# SGT UNIVERSITY

## GREEN AUDIT REPORT

2024-2025

Prepared by

EHS ALLIANCE

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# CERTIFICATE

EHS alliance

CERTIFICATE

PRESENTED TO

SGT UNIVERSITY

Badli Road, Chandu, Budhera, Gurugram, Haryana 122505

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

GREEN AUDIT

ACADEMIC YEAR 2024-25

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.

EHS ALLIANCE LLP GURUGRAM

SIGNATURE

23.08.2025
DATE OF AUDIT

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# ACKNOWLEDGEMENT

EHS Alliance Services extends its sincere appreciation to the management of **SGT University** for entrusting us with the responsibility of conducting this important **Green Audit**. We are grateful for the cooperation and support extended to our team, which greatly contributed to the successful completion of the assessment.

We would like to express our special thanks to ***Prof. (Dr.) Hemant Verma - Hon'ble Vice Chancellor & Dr. Ajay Kumar Khanduri - Registrar***, for granting us the opportunity to evaluate the environmental performance of the campus and for her continued encouragement throughout the audit process.

Our sincere gratitude also goes to **Dr. Suman Vij - Director, IQAC** and Audit Coordinator, for his invaluable guidance, coordination, and unwavering support—without which the successful completion of this audit would not have been possible.

We further acknowledge the active involvement and contributions of several staff members in facilitating data collection and fieldwork. In particular, we extend our thanks to:

| | |
|---|---|
| ***Dr. Archana Chaudhary*** | ***Chairperson, Environment Committee*** |
| ***Mr. Gaurav Chaudhary*** | ***Admin Officer*** |
| ***Dr. Manjri Shukla*** | ***Member, Environment Committee*** |
| ***Ms. Rachna*** | ***Secretary, Environment Committee*** |
| ***Ms. Trapti Sharma*** | ***Member, IQAC*** |
| ***Dr. Neha SethiAM,*** | ***IQAC*** |

Their commitment played a vital role in the smooth execution of the audit activities.

# DISCLAIMER

This report has been prepared by the Audit Team of **EHS Alliance Services** for **SGT University**, based on the data and information provided by representatives of the institution. The findings, analysis, and conclusions presented herein are supported by the professional expertise and best judgment of the audit team.

While every reasonable effort has been made to ensure accuracy and completeness, the information contained in this report has been compiled in good faith using the data made available during the course of the audit. The conclusions are derived from the best estimates and observations at the time of preparation.

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**Signature**

**LEAD AUDITOR**

# CONCEPT AND CONTEXT

The **National Assessment and Accreditation Council (NAAC)**, New Delhi, has mandated that, effective from the academic year **2019–20**, all Higher Educational Institutions (HEIs) are required to submit an annual Green, Environment, and Energy Audit Report. This mandate falls under **Criterion 7** of the NAAC framework. NAAC, an autonomous institution of the Government of India, assesses and accredits institutions of higher education and assigns them grades—A, B, or C—based on their performance across defined parameters.

In addition to fulfilling accreditation requirements, the Green Audit reflects the **Corporate Social Responsibility (CSR)** of educational institutions, emphasizing their role in addressing climate change and contributing to **carbon footprint reduction**.

In alignment with this directive, the management of **SGT University** resolved to undertake an external environmental assessment, engaging a qualified and competent professional audit agency. The purpose of the Green Audit is to systematically evaluate environmental practices both within and surrounding the campus, identifying activities that may have direct or indirect environmental impacts.

The Green Audit is a structured process involving the **identification, quantification, documentation, reporting, and analysis** of various environmental aspects of the institution. It is designed to review ongoing efforts and assess potential risks to the health of campus occupants and the surrounding ecosystem.

The audit serves as a tool to guide environmental improvements and recommend best practices for sustainability. It addresses key focus areas including **Green Campus Initiatives, Waste Management, Water Conservation, Air Quality, Energy Efficiency, and Carbon Emissions**.

The audit is conducted through a clearly defined framework encompassing its **objectives, methodology, analytical tools, and reporting structure**, aimed at fostering environmental consciousness and sustainable operations across the institution.

# INTRODUCTION

In recent years, educational institutions have increasingly recognized the importance of environmental sustainability, prompting the adoption of innovative and eco-friendly practices. To safeguard the campus environment, many institutions have implemented strategies aimed at addressing ecological concerns such as **energy conservation, waste recycling, reduction of water consumption, rainwater harvesting**, and more.

Despite these efforts, it is acknowledged that institutional operations can have unintended adverse impacts on the environment. A **Green Audit** is a systematic, official evaluation of how an institution's activities affect the environment. It aims to assess the current environmental conditions of the campus and identify areas for improvement.

The Green Audit serves as an essential tool for colleges and universities to analyze their **consumption of energy, water, and other resources**. Through this process, institutions can make informed decisions on reducing waste, optimizing resource utilization, and implementing cost-saving measures. Furthermore, the audit helps to quantify the types and volumes of waste generated, providing a foundation for enhanced **waste minimization and recycling initiatives**.

The practice of green auditing, coupled with the adoption of suitable mitigation measures, creates a mutually beneficial scenario for institutions, the academic community, and the environment. It fosters **awareness of health and sustainability issues**, promotes **environmental values and ethics**, and enhances the understanding of the institution's ecological footprint among students and staff.

In addition to supporting environmental stewardship, green auditing contributes to **financial savings** through the efficient use of resources. It also encourages the development of a sense of **personal and collective responsibility** towards sustainability among faculty, students, and administrators.

The audit process typically includes **primary data collection**, a comprehensive **site walkthrough** with the institution’s team, and the **review of relevant policies, practices, documents, and operational records**. This holistic approach ensures a thorough and actionable assessment of the institution’s environmental performance.

# OVERVIEW OF THE UNIVERSITY

SGT (Shree Guru Gobind Singh Tricentenary) University, Gurugram, spans over 70 acres of lush green campus, enveloped in serene beauty and a tranquil environment. Situated at Chandu-Bhudera on the outskirts of Gurgaon, it is less than five kilometers from the Delhi border at Daurala, offering convenient access from Indira Gandhi International Airport.

SGT University was established by the Haryana Private Universities (Amendment) Act No. 8 of 2013 to provide educational opportunities to all segments of society under the umbrella of Dashmesh Educational Charitable Trust. The Trust was founded in 1999 with the noble mission of spreading the teachings of Shree Guru Gobind Singh Ji, the great philosopher and social reformer who believed that "the spread of learning is the best service to mankind." The foundation for the university's growth was laid in 2002 with the establishment of the SGT Dental College.


In an ever-evolving work environment, SGT University fosters a culture of continuous learning to develop future innovative leaders of international repute. These leaders are quick to learn and implement new skills, understand changing customer needs, and can revamp operations effectively with a significant return on investment. SGT University's modern infrastructure and learner-centric pedagogy fully support its students. The university is focused on investing in "Nurturing Future Leaders" to produce resourceful and productive employees at all levels, from "Green Graduates" to "Tenured Senior Managers." The university is determined to instill domain-specific skills and soft skills in its emerging innovative leaders, making them future-ready. At SGT University, the focus is on developing skills and behaviors that align with a good cultural fit and the right academic background.

## Facilities in campus

*Hostel*: SGT University provides separate hostels for girls and boys with round-the-clock security. Each hostel features separate dining rooms, recreation rooms, and study rooms.

*Transport Services*: Theuniversityoperates60buses across NCR and neighbouring areas, serving both students and staff. Bus facilities are also available for hostellers for city visits, with charges based on actual usage.

*Playgrounds*: SGT University offers a variety of sports facilities, including playgrounds for basketball, volleyball, football, table tennis, cricket, and badminton, promoting the all-round development of students.

*Canteen*: The spacious cafeteria provides a wide variety of snacks to students and staff at reasonable rates.

*Labs*: The Department of Anatomy at SGT Medical College, Hospital, and Research Institute features a well equipped museum, dissection hall, and research lab, with facilities for tissue processing, special staining, and research in genetics and embryology.

*Gym*: SGT University offers well equipped gyms in both the girls' and boys' hostels.

*Seminar Hall*: The Seminar Hall is an ideal venue for seminars and lectures by medical professionals, offering students insights into various fields. These sessions provide first hand info & opportunities for students to ask questions and clear their doubts.

*Library*: The university's fully air-conditioned library, designed for comfort and natural lighting, can accommodate450usersatatime. It offers modern facilities and resources, including CD-ROMs, online data bases, books, journals, theses, WHO publications, and more.

# VISION & MISSION

*VISION*

To nurture individual excellence through value-based, cross-cultural, integrated, and holistic education, adopting contemporary and advanced methods blended with ethical values, contributing to building a peaceful and sustainable global civilization.

*MISSION*

- To impart higher education that meets global standards and the changing needs of society.
- To provide access to quality education and improve the quality of life at individual and community levels through innovations and ethical research.
- To engage with and promote the growth and welfare of the surrounding community through extension and outreach activities.
- To develop socially responsible citizens, fostering ethical values and compassion through community engagement and promotion activities.
- To create a competitive and coordinated environment where individuals develop skills and a lifelong learning attitude to excel in their endeavors.
- To develop Centers of Excellence to achieve cutting-edge technology in all fields.

SGT University offers over 160 courses, including undergraduate, postgraduate, and PhD programs, across 18 faculties.

- *Faculty of Mass Communication & Media Technology*
- *Faculty of Hotel & Tourism Management*
- *Faculty of Fashion & Design*
- *Faculty of Commerce & Management*
- *Faculty of Engineering & Technology*
- *Faculty of Agricultural Sciences*
- *Faculty of Education*
- *Faculty of Law*
- *Faculty of Science*
- *Faculty of Indian Medical System*
- *Faculty of Naturopathy and Yogic Sciences*
- *Faculty of Allied Health Sciences*
- *Faculty of Behavioral Sciences*
- *Faculty of Dental Sciences*
- *Faculty of Nursing*

- *Faculty of Medicine & Health Sciences*
- *Faculty of Physiotherapy*
- *Faculty of Pharmacy*

***Library***

***Computer Lab***

***Smart classrooms***

***Seminar room***

**Geo Location**
Geo Coordinates from Google maps:
28.4830607, 76.897286

# AUDIT PARTICIPANTS

On behalf of SGT University

| Name | Designation |
|---|---|
| Prof. (Dr.) Hemant Verma | *Hon'ble Vice Chancellor* |
| Dr. Ajay Kumar Khanduri | *Registrar* |
| Dr. Suman Vij | *Director, IQAC* |
| Dr. Archana Chaudhary | *Chairperson, Environment Committee* |
| Mr. Gaurav Chaudhary | *Admin Officer* |
| Dr. Manjri Shukla | *Member, Environment Committee* |
| Ms. Rachna | *Secretary, Environment Committee* |
| Ms. Trapti Sharma | *Member, IQAC* |
| Dr. Neha Sethi | *AM, IQAC* |
| Mr. Dinesh Kumar | *Executive, IQAC* |
| Mr. Kumar Mayank | *Sr. Manager, HR* |
| Mr. Shripal Singh | *AGM* |
| Mr. Piyush Kaul | *Member, IQAC* |
| Mr. Sriram Singh | *Executive, Horticulture* |
| Mr. Saurabh Saini | *Executive, Horticulture* |
| Mr. Vishal Patel | *Sr. Executive, Horticulture* |
| Mr. Sohan Kant | *Sr. Executive, HR* |
| Mr. Ashwani Bhardwaj | *In-charge, Medical Store* |
| Mohd. Shah Zafar | *Dy. Manager* |
| Mr. Sunil | *Engineer* |
| Mr. Manbir Chaudhary | *Supervisor* |
| Mr. Rishi Sharma | *CEO, ACIC* |
| Mr. G. S. Yadav | *AGM, MEP* |

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, PGCCC |
| Mr. Puneet Kaushik | Co-Auditor | Environment Expert in Renewable energy and SDG |
| Mr. Jitendra Punia | Co-Auditor | Sustainability Expert for Industry and Institutions |

# EXECUTIVE SUMMARY

Green auditing serves as a vital mechanism for assessing whether the practices adopted by an institution are environmentally sustainable and ecologically sound. Historically, communities maintained a balanced and responsible approach toward the use of natural resources. However, over time—particularly in urban and semi-urban settings—resource consumption has become excessive and often unchecked, with increased reliance on electricity, water, fuel, and other utilities.

At this juncture, it becomes imperative to critically examine whether our institutional operations are consuming more resources than necessary and to evaluate whether these resources are being used judiciously. The Green Audit provides a structured framework to review and optimize such practices, promoting efficiency in resource utilization.

In the context of growing environmental concerns, such as climate change and the depletion of natural resources, a shift toward sustainable processes is no longer optional—it is essential. A Green Audit supports this transition by offering a systematic approach to identify environmental inefficiencies and areas for improvement. Furthermore, it enhances environmental consciousness among faculty, staff, and students, encouraging collective responsibility for maintaining an eco-friendly campus.

This marks the **seventh Green Audit** conducted at SGT University, in alignment with the **National Assessment and Accreditation Council (NAAC)** requirements. The primary focus of this audit was to assess critical sustainability indicators including **energy consumption (electricity and fossil fuels), water usage, soil and vegetation health, waste management practices, and the overall carbon footprint** of the campus.

To initiate the process, a comprehensive questionnaire was circulated to gather data on existing infrastructure, resource availability, and the consumption patterns of both students and staff. This data-driven approach laid the foundation for the subsequent on-site assessment and analysis.

# GREEN AUDIT - ANALYSIS

## 1.1 GENERAL INFORMATION

| | |
|---|---|
| Does any Green Audit conducted earlier? | *Yes, this is the sixth external audit organized by the university* |
| What is the total strength (people count) of the Institute? | ***Students***<br>*Male: 4486 Female: 5065 Total: 9551*<br><br>***Teachers (including guest faculty)***<br>*Male: 336 Female: 452 Total: 788*<br><br>***Non-Teaching Staff***<br>*Male: 2023 Female: 621 Total: 2644*<br><br>***Total Strength***<br>*Male: 6845 Female: 6138 Total: 12983* |
| What is the total number of working days of your campus in a year? | *There are one hundred and eighty working days in a year.* |
| Where is the campus located? | *The campus is located at Budhera, Gurugram-Badli Road, Gurugram (Haryana)-122505* |
| Which of the following are available in your institute? | ***Garden Area:*** *Available*<br>***Playground:*** *Available*<br>***Kitchen:*** *Available*<br>***Toilets:*** *Available*<br>***Garbage/Waste Storage Yard:*** *Available*<br>***Laboratory:*** *Available*<br>***Canteen:*** *Available*<br>***Hostel Facility:*** *Available*<br>***Guest House:*** *Available* |
| Which of the following are found near | ***Municipal Dump Yard:*** *Not located in the vicinity of the institute*<br>***Garbage Heaps:*** *None observed*<br>***Public Convenience:*** *Available*<br>***Sewer Line:*** *Approximately 4 km of sewer line exists within the campus*<br>***Stagnant Water:*** *Not present* |

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| your institute? | ***Open Drainage:*** *Not present*<br>***Nearby Industry (Type):*** *None*<br>***Nearest Bus/Railway Station:*** *Budhera Bus Stand, Garhi Hashru Railway Station*<br>***Market / Shopping Complex:*** *Available nearby* |

## 1.2 WASTE MINIMIZATION AND RECYCLING

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| Does your institute generate any waste? If so, what are they? | *Yes, the following types of waste are generated by the campus*<br>• *Biodegradable waste – Horticulture waste and food waste*<br>• *Non-biodegradable waste – Paper and plastic waste*<br>• *Biomedical waste – sanitary disposal waste*<br>• *E-waste*<br><br>*The university takes measures to manage the solid waste on campus by segregating it at the source, composting biodegradable waste, recycling electronic waste, and restricting single-use plastics.*<br><br>*The campus has color-coded waste bins for the segregation of bio-degradable (green) and non-biodegradable (blue) wastes.*<br><br>*Waste paper collection bins are strategically placed on campus to collect and recycle paper. The biodegradable waste is converted into compost using the composting facility in the university. The compost is used in the nursery and garden.* |
| What is the approximate amount of waste generated per day? (in Kg approx.) | *Biodegradable waste - 50 Kg*<br>*Non-biodegradable waste -50 Kg*<br>*Hazardous Waste - 10 Kg*<br>*Others < 2 Kg* |
| How is the waste managed in the institute? By Composting, Recycling, Reusing, Others (specify) | ➢ *Composting is done for horticulture waste management.*<br>➢ *SGT university collaborates with Greenobin to recycle paper waste.*<br>➢ *SGT university also has a MoU with Earth Zone Recycling. They collect e-waste (computers, mobile, printers, servers, printers) and send it for recycling.*<br>➢ *BMW of SGT University is being managed by the Biotic Waste Limited. Solid waste (Both dry and wet) is managed by Gurugram Waste Management System Pvt Ltd*<br>➢ *Oil and hazardous waste is managed by Shiv Shakti Oil and Lubricants and Gujarat Enviro Protection and Infrastructure (Haryana) Pvt. Ltd*<br>➢ *University's environment club, collaborates with Help age India, Smile Train, The Blind Relief Association, Delhi, Reliance Foundation etc.*<br>➢ *A bi-annual one-week collection drive is organized by campus.*<br>➢ *The university avoids the use of single-use plastic on campus.* |

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| | ➢ *Two separate boxes of green and blue color for waste segregation in corridors, staffroom, and office. The university has also placed separate boxes for paper recycling.* |
| Do you use recycled paper in the institute? | *Yes, SGT University collaborate with third party recycle vendor for management of the used paper.* |
| How would you spread the message of recycling to others in the community? | *Following are the ways through which the university is spreading awareness about recycling*<br>➢ *Waste plastic collection drives*<br>➢ *Installation of Dustbins for waste plastic collection, e-waste collection and recycling*<br>➢ *Tie-ups with authorized e-waste collection agency*<br>➢ *Awareness among the Students by Webinars, seminars, Sign Boards, Posters, etc.*<br>➢ *Seminars and add-on courses for students and faculty*<br>➢ *MoUs with NGOs*<br>➢ *Reuse waste paper for poster-making* |
| Can you achieve zero garbage in your institute? If yes, how? | *University is in the process of achieving zero garbage. The university does not encourage the use of single-use plastic. University converts the biodegradable garden and kitchen waste into compost. The dry waste is reduced by using digital media to circulate messages rather than printed paper. E-waste is segregated and recycled.* |

## 1.3 GREENING THE CAMPUS

| | |
|---|---|
| Is there a garden in your institute? | *Yes, about 7,94,534 Sq ft areas are developed as Gardens and other green belt.* |
| Do students spend time in the garden? | *Yes, students spend around 2-4 Hours during winter.* |
| Total number of Plants in Campus? | *Plant type with approx. count*<br>*Full-grown Trees 1,573*<br>*Small Trees 1,027*<br>*Hedge Plants 2,25,105*<br>*Grass Cover sqm 7,94,534 Sq ft*<br>*Miyawaki Urban Forest 8,450 plants and trees* |

| | |
|---|---|
| Is the campus having a Horticulture Department? (If yes, give details) | *Yes, Total 65 staff were deployed in the horticulture department* |
| How many Tree Plantation Drives are organized by campus per annum? | *A total of 13 plantation drives were conducted. Approximately 1590+7610 = 9200 trees and hedge plants were planted by the garden committee in this Financial Year with more than an 80% survival rate.* |
| Is there any Plant Distribution Program for Students and Community? | *Yes, Plantation distribution drives are conducted in nearby Villages under Unnat Bharat. Moreover, the university has a practice where all guests are given a planter as a gift rather than a bouquet of flowers*<br>*Adopted villages: Sakatpur, Sultanpur, Jhanjrola, Dhanawas, Iqbalpur* |
| Is there any Plant Ownership Program? | *Yes* |

## 1.4 WATER AND WASTEWATER MANAGEMENT

| | |
|---|---|
| List uses of water in your institute | *Details of water usage in campus:*<br>***Drinking** – 312.07 KL/month*<br>***Gardening** – 200.32 Kl/month*<br>***Kitchen and Toilets** – 1269.38 KL/month*<br>***Others** – 67.51 KL/month*<br>***Hostel** – 4320.00 KL/Month*<br>***Hospital Beds** – 10125.00 KL/Month*<br>***OPD Patients** – 450.00 KL/Month*<br>***Total = 16744.28 KL/Month***<br><br>**** SGT University uses fresh water apart from 4084.33 KL treated water.***<br><br>*Note: Please note that all calculations have been made on the basis of NBC 2016 norms as university has no water usage records.* |
| How does your institute store water? | *SGT University relies on tanker for water supply as a primary source and 3 bore wells as a secondary source. 4 Overhead Water Tanks and 03 Underground Water tanks installed for storage of water.* |

| | |
|---|---|
| Are there any water-saving techniques followed in your institute? | ***Saving Techniques***<br>➢ *University ensures regular water tank maintenance and checks water quality standards on campus.*<br>➢ *The water tanks and water coolers are checked every three months, and RO systems are regularly changed.* |
| Locate the point of entry of water and point of exit of wastewater in your institute. | ***Entry*** *- The primary source of water is tankers. University also has bore wells which are used occasionally as secondary sources.*<br><br>***Exit****- From Canteen, Toilets, Hostel, bathrooms and Labs through covered drainage which is connected to sewage treatment plant* |
| Write down ways that could reduce the amount of water used in your institute | ***Basic ways:***<br>• *The university ensures that the faucets in the washrooms and water filtration units are checked regularly and do not have any leakages.*<br>• *The university checks the water flow in the taps.*<br>• *The university has initiated the installation of auto-push taps to reduce water wastage.*<br>• *All academic and hostel washrooms are fitted with low-flow taps, aerators, and dual-flush toilets, which significantly reduce daily water consumption.*<br>• *A dedicated maintenance team regularly inspects pipelines and valves, ensuring zero leakages and wastage.*<br>• *Campus landscaping uses native and drought-tolerant plant species to minimize irrigation demand.*<br>• *Drip irrigation and sprinkler systems have replaced conventional methods, ensuring optimal water use.*<br>• *Irrigation is scheduled during early morning and late evening hours to reduce evaporation losses.*<br>• *A fully operational Sewage Treatment Plant (STP) treats wastewater generated on campus.*<br>• *Treated water is reused for flushing, gardening, and cooling tower operations, reducing dependency on fresh water.*<br>• *Greywater pipelines are separated to facilitate effective reuse.*<br>• *Regular student awareness campaigns and workshops are conducted to promote water-saving practices.*<br>• *Hostel residents are encouraged to adopt bucket baths instead of prolonged showers.*<br>• *Awareness signage is displayed across hostels, washrooms, and canteens reminding everyone to conserve water.*<br><br>*These initiatives have significantly reduced water usage on campus while promoting sustainable water management practices.* |

## 1.5 ANIMAL WELFARE

| | |
|---|---|
| List the animals (wild and domestic) found on the campus (dogs, cats, squirrels, birds, insects, etc.) | *3 Cats, 5 dogs, 50+ butterfly species, 100+ Squirrels and 30+ Bird species including peacocks are found in campus. A variety of bird's species and other flora and fauna are available, so institute is putting efforts for biodiversity conservation and documentation.* |
| Does your institute have a Biodiversity Program or a KARUNA CLUB? | *Yes, SGT University's eco committee actively organizes awareness through various campaigns and activities including seminars, poster competition, etc.* |

## 1.6 CARBON FOOTPRINT - EMISSION & ABSORPTION

| | |
|---|---|
| Electricity used per year - CO2 emission from electricity | *(electricity used per year in kWh/1000) x 0.84*<br>*= 7870245/1000x0.84*<br>*= 6611.01 tons* |
| LPG/PNG used per year - CO2 emission from LPG/PNG | *(LPG/PNG used per year in KG) x 2.68*<br>*=81985 x 2.68*<br>*=219.72 tons* |
| Diesel used per year CO2 emission from HDS (Diesel) | *(Diesel used per year in litres) x 2.99*<br>*= 227117 x 2.99*<br>*=679.08 tons* |
| Transportation per year (car) CO2 emission from transportation (Bus and Car) | *There are 71 buses and 63 cars in university.*<br>*= (71*2*1*240/100)*0.02 + 163*2*2*240/100*0.02*<br>*=3.41 + 31.30*<br>*=34.70 tons* |

***Total CO2 emission per year is 7544.51 tons***

***After considering the carbon absorption capacity of the campus, the total carbon emission is 7110.59 tons***

# CARBON ABSORPTION BY FLORA IN THE INSTITUTION

The campus, spread over **235735 sq. ft.**, hosts a rich variety of greenery that significantly contributes to carbon absorption:

- **Trees:**
  - There are **1573 full-grown trees** of various species. Each full-grown tree has a carbon absorption capacity of **22 kg of $CO_2$ per year**, resulting in a total absorption of **34.61 tons of $CO_2$** (1573 trees × 22 kg).
  - Additionally, the campus has **1027 semi-grown trees**, each with an estimated carbon absorption capacity of **30%** that of a full-grown tree (i.e., **6.8 kg $CO_2$** per tree). Thus, the total absorption from semi-grown trees is approximately **6.98 tons of $CO_2$** (1027 trees × 6.8 kg).
- **Hedge Plants:**
  - Approximately **225105 hedge plants** of various species are maintained in garden spaces and non-built-up areas. While $CO_2$ absorption varies by species, in consultation with Environmental Science experts, an average absorption rate of **200 g $CO_2$ per plant per year** has been assumed. This results in a total estimated absorption of **45.02 tons of $CO_2$** annually (225105 plants × 0.2 kg).
- **Lawns:**
  - The entire **235735 sq. ft.** of lawn area is covered with buffalo grass, Mexican grass, and indigenous grass species. Grass absorbs $CO_2$ at a rate of **1 gram per 10 sq. ft. per day**, which totals approximately **47.15 tons of $CO_2$ per year** (235735 sq. ft. × 365 days × 0.1 g).

**Total Annual Carbon Absorption Capacity of the Campus:**

- From full-grown trees: **34.61 tons**
- From semi-grown trees: **6.98 tons**
- From hedge plants: **45.02 tons**
- From lawns: **47.15 tons**

**Grand Total: Approximately 433.92 tons of $CO_2$ per year**

# GREEN INITIATIVES BY CAMPUS

**1. Solid Waste Management**

- The university practices composting of horticulture waste for eco-friendly disposal.
- Paper usage is minimized through digitization of attendance records and internal assessments.
- The university library promotes the use of digital resources by regularly updating its collection of e-books and e-journals.
- Awareness initiatives are undertaken to educate students about food wastage and methods to reduce it.
- Students are encouraged to develop habits of reusing and recycling non-biodegradable materials.
- Regular workshops on solid waste management are organized for students.
- Single-use plastic and plastic crockery are strictly banned on campus.
- The institution actively promotes the 3Rs of sustainability—Reduce, Reuse, Recycle—through various campaigns and practices.

**2. Liquid Waste Management**

- Leakproof water fixtures are installed and regularly maintained.
- Water consumption is reduced by constructing more Indian-style toilets, which use less water compared to Western-style toilets.
- A dedicated caretaker is employed to promptly address any water leakage from taps, pipelines, tanks, or flush systems.
- Wastewater generated from the Reverse Osmosis (RO) system is reused for flushing in washrooms.

**3. E-Waste Management**

- A separate, secure storage room is designated for electronic waste.
- E-waste is periodically disposed of through an auction process, involving certified waste management agencies.

**4. Rainwater Harvesting**

- The university has established three rainwater harvesting pits to enhance groundwater recharge.
- Collected rainwater is utilized for gardening and landscaping purposes.

**5. Renewable Energy Initiatives**

- A rooftop Solar Photovoltaic (PV) system with a capacity of 58.22 kW is installed on campus.
- Solar-powered Street lights are in use across the premises.
- Solar geysers are installed on the roof of the Krishna Hostel for energy-efficient water heating.

**6. Air Pollution Control**

- Personal vehicles of students are not allowed on campus, thereby reducing vehicular emissions.
- Awareness Rally on Banning Firecrackers and celebrate eco-friendly festivals.

## 7. Environmental Committee –Initiatives

| Sl. No. | Name of the capability enhancement scheme | Year of implement ation | Name of the agencies involved with their contact details |
|---|---|---|---|
| 1 | World Ozone Day | 2024-25 | Kadam Club, Department of Environmental Science, FABS |
| 2 | Workshop on National Energy Conservation Day (15 Dec 2024) | 2024-25 | KADAM Club, Department of Environmental Science |
| 3 | Educational Trip "Prakrity Samvad" (27 January, 2025) | 2024-25 | Kadam Club, Department of Environmental Science |
| 4 | Webinar on Water Conservation (11 February 2025) | 2024-25 | Kadam Club, Department of Environmental Science |
| 5 | World Water Day Celebration (22 March 2025) | 2024-25 | Kadam Club, Department of Environmental Science, Faculty of Applied and Basic Sciences. |
| 6 | ENVIRONMENTAL FEST 2025 | 2024-25 | Kadam Club, Department of Environmental Science, Faculty of Applied and Basic Sciences. |
| 7 | Workshop Cum Lecture on 5th March 2025 (Noise Pollution and Control: Strategies and Implications) | 2024-25 | Savant Club, Department of Physics In association with Kadamb Club, Department of Environmental Science, Faculty of Applied and Basic Sciences |
| 8 | Workshop on Cyber Hygiene | 2024-25 | Cyber Hygiene: Best practices for a secure Digital Environment |
| 9 | Educational Visit to Central Research Facility (CRF), IIT Delhi | 2024-25 | Kadam Club, Department of Environmental Science, Faculty of Applied and Basic Sciences |
| 10 | Webinar on Water Conservation (11 February 2025) | 2024-25 | Kadam Club, Department of Environmental Science |
| 11 | World Water Day Celebration (22 March 2025) | 2024-25 | Kadam Club, Department of Environmental Science, Faculty of Applied and Basic Sciences. |
| 12 | Workshop Cum Lecture on 5th March 2025 (Noise Pollution and Control: Strategies and Implications) | 2024-25 | Savant Club, Department of Physics In association with Kadamb Club, Department of Environmental Science, Faculty of Applied and Basic Sciences |
| 13 | Biogas for a Greener Tomorrow: Sustainable | 01-05-2025 | FEAT |

| | | | |
|---|---|---|---|
| | Energy Awareness for Rural Communities | | |
| 14 | Empowering Villages with Solar Energy: A Step Towards Sustainable Living | 29-04-2025 | FEAT |
| 15 | 30 Days Environmental Challenge | 29th July to 27th August 24 | DSW |
| 16 | Awareness Rally on Banning Firecrackers and celebrate eco-friendly festivals | 2024-25 | Faculty of Applied and Basic Sciences (FABS), SGT University, Gurugram |

# NOTEWORTHY PHOTOGRAPHS



GPS Map Camera
Gurugram, Haryana, India
Fwh3+ww6 Sgt University 1, Budhera, Gurugram, Haryana 122505, India
Lat 28.47986° Long 76.9045°
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Google


GPS Map Camera
Gurugram, Haryana, India
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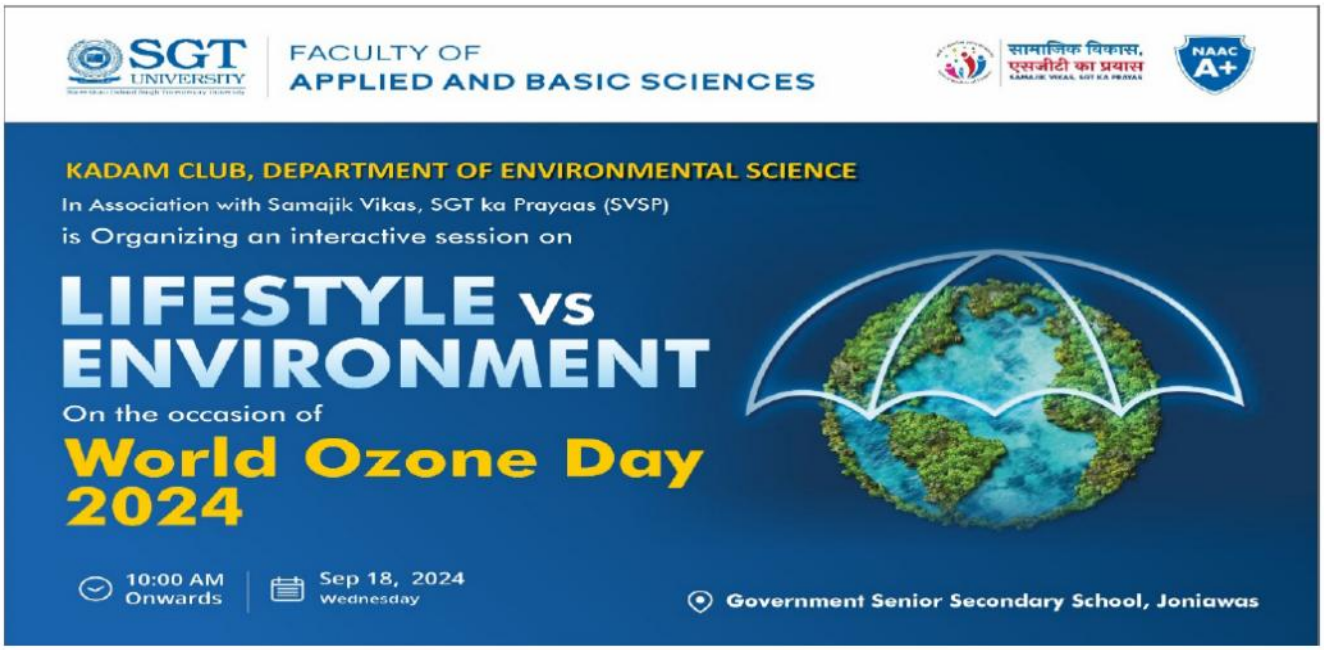
SGT UNIVERSITY
FACULTY OF
APPLIED AND BASIC SCIENCES
सामाजिक विकास, एसजीटी का प्रयास
NAAC A+
KADAM CLUB, DEPARTMENT OF ENVIRONMENTAL SCIENCE
In Association with Samajik Vikas, SGT ka Prayaas (SVSP)
is Organizing an interactive session on
LIFESTYLE vs ENVIRONMENT
On the occasion of
World Ozone Day 2024
10:00 AM Onwards
Sep 18, 2024 Wednesday
Government Senior Secondary School, Joniawas


SGT UNIVERSITY
FACULTY OF
APPLIED AND BASIC SCIENCES
NAAC A+
Workshop cum Lecture
Noise Pollution and Control: Strategies and Implications
Organized by:
Savant Club, Department of Physics in association with Kadamb Club,
Department of Environmental Science, Faculty of Applied and Basic Sciences
RESOURCE PERSON
Dr. Naveen Garg
(Senior Principal Scientist and Head, Acoustic and Vibration Standards),
CSIR-National Physical Laboratory (NPL) - New Delhi
10:00 AM Onwards
March 5th, 2025 Wednesday
318, A Block, SGT University
Advisor & Moderator
Dr. M.T. Beig
Co-advisor
Dr. Yogesh Sharma
HOD Physics
Dr. Mukesh Kumar
Dean FABS
Prof. Bhoopesh Kumar Sharma


SUSTAINABLE INSTITUTIONS OF INDIA
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RANKING
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Google


GPS Map Camera
Gurugram, Haryana, India
Google


GPS Map Camera
Gurugram, Haryana, India
Google


Gurugram, Haryana, India


SGT UNIVERSITY
International Day for the
PRESERVATION OF THE
OZONE LAYER
"Ozone for Life"
GPS Map Camera
Gurugram, Haryana, India
Google
GPS Map Camera
Gurugram, Haryana, India
CWQM+X55, New Colony, Garhi Harsaru, Gurugram, Haryana 122505, India
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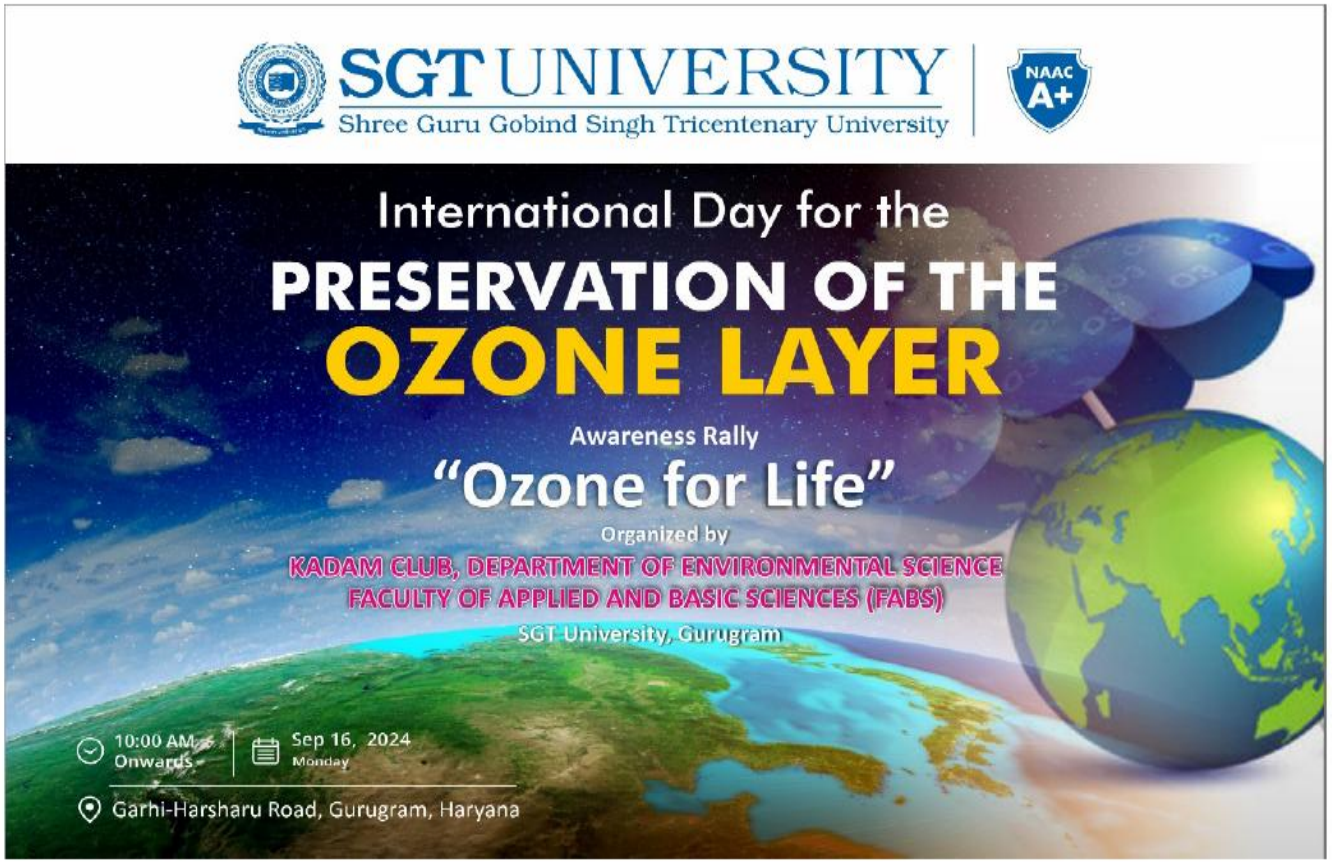

SGT UNIVERSITY
Shree Guru Gobind Singh Tricentenary University
NAAC A+
International Day for the
PRESERVATION OF THE
OZONE LAYER
Awareness Rally
"Ozone for Life"
Organized by
KADAM CLUB, DEPARTMENT OF ENVIRONMENTAL SCIENCE
FACULTY OF APPLIED AND BASIC SCIENCES (FABS)
SGT University, Gurugram
10:00 AM Onwards
Sep 16, 2024
Monday
Garhi-Harsharu Road, Gurugram, Haryana

# RECOMMENDATIONS

- **Integrate Environmental Parameters into Procurement:**
  Environmental considerations shall be incorporated into the institute's purchase policy to adopt a cradle-to-grave approach, ensuring sustainability throughout the lifecycle of products.

- **Expand Solar Power Capacity:**
  The capacity of the existing solar power plant should be enhanced to meet at least **75% of the campus's total electricity demand**, promoting greater energy self-sufficiency and reducing carbon footprint.

- **Regulate Tap Flow Rates and Conduct Training:** Tap flow rates should be regularly monitored and maintained at **no more than 2.5 Liters per minute**. Additionally, **training programs on environmental management systems and nature conservation** should be organized for school students and the local community.

- **Install Water Meters Across Campus: Water meters** should be installed in all buildings to enable the **monitoring of per capita water consumption**, thereby promoting efficient water use and conservation.

- **Adopt Green Building Guidelines for Expansion:** All future infrastructure development and expansion projects should strictly adhere to **Green Building Guidelines**, ensuring energy-efficient, environmentally responsible construction.

- **Establish Sanitary Waste Disposal Facilities:** Sanitary waste management must comply with the **Central Pollution Control Board (CPCB) guidelines** under the **Solid Waste Management Rules, 2016**. It is recommended that an **incinerator** be installed on campus for the safe and hygienic disposal of sanitary waste.

# CONCLUSION

This audit has involved extensive team discussions and meetings with key staff members, covering a wide range of environment-related topics. The **Environment Committee of SGT University** actively promotes the conservation and responsible use of natural resources.

Approximately **75% of the university campus** is dedicated to landscaping and green spaces, reflecting the institution's commitment to environmental stewardship. The university demonstrates a conscious effort to operate in an environmentally responsible manner, considering the ecological impact of most of its activities.
The recommendations outlined in this report present additional strategies for enhancing current practices and guiding the institution toward becoming a more sustainable and eco-conscious campus.

Moving forward, it is essential to initiate new efforts such as **encouraging active participation of students and staff in community outreach programs focused on environmental conservation**, thereby fostering a culture of sustainability beyond the campus boundaries.

# REFERENCE


- 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

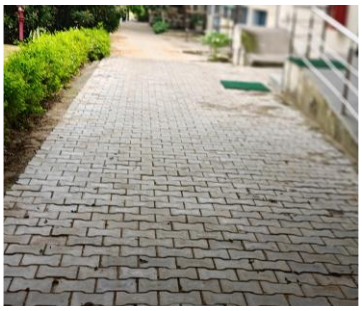
# ANNEXURE – PHOTOGRAPHS OF ENVIRONMENT CONSCIOUSNESS

Well Maintained Campus

Well Ventilated Building

Lush Green Campus

Sports Ground



Paving Stone Installed In Campus


Color Coded Dustbins

Ornamental Plants In Campus

Indoor Plants In Campus

Smart Classrooms

Solar Street Light

Water Cooler

Biodiversity Trail

Plant Donation


FSSAI License


Awareness Display


Save Water


Save Tree

Solar PV Installed

Stp Plant

Clean Campus


Rainwater Harvesting Pit

Urinals To Save Watere

BMW Waste Management


Green Initiatives

Miyawaki Urban Forest

Ventilated Building Corridores

AGREEMENT FOR COLLECTON OF DRY AND WET GARBAGE FROM SGT UNIVERSITY, VILLAGE CHANDU, BUDHERA, GURUGRAM (HARYANA)-122505

This Agreement is made and executed at Gurgaon on this 1st AUGUST 2023.

By and Between:

SGT UNIVERSITY VILLAGE CHANDU, BUDHERA, GURUGRAM, HARYANA-122505, having its registered office at VILLAGE CHANDU, GURUGRAM (H.R) - 122505 (Hereinafter referred to as SGT UNIVERSITY which expression shall unless it be repugnant to the subject or context hereof would mean and include its successors in interest, executors, administrators, liquidators and assigns) of the First Part, through its duly authorized signatory Dr. Joginder Yadav, Registrar.

And

M/s GURGAON WASTE MANAGEMENT SYSTEM (P) LTD. Having its office at U-15/6 DLF City Phase-3, Near R.B.S. Building Cyber City, Gurgaon-122001, Haryana (hereinafter referred to as 'SECOND PART' which expression shall, unless repugnant to the context of meaning here of mean and include its representatives, successors in interest, executors, administrators, liquidators and permitted assigns), through its duly

Waste Management MoU

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