GOVERNMENT DEGREE COLLEGE FOR WOMEN, MADANAPALLE

GREEN AUDIT REPORT

The college is located in the heart of the town within 1.04 acres of land. There has been only vertical growth of the campus since its establishment. Being an environmental conscious college, the faculty and the students of the college look after the environment carefully. Every year, during rainy season, tree plantation is carried out by the staff and students under the guidance of NSS unit of the college and the forest department.

ENVIRONMENT POLICY OF OUR COLLEGE:

Protection of health, safety and the prevention of pollution of the environment are primary goals of the Institute. The Institute will strive to develop and provide products and services that have no adverse environmental impact and are safe in their intended use, efficient in their consumption of energy and natural resources and can be recycled, reused or disposed safely.

CONSTITUTION FOR GREEN AUDIT

The Green Audit is carried out as per the environmental policy of GDC (W) and Green Audit Check List. The aim of the audit is to check the existing practices and provide advice for the development of environmental policy and practice in the areas of:

- Waste Management
- Water conservation and management
- Tree plantations
- Energy use and conservations
- Eco-friendly campus
- Green environment and clean campus

MEMBERS OF GREEN AUDIT TEAM

S. No.	Name of Auditor	Designation
1	Dr. R. Krishnaveni (Chairman)	Principal, GDC (W), MPL
2	Dr. V. Gurumurthy (Co-ordinator)	Lecturer, GDC (W), MPL
3	Smt. G. Bhavani Devi (Member)	Lecturer, GDC (W), MPL
4	Smt. K. Adilakshmi (Member)	Lecturer, GDC (W), MPL
5	Sri S. Masood Ahemmed (Member)	Lecturer, GDC (W), MPL
6	Smt. A. Leela (Member)	Lecturer, GDC (W), MPL

OBJECTIVES OF THE STUDY

- To promote the Environment Management and Conservation in the College Campus
- To secure the environment by minimising the consumption of resources.
- To reduce pollution in the campus.
- To promote recycling and reuse of wastes in the campus.

METHODOLOGY

In order to perform green audit, the methodology included physical inspection of the campus, observation and review of the documentation, interviewing key persons and data analysis and recommendations. The areas which were covered in the audit are 'Water management', 'Energy management' and 'Waste management'.

WATER MANAGEMENT

Water auditing is conducted for the evaluation of facilities of raw water intake and determining the facilities for water treatment and reuse. The concerned auditor investigates the relevant method that can be adopted and implemented to balance the demand and supply of water.

SOURCE OF WATER

S. No.	Resource	Quantity
1	Municipal water	----
2	Bore wells	Nil
3	Water reserve tanks	04

WATER USERS IN THE CAMPUS

S. No.	CATEGORY	STRENGTH
1	STUDENTS	470
2	STAFF	40
3	VISITORS	---

The visitors of the college vary with respect to different activities conducted in the college campus. During admission and different competitive exams conducted in the college campus the total number of visitors of the college may be 100-200 per day. The average number of visitors to the college vary from 10-20 per day.

QUANTITY OF WATER USED IN DIFFERENT SECTIONS OF THE CAMPUS

S. No.	SECTION	QUANTITY (LITERS/DAY)
1	Departments	40
2	Laboratories	100
3	Urinals and Toilets	8,000
4	Drinking	1000
5	Garden	2000
6	Miscellaneous	1000
	TOTAL	12040

MAJOR OBSERVATIONS REGARDING WATER USAGE AND CONSERVATION

1. At present waste water is not recycled or reused in any form in the college premises.
2. The garden is watered with water pipe 2 or 3 times per week.
3. The rain water is released into the rain water harvest pit inside the boundary of the college at low terrain.

RECOMMENDATIONS

1. The water Conservation Awareness Program to be conducted on World Water Day on 22nd of March every year.
2. To display notice boards for turning off the taps and to prevent wastage of water.
3. Rain Water Harvest pit is to be installed as per the guidelines of Central Ground Water Board.

ENERGY USE AND CONSERVATION

Study of energy consumption, energy sources, energy monitoring, lighting and vehicles in the campus is carried out. Energy Sources which are used in the college include Electricity, Diesel, Petrol & LPG, solar light and solar battery.

RECOMMENDATIONS

1. Energy Consumption for each building should be estimated to design the energy conservation plan.
2. Energy saving awareness shall be done by displaying the notice boards at appropriate place
3. Encourage natural ventilation and illumination by alteration in the building structures whenever going for new constructions.
4. Observation of Energy Conservation Day and NoVehical Day in the college.

GREEN BELT AREA & BIO-DIVERSITY

The Green Belt Area is meant for conservation of nature and aesthetic value of the college premises. As the college is located in the heart of the town and surrounded by polluted air, enough importance is given to maintain greenery in the campus. Tree plantation programs are organized in the college campus and surrounding villages through NSS unit. This program helps in encouraging eco-friendly environment which provides pure oxygen within the institute and awareness among villagers.

RECOMMENDATIONS

The Management of College may consider on top priority that

- Total 33% area is to be reserved for greenery.
- The Biodiversity is to be maintained while considering the plantation in future
- The selection of trees species to be based on environmental conservation and carbon sequestration value
- Artificial nests and water ponds are recommended to attract different birds in their migrating and breeding season
- Drip irrigation is strongly recommended to conserve the water
- Plan or roof gardens and vertical gardens in the campus.

ENVIORNMENTAL AWARENESS INITIATIVE

The college conducts awareness programmes for staff and students to promote using bicycles, controlled use of paper and tree plantation. Banners and posters are displayed to promote conservation of water and energy at important places. Waste disposal bins are arranged for wet and dry wastes. Recycling and reuse of plastic and paper are encouraged. Competitions are conducted at college level on “BEST OUT OF WASTE”-reuse and recycling of solid wastes.

GOOD POINTS OBSERVED

1. College has prepared Green Environmental policy and has taken initiatives for sustainable development of the college campus. .
2. College has formed a team of faculty and student for implementing the policy.
3. College has a plan to install solar panels in future.
4. College has Environmental Education as Life Skill Course in the curriculum.
5. College conducts Environment Awareness programmes for faculty and students. And also important days such as “World Ozone Day”, “World Forest Day’, “Earth Day” & “World Environment Day” are celebrated in the college.
6. There is a facility in the campus for composting the litter.
7. College has a plan for vermin-compost plant.
8. Creation of eco-friendly class room in the college campus.

MAJOR RECOMMENDATIONS

1. College should install solar panel.
2. Composting of bio degradable waste to be done scientifically.
3. Rain water Harvesting (RWH) is to be done technically.
4. Department wise electrical load consumption is to be done.
5. Energy used by each appliance is to be estimated.
6. E-waste management system needs to be adopted.

PLANT DIVERSITY

A survey was carried out to find plant diversity in the campus of Government Degree College (W), Madanapalle. The survey was focused on the diversity of plants on the basis of their habit only.

PLANT SPECIES IN BOTANICAL GARDEN AND COLLEGE CAMPUS

S. NO.	NAME OF THE PLANT	FAMILY	TOTAL
A	**LARGE TREES**		
1.	Polyalthia pendula (naramamidi)	Annonaceae	32
2.	Eucalyptus indica	Myrtaceae	01
3.	Cocos nucifera Coconut	Palmae (Arecaceae)	01
4.	Grevia robusta (Silver oak)	Verbinaceae	02
5.	Delonix regia (erra turayi)	Caesalpinaceae	01
6.	Azadiracta indica (Neem)	Meliaceae	02
7.	Areca palm	Arecaceae	02
8.	Syzigium cumini (neredu)	Myrtaceae	04
9.	Pongamia pinnata (Derris indica)-kanuga	Fabaceae	01
10.	Thuja	Coniferaceae	01
11.	Aracaria (Christmas tree)	Coniferaceae	02
12.	Bauhinia purpurea (Devakanchanam)	Caesalpinaceae	01
13.	Terminalia catapa (almond)	Combretaceae	11
14.	Tamarindus indica	Caesalpinaceae	14
15.	Enterlobium saman (rain tree)	Mimoceae	01
16.	Sapindus indica (soapnut)	Sapindaceae	04
17.	Millingtonia hortensis (punnaga)	Bignoniaceae	01
18.	Ficus elastica (rubber tree)	Moraceae	01
19.	Tectona grandis (Teak)	Verbinaceae	04
21	Mangifera indica (Mango)	Anacardiaceae	01

S. NO.	NAME OF THE PLANT	FAMILY
B	**SMALL TREES/SHRUBS/CLIMBERS**	
1.	Punica granatum (Pomegranate)	Punicaceae
2.	Murraya koenigi (curry leaf)	Rutaceae
3.	Lawsonia inermis (gorinta)	Lythraceae
4.	Gardenia jasminoides	Rubiaceae
5.	Tecoma stans	Bignoniaceae
6.	Musa paradisiacal (banana)	Musaceae
7.	Carica papaya	Caricaceae
8.	Nyctanthus arbor-tristis (parijatham)	Nyctaginaceae
9.	Adathoda vasica (addasaram)	Acanthaceae
10.	Phyllanthus acidus (chinna usari)	Euphorbiaceae
11.	Euphorbia thirucali (kalli)	Euphorbiaceae
12.	Cassia species	Caesalpinaceae
13.	Hibiscus rosa sinensis	Malvaceae
14.	Rosa species	Rosaceae
15.	Nerium odorum (ganneru)	Apocyanaceae
16.	Plumbago zelanica (Chithramulam)	Plumbaginaceae
17.	Dracaena species	Liliaceae
18.	Croton species	euphorbiaceae
19.	Taberna montana (nandiverdanam)	Apocyanaceae
20.	Acalypha species	Euphorbiaceae
21	Passiflora edulis (passion fruit)	Passifloraceae
22	Jasminum species	Oleaceae
23	Bignonia species	Bignoniaceae
24	Quis quails indica	Combretaceae
25	Ixora species	Rubiaceae
26	Barleria species	Acanthaceae
27	Pothos (Money plant)	Araceae
28	Bougainvillea species	Nyctaginaceae
29	Euphorbia milli	Euphorbiaceae
30	Tinospora cordifolia (Tippa teega, Amrutha	Menispermaceae

	valli)	
S. NO.	NAME OF THE PLANT	FAMILY
	C. HERBS	
1.	Achyranthus aspera (Uttareni)	Amaranthaceae
2.	Centella asiatica (Brahmi, Saraswathiaku)	Apiaceae
3.	Catharanthus roseus (Billaganneru)	Apocyanaceae
4.	Calotropis gigantia (Tella gilled)	Asclepidiaceae
5.	Artimissia nilagirica (Machipathri)	Asteraceae
6.	Acalypha indica (Muripinda)	Euphorbiaceae
7.	Phyllanthus amarus (Nelavusiri)	Euphorbiaceae
8.	Clitoria ternate (Sankupushpi)	Fabaceae
9.	Boerhavia erecta (Punarnava, Atikimavidi)	Nyctaginaceae
10.	Sansevaria roxburgiana (snake plant)	Asparagaceae
11.	Oxalis corniculata (Pulichintha)	Oxalidaceae
12.	Elettaria (cardomum)	Zingiberaceae
13.	Canna indica (metta tamara)	Cannaceae
14.	Solanum nigrum (Kamanchi)	Solanaceae
15.	Withania somniferum (Aswagandha)	Solanaceae
16.	Leucas aspera (Tummi)	Lamiaceae
17.	Ocimum tenuiflorum (Holy Basil, Krishna Tulasi)	Lamiaceae
18.	Ocimum basilicum (Sabja)	Lamiaceae
19.	Plectranthus amboinicus (Karpuravalli, Vamaku)	Lamiaceae
20.	Aloe barbadensis (Kalabanda)	Liliaceae
21.	Asparagus racemosus (Pilli teegalu, Satavari)	Asparagaceae
22.	Sansevaria cylindrica	Asparagaceae
23.	Tradescantia	Commelinaceae
24.	Gomphrena globosa (rudrakshalu)	Amaranthaceae