



GREEN AUDIT REPORT

2022-2023

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Objectives of the Study

Objectives of this study are carried out as directed in previous reports which are helping to promote the Environment Management and Conservation in the College Campus. The purpose of the audit is to identify, quantify, describe and prioritize framework of Environment Sustainability in compliance with the applicable regulations, policies and standards. The main objectives of carrying out Green Audit are:

- To make sure that the environment is not harmed due to increasing development.
- To make sure that all the resources are utilized properly.
- To assess the strength and weakness of the existing system.
- To introduce and aware students to real concerns of environment and its sustainability
- To secure the environment and cut down the threats posed to human health by analyzing the pattern and extent of resource use on the campus.
- To establish a baseline data to assess future sustainability by avoiding the interruptions in environment that are more difficult to handle and their corrections requires high cost.
- To bring out a status report on environmental compliance.

About the College

The concept of “going green” has become a trend recently. With climate change and other environmental issues affecting us in our daily lives, it has become a imperative to use the term more often. But many lack a full appreciation and awareness for what it really means to go green. “Sustainability involves becoming aware of the impact of all the little decisions that we make.” Thus we go on to explain and often tell students that sustainability is about being mindful of day-to-day activities and how they impact the environment today, as well as ,the lives of next generation. Recycling paper and plastics, along with trying to reduce usage of electricity and fossil fuels are a start, but there are many other steps — big and small — individuals can take to protect and preserve the planet.

The Km. Mayawati Govt. Girls Post Graduate College, Badalpur, Gautam Buddha Nagar campus is a picturesque site amidst blossoming green environment. It makes the campus mostly free from pollution. The college campus is spread in a total area of 1.7160 hectare of lush green land has more than 400 trees and lots of herbs and shrubs. The College is an all Girls College offering under graduate and

post graduate courses in faculties of humanities, science, commerce and education run by State Government of U.P. It has achieved NAAC grade B++ which is highest in Government Colleges of U.P. The college is also ISO 9001-2015 certified. From a humble start in 1997 with 28 students and 4 teachers, the college have grown today to a large family of about 2500 students, 58 full time dedicated teachers, 5 non-teaching staff, besides regular visiting faculty and research scholars. The college also has a study center under IGNOU which is providing for degree/post graduate programs. The college has 20 departments, under the five faculties of Arts, Science, Commerce, B.Ed. and B. Voc. The facilities provided are well lit, airy classrooms, smart classes, Wi-Fi campus, well equipped labs, video conferencing room, a multi-purpose hall, sports ground, badminton court, gym, common room, first aid room etc. The Green Campus initiatives were started with Nature Club several years back followed by formation of Eco-Restoration and Green Audit Committee in the year 2017-18. These initiatives taken collectively help us to develop innovative ideas for nature conservation and spread awareness among the students and the adjoining villages of the college campus. But besides all this the institution has some challenges in executing its environmental policy e.g., availability of less land area and scarcity of support staff. Beyond these challenges the students, faculty and support staff are working to develop a culture of self-sustainability and making the entire campus environmental friendly.





Both the teaching and Non-teaching staff of K.M.GG.PG College, Badalpur are committed for carrying out different activities to achieve sustainable development. This could be achieved through the following:-

- i. To sensitize and aware the students and staff regarding the use of water properly and to prevent the wastage of water at all levels.
- ii. To bring in use of the 'Rain Water Harvesting' in the campus.
- iii. To maximize the use of ICT and minimize the use of paper. It will ultimately lead to 'Paperless Office'.
- iv. To use the solid waste through vermin-composting in the campus and use it as a fertilizer in the college premises.
- v. To reduce the noise pollution in the campus.
- vi. To effectively protect and nurture the Flora and Fauna on the campus
- vii. To maintain green campus.

Green Audit Report

Green Audit can be defined as systematic identification, quantification, recording, reporting and analysis of components of environmental diversity. The 'Green Audit' aims to analyze environmental practices within and outside the college campus, which will have an impact on the eco- friendly ambience. Our emphasis is on 'Green Campus' including Water Conservation, Tree Plantation, Waste Management, Paperless Work, Alternative Energy and Mapping of Biodiversity. The purpose of the audit was to ensure that the practices followed in the campus are in accord-

ance with the Green Policy adopted by the institution. The methodology include: forming a Committee for green audit, physical inspection of the campus, observation and review of the documentation, interviewing key persons and data analysis, measurements and recommendations.

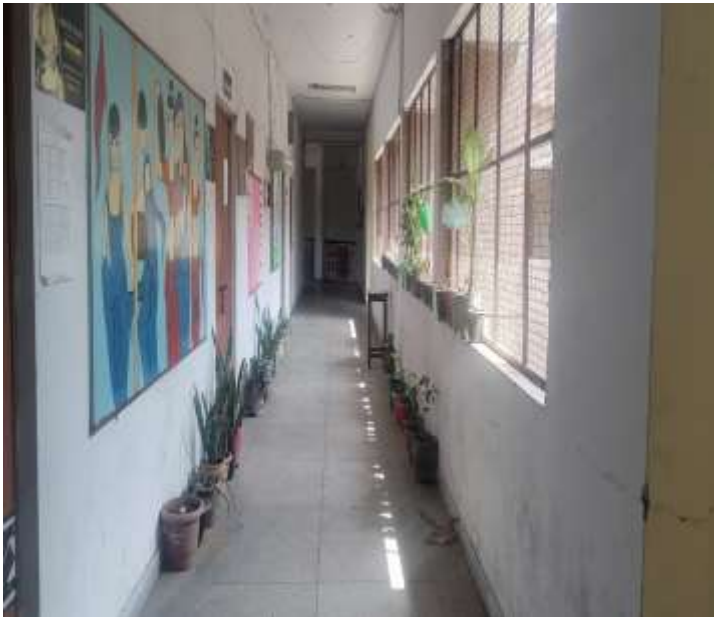
Green Audit Practices –

For Green Audit of this year the Eco-Restoration and Green Audit Committee have chosen to emphasise on following areas –

1. Daylight and Ventilation.
2. Water Efficiency
3. Wastewater Management
4. Indoor Air Quality
5. Energy Management
6. On-site Energy Generation
7. Solid Waste Management

Daylight and Ventilation-

The college building is designed in such a way that there is availability of plenty of sunlight in whole building. The college has large classrooms with big doors and many large windows in each room. This help in providing ample natural light and ventilation which further helps in reducing the electricity bill. Classrooms, library, laboratories, offices have high ceiling, wide doors and windows. In order to avoid glare curtains or blinds are provided in classrooms and laboratories. In classrooms there are fans and windows for cross ventilation. Exhaust fans are also provided in laboratories and offices to increase ventilation.



Water Efficiency-

The foremost source of water in college is underground water extracted by use of submersible pump. This water is then collected in overhead tanks and taken into use for various purposes. To avoid wastage of water flow in overhead tanks float valves are used. Simultaneously, regular servicing is also done by plumbers and electricians. The overhead tanks are also cleaned from time to time. The water of rain water harvesting tanks is used for gardening. There are 2 soak pits to reduce water wastage. Besides this the waste water of RO and the AC's water is also used for plants. RO system is operated by College water management team and maintenance is done by third party contractor appointed by College. Maintenance is done as and when required in a year.

4 water coolers fitted with RO purifiers are provided in College building as a source of safe drinking water. The college appoints a third party contractor for the maintenance of RO's and for plumbing also. To prevent water leakages the college's water management committee promptly attends any leakages and rectifies them with the help of third party contractors.

In washrooms and canteen waste of water is taken care of and notices to turn off the taps after use have been pasted for the students. A single flush system is in use in most of the washrooms.

Mostly dry and wet mopping is used to clean the college campus . For this the college has two dedicated sweepers who cleans the college. Signages for water conservation has been used near water coolers and RO's.



Noise pollution and Illumination-

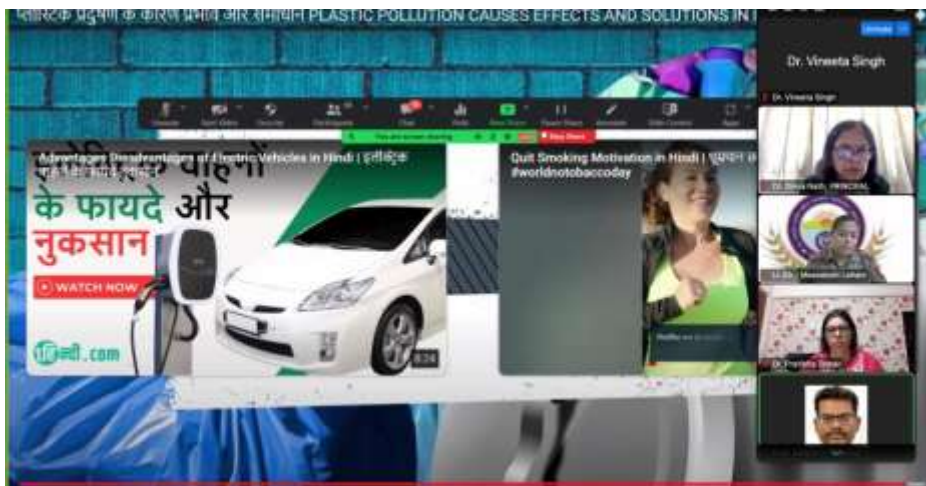
The level of noise and light intensity have said to be of profound importance in the development of students. It has been discovered that light settings have very important role in the performance of a

student. This point was kept in mind during the construction of college. The classrooms were provided with sufficiently big windows and doors so that ample amount of sunlight and wind can enter. The college is situated in a rural backdrop and its location is sufficiently far from the main GT road . As such there is no outdoor noise interference in College’s day to day activities.

Plastic free campus

The usage of plastic in college is minimal. The staff and the students are not encouraged to use one time use plastic, plastic bags and disposable plastic things throughout the campus. The Eco-restoration and green audit committee along with NSS and NCC had organised one day workshop to create awareness among students to make and use cloth bags made out of old worn out clothes . More such awareness programmes have been planned to execute in the coming future. Moreover, the committee have also proposed to minimise the use of single use plastics and if there is any use of such plastic the students are encouraged to convert it into an Eco-brick, which can be used for various purposes later on.

The environment day was celebrated on June 5 2023 in alignment with the theme of prevention of Plastic pollution. On this occasion an online lecture on the same topic was organised with special speaker as Dr. D.C Sharma . Along with this to spread awareness among students about environmental concerns a quiz was also organised by Eco-restoration committee.



Indoor Air Quality-

The indoor air quality makes an important indicator of complying to green audit practices. Indoor air pollution leads to diseases and discomfort of the building's occupants. The common indoor air pollutants are carbon monoxide released from incomplete combustion of fossil fuels, carbon dioxide which is released by respiration, volatile organic compounds (VOC's) which are released by paints, pesticides, office equipment such as printers and photo-copiers, graphics and craft materials including glues and adhesives, permanent markers etc.

Due to construction and maintenance activities, vehicular pollution also indoor air quality is compromised.

To effectively manage and maintain indoor air quality the college uses LPG in laboratories and canteen area, which is a safer fuel.



The class rooms and laboratories are well ventilated and exhaust fans are used to disperse any harmful fumes. In rooms and offices where air conditioners are used, timely service of AC's is done. Several



indoor plants are used in college for enhancing the indoor environment.





E-waste management in the campus –

E-waste is a consumer and business electronic equipment that is near or at the end of its useful life. This waste makes up about 5% of all municipal solid waste worldwide. It is hazardous than other waste because electronic components contain cadmium, lead, mercury, and Polychlorinated biphenyls (PCBs) that can damage human health and the environment.

E-waste generated in the campus is of minimal quantity. It is being effectively managed, keeping in mind the environmental hazards that may arise if not disposed properly.

The cartridges of laser printers are refilled and reused in the college campus. Awareness programme was conducted by college regarding E-waste Management. The E- wastes and defective items from computer laboratories are being stored properly and recycled in effective Manner.

The dismantled hardware of personal computers are used in PC trouble shooting lab. The college being a government college has to rely on government authorities's permission for disposal of e- waste.



Waste water Management-

Water conservation is a key activity as water availability affects on the development of the campus as well as on all area of development such as farming, industries, etc. Keeping this view water conservation activity is carried out.

The waste water generated is disposed off into the underground sewage tanks through waste water drainage to municipal server. The source of wastewater is Domestic Waste Water i.e., Sewage water. The Sewage water mainly comes from Toilets of college, canteen and laboratories. The Treated water is used for gardening Purpose and sludge is taken frequently from the collection tank and used for manure.

Solid waste management-

Solid Waste is mainly generated from leaves and other parts of plants, waste of canteen , laboratories, office and classrooms. Separate dustbins are provided for Bio-degradable and Non- biodegradable waste in order to segregate them at the source itself.

Single sided used papers are reused for writing and printing in all the departments to minimize the usage of papers. Furthermore, the college has an ongoing MoU with a NGO Jagruti for waste paper recycling. The NGO is called on yearly basis to collect the waste paper which is generated in the form of old newspapers, office papers which are of no usage. The NGO provides the college with paper rims in lieu of the waste paper. These paper rims will further be used by the office and other uses by the staff. Very less plastic waste is generated by some departments, office, garden, canteen etc and campus is declared as Plastic Free zone. Metal waste and wooden waste is stored.and they are sent to scrapping agents for further processing after completing the legal government process. The college has separate bins to collect biodegradable and non-biodegradable waste generated in the campus.Regular meetings are conducted with ground staff regarding the cleanliness of the campus and proper

disposal of waste. The college has installed a number of flex boards spreading awareness about the



proper segregation of waste.

Energy Management

This indicator addresses energy consumption, energy sources, energy monitoring, lighting, appliance, natural gas and vehicles. Energy use is clearly an important aspect of campus sustainability and thus

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requires no explanation for its inclusion in the assessment. The study carried out also analyzed the use of alternate energy resources that are eco-friendly. The energy is utilized in the Campus for lighting, space heating and cooling, running of laboratory instruments, appliances, water heating, ground water pumping, cooking and transportation.

The source of energy for all the buildings within the campus is through electricity only. The campus contains Lights and fans in use. Computers are set to automatic power saving mode when not in use. Also, campus administration runs on switch-off drill on regular basis. As such no in house energy generation system is installed in the college campus. There is a 5 KW solar power panel installed on the roof of zoology department. The college is however striving for increasing the total energy input of the college presently 10 KW to 50 KW.



Measures Taken in the year 2022-2023

With the aim to educate the young minds and contribute towards sustainable development the college's Eco restoration and Green Audit committee conducted various following activities throughout the year in association with other committees and departments of the college:

- A huge Plantation Drive was conducted in the month of July, hundreds of sapling were planted in and around college by NSS, NCC and Eco-restoration and Green Audit committee of the college.
- Under the aegis of Swachta Samiti of the college Jal Shakti Abhiyaan was organized to

emphasize the importance of water and to store water for future generations.

- To save water two recharge pits have been made in the college near the hand pumps. These recharge pits store the spill off water from the student water coolers and tanks.
- Cleanliness drive was carried out with help of Greater Noida Authority to cut the bushes and grass in college campus.
- Energy Conservation – Use of Solar lights is in plan and progress and the college is also planning to set up an EV charging station in the college with the help of PNB .
- A vermi compost unit was built to recycle the biodegradable waste of the college campus. This vermin compost pit is regularly emptied and the biofertilizer is used for the plants in college.
- Rainwater harvesting units repair and cleaning was done to make it intact for water conservation.
- Lectures on environmental issues are being held regularly in college.
- To spread awareness about environment World environment day was celebrated.
- To protect fauna of the college students advised to make nests for the birds and provide them water and feed to conserve them.
- The college Eco restoration committee along with NCC, and NSS has organised a one day workshop for students to promote usage of cloth bags instead of using Single Use Plastic in the month of November 2022.



Recommendations -

The Eco-restoration and Green audit committee of the college is taking care of the enactment, enforcement and review of the Environmental Policy. It is the responsibility of the committee to advise and guide the staff and students on how to conserve the environment without compromising on the development.

The audit is conducted annually and action is taken on the basis of audit report, recommendation and findings. Some of the recommendations of the committee are-

- 5–star rated Air Conditioners, Fans and CFLs should be used.
- Cleaning of tube-lights/bulbs to be done periodically, to remove dust over it.
- The college should plant more and more of Indoor plants to inculcate interest in students. Bonsai can be planted in corridor to bond a relation with nature.
- The committee also recommends that a wastewater treatment plant should be installed in the college to recycle and reuse the waste water generated from various activities in the college.
- It is also proposed that there is a need for monitoring and controlling overflow and periodically supervision drills should be arranged.
- It is also a recommendation that all cleaning products used by college staff should have a minimal detrimental impact on the environment, i.e. they should be biodegradable and non-toxic.
- More and more of watering in plants and gardening should be, by using drip/sprinkler irrigation system to minimize water use.
- Waste water treatment plant should be installed to recycle and reuse the water used for domestic purposes.
- It is also a strong recommendation that more for renewable and carbon-neutral electricity options with the aim of supplying all college properties with electricity that can be attributed to renewable and carbon-neutral sources.
- More LED lights should be installed to reduce power consumed for lighting.
- The campus administration should run switch–off drill on regular basis.
- In campus premises electricity should be shut down from main building supply after occupancy time, to prevent power loss due to eddy current.