



# SDG 2

SUSTAINABLE DEVELOPMENT GOAL



2

Zero Hunger



## **SDG 2: ROLE OF SMU TO OVERCOME ZERO HUNGER**

As per current estimates by UN nearly 690 million people are hungry, or 8.9 percent of the world population. It is important for all to consider this fact If recent trends continue, the number of people affected by hunger would surpass 840 million by 2030.

The role of educational institute is important to help society for setting up goal for zero hunger as different populace from society comes and receives their education.

Sikkim Manipal University & its teaching hospital Central Referral Hospital takes active part to eradicate hunger by:

**a. providing opportunity for staffs & students to participate in policy & decision making of Mess affairs:**

In both the campuses of Sikkim Manipal University students and staffs are nominated for mess committee and are active in preparing the decision-making policy of the mess.

All the students & staffs who are using mess facilities can express their suggestions to Mess Committee regarding all the affairs of mess. Based upon the suggestion by students & staffs mess committee takes necessary steps for the effective functionality of Mess.



Mess menus are prepared by the Mess Committee based upon the inputs from the students and staffs. Day to day menu is prepared considering balance diet for everyone. Menus are prepared considering different food choices (veg & Nonveg) and their counters are placed at different locations. **Minutes of Mess committee meeting is attached as Annexure A**

Wastages generated from mess are provided to local piggery farmers so that it can be used for feeding the pigs in farm.

**As per the third-party survey conducted by EHS alliance, the details of food waste generated are as follows:**

The average mess & canteen generate of food waste a day	20
No of mess & canteen	6
Campus food waste in Tons in the year 2022	43.8
No of Student & Staffs in the university	5133

**Details is attached in Annexure B**

Mess on both the campuses are run by local vendors and buys all the requirement from the local market of Sikkim & adjoining states.

**b. Extra care support for patients admitted under BPL scheme & free periodical health check-up at Central Referral Hospital:**

Central Referral Hospital not only provides free healthcare schemes to patients admitted under BPL scheme and free periodical health check up scheme but also provides them free nutritional all the three-time meals till their treatment at Central Referral Hospital considering their financials. Central Referral Hospital



organises free periodical Health Check-up of below mentioned orphanage centres:

- 1- Kalyan Ashram, Ranipool**
- 2- Drishya Child Care Centre, AHO Busty &**
- 3- Mamtalaya, Association for Social Health in India (ASHI), Gangtok.**

**Event Description: SMIT Hunger Carnival 2022**

**Theme: A food feast to bring various cuisines and foodies together**

**May 21, & 22, 2022**

SMIT Hunger Carnival was an offline event conducted by the student council, open to all students as well as faculty members (Present on campus).

**Event Introduction:**

SMIT Hunger Carnival was an offline event conducted by the student council, open to all students as well as faculty members (Present on campus). With the last working day being on 21st May, the event allowed everyone to have great food with their friends with a great music vibe. That not being it there were various fun games and cultural events conducted. This event was conducted following all the Covid safety protocols published by the government and the college administration.



## **Event Process:**

### **Day 1- 21/05/2022**

Work started from the morning of 21st. The setting up of stalls and preparations for the evening event started from 12:00pm and by 4:00pm was ready. The first day respected director sir with his family were introduced to all the stalls present at the venue (football ground). There was a total of 9 vendors to be present but Mu Kimchi was unable to make it due to the road block. The events street play, grid game, dance battle and all the other scheduled events were conducted smoothly without any problems. Everyone had good reviews about the feast at the end of the day making it a successful day.

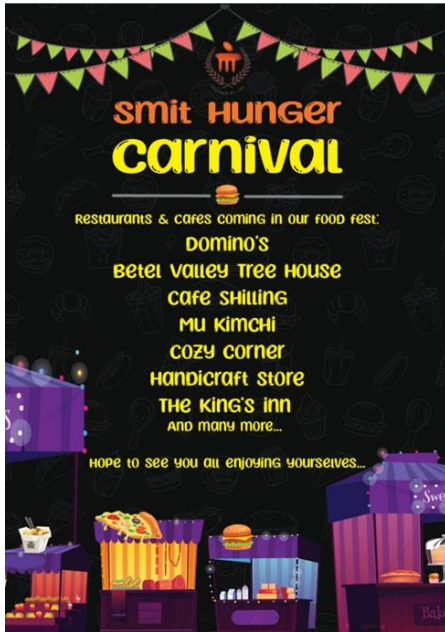
## **Event Venue:**

**Food stalls and cultural events at the football field.**

**Treasure Hunt clues across the campus with the gathering point at C quad.**

**No of participants: All students & faculties of SMIT**

**Event Photo:**

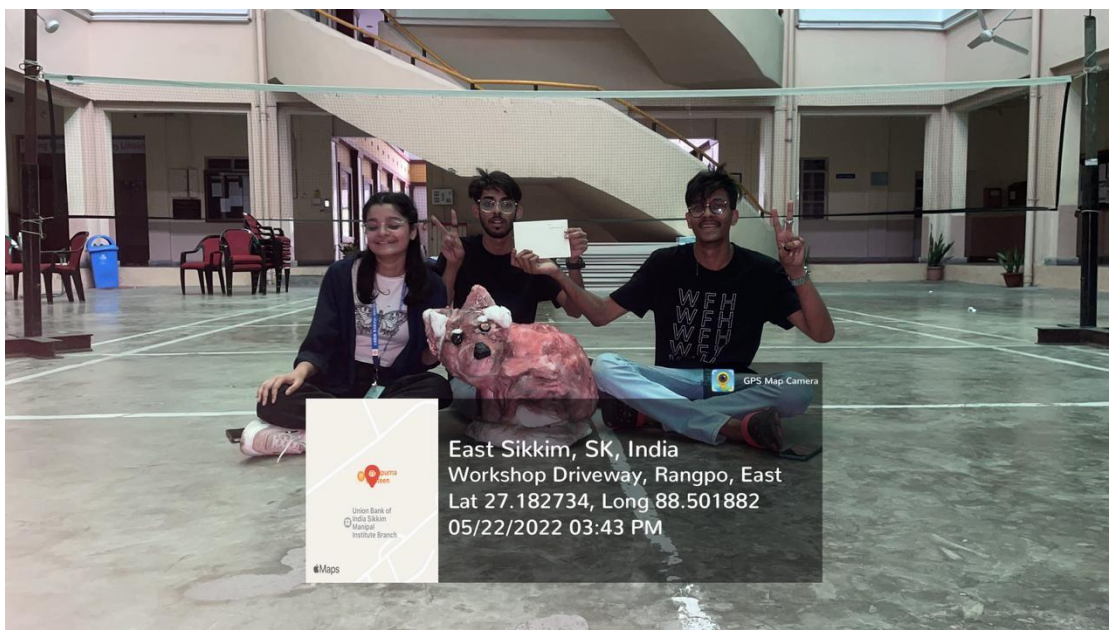




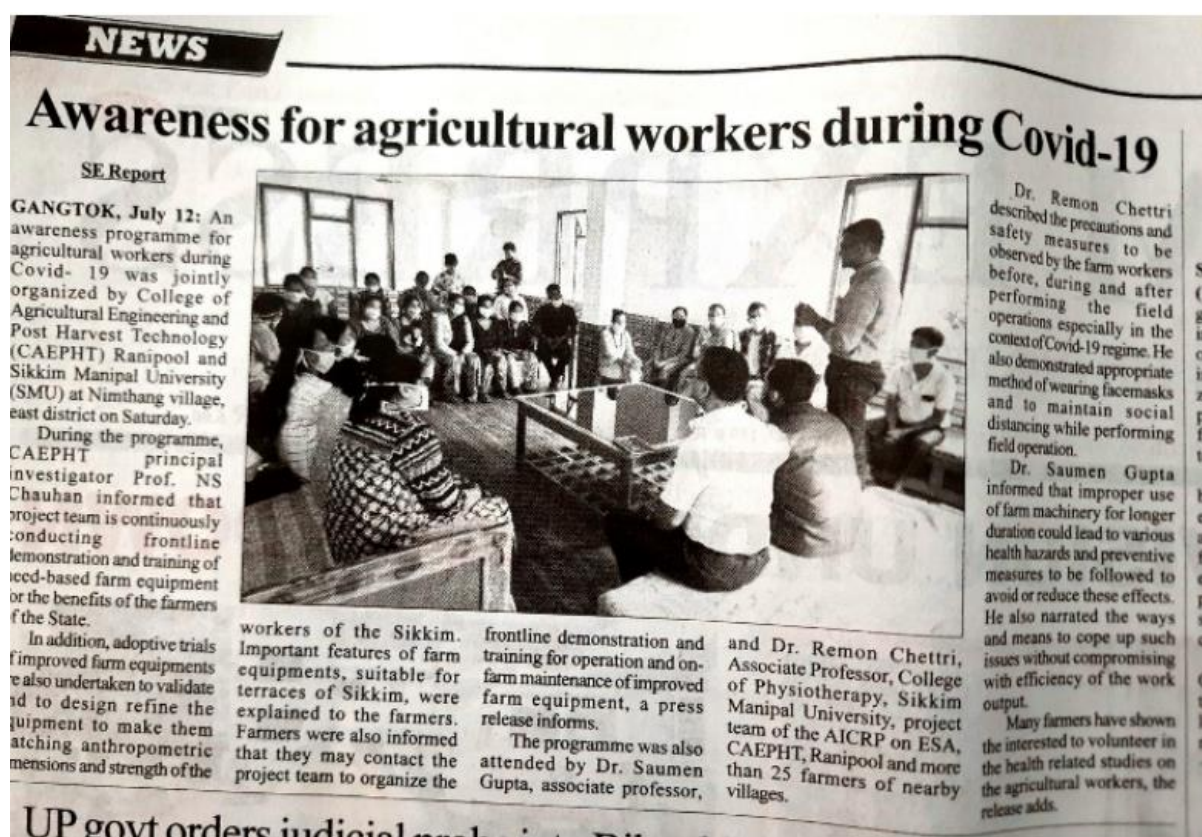








### Awareness program organised for local farmer in collaboration with College of Agricultural Engineering & Post Harvesting Technology, Ranipool, Sikkim





22<sup>nd</sup> Feb 2022

From

The Mess Rate Revision Committee, SMU.

To

The Dean,

SMIMS, SMU.

Subject: Report of the Committee constituted to assess the Student's Mess Rate Revision.

Respected Sir,

The Committee constituted to assess the request made by the Student's Mess contractor for rate revision is hereby submitting its recommendations. We sincerely apologize for the delay.

### COMMITTEE REPORT

**Mandate:** To assess the application submitted for enhancement of Mess food rate by Students Mess Contractor (SMIMS/ADMO/2021-344).

#### Committee members:

Dr Supratim Datta, Associate Dean Students' Affairs

Dr Harshavardhan Sampath, Mess Committee Chairman

Dr Rubi Dey, Chief Warden, SMIMS

Dr Santosh P Kesari, Warden, MBBS Boys Hostel

MS Barkha Devi, Warden Nursing Hostel

Mr Raju Chettri, Asst. Manager, Finance SMIMS

Mess Secretaries of MBBS, BPT & Nursing colleges

#### Facts pertaining to the application:

The Students Mess provides Breakfast, Lunch, Evening snacks & Dinner to MBBS, Nursing, Physiotherapy students.

The current mess charges of INR 155/day was revised in December 2019. There were no revision of charges in 2020 & 2021. Requested revision by the Mess contractor INR 195/day.



The committee looked into the following pertinent aspects:

1. The reasons for requesting a revision of mess rates from the Student's Mess Contractor.
2. Input from the Student's Mess representatives was taken on 09.12.21 by the Mess Chairperson Dr. Harshavardhan.S. The students unanimously agreed that the taste and consistency of the food served can be improved by increasing the mess rates.
3. Consumer Price Index (CPI) Inflation for years 2018 - 2022. Using the formula

$$\text{Value}_t = \text{Value}_0 \times \frac{\text{CPI}_t}{\text{CPI}_0}$$
$$= 155 \times (180^* \div 155^*) = \text{INR } 180^{**}.$$

*Value<sub>t</sub> = value today (Year ending 2021), Value<sub>0</sub> = past value (Dec 2019), CPI<sub>t</sub> = Consumer Price Index for Dec 2021, CPI<sub>0</sub> = Consumer Price Index for Dec 2019.*

*\*Consumer Price Index (CPI) values for Sikkim - Urban: Food and Beverages values.*

*\*\*Does not factor labour cost inflation.*

4. Notional losses incurred by the Mess Contractor due to COVID-19 related closure of Hostel, reduced student's strength, expenses incurred in supplying food in aluminium foil containers to students rooms, staff quarters & supplying packaged drinking water 3 liters/day.

The Committee, after due considerations and deliberations has unanimously concurred on the following recommendations:

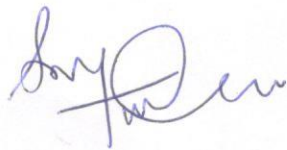
1. A revision of Student's Mess rates from the current rate of INR 155 to **INR 195** is justified (enhancement of INR 40 per student per day). The recommendation is based on the inflation in Consumer Price Index (CPI) since the previous rate revision in 2019 and the projected inflation for the year 2022.
2. A revision of Mess Charges be made every year based on Consumer Price Index (CPI). The periodic revision in mess rates is likely to ensure the quality of food being provided to students is not compromised to enhance profit/curtail losses.
3. The students to be made aware that Mess bills are already displayed each month on the Hostel notice Board. To inform the Hostel supervisors of any discrepancy immediately so that the bills can be rectified.
4. The Mess Committee Chairperson will report to the Dean, SMIMS on the quality and taste of food supplied every month hereafter after surprise inspections.

Name of Committee Member with Signature (Dated 22.02.2022)

1. Dr Supratim Datta (Chairperson)



2. Dr Harshavardhan Sampath (Chairman, Mess Committee)



3. Dr Rubi Dey, Chief Warden, SMIMS.



4. Dr Santosh P Kesari, Warden.



21/2/22

5. MS Barkha Devi, Warden, Nursing Hostel.



6. Mr Raju Chettri, Asstt. Manager, Finance, SMIMS.




— None of the students' signature is seen.  
— Did any student member of the committee  
attend it?


(Mess Secretaries) 10/3/2022



7-3-22




Sruja Ghimirey



Sagar Banerjee

**Dr Muralidhar V Pai**  
DEAN  
Sikkim Manipal Institute of Medical Sciences  
5th Mile Tadong, Gangtok - 737102  
East Sikkim

Since Students and Committee have  
approved. Rate may be revised as  
recommended from Feb 2022.



14-3-22





**SMU** SIKKIM  
MANIPAL  
UNIVERSITY  
*Accredited by NAAC*



# ENVIRONMENT AUDIT REPORT

PREPARED BY  
EHS ALLIANCE SERVICES

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# AUDIT CERTIFICATE



## CERTIFICATE

PRESENTED TO

### SIKKIM MANIPAL UNIVERSITY (SMU)

Sikkim Manipal University, 5th Mile, Tadong, Gangtok, 737102

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

### ENVIRONMENT AUDIT

The environment legal compliances and initiatives carried out by the College have been verified on the report submitted and was found to be satisfactory.

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



SIGNATURE



03.08.2022

DATE OF AUDIT

## || **ACKNOWLEDGEMENT**

EHS Alliance Services would like to thank the management of Sikkim Manipal University (SMU), Gangtok for assigning this important work of Environment Audit. We appreciate the co-operation of the teams in the completion of the assessment.

We would like to especially thank *Lt Gen (Dr) Rajan S Grewal - Vice Chancellor, SMU* for giving us an opportunity to evaluate the environmental performance of the campus.

We would also like to thank *Col Manoj Kumar(Retd) - Head Engineering - Infrastructure and Facilities, 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

*Prof. (Dr) KS Sherpa - Registrar, SMU*

*Dr Murlidhar V Pai - Dean, SMIMS*

*Prof. (Dr) G L Sharma - Director SMIT*

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

*Col D B Chhetri (Rtd.) - Head Administration, SMIT*

*Mr. Sebom Mukherjee - Dy. Manager (Housekeeping), SMIT*



## DISCLAIMER

EHS Alliance Services Audit Team has prepared this report SMU 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 the information gathered.

It is further informed that the conclusions have 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**

## || **CONCEPT AND CONTEXT**

In India, the process for environmental audit was first mentioned under the Environment Protection Act, 1986 by the Ministry of Environment of forests on 13th March, 1992. As per this act, every person owning an industry or performing an operation or process needs legal consent and must submit an environmental report or statement.

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. Moreover, it is part of the Corporate Social Responsibility of the Higher Educational Institutions to ensure that they contribute towards a sustainable environment.

In view of the NAAC circular regarding environment auditing, the University management decided to conduct an external environment assessment study by a competent external professional auditor.

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

The ICC defines Environmental Auditing as:

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

This audit focuses on the environment legal compliances and implementation of rules defined by MoEFCC or the state pollution control board. The concepts, structure, objectives, methodology, tools of analysis and objectives of the audit are discussed below.



## || INTRODUCTION

Nature is a very precious gift for all life forms. Disturbance in nature causes environmental Problems. These are increasing day by day as a result of the development of urbanization and industrialization on earth. Because of the unplanned utilization of resources, our planet is facing tremendous pressure results a sharp rise in temperature. Therefore, there is an urgent need to plan the consumption of the resources in a sustainable manner to conserve natural resources for future generations.

Sustainable development is becoming popular in the world for saving the earth. Utilizing resources judiciously can save the earth's precious resources. Measurement of environmental components is the most effective step to conserving and protecting natural resources.

Environmental auditing had begun in the early 1970s with the provision of civil lawsuits for non-compliance with environmental regulations. Environment auditing involves on-site visits, collection of samples, performing analyses, and reporting results to competent authorities.

Industry, the corporate world is initiating auditing for saving natural resources. Academic institutions also can contribute to the preservation and conservation of resources within their premises.

In thin "Environment Audit" report would help everyone to think about preserving resources, show a willingness to learn their importance, adopt steps to minimize resource use and set an example for others to follow the path of eco-friendly practices to achieve the goal of sustainable development. Effective implementation of environmental auditing helps in minimization of environmental risks at a low cost.





## || **OVERVIEW OF THE UNIVERSITY**

Sikkim Manipal University (SMU) formerly known as Sikkim Manipal University of Health, Medical and Technological Sciences came into existence on November 15, 1992 as a result of the agreement signed between the Government of Sikkim and the Manipal Pai Foundation, with the aim of imparting exemplary education and health care services in the state of Sikkim and country wide.



It is the first ever Public Private Partnership in the country for higher Education and Health Care Services. The University has two campuses: Medical campus and the Technology campus. Government of Sikkim provides a grant of Rs. 2.25 Crores per annum for the hospital against which CRH provides free treatment to BPL families and concessional treatment to other residents of the State.





The University was established in 1995 vide Sikkim Manipal University of Health, Medical and Technological Sciences Act (Act No. 9 of 1995). SMU is recognized by the University Grants Commission under Section 2(f) of the UGC Act, 1956 vide letter No F. 9-7/96(CPP-I) dated 9th Dec 1998 and approved by the Government of India. All courses run by the university are approved by the regulatory bodies like Medical Council of India (MCI), Nursing Council of India, Indian Association of Physiotherapy, All India Council for Technical Education (AICTE) and the Distance Education Council.



The Sikkim Manipal University of Health Medical and Technological Sciences (Amendment) Act No. 13 of 2009 was passed by the Sikkim Legislative Assembly on 12 Dec, 2009 and received the assent of The Governor of Sikkim on the 22nd of January 2010. Vide Notification No. 13/LD/P/2010, Dated: 08/04/2010 of Sikkim Government, Sikkim Manipal University of Health Medical and Technological Sciences was changed to Sikkim Manipal

## **MISSION | VISION | OBJECTIVES | CORE VALUES**

### **VISION**

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

## MISSION

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

## OBJECTIVES

- To support, promote and undertake the advancement of academics
- To promote use of ICT and modern education technologies
- To encourage research, creation and dissemination of knowledge
- To facilitate extension and community service
- To empower people of Sikkim and contribute to human development in Northeast
- To create environmental and social responsibilities among students and employees
- To 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.

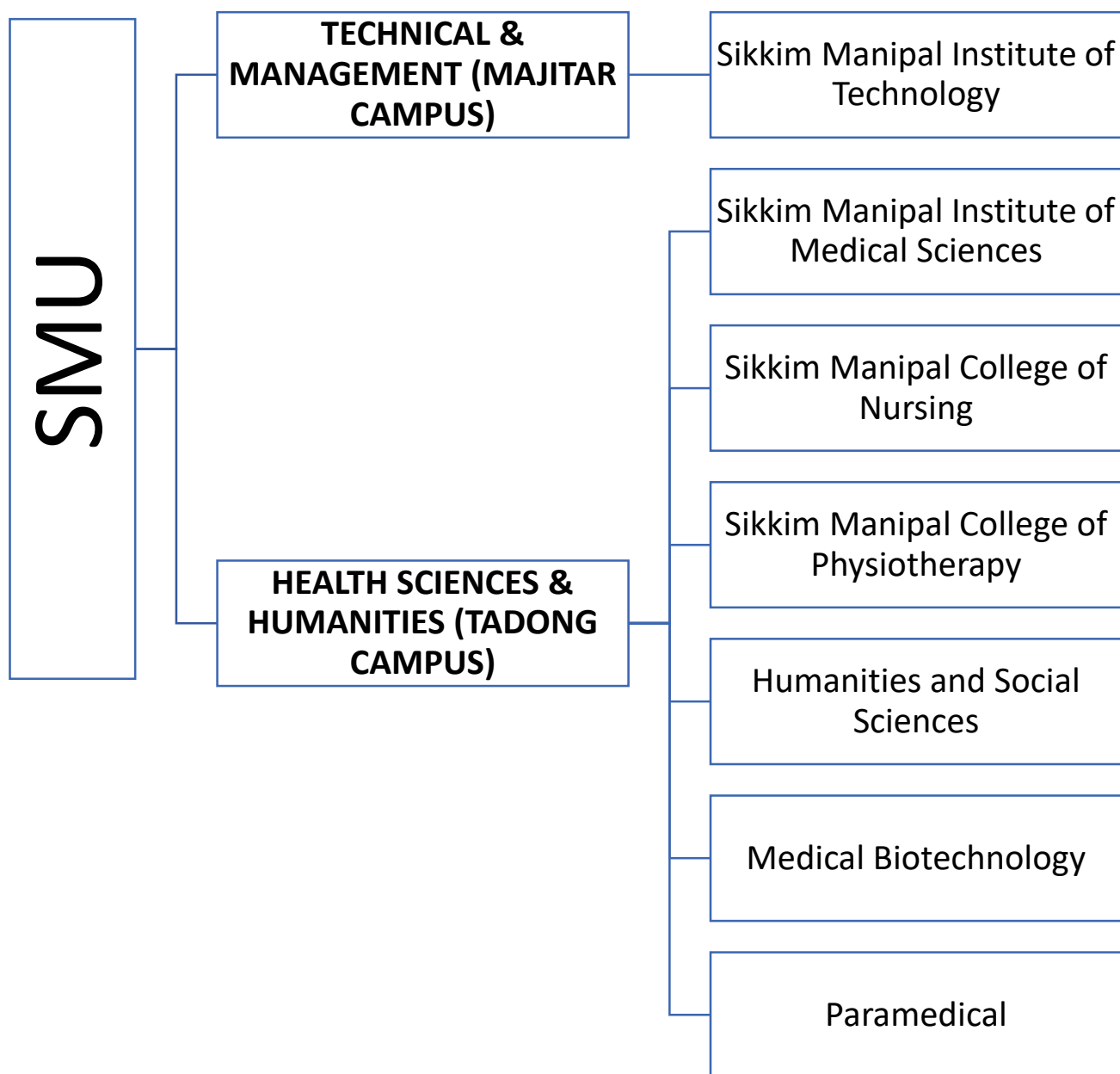
### *Respect and Fairness*

We trust every individual and treat them with dignity, respect and fairness. We practice open and honest communication at all times.

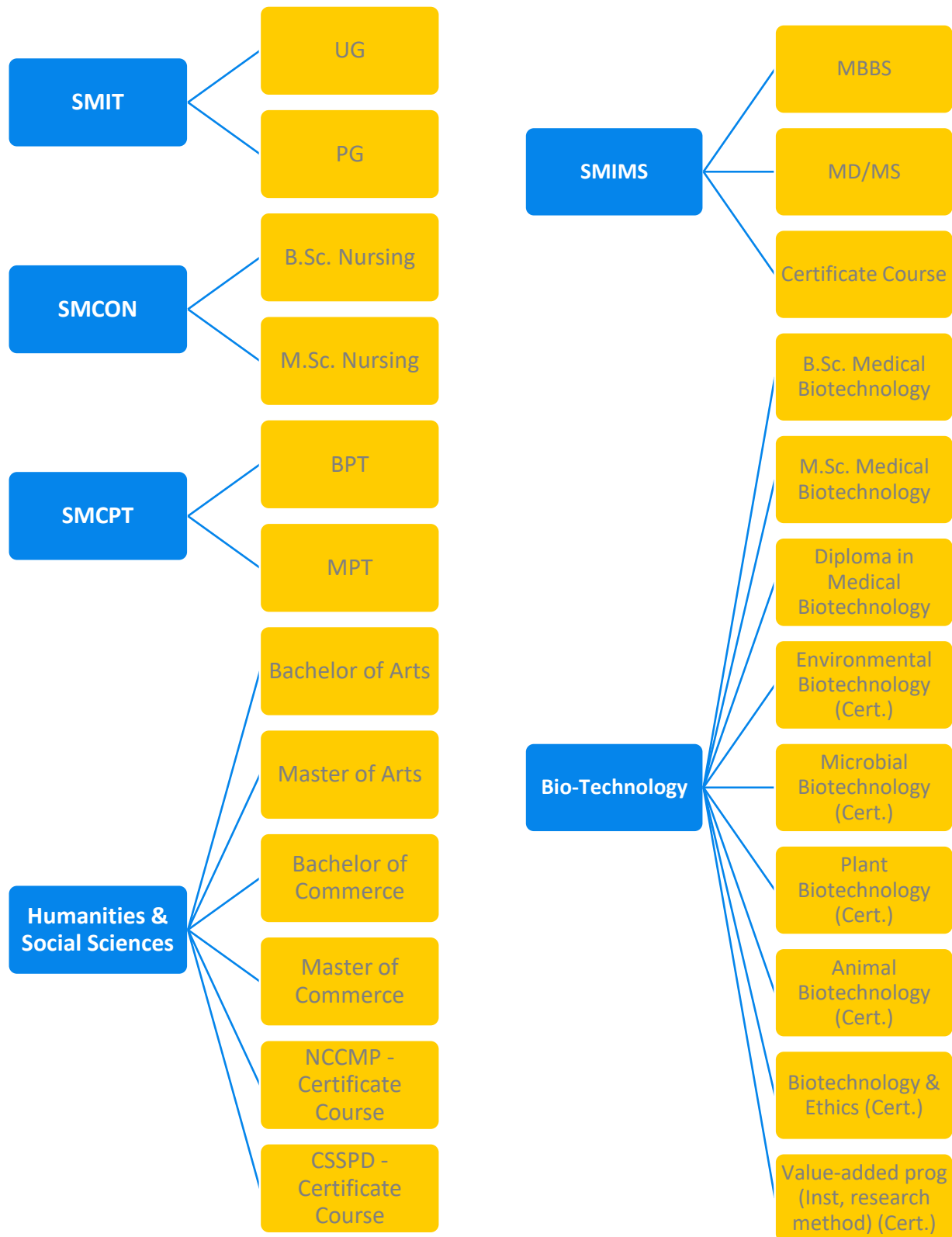
### *Excellence through Quality, Innovation and Leadership*

We are committed to delivering superior programs and academic services through continuous innovation and leadership at all levels.

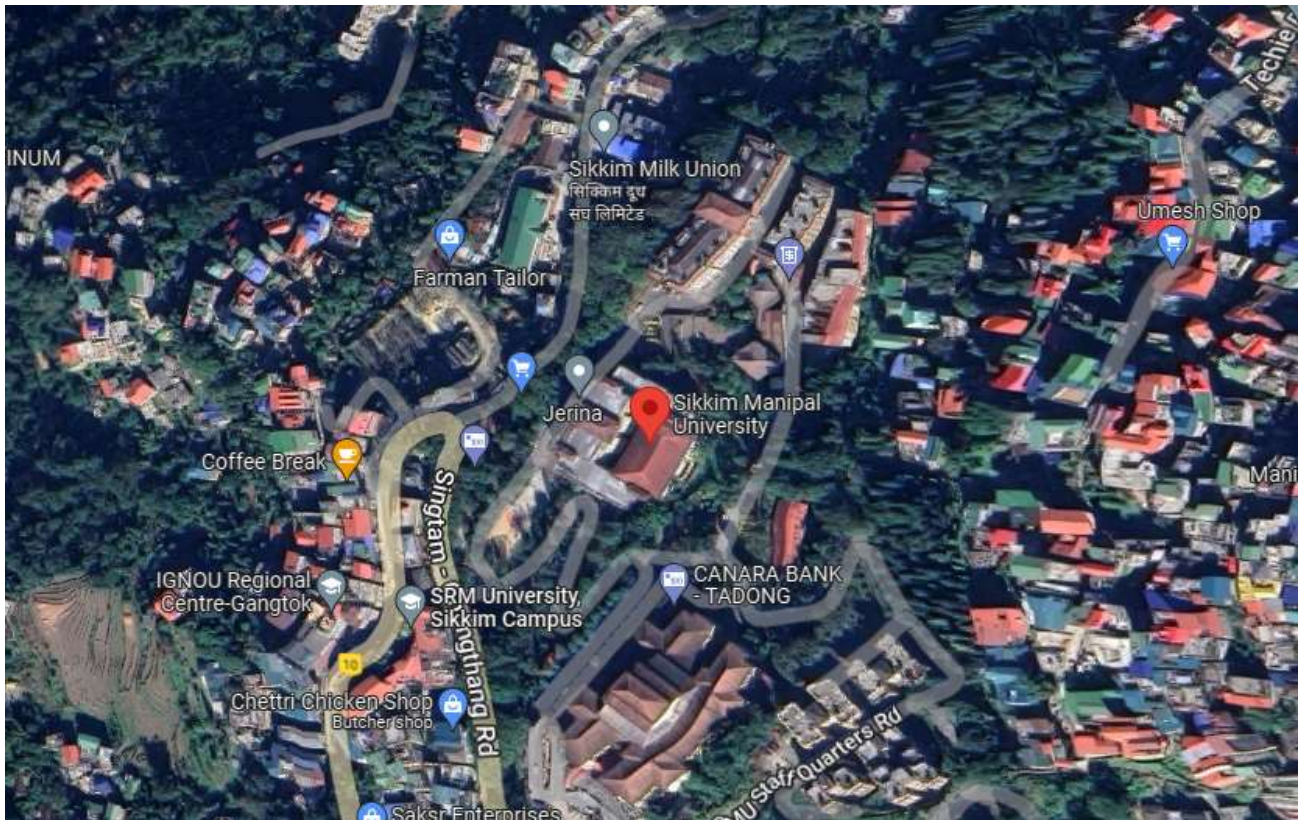
Below are the details of institutions of SMU



Presently, SMU offers various courses featuring a wide selection of undergraduate, postgraduate and PhD courses. Below are the details of SMU faculties namely:







*Geo Location* Geo Coordinates from Google maps: 27.3177334, 88.5960472



## AUDIT PARTICIPANTS

On behalf of SMU

Name	Designation
<i>Lt Gen (Dr) Rajan S Grewal</i>	<i>Vice Chancellor, SMU</i>
<i>Prof. (Dr) KS Sherpa</i>	<i>Registrar, SMU</i>
<i>Dr Murlidhar V Pai</i>	<i>Dean, SMIMS</i>
<i>Prof. (Dr) G L Sharma</i>	<i>Director SMIT</i>
<i>Col V S Yadav (Rtd.)</i>	<i>Head General Services, SMU</i>
<i>Col Manoj Kumar(Rtd)</i>	<i>Head Engineering - Infrastructure and Facilities, SMU</i>
<i>Col D B Chhetri (Rtd.)</i>	<i>Head Administration, SMIT</i>
<i>Mr. Sehom Mukherjee</i>	<i>Dy. Manager (Housekeeping), SMIT</i>

On behalf of EHS Alliance Services

Name	Position	Qualifications
<i>Dr. Uday Pratap</i>	<i>Lead-Auditor</i>	<i>Ph.D. , PDIS, QCI – WASH, Lead Auditor ISO 14001:2015</i>
<i>Mr. Shamsher Kharab</i>	<i>Co-Auditor</i>	<i>M.Sc., M.Tech in Environment Sciences, Field Expert, Post Diploma in Industrial Safety Management</i>



## EXECUTIVE SUMMARY

The environment audit is a snapshot in time, in which one assesses campus performance in complying with applicable environmental laws and regulations. Though a helpful benchmark, the audit almost immediately becomes out-dated unless there is some mechanism in place to continue the effort of monitoring environmental compliance. Our approach to promote a Green Campus to inculcate the sustainable value systems among the students, so that they carry the learning and practices them in their future endeavours. This will ensure that Sustainability and Environmental practices get embedded in all the institutions and organizations in the country.

A Green Campus is a place where environmentally friendly practices and education combine to promote sustainability in the campus which ultimately offers an institution the opportunity to take the lead in redefining its environmental culture and developing new paradigms by creating sustainable solutions to environmental, social and economic needs of the mankind.

This is second environment audit of University for doing their bit towards environmental protection and environmental awareness at local and global front. Audit criterion is environmental cognizance, waste minimization and management, biodiversity conservation, water conservation, energy conservation and environmental legislative compliance by the campus. A questionnaire is used during audit. This audit report contains observations and recommendations for improvement of environmental consciousness.





# WASTE MANAGEMENT

## TYPES OF WASTE ON UNIVERSITY CAMPUS

To create effective waste management plans, the university first needs to know the types of waste they produce. Below, we have compiled a list of various kinds of waste commonly generated on institutional campus:

1. **Food Waste** - University campus generates food waste. The average mess and canteen generate approximately 20 kg of food waste a day. The reasons for food waste on an educational campus may be over-purchasing food to ensure a sufficient supply and then throwing it away, especially in all hostel messes where plentiful stores are essential. And in the cafeteria or hostel mess, students may pile food onto their ample trays, find it unappealing once they sit down and dutifully scrape it into the garbage. Immediate attention is given to food waste minimization techniques.
2. **Recyclable Paper, Cardboard, Plastic, Glass and Cans** -Campus tends to produce vast quantities of these recyclables. Even in the digital age, many students, professors and staff members still prefer handwritten notes and end up with piles of unwanted paper once their courses and projects are complete. The snacks so essential to late-night studying or socializing tend to come in recyclable plastic, glass or aluminium containers. And shipments of necessary items throughout the year are likely to arrive in recyclable plastic and cardboard packaging. The same is sold/auctioned to the scrap vendors from time to time.
3. **Student Clothes and Housewares** - As we have mentioned above, many students find it more convenient to throw away their clothes and dorm furnishings at the end of the year than donate or recycle them.
4. **E-Waste - Student and facility electronics often form a large portion of a campus's waste** — As campus continually upgrade their computing facilities and office computers to keep up with the latest technology, the old computers have to go somewhere. So do old printers, phones, copy machines and other electronics that receive upgrades over the years. Discarded student electronics often become part of a University's waste stream as well. Students may throw away old phones, TVs, tablets, laptops and printers, along with cords and other accessories. Recycling is a much more eco-friendly option — the metals in old electronics often have a high reuse value. The University has tie-up with external authorised agency details mentioned in legislation compliances.
5. **Chemical Waste** - Chemical waste on a university campus may come from numerous sources. Campus laboratories generate waste chemicals, as do cleaning services. The detergents used in campus laundry rooms eventually become waste as well. Much of these chemical substances are hazardous waste under Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 and must undergo specific disposal processes according to state environmental rules and regulations.



6. **Maintenance Waste** - In the maintenance department, spent paints, solvents, adhesives and lubricants all form potentially hazardous waste. Because they are difficult to recycle, spent incandescent light bulbs usually become landfill waste. Spent fluorescent light bulbs, which contain small amounts of mercury, typically require special handling because of the environmental and health risks they pose.
7. **Biological Waste** - Biological waste from laboratories and campus medical centres will require special handling and disposal as per BMW Rules, 2016. Tissue from biology and cadaver labs forms biological waste, as do tissue samples, contaminated bandages and used sharps from medical facilities
8. **Furniture** - Furniture waste on a University campus has a couple different sources. The campus itself may also get rid of old furniture as it modernizes its classrooms, cafeterias, computer labs and study spaces. Annually sold to junk dealer.
9. **Books/Magazines/Newspapers** - Books accounted for solid waste generation and University often generate tons of textbook waste. As courses upgrade to new editions, they may end up throwing their newly obsolete textbooks into the garbage if donation programs cannot use them. Students of SMU donate their text books and notes to junior students, or else are auctioned to reseller.
10. **C & D Waste** - Due to expansion of University campus building and renovation works result significant amount of construction and demolition waste that should be either used for back filling or disposed off through authorised dumping site by CPCB/SPCB.
11. **Solid Waste** - The University is managing solid waste by providing it to the Municipal Authority.
12. **Horticulture Waste** – University campus has lavish greenery and grounds that results significant horticulture waste which is managed by in-house composting system.

## ENERGY CONSERVATION

1. List ten ways that you use energy in your institute. (Electricity, LPG, firewood, others). Using this list, try to think of ways that you could use less energy every day.

- SMU uses electricity for Lights, fans, computers, smart boards, AC, etc.
- Electricity is mainly used in the classrooms, offices, staff room, library, seminar room, hostel, canteen, etc.
- SMU uses solar energy For street lights
- SMU use solar water heater in kitchens and hostels
- LPG is used for cooking purpose in canteen and hostel mess.

2. Are there any energy-saving methods employed in your institute? If yes, please specify. If no, suggest some

Yes, SMU has adopted energy-saving techniques

- Renewable source of energy through 100 KW solar panel is operational
- Solar heaters are installed for the hostel and mess
- LED lights have been installed in the campus
- Switch off fans and lights when not in use
- Switch off bulbs/LEDs in the well-lighted rooms during sunny afternoons.
- Various energy conservation awareness programs for students and staff
- Keep the computers and ACs in power-saving mode.

3. How many CFL/LED bulbs have your institute installed?

SMU has replaced 70% conventional bulbs and tube lights with 18W LED Lights.

4. Do you run “switch off” drills at the institute?

Yes

5. Are your computers and other equipment put in power-saving mode?

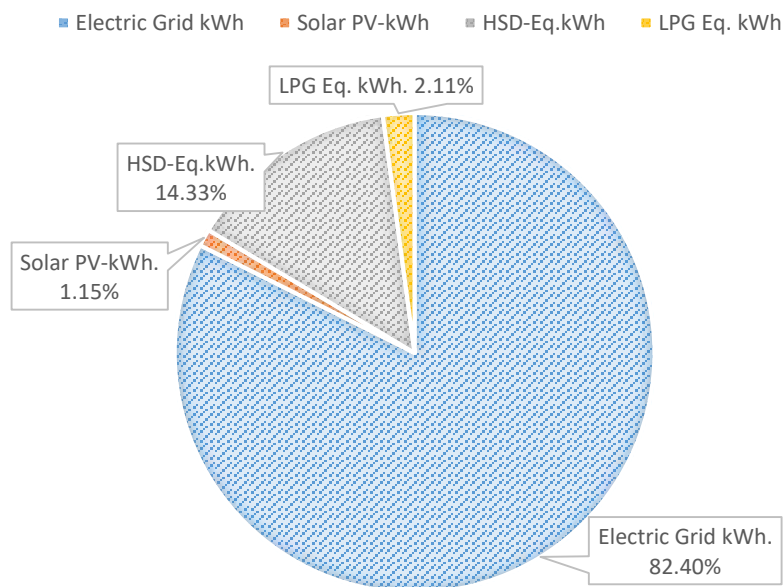
Yes, SMU put the equipment on power-saving mode

6. Does your machinery (TV, AC, Computer, weighing balance, printers, etc.) run on standby modes most of the time? If yes, how many hours?

Yes, approx. 6 hours

Energy Share	kWh	Percentage
Electric Grid kWh	4896283.00	82%
Solar PV-kWh	68530.00	1%
HSD-Eq.kWh	851734.48	14%
LPG Eq. kWh	125640.00	2%
<b>Total -kWh</b>	<b>5942187.48</b>	<b>100%</b>

## ENERGY SHARE IN KWH



### SOLAR PV DETAILS

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
4,564	4,905	4,900	5,500	6,739	6,050	5,800	4,860	6,950	6,930	5,730	5,602	<b>68530</b>

# WATER AND WASTE- WATER MANAGEMENT

## 1. List uses of water in your institute

*Basic use of water in campus:*

*Drinking – 172.32 KL/month*

*Gardening – 269.52 KL/month, SMU uses STP treated water*

*Kitchen and Toilets – 1135.60 KL/month*

*Hostel – 4719.60 KL/Month*

*Others – 481.52 KL/month*

*Total = 6778.56 KL/Month*

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

*SMU relies on spring water as a primary source of water and 5 bore wells as a secondary source. 04 Underground Water tanks of 5,50,000 litres, 99 tanks of 10,00,000 litres and reservoir tanks of 17,70,000 litres installed for storage of water. SMU ensures regular maintenance of water tanks and checking of water quality standards on the campus. The water tanks and water coolers are checked every 3 months, and water purification systems are regularly changed.*

### *Saving Techniques*

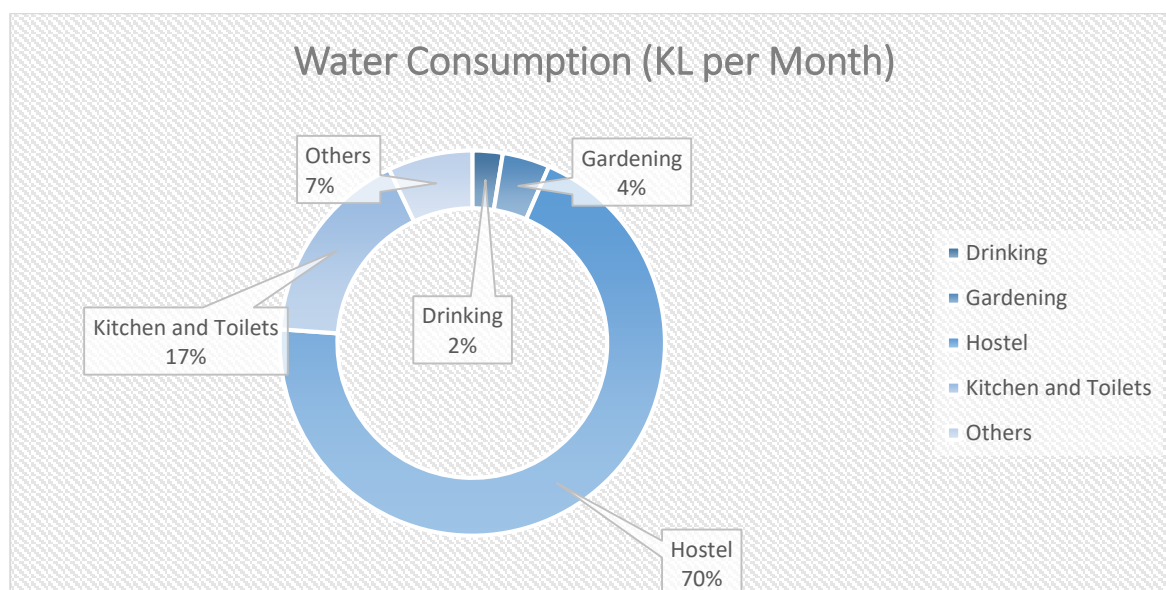
- *SMU ensures that the faucets in the washrooms and water filtration units are checked regularly and do not have any leakages.*
- *SMU has also initiated the installation of auto push taps to reduce water wastage.*



### 3. Locate the point of entry of water and point of exit of wastewater in your institute. (Entry and Exit)

*Entry – SMU uses spring water and have 5 bore wells as a secondary source*

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



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

**Basic ways:**

- Close the taps after usage
- Maintenance and monitoring of valves in the supply system to avoid overflow, leakage and spillage
- SMU ensures that the faucets in the washrooms and water filtration units are checked regularly and do not have any leakages.
- SMU has initiated the installation of auto push taps to reduce water wastage.

### 5. Does your institute harvest rainwater?

*Yes, campus has rainwater storage tanks of capacity 40,000 litres*

### 6. Is there any water recycling System?

*Yes, there are fully functional STP (480 KLD) ETP (15 KLD) on the campus*

*Zero liquid discharge (ZLD) is a strategic wastewater management system that ensures that there will be no discharge of industrial wastewater into the environment. It is achieved by treating wastewater through recycling and then recovery and reuse for flushing, gardening, Dg cooling and housekeeping purpose. 480 KLD STP and 15KLD ETP installed and functional in Campus as per Environment Clearance from State Pollution Control Board. The flow diagram of STP is given below:*



**480 KLD STP : SMIT MAJITAR**



**15KLD ETP: TADONG CAMPUS**

## **BIO DIVERSITY**

Promoting biodiversity at the university campus provides students with educational, hands-on opportunities to make positive environmental impacts. Hanging birdhouses, planting wildflower gardens, and expanding recycling programs run by SMU management and students inside the premises as well as in adopted local villages. Birds and Squirrels are commonly found on campus. A variety of bird species and other flora and fauna are available but these are not harmful to humans so institute doing their bit

for its conservation. Approx. 50 Dogs, 40 cats, 50+ Squirrels, 50+ monkeys, 1000+ Birds including butterflies are found in campus. A variety of bird's species and other flora and fauna available, so institute is doing their bit for bio diversity conservation.

## **AIR QUALITY MANAGEMENT**

### **1. Are the Rooms in Campus Well Ventilated?**

*Yes, as per National Building Code, guidelines*

### **2. Window Floor ratio of the Rooms?**

*Very Good, ample daylight utilization because of big windows.*

### **3. What is the ownership of the vehicles used by your campus?**

*SMU has 12 buses and 22 cars and others. All the vehicles runs on diesel.*

### **4. Provide details of Institute-owned vehicles?**

<i>Details of University-owned vehicles</i>	<i>Buses</i>	<i>Cars</i>	<i>Vans</i>	<i>Other</i>	<i>Total</i>
<i>No. of vehicles - Diesel</i>	<i>12</i>	<i>22</i>	<i>0</i>	<i>0</i>	<i>34</i>

### **5. Is the PUC of the campus vehicles done?**

*Yes*

### **6. Specify the type of fuel used by your campus's vehicles**

*Diesel – 34  
Petrol/CNG – 0  
Electric – 0*

### **8. Air Quality Monitoring Program (If, Any)**

*No*

**Air Pollution Mitigation** The campus encourages the students to use public transport. There is no vehicle movement is allowed within the campus, except for goods and service movement periodically. The parking of staff vehicles is allowed at a designated space within the campus. Hence, air pollution due to vehicular movement is negligible. Paved roads and vegetation help in reducing dust pollution to a large extent Burning of waste within the campus is strictly banned.

## **ENVIRONMENT LEGISLATIVE COMPLIANCE**

### **1. Are you aware of any environmental Laws About different aspects of environmental management?**

*Yes, To promote environment management on the campus, the university follows certain laws related to RRR such as e-waste Management and Handling Rules 2011, Plastic Waste Management Rules, 2016, Solid Waste Management Rules 2016, and more*

### **2. Does your institute have any rules to protect the environment? List possible Rules you could include.**

*Yes, the environment committee of SMU is conscious of environment protection and takes proper measures in terms of awareness campaigns, activities, webinars, seminars, etc.*

### **3. Does Environmental Ambient Air Quality Monitoring conducted by the Institute?**

*No*

### **4. Does Environmental Water and Wastewater Quality monitoring conducted by the Institute?**

*No*

### **5. Does stack monitoring of DG sets conducted by the Institute?**

*Yes, half yearly monitoring is done by the NABL approved Laboratory*

### **6. Is any warning notice, letter issued by state government bodies?**

*No*



## 7. Does any Hazardous waste generated by the Institute?

*Yes, it is being disposed through the ETP and incinerator.*



INCINERATOR: TADONG CAMPUS

## || GENERAL INFORMATION

### 1. Does your institute have any rules to protect the environment? List possible rules you could include.

*Yes, SMU committee carries out a number of workshops, campaigns, and awareness programmes for environment protection in campus.*

### 2. Are students and faculties aware of environmental cleanliness ways? If Yes Explain

*SMU conducts various campaigns for cleanliness and awareness on Swachh Bharat Abhiyaan.*

### 3. Does Important Days Like World Environment Day, Earth Day, and Ozone Day etc. eminent in Campus?

*Yes, World Environment Day, Ozone Day, Earth Day, Earth Hour and more are celebrated on campus. Various plantation drives of native plants, etc. are organised time to time.*

#### **4. Does Institute participate in the National and Local Environmental Protection Movement?**

*Yes, SMU is actively participating in environment protection movements like Swatch Bharat Abhiyan by students at the campus*

#### **5. Does Institute have any Recognition or certification for environment friendliness?**

*Yes. SMU has received recognitions and certifications like a Certificate of Participation from 'Fit India' for successfully participating in 'World Cycle Day Celebration' on 3<sup>rd</sup> June, 2022*

#### **7. Does Institution conduct a green or environmental audit of its campus?**

*This is the second external audit carried out by the University.*

#### **8. Has the institution been audited /accredited by any other agency such as NABL, NABET, TQPM, NAAC etc.?**

*Yes, University is accredited by NAAC, NABH and NABL*

## **RECOMMENDATIONS AND SUGGESTIONS**

- Green building guidelines with ECBC compliance should be adopted for future expansion projects of the University.
- Increase recycling education on campus by conducting webinars and campaigns
- Expand work with community and nongovernmental organizations to assist in finding solutions to environmental problems.
- Environmental Monitoring i.e. (Ambient Air Quality monitoring and Stack Monitoring of DG sets need to be conducted by State Pollution Control Board, approved laboratory) should be conducted periodically.
- Agreement with third party authorised vendors should be done for different types of waste management, such as e-waste, BMW, Plastic waste, etc.
- Environmental parameters should be included in purchase policy to achieve cradle to grave approach for sustainability.

## || CONCLUSION

This audit involved extensive consultation with all the campus team, interactions with key personnel on wide range of issues related to environmental aspects. The University is devoted to promote the environment management and conservation in the campus and community. The audit has identified some suggestions for making the campus premise more environment friendly. The recommendations and suggestions are mentioned for university campus team to initiate actions.

The audit team opines that the overall site is well-maintained from environmental perspective. Still there are few things that are important to initiate which includes periodic inspection of buildings to increase the energy efficiency.

Even though the University does perform fairly well, the recommendations in this report highlight many ways in which the University can work to improve its actions and become a more sustainable institution.

## || REFERENCES

- **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 I – RECOGNITIONS AND CERTIFICATES



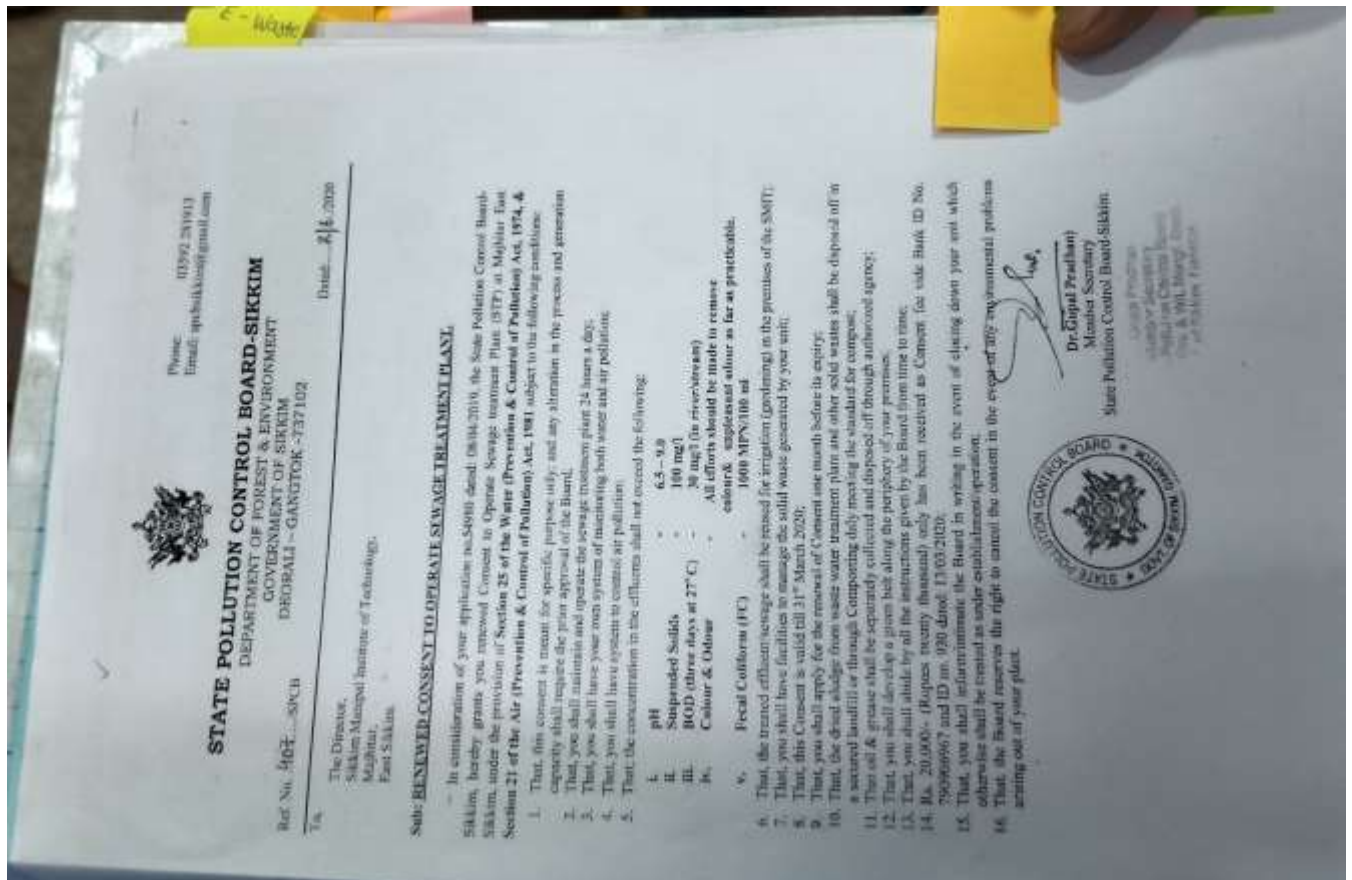


## विश्व साइकिल दिवस पर आयोजित किया गया उत्सव

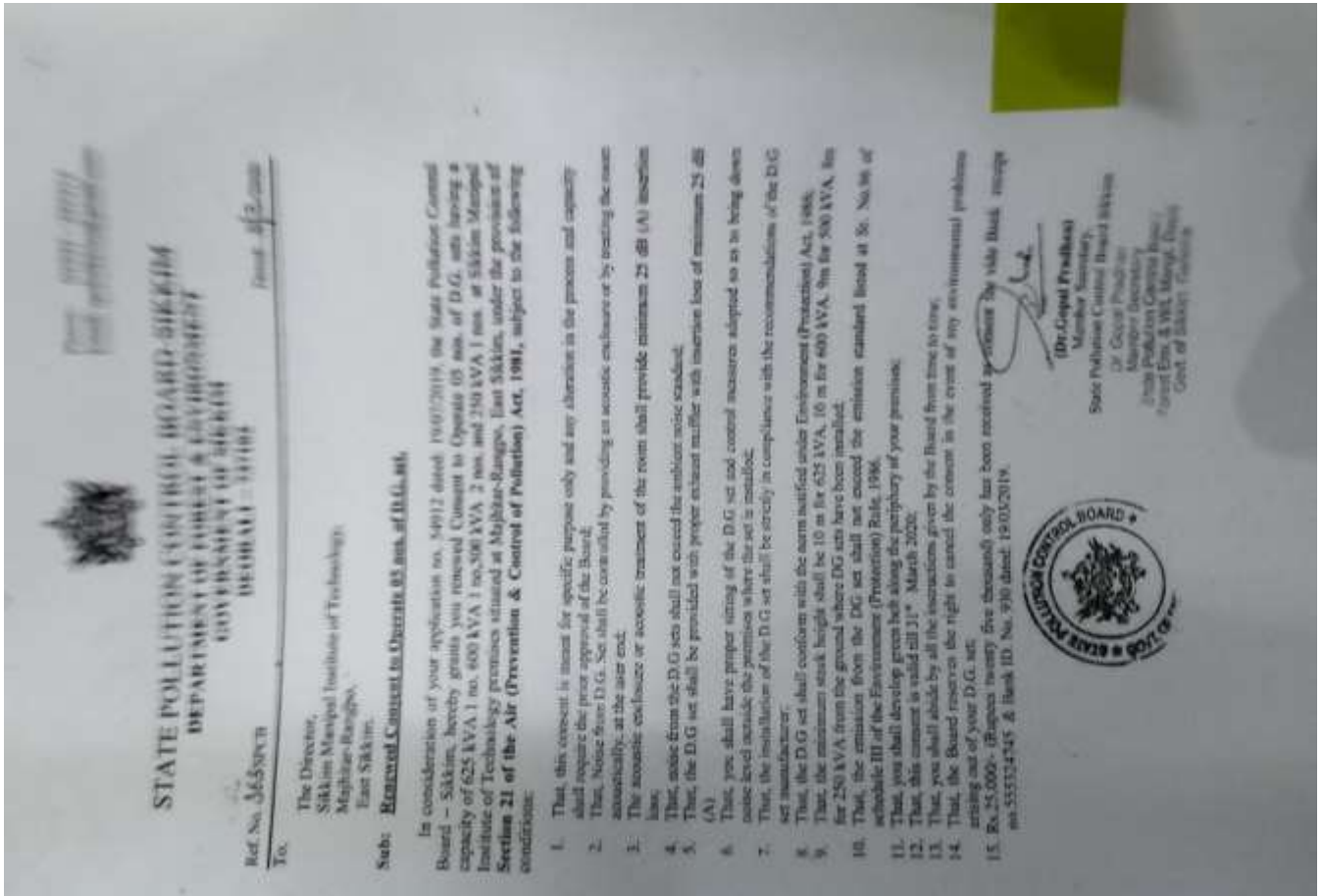


रंगपो (निज संवाददाता)। तीन जून को विश्व साइकिल दिवस के रूप में पालन किया जाता है। यह एक साधारण साइकिल को समर्पित एक दिन है, जो लगभग 200 वर्षों से परिचालन में एक सरल, लागत प्रभावी, पर्यावरण के अनुकूल और दीर्घकालिक परिवहन का रूप है। यह आयोजन जीवन और विषयों के सभी क्षेत्रों से साइकिल चालकों को

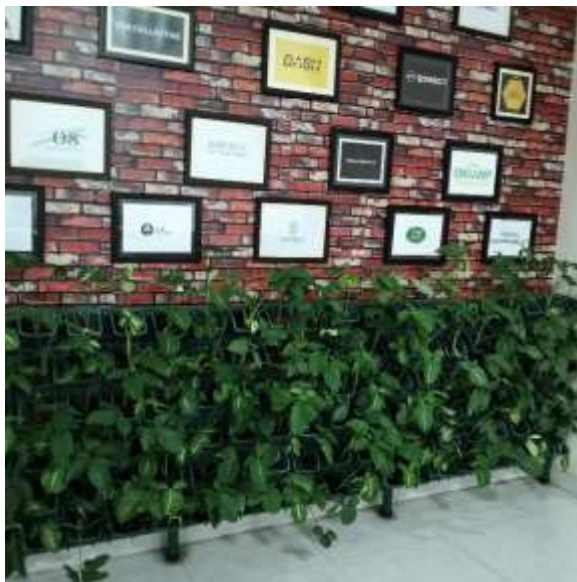
आकर्षित करता है। एसएमआईटी माझिटार में भी साइकिल दिवस मनाया गया। एसएमआईटी के निदेशक प्रो. जी.एल. शर्मा, प्रो. (डॉ.) आनंद प्रकाश तिवारी, एसोसिएट निदेशक (छात्र मामले), प्रो. (डॉ.) अजय झा को पेडलिंग करके और वैश्विक उत्सव का आनंद लेते हुए प्रतिभागियों को प्रेरित करते देखा गया।



Consent for STP

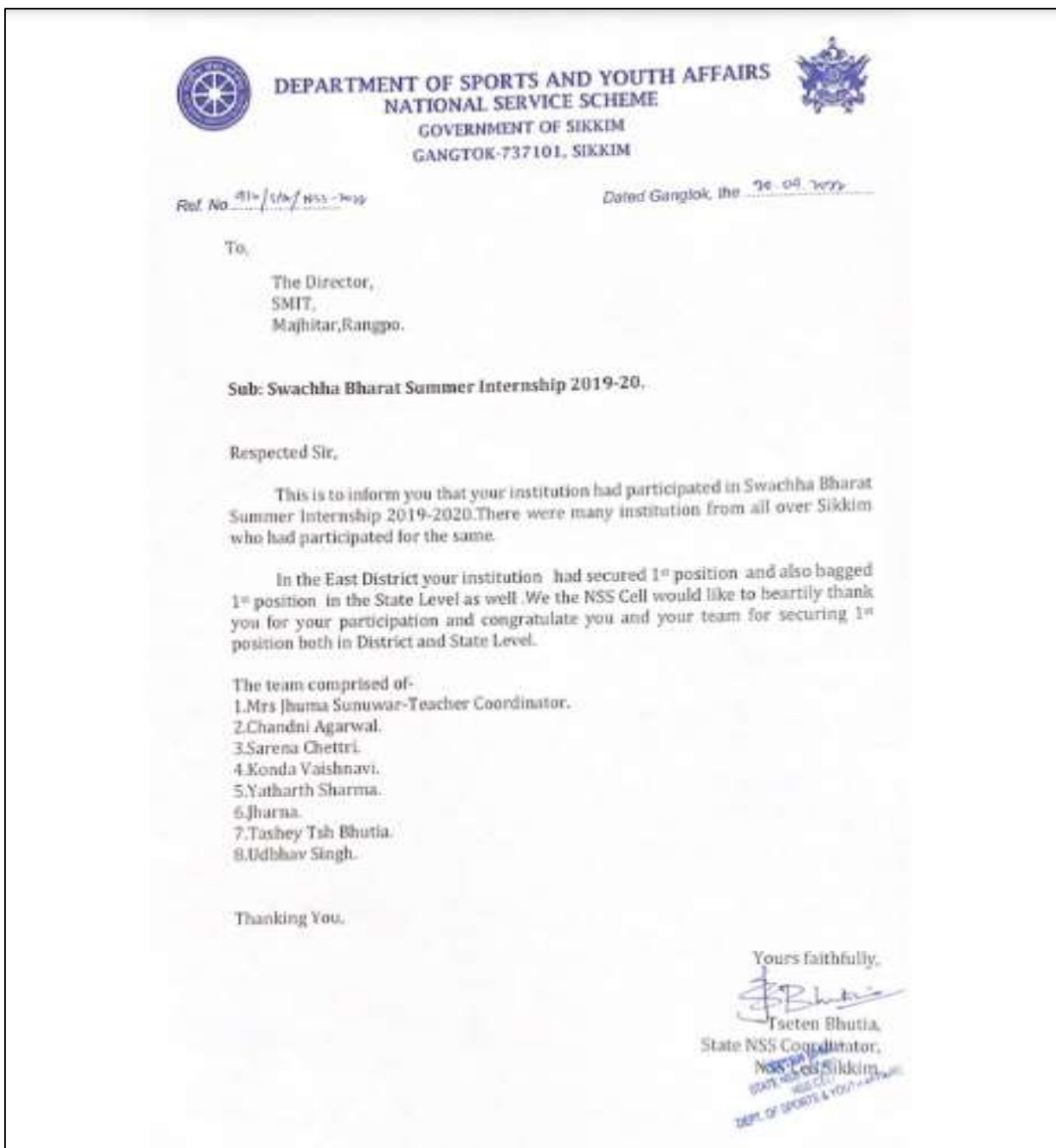


CTO for 5 Digi Sets



Air Purifying Planggt inside buildings

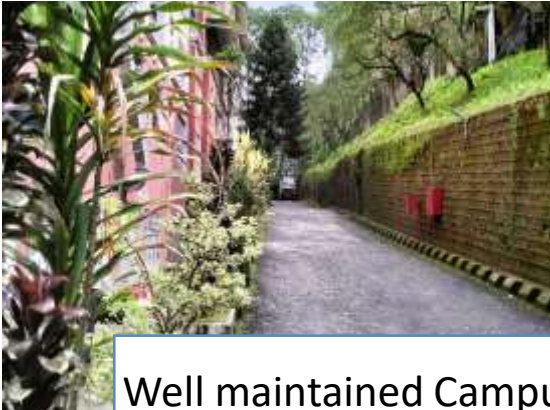




Appreciation letters from State NSS coordinator



## ANNEXURE II - PHOTOGRAPHS



Well maintained Campus



Lush Green Campus



Sports Ground



Lawn Bowls Ground



Ornamental Plants



Indoor Plants



**Well maintained Greenery**



**Lush Green Campus**



**Ornamental Plants**



**Ornamental Plants**



**Ornamental Plants**



**Indoor Plants**





**Incinerator**



**BMW segregation**



**Use of Urinals to save water**



**Water flow rate as per standards**



**AC waste water conservation using pipes**



**AC waste water re-used in plants/ pots**



Paved Pathways



Solar Power plant installed  
on the building roofs



Color coded dustbins



Bird nest in campus



Display of Awareness  
messages



Display of Awareness  
messages





Active participation of students in plantation drive



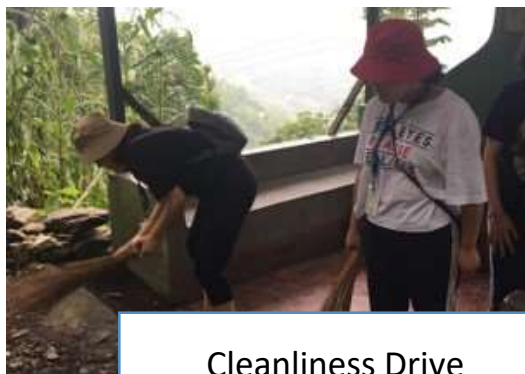
Plantation drive in nearby area



Awareness programme in village area



Awareness programme by Red Ribbon Club



Cleanliness Drive



Awareness campaign on World Tobacco Day



International Yoga Day  
Celebration



International Yoga Day  
Celebration



World Health Day  
Celebration



Poster making activity



SMU in media



Central AC System - HVAC

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