



VIT[®]

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

SDG 11 Sustainable Cities and Communities

Annual Report 2018-19

11 SUSTAINABLE CITIES AND COMMUNITIES



Make cities and human settlements inclusive, safe, resilient and sustainable



Vellore Institute of Technology

Vellore – 632014

Tamil Nadu, India

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Report of VIT-Vellore Campus

GOAL 11: Sustainable Cities and Communities...

Clean River Palar:

The River Palar is the prime water resource for the Vellore City and nearby villages, which covers nearly about 4 kms in Vellore limit. The river Palar has been left unattended due to many unknown reasons and this provided opportunities for other ways of exploiting the water resource by dumping of solid and liquid wastes and growth of *Prosopis Juliflora*, a shrub which depletes the water table of river and water bodies etc., The Vellore Institute of Technology has initiated the Clean River Palar Project to restore the livelihood of the river, in collaboration with the Civil Society Organizations, Community Based NGOs, Merchant associations and Philanthropists in and around Vellore District.

The project implemented under the guidance of the District Collector and VIT, collaboration with District Public Works Department and Water Resource Department to clean and restore the habitat of the **River Palar**. Nearly around **1,14,00,000, Sq. feet** of ***Prosopis Juliflora* shrub** has been successfully removed from the riverbed and the restoration work nearly took 15 days which has been split into three phases, each phase has five days to cover the allotted area for removing and restore the river bed.





GAJA CYCLONE RELIEF WORK: NOVEMBER 2018

Cyclone is one of the most common and frequent disasters, and affects a large number of people in India. Our cyclone management system. Cyclone Gaja made landfall in South India, at Vedaranyam, Tamil Nadu. At the time of landfall of the cyclone, 100-120 kmph speed was experienced. The highest sustained speed was recorded in Adhirampattinam at 165 kmph and 160 kmph at Muthupet. The cyclone Gaja affected 08 districts of Tamil Nadu, namely, Nagapattinam, Thanjavur, Thiruvarur, Pudukottai, Karaikal, Cuddalore, Trichy and Ramanathapuram

Institution Responsibility Activity:

Centre for sustainable and rural development and research studies (CSR&RS) acts as a nodal collection centre for collection of disaster relief materials for the affected regions and handed over to pudukkottai district collector regimen.





UNNAT BHARAT ABHIYAN (UBA) : ADAPTATION OF VILLAGES FOR SUSTAINABLE DEVELOPMENT

Sl. No	District	Block	Name of the Village
1.	Vellore	Anaicut	Peenjamandai
2.	Vellore	K.V.Kuppam	Melmoil
3.	Vellore	Sholingur	Valli malai
4.	Vellore	Pernampattu	Melpatti
5.	Vellore	Kandhili	Perampattu

Participation in Grama Sabha for sustainable Development activities



Gram Sabha

A Gram Sabha was called in October 2018 which was attended by the BDO, four members of the VIT- CSR team, and more than 50 villagers including men and women of all age groups. Many problems were brought out through discussion. A few of these are as follows:

1. No proper roads in the village.
2. Severe shortage of drinking water
3. No drainage of wastewater (grey water). It flows through the streets resulting in all roads being slushy.
4. No place for putting garbage.

5. No primary health centre in the village.
6. Very few families have a toilet.

At the time of this meeting, the village had no panchayat. This village was always a part of a three-village panchayat and had generally been neglected and hence the village was very backward having lack or inadequacy of even basic amenities.

BASELINE SURVEY OF VILLAGES FOR DATA ANALYSIS



As part of UBA activities, VIT, Vellore decided to adopt a five villages. So as to help in proper planning of the development activities. Vellore district was chosen the 5 villages as close to proximity to VIT, Vellore and one Tribal Village. The prime objective of a meeting was to apprise the officers of the scope of the participation by VIT, Vellore in the upliftment of a village/village cluster. Accordingly the BDO was requested to identify a backward village in the block Vellore District and we started to focus the work by VIT, Volunteers team under UBA. And Baseline Survey is completed in all five adopted Villages.

Report of VIT-Chennai Campus

1. Preamble

The following is a comprehensive report on 'SDG 11 – Sustainable Cities and Communities' for Vellore Institute of Technology Chennai (VIT Chennai). SDG 11 deals with how universities act as custodians of heritage and environment in their communities. VIT Chennai adopts eco-friendly and green initiatives to promote sustainable practices in its lush and verdant campus. A few remarkable efforts include energy conservation, water conservation and wastewater recycling. The extensive research programs are other sustainable initiatives to uphold green values.

2. Policies/Major decisions regarding SDG 11

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. The policies or major decisions regarding SDG 10 are elucidated as follows.

2.1 Water Efficient Toilets

Conservation of water is a very important task of any organization and society. One of the key factors aligning to the conservation of water is the 'Water Efficient Toilets'. The salient feature of the Water Efficient Toilets includes:

- Availability of grey water (Recycled Water) for flushing in Toilets
- Availability of well-connected pipe network
- Availability of running Water – 24 Hours a day
- Exhaust and Air Vents in Toilets

2.2 Rainwater Harvesting & Solid Waste Management

Rainwater harvesting and water recharge pits have become a part and parcel of VIT Chennai.



Fig.1 – Rainwater Collection Pit



Fig.2 – Solid Waste Management Unit

2.3 Solar & Wind Powered Systems



Fig.3 – Solar Panels installed at the Roof-tops of the building



Fig.4 – Solar panels powered exterior (pathway) lightings



Fig.5 – Wind-powered exterior (pathway) lightings

2.4 Digital Library

VIT Chennai, Central Library has a Digital library, Video Conferencing facility and also provides classroom teaching through NPTEL video courses in the different fields of education. The subscribed e-resources are ProQuest-ABI/Inform Complete, ProQuest-Dissertation & Theses (ETD) Part A & B, Bentham Science, Heinonline, JSTOR, Lexis Nexis, Manupatra, Westlaw India SAE Tech. Papers, Springer Link, bibliographical databases Scifinder Scholar, and Scopus, e-books.

3. Academic details regarding SDG 11

The following courses are offered as part of B.Tech programs at VIT Chennai.

- CHY1002 – Environmental Sciences
- CLE1006 – Environmental Engineering
- CLE1016 – Urban Planning
- CLE2018 – Industrial Wastes Treatment and Disposal
- CLE2019 – Pollution Control and Monitoring
- CLE2020 - Solid Waste Management
- MGT1006 - Environmental and Sustainability Assessment

4. Major events organised

4.1 Lectures organized relevant to SDG 11

- A Guest Lecture is organized by School of Computing Science and Engineering on “Achieving a Smart and Sustainable City through Democratization of Data” on 11th September 2018 for the students of School of Computing Science and Engineering. The resource person is Prof. Dr. Ing.Sian Lun Lau, Head of Department/Assoc. Professor at the Department of Computing and Information Systems, Faculty of Science and Technology, Sunway University in Bandar Sunway, Malaysia. He is an expert in pervasive Computing, future mobile application and Context-Awareness. Other than research, He is also user and evangelist for Open Source Software. He has been actively involved with the FOSS initiative in Malaysia.
- The rise of the technologies such as cloud, analytics, and IoT has brought many exciting new ideas and development to our world. For example, Industrial Revolution 4.0 is getting more attention lately in many regions. Before we dive fully into the movement, it is good to re-look at the concept of “Smart” and to strategize how we should move forward. A new way of looking at the development of smart cities is to incorporate sustainability into everything surrounding it. One way to achieve this is to empower people in a community since people are one of the essential sources of data. Hence, the concept of IoP - Internet of People may help change some of our plans and strategies to build the next smart and sustainable city. This talk will present some points for discussion and look at challenges ahead.
- Prof. Dr. Ing.Sian Lun Lau also gave a lecture on “Human Computer Interaction and the collaborative research opportunities in the field” on 12th September 2018 for the CSE4015 - Human Computer Interaction. Sixty-eight students participated in this lecture.



Fig.6 – Photographs taken during the lecture entitled “Human Computer Interaction”
