



SWAMI VIVEKANANDTM
SUBHARTI
UNIVERSITY
Approved by UGC *Where Education is a Passion...*



University's Best Practice

'Save Nature to Sustain Life'

The Objectives

1. Natural Resource Conservation:

- To implement energy-saving measures such as upgrading LED lighting and installing renewable energy systems and adopt sustainable land management practices by implementing water conservation measures like installing low-flow appliances, rainwater harvesting systems, and drought-resistant landscaping

2. Promoting Environmental Awareness:

- To plan activities to raise awareness such as seminars, workshops, and lectures to educate university students about the relationship between human existence and the natural world. and work together with environmental groups to organise events that highlight environmental problems and their solutions.

3. Biodiversity Conservation:

- To carry out habitat restoration efforts in order to build or improve ecosystems that supports the local flora and fauna; to provide a healthy habitat for them in order to protect biodiversity and encourage ecological resilience.

4. Solid Waste Management:

- To implement a comprehensive waste management program encompassing waste reduction strategies, recycling facilities and establish partnerships with local recycling centers and waste management agencies to ensure effective recycling and waste diversion
- To provide education and training to promote waste minimization, reuse, composting, and proper disposal practices.

5. Development of Green Infrastructure

- To implement green infrastructure projects like green pathways, permeable pavements, and bioswales to control storm water runoff and enhance urban biodiversity and cultivate campus green spaces, botanical gardens, and arboretums to boost biodiversity.

6. Education and Research:

- To include environmental sustainability into academic programs covering all disciplines, providing opportunity for research, courses, and practical experiences pertaining to environmental responsibility and conservation.
- To support student-led initiatives, research projects, and community outreach efforts focused on environmental conservation, as well as interdisciplinary research collaborations addressing pressing environmental challenges and developing innovative solutions for sustainable development.

7. Community Engagement:

- To coordinate volunteer opportunities, service-learning initiatives, and outreach events that engage community members in environmental stewardship and hands-on conservation activities.
- To cultivate partnerships with local communities, government agencies, NGOs, and corporations in order to work together on environmental conservation programs and initiatives.

8. Policy Advocacy:

- To advocate for the adoption of environmentally friendly policies and practices within the university, advocating for sustainability principles to be integrated into institutional policies, strategic plans, and governance structures.

9. Carbon Footprint Reduction:

- To evaluate the university's carbon footprint and identify the primary emission sources, greenhouse gas inventory and design and execute a carbon reduction strategy that includes the implementation of energy efficiency measures, the incorporation of renewable energy, transportation, and development of carbon offset initiatives.
- To encourage the university community to participate in carbon reduction initiatives by means of awareness campaigns, behavior change initiatives, and incentives for sustainable transportation options and energy conservation.

10. Monitoring and Evaluation:

- To define key performance indicators (KPIs) and metrics for monitoring advancement towards sustainability goals.
- To establish monitoring and evaluation methods to assess the effectiveness of conservation activities, pinpoint areas for enhancement, and measure the effects of interventions on biodiversity, resource conservation, waste reduction, and carbon footprint mitigation. Utilize stakeholder input and regular assessments to guide decision-making initiatives and continuously improve best practices for environmental conservation and sustainability.

The Context

The significance of preserving nature and fostering environmental sustainability has become more pressing in light of the growing global environmental challenges, including biodiversity loss, climate change, and ecosystem degradation. Our university, as a higher education institution, acknowledges its obligation to make a significant contribution to the resolution of these urgent issues and the promotion of a sustainable future for both present and future generations. Our campus, which is situated within a diversified ecological landscape, functions as both a microcosm of natural beauty and a hub of human activity. Nevertheless, the susceptibility of natural systems, the degradation of habitats, and the threat to biodiversity have all been significantly exacerbated by the unsustainable development practices, population growth, and rapid urbanisation that have impacted local ecosystems.

The 'Save Nature to Sustain Life' project is a necessary and fitting reaction to the environmental problems that our university group and society as a whole are currently facing. The primary objective of this project is to promote environmental responsibility, promote healthy living, and give people the tools they need to be good change makers by supporting the protection and repair of nature. The purpose and ideals of our university, which stress social duty, environmental sustainability, and the quest of knowledge for the good of society, are also in line with the best practice plan. Our institution's beliefs and activities are based on conservation and sustainability principles. We want to encourage others to do the same, set a good example, and create a school atmosphere that values and protects nature. The initiative highlights our commitment to promoting harmonious interactions between people and nature. We recognise that safeguarding biodiversity and the health of ecosystems is essential for the survival and prosperity of all living things on Earth, as human health and ecological health are closely linked.

Our Practices

To effectively implement the "Save Nature to Sustain Life" best practice initiative, a variety of practices which incorporate various aspects of university operations, education, and community engagement can be implemented. The following are a few examples of the University's initiatives on the ground to implement this best practice:

1. **Campus Biodiversity Enhancement:**

- Established gardens and green areas on campus to promote biodiversity and provide habitat for local plants and animals.
- Introduced native plant species to landscape designs to save water use and support the surrounding ecosystems.
- To preserve ecological balance, sustainable land management techniques were used, such as organic gardening and natural pest control.

2. **Resource Conservation and Efficiency Measures:**

- Installed renewable energy technologies, including solar panels, to mitigate carbon emissions and dependence on fossil fuels, in addition to energy-efficient lighting, heating, and ventilation systems. Implemented water conservation strategies, including the installation of drought-tolerant landscaping, rainwater harvesting systems, and low-flow fixtures/push taps, to reduce water consumption and protect freshwater resources.
- Conducted energy audits to identify opportunities for energy conservation and efficiency improvements in university buildings and facilities.

3. Waste Reduction and Recycling Programs:

- Implemented waste management strategies that prioritise reduction, recycling, and composting. Provided recycling bins and composting facilities on campus, as well as educational outreach to encourage correct trash disposal practices.
- Implemented steps to decrease single-use plastics, including prohibiting plastic water bottles and promoting reusable alternatives.

4. Environmental Awareness and Participation

- To promote environmental consciousness among students, faculty, staff, and the broader community, we organized environmental awareness campaigns and events.
- To encourage students to address environmental issues and spearhead sustainability initiatives on campus, student-led environmental groups have been created.
- To incorporate environmental sustainability into its curriculum across various disciplines, the institution offers courses, seminars, and sessions on topics including ecology, sustainable development, and biodiversity conservation.

5. Sustainability through research and innovative concepts:

- Supported interdisciplinary research projects and collaborations focused on environmental conservation, renewable energy, climate change mitigation, and sustainable development.
- Created research funding opportunities and scholarships for students researching environmental topics, fostering innovation and creativity in sustainability.
- Established partnerships with industry, government agencies, and non-profit organizations to leverage resources and expertise for addressing complex environmental challenges.

6. Policy Formulation and Advocacy

- Developed and implemented environmental sustainability guidelines that govern university operations, procurement practices, and campus development projects.
- Participated in sustainability-focused initiatives and networks, such as the Association for the Advancement of Sustainability in Higher Education (AASHE) or the United Nations Sustainable Development Goals (SDGs), to exchange best practices and collaborate on collective action.

7. Partnerships and Community Engagement:

- Collaborated with local communities, environmental organisations, government agencies, and companies to promote environmental conservation efforts.
- Engaged community people via volunteer opportunities, service-learning projects, and outreach activities to raise environmental awareness and action.
- Implemented community-based conservation efforts, including habitat restoration, tree planting, and environmental monitoring, to engage locals in conserving and preserving natural resources.

Swami Vivekanand Subharti University is instrumental in the advancement of sustainability and the preservation of nature for future generations as well as present by developing a culture of responsibility for the environment through the implementation of these practices

Evidence of Success

Environment provides clean air, water, and soil for life on Earth. It supports diverse flora and fauna in habitats, promoting planet health. However, the constant growth of urbanisation, industry, and agriculture has severely degraded these ecosystems, threatening their delicate balance. Deforestation, pollution, climate change, and habitat destruction are existential threats to our future. Human and environmental interaction emphasises the need for timely conservation efforts. Maintaining ecosystem services requires preserving natural habitats and promoting biodiversity. Nature preservation helps our quality of life by offering leisure, culture, and mental health.

As Earth's protectors, we must support environmental health policies and sustainable behaviours. Swami vivekanand subharti University encourages group action to solve environmental challenges by deepening relationships with nature and recognising its significance. Nature preservation protects the world and ensures a sustainable future for all living things. Act immediately to ensure our existence and future generations' well-being. We at Swami Vivekanand Subharti University have always been mindful of our responsibilities to the environment. In line with the "National Objectives," we have launched multiple projects aimed at creating a "Greener India" and taken countless actions to "awaken" our youth to their responsibility towards the environment.

Thrust Aspects: The following initiatives have been taken up for improvement of the surrounding environment.

1. Paperless Reforms.
2. Battery-operated Vehicles.
3. Solar Power Generation
4. Rainwater harvesting system
5. Sewage treatment plant

6. Effluent treatment plant
7. Sensor-based lights
8. Reclaiming the waste
9. Segregate and recycle
10. Awareness, Encouragement and Involvement

1) **Paperless Reforms:**

- a. 'Every year, some 15 billion trees are felled to produce paper. In order to transition the institution to a paperless operating system, our internal IT department has created multiple ERP modules so that the majority of operations take place "computer to computer."'.
- b. "KIOSKS" are installed, allowing students to access their accounts and encourage them to submit entries, ask questions, make payments, and other online activities. We've started a **"Subharti App"** to further bolster our campaign.

There are places when you need paper. Next, using rough or single-sided paper is suggested. Students are encouraged to take prints on both sides to maximize the area of the paper they are utilizing.



STUDENT USING THE 'KIOSK'

2) **Battery Operated Vehicles:**

Another method of protecting the environment is to mitigate the pollution generated by a variety of activities. In the same vein, we advocate for the utilisation of battery-operated vehicles. The university operates 44 electric vehicles, including carriages, bicycles, battery-operated rickshaws and e-buses, for on-campus transportation. Additionally, our employee and students are encouraged to construct and employ the same.



BATTERY OPERATED VEHICLES

- a. E Cycle:** Our Subharti Institute of Engineering students have successfully created and even produced an e-bike. The e-cycle employs rechargeable batteries to supplement the rider's pedal force. It can go up to 25 km/h at its fastest. In addition to providing exercise, e-bikes enable riders to take brief rests from pedaling. This can lower fatalities in individuals with coronary heart disease by about 27%, according to research, which is why the university plans to include it in cardiac rehabilitation programs.

News on the E-Cycle made by our student.



- b. Twin Bicycle:** Nothing compares to the pure joy of riding a bicycle, as John F. Kennedy so eloquently put it, and it's even more enjoyable when you ride with a companion. Dr. Krishna Murty, a distinguished Subharti Medical College alumnus, invented the twin bicycle, which also has an industrial design.



Children enjoying a ride on the TWIN BICYCLE

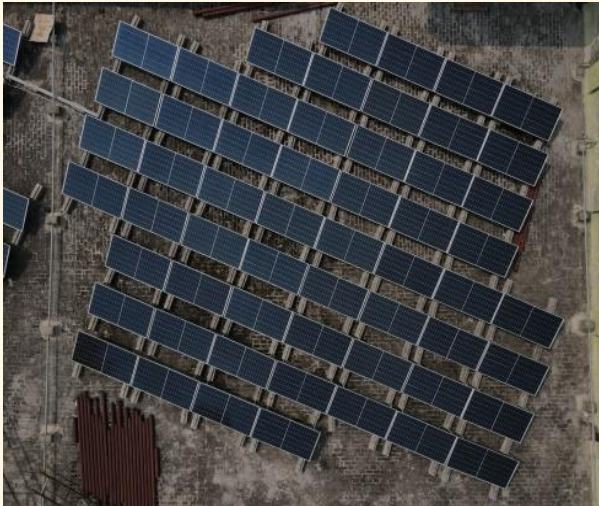
(Registration Number 306717). The twin cycle is accessible within the campus for usage by both residents and nonresidents. Residents of the campus have taken to riding the twin cycle in the evenings instead of using any other mode of transportation. The bicycles are available for homeowners to grab from the assigned parking spots and drop off at additional parking spots. Similar to how carpooling has grown in popularity, residents prefer cycle pooling.

c. Garbage Van: The mechanical engineering department students constructed the university's completely automated, electrically powered garbage van. This van assists in gathering and disposing of all of the university's trash in the proper location.



The Launch of Garbage van

Solar Power: The university has been slowly putting in solar panels for power, lights, and other things. We have installed solar systems with a capacity of 2 MW of solar energy, which is working efficiently and producing approximately 24 lakh units of solar energy per year. With this assistance, we have successfully conserved over 1286 tonnes of carbon dioxide emissions. Additionally, the university has initiated the installation of over 1.9 MW of solar energy systems on campus. With an aim of maximum dependency on no conventional energy resources We are considering global environmental changes and sustainable development.



c. **Solar Rickshaw:** The students at Subharti Technical Campus have also built a solar-powered e-Rickshaw. It is directly powered by the sun, has electric motors that power it, and solar panels that are placed on the vehicle allow it to work while the vehicle is moving. There is no need for batteries because the sun panels power the motor directly. The only thing these rickshaws are used for is getting rid of trash. There are two solar rickshaws operating on campus right now, and work is being done to remake them because they look too big the way they are now.

d. **Solar-based water purifier:** Students at the Subharti Technical Campus built and put up a solar water purifier next to the office of the Vice Chancellor.

Sun radiation treatment and water distillation, along with sun heating, are used to clean the water. The solar energy collector, the solar distillation system, and the solar water disinfection system are the three major parts of the system. The solar energy collection takes in the sun's rays and turns them into heat for the solar distillation process. Using solar radiation, a solar water disinfection device can turn low-turbidity, microbiologically contaminated water into water that can be drunk. The main benefits that come with are Free energy from the sun that works well and doesn't need much upkeep. But it can't make a lot of things, so the kids are working on making it better.



e. **Solar water heater:**

The students of Subharti University build solar water heating systems. These water heaters are installed in the University's boys and girls hostels. Solar thermal collectors absorb thermal energy from incident solar radiation and transfer it to water. The fundamental elements of

solar water heating systems include solar thermal collectors, storage tanks (to store the heated working fluid/ heated water), and piping systems to move heated water and working fluid between collectors, storage tanks, and buildings.

3) Rainwater harvesting system:

Subharti University has a total of 33 rainwater harvesting pits on the campus. Rainwater harvesting is the process of saving and collect rainwater through natural resources and to cater to the shortage of water in the future. Water harvesting is very useful to meet various needs like recharge of groundwater, reducing the electricity consumption in supplying water and supplying simple water at any time whenever it is required.



4) Sewage treatment plant (STP):

Water is a basic necessity of life and is used for many purposes so, recycling water is necessary. Considering this in mind our university has installed one sewage treatment plant with a capacity 1.1 ML/Day. The treated water is mainly used for cleaning and irrigation purposes.



Effluent treatment plant (ETP):

ETP is a process designed for treating industrial wastewater for its reuse or safe disposal to the environment and to meet the standards for the emission or discharge of environmental pollutants from various set-ups set by the Government. Our university has 2 ETP installations at the campus. One ETP has a capacity of 10,000L/day and another one is of 30,000L/day.



5) **Sensor-Based Lights:**

Our students promised to use newer ways to save energy and we're sure that every bit of energy they saved could be used again in the future. Electronic motion detector-based sensor lights have been put up in 125 different places on the University grounds with help from students at the Subharti Institute of Technology and Engineering. Motion monitors are used to turn on street lights and lights inside for hallways, lobbies, and stairs. These lighting systems save energy because they only turn on the lights for a set amount of time, after which the person has probably left the area.



6) **Reclaiming the Waste:**

Many of our students want to start their blogs like our founder, Subharti, who has many skills and is writing one called "busy bee" (<https://subharti.org/blog/category/busybee/>). Students in the interior design



area of the Faculty of Fine Arts have been using "scrap" to make sculptures and other works of art. This changes the way people think about innovation and cuts down on waste. Lamp shades made from trash, cartoon figures made from old newspapers, a sculpture of a man carrying trash, and many more are all examples of this.



SCULPTURES AND ART PIECES MADE FROM SCRAP

7) Segregate and Recycle:

The University starts, promotes, and makes sure that trash is properly separated and thrown away.

Together with that, we get our kids involved in turning the green waste into compost.



DUSTBINS FOR RESIDENTS FOR SEGREGATION OF WASTE

BIO FERTILIZER
PROGRAMME
(BIOCOMPOST,
VERMICOMPOST)



- a. **Bio compost:** The University, using NADEP and pit composting methods, converts most biodegradable waste into bio compost.
- b. **Vermicompost:** A place has been set aside at the University for making vermicompost. Agricultural students from the Faculty of Science are required to take part in both projects so that they can learn and be inspired to do the same things at home. This is also done to raise awareness.

8) **Encouragement, Awareness, and Involvement:**

- a. We celebrate all kinds of days, like "Plantation Day" and "Environment Day." To help our students understand how important nature is, we ask them to plant seeds and give trees.



Plantation of Saplings



- b. The University gives planters to all of its events and tells its students not to pick flowers and to support plant growth.



Welcome of guests with Saplings

- c. Regular blogs and Facebook efforts to use eco-friendly items, such as "own cloth bags" instead of plastic ones, "carry your bottles" instead of plastic ones, "don't use single-use plastic," and so on.



Few snapshots of blog

- d. Students take part in events like "nukkad natak" and "poster competitions" that have these kinds of themes to help them think about how to make India "green."



Skit



Poster Competition

FEW MORE GLIMPSES



सुभार्ती विश्वविद्यालय में विड़ियों को पिंजरे से आजाद कर विश्व पर्यावरण दिवस भव्य रूप से मनाया गया

श्रीकांत झा सुभार्ती विश्वविद्यालय में पर्यावरण दिवस के अवसर पर विड़ियों को पिंजरे से आजाद कर विश्व पर्यावरण दिवस भव्य रूप से मनाया गया। इस कार्यक्रम में सुभार्ती विश्वविद्यालय के विड़ियों को पिंजरे से आजाद कर विश्व पर्यावरण दिवस भव्य रूप से मनाया गया।

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Subharti University: A message of environmental protection on World Car Free Day

Transparent News Bureau Subharti University is a car-free zone. The school members within the campus are providing multi-modal transport during the summer season. The campus also promotes sustainability by renovating old buildings and installing energy-efficient lighting. University and health members are encouraged to walk and cycle to work. The open space of the campus is used for various activities and sports. The Vice-Chancellor of Subharti University, Dr. Shikha Singh, said that the university is committed to environmental protection and sustainable development. She said that the university is a car-free zone and encourages students to walk and cycle to work. She also said that the university is committed to environmental protection and sustainable development.



मेरठ। सुभार्ती विश्व विद्यालय में पर्यावरण दिवस के अवसर पर 'अवनी, हर्षिता और निशाद बने विजेता' नामक प्रतियोगिता का आयोजन किया गया। इस प्रतियोगिता में सुभार्ती विश्वविद्यालय के विड़ियों को पिंजरे से आजाद कर विश्व पर्यावरण दिवस भव्य रूप से मनाया गया।



Meerut, Uttar Pradesh, India
XJ4M+XM9, Meerut, Uttar Pradesh 250002, India
Lat 28.957437°
Long 77.63426°
05/06/23 08:39 AM GMT +05:30

Problems Encountered and Resources

Problems Encountered in the "Save Nature to Sustain Life" Initiative

1. **Resource Availability:** Difficulty sourcing sustainable materials and a shortage of skilled personnel hinder project efficiency.
2. **Financial Constraints:** Limited budgets and challenges in securing grants affect the scale of initiatives.
3. **Collaboration Challenges:** Bureaucratic hurdles and misaligned goals complicate partnerships with local organizations and communities.
4. **Project Implementation Hurdles:** Logistical issues and management challenges delay project execution.
5. **Carbon Footprint Challenges:** Accurately assessing carbon emissions and encouraging sustainable behavior changes are significant hurdles.
6. **Educational Integration Barriers:** Integrating sustainability into the curriculum faces resistance and requires resource allocation.

Resources Needed for Improvement

- **Increased Funding:** More financial support for sustainability projects.
- **Training Programs:** Skill-building initiatives for staff and students.
- **Expert Partnerships:** Collaborations with environmental organizations for guidance.
- **Educational Materials:** Resources for awareness campaigns.
- **Infrastructure Investment:** Funding for waste management systems and energy-efficient facilities.