



VISAKHA INSTITUTE OF ENGINEERING & TECHNOLOGY

(Sponsored by Varaha Lakshmi Narasimha Swamy Educational Trust, Regd. No.41/2007)

Approved by AICTE, New Delhi, Affiliated to JNTUGV-Vizianagaram & Accredited by NAAC

88th Division, GVMC, Narava, Visakhapatnam - 530 027.

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7.1.6.

Quality audits on environment and energy are regularly undertaken by the institution

INDEX

Reports on environment and energy audits submitted by the auditing agency:

S. No.	Description
1	Reports on environment and energy audits submitted by the auditing agency
a	Green Audit
b	Energy Audit
c	Environmental Audit

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Quality Audit Report

Objectives of the Audit:

Quality Auditing is a management tool comprising systematic, documented, periodic and objective evaluation of how well environmental organization, management and equipment are performing, with the aim of helping safeguard the environment by:

- i. Facilitating management control of environmental practices.
- ii. Assessing compliance with various policies which would include meeting regulatory requirements.
- iii. Sensitizing students about the growing environmental issues.

There are various Audits carried out at the institute which stimulated the environmental sustainability and evaluation.

1. Carbon and Energy Audit
2. Green Landscape Audit
3. Environmental (Water & Waste Management) Audit

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1. Carbon & Energy Audit

For calculating total emissions, Scope 1 & Scope 2 emissions are being considered.

Scope 1: Direct GHG Emissions

Direct GHG emissions occur from sources that are owned or controlled by the college, for example, emissions from combustion in owned or controlled DG sets, canteen, vehicles, etc.;

VIET Scope 1 emissions for 2022:

Sources of Scope 1 emissions in VIET:

- 1) LPG used for canteen
- 2) Diesel used for generator

S.No	Fuel Type	Description	Activity Data	Units	CO2 eq. Emissions (tons)
1.	LPG	Canteen	6.84	MT	20.38
2.	Diesel	Transportation	26.00	KL	68.64
3.	Diesel	Generator	4.50	KL	11.88

Total Scope 1 emissions of VIET : 100.90 Tons (for year 2022)


Scope 2: Electricity Indirect GHG Emissions

Scope 2 accounts for GHG emissions from the generation of purchased electricity consumed by a company. Purchased electricity is defined as electricity that is purchased or otherwise brought into the organizational boundary of the company. Scope 2 emissions physically occur at the facility where electricity is generated.

VIET Scope 2 emissions for 2022:

Electricity purchased from grid : 1,53,492

Scope 2 Breakup


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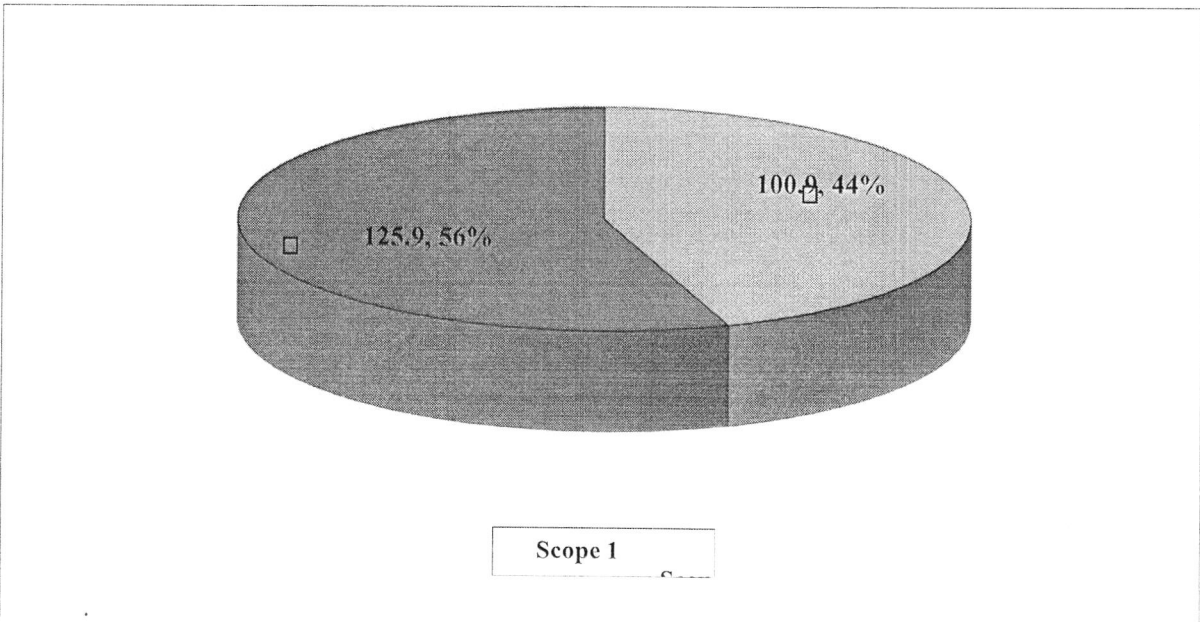
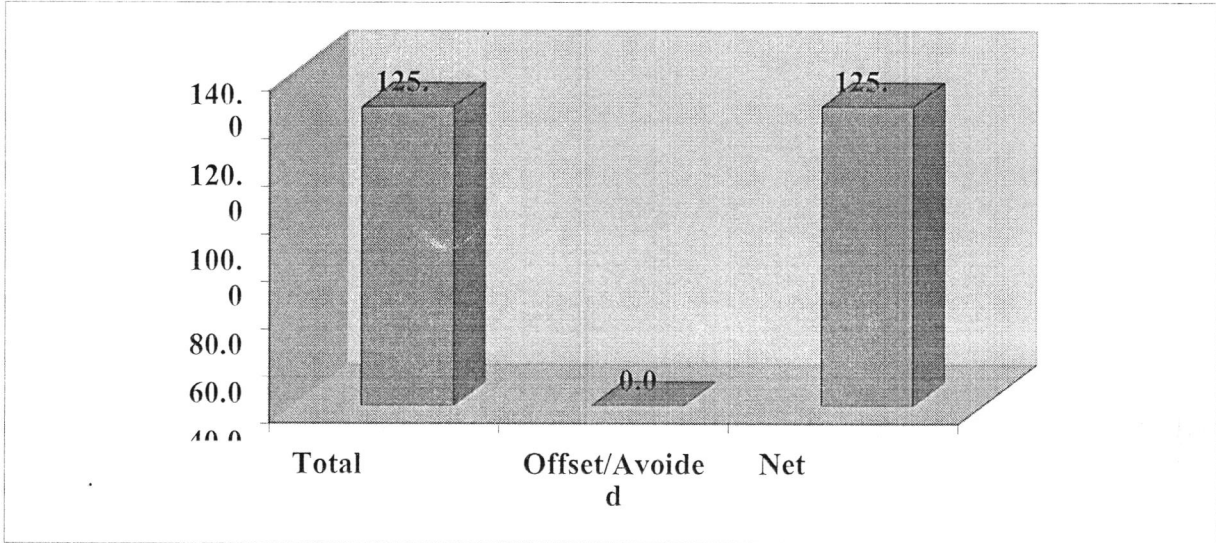
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Scope 1	100.90	MT CO2 eq.
Scope 2	125.90	MT CO2 eq.
Total	226.80	MT CO2 eq.


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ENERGY EFFICIENCY

Annual energy consumption of VIET campus is 1,53,492 units. There are major blocks in the campus which consumes energy for their operation. Major energy consumers are:

1. LED lamps
2. Air conditioners
3. Water heating in hostels

Recommendation:

1. Installing "Airtron", an energy saver that can be installed at every individual unit of AC.
2. Installing solar water heater for hostel hot water requirements.
3. Replacing Conventional Lamps with LED Lamps

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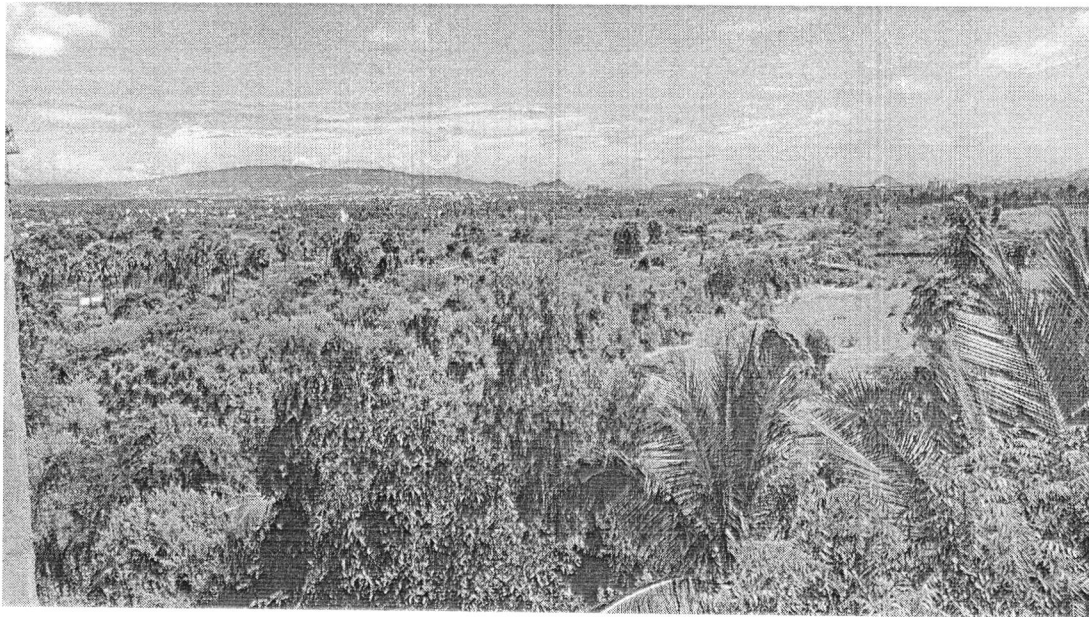


2.Green Landscape Audit

VIET carbon sequestration through plantation

Carbon sequestration through plantation is one of the important steps towards achieving carbon neutrality. In carbon footprint calculation of VIET, carbon sequestration through plantation is considered and due credit has been given.

No. of trees considered for calculation	: 200 trees
CO2 absorbed by a tree in one year	: 18 KG
Total CO2 sequestrated CO2 / year	: 200 trees x 18 KG of : 3,600 KGs of CO2




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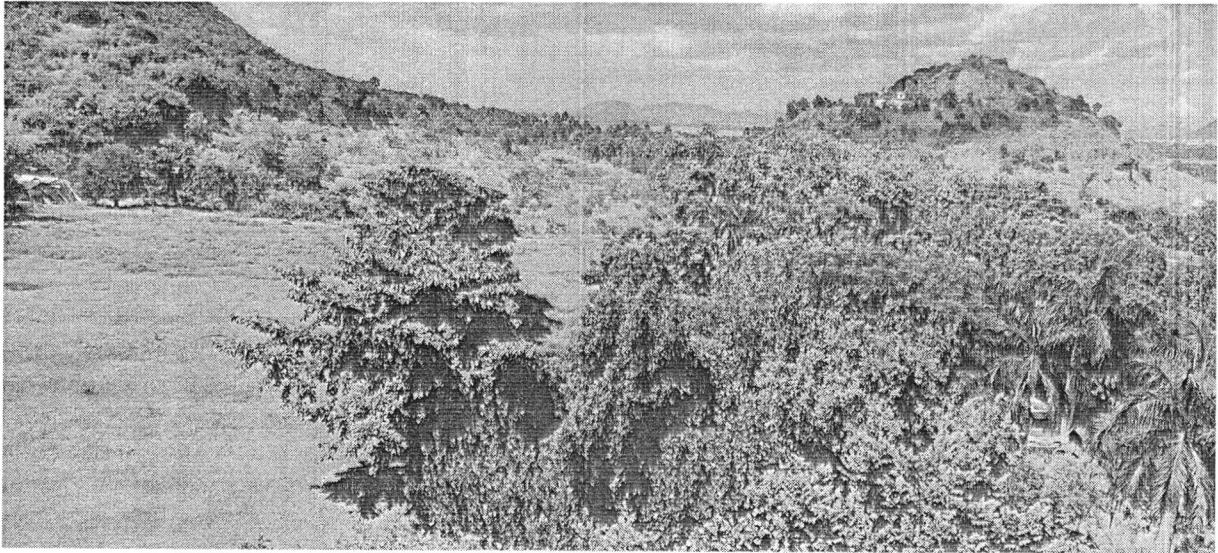
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Recommendations for Enhancing Flora in Campus

1. Implementation of Ecosystem Restoration
2. Enhancing Ecosystem Protection
3. Planting more fruit yielding trees
4. Increasing number of Native Plants in the Landscape area
5. Introducing more native species in Open Areas
6. Preventing/ Decreasing Invasive Alien Species Spread
7. Developing natural areas to encourage bird roosting and nesting in built-up areas
8. Introducing features to attract birds in the built-up areas
9. Improving measures for rainwater harvesting in paved and un-paved areas

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3.Environmental Audit

Water Conservation

To achieve a water positive status by continuous reduction of freshwater consumption should be the ultimate focus of VIET. Increased and focused attention should be given to attain water sustainability in future by inculcating the discipline of water conservation.

Fresh water consumption of VIET : 40 KL per
day (KLD) (calculated) Rainwater harvesting : carried out
for roof area

Recommendations for water conservation:

1. Waterless urinals
2. Volume reduction in flush tanks
3. Rainwater harvesting
4. Display water balance/conservation status at entrance of all blocks for overall involvement of all students & staff
5. Install water flow meter:

Waste Management

VIET has initiated waste management activities inside its facility. Separate bins have been provided for different types of wastes. Waste bins are provided throughout the campus and students are being urged to use the bins effectively.

Recommendation:

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1. The waste management yard must be maintained in a similar fashion as that of a raw material storage room.
2. Enhancing awareness creation, training and capacity building.
3. Achieving zero liquid discharge status.

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