

Environment Audit

2021-22 & 2022-23



Society for Academic Facilitation & Extension

ISO:14001: 2015 & ISO:50001: 2018

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Acknowledgement

We extend our sincere appreciation and gratitude to the esteemed members of the Managing Committee of Dayanand Girls PG College, Kanpur, for their invaluable contributions and unwavering support in the completion of the Green Audit report. The dedication and collaborative efforts of the following individuals have been instrumental in the successful execution of this project:

Managing Committee:

- | | |
|----------------------------------|-----------------|
| 1. Shri. Manvendra Swarup | Chairman |
| 2. Smt. Kumkum Swarup | Vice-Chairman |
| 3. Shri. Gauravendra Swarup | Secretary |
| 4. Shri. Ranjit Singh | Joint-Secretary |
| 5. Smt. Ananta Swarup | Member |
| 6. Dr. Virendra Kumar Srivastava | Member |
| 7. Dr. Geeta Mathur | Member |
| 8. Smt. Madhu Srivastava | Member |
| 9. Dr. Meeta Jamal | Member |
| 10. Dr. Prem Narayan Nigam | Member |
| 11. Dr. Ashwani Kumar Asthana | Member |
| 12. Prof. Archana Verma | Principal |

College Officials:

- | | |
|------------------------------------|------------------------------|
| 1. Prof. Archana Varma (Principal) | Chairperson |
| 2. Prof. Vandana Nigam | Coordinator |
| 3. Dr. Nivedita Tandon | Teacher Member |
| 4. Prof. Sugandha Tiwari | Teacher Member |
| 5. Prof. Alka Srivastava | Teacher Member |
| 6. Prof. Suman Singh | Teacher Member |
| 7. Dr. Archana Dixit | Teacher Member |
| 8. Dr. Eshita Pandey | Teacher Member |
| 9. Mrs. Sanchita Laxmi | Teacher Member |
| 10. Mr. Krishnendra Kumar | Acting Office Superintendent |

We are grateful for the cooperation and assistance provided by the entire college community, whose commitment to sustainability and environmental stewardship has greatly contributed to the success of this audit.

Sincerely,

SAFE (Society for Academic Facilitation and Extension)

About the Institution

Introduction

Established in 1959, Dayanand Girls' PG College in Uttar Pradesh holds the distinction of being the first post-graduate college for women in Kanpur, affiliated with C.S.J.M. University, Kanpur. Under the mentorship of the late Dr. Nagendra Swarup Ji, the institution has set a significant educational benchmark. Dayanand Girls' PG College offers a comprehensive range of programs, including 13 undergraduate and 12 postgraduate courses, all available in full-time mode. These courses are designed to equip students with essential skills and knowledge in their chosen fields. Students can pursue various degrees such as M.Sc., M.A., B.A., B.Ed., and B.Sc. in streams like Science, Humanities & Social Sciences, and Teaching & Education.

The college brings together students from diverse cultural and religious backgrounds, providing a rich and varied academic and vocational experience. It aims to develop each student into a strong, integrated woman, inspiring them to be responsible, committed to serving others and society, and to receive a holistic education.

Over time, Dayanand Girls' PG College has offered students the opportunity to gain expertise and proficiency through its trained and experienced faculty. The college also boasts excellent facilities and infrastructure, including a cafeteria, labs, library, and sports complex.

Statements of the Institution

- **Vision:** The College has envisioned “Dayanand Girls P.G. College is the first Post - Graduate College for women in Kanpur, University affiliated to the Chhatrapati Shahu Ji Maharaj University, Kanpur. We bring together students from different cultural and religious backgrounds and offers rich and varied academic and vocational programmes”.
- **Mission:** The College has a mission “The institution strives to develop each student into a strong, responsible citizen, committed to the service of others and society and at the same time receive a holistic education.
- **Motto:** “*Asto Ma Sadgamaya Tamso Ma Jyotirgamaye*”
- **Objective:** “The college has been a paragon and a source of inspiration in the field of arts and science. It has maintained its conspicuous presence in academia and has always been steadfast in its mission to promote in the various fields of learning. Moreover, free pursuit of knowledge is encouraged here, within an environment that is respectful and congenial to all members”.
- **Aim of the College:** A Dayanand Girls College student should develop a broad knowledge base in her discipline , critical thinking, independent decision making and creative problem solving ,the ability to work individually and collaboratively, An understanding of spiritual and ethical values including an awareness of the Vedic perspective, The ability to be sensitive to the cultural and environmental issues contributing to their sustenance.

The Natural Environs of Dayanand Girls' College, Kanpur

Dayanand Girls' College in Kanpur is situated in a setting that harmoniously blends urban convenience with a touch of natural tranquility. Located in one of Uttar Pradesh's prominent industrial and educational hubs, the college campus serves as a serene oasis amidst the bustling cityscape of Kanpur. The campus itself is adorned with lush greenery, featuring well-maintained gardens and tree-lined pathways that provide a refreshing environment for both students and faculty. These green spaces are not only aesthetically pleasing but also offer a peaceful retreat from the rigorous academic activities, promoting mental well-being and focus.

In addition to the manicured lawns and flower beds, the campus is home to several age-old trees, which stand as silent witnesses to the institution's long history and tradition. These trees not only add to the scenic beauty but also provide ample shade, making the outdoor spaces more comfortable for various activities and gatherings.

The college's location also offers easy access to the city's numerous parks and recreational areas, allowing students to explore and enjoy nature beyond the campus boundaries. The proximity to the Ganges River further enriches the natural setting, with the riverbanks providing a picturesque locale for reflection and relaxation. Moreover, the institution's commitment to sustainability and environmental awareness is evident in its initiatives to maintain a green campus. Efforts such as rainwater harvesting, waste recycling programs, and energy-efficient practices highlight the college's dedication to preserving its natural surroundings.

In summary, Dayanand Girls' College, Kanpur, is characterized by a harmonious blend of urban accessibility and natural beauty. The verdant campus, coupled with the institution's eco-friendly initiatives, creates an enriching environment conducive to learning, growth, and personal development.

Assessment of the College

- **Affiliation:** The College has all its courses approved and affiliated to **The Chhatrapati Shahu Ji Maharaj University, Kanpur.**

Certification-

- **AISHE:** The College has the AISHE Code C-12428
- **Recognition:** The College is recognised by University Grant Commission (UGC) under section 2(f) and 12 (b) of the UGC Act, 1956 vide by University Grants Commission, New Delhi

Institution overview

➤ Populace analysis for Academic year 2022-23

❖ Students' data

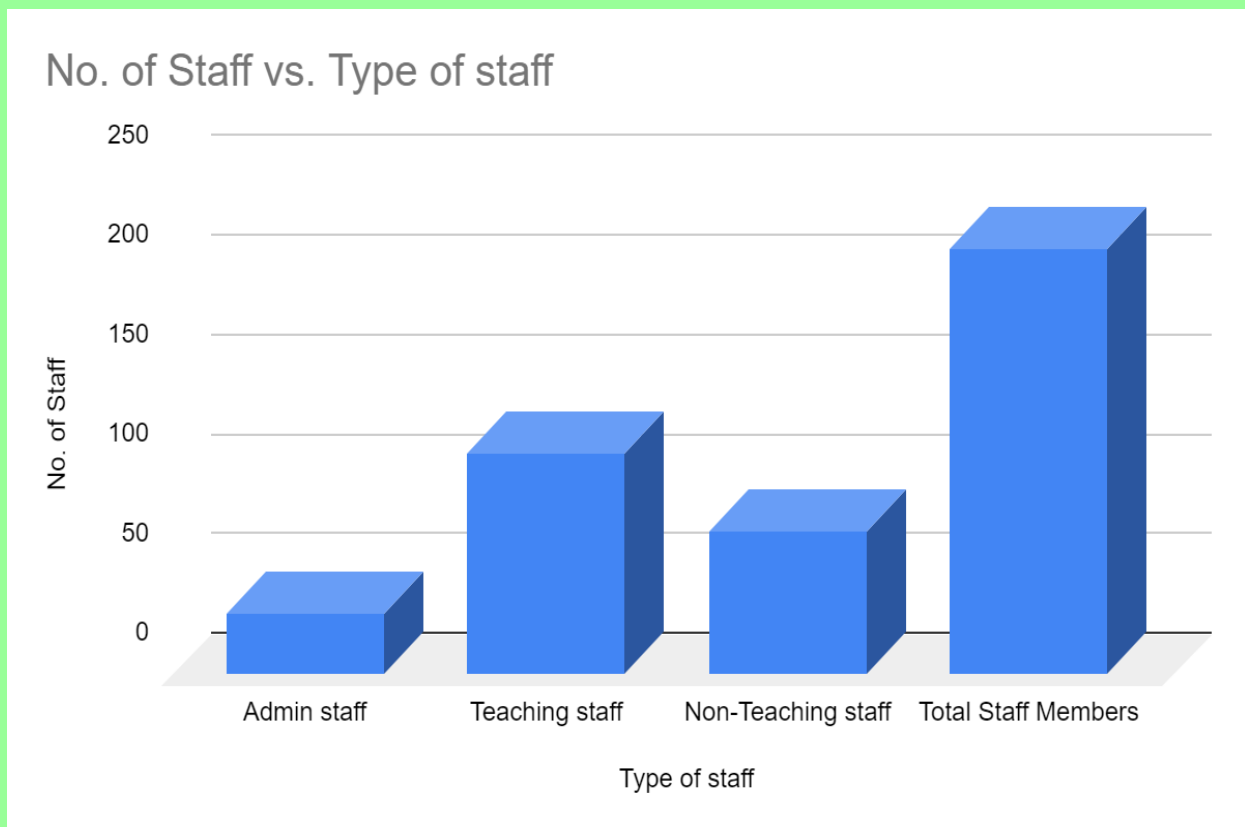
The data provided by the College indicates that there were a **total of 2973** students on the premises.

❖ Staff data

Type of Staff	No. of Staff
Admin staff	31
Teaching staff	111
Non-Teaching staff	72
Total Staff Members	214

Table 1: Staff data of the Institution for 2022-2023

The staff data shows the premises had a total of **214** Staff Members.



➤ **Populace analysis for Academic year 2021-22**

❖ **Students' data**

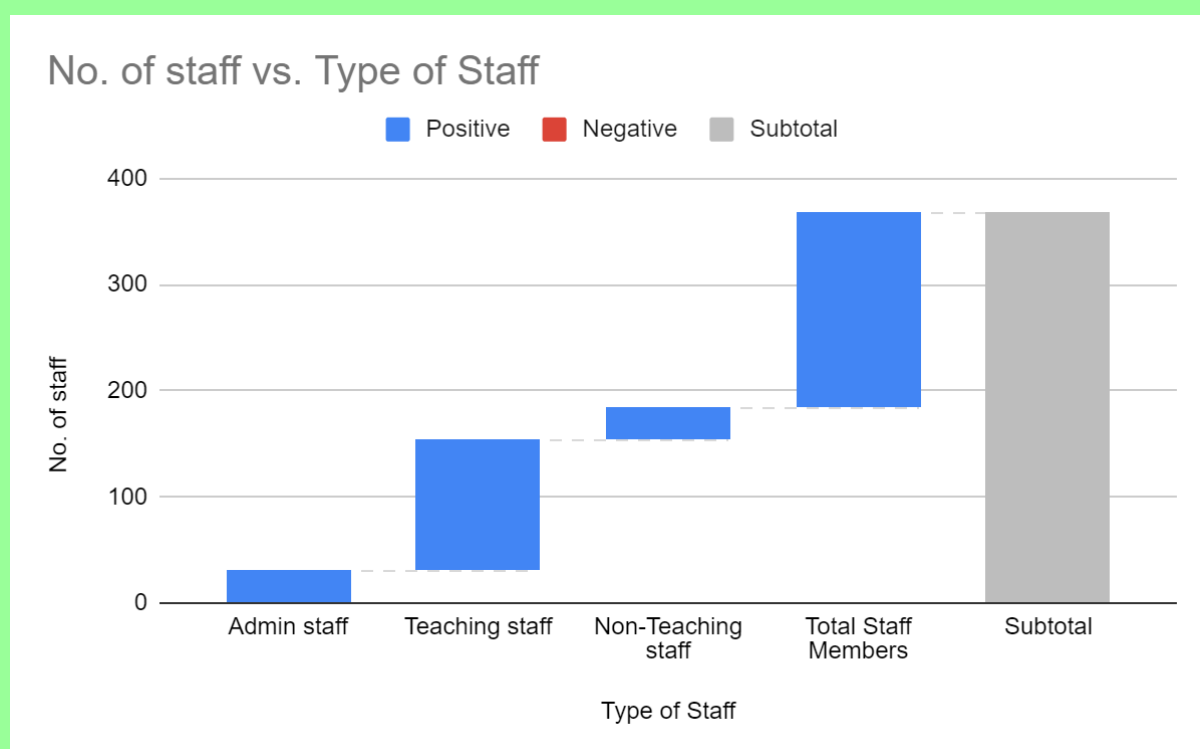
The data provided by the College indicates that there was a **total of 3371** students on the premises.

❖ **Staff data**

Type of Staff	No. of staff
Admin staff	31
Teaching staff	124
Non-Teaching staff	29
Total Staff Members	184

Table 2: Staff data of the Institution for 2021-2022

The staff data shows the premises had a total of **184** Staff Members.



College Infrastructure

Establishment: The College was established in 1959. The building is a Reinforced Cement Concrete (RCC) framework building. Overall, the Infrastructure of the Building is excellent in terms of the Architecture Design and Green Building Design. The Premises covers quite a few of the requirements for a Green Habitat. The infrastructure of a college refers to the physical facilities and resources that support the educational and administrative functions of the institution. It encompasses various elements such as buildings, classrooms, libraries, laboratories, administrative offices, recreational areas, and other facilities.

Spatial Organisation: The overall ambience of the College is warm and inviting. The classrooms and other spaces benefit from ample natural ventilation through clear glass

windows that allow fresh air to flow in. The building's architecture is well-designed, featuring a color palette that not only makes the structure stand out but also gives it an institutional feel. This design harmonizes with the local architecture and the natural landscape, which includes large trees surrounding the area. The emphasis on design creates a calm environment, seamlessly blending the built form with the serene surroundings. The floor-to-ceiling height exceeds 11 feet. While there are no lifts in the premises, amenities include CCTV, fire extinguishers, a library, and a first aid box.

SAFE Study Audit

➤ About the SAFE Study Audit

It is a systematic study of the factors that make the institution a sustainable and healthy environment for its inhabitants.

➤ Analysis for the SAFE Study Audit

The procedure included detailed verification for the following:

Energy Audit

- Analysis of the Lights, Fans, AC, Equipment
- Renewable energy
- Scope for reducing the current energy bills if any
- Improvement in the thermal comfort of the premises

Green Audit

- Green initiatives
- Hygiene audit
- Water Audit - Analysis of the current water consumption of premises; Scope to include Rain water harvesting and Waste water treatment in premises
- Waste Audit - Current waste produced, its segregation and usage; Strategies to be adopted for waste management and awareness

Environmental Audit

- Analysis of the current landscape + hardscape of campus
- Analysis of the flora and fauna of campus
- Strategies adopted at present to enhance vegetation
- Measures that can be adopted for ecological improvement of the premises.

➤ Strategy Adopted for SAFE Study Audit

The strategy included data collection from the administrative department, actual inventory inspection, investigation of operation and maintenance procedures, analysis of the collected data, and preparation of the report.

Timeline of the Activities for Green Building Study Audit

- 10 May 2024 – Allotment and Initiation by the College
- 10 May 2024 – Induction meeting
- 14 May 2024 – Survey of the Student and staff submitted.
- 04-05 June 2024 - Site visit at the Institute
- 06 June 2024 – Submission of the report

Ecological (Environmental) Audit

The environment is integral to human life and cannot be seen as a separate entity; we coexist with it. An ecological audit helps us understand the current state of flora and fauna within the college premises and identifies potential improvements. It also addresses any audio-related issues in the area and monitors the environmentally conscious behaviors adopted by the building's occupants, contributing to a reduced carbon footprint. People's health is paramount, and promoting hygienic habits and awareness of environmental actions is crucial. Universal design principles are essential for both built and unbuilt areas, ensuring accessibility and inclusivity.

Our study reveals that Dayanand Girls' College, Kanpur, has developed eco-friendly practices and sustainable solutions, which are reflected in the limited biodiversity within the premises. Situated in the city, the college boasts a welcoming entrance space that enhances its appeal. The open spaces within the college are multifunctional, serving as leisure areas for study and grounds for sports activities. The design includes ample resting spaces that offer a warm and inviting atmosphere.

Open Spaces

The college maintains a harmonious balance of natural and open spaces, with well-distributed vegetation and open areas. The ground serves as a venue for sports and cultural gatherings, providing students with ample space for various activities. The landscape design integrates both softscape and hardscape elements, creating an aesthetically pleasing and functional environment that benefits the institution.

Efforts to enhance the natural beauty of the space include provisions for natural plantations, which have significantly improved the visual appeal. The maintenance staff, assigned to upgrade these open spaces, have performed their duties exceptionally well. The infrastructure committee also plays an active role in this process. Traditional tap and pipe facilities are used for watering, with special provisions in place to ensure efficient irrigation. During the summer, these spaces are watered daily, reflecting the college's commitment to maintaining its environment. The college's efforts to preserve and enhance its open spaces are commendable, showcasing a strong dedication to sustainability and ecological balance.

Flora and Fauna Audit of Dayanand Girls' College, Kanpur

Dayanand Girls' College, Kanpur, is committed to maintaining a sustainable and eco-friendly campus environment. The flora and fauna audit is an integral part of the college's ecological management strategy. This audit aims to assess the current state of the campus biodiversity, identify areas for improvement, and promote practices that enhance the natural habitat within the college premises.

Flora: The college campus is home to a diverse range of plant species, contributing to its green and serene environment. Key observations from the flora audit include:

- **Tree Species:** The campus boasts a variety of tree species, including native and ornamental trees. These trees not only provide shade and aesthetic value but also play a crucial role in maintaining air quality and supporting local wildlife.
- **Shrubs and Flowering Plants:** Numerous shrubs and flowering plants are strategically planted around the campus. These plants enhance the visual appeal and contribute to the ecological balance by attracting pollinators such as bees and butterflies.
- **Herbal Garden:** A dedicated herbal garden exists within the premises, featuring medicinal plants that are used for educational purposes. This garden serves as a valuable resource for students studying botany and alternative medicine.
- **Green Lawns and Open Spaces:** Well-maintained lawns and open spaces provide recreational areas for students and staff. These green areas are used for various activities, including sports and cultural events, promoting physical well-being and social interaction.

Fauna: The college campus supports a variety of fauna, reflecting a healthy and thriving ecosystem. Key findings from the fauna audit include:

- **Bird Species:** The campus is a habitat for several bird species, both resident and migratory. Birdwatching activities are encouraged, fostering a connection with nature and promoting biodiversity awareness among students.
- **Insects and Pollinators:** A significant presence of insects, especially pollinators like bees and butterflies, indicates a healthy environment. These pollinators play a vital role in maintaining the ecological balance and supporting plant reproduction.
- **Small Mammals and Reptiles:** The campus is home to a few small mammals and reptiles, contributing to the biodiversity. Efforts are made to ensure their habitats are preserved and protected from human interference.

Conservation Efforts: The college has implemented several measures to conserve and enhance its flora and fauna:

- **Plantation Drives:** Regular tree plantation drives are organized to increase green cover and promote environmental awareness among students and staff.

- **Sustainable Practices:** Eco-friendly practices such as composting organic waste, using natural fertilizers, and minimizing the use of chemicals are strictly followed to maintain soil health and biodiversity.
- **Awareness Programs:** Educational programs and workshops on the importance of biodiversity and conservation are conducted regularly. These initiatives aim to instill a sense of responsibility and environmental stewardship in the college community.

Recommendations: Based on the audit, the following recommendations are proposed to further enhance the biodiversity of Dayanand Girls' College:

- **Biodiversity Monitoring:** Establish a regular monitoring program to track changes in flora and fauna populations and assess the effectiveness of conservation efforts.
- **Habitat Enhancement:** Create additional habitats such as birdhouses, butterfly gardens, and water features to support a wider range of species.
- **Community Engagement:** Encourage community participation in biodiversity conservation activities, fostering a collaborative approach to environmental sustainability.

The flora and fauna audit of Dayanand Girls' College, Kanpur, highlights the institution's dedication to maintaining a vibrant and sustainable campus environment. Through continued conservation efforts and the implementation of recommended practices, the college can further enrich its biodiversity and serve as a model for ecological stewardship in the educational sector.

Noise Audit

Macro Level

At a macro level, Dayanand Girls' College, Kanpur, benefits from its location within a city that experiences moderate traffic noise. The college is situated on a site with expansive open grounds and an approach road that experiences minimal traffic. Although the surrounding residential areas have sparse vegetation, the overall noise levels remain low, ensuring that students and staff are not significantly impacted in their daily activities. The proximity of the approach road, which sees minimal traffic, further contributes to the low noise environment. Our macro-level analysis confirms that the adverse effects of noise pollution on the college are minimal, yielding positive outcomes for the campus community.

Micro Level

On a micro level, the college premises are well-equipped to mitigate noise pollution. The ample open space within the campus is naturally adorned with large trees, which act as effective noise barriers. Additionally, the institution is surrounded by residential buildings that further buffer against external noise. The designated parking areas are strategically located near the entrance, minimizing noise within the central campus. The college does not employ any equipment that contributes to significant noise levels. Overall, the noise levels within the premises are low, reflecting a well-considered approach to maintaining a quiet and conducive educational environment.

Carbon Footprint Audit

Eco-friendly Commuting Practices

Based on data collection and discussions with staff, the following points were noted regarding eco-friendly commuting practices at Dayanand Girls' College:

- **Ease of Commuting:** The college is in close proximity to public transport options, making it highly accessible and walkable for students and staff. This encourages the use of public transportation and reduces the reliance on private vehicles.
- **Parent Commute:** The college hosts two parent-teacher meetings annually, with a turnout rate of approximately 40-60%. This manageable frequency and turnout help in reducing potential carbon emissions associated with large gatherings.
- **Vehicle Details:** The college provides designated vehicle parking facilities. These provisions are currently adequate and are situated to minimize noise and emissions within the core campus area.

Through these practices, Dayanand Girls' College demonstrates a commitment to reducing its carbon footprint and promoting sustainable commuting options. By continuing to encourage the use of public transportation and maintaining effective noise management strategies, the college ensures a positive impact on both the environment and the well-being of its campus community.

Heat Island Reduction

Dayanand Girls' College, Kanpur, has implemented several effective practices to mitigate the Urban Heat Island Effect, which typically results from inadequate urban planning strategies that increase local temperatures.

- **Exposed Roof Areas:** The top floor of the college buildings is meticulously clean and well-maintained. The roofs are painted white, a strategy known to reflect sunlight and reduce heat absorption. The maintenance staff and management have ensured there is no weathering or degradation of the roof surfaces, and current practices are consistently upheld to maintain these conditions.
- **Exposed Non-Roof Hardscape Areas:** Pathways surround the premises, enhanced by natural and potted plants along their edges. Additionally, the campus boasts extensive garden spaces. These green areas contribute significantly to reducing heat absorption from hardscape surfaces.

These measures effectively reduce the heat island effect, ensuring that the building roofs and surrounding site remain cool and contribute to a more comfortable campus environment.

Outdoor Light Pollution Study

The college has taken measures to minimize outdoor light pollution. The compound lights are designed to avoid upward emission, thus preventing unnecessary light spill into the night sky and reducing light pollution.

Universally Accessible Premises

According to the World Report on Disability (2011), approximately 180 million people in India, or 15% of the population, live with disabilities. In line with this, Dayanand Girls' College has made significant strides to ensure its campus is universally accessible:

- **Ramps and Handrails:** Ramps and handrails are installed along staircases, and staircases feature low-height risers to facilitate ease of movement.
- **Design:** The campus design includes wide, naturally ventilated passages and corridors, ensuring ease of access for everyone. Both doubly and singly loaded corridors are designed with fire safety in mind.
- **Resting Places:** Outdoor seating areas are strategically placed under trees, providing comfortable resting spots for especially abled students.

These thoughtful design elements ensure that the campus is welcoming and accessible to all students, including those with disabilities.

Fire Safety

Dayanand Girls' College has instituted comprehensive fire safety measures to ensure the well-being of all occupants:

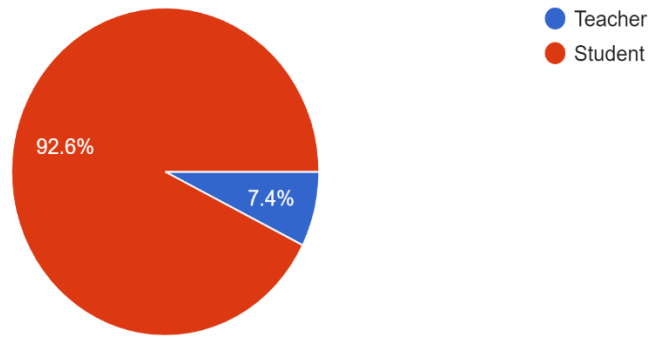
- **Staircases:** Each floor features open staircases free from barriers, storage, or combustible materials, ensuring quick and safe evacuation routes in case of an emergency.
- **Classroom Ventilation:** Classrooms are designed with low-height windows, allowing for ample ventilation and natural light throughout the day, which contributes to a healthy and safe indoor environment.

These measures collectively enhance the fire safety and overall safety of the college, providing a secure environment for students and staff.

Survey Results: The total responses received were 1313 out of which 92.6% were students and rest were teachers.

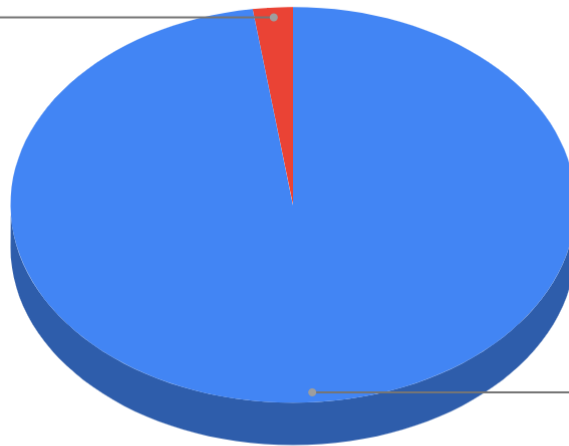
Catagory

1,313 responses



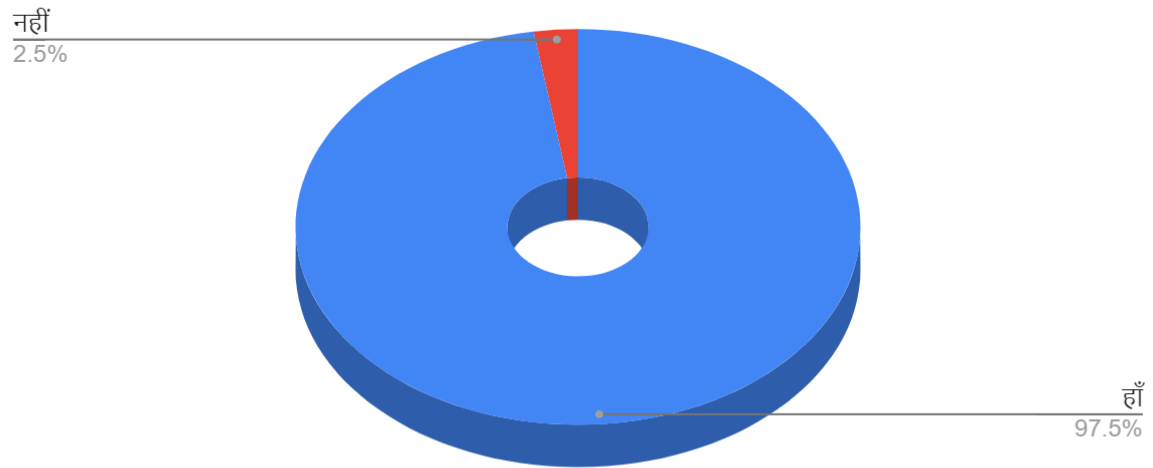
क्या आपको पर्यावरण संबंधी मुद्दों के बारे में जानकारी है?
Are you aware of environmental issues?

नहीं
2.3%

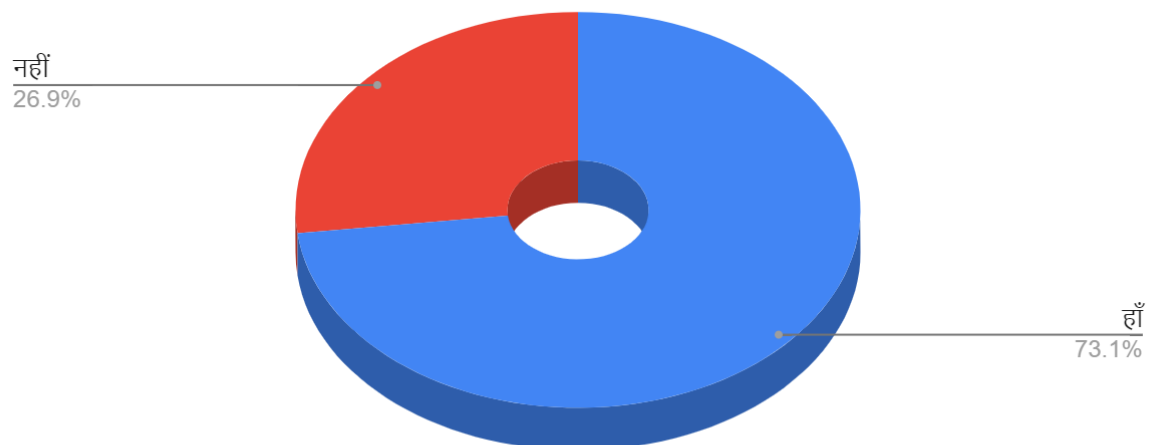


हाँ
97.7%

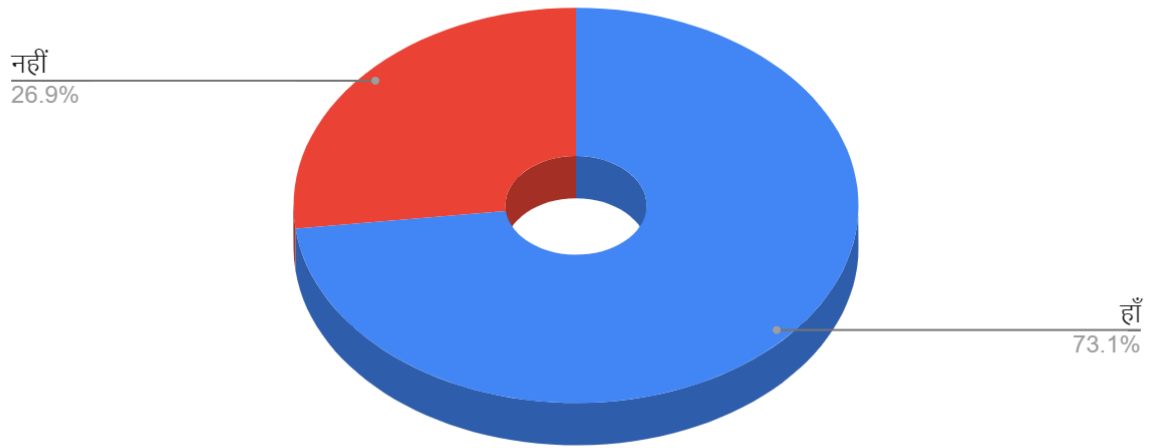
क्या आपको लगता है कि आप और आपका कॉलेज पर्यावरण के प्रति सजग है? Do you think you and your college are environmentally co...



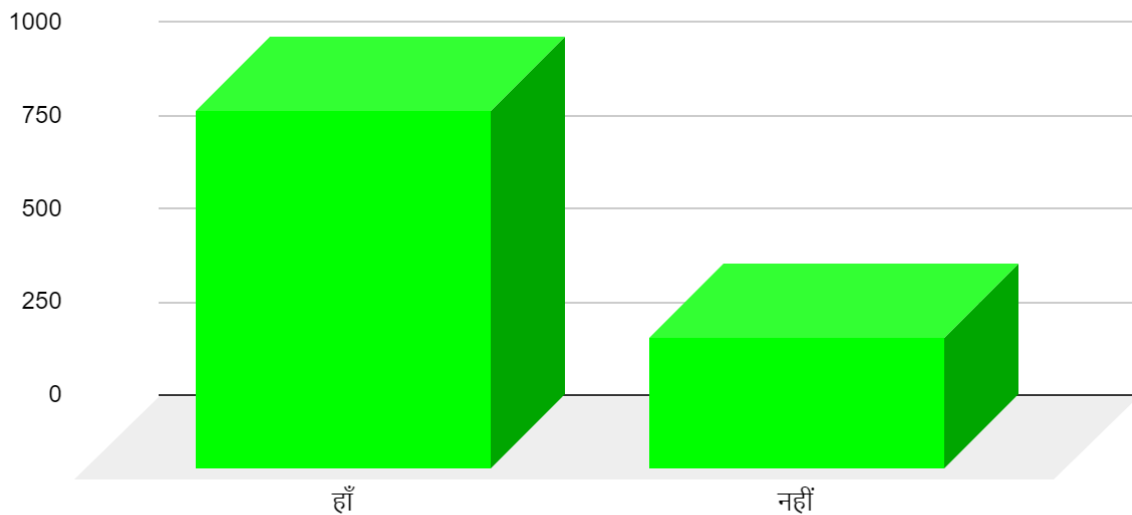
क्या आपने कॉलेज में पेड़ लगाने और पर्यावरण संरक्षण के लिए किसी अन्य कार्यक्रम में भाग लिया है? Have you participated in any other pro...



क्या आपने कॉलेज में पेड़ लगाने और पर्यावरण संरक्षण के लिए किसी अन्य कार्यक्रम में भाग लिया है? Have you participated in any other pro...

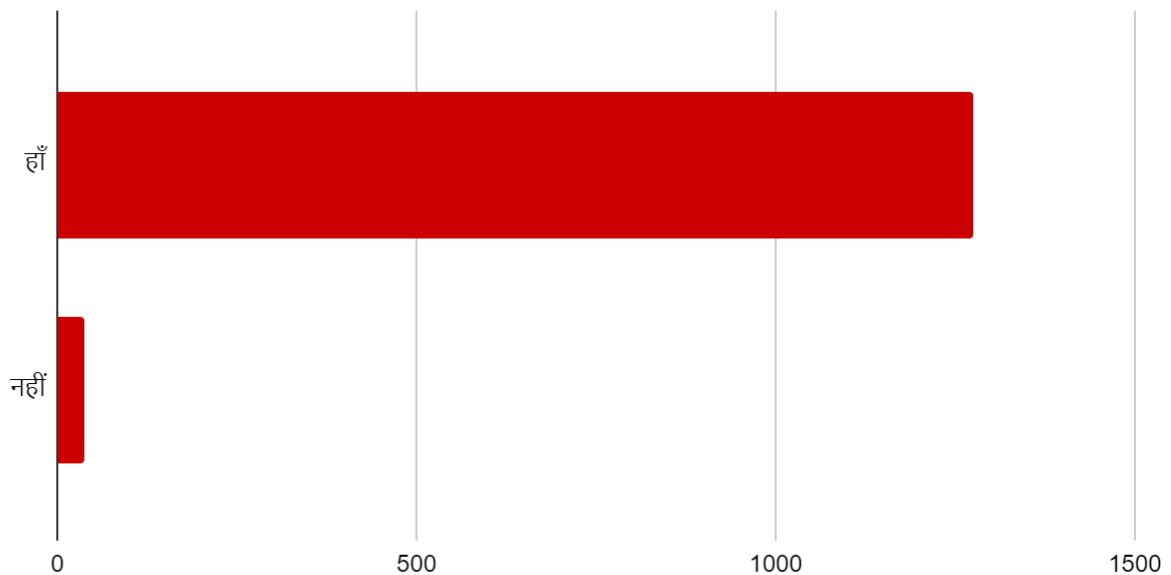


क्या आपने कॉलेज में पेड़ लगाने और पर्यावरण संरक्षण के लिए किसी अन्य कार्यक्रम में भाग लिया है? Have you participated in any other pro...



Count of क्या आपने कॉलेज में पेड़ लगाने और पर्यावरण संरक्षण के लिए किसी अन्य कार्यक्रम में भाग लिया है? H...

क्या आपको लगता है कि कॉलेज को और अधिक पर्यावरण संरक्षण के लिए कदम उठाने चाहिए? Do you think the college should take more...



Positive Steps Taken by the College Towards Green Building and Good Maintenance

The College has implemented several initiatives to promote a green and well-maintained environment. Here are some key responses gathered from the study:

- **Clean Every Area:** Routine cleaning activities ensure that every part of the college is kept tidy and hygienic.
- **Greenery and Planting:** The campus is adorned with green plants, trees, and flowers, showcasing the college's commitment to maintaining a green environment.
- **Faculty Efforts:** The faculty is dedicated to maintaining the college buildings and organizing better waste management systems, including the strategic placement of dustbins.
- **Environmental Awareness:** Students are encouraged to plant trees, save water, and participate in activities such as speeches on environmental topics, with incentives provided to motivate their involvement.
- **No Mobile Zone:** Establishing areas where mobile phone usage is restricted to reduce electronic waste and promote focus on studies.

Positive Site Features

- **Ban on Plastic:** The college premises have restrictions on using plastic bags and products to minimize plastic waste.
- **Accessibility:** The premises are designed to be user-friendly, with features like kerb ramps near entrances and low-height handrails to aid mobility.

Recommendations for a Sustainable Habitat by SAFE

- **Site Beautification**
 - **Bird Facilities:** Provide drinking water and food facilities for birds visiting the college premises.
- **Heat Island Reduction**
 - **Cool Rooftops:** Painting terrace roofs with Cooltop can help lower the temperature of indoor spaces.
- **Pollution Control**
 - **Eco-Friendly Vehicles:** Encourage the use of battery-operated or low-emission vehicles by providing parking spaces with charging points, inspiring sustainable transportation practices.
 - **Bicycles as Rewards:** Award bicycles to top-performing students and staff as a gesture of appreciation and to promote eco-friendly transportation.
 - **Paperless Technologies:** Adopt paperless technologies in administrative functions to reduce paper usage.
 - **Carbon-Absorbing Plants:** Plant species such as Pine, Neem, Peepal, Bamboo, and Teak to enhance carbon sequestration and contribute to carbon neutrality.

By adopting these measures, the college not only promotes a greener environment but also fosters a culture of sustainability and environmental responsibility among its community members.

Onsight Visit Photographs:





**Dr. Ramesh Chandra
Chairman**

**Dr. Shaleen Kumar Singh
Coordinator**

**Dr. Deepak Singh
Co-coordinator**