GREEN AND ENVIRONMENTAL AUDIT REPORT

2020 – 2021

Devineni Venkata Ramana & Dr. Hima Sekhar

MIC College of Technology

ISO 9001:2015 Certified Institute
(Approved by AICTE & Permanently Affiliated to JNTUK, Kakinada)
Kanchikacherla - 521180, Krishna Dist, A.P, India.
Phone: 08678 – 273535, 273623, Fax: 08678 – 273569
E mail: dvrhsmic@mictech.ac.in, Website: www.mictech.edu.in

AUTONOMOUS
NBA-Accredited
B.Tech (CSE|ECE|ME)
Accredited by
NAAC With Grade A

Green and Environmental Audit Assessment Committee

Sl. No.	Name of the Member	Designation	Signature
1	Dr. K. Srinivas Principal	Chairman	
2	Dr. G. Rajesh NSS Co-Ordinator	Member	
3	Mr. N. Venkata Subbarao Associate Professor, Dept of Civil Engg.	Member	
4	Mr. S. B. C. Prasad Assistant Professor, Dept of Basic Engg.	Member	
5	Mr. K. Venkateswara Rao Maintenance Incharge	Member	

Table of Contents

1. Introduction:

Green auditing is the process of identifying and determining whether the institutional practices are eco-friendly and sustainable. The Green audit aims to analyse environmental practices on the college campus. This is an attempt of Devineni Venkata Ramana & Dr. Hima Sekhar MIC College of Technology to conduct green audit on the college campus. For audit purpose, the study area is grouped as different buildings and blocks like Main building, BED block, Boys' hostel and Girls' hostel.

The main objectives of carrying Green Audit are:

i). To examine current environmental practices in the college

ii). To set up goal, vission, mission for green practices on the college campus

iii). To document the quality of drinking water

iv). To document the solid waste disposal system

v). To enable waste management through solid waste and water recycling

vi). To prepare an Environmental Statement Report on green practices.

2. About Institution:

Devineni Venkata Ramana & Dr. Hima Sekhar MIC College of Technology's (Autonomous) odyssey began in 2002 in Kanchikacherla, a village that boasts of idyllic beauty and serene atmosphere suited for scholastic pursuits. Right from its inception, the College has crossed new vistas making inroads into Quality Education under the dynamic stewardship of our Visionary Chairman Dr. M V Ramana Rao, M.E., Ph.D., CEO & MD MIC Electronics Ltd., Hyderabad.

MIC's tryst with destiny began in 2002 with three branches of B.Tech., (ECE, CSE, and EEE). In 2004, the Mechanical Engineering branch in B.Tech., MCA & MBA courses were added. The College was granted permission to run M.Tech., in Machine Design, PE&D, VLSI&ES, and CSE in 2012. APSCHE approved diploma courses in 2012-13 with two branches: EEE and ME. In 2013-14, two more branches in diploma viz., CE and ECE were approved. In 2013, permission was accorded for B. Tech Civil Engineering branch and 2017 for B.Tech in Information Technology.

The College was approved by the All India Council for Technical Education (AICTE), New Delhi, and is permanently affiliated to the JNTUK, Kakinada.

3. Water Management:

Water is one of the basic needs that a man requires for his existence and survival .This is evident from the fact that civilizations have flourished mostly on the banks of rivers in ancient times. Water is a natural resource that is freely available but drinking water is not available freely for human consumption. It is very important to conserve the water resources to make a sustainable campus. Water auditing is conducted for the evaluation of raw water availability and to suggest better options for recycling and reuse of water.

No proper source of water is available on the campus of Devineni Venkata Ramana & Dr. Hima Sekhar MIC College of Technology. Due to failure of bore wells in the college location, the college collects water from the nearest owned bore well and open well point. Total required water is transmitted through water tankers to the campus daily. The total quantity of water required for the campus is assessed at 1.4 lakh liters per day.

4. Water Consumption in the Institute:

The study observed that no major source of water is available in the college, the required water is transported from the nearest point through water tankers every day. Water consumption details are assessed as for the following information.

Sl. No.	Water Consumption Details	Water usage (liters/day)
1	By college for 4000 students	37000
2	By Boys hostel 250 students	33000
3	By Girls hostel 250 students	30000
4	By Canteen	15000
5	By Gardening & Lawns Sprinkling	25000
	Total Consumption /day	**1,40,000**

To supply good quality of drinking water to the students, Reverse Osmosis plant is established in the college. Drinking water quality is also analyzed by the Environmental Engineering Lab.

5. Water Quality Analysis by Environmental Engineering Lab:

Sl. No.	Parameter	Indian Standard for drinking water(BIS 10500-2012)	Result
1	P^H	6.5-8.5	7.35
2	Turbidity, NTU	5	1.35
3	Total Hardness (as $CaCo_3$), PPM	300	205
4	Total Dissolved Solids, PPM	500	1000
5	Alkalinity, mg/l	200	432
6	Acidity, mg/l	----	20
7	Chlorides (as Cl), mg/l	250	210
8	Iron (as Fe), mg/l	0.3	0.1

6. Sustainable Water Practices on the Campus:

Rain Water Harvesting:

Rain water harvesting is a simple method of collecting rain water and deploying the same for further usage. Roof top rain water is the technique through which rain water is captured from roof catchments and stored in storage tanks. This is an increasingly important water conservation method in the apartments and gated complexes, the same can be implemented in the educational buildings also as major catchment areas and higher quantity of rain water is available for storage.

In Devineni Venkata Ramana & Dr. Hima Sekhar MIC College of Technology due to non availability of proper source of water, the committee concentrated on water conservation methods and the Committee identified water conservation by using sprinkler method to maintain green lawns and suggested different conservation methods like Rain water harvesting , Roof top rain water storage ,Waste water recycling etc.

Sprinkler Method:

Sprinkler irrigation system has been installed to maintain gardens and lawns in the college campus and this practice helps to save water and can supply water to the roots of plants.

Rain water harvesting:

Rain water harvesting is one of the best methods to conserve water. Three different sizes of rain water storage tanks are constructed on the campus. Rain water harvesting structures are also recommended by the Committee to increase conservation capacity.

Roof top rain water storage:

Average rainfall is estimated as 1037mm based on the data collected from the last 17 years of annual rainfall (Source : NASA web site). The Committee advised to use roof top rain water for gardening purposes. The roof top rain water storage capacity is estimated by the department of Civil Engineering as 60 lakh liters/annum.

Waste water recycling:

Waste water quantity is estimated as one lakh liters per day. The Committee identified that waste water can be recycled by adopt the economical methods to save water quantity.

7. Green Management in Campus:

This includes plants, greenery and sustainability on the campus. The college created a green campus by growing a number of trees and plants. Various tree plantation programs are being organized on the college campus and surrounding villages through NSS (National Service Scheme).

List of Trees and Plants Present on the Campus:

Sl. No.	Name of the Plant
1	Almonds Plant
2	Yucca Plant
3	Green ficus Plant
4	Ptychosperma Macarthurli
5	Pagoda Plant
6	Yadra bel plant
7	Coconut Plant
8	Crepe Plant
9	Chinese ixora Plant
10	Sapota Plant
11	Shatavari Plant
12	Neem Plant
13	Chandra Prabha flower plant
14	Mango tree
15	Bamboo Plant
16	Banana Plant
17	Araucaria Plant
18	Sago Palm Plant
19	Bougainvillea glabra plant
20	Jamun Plant
21	Guava Plant

8. Solid Waste Management on the Campus:

Waste generated from tree leaves and lawn management comes under this Solid waste management on the campus. Separate dustbins are provided for bio-degradable and plastic waste to segregate them at source itself. Single sided used papers are reused for writing and printing in all the departments to minimize the usage of papers. Examination related material, reports and guides are properly disposed for recycling after completion of their preservation period.

Solid waste is collected regularly by using college tractor for disposal to produce manure at the village panchayat.

9. Recommendations and Suggestions:

The internal audit team recommends the following actions.

i). Three rain water storage tanks are to be constructed on the campus. The Committee recommends to construct new rain water harvesting structures for Hostel, Basic Engineering Department building also.

ii). To minimize the cost to get water from the nearest source, the Committee advised to adopt sustainable water practices like roof top rain water storage, rain water harvesting and recycling of waste water.

iii). Proper mechanism is required to identify water leakages in the college.

iv). Awareness programmes to save water and energy need to be conducted.

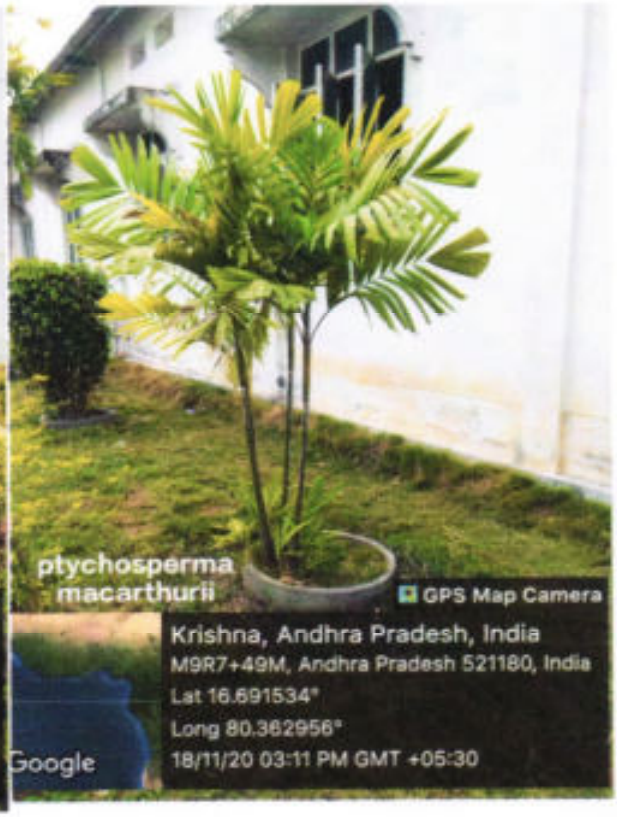
v). Observe power saving day once in a month.

vi). Observe a 'no-vehicle' day once in a week.

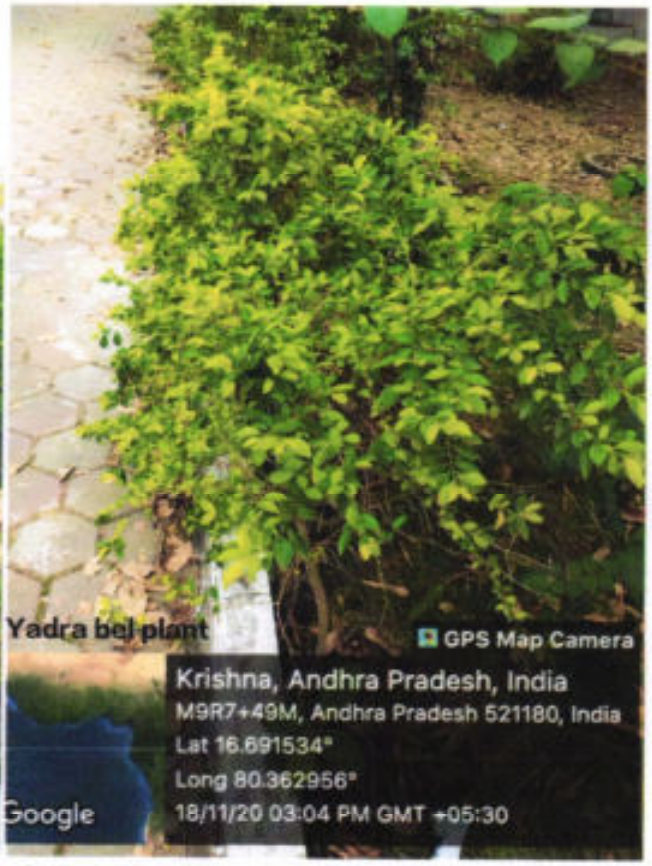
vii). Due to more quantity of grass and plant leaves available on the campus, the Committee advised to set up Model Compost Plant on the college campus itself.

viii). Establish a Plastic free campus by avoiding the use of all plastic items in all college related functions.

10. Photo Gallery:




pagoda plant
GPS Map Camera
Krishna, Andhra Pradesh, India
M9R7+49M, Andhra Pradesh 521180, India
Lat 16.691534°
Long 80.362956°
18/11/20 02:57 PM GMT +05:30
Google


Yadra bel plant
GPS Map Camera
Krishna, Andhra Pradesh, India
M9R7+49M, Andhra Pradesh 521180, India
Lat 16.691534°
Long 80.362956°
18/11/20 03:04 PM GMT +05:30
Google

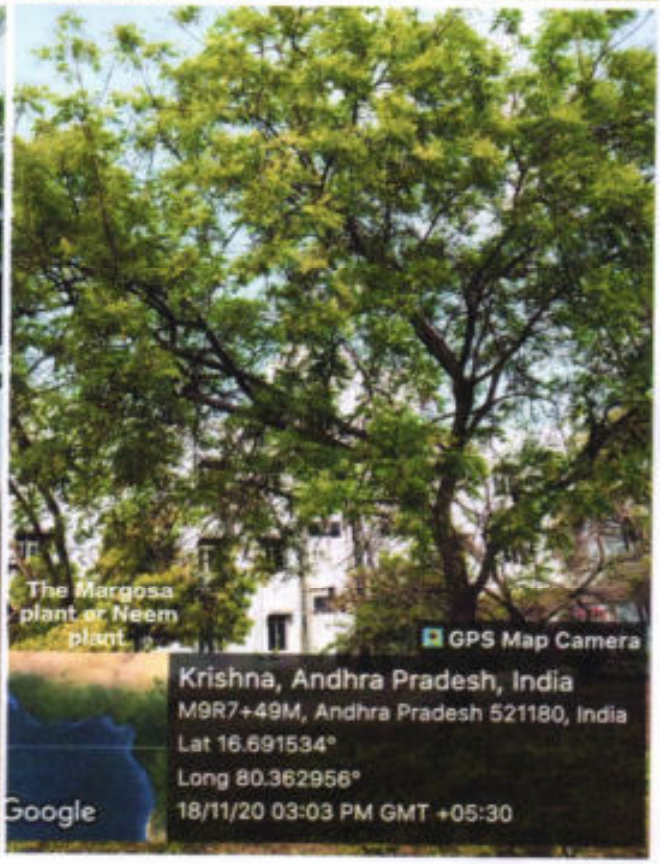

Crepe plant
GPS Map Camera
Krishna, Andhra Pradesh, India
M9R7+49M, Andhra Pradesh 521180, India
Lat 16.691534°
Long 80.362956°
10/02/21 03:22 PM GMT +05:30
Google

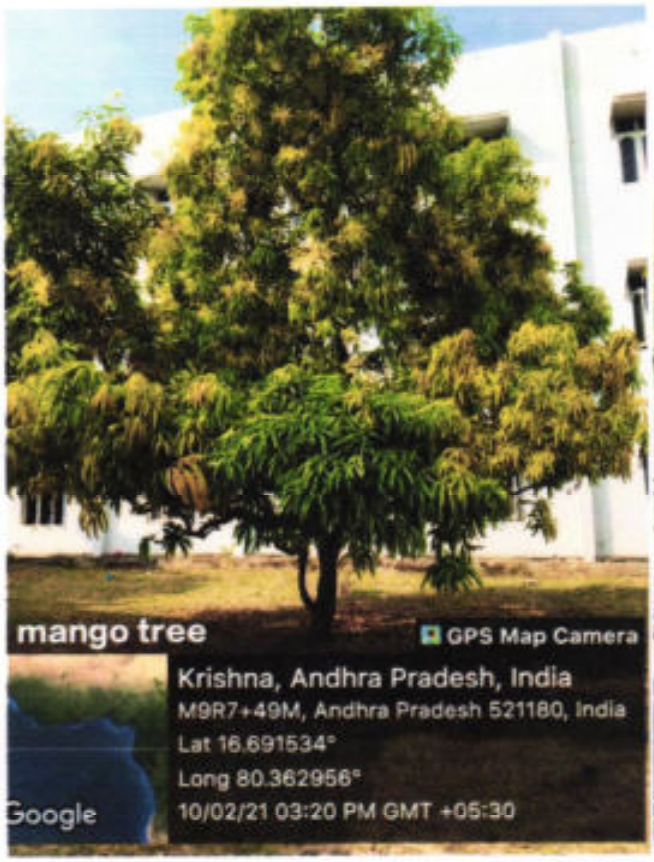

Coconut plant
GPS Map Camera
Krishna, Andhra Pradesh, India
M9R7+49M, Andhra Pradesh 521180, India
Lat 16.691534°
Long 80.362956°
18/11/20 03:06 PM GMT +05:30
Google


GPS Map Camera
Krishna, Andhra Pradesh, India
M9R7+49M, Andhra Pradesh 521180, India
Lat 16.691534°
Long 80.362956°
10/02/21 03:24 PM GMT +05:30
Google


Shatavari plant
GPS Map Camera
Krishna, Andhra Pradesh, India
M9R7+49M, Andhra Pradesh 521180, India
Lat 16.691534°
Long 80.362956°
10/02/21 03:16 PM GMT +05:30
Google


Sapota plant
GPS Map Camera
Krishna, Andhra Pradesh, India
M9R7+49M, Andhra Pradesh 521180, India
Lat 16.691534°
Long 80.362956°
18/11/20 03:02 PM GMT +05:30
Google


The Margosa plant or Neem plant
GPS Map Camera
Krishna, Andhra Pradesh, India
M9R7+49M, Andhra Pradesh 521180, India
Lat 16.691534°
Long 80.362956°
18/11/20 03:03 PM GMT +05:30
Google

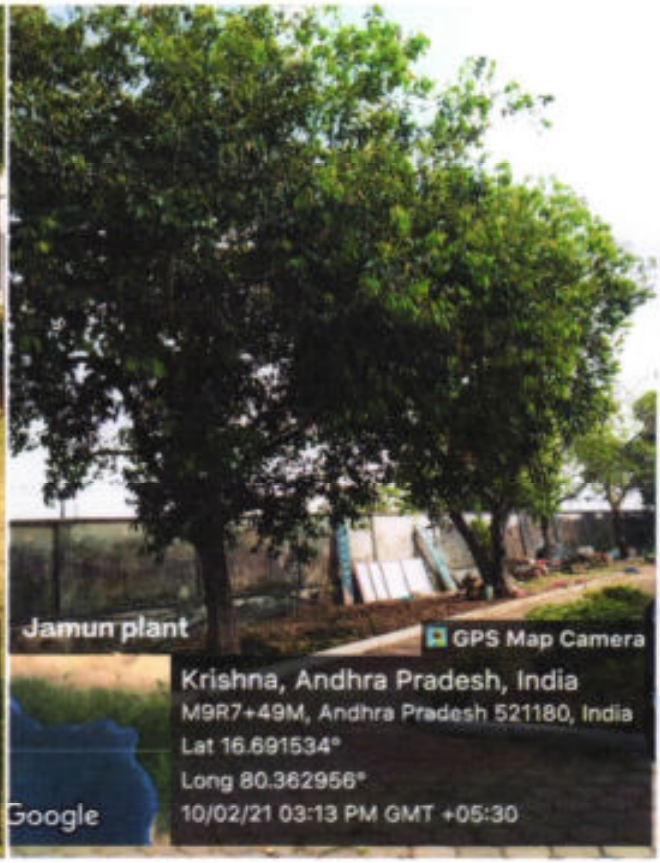

mango tree
GPS Map Camera
Krishna, Andhra Pradesh, India
M9R7+49M, Andhra Pradesh 521180, India
Lat 16.691534°
Long 80.362956°
10/02/21 03:20 PM GMT +05:30
Google


Chandra prabha flower plant
GPS Map Camera
Krishna, Andhra Pradesh, India
M9R7+49M, Andhra Pradesh 521180, India
Lat 16.691534°
Long 80.362956°
10/02/21 03:26 PM GMT +05:30
Google


Banana plant
GPS Map Camera
Krishna, Andhra Pradesh, India
M9R7+49M, Andhra Pradesh 521180, India
Lat 16.691534°
Long 80.362956°
10/02/21 03:21 PM GMT +05:30
Google

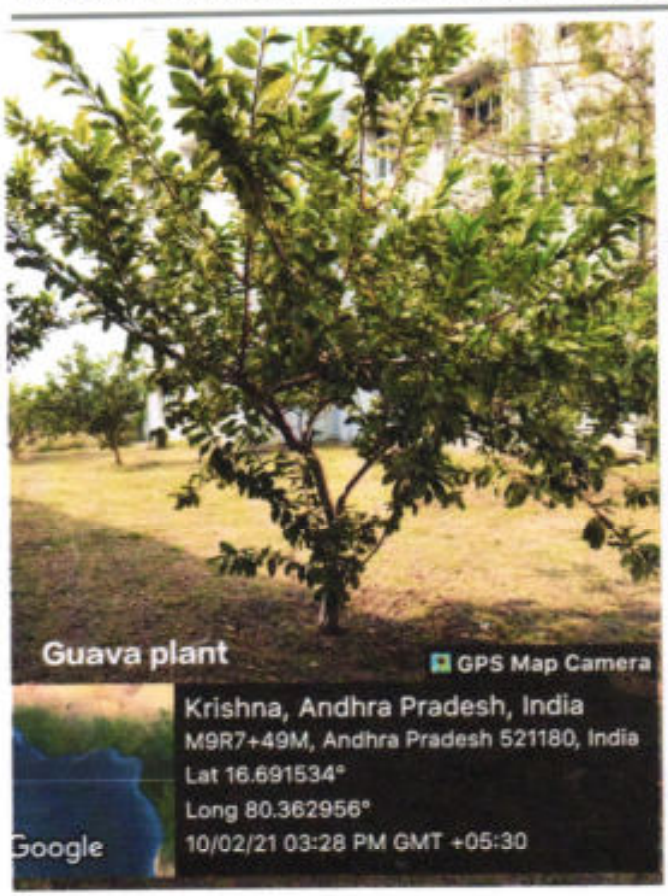

Bamboo plant
GPS Map Camera
Krishna, Andhra Pradesh, India
M9R7+49M, Andhra Pradesh 521180, India
Lat 16.691534°
Long 80.362956°
10/02/21 03:34 PM GMT +05:30
Google


Bougainvillea glabra plant
GPS Map Camera
Krishna, Andhra Pradesh, India
M9R7+49M, Andhra Pradesh 521180, India
Lat 16.691534°
Long 80.362956°
10/02/21 03:32 PM GMT +05:30
Google


Jamun plant
GPS Map Camera
Krishna, Andhra Pradesh, India
M9R7+49M, Andhra Pradesh 521180, India
Lat 16.691534°
Long 80.362956°
10/02/21 03:13 PM GMT +05:30
Google


sago palm plant
GPS Map Camera
Krishna, Andhra Pradesh, India
M9R7+49M, Andhra Pradesh 521180, India
Lat 16.691534°
Long 80.362956°
10/02/21 03:33 PM GMT +05:30
Google


araucaria plant
GPS Map Camera
Krishna, Andhra Pradesh, India
M9R7+49M, Andhra Pradesh 521180, India
Lat 16.691534°
Long 80.362956°
10/02/21 03:37 PM GMT +05:30
Google



Collection of Tree leaves under Solid waste management

Maintenance of Lawn by Sprinkler System