



ગુજરાત કેન્દ્રીય વિશ્વવિદ્યાલય
CENTRAL UNIVERSITY OF GUJARAT

CENTRAL UNIVERSITY OF GUJARAT

GREEN AUDIT REPORT

2021-2022

PREPARED BY
EHS ALLIANCE SERVICES

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CERTIFICATE



AUDIT CERTIFICATE

PRESENTED TO

CENTRAL UNIVERSITY OF GUJARAT (CUG)

Sector-29 Gandhinagar - 382030

Has been assessed by EHS Alliance Services for the comprehensive study of environmental impacts on institutional working framework to fulfill the requirement of

GREEN AUDIT

The green initiatives carried out by the institution have been verified on the report submitted and was found to be satisfactory.

The efforts taken by the management and the faculty towards environment and sustainability are appreciated and noteworthy.

AUDITOR SIGNATURE



10.05.2022

DATE OF AUDIT

EHS ALLIANCE SERVICES, PLOT A-72, SURYA VIHAR, GURUGRAM, 122001
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ACKNOWLEDGEMENT

EHS Alliance Services would like to thank the management of Central University of Gujarat for assigning this important work of Green Audit. We appreciate the co-operation to the teams for completion of assessment.

We would also like to thank **Prof. Atanu Mohaparta – Director IQAC** for his continuous support and guidance, without which the completion of the project will not be possible. We are also thankful to other staff members who were actively involved while collecting the data and conducting field measurements.

We are also thankful to

Mr. Jay Prakash M. Soni	<i>Deputy Registrar</i>
Mr. Pawan Pathak	<i>Executive Engineer</i>
Mr. Nilesh Kumar	<i>Jr. Engineer (Electrical)</i>
Dr. Rajesh Singh	<i>Assistant Professor – SESD</i>
Prof. Bhawana Pathak	<i>UBA Coordinator</i>
Dr. Rajneesh Kumar Gupta	<i>In-Charge NSS</i>

Last but not the least, we would like to thank **Prof. Rama Shanker Dubey – Hon'ble Vice Chancellor** and **Prof. H. B. Patel – Registrar**, Central University of Gujarat for giving us an opportunity to evaluate the environmental performance of the campus.



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DISCLAIMER



EHS Alliance Services Audit Team has prepared this report for Central University of Gujarat based on input data submitted by the representatives of University complemented with the best judgment capacity of the expert team.

While all sensible care has been taken in its preparation, details contained in this report have been compiled in good faith based on information gathered.

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

If you wish to distribute copies of this report external to your organisation, then all pages must be included.

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EHS Alliance staff, agents and accreditation bodies have signed individual confidentiality undertakings and will only receive confidential information on a 'need to know' basis.

Signature

LEAD AUDITOR



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CONCEPT AND CONTEXT

The National Assessment and Accreditation Council, New Delhi (NAAC) has made it mandatory from the academic year 2019–20 onwards that all Higher Educational Institutions should submit an annual Green, Environment and Energy Audit Report. Green Audit is assigned to the Criteria 7 of NAAC, National Assessment and Accreditation Council which is a self-governing organization of India that declares the institutions as Grade A, Grade B or Grade C according to the scores assigned at the time of accreditation. Moreover, it is part of Corporate Social Responsibility of the Higher Educational Institutions to ensure that they contribute towards the reduction of global warming through Carbon Footprint reduction measures.

In view of the NAAC circular regarding Green auditing, the University management decided to conduct an external environment assessment study by a competent external professional auditor. The green audit aims to examine environmental practices within and outside the campus, which impact directly or indirectly on the atmosphere. Green audit can be defined as systematic identification, quantification, recording, reporting and analysis of components of Institution environment. It was initiated with the intention of reviewing the efforts within the institutions whose exercises can cause risk to the health of inhabitants and the environment.

Through the green audit, a direction as how to improve the structure of environment and inclusion of several factors that can protect the environment can be commenced. This audit focuses on the Green Campus, Waste Management, Water Management, Air Pollution, Energy Management & Carbon Footprint etc. being implemented by the institution. The concepts, structure, objectives, methodology, tools of analysis, objectives of the audit are discussed below.





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INTRODUCTION

Now days, the educational institutions are becoming more thoughtful towards the environmental aspects and as a result new and innovative concepts are being introduced to make them sustainable and eco-friendly. To preserve the environment within the institution, a number of viewpoints are applied by the several educational institutes to solve their environmental problems such as promotion of the saving the energy, waste recycle, water consumption reduction, water harvesting and many more...

The activities carried out by the institution can also create adverse environmental impacts. Green audit is defined as an official inspection of the effects a University has on the environment. Green Audit is conducted to evaluate the actual scenario at the institution campus. Green audit can be a useful tool for a University/college to determine how and where they are using the most of the energy or water or resources; the University can then decide how to implement changes and make savings. It can also be used to determine the nature and volume of waste, which can be used for a recycling project or to improve waste minimization plan.

Green auditing and the application of mitigation measures is a win-win situation for all the institutions, the learners and the mother earth. It can also result in health awareness and can promote the environmental awareness, values and beliefs. It provides a better understanding to staff and students about the Green impact on institution. Green auditing also upholds financial savings through reduction of resource usage. It gives an opportunity to the students and teachers for the development of ownership of the personal and social responsibility. The audit process involves primary data collection, site walk through with the team of University /college including the assessment of policies, activities, documents and records.





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OVERVIEW OF THE UNIVERSITY

Established by Parliament of India through the Central Universities Act (2009), Central University of Gujarat (CUG) considers its main objectives to be dissemination and advancement of knowledge creation and sharing. The University is committed to make special provisions for integrated and interdisciplinary courses, to educate and train human resources for the country's development, to initiate appropriate measures for promoting innovation in teaching and learning and to pay special attention to improve the social and economic conditions and welfare of the people, especially pertaining to their intellectual, academic and cultural development. The University was ranked overall 60th in India and 2nd among all the Universities in Gujarat in NIRF 2016 rankings. According to NIRF 2017, the University ranked among the top 150 Universities in the country.

MOTTO

Providing a Global Platform for Knowledge and Employability to our Students along with Society and Industry Interface.



Institution's Distinctiveness

Since its inception, Central University of Gujarat has incorporated interdisciplinary and multi-disciplinary approach in its academic curriculum, pedagogy and research. It has unique undergraduate courses like Integrated Social Management and various inter disciplinary Post Graduate courses in Industrial Chemistry, Environmental Science, Nano Technology, Defence and Strategic Studies, Social Sciences, International Studies, library science and Education. The University has been encouraging teaching and research not only across the discipline but also



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across knowledge domain. The University is also encouraging inter-disciplinary research in all schools with a special centre devoted to Diaspora Studies.

The success of the courses is manifested in its achievements where 16 patents were registered for its innovations out of which two are commercialised that are aligned with the Hon'ble Prime Minister's call for Self Reliant India and Vocal for Local. Besides, University has published 1717 research publications in the form of Books, Papers and Chapters in edited books in reputed national and international publication houses.



Facilities

CENTRAL INSTRUMENTATION FACILITY

The Central Instrumentation Facility (CIF) at the University is one of the best in the country. Currently, the CIF has a range of instruments which include 500 CUGz FT-NMR Spectrometer, Single Crystal and Powder XRD, Atomic Absorption Spectrophotometer, Elemental Analyzer (CHNS/O) and many more



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CENTRAL LIBRARY

The Central Library has a wide collection of resources taking into consideration the course contents and research needs of the university. Library's learning resource collections are developed aiming at providing the highest level of research and teaching support to the programmes and research thrust areas. Collection is reviewed every year in order to be relevant to the emerging and developing areas of research. The Library is growing in its breadth and depth it holds about 30,000 plus books, and subscribes to over 66 print journals and magazines and over 8000+ e-journals. The Library has KOHA software and computerized library facilities.

The Cyber Library provides seamless access to e-journals available at the university. Its main aim is to provide access to computers and internet to the students coming from economically weaker sections who are not able to buy computers/laptop individually. It has over 29 Pentium workstations with broadband internet access. CUG has successfully migrated towards the internet age by adding 8000+ online journals to its collection. The Library also provides access to several databases.

WI-FI AND ICT FACILITY

The University is wi-fi enabled and students can access the internet on the basis of a personal id and password provided by the University. The University also has a CyberLab that enables students to access a large variety of resources on the web that includes journals, databases, and books.



HOSTEL FACILITY

Limited Hostel accommodation both for men and women is available on a first come first allotment basis. The hostel fees are stipulated as per the norms of the University. Private accommodation on a shared basis is available in the city of Gandhinagar at reasonable rates.

GAMES AND SPORTS

The University is aware of the importance of physical activities and organised sports and games programmes, which should be combined with the students academic pursuits. Keeping in view the limited space available at the present location of the University, basic sports facilities are available in the campus.

CANTEEN

The University offers a canteen facility where snacks, tea, coffee/dining in facility is available.

TRANSPORT FACILITY

The University has its own AC bus which is available for the students and University staff for their convenience

CONFERENCE FACILITY

The University has well-equipped facilities for conferences, workshops and seminars with seating capacity ranging from 45 to 170 persons.

VISION

The vision of CUG is to establish itself as a centre of excellence with social commitment by integrating modern, scientific and technological knowledge and skills with the basic human ethos and values. The University shall set forth a model in teaching, research and personality development and create skilled human resource with a sense of responsiveness towards society, the country and the world at large..

MISSION

The mission of CUG is to provide access to quality education and create opportunities for encouraging students to effectively engage with emerging innovations and technological challenges, international competitiveness and leadership in thought as well as in action. CUG is also conscious of the importance of developing entrepreneurial and scholastic abilities for creation of knowledge, wealth and prosperity for the country as well as peace and happiness for human beings.



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AUDIT PARTICIPANTS

On behalf of University

Name - Designation/Department	
Prof. Atanu Mohaparta	Director – IQAC
Mr. Jay Prakash M. Soni	Deputy Registrar
Mr. Pawan Pathak	Executive Engineer
Mr. Nilesh Kumar	Jr. Engineer (Electrical)
Dr. Rajesh Singh	Assistant Professor – SESD
Prof. Bhawana Pathak	UBA Coordinator
Dr. Rajneesh Kumar Gupta	In-Charge NSS

On behalf of EHS Alliance Services

Name	Position	Qualifications
Dr. Uday Pratap	Lead Auditor	Ph.D. , PDIS, QCI – WASH, Lead Auditor ISO 14001:2015
Ms. Pooja Kaushik	Co-Auditor	M.Sc, Field Expert, QCI – WASH





EXECUTIVE SUMMARY

Green auditing is an essential step to identify and determine whether the institutions practices are sustainable and ecological. Traditionally, we were upright and efficient users of natural resources. But over the period of time, excessive usage of resources like water, electricity, petrol, etc. have become habitual for everyone especially, in urban and semi-urban areas. It is actually the right time to check if we (our process) are consuming more than required resources? Whether we are using resources sensibly?

Green audit standardizes all such practices and provides an efficient way to use natural resources. In the time of climate change and resource exhaustion it is necessary to re-check the processes and convert it in to green and sustainable. Green audit provides an approach for it. It also increases overall awareness among the folks working in institution towards the eco-friendly environment.

This is the first attempt to conduct green audit of this University campus for fulfilment of NAAC criteria. This audit was mainly focused on greening indicators like consumption of energy in terms of electricity and fossil fuel, quality of soil, water usage, vegetation, waste management practices and carbon foot print of the campus. Initially a questionnaire was shared to know about the existing resources of the campus and resource consumption pattern of the students and staffs in the university.

GREEN AUDIT - ANALYSIS

1.1 GENERAL INFORMATION

1. Does any Green Audit conducted earlier?

No, this is very first time CUG has gone for External Green Audit in a systematic way of monitoring their environmental eminence.

2. What is the total strength (people count) of the Institute?

Students

Male: 727 Female: 616 Total: 1343

Teachers (including guest faculty)

Male: 70 Female: 35 Total: 105

Non-Teaching Staff

Male: 117 Female: 41 Total: 158



Total Strength

Male: 914 Female: 692 Total: 1606

3. What is the total number of working days of your campus in a year?

There are one hundred eighty working days in a year.

4. Where is the campus located?

The campus is located in Sector-29 Gandhinagar, Gujarat- 382030

5. Which of the following are available in your institute?

<i>Garden area</i>	<i>Available</i>
<i>Playground</i>	<i>Available</i>
<i>Kitchen</i>	<i>Available</i>
<i>Toilets</i>	<i>Available</i>
<i>Garbage Or Waste Store Yard</i>	<i>Available</i>
<i>Laboratory</i>	<i>Available</i>
<i>Canteen</i>	<i>Available</i>
<i>Hostel Facility</i>	<i>Available</i>
<i>Guest House</i>	<i>Available</i>

6. Which of the following are found near your institute?

<i>Municipal dump yard</i>	<i>Not in vicinity of institute</i>
<i>Garbage heap</i>	<i>No Garbage heaps</i>
<i>Public convenience</i>	<i>Public convenience is available</i>
<i>Sewer line</i>	<i>Approximately 4 KM sewer line within campus</i>
<i>Stagnant water</i>	<i>No stagnant water</i>
<i>Open drainage</i>	<i>No</i>
<i>Industry – (Mention the type)</i>	<i>No</i>
<i>Bus / Railway station</i>	<i>Gandhi nagar railway station and city bus stop</i>
<i>Market / Shopping complex</i>	<i>Available</i>

1.2 WASTE MINIMIZATION AND RECYCLING

1. Does your institute generate any waste? If so, what are they?

Yes, Solid waste, Canteen waste, paper, plastic, horticulture, laboratories waste, e-waste, etc.

2. What is the approximate amount of waste generated per day? (in KG approx.)



*Biodegradable waste - 85 Kg
Non-biodegradable waste - 18 Kg
Hazardous Waste < 2 Kg
Others - 2 Kg*

3. How is the waste managed in the institute? By Composting, Recycling, Reusing, Others (specify)

- *Composting is done for horticulture waste management.*
- *Aerobin Composters are installed for bio-degradable waste management.*
- *Diluted solutions are used instead of concentrated solutions in laboratories*
- *One side printed Paper is re-used for internal communication.*
- *Solid waste is taken by Municipal Corporation after collecting the BMW separately*
- *Single use plastic is banned in the campus*

4. Do you use recycled paper in institute?

Yes, One side printed Paper is re-used for internal communication in the campus

5. How would you spread the message of recycling to others in the community?

Following are the ways through which University is spreading the awareness about recycling

- *Poster competition activities*
- *Campaigns*
- *Rally*
- *Webinars and seminars*

6. Can you achieve zero garbage in your institute? If yes, how?

Not yet achieved. Possible through waste management policy and planning.

1.3 GREENING THE CAMPUS

1. Is there a garden in your institute?

Yes, about 59201.51 Sq ft areas are developed as Gardens.

2. Do students spend time in the garden?

Yes, students spend around 2-4 Hours during winters.



3. Total number of Plants in Campus?

<i>Plant type with approx. count</i>	
<i>Full grown Trees</i>	<i>300</i>
<i>Small Trees</i>	<i>300</i>
<i>Hedge Plants</i>	<i>3877</i>
<i>Grass Cover SQM</i>	<i>59201.51 SqFt</i>

4. Does the Institute has any Horticulture Department? (If yes, give details)

Yes, Total 7 staff is deployed in horticulture department

5. How many Tree Plantation Drives organized by campus per annum?

Six tree Plantation Drives are Organized by campus in the last FY. Total 30 trees and 20 hedge plants planted in this Financial Year with more than 85% survival rate.

6. Is there any Plant Distribution Program for Students and Community?

Yes, University has a practice where all guests are given a planter as a gift rather than a bouquet of flowers. Besides this landscape, Plantation is also done in Kakanu Tarapur village by the University

8. Is there any Plant Ownership Program?

No

1.4 WATER AND WASTEWATER MANAGEMENT

1. List uses of water in your institute

Basic use of water in campus:

Drinking – 46.44 KL/month

Gardening – 990.00 Kl/month

Kitchen and Toilets – 304.98 KL/month

Others – 111.02 KL/month

Hostel – 1671.30 KL/Month

Total = 3123.75 KL/Month



2. How does your institute store water? Are there any water saving techniques followed in your institute?

*There are total 35 tanks of 1000 litres tanks on terrace.
Along with this, there are underground tanks of capacity 25000 litres and 40000 litres*

Saving Techniques

- *Avoid overflow of water controlled valves are provided in water supply system.*
- *Close supervision for water supply system.*
- *Water Conservation awareness for new students*
- *Sprinklers usage for gardening and grass cover*

3. Locate the point of entry of water and point of exit of waste water in your institute.

Entry - Water comes from Municipal corporation and 2 bore wells

Exit- From Canteen, Toilets, bathrooms, Hostels and Labs through covered drainage which is connected to sewage

4. Write down ways that could reduce the amount of water used in your institute

Basic ways:

- *Close the taps after usage*
- *Water Conservation awareness for new students*
- *Maintenance and monitoring of valves in supply system to avoid overflow, leakage and spillage*
- *In new block, push tap are installed to save water*

1.5 ANIMAL WELFARE

1. List the animals (wild and domestic) found on the campus (dogs, cats, squirrels, birds, insects, etc.)

Approx. 100 Birds, 3-4 Cats, 4-5 dogs and 50+ Squirrels along with butterfly species are found in campus. A variety of bird's species and other flora and fauna are available, so institute is doing their bit for bio diversity conservation.

2. Does your institute have a Biodiversity Program or a KARUNA CLUB?

Yes, eco club of Central University of Gujarat actively organizes awareness through various campaigns and activities including seminars, poster competition, etc.



1.6 CARBON FOOTPRINT - EMISSION & ABSORPTION

1. Electricity used per year - CO2 emission from Electricity

$(\text{electricity used per year in kWh}/1000) \times 0.84$
 $678684.00 \text{ kWh}/1000 \times 0.84$
 $= 678684.00 /1000 \times 0.84$
 $= 570.09 \text{ ton}$

2. LPG/PNG/CNG used per year - CO2 emission from LPG/PNG/CNG

$(\text{LPG used per year in KG}) \times 2.99$
 2280×2.99
 $= 2280 \times 2.99$
 $= 6.82 \text{ ton}$

$(\text{CNG used per year in KG}) \times 2.25$
 488.6×2.25
 $= 488.6 \times 2.25$
 $= 1.10 \text{ ton}$

3. Diesel used per year CO2 emission from HDS (Diesel)

$(\text{Diesel used per year in litres}) \times 2.68$
 6448×2.68
 $= 6448 \times 2.68$
 $= 17.28 \text{ ton}$

4. Transportation per year (car) CO2 emission from transportation (Bus and Car)

University has 2 buses, 3 cars and 2 vans. Buses and 2 cars run on diesel, 1 car and 1 van runs on petrol and 1 van is CNG based vehicle.

$= (2 \times 1 \times 2 \times 180/100) \times 0.01 + 5 \times 2 \times 2 \times 180/100 \times 0.02$
 $= 0.07 + 0.72$
 $= 0.79 \text{ tons}$

Total CO2 emission per year cumulative by electricity usage + Diesel usage + LPG combustion + CNG consumption + bus and car transportation (570.09 + 17.28 + 6.82 + 1.10 + 0.77 = 596.08 ton)



CARBON ABSORPTION BY FLORA IN THE INSTITUTION

There are 300 full grown trees and 300 semi grown trees of different species, on the campus spread over 33428 sqm.

Carbon absorption capacity of one full grown tree 22 kg CO₂ Therefore Carbon absorption capacity of 300 full-grown trees 300 x 22 kg CO₂ = 6.6 tons of CO₂.

The carbon absorption capacity of 300 semi-grown trees is 50% of that of full-grown trees. Hence the carbon absorption 300 x 6.8 kg of CO₂ = 2.04 tons of CO₂

There are approximately Hedge Plants 3877 of various species being raised in the gardens and grown in the areas where no buildings are built Carbon absorption of bush plants varies widely with their species. Certain bushes absorb very high level of CO₂ where as some others absorb very low level of CO₂. In the absence of a detailed scientific study, 200g of CO₂ absorption is taken per bush (in consultation with Environmental Science specialists). Based on this, total carbon absorption of bushes is 3877 x 200 g = 0.78 tons of CO₂

The lawns on the campus have buffalo grass, Mexican grass and indigenous grass species and cover a total area of 59201.51 sq. ft. Carbon absorption capacity of a 10 sq. ft. area of lawn is 1 g per day Therefore, carbon absorption by lawn area 59201.51 x 365 x 0.1 g CO₂ = 2.16 tons CO₂ per year.

Grand total of carbon absorption capacity of the campus is 11.58 tons.

GREEN INITIATIVES BY CAMPUS

- **Solid Waste Management**
 - Waste management is done by composting
 - One sided used paper is re-used for internal assessment and working.
 - There is ban on single use plastic and plastic crockery in the campus.
- **Renewable Energy**
 - Solar power plant of capacity 5 KW is installed on building roof.
- **Tree Plantation Drives**
 - Six plantation drives were carried out in the current year in the Campus.
 - Plants survival rate is around 85%
 - Tulsi Van" initiated at CUG on 25th June 2021



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Tree plantation - CUG Sec 29 campus (5th June 2021)



Tulsi Van" initiated at CUG (25th June 2021)

- **Air Pollution Reduction**
 - Personal Vehicles (Students) are not allowed in the campus
 - University is in process to pursue air quality monitoring through own lab and is in process to get NABL accreditation.
- **Environment Committee Initiatives** – CUG has an eco-club. Below are the highlights of their work on environment cautiousness.



Cleanliness Drive by Faculty Members and Students on the Campus)



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(Established by an Act of Parliament of India, No. 25 of 2009)

CUG - ECO CLUB

LET'S SAVE THE WORLD
THINK GREEN

Registration Link
<https://forms.gle/e5AqCozB93q6sEhQ9>

Coordinator
Prof. Bhawana Pathak

Club Members	Student Members
1. Prof. R. Y. Hiranmai	1. Sandeep Kalyan
2. Prof. Pallavi Sharma	2. Jigar Solanki
3. Dr. Rajesh Singh	3. Priyanka Verma
4. Dr. Paulami Sahu	
5. Dr. Dheeraj Rathore	

Email: cugcoclub@gmail.com
School of Environment and Sustainable Development
Central University of Gujarat
www.cug.ac.in

- CUG has adopted five villages (Kaka Nu Tarapur, Titoda, Adraj Moti Pundrasan, and Lekhawara) near Gandhinagar district under Unnat Bharat Abhiyan.
- University is actively participating in UBA and facilitating the Social and Environmental awareness in five villages (KakaNuTarapur; Lekawada; Titoda; Pundrasan; Adraj Moti) near Gandhinagar district.
Based on Technology identification and Proposing Solution: Two projects formulation under Technology Development and Customization of solution is approved with financial support.

Sustainable Agriculture System - Groundwater treatment and purification using solar distillation System in Kakanu- Tarapur village, Gujarat (Rs 50,000/)

Water Resource Management - CETP-solid waste treatment and its conversion into biofertilizer (Rs 80,000)

- Group of faculty members and students visited selected villages and interacted with Village Sarpanch, Talati, School principals, students and other people to understand village ecosystem and different issues to find out scientific solution. Also discussed the developmental activities to be introduces in the village to facilitate with the help of University students and faculties.



- Webinar was organized on Responding The Challenges of Covid-19 : Awareness & Prevention
- Central University of Gujarat, NSS organized association with (EBSB & Yoga Club) celebrated World No Tobacco day by organising a webinar on 31st May 2021



- Online training session for common yoga protocol practice for celebration of 7th International Day of Yoga from 21st May to 21st June 2021
- CUG Observes World Environment Day, and organise Webinar on Environment Restoration on 5th June 2021
- The webinar on ‘Swastha Jivan Shaili: Yoga, Pranayam and Dhyana’ was organized by EBSB, CUG on 29th July 2021



- On 75th Independence of India several activities were conducted by EBSB, NSS and Yoga Club.



- Swachhata Pakhwada was jointly organized by EBSB and NSS of CUG during 8th to 15th September. About two hundred participants had extended their participation in the event. As part of the event, a seminar on 'Water Conservation: Awareness and Responsibility' was also held.



- Vigilance Awareness Week was jointly organized by EBSB and NSS of CUG from 26th October to 1st November 2021.



RECOMMENDATIONS

- Eco-friendly parameters should be included in the purchase of articles and goods for the university campus.
- University should go for water balancing / audit for monitoring the use and wastage of water.
- Water Meter should be installed at every building of institute for monitoring of water consumption per capita.
- Enhance recycling can be done by creating a group where students can recycle books, personal clothes and other material to needy students. This can be an initiative under green program.
- We recommend University to build sewage treatment plant (STP) of required capacity and treated water should be used in toilet and gardening purposes.
- Solar power plant should be increased to fulfil at least 70% of the electricity requirements.
- Plant distribution program in nearby villages and societies should be initiated periodically.
- Green building guidelines for future expansion projects of the campus

CONCLUSION

This audit involves considerable team discussions and meetings with key staff members on a variety of environmental-related topics. The eco club of University promotes conservation of resources.

Overall 40% of University campus is for landscaping and 16% is green cover. The University makes a significant effort to act in an environmentally responsible manner and takes into account the environmental effects of the majority of its activities. The recommendations in this report suggests some more ways in which the University can work to improve its practices and develop into a more sustainable institution, despite the fact that it performs rather well overall.

It's important to begin a few things such as plant distribution and ownership program and plan to increase the Solar PV capacity. Additionally, we strongly advise installing water metres at each building/block and water balancing report.



- The Environment [Protection] Act – 1986 (Amended 1991) & Rules-1986 (Amended 2010)
- The Petroleum Act: 1934 – The Petroleum Rules: 2002
- The Central Motor Vehicle Act: 1988 (Amended 2011) and The Central Motor Vehicle Rules:1989 (Amended in 2005)
- Energy Conservation Act 2010.
- The Water [Prevention & Control Of Pollution] Act – 1974 (Amended 1988) & the Water (Prevention & Control of Pollution) Rules – 1975
- The Air [Prevention & Control Of Pollution] Act – 1981 (Amended 1987) The Air (Prevention & Control of Pollution) Rules – 1982
- The Gas Cylinders Rules – 2016 (Replaces the Gas Cylinder Rules – 1981)
- E-waste management rules 2016
- Electrical Act 2003 (Amended 2001) / Rules 1956 (Amended 2006)
- The Hazardous Waste (Management and Handling and Trans-boundary Movement) Rules, 2008 (Amended 2016)
- The Noise Pollution Regulation & Control rules, 2000 (Amended 2010)
- The Batteries (Management and Handling) rules, 2001 (Amended 2010)
- Relevant Indian Standard Code practices

Transparency of Green Audit Report

Green audit report is one of the useful means of demonstrating an organization's commitment to openness and transparency. If an Organisation believes it has nothing to hide from its stakeholders, then it should feel confident enough to make its green audit reports freely available to those who request them. As a basic rule, green audit reports should be made available to all stakeholders.



ગુજરાત કેન્દ્રીય વિશ્વવિદ્યાલય
CENTRAL UNIVERSITY OF GUJARAT



ANNEXURE – PHOTOGRAPHS OF ENVIRONMENT CONSCIOUSNESS



Well ventilated building structure



Well maintained University campus



Lush green campus



Color coded dustbins



Paving stone installation
in the university



Playground



Ornamental Plants in the
campus



Indoor Plants in the
campus



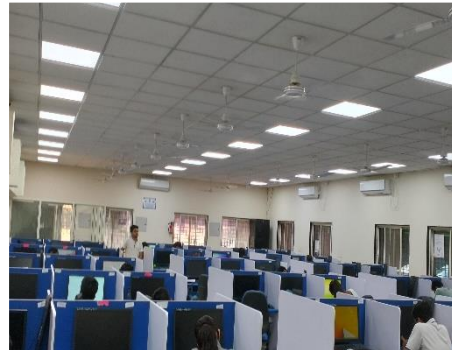
Green house nursery



Nursery plants



Classrooms as per NBC guidelines with more than 40% window ratio



Spacious and well equipped computer lab



Aerobin composter



Water purifier installed



Incinerator for sanitary waste management



Sensor based urinals to save water



Awareness posters



Awareness posters



Underground water storage tank



Rainwater storage tank



Rainwater storage tank



HVAC AC unit



Cleanliness drive by girls hostel team



Cleaning in hostel campus



Herbal tree plantataion



Plantation by faculty



Plantation on World Environment Day



Plantation by senior officials

***** END OF THE REPORT *****