



VIT[®]

Vellore Institute of Technology

(Deemed to be University under section 3 of UGC Act, 1956)

SDG 13 Climate Action

Annual Report 2018-19

13 CLIMATE ACTION



Take urgent action to combat climate change and its impacts

Vellore Institute of Technology

Vellore – 632014

Tamil Nadu, India

www.vit.ac.in



Report of VIT-Vellore Campus

GOAL 13: Climate Action...

A. Preamble

Climate change is affecting national economies, People are experiencing changing weather patterns, rising sea levels, and extreme weather events. These include all the elements that we usually associate with the weather, such as temperature, wind and precipitation. The speed and scope of climate-related changes can have various consequences on the ecosystems and on human activities.

In Vellore Institute of Technology, efforts are made to save mother earth for future generations through sustainability initiatives for conservation and scrupulous use of water, soil, air and other natural resources

Rain Water harvesting pond



B. Rainwater harvesting:

VIT maintains a huge lake which is used for storing water during the rainy seasons. There are more than 100 rain water harvesting units throughout the academic as well as hostel premises. The E2PC (Energy and Environment Protection Club) strives to create awareness among the student community about the importance of green and clean campus. The club celebrates every year, The Earth Day, by switching off lights for two minutes. The institute promotes sound environmental management policies and



practices by following the guidelines legislated by State and Central Government bodies.

C. Transportation Facilities and Carbon Footprint Reduction

Air pollution is a matter of serious concern in the campus owing to its urban location. VIT, as a responsible institution understands the importance of its carbon footprint and has developed a plan to reduce greenhouse gas emissions. The endeavor is to take leadership role in environmental stewardship and become one of the nation's first institutions of higher education to accept the goal of climate neutrality by undertaking Carbon Neutrality commitment. Majority of the students in the campus rely on public transport, indicating lesser carbon foot print of the student community. Also shuttle cabs services are provided within the campus to minimize the carbon foot print.

D. Green Belt Development and Landscape

Vellore Institute of Technology has already planted adequate numbers of saplings all along the periphery and inside the campus, roadways and available open spaces. The major aim of greenbelt development plan is to attenuate air pollutants released into the environment but it can also help in overall improvement in the environmental conditions of the campus. The plan will address the following issues such as attenuation of air pollution, noise reduction, improving the biodiversity of the region, adding aesthetics and combating soil erosion and prevention of land degradation. A well designed green-belt helps in intercepting particulate matter and gaseous pollutants and helps in purifying the air. Trees acts as effective barrier and absorber of noise. The green belt around the campus acts as an indicator in the event of release of gaseous emission by visible morphological changes in the leaves, stem etc. To accrue the benefits of greenbelt and to maximize its potential in environmental management around the campus, choice of the green belt tree and shrub species plays a vital role.



- No of Publications : 22
- No of Events, Workshops and Guest Lectures : **100**
- No of Extension Activities : **10**



Report of VIT-Chennai Campus

PREAMBLE

Climate change catastrophe is challenging to our earth. The most prominent monsoon system in the world is Indian monsoon, and our country faces numerous climate change calamities like flood, cyclones, droughts etc. Greenhouse effect also plays a major role in the expectation of climatic change and also sea level rise. There is a need in limiting global warming to avoid catastrophic consequences and also an approach to conflict the climatic change effect. There is a need for adapting many initiatives like green technologies, usage of resources in a better manner for controlling the climate change threat..

CLIMATE CHANGE ADAPTION

Research on Paleoclimatology, Paleoceanography, climate change and Gas hydrates has been carried out in VIT. Research and studies has been carried out on Last glacial-Holocene paleoclimatic and paleoceanographic evolution of Arabian Sea: Foramaniferal and Stable Isotopic Evidences, A high-resolution multi-proxy record of Neogene and paleoceanographic evolution of Southern Ocean link to Global Climate Change and Retrieval of ice velocity using Interferometry techniques to understand the ice dynamics and glacier stored water of Karakoram glaciers DST-SPLICE Climate Change Programme. A workshop has been attended on Integrating Precipitation Forecasts and Climate Predictions with Basin-Scale Hydrological Modelling in the Himalayas by the faculties of VIT. As a part of this, Atmospheric Process and climate change, Energy environment and climate change has been included in the curriculum. Research on Mean Shift Clustering Model for Rainfall Drop Size Distribution has also been carried out.



PLANTATION AND ENERGY CONSUMPTION

Energy And Environmental Protection Club and National Service Scheme of VIT engaged in the activities like plantation of tree in the campus, nearby villages and Arignar Anna Zoological Park Vandalur and Advanced Institute for Wildlife Conservation, Vandalur. Several awareness programmes has been organised by VIT for the environmental preservation and climate change. VIT involves in various practices adopting the green policy. The green initiatives promote sustainability in the institute. The energy conservation facilities, water conservation and water recycling facility contribute to the development and maintenance of the campus as a green campus.

ENERGY CONSERVATION- SOLAR POWER PLANT

- ✓ A solar water heater system of each 15,000 L capacity was installed in the roof of both Ladies and Men's hostel and thereby saving a lot of power.
- ✓ Single panel solar street lights (41 numbers), each having 95 W capacities are placed on the main streets.
- ✓ Hybrid type solar and wind based street lights (21 numbers), each having 2x45 w capacities is placed around on the streets around the Administrative building.



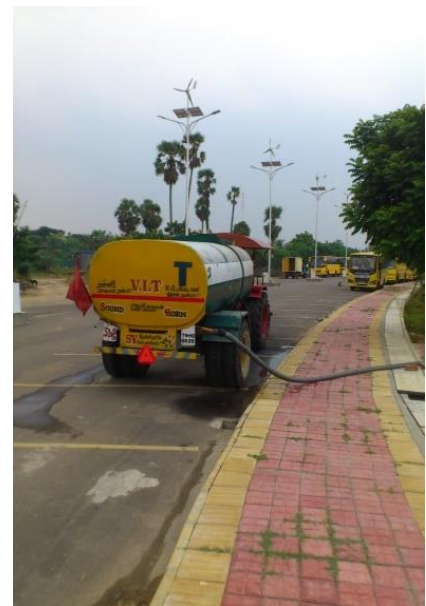
Solar water heater in Academic and Hostels building



Hybrid type (solar & wind) street lighting

GREEN BELT DEVELOPMENT

The lead role to green the campus is done through a dedicated Horticulture section of the University. The students also participate in their initiatives.



Water filling from the rainwater harvesting pond to a tanker to irrigate plants in the road median of the Vandalur-Kellambakkam road of 18 km length (Maintained by VIT Chennai)