



Miranda House
UNIVERSITY OF DELHI

GREEN AUDIT REPORT

2021 - 2022

PREPARED BY
EHS ALLIANCE SERVICES



TABLE OF CONTENT

AUDIT CERTIFICATE	3
ACKNOWLEDGEMENT	4
DISCLAIMER	5
CONTEXT & CONCEPT	6
INTRODUCTION	7
OVERVIEW OF COLLEGE	8
VISION AND MISSION	10
AUDIT PARTICIPANTS	12
EXECUTIVE SUMMARY	13
GREEN AUDIT ANALYSIS	13
1.1 GENERAL INFORMATION OF COLLEGE	13
1.2 WASTE MINIMIZATION AND RECYCLING	14
1.3 GREENING THE CAMPUS	15
1.4 WATER & WASTEWATER MANAGEMENT	16
1.5 ANIMAL WELFARE	18
1.6 CARBON FOOTPRINTS	18
INITIATIVES TAKEN BY COLLEGE	19
RECOMMENDATION	22
CONCLUSION	23
REFERENCE	23
ANNEXURE – PHOTOGRAPHS OF ENVIRONMENT CONSCIOUSNESS	24



CERTIFICATE



AUDIT CERTIFICATE

PRESENTED TO

MIRANDA HOUSE

GC Narang Road, University Enclave, Delhi- 110007

Has been assessed by EHS Alliance Services for the comprehensive study of environmental impacts on institutional working framework to fulfill the requirement of

GREEN AUDIT

The green initiatives carried out by the institution have been verified on the report submitted and was found to be satisfactory.

The efforts taken by the management and the faculty towards environment and sustainability are appreciated and noteworthy.

AUDITOR SIGNATURE



11.07.2022

DATE OF AUDIT

EHS ALLIANCE SERVICES, PLOT A-72, SURYA VIHAR, GURUGRAM, 122001
WWW.EHSALL.IN | BUSINESS@EHSALL.IN | EHSALLIANCE@GMAIL.COM



ACKNOWLEDGEMENT

EHS Alliance Services would like to thank the management of Miranda House for assigning this important work of Green Audit. We appreciate the co-operation to the teams for completion of assessment.

We would also like to thank **Dr. Nisha Vashishta** – Coordinator, IQAC, for her continuous support and guidance, without which the completion of the project will not be possible. We are also thankful to other staff members who were actively involved while collecting the data and conducting field measurements.

We are also thankful to

Dr. Namrata Singh – Member, IQAC

Ms. Neetu Chopra – Member, IQAC

Dr. Upali – Member, IQAC

Dr. Seema Aggarwal – Member, IQAC

Prof. Monika Tomar – Member, IQAC

Dr. Rekha Kumari – Convener, Vatavaran

Ms. Saba Zulfiquar – Member, Vatavaran

Dr. Somdutta Sinha Roy – Member, Vatika

Mr. Jyoti Prakash – Section Officer, Admin

Mr. Shiv Kumar – Site Engineer

Last but not the least, we would like to thank **Prof. Bijaylaxmi Nanda (Principal)**, Miranda House for giving us an opportunity to evaluate the environmental performance of the campus.



DISCLAIMER

EHS Alliance Services Audit Team has prepared this report for Miranda House based on input data submitted by the representatives of College complemented with the best judgment capacity of the expert team.

While all sensible care has been taken in its preparation, details contained in this report have been compiled in good faith based on information gathered.

It is further informed that the conclusions are arrived following best estimates and no representation, warranty or undertaking, express or implied is made and no responsibility is accepted by Audit Team in this report or for any direct or consequential loss arising from any use of the information, statements or forecasts in the report.

If you wish to distribute copies of this report external to your organisation, then all pages must be included.

EHS Alliance, its staff and agents shall keep confidential all information relating to your organisation and shall not disclose any such information to any third party, except that in the public domain or required by law or relevant accreditation bodies.

EHS Alliance staff, agents and accreditation bodies have signed individual confidentiality undertakings and will only receive confidential information on a 'need to know' basis.



Signature

LEAD AUDITOR

CONCEPT AND CONTEXT

The National Assessment and Accreditation Council, New Delhi (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 is assigned to the Criteria 7 of NAAC, National Assessment and Accreditation Council which is a self-governing organization of India that declares the institutions as Grade A, Grade B or Grade C according to the scores assigned at the time of accreditation. Moreover, it is part of Corporate Social Responsibility of the Higher Educational Institutions to ensure that they contribute towards the reduction of global warming through Carbon Footprint reduction measures.

In view of the NAAC circular regarding Green auditing, the College management decided to conduct an external environment assessment study by a competent external professional auditor. The green audit aims to examine environmental practices within and outside the College campus, which impact directly or indirectly on the atmosphere. Green audit can be defined as systematic identification, quantification, recording, reporting and analysis of components of College/college environment. It was initiated with the intention of reviewing the efforts within the institutions whose exercises can cause risk to the health of inhabitants and the environment.

Through the green audit, a direction as how to improve the structure of environment and inclusion of several factors that can protect the environment can be commenced. This audit focuses on the Green Campus, Waste Management, Water Management, Air Pollution, Energy Management & Carbon Footprint etc. being implemented by the institution. The concepts, structure, objectives, methodology, tools of analysis, objectives of the audit are discussed below.





INTRODUCTION

Now a days, the educational institutions are becoming more thoughtful towards the environmental aspects and as a result new and innovative concepts are being introduced to make them sustainable and eco-friendly. To preserve the environment within the institution, a number of viewpoints are applied by the several educational institutes to solve their environmental problems such as promotion of the saving the energy, waste recycle, water consumption reduction, water harvesting and many more...

The activities carried out by the institution can also create adverse environmental impacts. Green audit 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 can be a useful tool for a College/college to determine how and where they are using the most of the energy or water or resources; the College can then decide how to implement changes and make savings. It can also be used to determine the nature and volume of waste, which can be used for a recycling project or to improve waste minimization plan.

Green auditing and the application of mitigation measures is a win-win situation for all the institutions, the learners and the mother earth. It can also result in health awareness and can promote the environmental awareness, values and beliefs. It provides a better understanding to staff and students about the Green impact on institution. Green auditing also upholds financial savings through reduction of resource usage. It gives an opportunity to the students and teachers for the development of ownership of the personal and social responsibility. The audit process involves primary data collection, site walk through with the team of College/college including the assessment of policies, activities, documents and records.





OVERVIEW OF THE COLLEGE

Miranda House, college for women, located in the University of Delhi campus, is a premier women's institution. It was established in 1948 by the then Vice Chancellor, Sir Maurice Gwyer. Lady Edwina Mountbatten laid its foundation stone on March 7 in the same year. Originally designed by renowned architect Walter George, Miranda House is built in warm red brick with cool and spacious corridors. The College shares an architectural affinity with other colonial educational institutions of the country. In the past six decades, as the College has grown, several other buildings have been added in consonance with its original design. Special efforts are on to preserve the heritage of its pristine architectural glory.

Miranda House offers liberal education in social sciences, humanities and basic sciences to more than 4000 students. The faculty, renowned for its meritorious profile and versatile talent, is dedicated to the cause of liberal education. Through their three years at Miranda, our students develop a sense of social responsibility, intellectual rigour, and practical knowledge. They develop communication, analytical and problem-solving skills, and a demonstrated ability to apply their education to our complex and diverse world.



The College has always maintained high academic standards. More significantly, it has provided students an enabling and creative environment to freely develop and express views that help them respond to changes in society. Being on the University campus, its proximity to other colleges facilitates the participation of Miranda students in several inter-college events, both academic and cultural. Those who will make the College hostel their home for the next three years



have the privilege of residing in one of the most beautiful residential buildings on the University campus. The institution's philosophy is guided by a pedagogy that encourages the students to explore new domains, to critically examine the world around them and to question stereotypes.



[The Legacy... traditions and institutional values](#)

MH has a rich legacy. Established at dawn of independence it provided a unique opportunity to young women for quality higher education. They set for themselves high goals and ideals. They worked for a new society in which women would enjoy equal opportunity with men in professional and public fields. In this, they were abetted by the founding faculty who were independent minded, and belonged to the select group of highly educated women in independent India with a deep concern for quality of education they imparted. They were also charged with a spirit of adventure, steeped in idealism, and committed to women empowerment and the task of building a nation. Proud of their mission as early pioneers, they worked with single-minded devotion in setting the Miranda traditions. These attributes of total dedication have contributed in a large measure to the position of distinction occupied by the college. Over near seven decades of its existence, the college has grown from strength to strength, continuing to provide an atmosphere of high academic excellence and rich cultural activities to its students. The college has established a niche for itself amongst the globally recognized premiere institutions of higher learning.

Being a college established and maintained by the University, Miranda House has a special place among the women's colleges of the University of Delhi. Its location in the heart of the University Campus, and its close interaction with the various Departments of the University and other campus colleges gives it a unique advantage. Although a women's college, it is not a cloister. It welcomes interaction with other colleges and educational organizations across the country, actively engaging both men and women in all its extramural activities, competing with the best on equal terms.



The extremely distinguished list of alumnae imparts a sense of confidence and immense pride in students. They view themselves as torchbearers of great traditions. All this propels them to often explore uncharted territory, think unfettered, and bend traditions in a bid to create a better world, especially for women.

VISION

The Upanishadic maxim in the college logo “Swadhyayann pramaditavyam” enshrines Miranda House’s understanding of what education must accomplish and steers students towards introspection and self-learning.

Miranda House envisions a world where women have their rightful place and are given due recognition as leaders to reach top positions in all sectors of human endeavour. To give shape to this vision, Miranda House continually reaffirms and embraces its responsibility to build on its historic legacy of leadership in the education of women. It remains strongly committed to addressing issues of gender in all their complexity and preparing young women to:

lead professionally successful lives enriched by the love of learning build personally fulfilling lives radiating integrity and strength of character sustain purposeful engagement with the world with an open mind and balanced perspective develop an understanding of their duty to nation and nation-building meet with confidence the challenges they will encounter in their lives flourish in a different cultural milieu in an increasingly interconnected world uphold the core institutional values of respect for diversity, inclusiveness, and humanism to emerge as leaders charged with new ideas and the capacity to make a difference.

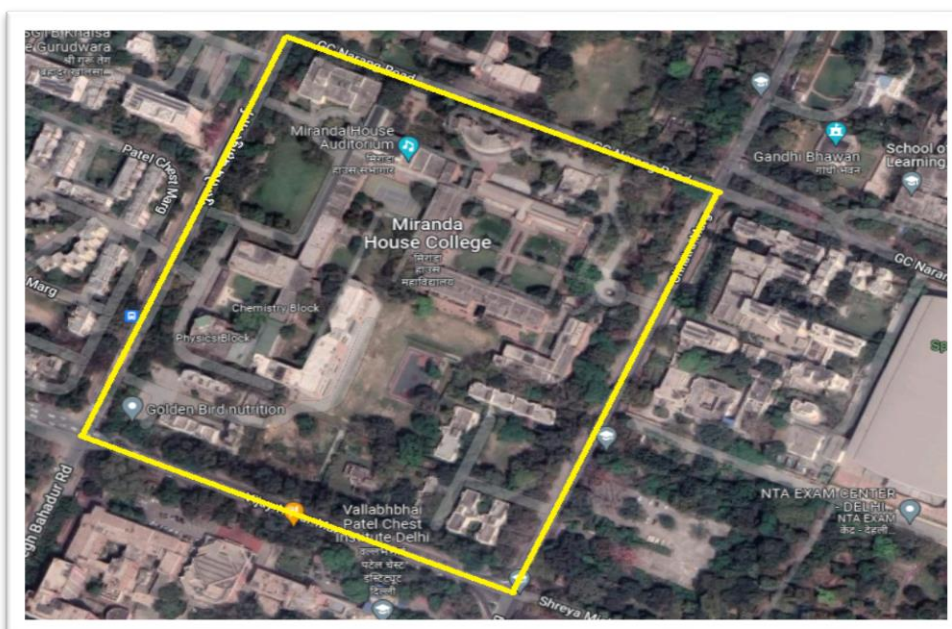


MISSION

The stated mission of the college is to provide

- a stimulating active learning environment attracting young women with exceptional desire to make a difference to the world
- highest quality liberal arts and basic science education through distinctive academic programmes that instill rigour in the pursuit of knowledge
- culturally sensitive inclusive environment upholding core values of respect for diversity
- enriching co-curricular activities linking education to the world of work and communities
- dedicated and responsive faculty of scholars to assist each student fulfill aspirations and reach milestones
- competencies for new domains of knowledge and the future of work in a globally connected world
- early mentoring for leadership instilling capacity to explore new ideas, take intellectual risk, and usher paradigm change

Geo Location
Geo Coordinates from Google maps:
28.6926368, 77.2102818





AUDIT PARTICIPANTS

On behalf of College

Name - Designation/Department	
Prof. Bijaylaxmi Nanda	Principal
Dr. Namrata Singh	Member IQAC
Dr. Somdutta Sinha Roy	Member, MH – Vatika
Ms. Neetu Chopra	Member IQAC
Dr. Upali	Member IQAC
Ms. Saba Zulfiquar	Member, MH – Vatavaran
Dr. Rekha Kumari	Convener, MH – Vatavaran
Dr. Seema Aggarwal	Member IQAC
Prof. Monika Tomar	Member IQAC
Mr. Jyoti Prakash	Section Officer, Admin
Mr. Shiv Kumar	Site Engineer

On behalf of EHS Alliance Services

Name	Position	Qualifications
Dr. Uday Pratap	Lead Auditor	Ph.D. , PDIS, QCI – WASH, Lead Auditor ISO 14001:2015
Ms. Pooja Kaushik	Co-Auditor	M.Sc., Field Expert, QCI – WASH





EXECUTIVE SUMMARY

Green auditing is an essential step to identify and determine whether the institutions practices are sustainable and ecological. Traditionally, we were upright and efficient users of natural resources. But over the period of time, excessive usage of resources like water, electricity, petrol, etc. have become habitual for everyone especially, in urban and semi-urban areas. It is actually the right time to check if we (our process) are consuming more than required resources? Whether we are using resources sensibly?

Green audit standardizes all such practices and provides an efficient way to use natural resources. In the time of climate change and resource exhaustion it is necessary to re-check the processes and convert it in to green and sustainable. Green audit provides an approach for it. It also increases overall awareness among the folks working in institution towards the eco-friendly environment.

This is the second attempt to conduct green audit of this College campus for fulfilment of NAAC criteria. This audit was mainly focused on greening indicators like consumption of energy in terms of electricity and fossil fuel, quality of soil, water usage, vegetation, waste management practices and carbon foot print of the campus. Initially a questionnaire was shared to know about the existing resources of the campus and resource consumption pattern of the students and staffs in the College.

GREEN AUDIT - ANALYSIS

1.1 GENERAL INFORMATION

1. Does any Green Audit conducted earlier?

No, 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: 5834 Total: 5834

Teachers (including guest faculty)

Male: 44 Female: 212 Total: 256

Non-Teaching Staff

Male: 95 Female: 12 Total: 107

Total Strength

Male: 139 Female: 6058 Total: 6197



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

There are one hundred eighty working days in a year.

4. Where is the campus located?

The campus is located at GC Narang Road, New Delhi, Delhi 110007

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	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	Approximately 2 KM sewer line within campus
Stagnant water	No stagnant water
Open drainage	No
Industry – (Mention the type)	No
Bus / Railway station	Metro/Bus connectivity
Market / Shopping complex	Available

1.2 WASTE MINIMIZATION AND RECYCLING

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

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

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

*Biodegradable waste - 85 Kg
Non-biodegradable waste - 18 Kg*



Hazardous Waste < 2 Kg
Others - 2 Kg

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

- Composting is done for horticulture waste management.
- Hydroponics technique is used to recycle the grey water from college mess
- Aerobic Composting is done 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 after collecting the BMW separately
- Single use plastic is banned in the campus
- Paper recycling plant is installed in the campus

4. Do you use recycled paper in institute?

Yes, and there is fully functional paper recycling plant in the campus

5. 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

- Poster competition activities
- Campaigns
- Rally
- Webinars and seminars

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

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

1.3 GREENING THE CAMPUS

1. Is there a garden in your institute?

Yes, about 37001.35 Sq mtrs areas are developed as Gardens.

2. Do students spend time in the garden?

Yes, students spend around 2-4 Hours during winters.



3. Total number of Plants in Campus?

<i>Plant type with approx. count</i>	
<i>Full grown Trees</i>	<i>793</i>
<i>Small Trees</i>	<i>1284</i>
<i>Hedge Plants</i>	<i>12620</i>
<i>Grass Cover SQM</i>	<i>398279.22 SqFt</i>

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

Yes, Total 11 staff deployed in horticulture

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

Five tree Plantation Drives are Organized by campus in the last FY. Total 38 trees and 100 hedge plants planted in this Financial Year 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. Besides this landscape, Plantation is also done in Burari village by the college

8. Is there any Plant Ownership Program?

Yes, MH vatavaran has encouraged students to adopt a tree in their neighborhood

1.4 WATER AND WASTEWATER MANAGEMENT

1. List uses of water in your institute

Basic use of water in campus:

Drinking – 178.67 KL/month

Gardening – 372.47 Kl/month

Kitchen and Toilets – 1176.81 KL/month

Others – 228.49 KL/month

Hostel – 855.90 KL/Month

Total = 2812.34 KL/Month



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

There are total 192500 liters water storage of water and boosting within the College campus.

Sl. No	Storage Type	Capacity	Quantity	Total (in Litres)
1	OVER HEAD TANK	500	75	37500
2	OVER HEAD TANK	1000	19	19000
3	OVER HEAD TANK	2000	3	6000
4	OVER HEAD TANK	3000	1	3000
5	UNDER GROUND TANK (Fire tank)	5000	3	15000
6	UNDER GROUND TANK	34000	3	102000
7	UNDER GROUND HEAD TANK	10000	1	10000
	TOTAL STORAGE CAPACITY			192500

Saving Techniques

- *Avoid overflow of water controlled valves are provided in water supply system.*
- *Close supervision for water supply system.*
- *Water Conservation awareness for new students*
- *Sprinklers usage for gardening and grass cover*

3. Locate the point of entry of water and point of exit of waste water in your institute.

Entry - Water comes from Delhi Jal Board (MCD)

Exit- From Canteen, Toilets, bathrooms, Hostels and Labs through covered drainage which is connected to sewage

4. Write down ways that could reduce the amount of water used in your institute

Basic ways:

- *Close the taps after usage*
- *Water Conservation awareness for new students*
- *Maintenance and monitoring of valves in supply system to avoid overflow, leakage and spillage*
- *In new block, push tap are installed to save water*



1.5 ANIMAL WELFARE

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

Approx. 20 species of Birds, 3 Cats, around 100+ Squirrels and 20+ butterfly species are found in campus. No stray dog is visible in the vicinity of the college. A variety of bird's species and other flora and fauna are available, so institute is doing their bit for bio diversity conservation.

2. Does your institute have a Biodiversity Program or a KARUNA CLUB?

*Yes **MH Vatavaran** Society actively organizes awareness through various campaigns and activities including seminars, poster competition, etc.*

1.6 CARBON FOOTPRINT - EMISSION & ABSORPTION

1. Electricity used per year - CO₂ emission from Electricity

(electricity used per year in kWh/1000) x 0.84
581988.00 kWh/1000 x 0.84
= 581988.00 /1000x0.84
= 488.87 ton

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

(LPG/PNG used per year in KG) x 2.99
542.31 x 2.99
=542.31 x 2.99
=1.62 ton

3. Diesel used per year CO₂ emission from HDS (Diesel)

(Diesel used per year in litres) x 2.68
212.14 x 2.68
=212.14 x 2.68
=0.57 ton

4. 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.



Total CO₂ emission per year cumulative by electricity usage + bus and car transportation (488.87 + 1.62 + 0.57 = 491.06 ton)

CARBON ABSORPTION BY FLORA IN THE INSTITUTION

There are 793 full grown trees and 1284 semi grown trees of different species, on the campus spread over 40 acres.

Carbon absorption capacity of one full grown tree 22 kg CO₂ Therefore Carbon absorption capacity of 793 full-grown trees $793 \times 22 \text{ kg CO}_2 = 17.45 \text{ tons of CO}_2$.

The carbon absorption capacity of 1284 semi-grown trees is 50% of that of full-grown trees. Hence the carbon absorption $1284 \times 6.8 \text{ kg of CO}_2 = 8.73 \text{ tons of CO}_2$

There are approximately Hedge Plants 12620 of various species being raised in the 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 CO, absorption is taken per bush (in consultation with Environmental Science specialists). Based on this, total carbon absorption of bushes is $12620 \times 200 \text{ g} = 2.52 \text{ tons of CO}_2$

The lawns on the campus have buffalo grass, Mexican grass and indigenous grass species and cover a total area of 398279.0 sq. ft. Carbon absorption capacity of a 10 sq. ft. area of lawn is 1 g per day Therefore, carbon absorption by lawn area $398279.0 \times 365 \times 0.1 \text{ g CO}_2 = 14.54 \text{ tons CO}_2$ per year.

Grand total of carbon absorption capacity of the campus is 43.24 tons.

GREEN INITIATIVES BY CAMPUS

➤ Solid Waste Management

- Waste management is done by composting
- Recycling of used paper is carried out in paper recycling plant.
- There is ban on single use plastic and plastic crockery in the campus.

➤ Renewable Energy

- Solar power plant of capacity 7 KW is installed on building roof.
- College has signed an agreement with third party solar power provider for 1 MW.
- The college is using solar lights for street lights.



➤ **Tree Plantation Drives**

- Five plantation drives were carried out in the current year in the Campus.
- Plants survival rate is around 85%

➤ **Air Pollution Reduction**

- Personal Vehicles (Students) are not allowed in the campus
- College is in process to pursue air quality monitoring by NABL approved lab.

➤ **Environment Committee Initiatives** – MH has an environment committee 'MH Vatavaran'. Below are the highlights of their work on environment cautiousness.

- Poster Making (Handmade/Digital) and Essay Writing Competitions were organised on the topic 'Noise Pollution' in July 2021
- In August, the society organised 'Tie a rakhi, Nurture Nature' event on the occasion of Rakshabandhan in which the volunteers vowed to protect plants by tying handmade, eco-friendly rakhis to them.
- A webinar on 'The Importance of Mangroves to Environment and People: A Call to Action' was organized on 02 September 2021
- On 06 September 2021, the Garden Committee of Miranda House along with MH Vatavaran, carried out a plantation drive in celebration of 'Poshan Week' (01-07 September 2021) by planting various saplings in and around the Miranda House campus.
- To celebrate Himalaya Diwas on 09 September 2021, MH Vatavaran invited original contributions in the form of poems, essays, stories, personal experiences, handmade pieces of art from the students and faculty members of Miranda House Community
- To mark the occasion of 'International Day for the Preservation of the Ozone Layer' on 16 September 2021, MH Vatavaran organised a Slogan Writing-cum-Poster Making Competition on the theme of 'Montreal Protocol: Keeping us, our Food and Vaccines Cool'
- MH Vatavaran volunteers and faculty members also attended a webinar on the 'Importance of Ozone Layer', conducted by Council on Energy, Environment and Water (CEEW)
- MH Vatavaran collaborated with WWF India for the third consecutive year for 'Project ECHO' (Environment Conservation Heroes). The theme for the session 2021-22 was "Transforming Businesses for a Greener Future". Under this project, the team came up with "Best from Waste - A Miranda House Initiative" with the idea of upcycling discarded clothes into useful products with the dual objective of conserving the environment and supporting underprivileged women by providing



them with employment opportunities as tailors. It also aimed at providing eco-friendly products to the general public at affordable prices.

- In celebration of Wildlife Week (02-08 October 2021), MH Vatavaran organised a Photography Contest
- In celebration of Diwali, MH Vatavaran organised an eco-friendly Rangoli Making Competition on the theme: 'Say No to Fire-crackers'.
- MH Vatavaran members participated in a 5 days training workshop on "Understanding the Vulnerability and Risk Associated with Urban Areas" conducted by the National Institute of Disaster Management.
- In December, MH Vatavaran members engaged themselves in Paryavaran Saathi Chatbot under the campaign 'Yudh, Pradushan ke Virudh', launched by Government of N.C.T of Delhi, for increasing the awareness and fighting against Air Pollution.
- In January, MH Vatavaran participated in the two phases of 'Swachhta Action Plan' organised by Mahatma Gandhi National Council of Rural Education, Ministry of Education, Government of India. In the first phase, MH Vatavaran members participated in the individual cleanliness drive- 'Gandhi Chhadi' and the second phase involved a plantation drive 'Each One Plant One'
- MH Vatavaran organised a 'Presentation-cum-Video making Competition' on the theme of 'Air Pollution'
- MH Vatavaran in collaboration with WWF India, under Project ECHO, organised a virtual session on "Denizens of Ganges" on 28 February 2022.
- In the month of March, MH Vatavaran launched an initiative of "Cleaning Our College Campus"
- On 07 March 2022, MH Vatavaran in collaboration with WWF India, under Project ECHO, organised a virtual session on "Big Cats".
- On 07 March 2022, MH Vatavaran also organised "MH Green Initiatives Tour" for the students of Miranda House. The tour was planned to educate the students about the various initiatives of the college to promote sustainability and awareness on Compost Plant, Paper Recycling Plant, Herbal Garden, Rainwater storage System, Soil Less Plantation, Hydroponic System, Vertical Plastic Bottle Garden and Solar Plant.
- MH Vatavaran organised an online 'EnviroQuiz' Competition on 10 April 2022.
- MH Vatavaran organised "Hackathon"- a Video Making Event on the occasion of Earth Day on 22 April 2022.



RECOMMENDATIONS

- Environmental parameters should be included in purchase policy to achieve a cradle to grave approach for sustainability.
- College should go for water balancing / audit for monitoring the use and wastage of water.
- Water Meter should be installed at every building of institute for monitoring of water consumption per capita.
- College should start drip irrigation to save water in campus
- College should increase the use of Sprinklers gardening purpose
- Flow rate of taps should be checked, it should not be more than 2.5 litres/minute.
- Increase plantation drives in nearby villages, local bodies, NGO and Municipal Corporation.
- Arrange training programmes on environmental management system and nature conservation for schools and local people.
- Establish an E-waste collection centre in campus.
- Green building guidelines for future expansion projects of the campus

CONCLUSION

This audit involves considerable team discussions and meetings with key staff members on a variety of environmental-related topics. The eco club of College (MH - Vatavaran) promotes conservation of resources.

Overall 75% of College campus is for landscaping and 60% is green cover. The College makes a significant effort to act in an environmentally responsible manner and takes into account the environmental effects of the majority of its activities. The recommendations in this report suggests some more ways in which the College can work to improve its practices and develop into a more sustainable institution, despite the fact that it performs rather well overall.

It's important to begin a few things, such drip irrigation and checking the water flow from the taps. Additionally, we strongly advise installing water metres at each building/block and water balancing report.



REFERENCE

- 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
- 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)
- The Batteries (Management and Handling) rules, 2001 (Amended 2010)
- Relevant Indian Standard Code practices

ANNEXURE – PHOTOGRAPHS OF ENVIRONMENT CONSCIOUSNESS



Well ventilated building structure



Well maintained College campus



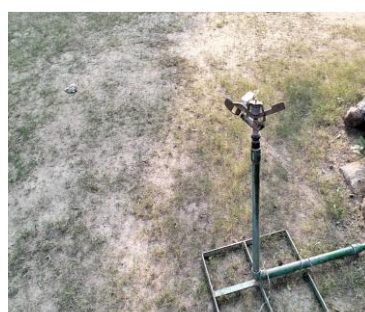
Lush green campus



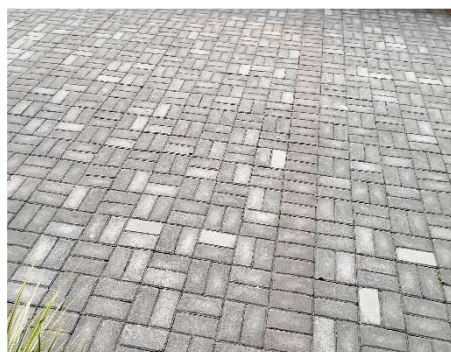
Color coded dustbins



Certificate for participation



Sprinklers for water conservation



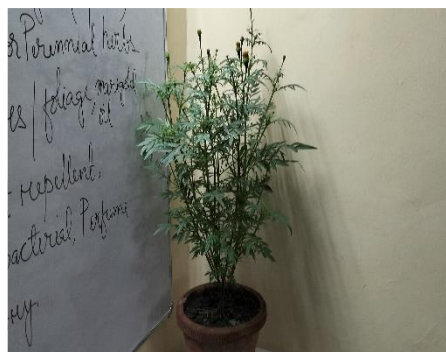
Paving stone installation
in the College



Playground



Ornamental Plants in the
campus



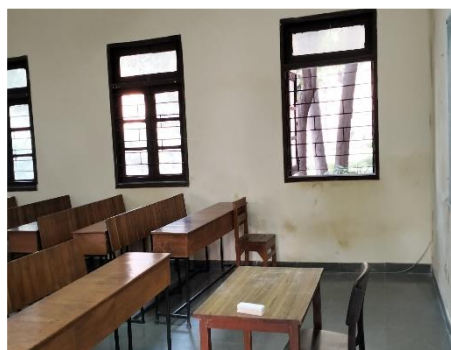
Indoor Plants in the
campus



Pavers for walkways



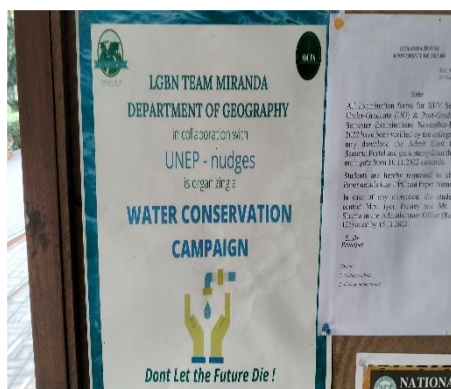
Green grassland



Classrooms as per NBC guidelines with more than 40% window ratio



Spacious and well equipped computer lab



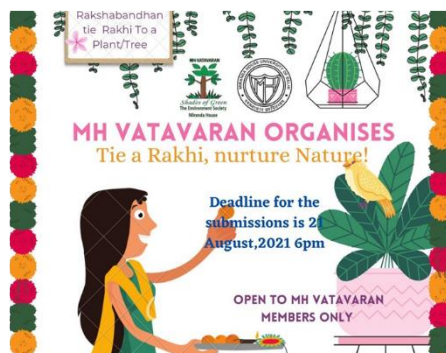
Water saving posters at various places in campus



Recycled paper drying



Plantation drive by the students



'Tie a rakhi, Nurture Nature' event



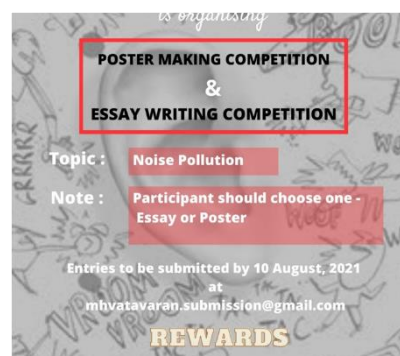
Cleanliness drive



Cleanliness drive



Rain water storage tank



Poster making activities



Hydroponics for recycling grey water



Awareness campaign

***** END OF THE REPORT *****