15. Is there a nature club in your college? If yes what are their activities?
16. What is the type of vegetation in the surrounding area of the college?
17. Is there any nature awareness program conducted in the campus?
18. What is the involvement of students in the green cover maintenance?
19. What is the total area of the campus under tree cover? Or under tree canopy?
20. Share your ideas for further improvement of green cover.

E) AUDIT OF CARBON FOOTPRINT

1. Total Number of vehicles used by the students of the college.
2. Mention the usage of cycles, two wheelers and cars.
3. Number of persons using common transportation
4. Number of parent-teacher meetings in a year?
5. Number of visitors with vehicles per day?
6. Number of generators used per day (hours). Give the amount of fuel used per day.
7. Suggest the methods to reduce the quantity of use of fuel used by the students / teacher-non teaching staff of the college.

3. POST AUDIT STAGE:-

The base of any green audit is that its findings are supported by documents and verifiable information. The audit process seeks, on a sampled basis, to track past actions, activities, events, and procedures to ensure that they are carried out according to systems requirements and in the correct manner. Green audits form a part of a process. Although they are individual events, the real value of green audits is the fact that they are carried out, at defined intervals, and their results can illustrate improvement or change over time. Although green audits are carried out using policies, procedures, documented systems and objectives as a test, there is always an element of subjectivity in an audit. The essence of any green audit is to find out how well the environmental management and environmental equipment are performing. Each of these components is crucial in ensuring that the campus environmental performance meets the goals set in its green policy. The individual functioning and the success of integration will all play a role in the degree of success or failure of the campus environmental performance

♦ KEY FINDINGS AND OBSERVATIONS

A) WATER

- Main water uses in the campus: gardening, recreation, toilet, laboratory, cleaning, canteen, drinking, hostel, washing, office uses.
- Rain water harvesting and bore wale are main sources water in the campus.
- Storage water: ground water storage, wet lands, ponds and tanks.
- Water wastage mainly during urinals and toilets.
- Water wastage can be prevented by: wisely flush, washing vehicles, long showers and in the kitchen.
- Water is used in many different ways such as distilled and deionized water in laboratory
- Water coolers: Yes
- Water taps: Yes
- Bathrooms and toilets in staff rooms, common, hostels:Yes

- Water management plan: Pressure system, Two Well and Tube well.
- Reasons for water wastage: leakages from taps, over use of water and overflow of water from motors

B) ENERGY

- Usage of energy through electricity, microwave, LPG and Diesal.
- No generators:1
- No CFL bulbs:2
- Total number of tube lights: 194
- Total number of fans: 170
- Total number of computers: 70
- Total number of air conditioners: 19
- Total number of TV: 17
- Total number of rooms:98
- Total number of staff room: 4
- Total Refrigator:3

C) WASTE

- Following all are far from the college area: Municipal dump yard, Garbage heap, Public convenience, Sewer line, Stagnant water, Open drainage, Public halls
- College generates e-waste, Solid waste, dry leaves, canteen waste, liquid waste, glass and unused equipment.
- There is a composting system to reduce canteen waste and electronic waste such as computers, electrical parts reduced by selling of it.
- Plastic waste dispose by selling
- Solid waste as food waste, damage furniture, paper waste send to municipal waste collection centre.
- No treatment for laboratory wastes
- Waste water treatment plant is under the pipeline condition to treat the lab and other waste water.
- Glassware waste as broken glass wares from the laboratory send to municipal waste

collection centers

D) GREEN CAMPUS

- Garden area inside the college –Yes
- Total number of plant species identified – 384
- Total campus area – 18.29 ACRES
- Treated water from waste water treatment is used in pouring the plants of garden.
- The college has one composting pit inside the campus.
- There is a Nature Club in the campus. Awareness program, plastic free zone, Ozone Day celebration, World Environment Day and other activities are held in the college.

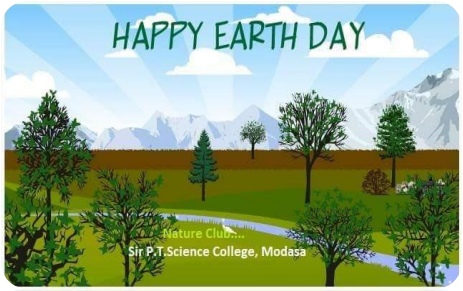
♦ World Environment Day – June 5

Awareness seminars are organized on various environmental problems. Distribution of trees, poster exhibition etc. activities are done on that day.

♦ Ozone Day – September 16

The Green campus drive is an initiative of the college to protect the environment. The college is trying for a ‘No Plastic’ zone. The campus protects age old trees in addition to several new trees and plants planted. Rain water is collected in the cement underground tank in the college. Bio-degradable waste is collected and made into compost. Non-degradable and electronic waste and toxic materials are regularly disposed of. Important

days like World Environment Day, Ozone Day, etc are observed and several programmes including processions, competitions and street plays are conducted by various departments and the Nature Club to create awareness in environment protection and conservation.



(WORLD EARTH DAY)

(PLASTIC FREE COLLEGE CAMPUS AND MODASA TOWN PROGRAMME)

(SWACHH BHARAT ABHIYAN PROGRAMME)

PLANTS FOUND IN THE CAMPUS:

SR NO	BOTANICAL NAME	FAMILY	V.N.	HABIT
1	*Annona squamosa* L.	Annonaceae	Sitaphal	T
2	*Annona reticulata* L.		Ramphal	T
3	*Artabotrys hexapetalus* (L.f.) Bhandari.		Lilo Champo	S
4	*Polyalthia longifolia* (Sonn.) Thw.		Asopalav	T
5	*Cissampelos pareira* L.	Menispermaceae	Venivel	Cl
6	*Cocculus hirsutus* (L.) Diels		Vevdi	Cl
7	*Cocculus villosus* DC.		Vevdi	Cl
8	*Tinospora cordifolia* (Willd.) Hook.&. Thoms.		Gudajvel	Cl
9	*Argemone mexicana* L.	Papaveraceae	Darudi	H
10	*Brassica campestris* L. Var. Sarson	Brassicaceae	Sarsav	H
11	*Brassica juncea* (L.) Czern & Coss.		Rai	
12	*Cadaba fruticosa* (L.) Druce.	Capparaceae	Teliohemkand	S
13	*Capparis decidua* (Forsk.) Edgew.		Kerado	S
14	*Capparis sepiaria* L.		Kanther	S
15	*Capparis spinosa* L.		Kantalo kanther	S
16	*Capparis horrida* L.		Govind fal	S
17	*Cleome gynandra* L.		Ghandhatu	H
18	*Cleome viscosa* L.		Pilitilvan	H
19	*Crateva nurvala* Buch.		Vayvarno	T

20	*Hybanthus enneaspermus* (L.) F.Muell.	Violaceae		H
21	*Polygala chinensis* L.	Polygalaceae	Pilibhonysan	H
22	*Polygala erioptera* DC.		Bhonyasn	H
23	*Polycarpaea corymbosa* (L.) Lam.	Caryophyllaceae	----------	H
24	*Portulaca grandiflora* HK.f.	Portulacaceae	Chini gulab	H
25	*Portulaca oleracea* L.		Motiluni	H
26	*Portulaca tuberosa* Roxb.		Dholi luni	H
27	*Portulaca quadrifida* L.		Ziniluni	H
28	*Bergia capensis* L.	Elatinaceae	Jaljambro	H
29	*Bergia suffruticosa* (Del.) Fenzl.		Gandharo okhrad	H
30	*Abelmoschus esculentus* (L.) Moench.	Malvaceae	Bhinda	S
31	*Abutilon indicum* (L.) Sw.		Khapat, Kanski	S
32	*Abutilon fruticosum* Guill. Perr.		Zini khapat	S
33	*Gossypium herbaceum* L.		Kapas	Us
34	*Gossypium arboreum* L. var. *Neglectum* L.		Deshi kapas	S
35	*Gossypium herbaceum* L. var. *Acerifolium (*Guill & Perr.) Che.		Kapas	S
36	*Hibiscus rosa-sinensis* L.		Jasud	S
37	*Hibiscus lobatus* (Murr.) O.Ktze.		Tali	H
38	*Pavonia odorata* Willd.		Sugandh Bala	H

39	*Sida cordata* (Burm.f) Borss.		Bhoyabala	H
40	*Sida acuta* Burm.f.		Bala	H
41	*Sida cordifolia* L.		Bala	H
42	*Sida ovata* Forsk.		Bala	H
43	*Sida retusa* L.		Bala	H
44	*Sida rhombifolia* L.		Bala	H
45	*Sida spinosa* L.		Bala	H
46	*Thespesia populnea* (L.) Soland.		Paras piplo	T
47	*Adansonia digitata* L.	Bombacaceae	Rukhdo	T
48	*Bombax ceiba* L.		Shimlo	T
49	*Dombeya acutangula* L.		Bhadraksh	S
50	*Guazuma ulmifolia* Lam.		Khoto rudraksh	T
51	*Pterospermum acerifolium* Willd.		Kanak champo	T
52	*Waltheria indica* L.	Sterculiaceae	---------	H
53	*Corchorus aestuans* L.		Chhunchh	H
54	*Corchorus capsularis* L.		Bor chhunchh	H
55	*Corchorus olitorius* L.		Nani chhunchh	H
56	*Corchorus depressus* (L.) Stocks.	Tiliaceae	Bahuphali	H
57	*Corchorus trilocularis* L.		Tridhari chhunchh	H
58	*Grewia villosa* Willd.		Parekhado	S
59	*Grewia hirsuta* Vahl, Symb.		Khad dhamni	S
60	*Triumfetta rhomboidea* Jacq.		Zipti	H

61	*Triumfetta pentandra* A.		Zipti	H
62	*Triumfetta rotundifolia* Lam.		Zipto	H
63	*Tribulus terrestris* L.	Zygophyllaceae	Gokhru	H
64	*Oxalis corniculata* L.	Oxalidaceae	Navari	H
65	*Impatiens balsmina* L.	Balsaminaceae	Tanmaniyoo	H
66	*Aegle marmelos* (L.) Corr.	Rutaceae	Bili	T
67	*Citrus limon* (L.) Burm.		Limbu	T
68	*Limonia acidissima* L.		Kotha	T
69	*Murraya koenigii* (L.) Spr.		Mitho limdo	S
70	*Murraya paniculata* (L.) Jacq.		Kamini	S
71	*Ailanthes excelsa* Roxb.	Simaroubaceae	Moto arduso	T
72	*Balanites aegyptiaca* (L.) Del.	Balanitaceae	Ingoriyo	S
73	*Azadirachta indica* A.Juss.	Meliaceae	Limdo	T
74	*Melia azedarach* L.		Bakam limdo	T
75	*Zizyphus nummularia* (Burm.f.) W.&A.	Rhamnaceae	Chanibor	S
76	*Ampelocissus latifolia* (Roxb.) Planch.	Vitaceae	Jangli draksh	Cl
77	*Cayratia carnosa* (Lam.) Gagnep.		Khat khatumbo	Cl
78	*Cardiospermum halicacabum* L.	Sapindaceae	Kagdolio	Cl
79	*Dodonaea viscosa* (L.) Jacq.		Jakhami	S
80	*Sapindus laurifolius* Vahl. Symb.		Aritha	T
81	*Lannea coromandelica* (Houtt.)		Moyno	T

	Merrill.			
82	*Mangifera indica* L.	Anacardiaceae	Ambo	T
83	*Moringa oleifera* L.	Moringaceae	Sargavo	T
84	*Abrus precatorius* L.	Fabaceae	Chanothi	Cl
85	*Alysicarpus monilifer* (L.) DC.		Samervo	H
86	*Alysicarpus longifolius* (Rottl. Ex. Spreng.) W. & A.		Moto samervo	H
87	*Alysicarpus bupleurifolius* (L.) DC.		Khad samervo	H
88	*Alysicarpus scarious* (Rottl. Ex. Spreng.) Grah. A.Socki.		Ruchhalo samervo	H
89	*Arachis hypogaea* L.		Magfali	H
90	*Butea monosperma* (Lam.) Taub.		Khakhro / Kesudo	T
91	*Cajanus cajan* (L.) Millsp.		Tuver	S
92	*Clitoria ternatea* L.		Garni	Cl
93	*Crotolaria orixensis* Willd.		Tripani, fatakiyo	H
94	*Crotolaria burshia* Buch. Ham.		Kharsani	S
95	*Crotolaria retusa* L.		Gughro	S
96	*Crotolaria juncea* L.		Shun	S
97	*Dalbergia latifolia* Roxb.		Sisam	T
98	*Dalbergia sissoo* Roxb.		Moto sisam	T
99	*Derris indica* (L.) Bennet. Syn. (*Pongamia pinnata* Pierre.)		Karanj	T
100	*Dolichos falcatus* L.		Valor	Cl
101	*Indigofera cordifolia* Heyne.		Gali	H

102	*Indigofera linifolia* Banker.		Bethi gali	H
103	*Indigofera linnaei* Ali.		Fatakiya / Bhoyan gali	H
104	*Indigofera tinctoria* L.		Gali	H
105	*Medicago sativa* L.		Lachko	H
106	*Melilotus alba* L.		Jangali methi	H
107	*Mucana prurita* HK.f.		Kuvech	Cl
108	*Pisum sativum* L.		Vatana	Cl
109	*Rhyncosia minima* (L.) DC.		Nanikamalvel	Cl
110	*Sesbania grandiflora* (L.) Poiret.		Agathio	T
111	*Sesbania sesban* (L.) Merr. Sub. Sp. *sesban* var. *Sesban* Gill.		Shevari	S
112	*Tephrosia purpurea* (L.) Pers.		Sarpankho	Us
113	*Trigonella foenum- graecum* L.		Methi	H
114	*Zornia gibbosa* Span.		Samarapani	H
115	*Bauhinia acuminata* L.	Caesalpiniaceae	Kanchan	S
116	*Bauhinia purpurea* L.		Dev kanchanar	T
117	*Caesalpinia bonducella* Fleming.		Sagargota	S
118	*Caesalpinia crista* L.		Karkas	S
119	*Caesalpinia pulcherrima* (L.) Svt.Obs.		Galtoro	T
120	*Cassia auriculata* L.		Aval	S
121	*Cassia fistula* L.		Garmalo	T

122	*Cassia occidentalis* L.		Kasundro	H
123	*Cassia tora* L.		Kuvandio	H
124	*Cassia pumila* Lam.		Bethi chimed	H
125	*Delonix elata* (L.) Gamble.		Sandsro	T
126	*Delonix regia* (Boj.) Raf.		Gulmohar	T
127	*Parkinsonia aculeata* L.		Rambaval	S
128	*Peltophorum pterocarpum* (DC.) Baker.		Tamrafali	T
129	*Tamarindus indica* L.	Caesalpiniaceae	Amli	T
130	*Acacia auriculiformis* A.Cunn.	Mimosaceae	Australian baval	T
131	*Acacia nilotica* (L.) Del.		Baval	T
132	*Albizia lebbeck* (L.) Bth.		Siris	T
133	*Mimosa hamata* Willd.		Kaibaval	Us
134	*Mimosa pudica* L.		Lajamani	H
135	*Parkia biglandulosa* W. & A.		Chanduphal	T
136	*Pitchecellobium dulce* (Roxb.) Bth.		Gorasamli	T
137	*Prosopis chilensis* (Molina) Stun.		Gando baval	T
138	*Samanea saman* (Jacq.) Merrill.		Rato sarasdo	T
139	*Rosa indica* L.	Rosaceae	Gulab	S
140	*Rosa alba* L.		Indian white rose	S
141	*Kalanchoe laciniata* DC.	Crsaaulaceae	----------	H
142	*Kalanchoe pinnata* (Lam.) Pers.		Panphuti	H
143	*Anogeissus latifolia* (Roxb.) Wall.	Combretaceae	Dhav	T

144	*Combretum coccineum* Lam.		Madhvel	Cl
145	*Quisqualis indica* L.		Madhumalti	Cl
146	*Terminalia arjuna* (Roxb.) W. & A.		Arjunsadad	T
147	*Terminalia catappa* L.		Badam	T
148	*Callistemon lanceolatus* DC.	Myrtaceae	Bottle brush	T
149	*Eucalyptus citriodora* HK.f.		Neelgiri	T
150	*Psidium guajava* L.		Jamfal	T
151	*Syzygium cumini* (L.) Skeels.		Jambu	T
152	*Ammannia baccifera* L.	Lythraceae	Jalagio	H
153	*Ammannia multiflora* Roxb. Hort.		Zinoagio	H
154	*Lawsonia inermis* L.		Mendhi	S
155	*Ludwigia parviflora* Roxb.	Onagraceae	----------	H
156	*Ludwigia perennis* L.		Panlavang	H
157	*Passiflora edulis* Sims.	Passifloraceae	Krishna kamal	Cl
158	*Passiflora foetida* L.		“	Cl
159	*Carica papaya* L.	Caricaceae	Papaya	T
160	*Citrullus colocynthis* (L.) Schrad.	Cucurbitaceae	Kadva indravarna	Cl
161	*Coccinia grandis* (L.) Voigt. Hort.		Tindora	Cl
162	*Ctenolepis cerasiformis* (Stocks.) HK.f.		Ankhfutamani	Cl
163	*Momordica charantia* L.		Karela	Cl
164	*Momordica dioica* Roxb.		Kankoda	Cl

165	*Mukia maderaspatana* (L.) M.Roem.		Chanak chibhadi	Cl
166	*Trichosanthes cucumerina* L.		Jangli parval	Cl
167	*Opuntia elatior* Mill.	Cactaceae	Fafdo thor	S
168	*Mollugo pentaphylla* L.	Molluginaceae		H
169	*Mollugo nudicaulis* Lam.			H
170	*Trianthema portulacastrum* L.	Aizoaceae	Satodo	H
171	*Coriandrum sativum* L.	Apiaceae	Kothmir	H
172	*Alangium salvifolium* (L.f.) Wang.	Alangiaceae	Ankol	T
173	*Anthocephalus indicus* A.Rich.	Rubiaceae	Kadamba	T
174	*Borreria stricta* (L.f.) Schum.		Ganthiyu	H
175	*Gardenia jasminoides* L.		Gandharaj	S
176	*Hamelia patens* Jacq.			H
177	*Ixora arborea* Roxb.		Naveri	S
178	*Ixora coccinea* L.		Rati nevari	H
179	*Mitragyna parvifolia* (Roxb.) Korth.		Kadamb	T
180	*Oldenlandia corymbosa* L.		Pitpapdo	H
181	*Xeromphis spinosa* (Thunb.) Keay.		Mindhal	S
182	*Acanthospermum hispidum* DC.	Asteraceae		H
183	*Artemisia maritima* L.		Kirmani	H
184	*Bidens biternata* (Loar.) Merr. B.		Kokadi	H
185	*Blumea eriantha* DC.		Kapuriyo kalhar	H

186	*Blumea lacera* (Burm.f.) DC.		Kapuriyo	H
187	*Chrysanthemum indicum* L.		Guldaoudi	H
188	*Echinops echinatus* Roxb.		Utkanto	H
189	*Eclipta prostrata* (L.) L.Mant.		Bhangro	H
190	*Grangea maderaspatana* (L.) Poir.		Zinki mundi	H
191	*Helianthus annus* L.		Suryamukhi	H
192	*Launaea procumbens* (Roxb.) R. & R.		Moti bhopatri	H
193	*Launaea sarmentosa* (Willd.) Alst.		Nani bhopatri	H
194	*Parthenium hysterophorus* L.			H
195	*Sphaeranthus indicus* L.		Gorakhmundi	H
196	*Tagetes erecta* L.		Galgota	H
197	*Tridax procumbens* L.		Pardesi bhangro	H
198	*Vernonia anthelmintia* (L.) Willd.		Kaligiri	H
199	*Vernonia cinerea* (L.) Less.		Shadevi	H
200	*Xanthium strumarium* L.		Gokhru	H
201	*Plumbago zeylanica* L.	Plumbaginaceae	Safed chitrak	H
202	*Anagallis arvensis* L. Var. Coerulea L.	Primulaceae		H
203	*Madhuca indica* J.F.	Sapotaceae	Mahudo	T
204	*Manilkara hexandra* (Roxb.) Dab.		Rayana	T
205	*Manilkara zapota* (L.) Van.		Chikoo	T

206	*Mimusops elengi* L.		Bakul	T
207	*Jasminum flexile* Vahl. Symb.	Oleaceae	Jui	Cl
208	*Jasminum multiflorum* (Burm.f.) Andr.		Bat mogro	Cl
209	*Nyctanthes arbortristis* L.		Parijatak	T
210	*Alstonia scholaris* (L.) R.Br.	Apocynaceae	Saptaparni	T
211	*Carissa congesta* Wt. Icon. T.		Karamda	S
212	*Catharanthus pusillus* (Murr.) G.Don.		Morali	H
213	*Catharanthus roseus* (L.) G. Don.		Barmasi	H
214	*Ervatamia divaricata* (L.) Burkill.		Taggar	S
215	*Nerium indicum* Mill.		Lal Karen	S
216	*Plumeria rubra* L.		Khad champo	T
217	*Plumeria acutifolia* Poir.		Champo	T
218	*Rouvolfia tetraphylla* L.		Sarpagandha	S
219	*Thevetia peruviana* (Pers.) Merill.		Pili karen	S
220	*Calotropis gigantea* (L.) R.Br.	Asclepiadaceae	Moto akdo	S
221	*Calotropis procera* (Ait.) R.Br.		Nano akdo	S
222	*Dregea volubilis* (L.f.) Bth.		Moti dodi	Cl
223	*Pergularia daemia* (Forsk.) Chiov.		Chamar dudheli	Cl
224	*Tylophora indica* (Burm.f.) Merill.		Damvel	Cl
225	*Cryptostegia grandiflora* R.Br.	Periplocaceae	Rubber vel	Cl

226	*Hemidesmus indicus* (L.) R.Br.		Dudhi	Cl
227	*Enicostema hyssopifolium* (Willd.) Verdoon.	Gentianaceae	Kadavinai	H
228	*Cordia dichotoma* Forst. F. Prodr.	Ehretiaceae	Vadgundo	T
229	*Cordia gharf* (Forsk.)E.&A.		Nana gunda	T
230	*Cordia sebestena* L.		Gunda	S
231	*Coldenia procumbens* L.	Boraginaceae	Okhrad	H
232	*Heliotropium indicum* L.		Hathi sundho	H
233	*Heliotropium ovalifolium* Forsk.		Nani hathi sundhi	H
234	*Trichodesma amplexicaule* Roth.		Undhafati	H
235	*Convolvulus microphyllus* (Roth.) Sieb.	Convolvulaceae	Dholi sahankhvali	H
236	*Evolvulus alsinoides* (L.) L.		Kali shankhavali	H
237	*Ipomoea obscura* (L.) Ker-Gawl.		Vad fudardi	Cl
238	*Ipomoea pes-tigridis* L.		Vagpadi	Cl
239	*Ipomoea quamoclit* L.		Kamini	Cl
240	*Ipomoea eriocarpa* R.Br.		Bodi fudardi	Cl
241	*Ipomoea fistulosa* Mart.		Besharmi	Cl
242	*Merremia gangetica* (L.) Cufod.		Underkani	Cl
243	*Cuscuta chinensis* Lam.	Cuscutaceae	Amarvel	P
244	*Cuscuta reflexa* Roxb.	Cuscutaceae	Amarvel	P
245	*Capsicum annum* Roxb.	Solanaceae	Marchi	H

246	*Cestrum diurnum* L.		Din ka raja	S
247	*Cestrum nocturnum* L.		Rat ni rani	S
248	*Datura innoxa* Mill.		Kalo dhanturo	Us
249	*Datura metel* L.		Dhanturo	H
250	*Physalis minima* L.		Popti	H
251	*Solanum indicum* L.		Ubhi ringni	H
252	*Solanum melongena* L.		Ringan	H
253	*Solanum nigrum* L.		Piludi	H
254	*Solanum surattense* Burm.f.		Bho ringni	H
255	*Withania somnifera* (L.) Dunal.		Ashvagandha	Us
256	*Lindernia ciliata* (Colsm.) Pennell.	Scrophulariaceae	Bhit chalti	H
257	*Lindernia oppositifolia* (Retz.)Mukerjee.		Nani bhit chalti	H
258	*Striga angustifolia* (D.Don). Saldhana.		Dholo agio	P
259	*Striga gesneroides* (Willd.) Vatke.		Rato agio	P
260	*Bignonia unguis* Cati Rehd.	Bignoniaceae	Nakhvel	Cl
261	*Millingtonia hortensis* L.		Desi buch	T
262	*Tecoma stans* (L.) H.B. & K.		Pili limbdi	S
263	*Pedalium murex* L.	Pedaliaceae	Ubhi gokharu	H
264	*Sesamum laciniatam* Klein		Vagadau tal	H
265	*Martynia annum* L.	Martyniaceae	Vinchhudo	H
266	*Adhatoda vasica* (L.) Nees.	Acanthaceae	Arduso	Us
267	*Blepharis repens* (Vahl.) Roth.		Zinkuuntingon	H

268	*Hygrophila auriculata* (Schum.) Heine.		Kantashelio	H
269	*Justicia procumbens* L.			H
270	*Lapidagathis trinervis* Wall.		Harancharo	H
271	*Peristrophe bicalyculata* (Retz.) Nees.		Kalianghedi	H
272	*Rungia pectinata* (L.) Nees.		Khadselio	H
273	*Ruellia tuberosa* L.		Fatakado	H
274	*Thunbergia erecta* (Bth.) T.Anders.		Mohan	S
275	*Clerodendrum inerme* (L.) Gaertn.	Verbenaceae	Vad Mendi	S
276	*Clerodendrum multiflorum* (Burm.f.) O.Ktze.		Arni	S
277	*Duranta repens* L.		Damyanti	S
278	*Gmelina arborea* Roxb.		Saven	T
279	*Lantana camara* L.		Indradhanu	S
280	*Phyla nodiflora* (L.) Greene.		Ratvelio	H
281	*Tectona grandis* L.		Sag	T
282	*Vitex negundo* L.	Verbenaceae	Nagod	T
283	*Leucas aspera* (Willd.) Spr.	Lamiaceae	Kubi	H
284	*Leucas cephalotes* (Roxb. Ex. Roth.) Spr.		Dosino kubo	H
285	*Leucas urticaefolia* R.Br.		Kubo	H
286	*Mentha piperita* L.		Vilayati Fudina	H
287	*Mentha spicata* L.		Fudino	H

288	*Moschosma polystachyum* (L.) Bth.		Avachi Bavchi	H
289	*Ocimum gratissimum* L.		Ramtulsi	H
290	*Ocimum sanctum* L.		Tulsi	H
291	*Ocimum basilicum* L.		Damro	H
292	*Boerhavia chinensis* (L.) Druce	Nyctaginaceae	Satodi	H
293	*Boerhavia diffusa* L.		Satodi	H
294	*Boerhavia verticillata* Poir.		Punarnava	H
295	*Bougainvillea glabra* DC.		Boganvel	S
296	*Bougainvillea spectabilis* Willd.		"	S
297	*Mirabilis jalapa* L.		Gulbas	H
298	*Achyranthes aspera* L.	Amaranthaceae	Anghedi	H
299	*Aerva sanguinolenta* (L.) Bl. Bljdr.		Gorakh ganjo	H
300	*Amaranthus lividus* L.		Tandaljo	H
301	*Amaranthus spinosus* L.		Katalo dhimdo	H
302	*Amaranthus viridis* L.		Dhimdo	H
303	*Celosia argentea* L.		Lapadi	H
304	*Digera muricata* (L.) Mant.		Kanegro	H
305	*Gomphrena globosa* L.		Batau	H
306	*Chenopodium album* L.	Chenopodiaceae	Chilni bhagi	H
307	*Basella rubra* L.	Basellaceae	Poi	Cl
308	*Antigonon leptopus* H. & Arn.	Polygonaceae	Ice cream	Cl
309	*Polygonum glabrum* Willd.		Okharad	H

310	*Dendrophthoe falcata* (L.f.) Etting.	Loranthaceae	Vando	P
311	*Santalum album* L.	Santalaceae	Chandan	T
312	*Acalypha wilkesiana*	Euphorbiaceae		H
313	*A. hispida*		Ranchalo dudro	H
314	*Acalypha indica* L.		Vaichikanto	H
315	*Breynia retusa* (Dennst.) Alst.		Kamboi	S
316	*Chrozophora prostrata* Dalz.		Betho okhrad	H
317	*Croton bonplandianum* Baill.		Croton	H
318	*Drypetes roxburghii* (Wall.) Hurus.		Putranjivi	T
319	*Emblica officinalis* Gaertn.		Amla	T
320	*Euphorbia dracunculoides* Lam.		Ubhi dudheli	H
321	*Euphorbia hirta* L.		Nagla dudheli	H
322	*Euphorbia milli* Ch.			S
323	*Euphorbia neriifolia* L.		Thor	S
324	*Euphorbia pulcherrima* L.		Lalpatti	S
325	*Euphorbia heterophylla* L.		Nani lalpatti	H
326	*Jatropha curcus* L.		Ratanjot	S
327	*Jatropha podagrica* Hook.			S
328	*Jatropha gossypifolia* L.		Lal erandi	S
329	*Phyllanthus fraternus* Webster.		Bhonyamli	H
330	*Phyllanthus virgatus* J.G. Forst.		Moti Bhoi amli	H
331	*Ricinus communis* L.		Erand	S

332	*Holoptelia integrifolia* (Roxb.) Planch.	Ulmaceae	Kanjo	T
333	*Pilea microphylla* (L.) Liebm.		Chanapatti	H
334	*Ficus asperrima* Roxb.	Moraceae	Bhoi umbro	S
335	*Ficus bengalensis* L.		Vad	T
336	*Ficus racemosa* L.		Umaro	T
337	*Ficus hispida* L.f.		Dedhumaro	T
338	*Ficus elastica* L.		Rubber plant	S
339	*Ficus carica* L.		Anjir	T
340	*Ficus tsiela* Roxb.		Pipli	T
341	*Morus alba* L.		Shetur	T
342	*Casuarina equisetifolia* L.	Casuarinaceae	Sharu	T
343	*Zingiber officinale* Rosc.	Zingiberaceae	Aadu	H
344	*Musa paradisiaca* L.	Musaceae	Kela	S
345	*Canna indica* L.	Cannaceae	Kena	H
346	*Crinum asiaticum* L.	Amaryllidaceae	Nagdaman	H
347	*Pancratium triflorum* Roxb.			H
348	*Agave americana* L.	Agavaceae	Ramban	H
349	*Polianthes tuberosa* L.		Gulchhadi	H
350	*Yucca gloriosa* L.		Yucca	H
351	*Aloe barbadensis* Mill.	Liliacae	Kunvarpatho	H
352	*Asparagus racemosus* Willd.		Satavari	Cl
353	*Gloriosa superba* L.		Kankasani	Cl
354	*Urginea indica* (Roxb.) Kanth.		Jangli Dungli	H

355	*Zephyranthes rosius*			H
356	*Commelina bengalensis* L.	Commelinaceae	Motu sismuliu	H
357	*Commelina diffusa* Burm.f.		Nanu sismuliu	H
358	*Tradescntia zebrena* Hort.			H
359	*Areca catechu* L.	Arecaceae	Supari	T
360	*Caryota urens* L.		Shiv jata	T
361	*Cocos nucifera* L.		Nariel	T
362	*Phoenix sylvestris* (L.) Roxb.		Khajuri	T
363	*Roystonea regia* (H.B. & K.) F.		Bottle pam	T
364	*Pandanus odoratissimus* L.f.	Pandanaceae	Kevro	S
365	*Alocasia indica* Schott.	Araceae		H
366	*Colocasia esculenta* (L.) Schot.		Alavi	H
367	*Pothos scandens* L.		Money plant	Cl
368	*Lemna paucicostata* Hegelm.	Lamnaceae		H
369	*Wolffia microscopia* (Griff.) Kurz.			H
370	*Cyperus triceps* (Rottb.) Endl.	Cyperaceae		H
372	*Cyperus rotundus* L.		Moth, Chido	H
373	*Scripus kysoor* Roxb.			H
374	*Scleria stocksiana* L.			H
375	*Aristida adscensionis* L.	Poaceae	Lapdu	H
376	*Andropogon annulatus* Forsk.		Jhinjavo	H
377	*Bothriochla pertusa* (L.) A. Camus.		Jinjvo	H
378	*Cenchrus biflorus* Roxb.		Motu Dharamnu	H

379	*Cenchrus ciliaris* L.		Jhino dhamramnu	H
380	*Chloris virgata* Sw.			H
381	*Cynodon dactylon* Pers.		Dharo	H
382	*Eleusine indica* (L.) Gaertn.		Ukdo	H
383	*Setaria glauca* Beauv.		Ziptagrass	H
384	*Setaria tomentosa* (Roxb.) Kunth.		Kutra grass	H

- Total 384 plant species were collected in college campus.

♦ CARBON FOOTPRINT

- Number of persons using cycles -56
- Number of persons using cars – 43
- Number of persons uses two wheelers – 305
- Number of persons using other transportations –201
- Expenditure for transportation per person per day (approx.)– Rs.20/-
- Parent-teacher meetings done in a year.

♦ LIST OF ECO FRIENDLY ACTIVITIES

- Planting and caring of trees in and around the campus.
- Timely disposal of wastes from the campus.
- Celebration of important days like World Environment Day, Ozone Day, with great importance.
- Management has decided to adopt green protocol
- Distribution of medicinal plant saplings among students
- Preparation and distribution of sapling during the monsoon season among the students.
- Bio Medical Waste is biggest challenge for Green environment, Address to this problem our Institute had taken inisetive district wise which collobration of Gemmi Govt.of Gujarat.

♦ MAJOR AUDIT OBSERVATIONS

- The environmental awareness initiatives are substantial.
- Installation of solar panels is adequate.
- The training in vegetable cultivation and composting are adequate.
- Gardens inside the college premises are found well maintained.
- Use of notice boards and signs are adequate to reduce over exploitation of natural resources.
- Programs on green initiatives have to be increased. Campus should have stringent actions for plastic free zone.
- Rain water harvesting systems, solar power generation, environmental education programs have to be strengthened.

WATER AUDIT

- There is enough water consumption monitoring system in the college campus.
- The college has waste water treatment plant should maintain and function well.
- The waste water from canteen and kitchens are used for gardening.
- The college has to take actions to strengthen rain water harvesting. Measurement of quantity of water from the rain water harvesting should be done.
- Automatic switching system should install for pump sets used for overhead tank filling.
- Per day use of water should not be done in over wastage of water.
- Display boards against the misuse of water use are lacking.

ENERGY AUDIT

- The communication process for awareness in relation to energy conservation is found inadequate.
- Assessment of electrical load calculation is yet to be done by the college.
- Objectives for reducing energy, water and fuel consumption should be done.

- The older generation and non energy efficient equipments should be replace with new energy efficient equipments.
- Regular monitoring of equipments and immediate rectification of any problems should be done as safety precaution in the campus.

ENERGY AUDIT

TUBELIGHT		WATTAGE		FAN		WATTAGE		COMPUTER	WATTAGE		BULB	WATTAGE		REFRIGERATOR	WATTAGE	A.C(5 STAR)	WATTAGE
REG.	LED	REG	LED	REG.	EXHAUST	REGULAR AND EXHAUST	OLd			REG.	CFL	REG.	CFL				
1	0	40	0	1	0	53		1	65	0	0	0	0	0	0		

3	0	120	0	2	0	106		0	0	0	0	0	0	0	0		
1	1	40	20	2	1	186			0	2	1	50		0	0		
6	1	240	20	9	0	477		0	0	3	1	45	15	0	0		
2	0	80	0	1	0	53		1	65	0	0	0	0	0	0		
2	0	80	0	4	0	212		4	260	0	0	0	0	0	0		
														0	0		
1	0	40	0	1	0	53		1	65	0	0	0	0	0	0		
11	2	440	40	6	0	318		0	0	0	0	0	0	1	295		
1	1	40	20	1	1	133		2	130	0	0	0	0	0	0		
9	1	360	20	7	1	451		0	0	0	0	0	0	0	0		
3	0	120	0	2	0	106		1	65	0	0	0	0	0	0		
														0	0		
0	0	0	0	2	0	106		0	0	0	0	0	0	0	0		
														0	0		
3		120	20	3	1	239		1	65	0	0	0	0	1	295		
5	1	200	20	3	1	239		0	0	0	0	0	0	0	0		
1	0	40	0	1	1	133		0	0	0	0	0	0	0	0		
2	0	80	0	2	1	186		0	0	0	0	0	0	0	0		
1	0	40	0	5	0	265		0	0	0	0	0	0	0	0		
4	0	160	0	4	2	372		0	0	0	0	0	0	0	0		
0	1	0	20	1	0	53		1	65	0	0	0	0	0	0		
1	1	40	20	2	0	106		1	65	0	0	0	0	0	0		
4	3	160	60	1	3	293		0	0	0	0	0	0	0	0		
5	4	200	80	1	3	293		0	0	0	0	0	0	0	0		
6	1	240	20	0	3	240		0	0	0	0	0	0	0	0		
1	0	40	0	0	0	0		0	0	0	0	0	0	1	295		
1	0	40	0	1	0	53		0	0	1	0	15	0	0	0		
2	0	80	0	1	1	133		0	0	1	0	15	0	0	0		

2	0	80	0	1	1	133		0	0	0	0	0	0	0	0		
1	0	40	0	1	0	53		0	0	0	0	0	0	0	0		
8	0	320	0	2	0	106		0	0	0	0	0	0	0	0		
4	0	160	0	4	3	452		0	0	0	0	0	0	0	0		
1	0	40	0	2	0	106		0	0	0	0		0	0	0		
1	1	40	20	2	0	106		0	0	0	0	0	0	0	0		
4	1	160	20	7	2	531		0	0	0	0	0	0	0	0		
4	5	160	100	5	0	265		0	0	0	0	0	0	0	0		
0	5	0	100	9	0	477		0	0	0	0	0	0	0	0		
3	0	120	0	1	0	133		17	1105	0	0	0	0	0	0		
4	2	160	40	4	0	212		4	260	0	0	0	0	0	0		
1	2	40	40	2	0	106		3	195	0	0	0	0	0	0	1	1375
0	4	0	80	3	0	159		1	65	0	0	0	0	0	0	1	1375
3	0	120	0	2	0	106		0	0	0	0	0	0	0	0		
5	3	200	60	10	0	530		0	0	0	0	0	0	0	0		
5	0	200	0	7	0	371		0	0	0	0	0	0	0	0		
4	2	160	40	8	0	424		0	0	0	0	0	0	0	0		
9	1	360	20	12	0	636		6	390	0	0	0	0	0	0		
0	10	0	200	8	0	424		0	0	0	0	0	0	0	0		
0	4	0	80	6	0	318		26	1690	0	0	0	0	0	0		
1	0	40	0	2	0	106		0	0	0	0	0	0	0	0		
1	0	40	0	0	0	0		0	0	2	0	30	0	0	0		
0	0	0	0	0	0	0		0	0	0	0	0	0	0	0		
25608		**5480**	**1160**			**10613**			**4550**			**155**	**15**		**885**		**2750**

WASTE AUDIT

- Solid waste management systems should be maintained.
- The college has proper communication with the local body for regular collection of solid waste from the campus.
- Implementation of sustainable projects to attain set environmental goals should to be place.
- Waste bins in the class rooms, veranda, canteen and campus are inadequate.
- Biogas plant should be established.
- Proper composting systems should be established.
- Green chemistry labs should be introduced.

GREEN CAMPUS AUDIT

- Regular planting of trees in the campus should be done.
- Display boards to identify plants.
- There are fruit trees in the college to attract birds.
- Registry for flora and fauna on the campus is lacking.

❖ AUDIT OF CARBON FOOT PRINT

- Encourage students and faculties to use cycles.

4. CONCLUSION AND RECOMMENDATION:-

❖ PREPARATION OF ACTION PLAN

Policies referring to college management and approaches towards the use of resources need to be considered. The college should have a green policy/environmental policy for its sustainable development. The environmental policy formulated by the management of the college should be implemented meticulously. The college should have a policy on awareness training programs and college also should have a procurement policy (the college's policy for purchasing materials).

♦ FOLLOW UP ACTION AND PLANS

Green Audits are exercises which generate considerable quantities of valuable management information. The time, effort and cost involved in this exercise are often considerable and in order to be able to justify this expenditure. It is important to ensure that the findings and recommendations of the audit are considered at the correct level within the campus and that action plans and implementation programs result from the findings. Audit follow up is part of the wider process of continuous improvement. Without follow-up, the audit becomes an isolated event which soon becomes forgotten in the pressures of management priorities and the passing of time.

♦ ENVIRONMENTAL EDUCATION

The following environmental education program may be implemented in the college before the next green auditing:-

- Training programs in solid waste management, liquid waste management, setting up of medicinal plant nursery, water management, vegetable cultivation, tree planting, energy management, landscape management, pollution monitoring methods, and rain water harvesting methods.
- Increase the number of display boards on environmental awareness such as save water, save electricity, no wastage of food/water, no smoking, switch off light and fan after use, plastic free campus etc.
- Activate and raise the environmental clubs.
- Set up model rainwater harvesting system, rainwater pits, vegetable garden, medicinal plant garden, paddy fields etc. for providing proper training to the students.
- Conduct exhibition of recyclable waste products.
- Implement chemical treatment system for waste water from the laboratories.
- Awareness on carbon consumption.
- Students and Staff members may be made totally aware of pollution caused by use of vehicles.

- The carbon consumption awareness programs on carbon emission at individual as well as social level will help to avoid air and noise pollution in the campus due to vehicles.

♦ RECOMMENDATIONS

The green audit assists in the process of testing performance in the environmental arena and is fast becoming an indispensable aid to decision making in a college. The green audit reports assist in the process of attaining an eco friendly approach to the sustainable development of the college. Hope that the results presented in the green auditing 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. A few recommendations are added to curb the menace of waste management using eco-friendly and scientific techniques. This may lead to the prosperous future in context of green campus and thus sustainable environment and community development. It has been shown frequently that the practical suggestions, alternatives, and observations that have resulted from audits have added positive value to management of the campus. An outside view, perspective and opinion often help staffs who have been too close to problems or methods to see the value of alternative approaches. A green audit report is a very powerful and valuable communications tool to use when working with various students who need to be convinced that things are running smoothly and systems and procedures are coping with natural changes and modifications that occur.

COMMON RECOMMENDATIONS

- Adopt an environmental policy for the college.
- Establish a purchase policy for environmental friendly materials.
- Introduce UGC Environmental Science course to all students.
- Conduct more seminars and group discussions on environmental education.
- Students and staff can be permitted to solve local environmental problems.
- Renovation of cooking system in the canteen to save gas.
- Establish water, waste and energy management systems.

CRITERIA WISE RECOMMENDATIONS WATER

- Remove damaged taps and install sensitive taps is possible.

- Establish rain water harvesting systems for each building.
- Maintain the water treatment systems.
- Awareness programs on water conservation to be conducted.
- Install display boards to control over exploitation of water.

ENERGY

- Employment of more solar panels and other renewable energy sources.
- Conduct more save energy awareness programs for students and staff.
- Replace computers and TVs with LED monitors.
- More energy efficient fans should be replaced.
- Observe a power saving day every year.
- Automatic power switch off systems may be introduced.

WASTE

- Establish a functional bio gas plant.
- A model solid waste treatment system to be established.
- Practice of waste segregation to be initiated.
- Establish a plastic free campus.
- Avoid paper plates and cups for all functions in the college.

GREEN CAMPUS

- Grow potted plants at both verandah and class rooms.
- Create automatic drip irrigation system during summer holidays.
- Not just celebrating environment day but making it a daily habit.
- Beautify the college building with indoor plants.
- Providing funds to the Nature Club for making campus greener.
- Encouraging students not just through words, but through action for making the campus greener.
- Conducting competitions among departments for making students, teaching-non teaching staffs more interested in making the campus greener.

CARBON FOOTPRINT

- Increase a system of car pooling among the staff to reduce the number of four wheelers coming to the college.
- Introduce college bus services to the students and staff members.
- Encourage students and staff member to use cycles.
- Establish a more efficient cooking system to save gas.
- Discourage the students using two wheelers for their commutation.