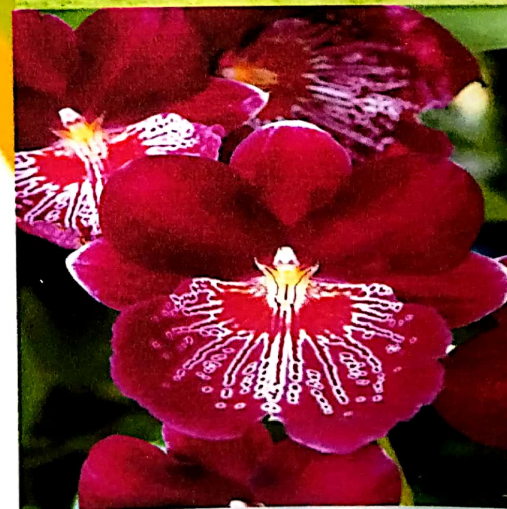


# Green Audit 2022-23



# St. Xavier's College, Mahuadanr

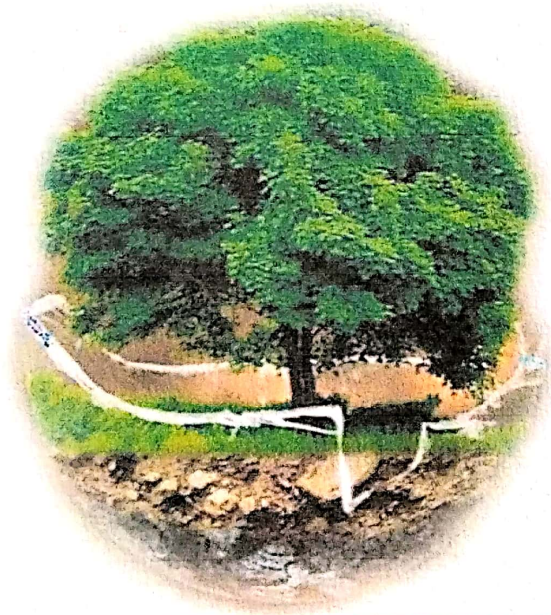
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## Green Audit



## **Action Taken Report**

### **Plant Waste Recycling for Garden and Playground Residue:**

Implemented a plant waste recycling program to manage waste generated from the garden and playground areas.

Established designated composting areas to process organic waste such as fallen leaves, trimmings, and other plant residues.

Trained maintenance staff and volunteers on proper composting techniques to ensure effective decomposition and utilization of compost for soil enrichment.

### **Installation of Small Bird Houses for Avian Safety:**

Installed small birdhouses within the campus trees to provide safe nesting spaces for birds, protecting them from external disturbances.

Conducted educational sessions and nature walks to raise awareness among students and staff about the importance of providing habitats for birds and supporting biodiversity.

### **Placement of Environmental Awareness Posters:**

Displayed posters across the campus highlighting environmental awareness messages, specifically advising against plucking flowers or fruits from trees and plants.

Designed posters with eye-catching visuals and clear messages to educate the campus community about the ecological importance of preserving plant life.

Organized awareness campaigns and interactive workshops to reinforce the importance of respecting nature and fostering a culture of environmental stewardship.

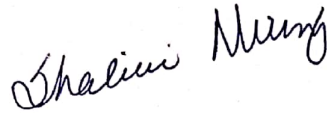
## Name and Signature of the Green Audit team

### External Audit Members

Dr. Fr. Kennedy SJ  
Assistant Professor  
Department of Botany  
St. Xavier's College, Ranchi



Dr. Shalini Minz  
Assistant Professor  
Department of Environmental Science  
St. Xavier's College, Ranchi



Dr. Sabbir Ansari  
Assistant Professor  
Department of Life Science  
Sido Kanhu Murmu University, Dumka



### Internal Audit Members

Dr. Fr. M.K. Jose SJ  
Principal  
St. Xavier's College, Mahuadanr



Sr. Kaslin Juliet  
Assistant Professor  
Department of Botany  
St. Xavier's College, Mahuadanr



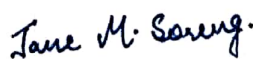
Mr. Shashi Shekhar  
Assistant Professor  
Department of Botany  
St. Xavier's College, Mahuadanr




Miss Shalini Bara  
Assistant Professor  
Department of Botany  
St. Xavier's College, Mahuadanr



Miss Jane Marian Soreng  
Assistant Professor  
Department of Zoology  
St. Xavier's College, Mahuadanr





*External Audit Memebers*



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Assistant Professor  
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St. Xavier's College, Ranchi



Dr. Shalini Minz  
Assistant Professor  
Dept. of Environmental Science  
St. Xavier's College, Ranchi



Dr. Sabbir Ansari  
Assistant Professor  
Dept. of Life Science  
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*Internal Audit Memebers*



Dr. Fr. M.K. Jose SJ  
Principal



Mr. Shashi Sheker



Sr. Kaslin Juliat



Miss Shalini Bara



Miss Jane Marian Soreng



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# Energy



# Audit

**2022-23**



**ST. XAVIER'S COLLEGE MAHUADANR**

**(Affiliated to Nilamber-Pitamber University, Medininagar)**

**Accredited by NAAC at 'B' grade(1st Cycle)**

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## Energy Audit 2022-23



## **Action Taken Report**

### **Display Messages for Optimum Electrical Appliance Use:**

Installed display messages in all classrooms and labs emphasizing the optimal use of electrical appliances such as lights, fans, computers, and projectors.

The messages provide tips on energy-saving practices and remind occupants to switch off appliances when not in use.

### **Promotion of Energy Conservation Stickers:**

Distributed "Save Electricity, Save Nature" stickers throughout the campus, prominently displaying them in common areas, classrooms, and labs.

Conducted awareness campaigns to encourage students, faculty, and staff to adopt energy-saving behaviors and promote environmental sustainability.

### **Projector Management for Energy Efficiency:**

Implemented a policy requiring all projectors to be kept off or in idle mode when not actively used for presentations.

Educated faculty and staff on the importance of minimizing projector usage to conserve energy and reduce operational costs.

### **Power Saving Settings for Computers:**

Configured power-saving settings on all computers campus-wide to automatically turn off monitors and hard disks after periods of inactivity.

Conducted training sessions for computer users to promote awareness and compliance with power-saving measures.

### **Efficient Toilet Area Lighting Management:**

Implemented regular inspections to monitor the effectiveness of the lighting management system and address any issues promptly.

### **Focus on Solar Plant Optimization:**

Conducted a thorough assessment of the existing solar power plant to identify factors contributing to below-rated power generation.

Implemented corrective measures to optimize the performance of the solar plant, including maintenance, repairs, and upgrades as necessary.

Enhanced monitoring and management practices to ensure the solar plant operates at its full capacity and contributes effectively to energy needs.



## Name and Signature of the Energy Audit team 2022-23

### External Audit Members

Mr. Shubhojeet Chakraborty  
Electrical and Electronics Engineer  
Birla Institute of Technology, Ranchi

*shubhojeet chakraborty*

Mr. Shubham Toppo  
Electrical and Electronics Engineer  
Birla Institute of Technology, Ranchi

*Shubham Toppo*

### Internal Audit Members

Dr. Fr. M. K. Jose SJ  
Principal  
St. Xavier's College, Mahuadanr

*[Signature]*

Asst. Prof. Sr. Kaslin Juliet  
IQAC Co-ordinator and Vice-Principal  
HoD, Department of Botany  
St. Xavier's College Mahuadanr

*Kaslin*

Asst. Prof. Binay Yadav  
HoD, Department of Chemistry

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Asst. Prof. Fr. Sanjay Martin SJ  
Assistant Professor  
Department of Chemistry

*[Signature]*

Asst. Prof. Neha Minj  
Assistant Professor  
Department of Mathematics

*N. Minj*

Asst. Prof. Anjna Ekka  
Assistant Professor  
Department of Mathematics

*[Signature]*

*Binay Pandanathji*

Asst. Prof. Aaliya Nadim  
Assistant Professor  
Department of Mathematics

*Aaliya*



# St. Xavier's College Mahuadanr





# Environment Audit

2022-23



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## Environment Audit



## **Action Taken Report**

### **Formation and Communication of Environment Policy:**

Established a comprehensive Environment Policy outlining the college's commitment to environmental sustainability and responsibility.

Communicated the Environment Policy to all faculties and staff members through workshops, meetings, and electronic communication channels to ensure understanding and adherence.

### **Increase in Environmental Promotional Activities:**

Expanded environmental promotional activities on campus to raise awareness and encourage sustainable practices among students, faculty, and staff.

Organized workshops, seminars, and awareness campaigns focusing on various environmental issues, such as waste management, water conservation, and biodiversity preservation.

### **Display of Environment Awareness Posters:**

Installed environment awareness posters in prominent areas of the campus, including corridors, common areas, and student lounges, to educate and inspire individuals to adopt environmentally friendly behaviors.

Rotated posters periodically to maintain interest and visibility, ensuring continuous reinforcement of environmental messages.

### **Adoption of Specific Waste Management Plans:**

Collaborated with State Swachta Mission to develop and implement specific waste management plans tailored to the campus's needs.

Implemented measures to ban the use of plastic carry bags, disposable cups, plates, and flex boards within the college premises, promoting the use of eco-friendly alternatives.

### **Utilization of Solar Panels for Public Lighting:**

Installed solar panels to power public lights within the campus, reducing reliance on conventional energy sources and lowering carbon emissions.

Conducted regular maintenance and monitoring of solar panel systems to ensure optimal performance and maximize energy efficiency.

## Name and Signature of the Environment Audit Team

### External Audit Members

Dr. Rajeev Ranjan Shrivastava  
Assistant Professor  
Department of Geography  
St. Xavier's College, Ranchi

Rajeev R. Shrivastava

Dr. Md Mainul Sk  
Assistant Professor  
Department of Geography  
Rajendra University, Bolangir, Odisha

Mainul SK

### Internal Audit Members

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Miss. Shephali Prakash  
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Prakash

Dr. Areful Houque  
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Dr. A. Houque

Rozy Shushmita Tirkey  
Assistant Professor  
Department of Geography  
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Pomy Pandalathis



# Environment Audit 2022-2023



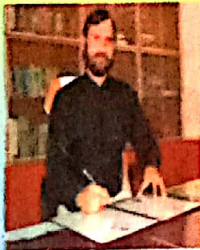
**Dr. Rajeev Ranjan Shrivastava**  
Assistant Professor  
Department of Geography  
St. Xavier's College, Ranchi,  
Jharkhand, India

## External Audit Members



**Dr. Md Mainul Sk**  
Assistant Professor  
Department of Geography  
Rajendra University, Bolangir,  
Odisha, India

## Internal Audit Members



**Fr. Dr. Joseph, M.K.**  
Principal



**Miss Shephali Prakash**



**Dr. Areful Hoque**



**Miss Rozy Sushmita Tirkey**

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# Green Audit 2021-22





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## Green Audit



## **Action Taken Report**

### **Plant Waste Recycling for Garden and Playground Residue:**

Established a plant waste recycling program to manage waste generated from the garden and playground.

Implemented composting facilities to convert organic waste into nutrient-rich compost for use in landscaping and gardening projects.

Conducted educational workshops and demonstrations to promote waste segregation practices among students and staff.

### **Installation of Small Bird Houses for Avian Safety:**

Installed small birdhouses within the campus trees to provide safe nesting habitats for birds, minimizing external disturbances.

Raised awareness among the campus community about the importance of preserving bird habitats and biodiversity.

### **Display of Environmental Awareness Posters:**

Erected posters across the campus displaying environmental awareness messages, particularly urging individuals not to pluck flowers or fruits.

Designed visually appealing posters with informative content to educate and remind students and staff about the significance of respecting nature.

Organized campaigns and events to reinforce the messages conveyed through the posters and promote responsible environmental behavior.

### **Expansion of Environmental Literature in the Library:**

Enriched the library collection with an expanded range of books focusing on environmental awareness and conservation.

Acquired literature covering various environmental topics such as ecology, biodiversity, climate change, sustainable development, and environmental ethics.

Organized library orientations and book fairs to encourage students to explore environmental issues and deepen their understanding of environmental stewardship.

### **Cultivation of Medicinal Herbs for Environmental Purification:**

Initiated the cultivation of medicinal herbs within the campus to contribute to environmental purification and biodiversity enhancement.


Identified suitable areas for planting medicinal herbs and established dedicated herb gardens with proper maintenance plans.

Integrated educational components into the herb garden project, providing opportunities for students to learn about the ecological and health benefits of medicinal plants.

## Name and Signature of the Green Audit team

### External Audit Members

Dr. Fr. Kennedy SJ Assistant Professor  
Department of Botany  
St. Xavier's College, Ranchi



Dr. Shalini Minz  
Assistant Professor  
Department of Environmental Science  
St. Xavier's College, Ranchi



Dr. Sabbir Ansari  
Assistant Professor  
Department of Life Science  
Sido Kanhu Murmu University, Dumka



### Internal Audit Members

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Principal  
St. Xavier's College, Mahuadanr



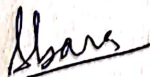
Sr. Kaslin Juliet  
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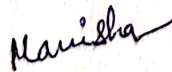


Miss Shalini Bara  
Assistant Professor  
Department of Botany  
St. Xavier's College, Mahuadanr



Pomy Pendarathji

Miss Manisha Baxla  
Assistant Professor  
Department of Zoology  
St. Xavier's College, Mahuadanr




### External Audit Members



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Dr. Sabbir Ansari  
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Dept. of Life Science  
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Dr. Fr. M.K. Jose SJ  
Principal



Mr. Shashi Sheker



Sr. Kaslin Juliat



Miss Shalini Bara



Miss Manisha Baxla

### Internal Audit Members



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# Energy



# Audit

## 2021-22



**ST. XAVIER'S COLLEGE MAHUADANR**  
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## Energy Audit 2021-22



## **Action Taken Report**

### **Replacing CFL Lights with LED Lights:**

Conducted a comprehensive audit of all lighting fixtures across the campus to identify areas for CFL to LED replacement.

Procured and installed LED lights in classrooms, labs, and other facilities, prioritizing areas with higher usage and longer operating hours.

Trained maintenance staff on the installation and maintenance of LED lighting systems.

### **Displaying Messages for Optimum Electrical Appliance Use:**

Implemented a program to display messages in all classrooms and labs regarding the optimal use of electrical appliances, including lights, fans, computers, and projectors.

Collaborated with faculty and student representatives to develop informative and engaging messages aimed at promoting energy conservation practices.

### **Promotion of Energy Conservation Stickers:**

Distributed "Save Electricity, Save Nature" stickers to be prominently displayed raising awareness among students, faculty, and staff about the importance of energy conservation.

Organized campaigns and events to reinforce the message of energy conservation and encourage active participation in sustainability initiatives.

### **Optimizing Projector and Computer Power Usage:**

Implemented policies to ensure projectors are turned off or placed in idle mode when not in use for presentations, reducing unnecessary energy consumption.

Configured power-saving settings on all computers to automatically turn off monitors and hard disks after specified periods of inactivity, such as 10 minutes or 30 minutes.

### **Efficient Toilet Area Lighting Management:**

Keeping lights off during daytime hours when natural light is sufficient.

Conducted regular inspections to ensure proper functioning of the lighting management system and promptly address any issues.

### **Undertaking Periodical Energy Audits:**

Conducted a thorough energy audit of the college facilities to identify opportunities for reducing energy consumption and improving efficiency.

Analyzed energy usage patterns and identified areas for potential savings, such as lighting, and equipment operation.

### **Internal Energy Auditing for Increased Efficiency:**

Established a dedicated team responsible for conducting regular internal energy audits to monitor and improve energy efficiency.

Implemented measures to address identified inefficiencies and reduce the risk of electrical and fire hazards, including equipment maintenance and upgrades.

**Utilizing Biomass for Energy Generation:**

Explored the feasibility of using biomass as a renewable energy source to power small internal works within the college campus.

Conducted research and feasibility studies to assess the potential cost savings and environmental benefits of biomass energy utilization.



## Name and Signature of the Energy Audit team 2021-22

### External Audit Members

Mr. Shubhojeet Chakraborty  
Electrical and Electronics Engineer  
Birla Institute of Technology, Ranchi

*shubhojeet chakraborty*

Mr. Shubham Toppo  
Electrical and Electronics Engineer  
Birla Institute of Technology, Ranchi

*shubham toppo*

### Internal Audit Members

Dr. Fr. M. K. Jose SJ  
Principal  
St. Xavier's College, Mahuadanr

*[Signature]*

Asst. Prof. Sr. Kaslin Juliet  
IQAC Co-ordinator and Vice-Principal  
HoD, Department of Botany  
St. Xavier's College Mahuadanr

*Kaslin*

Asst. Prof. Binay Yadav  
HoD, Department of Chemistry  
St. Xavier's College Mahuadanr

*Binay Yadav*

Asst. Prof. Neha Minj  
HoD, Department of Mathematics  
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*N. Minj*

Asst. Prof. Anjna Ekka  
Assistant Professor  
Department of Mathematics  
St. Xavier's College Mahuadanr

*Anjna Ekka*

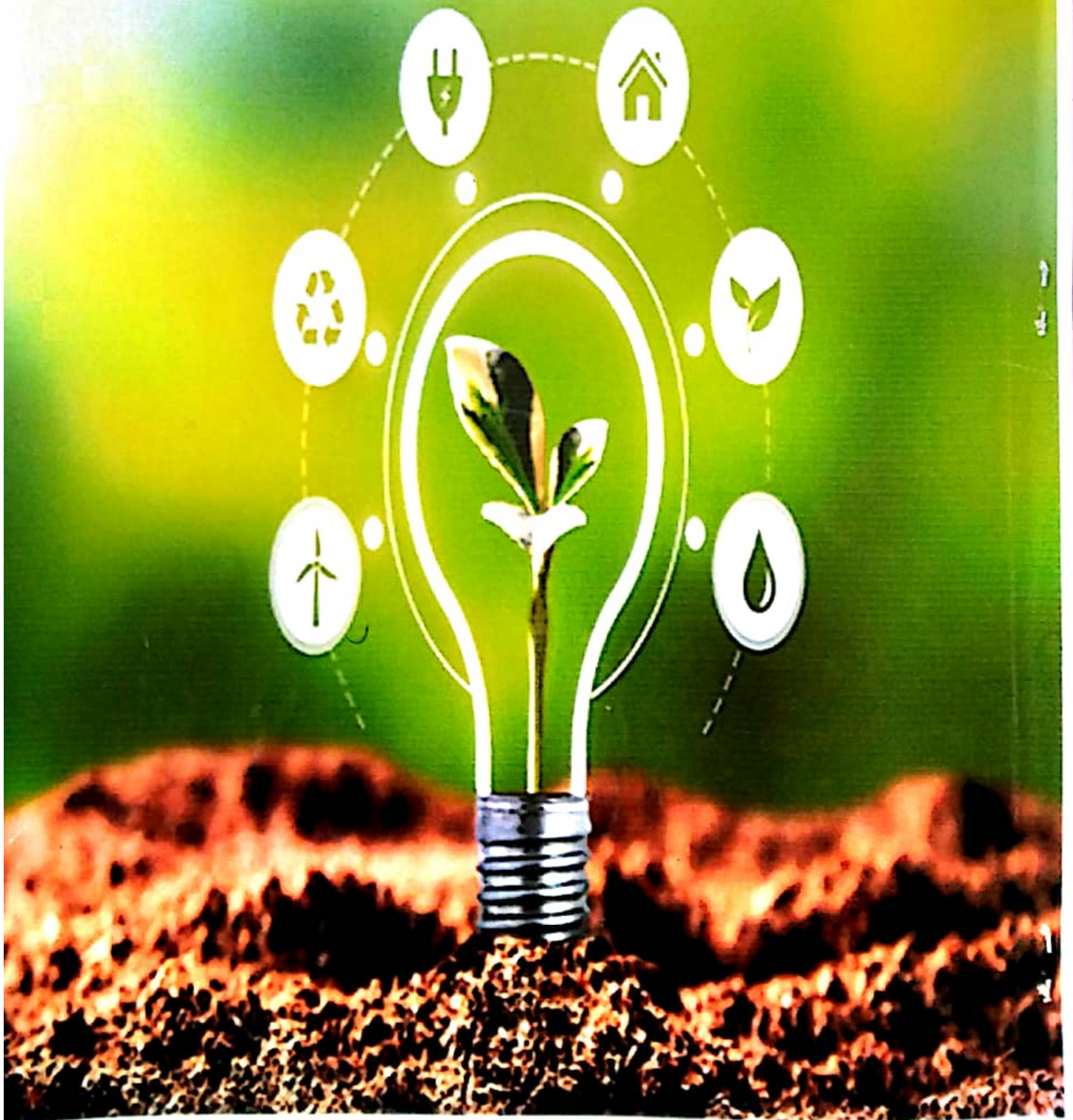
Asst. Prof. Aaliya Nadim  
Assistant Professor  
Department of Mathematics  
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*Aaliya*

*Bony Pandanathji*



# St. Xavier's College Mahuadanr





# Environment Audit

2021-22



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## Environment Audit



## **Action Taken Report**

### **Plantation of Additional Native Species:**

Identified suitable areas on campus for the plantation of additional native species, considering factors such as soil conditions, sunlight exposure, and existing ecosystem dynamics.

Conducted a survey to determine the most appropriate native species to plant, taking into account their compatibility with local ecosystems and their ability to enhance biodiversity.

Implemented a systematic planting schedule and engaged students, faculty, and staff in the planting process to foster a sense of ownership and stewardship over the new green spaces.

### **Student Awareness Programs for Eco-Friendly Efforts:**

Organized a series of student awareness programs throughout the year to promote eco-friendly efforts and environmental stewardship.

Collaborated with student organizations, academic departments, and environmental experts to design and deliver engaging and informative awareness sessions, workshops, and events.

Encouraged student participation in eco-friendly initiatives such as waste reduction, recycling, energy conservation, and sustainable transportation.

### **Converting Complete Lighting into LED Lighting:**

Procured and installed LED lights in all applicable areas, prioritizing high-traffic areas and spaces with high energy consumption.

Monitored energy usage and conducted periodic evaluations to measure the impact of the LED lighting conversion on energy efficiency and cost savings.

## Name and Signature of the Green Audit Team

### External Audit Members

Dr. Rajeev Ranjan Shrivastava

Assistant Professor

Department of Geography

St. Xavier's College, Ranchi.

Rajeev R. Shrivastava

Dr. Md Mainul SK

Assistant Professor

Department of Geography

Rajendra University, Bolangir, Odisha

Mainul SK

### Internal Audit Members

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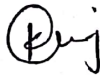


Mrs. Keerti Minj

Assistant Professor

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Miss. Shephali Prakash

Assistant Professor

Department of Geography

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Enid Captain Kandulnia

Assistant Professor

Department of Geography

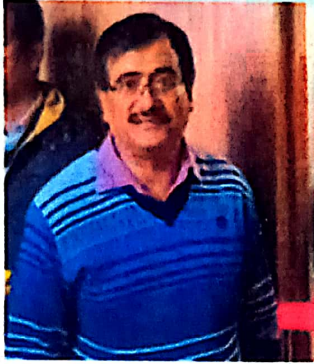
St. Xavier's College, Mahuadanr



Tony Pendanathji



# Environmental Audit Report 2021-22



**Dr. Rajeev Ranjan  
Shrivastava**  
Assistant Professor  
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Jharkhand, India

## External Audit Members



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# Green Audit 2020-21





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## Green Audit



## **Action Taken Report**

### **Plant Waste Recycling for Garden and Playground Residue:**

Implemented a plant waste recycling program to manage waste generated from the garden and playground.

Established composting facilities to convert organic waste into nutrient-rich compost for use in landscaping and gardening projects.

Educated students and staff on the importance of waste recycling and provided guidance on proper waste segregation practices.

### **Installation of Small Bird Houses for Avian Safety:**

Installed small birdhouses within the campus trees to provide safe nesting habitats for birds, protecting them from external disturbances.

Raised awareness among the campus community about the importance of preserving bird habitats and biodiversity.

### **Display of Environmental Awareness Posters:**

Erected posters throughout the campus showcasing environmental awareness messages, particularly urging individuals not to pluck flowers or fruits from plants.

Designed visually appealing posters with informative content to educate and remind students and staff about the significance of respecting nature and conserving plant life.

Conducted awareness campaigns and workshops to reinforce the messages conveyed through the posters and promote responsible environmental behavior.

### **Expansion of Environmental Literature in the Library:**

Enriched the library collection with a broader selection of books focusing on environmental awareness and conservation.

Acquired relevant literature covering topics such as ecology, biodiversity, climate change, sustainable development, and environmental ethics.

Organized library exhibitions and reading sessions to encourage students to explore environmental issues and deepen their understanding of environmental stewardship.

### **Cultivation of Medicinal Herbs for Environmental Purification:**

Initiated the cultivation of medicinal herbs within the campus premises to contribute to environmental purification and biodiversity enhancement.

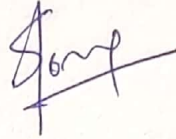
Identified suitable areas for planting medicinal herbs and established dedicated herb gardens with proper signage and labelling.

Incorporated educational components into the herb garden project, providing opportunities for students to learn about the ecological and health benefits of medicinal plants.

## Name and Signature of the Green Audit team

### External Audit Members

Dr. Fr. Kennedy SJ Assistant Professor  
Department of Botany  
St. Xavier's College, Ranchi



Dr. Shalini Minz  
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Department of Environmental Science  
St. Xavier's College, Ranchi



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Department of Life Science  
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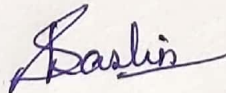


### Internal Audit Members

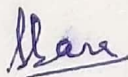
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St. Xavier's College, Mahuadanr



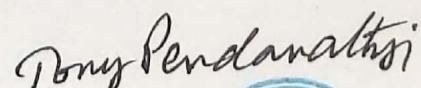
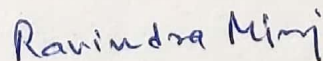
Sr. Kaslin Juliet  
Assistant Professor  
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St. Xavier's College, Mahuadanr



Miss Shalini Bara  
Assistant Professor  
Department of Botany  
St. Xavier's College, Mahuadanr



Mr. Ravindra Minj  
IT Specialist



St. Xavier's College, Mahuadanr

# Green Audit

Water management

Geographical Location

Plantation studies

Pond Eco-system

Power saving device & Alternative sources

Management of different types of wastes

Conclusions and Recommendations

Awareness & Training on Sustainability for Students

## External Audit Committee



Fr. Dr. Kennedy S.J.  
Assistant Professor  
Dept. of Botany  
St Xavier's College Ranchi



Dr. Shalini Minz  
Assistant Professor  
Dept. of Environmental science  
St Xavier's College Ranchi



Dr. Sabbir Ansari  
Assistant Professor  
Dept. of Life science  
Sido Kanhu Murmu University, Dumka

## Internal Audit Committee



Dr. Fr. M.K. Jose S.J.  
Chair-Person



Sr. Kaslin Juliet



Miss. Shalini Bara



Mr. Ravindra Minj

## ST. XAVIER'S COLLEGE MAHUADANR

(Affiliated to Nilamber-Pitamber University, Medininagar)

Accredited by NAAC at 'B' grade(1st Cycle)

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# Energy



# Audit

## 2020-21



**ST. XAVIER'S COLLEGE MAHUADANR**

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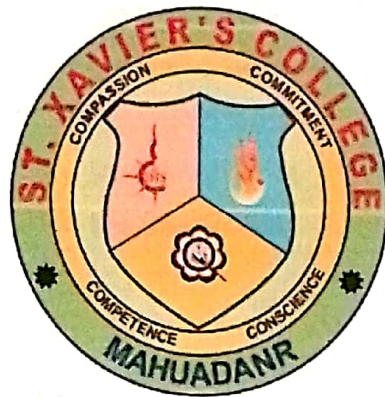


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## Energy Audit 2020-21



## **Action Taken Report:**

### **Implementation of Energy Audit Recommendations:**

Incorporated suggestions from the energy audit report for energy cost reduction, preventive maintenance, and quality control activities into utility operation procedures at the audit sites.

Established protocols for regular review and update of energy audit recommendations to ensure continuous improvement in energy efficiency.

### **Power Saving Settings for Computers:**

Configured power-saving settings on all computers campus-wide to automatically turn off monitors and hard disks after specified periods of inactivity (e.g., 10 minutes/30 minutes), contributing to significant energy savings.

### **Equipment Shutdown Protocol:**

Implemented a protocol for turning off electrical equipment when not in use, including computers, printers, copiers, and other office appliances, to minimize standby power consumption.

### **Projector Management and Energy Tracking:**

Projectors off or in idle mode when not in use for presentations, with oversight from institute-level student organizations responsible for monitoring energy consumption parameters.

Established a system for tracking energy usage in various departments, classrooms, halls, and other areas to identify opportunities for further energy conservation.

### **Establishment of Energy Monitoring Team:**

Formed a dedicated team tasked with continuously monitoring and analyzing energy consumption within the campus.

Provided team members with training and resources necessary to effectively monitor energy usage and identify areas for improvement.

### **Optimization of Water Usage and Temperature Settings:**

Implemented automatic processes for optimal water usage and temperature settings to maximize energy savings, including the use of smart controls and sensors where applicable.

Conducted regular inspections and maintenance to ensure the efficiency of water and heating systems.

### **Regular Energy Auditing and Public Reporting:**

Scheduled regular energy audits within the campus to assess energy usage patterns, identify inefficiencies, and recommend improvements.

### **Promotion of Energy Efficiency and Renewable Energy:**

Organized seminars, and lectures among students and staff to create awareness about energy efficiency and renewable energy sources such as solar, wind, and biogas.

Collaborated with relevant stakeholders to facilitate the implementation of energy-efficient technologies and practices across the campus.

**Appliance Maintenance and Replacement:**

Implemented a program for regular maintenance of appliances and equipment in all laboratories to ensure optimal performance and energy efficiency.

Initiated the process of replacing old appliances with energy-efficient models to reduce energy consumption and operational costs.



## Name and Signature of the Energy Audit team 2020-21

### External Audit Members

Mr. Shubhojeet Chakraborty  
Electrical and Electronics Engineer  
Birla Institute of Technology, Ranchi

shubhojeet chakraborty

Mr. Shubham Toppo  
Electrical and Electronics Engineer  
Birla Institute of Technology, Ranchi

Shubham Toppo

### Internal Audit Members

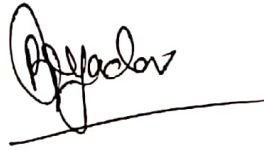
Dr. Fr. M. K. Jose SJ  
Principal  
St. Xavier's College, Mahuadanr



Sr. Kaslin Juliet  
IQAC Co-ordinator and Vice-Principal  
HoD, Department of Botany.  
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Kaslin

Binay Yadav  
HoD, Department of Chemistry  
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Mukul Toppo  
Assistant Professor  
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Mukul

Neha Minj  
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N. Minj

Anjna Ekka  
Assistant Professor  
Department of Mathematics  
St. Xavier's College Mahuadanr

Ekka

Pony Pandanathji



# St. Xavier's College Mahuadanr





# Environment Audit

2020-21



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## Environment Audit



## Action Taken Report

### **Opportunities for Improvements:**

Conducted a thorough assessment to identify areas for improvement across various aspects of campus operations, including energy consumption, waste management, water conservation, and environmental education.

Established action plans and implementation strategies to address identified opportunities for improvements, with clear goals and timelines.

### **Awareness Programs and Group Discussions on Environmental Education:**

Organized regular awareness programs and group discussions on environmental education, covering topics such as climate change, biodiversity conservation, sustainable living practices, and the importance of environmental stewardship.

Collaborated with faculty members, environmental experts, and student organizations to design and deliver engaging and informative sessions that raise awareness and promote environmental literacy among students and staff.

### **Save Energy Awareness Programs:**

Conducted targeted awareness programs on energy conservation for students and staff, highlighting the importance of saving energy, reducing carbon footprint, and adopting energy-efficient practices in daily routines.

Distributed educational materials, such as brochures, posters, and digital resources, to reinforce key messages and provide practical tips for energy conservation.

### **Observance of Power Saving Day:**

Instituted an annual Power Saving Day event to raise awareness about energy conservation and promote collective action to reduce energy consumption.

Organized special activities, competitions, and campaigns on Power Saving Day to engage the campus community and encourage participation in energy-saving initiatives.

### **Expansion of Renewable Energy Sources:**

Expanded the deployment of solar panels and other renewable energy sources on campus to reduce reliance on conventional energy sources and mitigate environmental impact.

Conducted feasibility studies and assessments to identify suitable locations for the installation of additional solar panels and explored opportunities for integrating other renewable energy technologies, such as wind and biomass, into campus infrastructure.

## **Name and Signature of the Green Audit Team**

### **External Audit Members**

Dr. Rajeev Ranjan Shrivastava  
Assistant Professor  
Department of Geography  
St. Xavier's College, Ranchi

*Rajeev R. Shrivastava*

Dr. Mohammad Taufique  
Assistant Professor  
Department of Geography  
Aligarh Muslim University, Uttar Pradesh

*Dr. M. Taufique*

### **Internal Audit Members**

Dr. Fr. M.K. Jose SJ  
Principal  
St. Xavier's College, Mahuadanr

*[Signature]*

Keerti Minj  
Assistant Professor  
Department of Geography  
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Rashmi Kandulna  
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*Rashmi*

Habib Ali Mridha  
Assistant Professor  
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*H. A. Mirdha*

*Dony Pendanathji*



# External Audit Members

## Environmental Audit Report 2020-21



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Shrivastava**  
Assistant Professor  
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St. Xavier's College, Ranchi,  
Jharkhand, India

### External Audit Members



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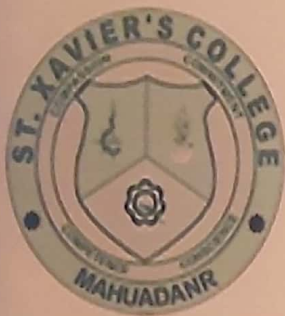
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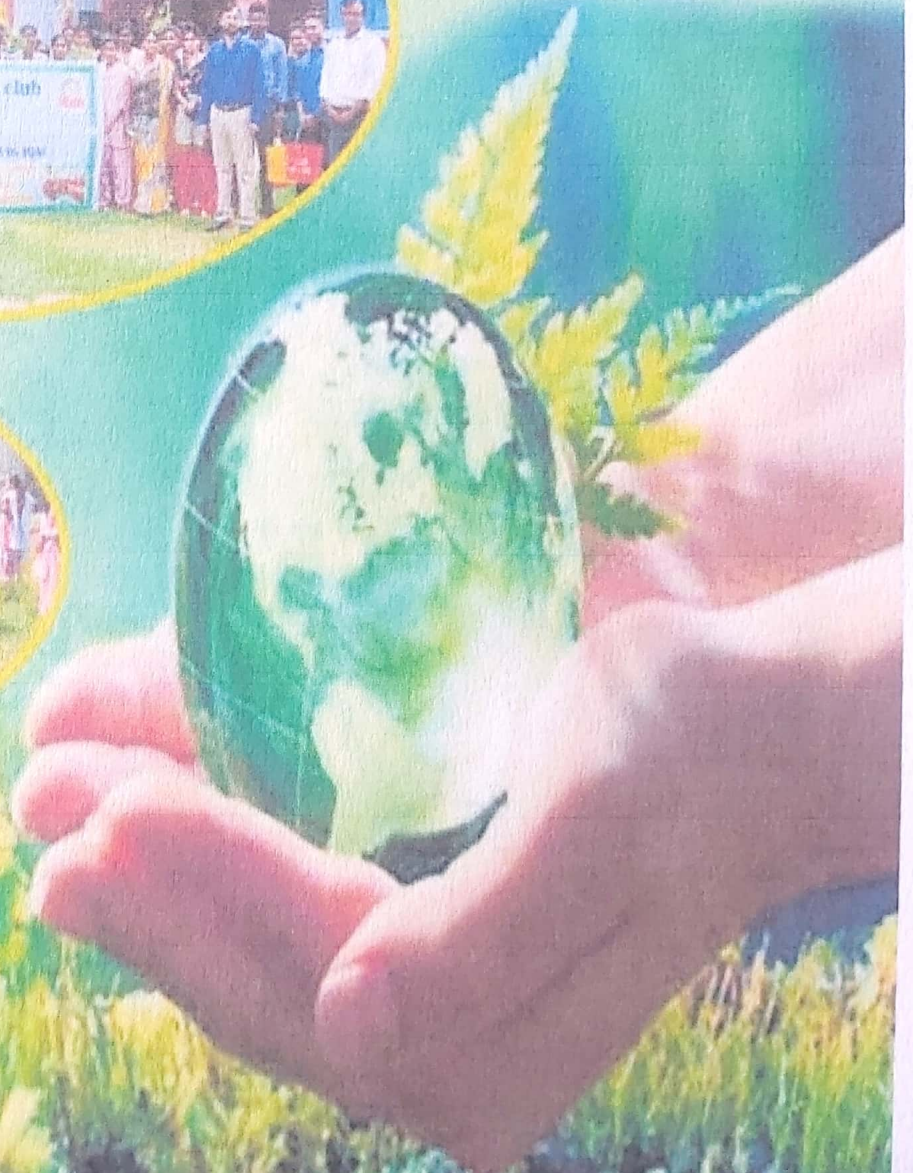
# Green Audit 2019-20





# Save Earth

# Save Life



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## Green Audit



## **Action Taken Report**

### **Adoption of Environmental Policy for the College:**

Developed and adopted a comprehensive environmental policy outlining the college's commitment to sustainability, conservation, and environmental stewardship.

Communicated the policy to all stakeholders, including students, staff, and faculty, to ensure awareness and adherence to environmental objectives and principles.

Organized departmental competitions to engage students and faculty in initiatives aimed at enhancing the campus's greenery, fostering a sense of ownership and environmental responsibility.

### **Empowering Students and Staff to Solve Local Environmental Problems:**

Permitted students and staff to actively engage in identifying and addressing local environmental challenges through participatory problem-solving approaches.

Established mechanisms for collaboration with local communities, government agencies, and environmental organizations to implement sustainable solutions.

### **Expansion of Solar Panels and Renewable Energy Sources:**

Increased the deployment of solar panels and other renewable energy technologies to decrease reliance on conventional energy sources and reduce carbon emissions.

Implemented projects to harness solar energy for powering campus facilities and operations, contributing to sustainability goals and cost savings.

### **Replacement of Computers and TVs with LED Monitors:**

Replaced traditional computers and TVs with energy-efficient LED monitors to lower energy consumption and minimize environmental impact.

Transitioned to LED technology for improved efficiency, longevity, and environmental sustainability in technology use across the campus.

### **Creation of a Plastic-Free Campus:**

Implemented measures to eliminate single-use plastics and promote eco-friendly alternatives throughout the campus.

Raised awareness and encouraged behavioral changes among students and staff to reduce plastic consumption and minimize plastic pollution.

### **Elimination of Paper Plates and Cups in College Functions:**

Eliminated the use of paper plates and cups for all college events and functions, opting for reusable or biodegradable alternatives.

Promoted sustainable practices and encouraged event organizers to prioritize environmental considerations in event planning and execution.

**Encouragement of Bicycle Usage among Students and Staff:**

Encouraged students and staff to use bicycles as a sustainable mode of transportation by providing bicycle infrastructure and promoting cycling culture.

Organized campaigns and initiatives to raise awareness about the benefits of cycling and promote bicycle-friendly policies on campus.

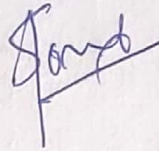
**Discouragement of Daily Generator Usage:**

Implemented measures to reduce reliance on generators and minimize their usage to essential needs only.

Promoted energy conservation practices and alternative power sources to reduce environmental impact and noise pollution from generator use.

**Name and Signature of the Green Audit team**

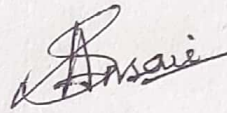
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Assistant Professor  
Dept. of Botany  
St Xavier's College Ranchi



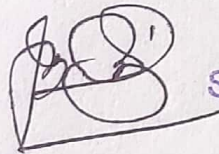
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Dept. of Life science  
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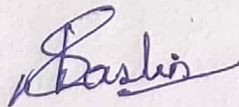


Dr. Fr. M.K. Jose S.J  
Principal

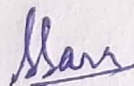


Principal  
St.Xavier's College  
Mahuadanr

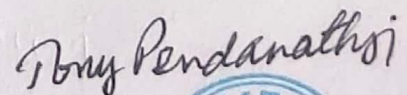
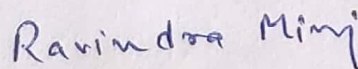
Sr. Kaslin Juliet  
Asst. Professor  
Dept. of Botany



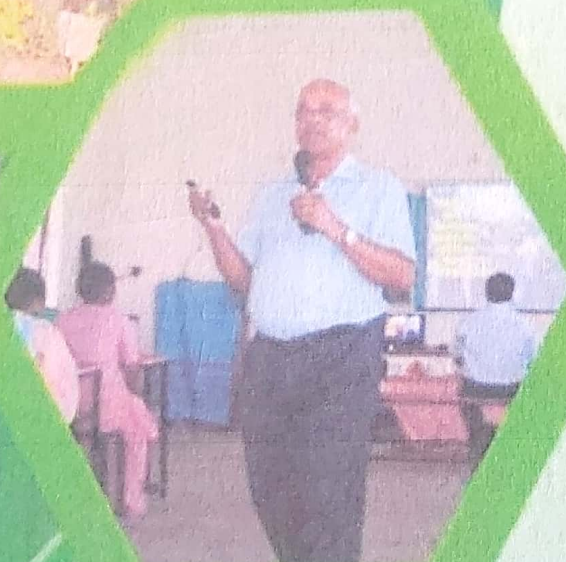
Miss. Shalini Bara  
Asst. Professor  
Dept. of Botany



Mr. Ravindra Minj  
IT specialist



**Earth  
provides  
enough  
to satisfy  
every  
man's  
needs,  
but not  
every  
man's  
greed**



**Mahatma Gandhi**



### External Audit Committee



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Dept. of Botany  
St Xavier's College Ranchi



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St Xavier's College Ranchi



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Assistant Professor  
Dept. of Life science  
Sido Kanhu Murmu University, Dumka

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Chair-Person



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**Mr. Ravindra Minj**

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# Energy



# Audit

## 2019-20



**ST. XAVIER'S COLLEGE MAHUADANR**  
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## Energy Audit 2019-20



## **Action Taken Report:**

### **Replacing CFL Lights with LED Lights:**

Conducted a thorough assessment of existing CFL lighting fixtures across the campus.

Developed a detailed plan for the systematic replacement of CFL lights with LED lights in areas where LED technology offers longer lifespan and greater energy efficiency.

Initiated procurement of LED bulbs and tubes based on the identified requirements.

### **LED Advantages and Implementation Strategy:**

Conducted awareness campaigns among staff and students to highlight the benefits of LED lights over CFL lights, including longer lifespan, lower power consumption, and reduced risk of breakage.

Identified priority areas for LED replacement based on factors such as energy consumption, usage patterns, and potential cost savings.

Collaborated with vendors to procure high-quality LED bulbs and tubes that meet the campus's lighting requirements and sustainability goals.

### **Promoting Energy Conservation Awareness:**

Designed and distributed stickers promoting the message of "Save Electricity, Save Nature" to be displayed prominently across the campus.

Conducted awareness campaigns, workshops, and seminars to educate the campus community about the importance of energy conservation and the role of LED lighting in reducing environmental impact.

### **Optimizing Projectors and Computers:**

Implemented a policy to ensure projectors are turned off or placed in idle mode when not in use for presentations.

Configured power-saving settings on all computers to automatically turn off monitors and hard disks after periods of inactivity (e.g., 10 minutes/30 minutes), reducing energy consumption.

### **Efficient Toilet Area Lighting Management:**

Ensuring lights are kept off during daytime when natural light is sufficient.

Conducted regular inspections to monitor the effectiveness of the lighting management system and address any issues promptly.

### **Optimizing Solar Power Generation:**

Conducted a comprehensive review of the existing solar power plant to identify factors causing it to operate below its rated power.

Implemented corrective measures to optimize the performance of the solar power plant, including maintenance, repairs, and upgrades as necessary.

**Monitoring and Evaluation:**

Established a monitoring mechanism to track the progress of LED replacement initiatives, energy savings achieved, and the overall impact on campus energy consumption.

Conducted regular audits and assessments to evaluate the effectiveness of implemented measures and identify areas for further improvement.

## Name and Signature of the Energy Audit team 2019-20

### External Audit Members

Mr. Shubhojeet Chakraborty  
Electrical and Electronics Engineer  
Birla Institute of Technology, Ranchi

*shubhojeet chakraborty*

Mr. Shubham Toppo  
Electrical and Electronics Engineer  
Birla Institute of Technology, Ranchi

*Shubham Toppo*

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St. Xavier's College, Mahuadanr

*[Signature]*

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IQAC Coordinator and Vice-Principal  
HoD, Department of Botany  
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Asst. Prof. Mukul Toppo  
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Asst. Prof. Neha Minj  
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*N. Minj*

Asst. Prof. Anjna Ekka  
Assistant Professor  
Department of Mathematics

*Anjna Ekka*

*Diby Pandalanathoi*



# St. Xavier's College Mahuadanr





# Environment Audit

2019-20



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## Environment Audit



## **Action Taken Report:**

### **Implementation of Environment Policy:**

Developed and adopted an Environment Policy outlining the college's commitment to environmental sustainability and responsible stewardship of natural resources.

Established clear objectives and targets aligned with the policy to guide environmental initiatives and activities on campus.

Communicated the Environment Policy to all stakeholders, including students, faculty, staff, and visitors, to promote awareness and encourage participation in environmental conservation efforts.

### **Installation of RO Systems:**

Installed Reverse Osmosis (RO) systems in strategic locations across the college campus to provide safe and clean drinking water to students, faculty, and staff.

Conducted regular maintenance and servicing of RO systems to ensure optimal performance and water quality.

### **Development of Waste Management Plan:**

Prepared a comprehensive Waste Management Plan for the campus to address the collection, segregation, recycling, and disposal of waste materials.

Implemented initiatives to reduce waste generation, promote recycling and composting, and ensure proper disposal of hazardous and non-hazardous waste.

Conducted training sessions and workshops for campus community members to raise awareness about waste management practices and encourage participation in waste reduction efforts.

### **Display of Environment Awareness Posters:**

Installed environment awareness posters in prominent areas of the campus, including corridors, common areas, and student lounges, to educate and inform individuals about environmental issues and conservation practices.

Designed posters with visually appealing graphics and concise messaging to attract attention and promote engagement.

Rotated posters periodically to maintain interest and relevance, and updated content to reflect current environmental themes and initiatives.



## Name and Signature of the Environment Audit Team

### External Audit Members

Dr. Rajeev Ranjan Shrivastava  
Assistant Professor  
Department of Geography  
St. Xavier's College, Ranchi

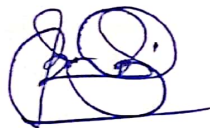
Rajeev R. Shrivastava

Dr. Mohammad Taufique  
Assistant Professor  
Department of Geography  
Aligarh Muslim University, Uttar Pradesh

Dr. M. Taufique

### Internal Audit Members

Dr. Fr. M.K. Jose SJ  
Principal  
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Mrs. Keerti Minj  
Assistant Professor  
Department of Geography  
St. Xavier's College, Mahuadanr

Keerti Minj

Miss Archana Jha  
Assistant Professor  
Department of Geography  
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A. Jha

Tommy Pendanathoj

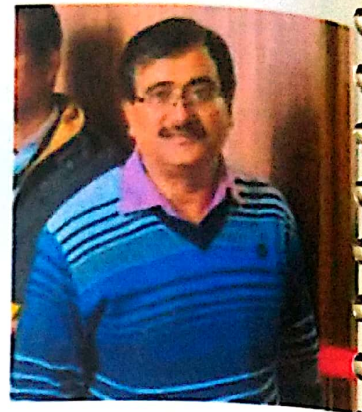


# Environmental Audit Report 2019-20



**Dr. Mohammad Taufique**  
Assistant Professor  
Department of Geography  
Aligarh Muslim University,  
Aligarh, Uttar Pradesh, India

## External Audit Members



**Dr. Rajeev Ranjan  
Shrivastava**  
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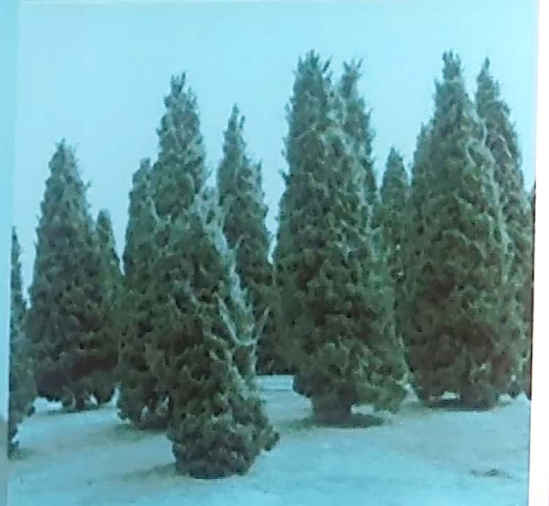
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# Green Audit 2018-19



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## Green Audit



## **Action Taken Report**

### **Adoption of Environmental Policy:**

Developed and adopted an environmental policy for the college, outlining commitments to sustainability, conservation, and eco-friendly practices.

Communicated the policy to all stakeholders, including students, staff, and faculty, to ensure understanding and compliance with environmental objectives.

Organized competitions among departments to encourage student involvement in maintaining and improving the campus's greenery, fostering a sense of ownership and responsibility.

### **Permitting Students and Staff to Solve Local Environmental Problems:**

Empowered students and staff to address local environmental issues by providing opportunities for engagement and participation in problem-solving initiatives.

Established channels for collaboration with local communities, government agencies, and environmental organizations to identify and address environmental challenges effectively.

### **Employment of More Solar Panels and Renewable Energy Sources:**

Expanded the use of solar panels and other renewable energy sources to reduce reliance on fossil fuels and lower carbon emissions.

Conducted feasibility studies and implemented projects to harness renewable energy for powering campus facilities and operations.

### **Establishment of Functional Biogas Plant:**

Established a functional biogas plant to convert organic waste into renewable energy and organic fertilizer.

Integrated the biogas plant into campus waste management systems to promote sustainability and resource efficiency.

### **Establishment of a Plastic-Free Campus:**

Implemented measures to reduce and eliminate the use of single-use plastics on campus, such as plastic bags, bottles, and packaging.

Encouraged the adoption of reusable alternatives and promoted awareness of the environmental impacts of plastic pollution.

### **Avoidance of Paper Plates and Cups for College Functions:**

Eliminated the use of paper plates and cups for all college functions and events, opting for reusable or biodegradable alternatives.

Promoted sustainable practices and encouraged event organizers to prioritize environmental considerations in planning and execution.

### **Encouragement of Bicycle Usage among Students and Staff:**

Encouraged students and staff to use bicycles as a sustainable mode of transportation by providing bicycle racks, repair stations, and designated cycling lanes.

Organized awareness campaigns and events to promote cycling as a healthy, eco-friendly commuting option.

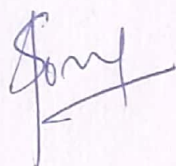
**Discouragement of Daily Generator Usage:**

Implemented measures to discourage the daily use of generators by optimizing energy management systems and minimizing reliance on backup power sources.

Prioritized energy efficiency and grid stability to reduce the need for generator usage and associated environmental impacts.

**Name and Signature of the Green Audit team**

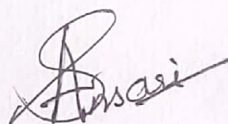
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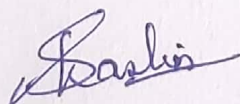
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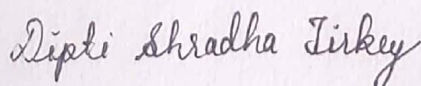
Dr. Fr. M.K. Jose S.J  
Principal



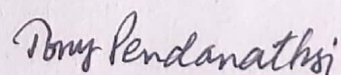
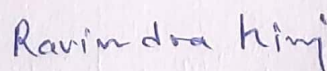
Sr. Kaslin Juliet  
Asst. Professor  
Dept. of Botany

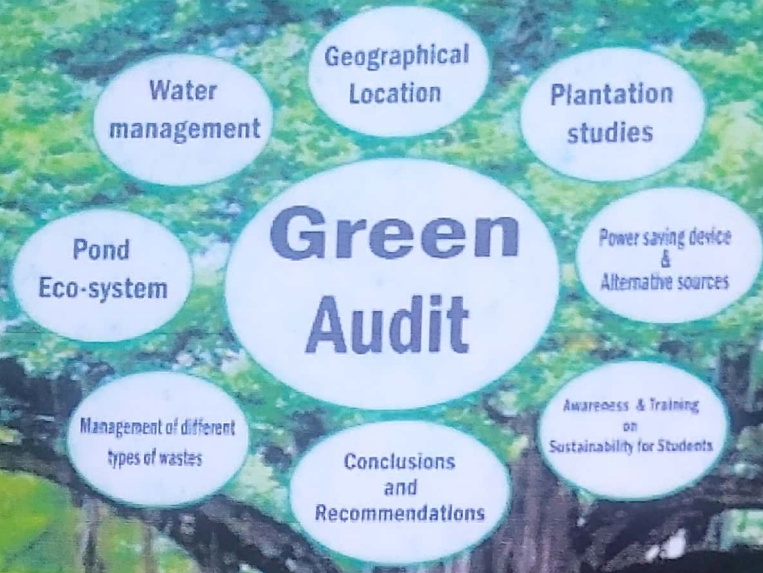


Miss. Dipti Shradha Tirkey  
Asst. Professor  
Dept. of Botany



Mr. Ravindra Minj  
IT specialist





**External Audit Committee**



Fr. Dr. Kennedy S.J.  
Assistant Professor  
Dept. of Botany  
St Xavier's College Ranchi



Dr. Shalini Maitr  
Assistant Professor  
Dept. of Environmental science  
St Xavier's College Ranchi



Dr. Sahbir Anwar  
Assistant Professor  
Dept. of Life science  
Sido Kanhu Murmu University, Dumka

**Internal Audit Committee**



Dr. Fr. M. K. Jose S.J.  
Chair Person



Sr. Kastin Juliet



Miss. Dipi Shradha Tirkey



Mr. Ravindra Minj

**ST. XAVIER'S COLLEGE MAHUADANR**

(Affiliated to Nilamber-Pitamber University, Medininagar)

Accredited by NAAC at 'B' grade(1st Cycle)

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# Energy



# Audit

## 2018-19



**ST. XAVIER'S COLLEGE MAHUADANR**

**(Affiliated to Nilamber-Pitamber University, Medininagar)**

**Accredited by NAAC at 'B' grade(1st Cycle)**

# St. Xavier's College, Mahuadanr

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## Energy Audit 2018-19



## **Action Taken Report:**

### **Optimizing Tube Light Usage in Classrooms:**

Conducted awareness sessions for teachers and staff on the importance of energy conservation and efficient use of lighting.

Implemented a policy to switch off the lights near windows when sufficient natural light is available.

### **Implementing Power Saving Settings for Computers:**

Configured power saving settings on all computers to automatically turn off monitors and hard disks after a specified period of inactivity (e.g., 10 minutes/30 minutes).

Conducted training sessions for staff and students to encourage them to manually switch off computers when not in use for extended periods.

### **Managing Toilet Area Lighting:**

Implemented a schedule for routine inspections to ensure lights are switched off during daylight hours and promptly address any malfunctioning sensors.

### **Transitioning to LED Lighting:**

Conducted a comprehensive audit to assess the feasibility of replacing fluorescent lamps with LED lights.

Identified areas with high energy consumption and prioritized them for LED retrofitting.

Procured and installed new generation LED lights in designated areas, focusing on energy efficiency and cost-effectiveness.

### **Upgrading to Smart LED Technology and Optimizing Solar Power Generation:**

Initiated the process of replacing fluorescent tube lights and CFL lights with smart LED tubes and bulbs.

Collaborated with vendors to source smart LED lighting solutions that offer advanced features such as dimming and scheduling for further energy savings.

Conducted maintenance and performance checks on the existing solar power plant to ensure it operates at its rated capacity, addressing any issues or inefficiencies promptly.

### **Monitoring and Evaluation:**

Established a monitoring mechanism to track energy consumption, cost savings, and environmental impact resulting from implemented measures.

Regularly review and assess the effectiveness of the initiatives taken, making adjustments as necessary to achieve optimal energy efficiency and sustainability goals.

## Name and Signature of the Energy Audit team 2018-19

### External Audit Members

Mr. Shubhojeet Chakraborty  
Electrical and Electronics Engineer  
Birla Institute of Technology, Ranchi

*shubhojeet chakraborty*

Mr. Shubham Toppo  
Electrical and Electronics Engineer  
Birla Institute of Technology, Ranchi

*Shubham Toppo*

### Internal Audit Members

Dr. Fr. M. K. Jose SJ  
Principal  
St. Xavier's College, Mahuadanr

*[Signature]*

Asst. Prof. Sr. Kaslin Juliet  
IQAC Co-ordinator and Vice-Principal  
HoD, Department of Botany  
St. Xavier's College Mahuadanr

*Kaslin*

Asst. Prof. Binay Kumar Yadav  
HoD, Department of Chemistry  
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*Binay Yadav*

Asst. Prof. Sanjay Martin Kujur  
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*Sanjay*

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*N-Minj*

Asst. Prof. Aaliya Nadim  
Asst. Prof. Department of Mathematics  
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*Aaliya*

*Prasanna Nathoi*



# St. Xavier's College Mahuadanr





# Environment Audit

**2018-19**



# St. Xavier's College, Mahuadanr

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## Environment Audit



## Action Taken Report

### **Safe Storage of Chemicals:**

Implemented a system for the safe storage of chemicals such as paints, gums, resins, oils, lubricants, and acids in designated areas.

Installed safety and warning signs to alert personnel about the presence of hazardous materials and promote safe handling practices.

### **Development of Internal Inspection System:**

Conducted regular inspections and audits to identify potential environmental risks and ensure timely corrective actions.

### **Preparation of Waste Management Plan:**

Developed a comprehensive waste management plan for the campus to minimize waste generation, promote recycling and reuse, and ensure proper disposal of waste materials.

Implemented segregation at the source and established procedures for the safe handling, storage, and disposal of different types of waste.

### **Display of Environment Awareness Posters:**

Installed environment awareness posters in prominent areas of the campus to educate and inform students, faculty, and staff about environmental issues, conservation practices, and the college's commitment to sustainability.

Organized awareness campaigns and events to further promote environmental awareness and encourage active participation in environmental initiatives.



## Name and Signature of the Environment Audit Team

### External Audit Members

Dr. Rajeev Ranjan Shrivastava  
Assistant Professor  
Department of Geography  
St. Xavier's College, Ranchi

Rajeev R. Shrivastava

Dr. Mohammad Taufique  
Assistant Professor  
Department of Geography  
Aligarh Muslim University, Uttar Pradesh

Dr. M. Taufique

### Internal Audit Members

Dr. Fr. M.K. Jose SJ  
Principal  
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Mrs. Keerti Minj  
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Miss Archana Jha  
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Department of Geography  
St. Xavier's College, Mahuadanr

A. Jha.

Tony Bendanathji



# Environmental Audit Report 2018-19



**Dr. Rajeev Ranjan  
Shrivastava  
Assistant Professor  
Department of Geography  
St. Xavier's College, Ranchi,  
Jharkhand, India**

## External Audit Members



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