



Unveiling Excellence

# USTM

## Biodiversity Conservation & Environment Council

# UNIVERSITY OF SCIENCE & TECHNOLOGY MEGHALAYA

**nirf** India Ranking-2024 (151-200)

Accredited 'A' Grade by NAAC

*...Towards a Sustainable Green Campus*

- Air
- Soil
- Flora
- Water
- Fauna
- Energy

BCEC  
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## Preface

University of Science & Technology Meghalaya started its journey in 2011 in the hilly areas of R-Bhoi District which is situated in the border areas of Guwahati which is the Gateway to North East. Much before we started our University, we got this dream to have a green campus with complete responsibility to the environment and natural resources both within the campus as well as in its neighborhood. When the University acquired this land, there were very less green areas due to stone crushers working & deforestation done to excavate stones to feed the stone crusher machines. We built our future plans keeping this objective in mind and we later came up with this policy to address maintenance of green cover, responsibility towards environment, sustainable energy and conservation plans. Meanwhile, government had also started working towards these objectives and that makes it more pertinent for us to follow the dream.

## Objectives

The objectives of our Environmental Policy are to make efficient and effective use of all natural resources. Keep encouraging members of our community and develop a sustainable approach towards the objective. The specific areas of our focus shall be-

- Clean & Green Campus
- Cleanliness is Godliness shall be the motto of USTM in maintaining a clean and green campus in future.
- One tree by each student and pledge to plant at least two trees during their stay in the University
- Regular tree plantation drives by the University in campus and neighborhood.
- Protect and nurture the Flora in the campus.
- Develop Herbal garden/ fruits garden and Biodiversity Park in the campus.
- Keep university campus free from plastic and move towards a plastic free zone.
- Conduct cleanliness drives under Swachh Bharat Mission of Govt.
- Display “No Litter” boards in college campus to create awareness
- Drainage Water management
- Air quality monitoring
- Maintaining database of plants and animals of the campus
- Celebrating all important days related to nature conservation
- ‘Use me’ Dry and Wet dust bins in campus
- Towards Sustainable Environment both within the campus as well as in its neighbourhood.

## Vision

University Campus would be Ecological and Self Sustainable area with Adequate Green Cover and 50% Renewable Energy contribution by 2030.

## Mission

To focus on the Sustainable Development Goals linked to maintaining Ecological Balance, Waste Management & Resource Conservation through the various infrastructure initiatives.





## GREEN CAMPUS POLICIES

### Water Conservation Policy

1. Minimize the consumption of water by reporting leaks and rectification.
2. Display “Close Tap” boards in toilets, basins and bathrooms
3. Progressively replacing / supplementing baths with shower facilities in hostels, staff quarters and guest houses, if needed.
4. Exploring options for using waste / roof water wherever possible.
5. Rain water harvesting schemes in all buildings of the campus for recharging the groundwater/borewells etc and can be reused later.
6. An underground 1.5 lakh liter Storage tank for stocking the rain to be made in the Campus
7. Natural water bodies within the campus to be preserved.
8. Water Budgeting.

### Clean & Green Campus Policy

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8. Maintaining database of plants and animals of the campus



### Sustainable Environment Policy

USTM aims to reduce and eliminate environmental pollution and encourages all faculty members, staff, students and others to do the same.

1. In order to reduce the carbon footprint inside the campus, Battery operated cart has been introduced inside the campus for intra movement of students and faculty members. Bring in no polluting vehicle for in-campus movement
2. Awareness through Air Quality Monitoring & Display Unit in the campus.
3. Display “No horn”, “No Tobacco” boards in campus
4. Maximize ICT usage and move towards ‘Paperless Office’.
5. Incorporate environmental aspects in teaching and research.
6. All the street light within the campus are sensor base solar powered. In addition to that two 5.2 KW each solar powered plants has also been installed to reduce the dependency on carbon based fossil fuel.

### Waste Management Policy

Promote 3 R's for waste management - Reduce, Reuse and Recycle

1. Install adequate waste handling systems for different types of waste.
2. Explore organic solid waste processing for organic manure production and bio gas units
3. Inorganic solid waste to be processed and sent to vendors for recycling.
4. E-waste, as per Waste Electrical and Electronics items covered in the Schedule 1 of the E-Waste management rules 2016 notified by the Ministry of Environment Forest and climate change, Government of India, will be sent to authorized vendors and channelized as per rule.
5. Bio medical solid wastes once generated will be segregated and stored in colour coded waste bags in an isolated place by the stakeholders from where it will go for different treatment procedure. The stakeholders will hand over the Bio Medical Wastes to the authorized vendor as per the scheduled time only after proper segregation as per PCB norms.
6. Demarcate areas of waste management through display boards



## Developmental Excavation & Reforestation Policy

- Pre Construction Advisory Council
- Land Area allocation Consultancy
- Landscaping design Consultancy
- Green Cover Management and maximization
- Maintain Ecological Environmental Balance

## Energy Conservation Policy

1. Minimizing the consumption of electricity where opportunities arise by
2. Encouraging staff and residents to turn off electrical appliances when not in use
3. Display “switch off” boards in rooms
4. Sensor based switching of lights and fans in common areas
5. Progressive replacement of light bulbs with energy efficient ones
6. Conserving energy by promoting the use of daylight
7. Conducting frequent preventive and corrective maintenance.
8. To Use Solar Energy in Campus - install Solar Lamps and Solar water Heaters in hostels.
9. By 2025 we intent to enhance our solar energy share to 50 % of the total requirement.

## Herbal Mission

1. Herbal Plant repository and maintenance
2. Plant selection consultancy with our Ayurvedic College
3. New variety identification and listing

## Organic Mission

- Organic Farming of Vegetables for captive consumption
- Cow & Goat Dairy Farm support organic manure for farming and fish ponds
- Vermi-composting and Bio Gas Plant
- Mushroom Cultivation with Hay
- Apiculture for natural pollination of Flowers
- Weekly Organic Vegetable Hut
- Pond Fish and Bio Floc farming

## Policy Implementation and University Commitment

- 1.1 Conduct ‘Green Audit’ & ‘Energy Audit’ regularly to evaluate the task ahead.
- 1.2 Allocate responsibility and create annual activity plan for maintaining focus in the above areas
- 1.3 Set targets on environmental performance and monitor/report our progress towards our targets.
- 1.4 Promote awareness of the need to achieve sustainable use of resources for the benefit of the university and society as a whole.
- 1.5 Ensure compliance with legal requirements and demonstrate through appropriate procedures and management information.
- 1.6 Necessary Fund to be allocated to comply with the Green Campus norms as set time to time.
- 1.7 Yearly review of the Audit Reports and status shall be done by the Green Campus Committee.





## Green Initiatives

The University of Science and Technology Meghalaya (USTM) has taken several green initiatives to promote sustainability and environmental responsibility on campus. USTM aims to reduce and eliminate environmental pollution and encourages all faculty members, staff, students and others to do the same.

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- All street lights within the campus are sensor based & solar powered.
- Two 5.2 KW each solar powered plants has also been installed to reduce the dependency on carbon based fossil fuel.



Air Quality Monitoring



Air Quality Monitoring

**Green Campus:** USTM has undertaken various efforts to maintain a green campus, including extensive tree plantations, organic farming practices, and the use of eco-friendly materials in construction. USTM has developed green spaces around the campus to enhance biodiversity and create a cleaner environment

**Rainwater Harvesting:** The university has implemented rainwater harvesting systems to conserve water and ensuring sustainable water management and conservation.



Rain Water & West Water Recycling



Solar Power

**Solar Power Installation:** USTM has installed solar panels across the campus to harness renewable energy, reducing dependence on conventional power sources and lowering carbon emissions.

**Plastic-Free Campus:** The university has launched campaigns to minimize the use of plastic on campus, encouraging students and staff to adopt reusable and biodegradable alternatives.





**Waste Management:** USTM promotes waste segregation and recycling through the implementation of effective waste management systems on campus. The university has also initiated composting projects to efficiently manage organic waste.



Solid Waste Plant



Drain Water Harvesting

**Environmental Awareness Programs:** USTM frequently conducts workshops, seminars, and events to raise awareness about environmental issues among students, faculty, and the local community. These initiatives are designed to educate and engage the university community in adopting sustainable practices.

**Sustainable Transportation:** The university encourages the use of bicycles, electric vehicles, carpooling and public transportation to reduce carbon emissions associated with commuting.

**Sustainable Infrastructure Infrastructure:** USTM prioritizes sustainable architecture by integrating energy-efficient designs, green buildings, and eco-friendly construction materials. The university is committed to using environmentally friendly materials in its buildings and facilities, promoting sustainable and responsible construction practices.

### **Biodiversity Conservation and Sustainable Environment at USTM**

The University of Science and Technology, Meghalaya (USTM) has been actively involved in promoting biodiversity conservation and sustainable environment through various initiatives. Here is a report on some of the key events and activities:

#### **National Conference on Bioresources and Sustainability**

USTM recently concluded a National Conference on Bioresources and Sustainability, which focused on the importance of conservation efforts. The conference brought together experts and stakeholders to discuss strategies for sustainable utilization of bioresources while ensuring environmental protection.

#### **Collaboration with Botanical Society of Assam**

USTM, in association with the Botanical Society of Assam, organized a two-day event on "Biodiversity: Conservation and sustainable utilization for Atmanirbhar Bharat" on June 3-4, 2022. The event aimed to raise awareness about the importance of biodiversity conservation and explore sustainable ways to utilize natural resources for a self-reliant India.

#### **Capacity Building and Awareness Initiatives**

USTM has been actively involved in capacity building and awareness creation activities related to biodiversity conservation. The university has supported the establishment of Biodiversity Management Committees (BMCs) at the block level, which comprise heads of local villages. USTM has also conducted awareness and capacity building exercises for these BMCs to strengthen their role in biodiversity conservation efforts.



Biogas Plant

Baridua, Meghalaya, India  
3RXV+GW7, Baridua, Meghalaya  
781022, India  
Lat 26.098733°  
Long 91.842854°  
08/12/22 11:44 AM GMT +05:30



## Research and Documentation

USTM has been actively engaged in research and documentation related to biodiversity conservation. The university has supported the creation of databases that can inform biodiversity conservation efforts in the state. Additionally, USTM has facilitated the production of documentaries to spread awareness about the importance of biodiversity and the need for conservation.

These initiatives demonstrate USTM's commitment to promoting biodiversity conservation and sustainable environment through research, capacity building, awareness creation, and collaboration with various stakeholders.

The air quality at the University of Science and Technology Meghalaya (USTM) aligns with the broader air quality in Meghalaya, which is generally within the "Good" category. As of the most recent monitoring, the Air Quality Index (AQI) for the region is around 12, well below the World Health Organization's recommended limits for pollutants like PM<sub>2.5</sub>, which is at 5 µg/m<sup>3</sup>. This suggests that the air quality on campus is healthy, with no immediate concerns for students and staff.

At USTM, several initiatives have been implemented to reduce air pollution, focusing on both technological advancements and community engagement. Here are some key initiatives:

### Technological Innovations

**Suddha Vaayu Project:** This initiative involves the development of an electrical chamber designed to detect and mitigate air pollution. The chamber uses a three-step purification process to remove particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) and is powered by solar energy. Preliminary tests indicate an efficiency of 88-90% in removing fine particles from the air.

**Air Pollution Control Devices:** The government has been working on devices aimed at traffic junctions to dilute and actively remove pollutants. These devices utilize low-speed wind generators and filters to enhance air quality in congested areas, which are often hotspots for pollution.

### Community Engagement and Awareness

**Awareness Campaigns:** USTM has engaged in efforts to educate the local community about air pollution sources and mitigation strategies. This includes promoting practices such as reducing vehicle use, proper waste disposal, and the importance of planting trees to improve air quality.

**Collaboration with Local Authorities:** USTM collaborates with local government initiatives aimed at improving air quality through regulatory measures and community programs. This includes participation in broader environmental action plans that focus on reducing emissions from various sources.

### Monitoring and Research

**Continuous Air Quality Monitoring:** USTM is likely involved in ongoing research and monitoring of air quality, contributing to data collection and analysis that informs local air quality management strategies. This includes studying the effects of seasonal changes on air pollution levels and identifying key pollutants in the region.

These initiatives reflect a comprehensive approach to tackling air pollution at USTM, combining technology, community involvement, and research to create a healthier environment.





## LAND USE AND LAND COVER

The Land Use and Land Cover (LULC) of an area is shaped by a combination of physical and human activities. Detecting changes in LULC is crucial for understanding the physical environment, ecological processes, soil erosion, deforestation, and it is also essential for effective planning. The landscape of USTM is predominantly hilly. Over time, various academic departments, hostels, and auditoriums have been established on the once barren hills, while a significant portion has been preserved as natural green cover.

A LULC map prepared using Google Earth reveals that the USTM main campus covers a total of 88.85 acres. Of this, 44.55 acres are under greenery, 5.878 acres remain unconstructed, 2.18 acres are used for the playground, and 4.816 acres consist of marshy land and water bodies. Organized plantations are mainly found along internal roads, and together with the various academic departments, they contribute significantly to the overall green cover. The greenery, including natural forests, gardens, and plantations, accounts for 50.18 percent of the total area. The USTM campus also supports a wide diversity of aquatic flora and fauna, and efforts have been made to conserve the natural forests within the campus.

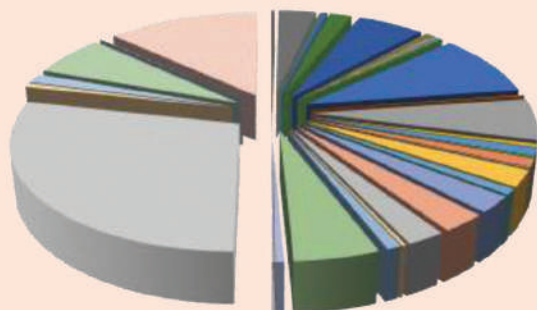


Fig: LULC categories in campus



<b>Land Area Summary</b>		
<b>Campus zone</b>	<b>Area in Acres</b>	<b>Percentage(%)</b>
East Zone	8	11%
North Zone	5	7%
Central Zone	8	11%
South Zone	9	13%
West Zone	5	7%
Water Body Area	5	7%
Green Cover Area	30	43%
<b>Total</b>	<b>70</b>	



## Aquatic flora of USTM campus

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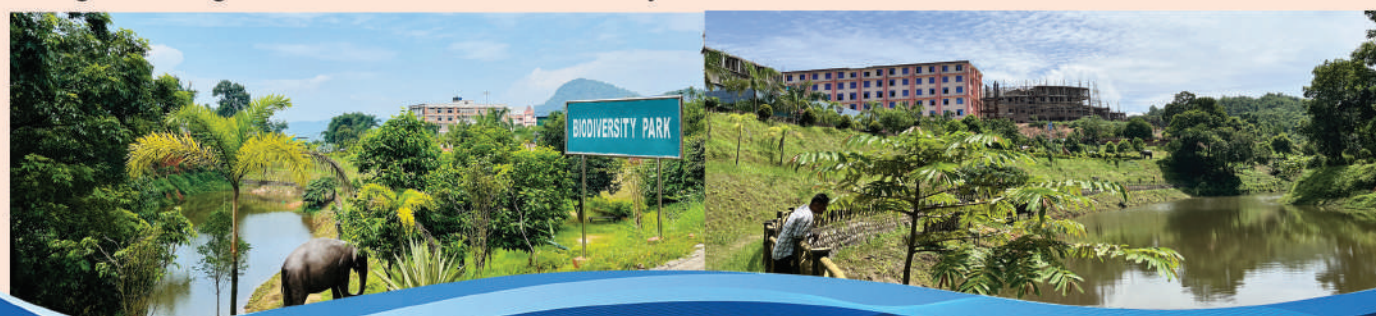
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Species name	Common name	Family
<i>Ludwigia adscendens</i>	Creeping waterpri	Onagraceae Perennial
<i>Ipomoea aquatica</i>	Waterspinach	Convolvulaceae
<i>Nelumbo nucifera</i>	Scented lotus	Nelumbonaceae
<i>Nymphaea spp</i>	Waterlily	Nymphaeaceae
<i>Azolla pinnata</i>	Waternvet	Azollaceae
<i>Pistia stratioites</i>	Waterlettuce	Araceae
<i>Chara vulgaris</i>	Chara	Characeae
<i>Hydrilla verticillata</i>	Hydrilla	Hydrocharitaceae
<i>Vallisnaria spp</i>	Eelgrass, Tapewood	Hydrocharitaceae
<i>Ceratophyllum</i>	Hornwort	Ceratophyllaceae
<i>Achyranthus aspera</i>	Devil's horsewhip	Amaranthaceae

Table: Physico Chemical Characteristics of water and Soil in the campus

Parameters	Water Characteristics	Parameters	Soil Characteristics
pH	6.8	pH	6
Dissolved oxygenmg/l	8	Soil texutre	Clay loam and sandy type
Biological Oxygen Demand mg/l	2.8	Bulk density gm/cm <sup>3</sup>	1.30
Free CO <sub>2</sub> mg/l	6.6	Porosity%	30
Turbidity NTU	5	Specific gravity gm	1.15
Conductivity μS/cm	200	Nitrogen kg/ha	105
Nitrate mg/l	3	Phosphorus kg/ha	29
Phosphate mg/l	0.1		
Chloride mg/l	16.31		

Both water and soil physico-chemical characteristics are interconnected and play a crucial role in the health of ecosystems, agriculture, and overall environmental sustainability. Regular monitoring of these parameters helps manage and mitigate environmental issues effectively.

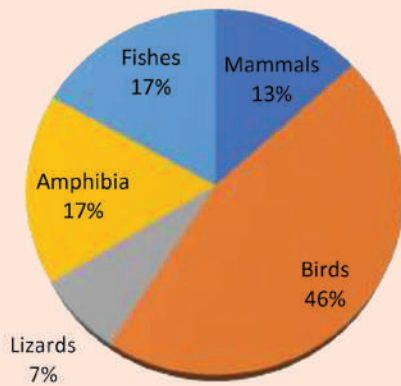




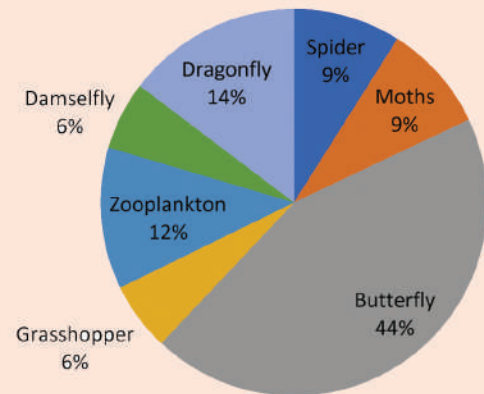
## Rich faunal diversity of the university campus

The University of Science & Technology Meghalaya boasts a rich faunal diversity, including 11 mammals, 38 birds, 6 lizards, 14 amphibians, and 14 fish, reflecting a robust and balanced ecosystem. Additionally, the campus is home to a wide array of arthropods and aquatic organisms, such as 22 spider species, 22 moth species, 108 butterfly species, 14 grasshopper species, 19 zooplankton species, and 50 odonate species. This diversity highlights the health of the campus ecosystem, with butterflies and odonates serving as key bio- indicators of environmental stability and water quality.

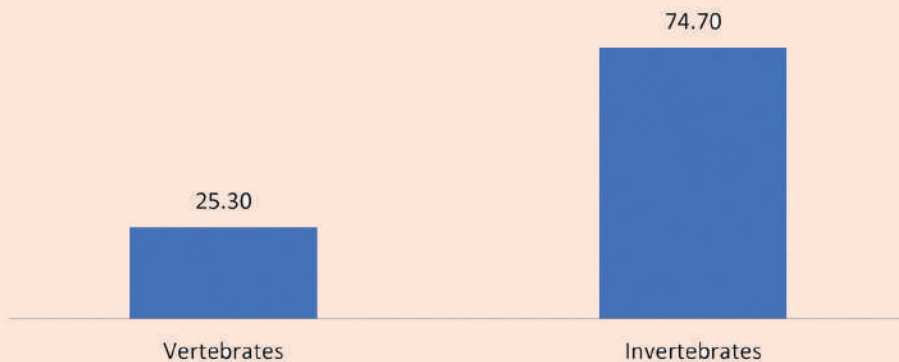
### Vertebrate Diversity



### Invertebrate diversity



### Vertebrate-Invertebrate Ratio



To further protect and enhance this biodiversity, the university has set several future goals:

1. **Habitat Restoration and Enhancement:** Restore natural habitats and remove invasive species to support diverse species.
  2. **Establish Conservation Areas:** Designate and protect specific campus areas as conservation zones, including the development of a butterfly park.
  3. **Promote Sustainable Practices:** Minimize environmental impact through reduced chemical use and responsible waste management.
  4. **Enhance Biodiversity Monitoring:** Develop comprehensive inventories and utilize technology for regular biodiversity assessments, supported by student dissertation work.
  5. **Educational Outreach and Community Involvement:** Increase awareness and engagement through workshops, educational materials, and NSS programs.
  6. **Collaborate with External Organizations:** Partner with local and regional conservation groups for shared efforts and knowledge.
  7. **Support Research and Innovation:** Encourage research on ecosystem health and species conservation, with ongoing environmental monitoring innovations.
  8. **Develop a Biodiversity Action Plan:** Create and update a structured plan with clear objectives and timelines.
- These initiatives underscore the university's commitment to maintaining a vibrant, healthy ecosystem and supporting the diverse life forms on its campus.

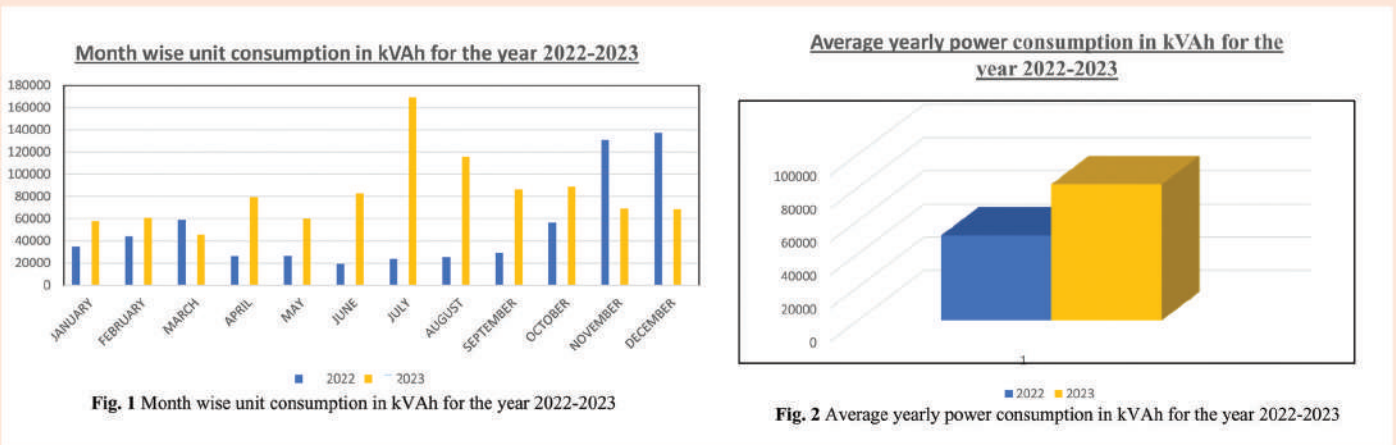


## Energy And Electricity Audit of USTM

Energy and electricity audit covers the aggregate consumption of power on the campus. It covers consumption of natural gas and fuels especially diesel in the different academic and administrative blocks, shopping complex, hostels and auditorium. It tries to decipher if renewable energy sources like solar energy facilities are available on the campus. Moreover, since LED lights are more environmentally sustainable than CFL and fluorescent bulbs, the audit evaluates the percentages of CFL, LED (bulb and tube light) and fluorescent (bulb and tube light) used on the campus.

In the words of Energy Conservation Act, 2001, energy audit is “The verification, monitoring and analysis of the use of energy including submission of technical report containing recommendations for improving energy efficiency with cost benefit analysis and an action plan to reduce energy consumption”.

Fig. 1 shows the month wise unit consumption in kVAh for the year 2022-2023. In aggregate, the average monthly power consumption in the campus in 2022 was 51040 kVAh while in 2023 it is found to be 81950 kVAh due to the addition of new infrastructure and facilities as shown in Fig. 2.



The survey finds that on average, the Administration block and the Academic blocks of the University has 70% of LED tube lights and bulbs, 20% of CFL lights and 10% of fluorescent tube lights respectively, whereas the counterpart has 70% of LED tube lights, 11% of LED bulbs, 44% of CFL lights and 13% of fluorescent tube lights. Further for the conservation of energy, the University has standalone solar street light facility. It has 50 nos. of 12 Watt, 10 nos. of 15 Watt and 6 nos. of 30 Watt solar street lights. Recently, the University has installed a solar generating plant in the campus with a generation capacity of 5.2 kW of power. Moreover, the University has installed a 20 kW hybrid solar plant at Block-D, which has been utilized for the entire computer laboratories resulting in an annual energy saving of 19,200 units and financial savings of Rs. 2,07,360 p.a. The annual energy saving potential at the University is approximately 1,01,602 kWh and a financial savings of about Rs. 9.81 lakh with an effective payback period of 5.1 years.

The University has installed a Rain Water Harvesting Plant at Boy’s Hostel-B, having capacity of 15,000 Litres during rainy season and it may save the water pump consumption of 61.6 kWh and energy financial savings of Rs.580 per day.

The University has installed the motion sensors for the illumination at the area of hostel toilets and Administrative Block and it saves the energy consumption in illumination.





## Future Action Plan for 2030

A vision for the biodiversity of the university campus would focus on creating a thriving, sustainable environment that supports diverse plant and animal species. By incorporating native vegetation, creating green spaces, and preserving natural habitats, the campus can become a living ecosystem that fosters biodiversity. Key initiatives which will include:

### Plan for 2024-25

- 1. Green Cover :** Increase green cover in developmental areas around the boundary and the roads
- 2. Water Harvesting:** No. of ground water well recharging to increase to five connected with new buildings thought networking of Pipelines.
- 3. Plantation Drive :** Massive plantation Drive of Leafy trees to be taken up.
- 4. Periodic Maintenance:** All Waste Management installation & Equipments to be maintained.
- 5. Air Quality Monitor :** To be replaced as the existing equipment is malfunctioning due to damage by recent rain.
- 6. Bio Gas Plant :** To be relocated for convenience of operation.
- 7. Solar Energy :** Install more solar energy panels in all building roof top to support Day lighting and fan/ac load.

### Plan for 2025-30

**Rain Garden:** Existing Rain gardens or Bio retention basin in different slopes of the campus will be upgraded and new species will be introduced which will include sphagnum, moss, Indian Bee Balm (*Monarda citriodora*), Indian Feather Grass (*Stipa elegantissima*), Indian Ginger Lily (*Hedychium coronarium*), Indian Paintbrush (*Castilleja* spp), Indian Mock Strawberry (*Duchesnea indica*), Indian Hawthorn (*Rhaphiolepis indica*), Indian Shot (*Canna indica*), Indian Coral Jasmine (*Nyctanthes arbor-tristis*) etc.

(A rain garden is a garden of native shrubs, perennials, and flowers planted in a small depression, which is generally formed on a natural slope. It is designed to temporarily hold and soak in rain water runoff that flows from roofs, driveways, patios or lawns. Rain gardens are effective in removing up to 90% of nutrients and chemicals and up to 80% of sediments from the rainwater runoff. Compared to a conventional lawn, rain gardens allow for 30% more water to soak into the ground. A rain garden is not a water garden. Nor is it a pond or a wetland. Conversely, a rain garden is dry most of the time. It typically holds water only during and following a rainfall event. Rain gardens are eco-friendly landscapes that promote water conservation, biodiversity, and sustainable living. By incorporating trees and a carefully selected array of rain garden plants, you can create a visually stunning oasis that serves as a habitat for wildlife, filters pollutants, and enhances the overall resilience of the ecosystem. Explore reputable online sources to buy plant seeds, and embark on your journey to transform your outdoor space into a flourishing rain garden that harmonizes with nature)

**Native tree species plantation drive:** *Alnus Nepalensis* (Alder) which has high water retention capacity will be planted in the campus to absorb rain water efficiently. Sapplings of few other trees like Neem, Asoka, Acacia (Babool), Peepal, Banayan, Jamun, Indian Laurel Tree etc will be introduced in the campus.

**Bamboo Fencing:** *Bambusa bambos*, a species of thorny, thick, and sturdy bamboo, makes an ideal natural barrier when grown along the edges of cultivated land. It acts as a durable, living fence with excellent water retention capabilities. Environmentally friendly and sustainable, this bamboo not only contributes to the ecosystem but also provides a natural, organic look. Using bamboo fencing around the campus will be a sustainable solution that enhances both the functionality and visual appeal of the boundary.

**Rain water harvesting:** Additional rainwater harvesting tanks will be installed in every building, complementing the existing ones, to maximize the collection and storage of rainwater. This strategy will help meet the campus's water supply needs, prevent water runoff, and promote a sustainable water storage solution.

**Native Plant Landscaping:** we will prioritize planting indigenous species to support local wildlife, improve soil health, and reduce the need for water and chemical inputs.

**Pollinator-Friendly Spaces:** Pollinator gardens with flowering plants that attract bees, butterflies, and other pollinators to enhance biodiversity will be established in the campus.

**Green Infrastructure:** Integrate green roofs, walls, and other eco-friendly infrastructure will be developed in the near future to promote habitat diversity while reducing the campus's carbon footprint.





## COUNCIL MEMBERS

### Expert Members



**Dr Ram Boojh**

Former Advisor, UNESCO, New Delhi



**Shri. C. P. Marak IFS (Retd.)**

Executive Chairman MBOSE & Former, Principal Chief Conservator of Forests & HOFF and Principal Secretary to the Govt. of Meghalaya, Forests & Env. Deptt.



**Prof. Sanjay Deshmukh**

Former Vice Chancellor, Mumbai University



**Prof S.C. Garkoti**

Pro Vice Chancellor  
JNU, New Delhi



**Prof K.G. Saxena**

Former Dean, School of Enviro. Science  
JNU, New Delhi



**Dr K.S. Rao**

Former Head, Deptt. of Botany  
University of Delhi, New Delhi



**Dr B.K. Tiwari**

Former Dean, School of Human &  
Environmental Sciences, NEHU, Shillong

### Internal Committee

- ▶ **Prof. G. D. Sharma**, Vice Chancellor, USTM  
Specialised in Microbial Ecology and Technology
- ▶ **Dr. R. K. Sharma**, Advisor USTM  
Former CSIR Scientist in Medicinal and Aromatic Plants
- ▶ **Dr. Balendra Das**, Pro Vice Chancellor, USTM  
Experienced in teaching & Research in Fish & Fishery Biology
- ▶ **Prof P.K. Baruah**, Professor, Department of Botany  
Experienced in teaching and research in Plant Microbiology
- ▶ **Dr. Mehjabeen Rahman**, Principal Secretary, USTM  
Expert in Wildlife Management and Conservation
- ▶ **Er. Debasish Saha**, Director IQAC & Operation, USTM  
Lead Mechanical Engineer with experience in industries.

### Sub Committees

#### Flora Monitoring Committee

- ▶ **Dr. Moutushi Das**, Assistant Professor Department of Botany  
Experienced in teaching and research in Plant Ecology; phytoremediation; phycology;  
Algal Biomass production; Recycling; Cultivation, harvesting and extraction of Bi-products; bio-fertilize
- ▶ **Dr. Nazir Bhatt**, Assistant Professor, Department of Botany  
Experienced in Teaching and Research in Plant Taxonomy and Systematic plant Anatomy,  
Plant Physiology, Ethno Botany and Phyto chemistry
- ▶ **Dr. Bhaskar Saikia**, Assistant Director, Green Mission  
Expert in Plant Taxonomy and Biodiversity

### Advisory Committee

- ▶ **Dr. N.K. Chaudhury**  
Former VC, Gauhati University
- ▶ **Prof D P Agrawal**  
Former Chairman, UPSC
- ▶ **Prof. Ved Prakash**  
Former Chairman, UGC
- ▶ **Dr. R. K. Sharma**  
Advisor USTM
- ▶ **Er. Fidel War**  
Former Chairman, MPSC, Shillong
- ▶ **Prof. Saurabh Basu**  
Dean Outreach, IIT-G



## Fauna Monitoring Committee

- ▶ **Dr. Balendra K. Das**, Pro Vice Chancellor, USTM  
Experienced in teaching & Research in Fish and Fishery Biology
- ▶ **Dr. Prabal Sarkar**, Associate Professor, Department of Zoology  
Specialized in Wildlife Ecology and Conservation Wildlife Forensic Wildlife Laws Environmental Management Nanotechnology and Climate Change
- ▶ **Mr. Sudipta Nag**, Assistant Professor, Department of Zoology  
Expert in Teaching and Research in Animal Ecology and Wildlife Biology

## Energy Use Committee

- ▶ **Dr. P. K. Pathak**, HOD Engineering & Technology  
Specialised in Watershed Management & Flood Control
- ▶ **Mr. Hrishikesh Sharma**, Assistant Professor Engineering & Technology  
Expertise in Electric Drives & Electric Vehicles etc.
- ▶ **Dr. Priyanko Protim Gohain**, Assistant Professor, Engineering & Technology  
Expertise in Energy Technology, Synthesis of nanomaterials & Biofuel synthesis

## Water Usage & Treatment Committee

- ▶ **Dr. Samikhu Sangmai**, Assistant Professor, Department of Earth Science  
Specialised in Remote Sensing and GIS, Wildlife Sciences, Environment & Sustainable Development
- ▶ **Dr. Lalit Saikia**, Assistant Professor, Department of Earth Science  
Specialised in Environmental Chemistry, Water resources engineering, Hazards & Disaster management
- ▶ **Dr. P. K. Pathak**, HOD Engineering & Technology  
Expertise in Watershed Management & Flood Control

## Forest Cover and Land Cover Committee

- ▶ **Dr. Nazir Bhatt**, Assistant Professor, Department of Botany  
Experienced in Teaching and Research in Plant Taxonomy and Systematic plant Anatomy Plant Physiology, Ethno Botany and Phyto chemistry
- ▶ **Dr. Nibedita Paul**, Associate Professor, Department of Social Work  
Expertise in Social Anthropology and experienced in research and industry
- ▶ **Dr. Swarup Kr. Baishya**, Assistant Professor, Department of Earth Science  
Specialised in Fluvial Geomorphology, Geo informatics, Geomorphology and Environmental Studies.

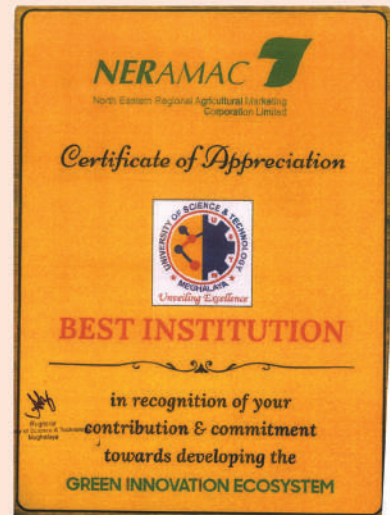
## Pollution Monitoring Committee

- ▶ **Professor Enamul Karim**, Dean, School of Applied Sciences, USTM  
Experienced in teaching and research in synthetic organic chemistry and chemical kinetics.
- ▶ **Er. Debasish Saha**, Director IQAC & Operation  
Lead Mechanical Engineer with experience in industries.
- ▶ **Dr. Lalit Saikia**, Assistant Professor, Department of Earth Science, USTM  
Specialised in Environmental Chemistry, Water resources engineering, Hazards & Disaster Management





## Awards & Recognitions



## Clean Campus, Green Campus





## **Campus**

**Techno City, Khanapara, Kling Road, Baridua, 9th Mile, Ri-Bhoi, Meghalaya-793101**

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