# SIKKIM MANIPAL UNIVERSITY (SMU)

# GREEN AUDIT REPORT

**2025-2026**

**Prepared By :**

EHS ALLIANCE

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# CERTIFICATE

EHS alliance

# CERTIFICATE

PRESENTED TO

## SIKKIM MANIPAL UNIVERSITY (SMU)

5th Mile Tadong Gangtok, East Sikkim -737102

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 2025 - 26**

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**

**27.07.2026**
**DATE OF AUDIT**

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# ACKNOWLEDGEMENT

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We are also thankful to ***Dr. Gopal Thapa - Director (Quality & Compliance) SMU***, for his continuous support and guidance, without which the completion of the project would not have been 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

***Dr. Muralidhar V. Pai - Hon'ble Pro-VC & Dean, (SMIMS)***

***Dr. Savitha G. Kini - Director, (SMIT)***

***Col. V. S. Yadav (Retd) - Head General Services, (SMU)***

# DISCLAIMER

EHS Alliance LLP Audit Team has prepared this report for Sikkim Manipal University 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.

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**Signature**

**LEAD AUDITOR**

# 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 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, and objectives of the audit as below:

# INTRODUCTION

Now a 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 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 institution 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.

# OVERVIEW OF THE UNIVERSITY

The Sikkim Manipal University (SMU) was established in 1995. It is recognized by the University Grants Commission (UGC) and established under the Sikkim Manipal University of Health, Medical and Technological Sciences Act, 1995, enacted by the Government of Sikkim.

SMU is the first Public-Private Partnership (PPP) initiative in India in the fields of higher education and healthcare services, established with the objective of providing quality education and affordable healthcare services. The University has been instrumental in offering quality education to students from Sikkim, the North-Eastern Region, and other parts of India, while also providing advanced healthcare services at affordable costs through its teaching hospital.

Since its inception, SMU has achieved several significant milestones in academics, research, healthcare, innovation, and community engagement. Today, the University has evolved into a multidisciplinary institution and continues to expand its academic programmes, research initiatives, infrastructure, and national and international collaborations.

The University is supported by highly qualified, experienced, competent, and dedicated faculty members who are committed to ensuring that graduates are equipped with the knowledge, professional skills, ethical values, and practical competencies required to excel in their chosen professions and contribute effectively to society. SMU plays a significant role in contributing to the nation's skilled human resource pool through quality teaching, research, innovation, entrepreneurship, and community outreach. Transparency, merit-based admissions, academic excellence, student-centric learning, and state-of-the-art infrastructure have been the characteristic features of the University since its establishment.

All academic programmes offered by SMU are approved by the respective statutory and regulatory bodies wherever applicable, including the National Medical Commission (NMC), Indian Nursing Council (INC), All India Council for Technical Education (AICTE), University Grants Commission (UGC), and other relevant statutory bodies.

The engineering programmes like B.Tech Computer Science Engineering, B.Tech Civil Engineering and Master of Computer Applications (MCA) (subject to the applicable accreditation cycle and validity period) offered by the University at Sikkim Manipal Institute of Technology (SMIT) have been accredited by the National Board of Accreditation (NBA).

The University has also been accredited with an 'A+' Grade by the National Assessment and Accreditation Council (NAAC), reflecting its commitment to academic excellence, quality assurance, research, innovation, governance, and continuous institutional improvement.

## Constituent units of Sikkim Manipal University

SMU operates through two of its main campuses:

### Majhitar Campus: Located at Majhitar, Rangopo, Pakyong District, Sikkim.

This campus houses:

Sikkim Manipal Institute of Technology (SMIT)
School of Humanities, Social Sciences and Liberal Arts
Centre for Distance and Online Education (CDOE)

### Tadong Campus: Located in Tadong, Gangtok District, Sikkim

This campus houses

Sikkim Manipal Institute of Medical Sciences (SMIMS)
Sikkim Manipal College of Nursing (SMCON),
Sikkim Manipal College of Allied & Healthcare Professions (SMCAHP)
Department of Hospital Administration
Department of Medical Biotechnology

Programmes offered by the university:

| **Majhitar Campus** | | |
|---|---|---|
| **S. No** | **Programme Name** | |
| 1 | **B. Tech.** | Civil Engineering |
| | | Computer Science & Engineering |
| | | Electronics & Communication Engineering |
| | | Electronics Engineering (VLSI)Design & Technology) |
| | | Electrical & Electronics Engineering |
| | | Mechanical Engineering |
| 2 | **M. Tech.** | Computer Science & Engineering (M. Tech) |
| | | Structural Engineering (M. Tech) |
| | | Hydrology & Water Resources Engineering (M. Tech) |
| 3 | **B. Sc.** | Physics |
| | | Chemistry |
| | | Mathematics |
| | | Applied Psychology |
| 4 | **BPES** | Physical Education and Sports |
| 5 | **M. Sc.** | Physics |
| | | Chemistry |
| | | Mathematics |
| | | Applied Psychology |
| 6 | **BBA** | Bachelor of Business Administration |
| 7 | **MBA** | Master of Business Administration |
| 8 | **BCA** | Bachelor of Computer Applications |
| 9 | **MCA** | Master of Computer Applications |
| 10 | **B. A.** | English |
| | | Political Science |
| | | Sociology |
| 11 | **M. A.** | English) |

| | | |
|---|---|---|
| | | Political Science |
| | | Sociology |
| 12 | **B. Com** | Bachelor of Commerce |
| 13 | **M. Com** | Master of Commerce |
| **Tadong Campus** | | |
| 14 | **MBBS** | Bachelor of Medicine, Bachelor of Surgery (MBBS) |
| 15 | **MD/MS** | Doctor of Medicine (MD)<br>Master of Surgery (MS) |
| 16 | **Nursing** | B. Sc Nursing |
| 17 | | M. Sc Nursing |
| 18 | **Allied & Healthcare Professions** | Bachelor of Physiotherapy (BPT) |
| 19 | | Masters of Physiotherapy (MPT) |
| 20 | | Bachelors in Medical Radiology and Imaging Technology |
| | | Bachelors in Anesthesia and Operation Theatre Technology |
| | | Bachelors in Medical laboratory science (BMLS) |
| | | Bachelors in Cardiovascular Technology |
| 21 | **B. Sc.** | Medical Biotechnology |
| 22 | **M. Sc.** | Medical Biotechnology |
| 23 | **BHA** | Bachelor of Hospital Administration |
| 24 | **MHA** | Master in Hospital Administration |

# MISSION | VISION | OBJECTIVES | CORE VALUES

***Mission***

Develop professionals of excellent calibre in the field of Health Sciences, Engineering, Management, Medical Biotechnology, Basic and Social Sciences, with a humane approach, capable of shouldering the responsibility of building the nation and be globally competent.

***VISION***

Global Leadership in Human Development, excellence in Education and Healthcare.

***Objectives***

- Support, promote and undertake the advancement of academics
- Upscale research, creation and dissemination of knowledge
- Enhance use of ICT and modern education technologies
- Optimum leverage of NEP 2020 and future opportunities
- Facilitate outreach and community services
- Empower people of Sikkim and contribute to human development in North East
- Create social and environmental responsibilities among students and employees
- Ensure steady growth of the University

***Core values***

- ***Integrity and Honesty:*** We conduct ourselves ethically and legally in all situations upholding stakeholder trust.
- ***Committed to Teams, Accountable for Results and Passion to Win:*** We are passionate about winning and hold ourselves accountable to organisational goals. We believe in teamwork and foster a performance driven culture across the organisation.
- ***Achieving Social Impact:*** We fulfil our responsibility to society, continuously contributing to build a better world.
- ***Respect and Fairness:*** We trust every individual and treat them with dignity, respect and fairness. We practice open and honest communication at all times.
- ***Excellence through Quality, Innovation and Leadership:*** We are committed to delivering superior programs and academic services through continuous innovation and leadership at all levels.

# AUDIT PARTICIPANTS

On behalf of Sikkim Manipal University

| Name | Designation |
|---|---|
| *Dr. Gopalakrishna Prabhu* | *Hon'ble Vice Chancellor, SMU* |
| *Dr. Muralidhar V Pai* | *Hon'ble Pro-VC & Dean, (SMIMS)* |
| *Prof. (Dr) K. S. Sherpa-* | *Registrar, SMU* |
| *Dr. Savitha G. Kini* | *Director, (SMIT)* |
| *Col. V. S. Yadav (Retd)* | *Head General Services, SMU* |
| *Dr. Gopal Thapa* | *Director (Quality & Compliance) SMU* |
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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* |

# EXECUTIVE SUMMARY

A Green Audit is a systematic and comprehensive assessment undertaken to evaluate the environmental performance, resource efficiency and sustainability practices of an institution. It provides a structured mechanism for examining whether institutional activities are being carried out in an environmentally responsible manner and whether natural resources are being utilised efficiently.

Traditionally, natural resources were used with greater care and restraint. However, rapid development, changing lifestyles and increasing dependence on modern infrastructure have resulted in the excessive consumption of water, electricity, fossil fuels and other resources, particularly in urban and semi-urban areas. This growing demand makes it necessary for institutions to periodically assess whether resources are being consumed according to actual requirements, whether avoidable losses are occurring and whether existing practices support long-term environmental sustainability.

In the context of climate change, resource depletion and increasing environmental concerns, institutions have a significant responsibility to adopt sustainable operational practices. A Green Audit supports this objective by establishing a baseline of existing environmental conditions, identifying areas of concern and recommending practical measures for resource conservation, pollution prevention and continual improvement. It also helps standardise environmental practices, strengthen institutional accountability and promote environmental awareness among students, faculty members, employees and other stakeholders.

The present assessment constitutes the fourth Green Audit cycle undertaken for the campus. It has been conducted to support the institution's commitment to environmental sustainability and to facilitate compliance with the applicable requirements of the National Assessment and Accreditation Council (NAAC). The audit provides an objective review of the environmental initiatives, infrastructure and resource-management practices adopted by the institution.

The assessment primarily covered key environmental performance indicators, including electricity consumption, fossil-fuel utilisation, renewable-energy adoption, water consumption, rainwater-harvesting arrangements, soil quality, vegetation and green cover, biodiversity, waste-management practices, sustainable transportation and the carbon footprint of the campus.

As part of the audit process, a structured questionnaire was initially shared with the institution to obtain information regarding the available infrastructure, natural resources, environmental initiatives and resource-consumption patterns of students and staff. The information provided by the institution was subsequently reviewed and supplemented through onsite inspections, stakeholder interactions, examination of available records and analysis of relevant operational data.

The findings and recommendations presented in this report are intended to assist the institution in strengthening its environmental management practices, improving resource efficiency and developing a practical roadmap towards a greener, cleaner and more sustainable campus.

# GREEN AUDIT - ANALYSIS

## 1.1 GENERAL INFORMATION

### 1. Does any Green Audit conducted earlier?

*Yes, this is the fourth external audit organized by the College*

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

***Students***
*Male: 2499 Female: 2116 Total: 4615*
***Teachers (including guest faculty)***
*Male: 224 Female: 185 Total: 409*
***Non-Teaching Staff***
*Male: 625 Female: 675 Total: 1300*
***Total Strength***
*Male: 3348 Female: 2976 Total: 6324*

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

*There are one hundred and eighty one working days in a year.*

### 4. Where is the campus located?

*The campus is located at 5th Mile Tadong Gangtok, East Sikkim -737102*

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

| | |
|---|---|
| *Garden area* | *Available* |
| *Playground* | *Available* |
| *Kitchen* | *Available* |
| *Toilets* | *Available* |
| *Garbage Or Waste Store Yard* | *Available* |
| *Laboratory* | *Available* |
| *Canteen* | *Available* |
| *Hostel Facility* | *Available* |
| *Guest House* | *Available* |

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

| | |
|---|---|
| *Municipal dump yard* | *Not in the vicinity of the institute* |
| *Garbage heap* | *No Garbage heaps* |
| *Public convenience* | *Public convenience is available* |
| *Sewer line* | *Approximately 4.0 KM sewer line within campus* |
| *Stagnant water* | *No stagnant water* |
| *Open drainage* | *No* |
| *Industry – (Mention the type)* | *No* |
| *Bus / Railway Station* | *New Jalpaiguri Railway Station, SNT Bus Station, Bagdogra Airport* |
| *Market / Shopping complex* | *Available* |

## 1.2 WASTE MINIMIZATION AND RECYCLING

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

*Yes, following types of wastes are generated by the campus*

- *Biodegradable waste,*
- *Non-biodegradable waste*
- *Biomedical waste*
- *Hazardous waste*
- *E-waste*

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

*Biodegradable waste - 500 Kg*
*Non-biodegradable waste -20 Kg*
*Hazardous Waste - 100 Kg (BMW)*
*Others - 2 Kg*

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

- *Food waste and horticulture waste is collected into pits for composting*
- *On campus, single-use plastic is prohibited.*
- *After collecting the BMW separately, the Municipal Corporation takes care of the solid garbage.*
- *Paper with printing on one side is reused for internal correspondence.*
- *E-waste collection and management through recycled – authorized vendor*

### 4. Do you use recycled paper in the institute?

*Yes, SMU collaborates with authorized third party recycle vendor for management of the used paper. SMU uses file covers and folders made from recycled papers.*

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

*Following are the ways through which the college is spreading awareness about recycling*

- *Waste plastic collection drives*
- *Installation of Dustbins for waste plastic collection, e-waste collection and recycling*
- *Tie-ups with authorized e-waste collection agency*
- *Awareness among the Students by Webinars, seminars, Sign Boards, Posters, etc.*

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

*Not yet achieved. Possible through waste management policy and planning.*
*1. Minimization of waste production*
*2. Awareness workshops & training for students and faculty on Waste management*

## 1.3 GREENING THE CAMPUS

### 1. Is there a garden in your institute?

*Yes, about 92000 Sqm areas are developed as Gardens.*

| | Total Area | Built Up Area | Green Cover Area | Open Space | Parking |
|---|---|---|---|---|---|
| SMU | 86926 sqm | 80081 sqm (incl all floors) | 40000 sqm | 20000 sqm | 6000 sqm |
| SMIT | 141359 sqm | 111350 sqm ( incl all floors) | 52000 sqm | 600000 sqm | 4000 sqm |

### 2. Do students spend time in the garden?

*Yes, students spend around 2-4 Hours during winter.*

### 3. Total number of Plants in Campus?

*Plant type with approx. count*

| | |
|---|---|
| *Full-grown Trees* | *1310* |
| *Small Trees* | *650* |
| *Hedge Plants* | *74150* |
| *Grass Cover sqm* | *990280 Sq ft* |

### 4. Is the College campus having a Horticulture Department? (If yes, give details)

*Yes, Total 40 staff (maali) were deployed in the horticulture department*

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

*5 Plantation Drives are Organized by the campus in the last year, and 50 saplings are planted in every plantation drive. The survival rate is more than 70%.*

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

*Yes, Plantation distribution drives are conducted in nearby Villages under Unnat Bharat. Moreover, the college has a practice where all guests are given a planter as a gift rather than a bouquet of flowers.*

### 8. Is there any Plant Ownership Program?

*SMU is continuously encouraging the students to adopt a tree in their neighborhood*

# 1.4 WATER AND WASTEWATER MANAGEMENT

## 1. List uses of water in your institute

*Basic use of water in campus:*
***Drinking** – 182.42 KL/month*
***Gardening** – 828 Kl/month*
***Kitchen and Toilets** – 634.95 KL/month*
***Others** – 75.77 KL/month*
***Hostel** – 7238.40 KL/Month*
***Total = 8959.54 KL/Month***

*Note:*

1. *Please note that all calculations have been made on the basis of NBC 2016 norms as college has no water usage records.*
2. *To account for sustainable water management practices, a volume of 500 KL of treated wastewater has been deducted from the university's total raw water requirement.*

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

*The institution's water storage infrastructure consists of underground, overhead, and reservoir systems with the following capacities:*

- ***Underground Storage**: Four tanks providing a total combined capacity of 5,50,000 liters.*
- ***Overhead Storage**: A network of 99 tanks with a cumulative capacity of 10,00,000 liters.*
- ***Reservoir Storage**: Dedicated reservoir systems providing an additional capacity of 17,70,000 liters.*

***Saving Techniques***

- *Avoid overflow of water-controlled valves are provided in water supply system.*
- *Close supervision for water supply system.*
- *Push taps are installed for water conservation*
- *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 wastewater in your institute.

***Entry** - Water comes from spring water and have 5 bore wells as a secondary source*
***Exit**- From Canteen, Toilets, Hostel, bathrooms and Labs through covered drainage which is connected to STP*

## 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*
- *Push taps are installed to save water*
- *Water recycling and use of sprinklers for gardening*

## 1.5 ANIMAL WELFARE

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

*3-5 Cats, 6-10 dogs, 20+ butterfly species, 50+ Squirrels, 10 monkeys and 300+ Bird and dragonflies are found in campus*

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

*Yes, Sikkim Manipal University's SMU 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

*(electricity used per year in kWh/1000) x 0.71*
*= 4896283/1000x0.71*
*= 3476.36 tons*

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

*(LPG/PNG used per year in KG) x 2.99*
*=86400 x 2.99*
*=258.34 tons*

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

*(Diesel used per year in litres) x 2.68*
*= 86894 x 2.68*
*=232.88 tons*

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

*There are 12 buses and 22 cars and other vehicles*
*=(12*1*2*181/100)*0.01+ (122*2*2*181/100)*0.02*
*=0.43 + 17.67*
*=18.102 tons*

Total CO2 emission per year is 4049.71 tons

***After considering the carbon absorption capacity of the campus and solar energy export, the total carbon emission is 3965.52 tons.***

## CARBON ABSORPTION BY FLORA IN THE INSTITUTION

There are 1310 full-grown trees and 650 semi-grown trees of different species, on the campus spread over 990280 sq ft.

Carbon absorption capacity of one full-grown tree 22 kg $CO_2$ Therefore Carbon absorption capacity of 1310 full-grown trees 1310 x 22 kg $CO_2$ = 28.82 tons of $CO_2$.

The carbon absorption capacity of 650 semi-grown trees is 30% of that of full-grown trees. Hence the carbon absorption 650 x 6.8 kg of $CO_2$ = 4.42 tons of $CO_2$

There are approximately Hedge Plants 74150 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 $CO_2$ whereas some others absorb very low levels of $CO_2$In the absence of a detailed scientific study, 200g of $CO_2$, absorption is taken per bush (in consultation with Environmental Science specialists). Based on this, the total carbon absorption of bushes is 74150 x 200 g = 14.83 tons of $CO_2$

The lawns on the campus have buffalo grass, Mexican grass, and indigenous grass species and cover a total area of 990280 sq. ft. Carbon absorption capacity of a 10 sq. ft. area of lawn is 1 g per day Therefore, carbon absorption by lawn area 990280 x 365 x 0.1 g $CO_2$ = 36.15 tons $CO_2$ per year.

The total of carbon absorption capacity of the campus is 84.22 tons.

# GREEN INITIATIVES BY CAMPUS

- **Solid Waste Management**
  - SMU does compost for horticulture waste
  - Reduce the use of paper by supporting the digitization of attendance and internal assessment records.
  - Reduce the requirement of printed books by updating the e-books and e-journals collection of the university library.
  - Take initiatives to spread awareness amongst students about food wastage and ways of minimizing it
  - The habit of reusing and recycling non-biodegradable products
  - Organizing workshops for students on solid waste management.
  - There is a ban on single-use plastic and plastic crockery in the campus.
- **Liquid Waste Management**
  - Maintain leakproof water fixtures.
  - Minimize the use of water by constructing more Indian-style toilets instead of Western-style toilets.
  - Continued employment of a caretaker to take immediate steps to stop any water leakage through taps, pipes, tanks, toilet flush etc.
  - Reuse of wastewater generated by the Reverse Osmosis (RO) system for gardening purpose.
- **E-waste Management**
  - SMU has a separate storeroom for the safe storage of electronic waste. After a certain interval of time college disposes of the E-waste to concerned agencies through the auction process.
- **Rainwater harvesting**
  - SMU has started building a rainwater storage tank with capacity of 20 lacs litres
- **Renewable Energy**
  - SMU has installed solar PV (100 KW) on the rooftop of building.
  - SMU is using solar lights for street lights.
- **Air Pollution Reduction**
  - Personal Vehicles (Students) are not allowed in the campus
- **Green Committee Initiatives**
  - *Awareness Program On Operation Sindoor*: Conducted on September 3, 2025.
  - *Plantation Drive (September):* A dedicated green campus initiative held on September 12, 2025.
  - *Cleanliness Drive:* An environmental sanitization campaign executed on September 19, 2025.
  - *Clothes And Stationary Collection Drive:* A community-focused resource recycling and donation event held on September 24, 2025.
  - *Plantation Drive (November):* A secondary campus-wide afforestation effort executed on November 23, 2025.
  - *World Environment Day:* Celebrated as part of the university's primary green initiative calendar on June 5, 2026.
  - *World Bicycle Day 2026:* Conducted to promote eco-friendly, zero-emission transportation on June 7, 2026.

# RECOMMENDATIONS

- Environmental parameters shall be included in the purchase policy to achieve a cradle-to-grave approach for sustainability.
- SMU should start drip irrigation to save water in campus
- The flow rate of taps should be checked; it should not be more than 2.5 litres/minute. Arrange training programs on environmental management systems and nature conservation for schools and local people.
- More Messages should be displayed at various locations to Aware People of Energy Savings
- Water Meters should be installed at every building of the institute for monitoring of water consumption per capita.
- Car-pooling practices can be adopted by the campus to minimize air pollution. Increase in the display of environment-conscious posters/paintings/slogans for spreading awareness amongst students.
- 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 Sikkim Manipal University promotes conservation of resources.

Overall, 60% of Sikkim Manipal University is for landscaping. 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 suggest some more ways in which the university can work to improve its practices and develop into a more sustainable institution.

It's important to begin a few things, such as initiating drip irrigation, and increasing plantation drives. Additionally, we strongly advise signing an MOU with third-party authorized vendors for waste management such as plastic, paper, metal, C&D, etc.

# 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



Indoor Sports Ground



Paving Stone Installed In Campus



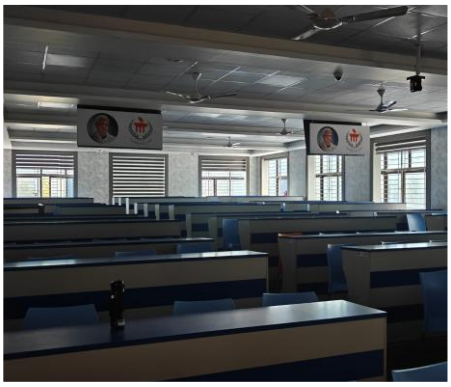

Color Coded Dustbins



Ornamental Plants In Campus



Indoor Plants In Campus



Classrooms As Per NBC Guidelines With More Than 40% Window Ratio



HVAC For Better Energy Efficiency




Push Taps In Water Cooler



Spacious Auditorium



Smart Class Rooms



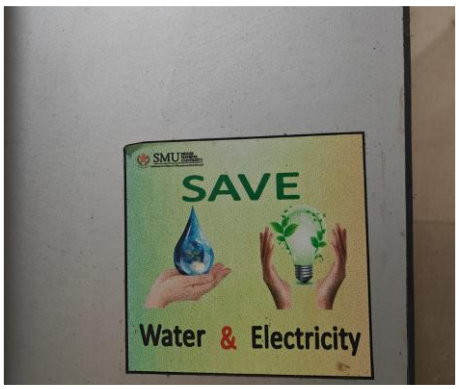
Plastic Paints Bucket Used As Flowering Pot



Push Taps In Wash Basin



Meeting Room




Awareness Poster-1




Green House Nursery




Coffee Shop



Urinals To Save Water



BEE Star Rated ACs




Plastic Container In Reuse As Dustbin



Silent Generator



BEE Star Rated Fan

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