

# *St. Ann's College for Women*

(Autonomous), Affiliated to Osmania University  
Accredited by NAAC with A<sup>+</sup> Grade (3<sup>rd</sup> cycle), CPE by UGC

Mehdipatnam, Hyderabad.



## **CRITERION – VII**

### **Institutional Values and Best Practices**

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

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## **GREEN AUDIT REPORT**

**2020-21**



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## **Preface**

The aim of education is not 'Knowledge' but 'Action'. Since Vedic times it is well understood that the well-being of our Planet Earth depends on the preservation and sustenance of the five basic elements or the Pancha Mahabhoota of Nature “Aakash, (Sky) Vayu, (Air), Agni (Fire), Jal (Water) and Prithvi (Earth)”. People of those times were careful to refrain from activities that could cause harm to Nature's bounties. But today the inappropriate human actions have altered the season's cycles, leading to Global warming and Climate change, polluting the air and surroundings. As educational institutions, colleges can play a pivotal role in pursuing environmentally sustainable solutions by adapting various green initiatives. Environmental awareness and protection are the need of the hour. Sustainability of Environment is the key to the future of mankind.

Green Audit is one such Green practice which can empower the organization to frame a better environmental performance. The Higher educational institutions in the country can promote the values of environmental education and awareness in several innovative measures to ensure sustainable practices among the students. The value of inculcating environmental knowledge to behave with positive attitude among youths provides ample number of opportunities for innovation in the field level.

Green audit practically involves energy conservation, use of renewable sources, rainwater harvesting, and efforts of carbon neutrality, plantation, hazardous waste management and E-waste management. This report serves to highlight the college accomplishments and to make recommendations for improving the college environmental sustainability. Green audit acts as a major tool for promoting good environmental management.

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### **About The College**

St. Ann's College for Women came into being in 1983 with two undergraduate courses and 106 students. At present, the college has a strength of over 3000 students and 102 well qualified staff members, belonging to as many as 28 different departments. The College cuts social, financial, cultural and linguistic barriers. Being a missionary college, the effort is to foster a rich campus culture with academic excellence and skill enhancement. The college continues to grow in quality, impact and reach. The college offered itself for assessment by NAAC in the year 2006 ,2013 and 2018. The concerted effort towards quality goals culminated in the award of 'A+' grade and further recognition came as a 'College with Potential for Excellence', both the times.

The college strives to maintain an environment which encourages all employees to upgrade their personal and professional goals and aspirations as college works towards achieving the mission of the college. The college provides a work environment in which everyone, staff and students alike accept responsibility to contribute to the success of the institution and empowered to do so.

The faculty at St. Ann's is the most valuable resource that brings along an incomparable set of skills and knowledge. The faculty boost of varied backgrounds in terms of specialization and experience. The academic, social and spiritual elements of St. Ann's college come together to offer the students a world of opportunity.

The college is in the initial stages of carrying out the Green Audit and Evaluation. Therefore, college follows institutional policy to conduct green audit. The purpose of the audit is to ensure that the practices followed in the campus are in accordance with the Green Policy adopted by the institution.



Green audit and evaluation of the college is taken care by the following committee;

**Green Audit Committee:**

Chairperson : Principal Dr.Sr.P.Amrutha

Convenor : Mrs. Sylaja, Eco-Club

Members : Mrs.Beverly , NSS P.O

Ms. Roja, Lecturer, Department of Botany

Mrs.Pranathi Lecturer, Department of Commerce

Mrs.Jyothi Outreach Coordinator

## Green Audit Report

2020-21

### **Executive Summary**

The prime objective of the audit was to evaluate the adequacy of the management control framework of environment sustainability and the degree to which the college is in compliance with the applicable regulations, policies and standards. During the planning of the audit, an analysis was conducted to identify and evaluate the matters associated with the environmental sustainability.

The methodology used includes physical inspection of the campus, review of the relevant documents and interviews.

### **Statement of Assurance**

This audit has been conducted in accordance with the institutional policy. In our opinion sufficient and appropriate audit procedures were completed. The conclusions are based on a comparison of the situations as they existed at the time of the audit with the established criteria.



### **Observations**

The important observations are, all the departments and students are aware about the need for environmental protection at a general level. It was also observed that a number of best practices such as rain water harvest pit, compost pit, vermi-compost, water purifier (RO), energy conservation, maintaining plants, tree plantation in the neighbouring community, Haritha haram (Govt. of Telangana initiative), Biogas plant, E – waste management, recycling of paper, encouragement to use eco-friendly material in the campus, etc. are followed.

#### **A) Water Management:**

The major source of water in the campus is municipal supply and also bore well. Wise use of water is general practice in the college. Aqua guard water filters are installed in all the floors for drinking purpose. Quality of drinking water is tested on a regular basis by Microbiology Department of the college.

Rainwater harvesting pit is functional. College has two rain water harvesting pits which maintain the campus ecology. The rain water runoffs are prevented in the campus through strategic bunds to enable the rain water to seep into the ground, ensuring rainwater conservation. It has been observed that the ground water level in the campus has shown a significant rise indicated by the availability of bore water throughout the year.

Department of Botany and Eco club maintain and monitor the rain water harvesting project. Air quality testing is also done in various hotspots of the college by the department of Microbiology.

#### **B) Waste Management:**

Land filling is the general hazardous waste management strategy adopted by few life sciences departments like Department of Genetics

**Biogas Plant** is located in the backyard of the campus. The gas generated is utilized for practical classes. Solid waste generated is used or sent for vermi composting maintained by the Department of Zoology. Kitchen waste generated in Nutrition lab is used for composting in bins.

Chemistry Departments has installed distillation units to recycle and reuse the organic solvents. Stockpiling of chemicals is avoided by using an inventory management system, avoiding long term storing and avoiding the storage of expired chemicals. Green chemistry



and Micro-scale experiment concepts are adopted to reduce the production of hazardous wastes. The toxic chemicals are neutralized and diluted before discarding.

Biological waste from other science laboratories are made harmless through autoclaving and then disposed. Hazardous waste generated in life sciences labs is disposed off in a scientific manner.

Department of Botany maintains the Botanical Garden of the college. The garden waste is converted into organic manure in an organic pit and is used as a biofertilizer in the botanical garden.

Used paper, Reagent bottles used in Chemistry and Biochemistry labs are given to vendors for recycling.

Production and sale of cloth bags at college and market places by volunteers of Eco Club and Chemistry Department.

Paper, Plastic and other dry waste is given for recycling to Greenwaves Environmental solutions. This is practiced by the departments of Biochemistry, Statistics, Nutrition, Zoology, Microbiology and Library.

Various awareness programs on segregation of waste, waste management have been organized both inside and outside the college like

### **Biomedical waste disposal in Science labs**

The collection of biodegradable waste involves use of different types of containers/bins For example, all the waste sharp metals like the needles used for pricking the fingers are disposed in yellow bin, cotton contaminated with blood is disposed in red bin and the disposable gloves used by the faculty and students are disposed of in blue bin. Sharp needles are kept in puncture-proof containers to avoid injuries and infection to the attenders and helping staff handling them. Each container is clearly labelled to show what is supposed to go into it. The waste is disposed of on a daily basis and the bins are sanitized and used.



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### **Biomedical waste Disposal**

#### **Activities conducted 2020-21 -Waste Management**

1. Demonstration Session on Kitchen waste composting in bins, khambha and cardboards, pots etc was organised on Jan 19, 2021 for students of Environment Education

2. Awareness session on Biodegradable Sanitary Pads/Menstrual waste management

As a part of creating awareness on Biodegradable sanitary pads Eco club on March 26, 2021, organised an awareness session on Menstrual Hygiene and waste management, disposal of sanitary pads, eco friendly alternatives available to avoid plastic napkins hazards both to women using them and to the environment

3. **Upcycling plastic waste -Plastic Bottle crafts**

In order to create awareness of recycling and repurposing of plastic Dharani ECO club conducted an activity "Plastic Bottle Crafts" where in the students of Environment Education were asked to prepare some creative and useful things out of used plastic bottles. All the Students took part in the event by upcycling some of the plastic products. The participants shared their views saying that they have got to learn something creative through this event.

4. **Newspaper bag Making/Sanitary pad pouch making was demonstrated to** Eco club and Environment Education students by Jessica Ruth to create awareness among students to avoid plastic bags Also students were taught to make sanitary pad disposal pouch using



newspapers, to dispose of used pads properly. Students were asked to prepare minimum 5 bags each using different kinds of paper like newspaper, Magazines and calendar's etc.

**5. Quiz on Know Your Plastic Foot print:** To create Consciousness on the plastic waste and to know how it is polluting our environment a simple Quiz was conducted with the theme - "Know your Plastic Foot print" were in questions related to usage of plastic in daily life were asked and points were allotted depending up how much of plastic wastage is generated by an individual

**6.** Eco club students created Instagram stories on two themes and Posted all these on our Dharini Eco club Insta page on Menstrual waste management

1. Switching over to Eco friendly alternatives from plastic pads

2. Creating awareness on Menstrual Hygiene and waste management

**7. Webinar on Food Wastage** and How to Tackle it- April 9<sup>th</sup>2021 For around 300 students as participants

8. Instagram, YouTube channel and twitter account created to share the e content created on food waste converted to beauty products

**9. Poster Making Competition** organized on topic Food waste management for students of St. Ann's by ECHO team under the Project activities

10. Along with other Eco Club Volunteers of our College Represented in **A National level Project -ECHO 2021 in collaboration with WWF**

They worked on Food Wastage problem trying to provide solutions at household level on "How to minimise and reuse Food waste as beauty products"

St Ann's College Team was among the Top 5 State level Winners in the Country

11. Projects on E waste management were completed by a team of Environment Education students during May -June 2021



12. Students participated in a **Workshop Zero waste Menstrual Hygiene** How are sanitary napkins harmful to the environment? And do they overwhelm the landfills further?

Through this workshop students learnt about other zero waste alternatives such as menstrual cups and cloth pads. This workshop opened new avenues into the world of Zero-Waste Menstrual Hygiene that will make periods safe for you and the environment.

### **C) Energy Management:**

Classroom has cross ventilation and sufficient natural lighting to minimize use of electricity. College takes steps to sensitize students and staff about energy conservation. High energy consuming fluorescent lights are found in use. The college has replaced them with LED or CFL lights in most of the places. Staff and students are encouraged to switch off all electrical appliances light, fans, air-conditions and lab equipment when not in use.

Electricity as energy source and the initiatives to save it are-

- Survey of electrical fixtures of college- class rooms, laboratories, departments and centers, based on which recommendations are made to save energy, Periodic Recommendations to all the departments and classes, all eco club volunteers of the class follow simple electricity saving rules like switching off all fans and bulbs of the classrooms, LCD projectors, using natural air by keeping windows open, Green Stickers (Energy saving rules) are pasted in the classes and Laboratories, Save Energy poster are displayed in corridors, Zero power hour /week is followed every Saturday.
- Annual maintenance contracts of equipments and instruments are in place for infrastructural facilities in the college. e. g. Elevators, Air conditioners, Computers. Departments also have AMC for equipments. Solar panels are in place for evening lighting, Incandescent bulbs and tube lights are replaced with LED power saver bulbs,
- Use of sunlight –Natural light for microscopy in all life science departments.
- Computers and printers are operated in Energy saver mode. Computers are regularly maintained for performance and all faculty and students are advised to use systems in Power Saver mode. The Dot matrix Printers are replaced with Laser Printers where ever possible. All CRT monitors are replaced with LCD monitors and Energy Star equipment is purchased.



#### **D) Landscape / Environment/Green Practices:**

The college campus is greener with fair biodiversity. Most of the trees and plants have their scientific names displayed on them. The campus of the college itself is environmental friendly with trees, garden, medicinal plants, vegetable garden, lotus ponds Green lawns adorned with ornamental plants and shady trees make the campus look beautiful. Though space is limited, every vacant corner of the campus has been planted with trees, shrubs, creepers, turfs and other plant species to make it look greener and more vibrant. The 5000 sq. ft. botanical garden is a consortium of fruits, vegetables, medicinal, ornamental plants, and pond ecosystem.

Green corridor concept should be adopted by increasing the number of potted plants in the college corridors. This can further reduce the carbon footprint.

#### **E) Tree Plantation:**

**Telangana Ku Haritha Haram** is a large-scale tree-plantation program of the Telangana Government to increase the tree cover in the southern Indian State. NSS, NCC, Eco club of College participates enthusiastically both within the college and outside

Department of Botany supports the cause of increasing the green coverage with good Biodiversity on campus

First Sunday of August is Friendship Day and at St Ann's College it is celebrated as **Green Greeting Day**. Green Greeting is a unique programme of Rotaract Club of St. Ann's. Every year students of the college are encouraged to gift saplings to their friends instead of gifting other gifts like friendship bands etc. The message of gifting sampling was nurture friendship; watch it grow.

Microbiological testing of soil, rhizosphere and phyllosphere is done regularly to optimize the health of plants as suggestive methods and recommendations are discussed in audit committee

#### **F) Celebrations Of Festivals Depicting Nature:**

- Vasantpanchami depicted as beginning of spring by Hindi department.
- Bathukamma- festival of flowers by Telugu department

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- Ecofriendly ganesh making workshop and sale,
- Eco friendly gifts and greetings during conferences- Guests for all conferences and celebrations are greeted with Green Greetings in the college.
- No to plastic and sale of eco friendly bags by Chemistry Department and Eco club.
- Students and staff always try to pool up and commute and those living nearby walk to college.

### **G) Green Agenda In Syllabus**

**Environment Education** is offered as Co-Curricular Activity to first year students for two semesters on choice basis. This is a **activity based course** which encourages student participation in organizing as well participating in events such as plantation drives, cleanliness drives, Nature walks, Rallies, recycling activities, composting ,promoting eco-friendly products, celebrating festivals in eco-friendly ways ,creating awareness by way of organizing camps, essay writing competitions ,quiz, debate, observing Eco calendar.

**Science and Environment course** creates an awareness and sensitivity towards conservation of biodiversity. It promotes development of required skills in sustaining the ecological balance of the environment; understanding of the benefits and limitations of science and its applications in technological developments towards human welfare. This course is offered to all students in the III semester. Teaching methodology includes seminars, projects, Group Discussion etc., based on the curriculum and the latest updates in the same.

“**Environment Management** Course trains students to manage environment risks and explore ways to reduce environmental footprint in day to day activities.

College observes Ozone day, Natural Recycling Day, World Earth Day, World population Day, Wildlife Week by organizing activities on environmental themes.

### **Paperless transactions by all Departments**

E-Feedback Systems, E-Certificate, Online- Google Classroom and Google Form Assignment

Know Your Plant-Digital Display

The Department of Botany Encourages students in compiling a Green File for the display of articles on the noticeboard regarding the Environmental Issues. Digital and Seed Herbarium

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Eco club in collaboration with Green Mitti encourages student internship on Five Modules pertaining to **Green Mitti Concept**

Sustainable Green cover

Seed Balls preparation

Natural Farming,

Waste Segregation and Composting

Home Gardening

Hydroponic Gardening

Upcycling of Materials

Energy and water conservation

Biodiversity and Micro climate carbon footprint reduction

Bird and Butterfly Watching

Micro climate improvement

Innovative Projects successfully completed by Eco club students

1. Making Natural colours from fruits and vegetables
2. Bioplastic preparation from starch
3. Mosquito repellent Incense stick from flower waste and leaf waste
4. Designing Bags and Doormats from old clothes



### **Recommendations from previous audit**

In order to improve their efficiency and consistency, certain practices could benefit them further

- Green audit may be conducted on a periodical basis
- A few more rainwater harvesting pits can be prepared at appropriate places in the campus
- Waste segregation can be done at the source by installing Wet and Dry Dust bins in all the floors of the college
- Solar panels can be installed for renewable electricity
- Solar cookers can be used in Nutrition labs
- Safely dispose computer, electrical appliances e waste in a scientific manner
- Survey can be done on CO<sub>2</sub> Emissions for accounting the carbon footprint and adopt methods to make college campus carbon neutral.
- Liquid soap dispensers can be put up in wash rooms of all floors.
- It is recommended to Install Incinerators, to dispose safely the sanitary napkins
- Also numbers of bins in the washrooms are to be increased.
- CFLs to be replaced with LED lights and solar lights

Food wastage is to be monitored and students to be sensitized on the issue

### **As per the recommendations the college has taken following measures**

- Green Audit is conducted on a regular basis
- A few more provisions are made in the quadrangle to percolate rain water
- Twin bins are placed in all the floors to encourage the waste segregation concept among students
- Few solar lamps are installed in quadrangle and sports ground for evening lighting purpose.
- Liquid soap dispensers are put up in wash rooms of all floors
- Most of the CFLs are replaced with LED lights
- Students participated in a National level project Titled ECHO 2020-21 on How to Handle Food waste They created awareness on this issue by conducting Food waste survey, competitions, webinar, e content, videos, e posters to repurpose food waste into beauty products.

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**Recommendations by Green Audit Team 2020-21**

- Energy Audit is also suggested to be conducted on a regular basis.
- Renewable energy sources to be initiated to save electricity
- Biodiversity survey of the campus can be done.
- Explore Measures to bring down carbon footprint in the campus
- All the CFLs to be replaced by LED lights.
- The college can apply for Green Awards
- Air Quality and water quality of the campus to be done on a regular basis



Dr. Sr. P. Amrutha

*Principal*

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