



Gondia Education Society's

DHOTE BANDHU SCIENCE COLLEGE, GONDIA

Dist: GONDIA (M.S.) 441614

Accredited 'A+' by NAAC, Bangalore | College with Potential for Excellence

UGC Community College & B Voc | Centre for Higher Learning and Research

Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University | Mentor Institution Recognized by NAAC & UGC

GREEN AND ENVIRONMENT AUDIT REPORT



Prepared by

Dr. R. R. Lakhe Director SQMS

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SHREYAS QUALITY MANAGEMENT SYSTEM

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Shreyas Quality Management System
(ISO 9001:2015 QMS, ISO 14001:2015 EMS & ISO 45001 OHSMS Certified Organization)

GREEN AUDIT CERTIFICATE

This Certificate has been awarded to
Dhote Bandhu Science College, Gondia
Dist. Gondia- 441614 (Maharashtra)
in recognition of the organizational efforts towards sustainable development.

SQMS/CERT/GA/21-22/II/02
SQMS Certificate No.



29.11.2021
Date of Issue

28.11.2022
Expiry Date

Dr. R. R. Lakhe (Director)
Shreyas Quality Management System

Note: Certificate validity is based on organization compliance on green audit recommendation and continual maintenance of the system and conduction of regular green audit

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GREEN AND ENVIRONMENT AUDIT COMPLETION CERTIFICATE

This is to certify that **Dhote Bandhu Science College, Gondia** has been conducted the detailed Green and Environment Audit for their campus on dated 4, October 2020 (academic year 2020–2021) in accordance with applicable standards to assess green initiatives implemented in college campus. This green audit is aimed to assess the impact of initiatives for maintenance of ecofriendly campus. The green audit involves water, waste water, energy, air, green inventory. The efforts taken by the management and faculty towards environment and sustainability are highly appreciated.

Name of the college	Dhote Bandhu Science College, Gondia
Details of facilities audited	Main college building including laboratories, office, class rooms, gymnasium, etc
Date of Green and Environment Audit	4, October 2021
Name of the certified auditor	Dr. R. R. Lakhe (Approved Lead Auditor) Shreyas Quality Management System LMS:NABL,ISO 9001,14001,45001,50001
Certification Number	SQMS/CERT/GA/21-22/II/02
Validity of certificate	28.11.2022

Signature of Auditor



Dr. Ramesh R. Lakhe
Director,
SQMS, Nagpur

ACKNOWLEDGMENT

Shreyas Green Management System extends gratitude to **Dhote Bandhu Science College, Gondia** for extending us an opportunity to conduct the Green and Environment Audit.

We are thankful to the faculty & staff of the college for their transparency & consistent support in sharing relevant information and for providing valuable information. This report would have not been possible without their support.

We would like to extend our thanks to Principal Dr. Anjan Naidu, internal audit committee members and NAAC Coordinator for giving us necessary inputs and helping us during field measurements to carry out Green and Environment Audit.

Signature of Auditor



Dr. Ramesh R. Lakhe

Director,

SQMS, Nagpur

DISCLAIMER

Green Audit Team has prepared Green and Environment Audit Report of **Dhote Bandhu Science College, Gondia** based on data submitted by the College complemented with the best judgment capacity of the expert team. The audit was conducted by visiting the college and interacting with the various stakeholders and Internal Audit Team members. It was conducted by interviewing the concerned persons, observing Onsite implementation and verifying the documents as well as records.

Every care has been taken in its preparation and report has been compiled in good faith based on information gathered.

It is further informed that the conclusions are arrived following best estimates and no responsibility is accepted by Audit Team in this report for any direct or consequential loss arising from any use of the information, statements or forecasts in the report.

Shreyas shall keep confidential all information relating to your organization and shall not disclose any information to any third party, except that required by law or relevant accreditation bodies.

Report by:

Mr. M. M. Naveed, Sr. Consultant
Shreyas Quality Management System, Nagpur.

Technical Review by:

Dr. Ramesh R. Lakhe, Director, SQMS, Nagpur
Mr. M. M. Naveed, Sr. Consultant
Kranti Dharkar, Sr. Consultant

EXECUTIVE SUMMARY:

The rapid urbanization and economic development at local, regional and global level has led to several environmental and ecological crises. On this background it becomes essential to adopt the system of the Green and environmentally sustainable practices on the campus of the institute which will lead for sustainable development.

Dhote Bandhu Science College, Gondia is deeply concerned and unconditionally believes that there is an urgent need to address these fundamental problems and reverse the trends of pollution. Being a premier institution of higher learning, the college has been recognized by award as 'District Green Champion' for 2020-21 and has actively promoted the various projects for the environment protection and sustainability.

The purpose of the audit was to ensure that the practices followed in the campus are in accordance with the Green Environment Policy adopted by the institution. It works on the several facets of 'Green Campus' including Water Conservation, Tree Plantation, Waste Management, Paperless Work, Alternative Energy and Mapping of Biodiversity. With this in mind, the specific objectives of the audit are to evaluate the adequacy of the management control framework of environment sustainability as well as the degree to which the departments are in compliance with the Green and Environment Policy. It can make a tremendous impact on student health, reducing college operational costs and improvement in the environment. The criteria, methods and recommendations used in the audit were based on the identified risks.



OVERVIEW OF INSTITUTION

Dhote Bandhu Science College , Gondia has the privilege of identifying itself as an exclusive science college in rural eastern Maharashtra State of India with over 1700 students and offering a wide range of undergraduate , postgraduate and doctoral programs in science.

It is affiliated to RTM Nagpur University and reaccredited with grade ‘A+’ (CGPA– 3.51) By NAAC Bangalore in 2017. UGC has approved the college for “ College with Potential for Excellence ” status. Students have wide range of UG as well as PG programs in the faculty of Science. It includes B.Sc , M.Sc , BCA and skill based degree programme B.Voc. The college is recognised as Center for higher learning and Research to RTMNU for Ph.D programme. College imparts co-education with 70% girl students.

It has over 3 acres of campus with variety of facilities, state of art laboratories, libraries, Wi-Fi, 300 capacity auditorium, AC conference room, ICT enabled smart class rooms, Girl’s common room with premium facilities, sports club – gym, RO drinking water facility, botanical garden, green lush lawn, students section, parking and solar lights. Good number of students are placed in companies TCS, Wipro, Cognizant, Infosys and others.

Vision:

“To take education to the doorsteps of the downtrodden and economically backward people of Eastern Vidarbha.”

Considering the challenges of the changing time and the demands of skill-based education, the institution has been striving hard to bring into reality its multi-dimensional mission for the last five decades.

Mission:

- ❖ To disseminate the latest and updated knowledge.
- ❖ To promote in-campus research activities.
- ❖ To ensure all-round development of every student.
- ❖ To train the students for self-development.
- ❖ To carve the true citizens and skilled professionals of tomorrow.



ABOUT GREEN AUDIT

Green and Environment Audit is a process of systematic identification, quantification, recording, reporting and analysis of components of environmental diversity of various establishments.

It aims to analyze environmental practices within and outside of the concerned sites, which will have an impact on the eco-friendly ambience.

A Nation's growth starts from its educational institutions, where the ecology is thought as a prime factor of development associated with environment. Educational institutions now a days are becoming more sensitive to environmental factors and more concepts are being introduced to make them eco-friendly. To preserve the environment within the campus, various viewpoints are applied by the several educational institutes to solve their environmental problems such as promotion of the energy savings, recycle of waste, water reduction, water harvesting etc.

It is imperative that the college should evaluate its own contributions toward a sustainable future as environmental sustainability is becoming an increasingly important issue for the nation.

Green and Environment 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.
- ❖ To determine the type and volume of waste, which can be used for a recycling project or to improve waste minimization plan.
- ❖ To promote health consciousness and promote environmental awareness, values and ethics.
- ❖ To create better understanding of Green impact on campus.

Environmental auditing is a process whereby an organization's environmental performance is tested against its environmental policies and objectives. Green and Environment audit is defined as an official examination of the effects a college has on the environment. As a part of such practice, internal environmental audit (Green Audit) is conducted to evaluate the actual scenario at the campus. Green and Environment auditing and the implementation of mitigation measures is a win-win situation for all the college, the learners and the planet.

It can also create

- Health consciousness and promote environmental awareness, values and ethics.
- Green and Environment auditing promote 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.
- A clean and healthy environment aids effective learning and provides a conducive learning environment

OBJECTIVES OF THE AUDIT

The main objective of the Green and Environment 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 and Environment Audit are:

- To verify the activities undertaken by the college to secure the environment and cut down the threats posed to human health by analyzing the pattern and extent of resource used on 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 requires high cost.
- To bring out a status report on environmental compliance.

ENVIRONMENTAL POLICY OF INSTITUTION



Gondia Education Society's **DHOTE BANDHU SCIENCE COLLEGE, GONDIA**

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ENVIRONMENT POLICY

Dhote Bandhu Science College, Gondia realize that protection of environment is part of the institutional social responsibility for the survival of humanity. Institution recognizes that its operations can have impact on environment and hence the college has its own policy to minimize this impact by adhering to the following sustainable practices This document makes clear the Institution's approach for the protection, preservation and sustainability of the environment.

- Minimizing the use of energy
- Looking for alternative sources of energy
- Promoting water harvesting
- Creating awareness on environmental issues
- Minimizing the use of plastics
- Handling of waste at the place of origin
- Handling of E-waste
- Promote eco-friendly alternatives
- Organizing programmes in the campus based on the environment themes
- Keeping the premises neat and tidy
- Planting trees in campus and society
- Providing safe drinking water
- Sensitizing to conserve water

DHOTE BANDHU SCIENCE COLLEGE, GONDIA

AUDIT PROCEDURE

PREAUDIT ACTIVITIES

College constituted Green Auditing Committee comprising of following members at institutional level for planning and implementation of green initiatives at campus and providing data to evaluate impact of green initiatives by external environmental auditing agency.

Green Auditing Committee (Audit team)

Sr.NO.	NAME	DESIGNATION
1	Prof. Sanjay Timande (Coordinator)	Associate Professor and Head Department of Microbiology & Biotechnology
2	Dr. Prashant Shahare (Co-coordinator)	Assistant Professor Department of Botany
3	Dr. Gunwant Gadekar (Member)	Assistant Professor & Head NSS Coordinator Department of Zoology
4.	Prof. D. G. Nalamwar (Member)	Associate Professor Department of Electronics
5	Dr. Kalpana Ghoshal (Member)	Assistant Professor Department of Botany

- Areas identified by internal committee for green auditing
 - i. Waste Minimization
 - ii. Greening
 - iii. Energy Conservation
 - iv. Water Conservation
 - v. Clean Air
 - vi. General Practices

Following data is made available by internal committee for green auditing

- Permanent population of institution

	Male	Female	Total
Students	612	1336	1948
Teachers	25 + 8 = 33	06 + 21 = 27	31 + 29 = 60
Non -Teaching Staff	39	03	42
Total	684	1366	2050
Visitors per day			About 100

- Amenities in the institution
 - Garden area
 - Playground
 - Toilets
 - Garbage or Waste Store
 - Laboratories
 - Guest House
 - Auditorium
 - Class Rooms
 - Administrative building
 - Gymkhana
- Environmental health risks near campus
 - Sewer line near campus
 - Open drainage
 - Shops near campus

- Waste Minimization
 - Institute generate solid waste, horticulture waste, biohazardous waste and e-waste.
 - Institute has provided separate bins for disposal of different types of waste.
 - College has a contract with municipal corporation for collection of solid waste.
 - Institute manage organic waste by vermicomposting.
 - Biohazardous waste is handled by autoclaving and incineration.
 - Metal furniture is used in some class rooms in place of wooden furniture to reduce wood usage
 - as it leaves carbon footprints on burning.
 - Incineration is used to burn sanitary napkins.
- Greening the campus
 - Institute has botanical garden , lux green lawn and tree plantation
 - College has planted the trees in campus area to make it more environments friendly.
 - Birds and Squirrels are commonly found in campus
 - Total land area available for plantation: 1.5 acres
 - Total land area covered by plantation: 6245 sq. meter
 - No. of trees planted in campus. 695



Lux Green Lawn

- Energy conservation
 - One electricity meter is there for all campus .
 - Energy efficient electrical equipments are used.
 - CFL/LED bulbs are used for lightining purpose
 - Solar street lights are in the campus
 - In practice computers are kept on power saving mode
 - Rooms in the class room are well ventillated
- Water conservation.
 - Usage of water in campus are; Drinking, Gardening, Kitchen & Toilets and Others.
 - Overhead Water Tanks are installed for storage of water.
 - No water wastage in campus but In case of emergency like spillage, leakage it is repaired by skilled technicians.
 - Bore well water and water supplid by munciple cooporation is used in campus.
 - Rain water is harvested by RWH system and rain water is used for gardening and to recharge the ground water
 - To avoid water wastage student s were asked to close taps
 - Drinking water quality received from RO filters is tested at public health laboratory for Water Quality monitoring
 - An average water bill for 2 months is rupees 6000/-
- Clean air
 - Rooms in Campus are Well Ventilated.
 - Vehicles of employees are not permitted in campus without PUC.
- General practices
 - World Environment Day and Ozone Day are celebrated in Campus.
 - Students participate in Environmental Protection Movement (Swachh Bharat Abhiyan) at campus.
 - Green Campus Award is received by institution



Contract with municipal corporation for collection of Solid Waste

Environmental Science Course prescribed by RTM Nagpur University is offered to students with the aim to give opportunity to students to understand the relationship between humans and the world in which we live.

Month	March	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb
Electrical Bill	3463	2666	1345	1962	2318	2414	2171	2208	2103	1638	1770	2265
Amount	51650	33902	18968	73910	29354	29928	27217	26533	22111	23307	30307	30091

Electrical Bills for last 12 months (2020-21)

Trees in the Campus of Dhote Bandhu Science College, Gondia

Sr. No.	Botanical Name	Number of individuals	Family	Common Name
1	<i>Saraca asoca</i>	13	Detarioideae	Ashoka
2	<i>Alstonia</i>	42	Apocynaceae	Satvin
3	<i>Bougainvillea</i>	93	Nyctaginaceae	Booganvel
4	<i>Mangifera indica</i>	2	Anacardiaceae	Mango, Amba
5	<i>Tecoma stans</i>	23	Bignoniaceae	Ghanti ful
6	<i>Plumeria alba</i>	16	Apocynaceae	Champa, Chapha
7	<i>Pongamia pinnata</i>	2	Fabaceae	Karang
8	<i>Mimusops elengi</i>	63	Sapotaceae	Bakul, Bakuli
9	<i>Bauhinia purpurea</i>	15	Caesalpiniaceae	Apta
10	<i>Azadirachta indica</i>	2	Meliaceae	Neem
11	<i>Albizia lebbeck</i>	7	Mimosaceae	Saras
12	<i>Carissa carandas</i>	43	Apocynaceae	Karvand
13	<i>Roystonea regia</i>	6	Arecaceae	Royal palm
14	<i>Tabernaemontana divaricata</i>	1	Apocynaceae	Crape Jasmine Flore Pleno
15	<i>Tabernaemontana divaricata</i>	17	Apocynaceae	Crape Jasmine
16	<i>Dypsis lutescens</i>	98	Arecaceae	Areca Palm
17	<i>Hibiscus schizopetalus</i>	1	Malvaceae	Japanese Hibiscus
18	<i>Eucalyptus globulus</i>	4	Myrtaceae	Eucalyptus, Nilgiri
19	<i>Ficus benghalensis</i>	1	Moraceae	Banyan
20	<i>Anthocephalus cadamba</i>	16	Rubiaceae	Kadam
21	<i>Cycas circinalis</i>	3	Cycadaceae	Sago palm
22	<i>Wodyetia bifurcata</i>	6	Arecaceae	Foxtail palm
23	<i>Nerium oleander</i>	30	Apocynaceae	Kaner
24	<i>Hibiscus rosa-sinensis</i>	28	Malvaceae	Jaswand
25	<i>Dypsis decaryi</i>	1	Arecaceae	Triangle palm
26	<i>Thuja occidentalis</i>	1	Cupressaceae	Morpankhi
27	<i>Phoenix dactylifera</i>	12	Arecaceae	Date palm
28	<i>Azadirachta indica</i>	1	Meliaceae	Neem
29	<i>Cycas revoluta</i>	10	Cycadaceae	Sago palm
30	<i>Caryota urens</i>	19	Arecaceae	Fishtail Palm, Wine Palm
31	<i>Spathodea campanulata</i>	9	Bignoniaceae	Rugtoora
32	<i>Alstonia Scholaris</i>	15	Apocynaceae	Saptaparni
33	<i>Tabebuia rosea</i>	48	Bignoniaceae	Basant Rani
34	<i>Mimusops elengi</i>	27	Sapotaceae	Bakul
35	<i>Ixora coccinea</i>	20	Rubiaceae	Rugmini
	35	695		



Trees in the Campus

DETAILS OF BIRDS VISITING THE CAMPUS

Birds in the Campus of Dhote Bandhu Science College, Gondia			
Sr. No.	Scientific Name	Family	Common Name
1	<i>Copsychus fulicatus</i>	Muscicapidae	Indian Robin
2	<i>Euodice malabarica</i>	Estrildidae	Indian Silverbill
3	<i>Anisoptera</i>	Libellulidae	Dragonfly
4	<i>Antheraea Paphia</i>	Saturniidae	Tussar Silk Moth
5	<i>Pycnonotus cafer</i>	Pycnonotidae	Red vented bulbul
6	<i>Mimathyma ambica</i>	Nymphalidae	Purple emperor butterfly
7	<i>Moduza procris</i>	Nymphalidae	Silver Timon



Birds in the Campus



Solar street lights



Rain Water Harvesting



BINS FOR DISPOSAL OF WASTE

D B Science College holds tree plantation programme



Students and staff of the Dhote Bandhu Science College during the plantation drive at the Fattepur village.

■ **District Correspondent**
GONDIA, Sept 28

DEPARTMENT of Botany of Dhote Bandhu Science College, Gondia, in cooperation with Hirwal NGO and Gondia Forest Department organised a tree plantation programme near Fattepur village. In all 60 saplings of various plants which included Tamarind, Peepal, Jackfruit, Mango, etc., were planted by students, staff and NGO people. All the saplings were provided by the Forest Department.

The event was organised under

the guidance of Principal Dr Anjan Naidu. Hirwal's Rupesh Nimbharte guided the students on the occasion and emphasised the importance of plantation and environment conservation. He asked the young generation to come forward and contribute in conservation activities.

Head of the Department of Botany Dr Mahesh Kawale, Dr Prashant Shahare, Dr KP Ghoshal and Prof Amol Badole took efforts for the success of the programme.

ACF Pradip Patil extended his support for the success of the plantation drive.

TheHitavada

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ehitavada.com

It's everybody's responsibility to conserve biodiversity'

■ **District Correspondent**
GONDIA, May 24

GONDIA Education Society's Dhote Bandhu Science College celebrated International Day for Biological Diversity by organising a webinar titled 'Advances in Biological Diversity,' the other day.

Dr Binu Prakash, Post-Doctoral Fellow, Institute of Physiology, Czech Academy of Sciences, The Czech Republic, addressed the gathering. Delivering her talk she said that it's the responsibility of every person to contribute towards protection and conservation of our biodiversity. She elaborated that this year 'Biodiversity Day 2021' is being celebrated under slogan 'We're part of the solution #ForNature'. "Biodiversity is the greatest treasure we have and it's diminishment is to be prevented at all cost. People must learn to live in harmony with Nature thereby protecting environment and other living beings that

inhabit the Earth," she said. Emphasising that 'unity is our strength and diversity is our power, she said that Environment is no one's property but is everybody's responsibility and appealed to everyone to contribute in its conservation.

The programme was organised under guidance of Principal Dr Anjan Naidu. Vice Principal Prof Sanjay Timande and IQAC Co-ordinator Dr Dilip Choudhary extended their cooperation and kind support. Dr Mahesh Kawale Head, Department of Botany delivered introductory remarks. Dr Kalpana Ghoshal handled all technical and non-technical parts of the webinar. The programme was beautifully conducted by Bhagyashree Lanjewar, B Sc Final year student. Programme Coordinator Dr Prashant C Shahare proposed a vote of thanks. Dr Shahare extended his thanks to all teaching and non-teaching members who contributed towards the success of the programme.



Glimpse of the webinar in progress.

Powered by Bharati Web Pvt Ltd



Water Quality monitoring (Drinking Water - RO Filter)

**महाराष्ट्र राज्य सार्वजनिक आरोग्य सेवा
राज्य/प्रादेशिक/जिल्हा आरोग्य प्रयोगशाळा - गोंदिया
पाणी नमुन्याचा सुक्ष्मजीवीय अहवाल**

पाठविणाऱ्याचे नाव व पत्ता :- प्रिन्सिपल, डी.बी. सायंस कॉलेज, गोंदिया
ता.जि.गोंदिया

पाठविणाऱ्याचे पत्र क्रमांक व दिनांक :- निरंक/..... २६/०९/२०१९

प्रयोगशाळा संदर्भ क्रमांक :- १३,७४७

नमुना घेतल्याचा दिनांक :- २६/०९/२०१९

नमुना पोहचल्याचा दिनांक :- २६/०९/२०१९

परिक्षण सुरु केल्याचा दिनांक :- २६/०९/२०१९

अ.क्र	स्त्रोताचा प्रकार	स्त्रोताचे स्थानिक नाव	परिक्षणाचे निष्कर्ष		इतर अभिप्राय
			प्रति १०० मिली नमुन्यातील संभाव्य सुक्ष्मजीवांची संख्या		
			कोलीफॉर्म	थर्मोटॉलरंट कोलीफॉर्म	
१	बोअरवेल (आर ओ)	प्रिन्सिपल, डी.बी. सायंस कॉलेज, गोंदिया	—	०	पिण्यास योग्य

अभिप्राय - पिण्यास अयोग्य पाण्यावर प्रमाणित क्लोरिनच्या मावेसह योग्य ती प्रक्रिया करून व सुक्ष्मजीवीय पुनर्तपासणीनंतर पिण्यास योग्य असल्याची खात्री झाल्यानंतरच ते पाणी पिण्यासाठी वापरता येईल.

अहवाल क्रमांक व दिनांक :- जिआप्रशा/गों/सुअ/ ३०२४ /१९

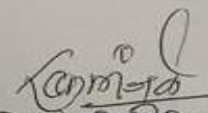
अभिप्राय कळविल्याचा दिनांक :- ३० / ०९ / २०१९

प्रत सादर :

(१) मा.जिल्हा आरोग्य अधिकारी, जिल्हा परिषद, जिल्हा

(२) मा.शल्यचिकित्सक, जिल्हा रुग्णालय, जिल्हा

(३) मा.गटविकास अधिकारी, पंचायत समिती


 कनिष्ठ वैज्ञानिक अधिकारी
 जिल्हा आरोग्य प्रयोगशाळा, गोंदिया

ONSITE AUDIT ACTIVITIES

Key Findings and Observations

- First Step: The opening meeting between the internal audit team and external auditors. In this meeting the purpose of audit, the procedure and the time schedule were discussed.
- Second Step: Site inspection to understand of how the facility manages the activities that influence the environment and collected information.
- Third Step: Communicated with the internal committee members to obtain most information.
- Fourth Step Evaluated the audit evidence against the objectives established for the audit.
- Fifth Step: organized an exit meeting to explain the audit findings



Meeting between the internal audit team and external auditors.
Initiatives by College towards Sustainable Environment

The team has observed following things;

Tree Plantation:

College has planted the trees in campus area to make it more environment friendly.

The Team has observed regular plantation programme through NSS and ECO club is undertaken by the college usually in moonson. The college has a canopy of trees and plants that make the environment carbon dioxide free and to maintain health of all the inmates. The garden has trees, which provide shade and a beautiful ambience.

Environmental awareness programs for faculty, staff and students like seminars, guest lectures, celebration of environment days, on-campus and off-campus plantation drives and induction programs for freshers are organized.

Rain Water Harvesting:

College has one rain water harvesting unit. This rain waters harvesting structure support the recharge of ground water and thereby the campus gets sufficient rise in the level of ground water and for watering trees and land scape.

Energy Conservation

Ordinary bulbs are being replaced by CFL and LED bulbs. The college is facilitated with **510 LED** bulbs / tube lights and **310 CFL** bulbs. The energy is also conserved by using natural light in the classrooms, sunlight is harvested in corridor of physics lab.

Tobacco Free Campus

Tobacco use is a risk factor for many diseases, especially those affecting the heart, liver, and lungs and causes many types of cancers.

The college is maintaining the tobacco free environment and usage of tobacco and related products are strictly prohibited on the campus. Stickers to this effort have been pasted in the college.



Green Cover

- Garden provides greenery and sustainability on the campus to ensure green standards.
- Garden is maintained in the college campus where different plants are grown. There is lawn which is adding the greenery and aesthetic value to the college campus. Tree species diversity in the college premises:
- Trees of the college campus are effective to stabilize soil; it provides habitat for diurnal.
- Trees of college campus protect students from heat waves in summer during the university examination.
- Aesthetic quality is maintained by planting ornamental trees.
- The plantation programme (in college premises and outside) had been implemented.

Green Practices:

- Care is taken to maintain plastic free campus and use of plastics is either discouraged.
- Village students come to college by public transport
- The parking for staff and students is far away from classrooms. This arrangement helps to reduce noise pollution in the campus.
- Administrative functions are carried out in computer online system to avoid unnecessary paper consumption.
- Garden wastes are converted into fertilizers and used for the growth of plants and trees on the campus.
- Proper drainage system has been constructed for whole the campus.
- The E- Waste generated from the hardware which cannot be reused and recycled are disposed through private agencies.
- Awareness programmes highlighting the need for green practices are conducted both inside and outside the campus by the NSS volunteers
- Adapt incineration to burn sanitary napkins
- E-waste is collected by vender and plastic waste disposal at municipal collection centre.

Solid waste management

- Solid waste is heterogeneous material and hence need to be disposed off systematically with due care of the Environment.
- Waste management methods practiced.
- Cleaning the campus on daily basis and disposal of waste into degradable and non-degradable waste bin's placed in class rooms, laboratories, corridors, office and staff rooms are practiced.
- Municipal Corporation has made arrangement to collect solid waste regularly. Vermiculture unit is used to eliminate waste. Biohazardous waste is managed by autoclaving and incineration.
- Being academic institution, waste paper is the main solid waste generated in the premises.

The institution has taken steps to minimize and avoid paper usage.

It was observed that:

- ✓ Prints and photocopies are taken on both sides of the pages to avoid excess paper usage. Rather than photocopy, digitalization (scanning) is practiced.
- ✓ The college library is connected to other college libraries E- Library facilities.
- ✓ The library is automated with bar-coded books.
- ✓ There are e-journals and e-books in library.
- ✓ Internal notices and communications are through E mail/SMS.
- ✓ Paper notices are displayed on the notice boards.
- ✓ The dissertation reports, journals, and answer papers are stored as per the University rules.
- ✓ For the disposal of old newspaper scrap dealer is called by librarian.
- ✓ In college minimum data is converted into soft copies and procedures are digitalized which minimizes the use of printing papers.
- ✓ The maximum working procedures are paperless to reduce carbon foot prints.

Energy Conservation

- Electrical power consumption: Electrical power consumption is related with the standard of living of the people, the growth of cities, industries and transport sectors. Use of electricity is essential to carry out routine work. Architectural design for the college is based upon use of natural lighting and ventilation, to save extra power for bulbs and fans. Energy is also conserved by using natural light in the classrooms.
- College is committed to reduce consumption of electricity by replacing old fluorescent lamps with LED bulbs and tube lights. Students and staff are aware to minimize electric consumption by switching off electrical appliances when not in use. Awareness programmes for faculty, staff and students are organized for sensitizing staff for energy and water conservation.
- Team observed (switch of fans and tube lights when not in use) in veranda for sensitizing students to avoid unnecessary wastage of electricity. Period monitoring committee members also look after it.

E-waste disposal and management

- The use of electronic equipment is growing faster due to advancement in technology. The quantity of E-waste generation is increasing as people buy advance electronic equipment while dumping old one. E-waste carries health risks as it contains toxic materials such as cadmium, chromium, PCBs. E-waste generation is minimum in college campus. E-waste generated in college is simply collected in room and handed over to scrap collector.
- List of e-waste reported: 1. CD/DVDs 2. Pen drives 3. Cables / Wires 4. External drives 5. Modems 6. Calculators 7. Dry cell batteries 8. Electronic scrap parts 9. Mouse / Key board such items 10. Speakers 11. PCs 12. Laptops 13. Printers 14. Air-conditioners 15. Freezers 16. Digital Thermostats 17. Fluorescent Lamps and tubes 18. Incandescent Light bulbs. Plastic and E-Waste handling is given priority handling since this causes a great threat and damage to the environment. A separate E Waste room has been provided on the premises for collection of E Waste.

Water management and quality assessment

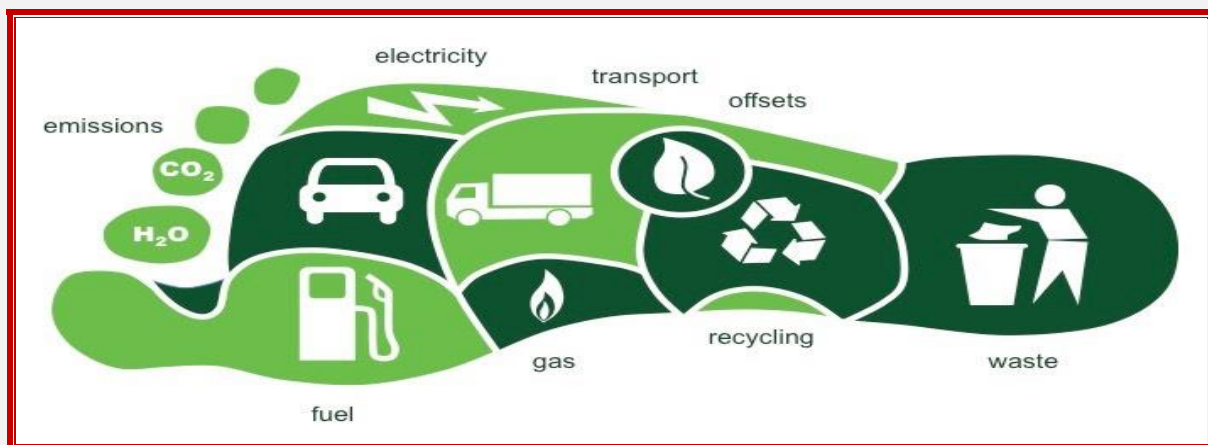
Water quality of working place is paramount as it is related to human health and livelihoods of people. Supplying clean and reliable water supplies is a prime necessity. The source of drinking water supply is majorly ground water and water cooler with R.O. (reverse osmosis) is installed. It is observed that ground water drawn from bore well is having a higher amount of salts which may affect the taste, but such water is treated via R. O. plant and used for drinking purposes. The team has observed that the main water uses in the campus basically in Garden, Cleaning, Canteen, and Drinking and in Toilets. Water taps are not leaky. Team observed display boards in lavatories and near water filter for sensitizing students to avoid unnecessary wastage of water.

Air and Noise pollution

- The committee has found that Students and are Staff members and made totally aware of pollution that are caused by use of vehicles. In the college campus village students are not attending the college by vehicles.
- The carbon consumption awareness programmes are organized to improve carbon emission at individual as well as social level and avoids Air and Noise pollution in the campus due to vehicles or any activity in it. Due to awareness programmes in the campus air quality within it is non polluted. No Faculty and staff vehicle is permitted to enter in campus without PUC.
- On analyzing the air quality, we could assess that there are many pollutants in our environment from the vehicles of the road. The burning of wastes, especially plastic waste, also causes emission of poisonous gases into the atmosphere. To reduce use of plastic usage, display boards are at prominent places in campus.
- But, as there are many plants in campus, they purify the polluted air, reduces oxygen level and supply enough oxygen for us.
- On date of visit, we reported:
 - Noise Level : 43dB (Within limit)
 - CO₂ emission: 714ppm (Within limit)

RECOMMENDATIONS

1. Plant more trees in the campus. Dig sufficient rain water pits in the campus wherever possible and maintain it regularly.
2. Ensure that all vehicles entering in campus has valid PUC.
3. Measure the CO₂ emission (carbon foot print) resulting from activities at campus regularly.
4. To avoid wooden waste generation more for this class room furniture should be transferred from wooden to metallic in future.
5. Put more solar panels in the campus to cover electricity bills and to make campus eco-friendly.
6. Department wise electrical load consumption is to be monitored.
7. List of equipment's with their electrical capacity is to be maintained in the departments.
8. Suggested to set AC at 26° C to reduce unnecessary power consumption.
9. Earthing to be checked on regular basis once in a year
10. Install effluent treatment plant in the campus.
11. Proper disposal of sanitary napkins as per latest guidelines should be done.
12. Air quality is to be checked regularly.
13. Monitoring noise level should be done regularly.
14. E – Waste shall be sold to the vender registered under pollution control board
15. Expand work with community and nongovernmental organizations to assist in finding solutions to environmental problems.
16. Adopt the proposed Environmentally Responsible Purchasing Policy, and work towards creating and implementing a strategy to reduce the environmental impact of its purchasing decisions.



BEST PRACTICES / INITIATIVES FOR ENVIRONMENT ADAPTED BY INSTITUTION

A. Renewable Energy

Solar street lights are used in campus.

B. Biodiversity Conservation Flora and fauna conservation

C. Tree Plantation Drives

D. Ground Water Recharge

E. Pollution Reduction

F. E - Waste Management

