

A.S.D. GOVT. DEGREE COLLEGE FOR WOMEN (A),

KAKINADA - 533002, EASTGODAVARI, ANDHRA PRADESH



GREEN AUDIT REPORT

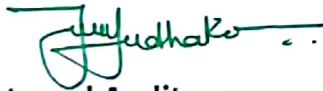
2022- 2023

A.S.D. GOVT. DEGREE COLLEGE FOR WOMEN (A),

KAKINADA - 533 002, EAST GODAVARI, ANDHRA PRADESH

GREEN AUDIT CERTIFICATE

This is to certify that **Green Audit** has been conducted for A.S.D. Government Degree College for Women (A), Kakinada, by us for the Academic year 2022-2023 to assess the Institution's green initiatives taken up as per environmental policies and objectives. In this audit, the efforts of the Institution on the green environment such as Waste Management, Energy Management, Water Management and Policies and facilities in the Institution were considered.



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Concept and Context

The National Assessment and Accreditation Council (NAAC) is an autonomous body in India that assesses and accredits higher education institutions. Green audit, also known as environmental audit, plays a crucial role in the accreditation process conducted by NAAC. NAAC has made it mandatory from the academic year 2019–20 onwards that all Higher Educational Institutions should submit an annual Green, Environment and Energy Audit Report. Green audit encourages institutions to adopt eco-friendly infrastructure and practices. This includes energy-efficient buildings, waste management systems, water conservation measures, and the use of renewable energy sources. These efforts contribute to a more sustainable campus. Students, parents, and the community increasingly value institutions that demonstrate a commitment to environmental responsibility. Green audit encourages institutions to adopt practices that lead to resource efficiency, such as reduced energy consumption and waste generation. These measures are environmental friendly and contribute to cost savings for the Institution. Green audit assesses the institution's efforts in fostering community awareness, involvement, and collaboration in environmental initiatives. NAAC accreditation evaluates various aspects of an institution, and environmental sustainability is increasingly recognized as an integral part of institutional quality. A positive green audit outcome contributes to the overall assessment of an institution's commitment to excellence. Green audit in NAAC assessments is essential for ensuring that higher education institutions are not only academically sound but also environmentally responsible and sustainable.

Introduction:

Greenaudit is defined as an official inspection of the effects a college has on the environment. Green Audit is conducted to evaluate the actual scenario at the institution campus. Green audit evaluates the institution's physical infrastructure and facilities from an environmental perspective and to maintain Ecofriendly campus. This includes solid state management, recycling of water, disposal of sewage and waste materials including electronic and biomedical wastes, plastic use, etc. should be followed consistently in the organization campus. The Green Audit assesses the extent to which environmental sustainability is integrated into the academic curriculum. It examines whether there are courses, programs, or initiatives that promote environmental education and awareness among students. Green Audit promotes environmental awareness, values, and ethics. It creates health consciousness. Overall, it plays a vital role in imparting a better understanding of green impact on stakeholders.

About the College:

The Institution has dedicated itself to the service of society by educating students and preparing professional educators for all levels. It is one of the premier institutions in the area. We have a

long history of excellence and repute and have a solemn commitment to address ourselves vigorously to the needs arising from a dynamic and rapidly changing society by aligning ourselves to the requirement of the new age of teaching, conducting research, disseminating new knowledge, and developing application for existing knowledge. We also believe in preparing life-long learners who are able to apply their knowledge in a cross cultural and diverse society.

The College offers M.Com Self finance course from 2016-17 batch with 30 seats and it also offers M.A. (Telugu). In addition to the P.G. Course several Certificate courses, Skill Development Diploma and Training courses are offered in collaboration with Govt. organizations and NGOs. Jawahar Knowledge Centre (JKC) of the College is imparting training for employability batch-wise all through the year and organizing Campus Drives. The College is receiving funds from RUSA and UGC for construction of additional rooms, upgrading existing structures and to establish e-classrooms, labs etc. A.S.D GDC (W) (A), Kakinada is the only Government College for Women for having Autonomous Status and for offering Home Science course in Coastal belt of Andhra Pradesh. Admissions are done through Online mode from the academic year 2020-21 onwards. Hostel facility is available both on the campus and in the near vicinity of the College.

Annaram Satyavathi Devi Government Degree College for Women, Kakinada was started with the motto:

‘Sthree Vidya Pravardhatam’ – ‘Women Education Shall Prosper.’

The idea came up with the inspiring words

***“A Man’s education being the education of an Individual,
a Women’s education is the education of a Family”***

~ Mahatma Gandhi

The college made a humble beginning in the year 1962 with the efforts of the eminent women personalities of the town who constituted into a committee called ‘Women’s education society of Kakinada’. The committee handed over the college to the Annaram Devasthanam Trust in the year 1963 and it was managed by the Trust Board for about five years. Subsequently, in the year 1968 the college was taken over by the Govt. of Andhra Pradesh. In the year 1996 the college was bifurcated into Junior College and Degree College. Then onwards it has been named as ‘A.S.D. Govt. Degree College for Women, Kakinada’. The institution is in a prime location of Kakinada town with campus area of 7.75 acres connected with good transport facility.

The College has 19 classrooms and 10 well equipped laboratories. A computerized library has 32796 books. It has 47 faculty working to support the Principal. The strength of the college is 1028. The college offered 07 conventional courses, 02 Self-finance courses, 03 Market-Oriented courses and 01 vocational course of Arts, Commerce and Sciences in UG till 2022-2023. From the Academic year 2023-24 onwards, Several Under Graduate Honours programmes were introduced in the college following the NEP 2020. As per that, the college offers several Honours programmes with Majors in B.Sc. (Mathematics), B.Sc. (Computer Science), B.Sc. (Physics), B.Sc. (Chemistry), B.Sc. (Botany), B.Sc. (Zoology), B.Sc. (Home Science), B. Com (General), B. Com (Computer Applications), B.Com (Digital Marketing), B.A.(Economics), B.A.(Political Science). Post Graduation Programmes like M.A. (Telugu), M.Com., M.Sc. (Chemistry) are offered in our college. In addition to the P.G. Courses, 60 Certificate courses, Skill Development Diploma and Training courses are offered in collaboration with Govt. organizations and NGOs. Jawahar Knowledge Centre (JKC) of the College is imparting training for employability batch-wise all through the year and organizing Campus Drives. The College is receiving funds from RUSA and UGC for construction of additional rooms, upgrading existing structures and to establish e-classrooms, labs etc. Along with their curriculum, students will be benefitted through many certificate-based skill enhancement programmes like TCS-ION, IIT-Mumbai Spoken Tutorial, IBM P-Tech, and CISCO Certification courses. Students were encouraged to complete MOOCS Courses offered through Coursera, Udemy, Infosys Springboard etc.,

VISION

The College envisages to evolve into Premier institution imparting quality education embedded with Values and Skills leading to the development of the Nation through the empowerment of women, especially those hailing from marginalized sections of the society.

MISSION

- To Empower young women to face the challenges of life with courage and commitment.
- To Mould the students as builders of a just and humane society founded on ethical values.
- To Promote a learning community in which all, especially those from less privileged sections, form an integral part to create a holistic society.
- To Provide need- based and skill- based training to create a workforce of women with abilities to globally compete, to entrepreneur and be self-reliant.

AUDIT PARTICIPANTS

On behalf of college

Name	Designation
Dr. V. Anantha Lakshmi M.Sc., M.Phil., Ph.D	Principal
Ms. M. Suvarchala M.Sc., M.Phil.,	Vice Principal
Ms. M. Vasantha Lakshmi M.Sc., M.Phil.,	IQAC Coordinator
Dr. K. Anitha M.Sc., Ph.D	Lecturer Incharge Chemistry
Ms. K. N. V. S. N. Eswari M.Sc., M.Phil.,	Lecturer Incharge Botany
Dr. M. Sulakshana, M.Sc., Ph.D	Ecoclub Convenor
Mrs. M. Subbalakshmi M.Sc.,	Lecturer in Chemistry

GREEN AUDIT – ANALYSIS

1.1 GENERAL INFORMATION

1. Does any Green Audit conducted earlier?

Yes, this is the second external audit organized by the college.

2. What is the total strength (people count) of the Institute?

Students

Male: 0 Female : 1153 Total : 1153

Teachers (including Guest faculty)

Male: 06 Female: 44 Total : 50

Non-Teaching Staff

Male: 11 Female: 19 Total: 30

Total Strength

Male: 17 Female: 1216 Total: 1233

3. What is the total number of working days of your campus in a year?

There are Two hundred and twenty working days in a year.

4. Where is the campus located?

Church Square Park, Jagannaickpur, Kakinada, Andhra Pradesh 533002

5. Which of the following are available in your institute?

Garden area	Available
Playground	Available
Kitchen	Available
Toilets	Available
Garbage Or Waste Store Yard	Available
Laboratory	Available
Canteen	Available
Hostel Facility	Available
Guest House	Not Available

6. Which of the following are found near your institute?

Municipal dump yard	Not in vicinity of Institute
Garbage heap	No Garbage heaps
Public convenience	Public Convenience is available
Sewer line	No
Stagnant water	No Stagnant Water
Open drainage	No
Industry	No
Bus / Railway station	Bus and Auto Connectivity
Market / Shopping complex	Available

1.1 WASTE MINIMIZATION AND RECYCLING

1. Does your Institute generate any waste? If so, what are they?

Yes, laboratories waste, plastic waste, Canteen waste, Kitchen Waste, paper, horticulture, e-waste, Solid waste etc.,,

2. What is the approximate amount of waste generated per day? (in KG approx.)

Biodegradable waste - 10 Kgs

Non-biodegradable waste – 0.5 Kg

Hazardous Waste < 2 Kg Others – 0.2 Kg

3. How is the waste managed in the Institute? By Composting, Recycling, Reusing Others (specify)

- NADEP Compost pit is used for Horticulture Waste management.
- Aerobic Composting is done in Hostel for Bio-degradable waste management.
- Diluted solutions are used instead of concentrated solutions in laboratories
- One side printed Paper is re-used for internal communication.
- Solid waste is taken by Municipal Corporation
- Single use plastic is banned in the campus

4. How would you spread the message of recycling to others in the community?

Following are the ways through which college is spreading the awareness about recycling

- By conducting Essay writing competitions to students
- Awareness Programmes to Staff and Students
- Rally conducted

5. Can you achieve zero garbage in your institute? If yes, how?

Not yet achieved. Possible through waste management policy and planning.

1.1 GREENING THE CAMPUS

1. Is there a garden in your Institute?

Yes

Botanical Garden: 2814.18 sq. feet

Horticulture Garden: 5517.6 sq. feet

Academic Park 6745.6 sq. feet

2. Do students spend time in the Garden?

Yes, Students spend around 2-3 Hours in the Academic Park.

3. Total number of Plants in Campus?

112 Trees in the College Campus, 53 Medicinal Plants and 65 varieties of Ornamental plants in Botanical Garden.

Plants in the Campus

S.No	Botanical Name	Vernacular Name	Family	Number of Plants
1	<i>Sapindus mukorossi</i>	Kunkudukai	Sapindaceae	1
2	<i>Syzygium cumini</i>	Nerudu	Myrtaceae	6
3	<i>Eucalyptus globulus</i>	Jam oil	Myrtaceae	2
4	<i>Cocos nucifera</i>	Kobbari	Arecaceae	1
5	<i>Azadirachta indica</i>	vepa	Meliaceae	1
6	<i>Pongamia pinnata</i>	Kanuga	Fabaceae	7
7	<i>Terminalia catappa</i>	Badam	Combretaceae	1
8	<i>Bauhinia purpurea</i>	Devakanchanamu	Fabaceae	1
9	<i>Saraca asoca</i>	Ashoka chettu	Fabaceae	1
10	<i>Mangifera indica</i>	Maamidi	Anacardiaceae	1
11	<i>Delonix regia</i>	Thurai	Fabaceae	1
12	<i>Mimusops elengi</i>	Pogada	Sapotaceae	1
13	<i>Emblica officinalis</i>	usiri	Euphorbiaceae	1
14	<i>Ficus benghalensis</i>	Marri chettu	Moraceae	2
15	<i>Tamarindus indica</i>	Chintha chettu	Fabaceae	1
16	<i>Cassia fistula</i>	Rela	Fabaceae	4
17	<i>Samanea saman</i>	Nidra ganneru	Fabaceae	1
18	<i>Areca catechu</i>	Poka chettu	Arecaceae	6
19	<i>Plumeria obtusa</i>	Deva ganneru	Apocynaceae	3
20	<i>Tectona grandis</i>	Teak	Lamiaceae	5
21	<i>Polyalthia longifolia</i>	Naramamidi	Annonaceae	5
22	<i>Phyllanthus emblica</i>	usiri	Euphorbiaceae	1
23	<i>Hibiscus rosa-sinensis</i>	Mandharam	Malvaceae	2
24	<i>Bougainvillea spectabilis</i>	Kagitham puvvulu	Nyctaginaceae	8
25	<i>Codiaeum variegatum</i>	Croton Plant	Euphorbiaceae	2
26	<i>Thuja occidentalis</i>	Thuja	Cupressaceae	7
27	<i>Ocimum tenuiflorum</i>	Krishna Tulasi	Lamiaceae	1
28	<i>Nerium oleander</i>	Ganneru	Apocynaceae	9

29	Allamanda cathartica	Allenanda theega	Apocynaceae	1
30	Plumeria pudica	Devaganneru	Apocynaceae	5
31	Cycas revoluta	Sago Palm	Cycadaceae	2
32	Phyllanthus emblica	usiri	Euphorbiaceae	1
33	Hamelia patens	Fire bush	Rubiaceae	1
34	Ocimum sanctum	Rama Tulasi	Lamiaceae	1
35	Allamanda	Golden trumpet	Apocynaceae	1
36	Sterlitzia reginae	Birds of paradise	Sterlitziaceae	2
37	Philodendron	Heartleaf philodendron	Araceae	2
38	Ixora coccinea	Ixora dwarf pink	Rubiaceae	2
39	Ixora coccinea Red	Nooru varahalu	Rubiaceae	4
40	Dracaena mahatma	Dracaena	Asparagus	2
41	Tecoma stans	pacha ganneru	Bigoniaceae	2
42	Dypsis lutescens	Areca palm	Areceace	2
43	Pandanus tectorius variegata	Screw Pine	Pandanaceae	2

List of Medicinal Plants available in Dr.Janaki Ammal Botanical Garden

S.No	Botanical Name	Vernacular Name	Family	Number of Plants
1	Cassia fistula	Rela	Fabaceae	1
2	Rauwolfia serpentina	Sarpagandhi	Apocynaceae	1
3	Abrus precatorius	Thella gurivindha	Fabaceae	1
4	Abrus precatorius	Nalla gurivindha	Fabaceae	1
5	Abrus precatorius	Erra gurivindha	Fabaceae	1
6	Acorus calamus	Vasa	Acanthaceae	1
7	Costus igneus	Insulin plant	Costaceae	1
8	Plumbago indica	Erra chitramulam	Plumbaginaceae	1
9	Alpinia galanga	Dumpa rastram	Zingiberaceae	1
10	Celastrus paniculatus	Jyothismathi	Celastraceae	1
11	Annona muricata	Lakshmanaphalam	Annonaceae	1
12	Cissus quadrangularis	Nalleru	Vitaceae	1
13	Justicia adhatoda	Addasaram	Acanthaceae	1
14	Piper nigrum	Miriyalu	Piperaceae	1
15	Piper longum	Pippallu	Piperaceae	1

16	Cymbopogon citratus	Nimmagaddi	Poaceae	1
17	Terminalia chebula	Karakaya	Combretaceae	1
18	Terminalia bellerica	Thani	Combretaceae	1
19	Phyllanthus amarus	Nela Usiri	Phyllanthaceae	1
20	Gymnema sylvestre	Podapatri	Asclepiadaceae	1
21	Vitex negundo	Vaavili	Lamiaceae	1
22	Madhuca longifolia	Vippa	Sapotaceae	1
23	Macaranga peltata	Kanda	Euphorbiaceae	1
24	Pterocarpus santalinus	Erra chandanam	Fabaceae	1
25	Ocimum sanctum	Tulasi	Lamiaceae	10
26	Aerva lanata	Kondapindi aaku	Amaranthaceae	5
27	Datura metel	Ummetha	Solanaceae	5
28	Aloe vera	Kalabanda	Asphodelaceae	5
29	Ricinus communis	Aamudam	Euphorbiaceae	1
30	Azadirachta indica	Vepa	Meliaceae	1
31	Calotropis procera	Jilledu	Asclepiadaceae	1
32	Bryophyllum pinnatum	Ranapala	Crassulaceae	1

4. Is the College campus having any Horticulture Department? (If yes, give details)

Yes, 04 Faculty are working in the department of Botany and Horticulture.

5. How many Tree Plantation Drives organized by campus per annum?

Three tree Plantation Drives are Organized by Ecoclub, NSS, NCC and Red Ribbon Club Committees of the College. Total 12 trees and 80 hedge plants planted with more than 85% survival rate.

6. Is there any Plant Distribution Program for Students and Community?

Yes, college has a practice where all guests are given a planter as a gift rather than a bouquet of flowers.

ANIMAL WELFARE

1. List the animals (wild and domestic) found on the Campus (dogs,cats,squirrels, birds, insects, etc.)

Phylum-wise Faunal Diversity in the Institution

The institution has conducted an extensive assessment of its faunal diversity, categorizing the species by their respective phyla. Below is a detailed overview of the findings:

Platyhelminthes:

- **Bipalium:** A genus of predatory land planarians known for their unique head shapes resembling a hammer.

Annelida:

- **Hirudinaria granulosa:** Commonly known as the Indian cattle leech, it is often found in freshwater habitats.
- **Megascolex:** A genus of large earthworms that play a crucial role in soil aeration and fertility.

Arthropoda:

- **Ants:** Social insects known for their complex colonies and significant roles in ecosystems.
- **Grasshoppers:** Insects that are important both as pests and as prey for various birds and reptiles.
- **White Ants:** Also known as termites, they are essential decomposers in the ecosystem.
- **Crickets:** Known for their distinctive chirping sounds, they are key players in food webs.
- **Mayflies:** Aquatic insects whose presence indicates clean water bodies.
- **Dragonflies:** Predators of mosquitoes and other small insects, contributing to pest control.
- **Lady Beetles:** Often called ladybugs, they are beneficial as they consume aphids and other pests.
- **Honey Bees:** Crucial pollinators for many crops and wild plants.
- **23 Species of Butterflies:** Important pollinators and indicators of a healthy environment.
- **Centipedes:** Predatory arthropods that help control insect populations.
- **Millipedes:** Decomposers that play a role in breaking down organic matter.

Mollusca:

- **Pila:** A genus of freshwater snails.
- **Lamellidens:** Freshwater mussels that contribute to the ecosystem by filtering water.

Chordata:

Amphibia:

- **Frogs and Toads:** Vital for controlling insect populations and as bioindicators of environmental health.

Reptilia:

- **Calotes versicolor:** The Indian Garden lizard, known for its ability to change colors.
- **Gecko:** Small lizards with adhesive toe pads, often found in human habitats.
- **Chamaeleon:** Known for their color-changing abilities and long, sticky tongues to catch prey.
- **Ptyas:** A genus of snakes including the rat snake, which helps control rodent populations.
- **Dryophis:** The green vine snake, known for its slender body and green coloration.
- **Natrix:** Grass snakes, which have a seasonal presence and play a role in controlling amphibian populations.
- **Bungarus:** Known as kraits, these are highly venomous snakes that play a role in rodent control.

Birds:

- **Corvus splendens (House Crow):** Commonly seen around human habitations, playing a role in scavenging.
- **Alcedo (Kingfishers):** Known for their vibrant colors and hunting skills, feeding primarily on fish.
- **Woodpeckers:** Known for pecking wood to find insects and create nesting sites.
- **Columba livia (Rock Pigeon):** Commonly found in urban areas, often seen in flocks.
- **Psittacula (Parakeets):** Known for their bright green plumage and social behavior.
- **Eagles and Hawks:** Birds of prey that help control populations of small mammals and other birds.
- **Sparrows:** Small birds often found in urban and rural areas, playing a role in insect control.
- **Eudynamis (Koel):** Known for their distinctive calls, they are brood parasites.
- **Mynas:** Omnivorous birds that are often seen in pairs or small groups.
- **Bubos (Owls):** Predatory birds that are active at night, helping control rodent populations.

Mammals:

- **Canis familiaris (Domestic Dog):** Commonly found in and around human settlements.
- **Funambulus (Squirrels):** Known for their agility and role in seed dispersal.
- **Rats:** Often seen around human habitations, playing various roles in the ecosystem.
- **Pteropus (Flying Foxes/Bats):** Important for pollination and seed dispersal.
- **Mongoose:** Known for their ability to hunt snakes and small mammals.

Eco-Friendly Initiatives

The institution is committed to preserving and enhancing this biodiversity through several eco-friendly practices, including:

- **Avoiding the Use of Pesticides and Weedicides:** This ensures that beneficial insects and other wildlife are not harmed, promoting a healthy and balanced ecosystem.
- **Leaving some Pasteur** undisturbed while cleaning the campus.
- **Providing fresh and clean water** for the birds visiting the campus

These efforts highlight the institution's dedication to maintaining ecological balance and promoting a sustainable environment.

2. Does your institute have a Biodiversity Program or a ECOCLUB?

Yes, The College has ECOCLUB Committee.

1.2 WATER AND WASTEWATER MANAGEMENT

1. List uses of water in your institute

Basic use of Water in campus:

Drinking – 48.074 KL/month

Gardening – 30 KL/month

Toilets – 48.087 KL/month

Others – 64.116 KL/month

Hostels - 62.640 KL/Month,

Kitchen - 6.750 KL/Month

Total = 259.66 KL/Month

2. How does your Institute store water? Are there any water saving techniques followed in your Institute?

S.No	Storage Type	Capacity	Quantity	Total (in Liters)
1	Over Head Tank (above Office)	1000	2	2000
2	Over Head Tank (above Botany & Chemistry dept)	1000	1	1000
3	Over Head Tank (above Home Science & Zoology)	1000	1	1000
4	Over Head Tank (above Examination Cell)	500	1	500
5	Over Head Tank (Hostel-1)	2000	2	4000
6	Over Head Tank (Hostel-2)	2000	2	4000
7	Over Head Tank (above Garden)	500	1	500
8	Over Head Tank (Toilets for Students)	1000	1	1000
9	Over Head Tank (Pink Toilet)	500	1	500
10	Over Head Tank (beside Pink Toilet)	1000	1	1000
11	R.O PLANT	2000	1	2000
TOTAL STORAGE CAPACITY				17500

3. Does Water Harvesting Facility available in your Institute?

Yes, One Water harvesting Facility available in Campus. Water harvesting would be beneficial to our college community and the environment at large. It would allow us to capture rainwater runoff preventing it from being wasted and instead storing it for future use. This stored water could be utilized for various purposes such as landscaping, gardening etc., reducing our reliance on external water sources.

4. Does Ground Water recharge pits available in your Institute?

Yes, Two Ground Water recharge pits available in your Campus. These pits help replenish groundwater levels by allowing rainwater to percolate into the soil, ultimately recharging aquifers, and wells.

5. Does your Institute has Waste water recycling system?

Yes, Construction of a water harvesting would greatly contribute to our institution's efforts to create a greener and more environmentally conscious campus. Students to learn about the importance of water conservation and witness the practical applications of sustainable water resource management. It would allow the students to learn about the importance of water conservation and sustainable development, fostering a sense of environmental responsibility.

1.3 CARBON FOOTPRINT - EMISSION & ABSORPTION

1. Electricity used per year - CO₂ emission from Electricity

(electricity used per year in kWh/1000) x 0.84

128377 KWH/1000 x 0.84

= 128.377x0.84

= 107.83 ton

2. LPG/PNG used per year - CO₂ emission from LPG/PNG

(LPG/PNG used per year in KG) x 2.99

766.8 x 2.99

= 542.31 x 2.99

= 2.29 ton

3. Transportation per year (car) CO₂ emission from transportation (Bus and Car)

College doesn't have any owned vehicles, so emission because of the transportation is Zero.

CARBON ABSORPTION BY FLORA IN THE INSTITUTION

- There are 63 full grown trees and 49 semi grown trees of different species, on the campus spread over 7.5 acres.
- Carbon absorption capacity of one full grown tree 22 kg CO₂ Therefore Carbon absorption capacity of 63 full-grown trees 63 x 22 kg CO₂ = **1386 Kgs** of CO₂.
- The carbon absorption capacity of 49 semi-grown trees is 50% of that of full-grown trees. Hence the carbon absorption 49 x 6.8 kg of CO₂ = **333.2 Kgs** of CO₂.
- There are approximately Hedge Plants 1054 of various species being raised in the Botanical garden and Horticulture gardens and grown in the areas where no buildings are built Carbon absorption of bush plants varies widely with their species. Certain bushes absorb very high level of CO₂ where as some others absorb very low level of CO₂. In the absence of a detailed scientific study, 200g of CO₂ absorption is taken per bush (in consultation with Environmental Science specialists). Based on this, total carbon absorption of bushes is 1054 x 200 g = **210.8 Kgs** of CO₂
- The lawns on the campus have indigenous grass species and cover a total area of 47916 sq. ft. Carbon absorption capacity of a 10 sq. ft. area of lawn is 1 g per day Therefore, carbon absorption by lawn area 47916 x 365 x 0.1 g CO₂ = **1748.9 Kgs** CO₂ year.
- Grand total of carbon absorption capacity of the campus is **3678.9 Kgs** CO₂

GREEN INITIATIVES BY COLLEGE

- **Solid Waste Management**

- Segregation of wastes is done by providing clearly labeled bins for different types of waste
- Waste management is done by composting the Horticulture wastes in NADEP compost pit
- There is ban on single use plastic in the Campus and No Plastic Day is observed on every Monday by College Ecoclub Committee.

- **Renewable Energy**

- Solar power plant of capacity 20 KW is installed on building roof.
- The college is using solar power in the Campus.

- **Tree Plantation Drives**

- Three Plantation Drives are Organized by Ecoclub, NSS, NCC and Red Ribbon Club Committees of the College. Total 12 trees and 80 hedge plants planted drives were carried out by in the current year in the Campus with Plants survival rate is around 85%

- **Air Pollution Reduction**

In an aim to reduce the pollution caused by Vehicles, Ecoclub Committee of our College implementing “**No Vehicle Day**” in our college campus on third Saturday of every month. On that day all the employees and students are using public transport service. The main purpose of implementing this No Vehicle Day is to sensitize the employees and students to reduce the pollution caused by transportation, to reduce traffic on roads and to reduce road accidents. ‘**No Plastic Day**’ is observed on every Monday for promoting Environmental Conservation by encouraging us all to stay away from the use of Plastic and opt for Eco-Friendly alternatives. Activities under ‘Swatch Bharat Abhiyan’ will be a key component of all the community work being done by NSS and NCC volunteers of the college. Staff Members are encouraged to participate in the cleanliness drive in the college campus through ‘Clean and Green’ Programme. All students and staff members to maintain cleanliness of the college campus and its surrounding areas weekly twice basis. Replacement of old electronic appliances and instruments with energy efficient new ones.

ECOCLUB: – A.S.D. Government College has environment committee “ECOCLUB”. Below are the highlights of their work on environment cautiousness.

- Awareness Programme on **SAVE SOIL** was organized to Students to take measures to SAVE SOIL. Save Soil is a global movement launched by Sadhguru, to address the soil crisis by bringing together people from around the world to stand up for Soil Health, and supporting

leaders of all nations to institute national policies and actions toward increasing the organic content in cultivable Soil. ISHA volunteers of save soil explained the importance of protecting the soil from harmful chemicals and also explained about Cauvery Calling. Nearly 210 students from different streams of our college participated in the programme on 03.01.2023

- Ecoclub Committee and Faculty of the Department of Botany and Horticulture conducted Poster presentation and Slogan writing competitions on the topic “**World Wild life conservation**” on the eve of world wild life day 02-02-2023.
- International Day of Forests is observed on March 21 every year. Rally conducted by the Ecoclub committee and Department of Botany and Horticulture in the surroundings of Jagannaikpur in order to create awareness among the public to save Forests. The Theme of World Forest Day 2023 is “**Forest and Health**” Forests give us so much to our health. They purify the water, clean the air, capture carbon to fight climate change, provide food and life-saving medicines, and improve our well-being. Students made the Slogans “Save Forests”, “Forests And Health”
- The International Day for the **Preservation of the Ozone Layer** or World Ozone Day is celebrated every year on September 16 to highlight the importance of the ozone layer and raise awareness among the people about the harmful effects of ozone depletion. Awareness programme was organised by Ecoclub committee of our college by Captain. Dr.M.Krishna Rao, Lecturer in Botany, P.R.Government Degree College(A), Kakinada on the topic “Save Ozone Save Earth” on 16.09.2022
- Ecoclub conducted Awareness Programme on “**World Earth Day**” on 21.04.2023 to spread awareness about issues, including the rampant increase in pollution, global warming, and deforestation, which harm the environment and result in the destruction of the planet.
- Ecoclub conducted Awareness Programme on “**World Nature Conservation Day**” on 28.07.2023 to raise awareness about the importance of protecting our natural resources and the environment. The theme for World Nature Conversation Day 2023 is 'Forests and Livelihoods: Sustaining People and Planet' Preserving our natural resources and environment is of utmost importance for the sustenance of life on Earth. World Nature Conservation Day is an opportunity to remind people that we all have a role to play in protecting our planet.
- Ecoclub conducted Awareness Programme on **Save Water**, “Accelerating Change” World Water Day is observed on March 22 every year to educate about the importance of water to the whole world and to raise awareness about the water crisis. The day also highlights the necessary improvement for access to water, hygiene facilities, and sanitation in all countries. The Theme of Water day 2023 is “Accelerating Change” to accelerate the change required to solve the water and sanitation crises. The theme signifies the importance of appropriately using water in humans’ daily needs on 22-03-2023

Recommendations

- Encourage the students to adopt a Plant in their neighborhood
- Arrange training programmes on environmental management system and nature conservation for schools and local people.
- Establish an E-waste collection Centre in campus.
- It is need of an hour to “**Save Soil**” So it is recommended to continue Save Soil Awareness Programme every year.

Conclusion :

This audit includes extensive team discussions and meetings with Green Audit Committee members of the College covering a range of environmental issues. The College is committed to environmental responsibility and resource conservation by organizing Plantation Programmes, Vehicle free day, No Plastic day, Awareness Programmes and Rallies on Environmental issues and considers the environmental impacts of most activities. Construction of a water harvesting would greatly contribute to our institution’s efforts to create a greener and more environmentally conscious campus. Students to learn about the importance of water conservation and witness the practical applications of sustainable water resource management. It would allow the students to learn about the importance of water conservation and sustainable development, fostering a sense of environmental responsibility. This report proposes additional recommendations to further enhance the College's practices and foster its evolution into a more sustainable institution, despite its already commendable overall performance. The recommendations are to encourage the students to adopt a Plant in their neighborhood, to continue Save Soil awareness programme, to establish an E-waste collection Centre in campus and to arrange training programmes on environmental management system.

Reference

- The Air [Prevention & Control Of Pollution] Act – 1981 (Amended 1987) The Air (Prevention & Control of Pollution) Rules – 1982
- The Gas Cylinders Rules – 2016 (Replaces the Gas Cylinder Rules – 1981)
- E-waste management rules 2016
- Electrical Act 2003 (Amended 2001) / Rules 1956 (Amended 2006)
- The Hazardous Waste (Management and Handling and Trans-boundary Movement) Rules, 2008 (Amended 2016)
- The Noise Pollution Regulation & Control rules, 2000 (Amended 2010)
- Relevant Indian Standard Code practices
- The Environment [Protection] Act – 1986 (Amended 1991) & Rules-1986 (Amended 2010)
- The Petroleum Act: 1934 – The Petroleum Rules: 2002
- The Central Motor Vehicle Act: 1988 (Amended 2011) and The Central Motor Vehicle Rules:1989 (Amended in 2005)
- Energy Conservation Act 2010.
- The Water [Prevention & Control Of Pollution] Act – 1974 (Amended 1988) & the Water(Prevention & Control of Pollution) Rules – 1975

PHOTO GALLERY



BOTANICAL GARDEN



HORTICULTURE GARDEN



ACADEMIC PARK



SOLAR PANEL 1



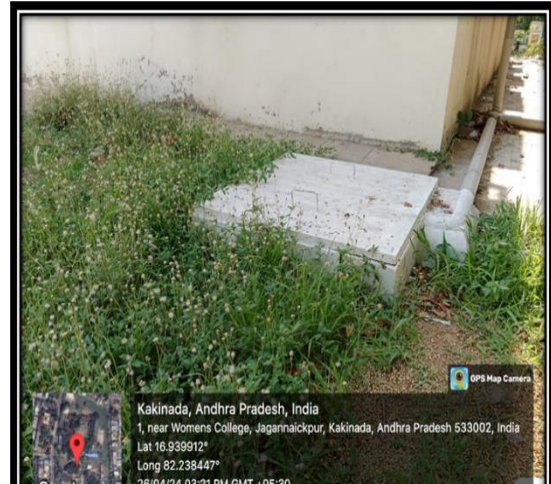
SOLAR PANEL 2



SOLAR PANEL 3



NADEP Compost Pit



Ground Water Recharge Pits 1



Ground Water Recharge Pits 2



Water Harvesting Facility



Vehicle Free Day on 3rd Saturday of every month



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Elocution on World Wetland Day



Save Soil Awareness Programme

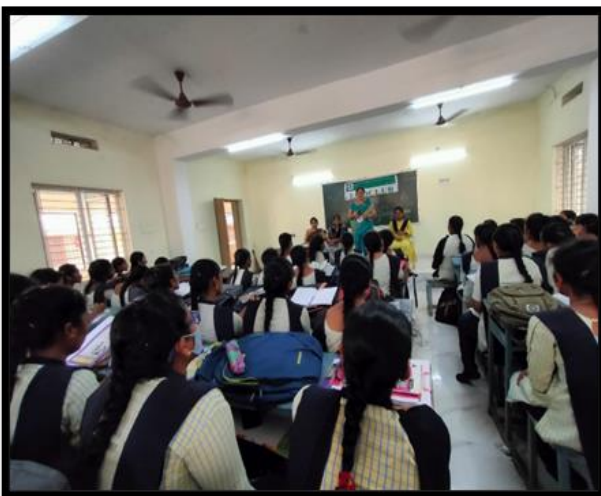


Ecoclub Volunteers actively participating in the Forest Day Rally



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Rally on Forest Day



Awareness Programme on Water Day



Poster Presentation competition on World Wild life conservation



Plantation Programme -1



Plantation Programme -2



Plantation Programme -3



Waste water recycling system



Greenery in the Campus

*** END OF THE REPORT ***