

INDIRA GANDHI GOVT. COLLEGE PANDARIA,  
DISTT. – KABIRDHAM (C.G.)



ENVIORNMENT AUDIT REPORT

2023

# Environmental Audit Assessment Team

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(Internal Auditors)

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- Mr. Dinesh Kumar Kashyap (Asst. Proff) Department of History
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- Mr. Chitrasen Thakur (Asst. Proff) Department of Botany
- Mr. Satyam Kumar Dounde (Asst. Proff) Department of Zoology
- Mrs. Madhuri Ratna Bhaskar (Asst. Proff) Department of Zoology
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(External Auditors)

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Range Officer Pandariya

  
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Pandaria East

## **Acknowledgement**

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By Environment Assessment Audit Team of Indira Gandhi Government College, Pandariyaof is very much thankful to Principal Dr. B.S.Chauhan, IQAC Coordinator for motivating us for 'Environment Audit 'For Evaluation of Institution's Environment of different Area eg.-Facilities, water, Atmosphere, Waste Management Etc.& Create Sustainable Community in an Institution Via Audit Report.

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# INTRODUCTION

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A Nation's growth starts from its educational institutions, where the ecology is thought as a prime factor of development associated with environment. Educational institutions now days are becoming more sensitive to environmental factors and more concepts are being introduced to make them eco-friendly. To preserve the environment within the campus, various viewpoints are applied by the several educational institutes to solve their environmental problems such as promotion of the energy savings, recycle of waste, water reduction, water harvesting etc.. The activities pursued by colleges can also create a variety of adverse environmental impacts. Environmental auditing is a process whereby an organization's environmental performance is tested against its environmental policies and objectives.

Green audit is defined as an official examination of the effects a college has on the environment. As a part of such practice, internal environmental audit (Green Audit) is conducted to evaluate the actual scenario at the campus. Green audit can be a useful tool for a college to determine how and where they are using the most energy or water or resources; the college can then consider how to implement changes and make savings. It can also be used to determine the type and volume of waste, which can be used for a recycling project or to improve waste minimization plan.

Green auditing and the implementation of mitigation measures is a win-win situation for all the college, the learners and the planet. It can also create health consciousness and promote environmental awareness, values and ethics. It provides staff and students better understanding of Green impact on campus. Green auditing promote financial savings through reduction of resource use. It gives an opportunity for the development of ownership, personal and social responsibility for the students and teachers. Thus it is imperative that the college evaluate its own contributions toward a sustainable future. As environmental sustainability is becoming an increasingly important issue for the nation, the role of higher educational institutions in relation to environmental sustainability is more prevalent. A clean and healthy environment aids effective learning and provides a conducive learning environment. There are various efforts around the world to address environmental education issues.



# CAMPUS OVERVIEW

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Indira Gandhi Government College, Pandaria is emerging college in Kabirdham District of Chhattisgarh. It was established in 1984 and enlightening the student fraternity of Pandaria and nearby villages. The most respected first Principal Dr. V. B. Choudhary gave special attention to College. The College has touched new heights by making its goal meaningful. The college was established in 1984, when the college had a system of study in the arts faculty till graduation. Started 38 years ago with about 100 students, the college is today imparting education to about 1150 students. Earlier, the college was being run in an additional room of basic primary school Pandaria which is today operating from its own 15 acre building in Village-Rauha (Pandaria). In this college from the academic session 1984 to 2008 only B.A. Classes of the Faculty of Arts continued to be conducted. In the Education session 2008-09, B.Sc. and B.Com. Classes were started under public participation and from the session 2010-11, MA in Sociology M.Com Begins in 2019 Session, History and Hindi literature classes are conducted under state Government. Today the study-teaching work of all the faculties of the college is being done continuously.



Geographical location of Indira Gandhi Government College, Pandaria Distt.- Kabirdham (A/C To Google earth)

# Courses offered by Institutions

Indira Gandhi Govt. College Pandariya imparts Education to Undergraduates in the following Departments:

## Arts Stream:-

- Department of Sociology
- Department of History
- Department of Geography
- Department of Political Science
- Department of Economics
- Department of Hindi
- Department of English

## Science Stream:-

- Department of Mathematics
- Department of Physics
- Department of Chemistry
- Department of Botany
- Department of Zoology

## Commerce Stream:-

- Department of Commerce

## Courses offered:-

### Bachelor of Arts Bachelor of Science Bachelor of Commerce

1. Economics
2. English Literature
3. Hindi literature
4. History
5. Political Science
6. Sociology
7. Geography

1. Mathematics
2. Physics
3. Botany
4. Chemistry
5. Zoology

1. Commerce

\* English & Hindi Foundation Courses are mandatory for each stream so they are not listed here in any stream.



**Indira Gandhi Govt. College Pandariya imparts Education to Postgraduates in the following Departments:**

1. Master of Arts in Hindi Literature
2. Master of Arts in Sociology
3. Master of Arts in History
4. Master of Commerce

## OBJECTIVES

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**The broad aims/benefits of the eco-auditing system would be**

- Environmental education through systematic environmental management approach.
  - Improving environmental standards.
  - Benchmarking for environmental protection initiatives.
  - Reduction in resource use.
  - Financial savings through a reduction in resource use.
  - Curriculum enrichment through practical experience.
  - Development of ownership, personal and social responsibility for the College campus and its environment .
  - Enhancement of HEI's profile.
  - Developing an environmental ethic and value systems in young people.
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# AUDIT PARTICIPANTS

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## INTERNAL AUDIT EVALUATORS:-

On behalf of Institute:

- Mr.Chitrasen Thakur Department of Botany
- Mr. Bholaram Dhritlahre Department of Chemistry
- Mr. Shivram Krishna Chandrakar Department of Chemistry
- Mr. Satyam Kumar Dounde Department of Zoology
- Mrs. Madhuri Ratna Bhaskar Department of Zoology
- Mr. Omprakash Dewangan Department of Mathematics
- Miss. Nileshwari Chandrakar Department of Physics

## EXTERNAL AUDIT EVALUATORS

# Areas of Environmental audit

The Areas of Ecological/Environmental to be followed/practiced by participating Institutions:

- Waste Management & Recycling
- Greenery Management & Restoration
- Energy Conservation & Management
- Water Conservation & Management
- Best Practices/Initiatives for Environment

**Which of the following are available in your institute:-**

1	Garden area	Available
2	Play ground	Available
3	Kitchen	Not Available
4	Toilets	Available
5	Garbage or Waste Store Yard	Not Available
6	Laboratory	Available
7	Canteen	Not Available
8	Hostel Facility	Not Available
9	Guest House	Not Available
10	Gymnasium	Available
11	Yoga Practice Hall	Not Available

Which of the following are found near your institute?

1	Dumpyard	Not in vicinity of institute
2	Garbage heap	No Garbage heaps
3	Public convenience	Yes
4	Sewer line	No
5	Stagnant water	1 Pond inside the campus
6	Open drainage	Yes
7	Industry—(Mention the type)	No
8	Bus/Railway station	Near to the campus ( 1 Kms around from college )
9	Public halls	No

## Waste Management and Recycling

1	Does your institute generate any waste? If so, what are they?	Yes, Solid waste, Liquid waste, paper waste, plastic waste, Biochemical waste, Horticulture Waste, etc.			
2	What is the approximate amount of waste generated per day? (in Kilograms/month)(approx.)	Bio degradable	Non-Biodegradable	Hazardous	others
		30kg	2kg	Nil	<6kg
3	How is the waste generated in the institute managed? By 1 Composting 2 Recycling 3 Reusing 4 Others (specify)	5 composting pits are there in campus, Sewage water is discharged into Pits. Two types of Waste bins are provided at campus for biodegradable and non-biodegradable waste.			
4	Do you use recycled paper in institute?	Yes			
5	Do you use reused paper in institute?	Yes (Reuse of one side printed Paper for internal Communication).			
6	How would you spread the message of recycling to others in the community? Have you taken any initiatives? If yes, please specify.	Yes The Environment Committee has organized various Seminars Events For Awareness to management.			
7	Can you achieve zero garbage in your institute? If yes, how?	Yes, as per new waste management rules all Kind of waste is managed in an adequate manner with out any deviation.			



## Greenery Management & Restoration

1	Is there a green area in your institute?	Yes, is the 9 Acre Green Area in Our Institute.	
2	Does student spend time in the garden?	1-2 Hours in a day	
3	Total number of Plants in Campus	Plant type	Approx. number
		Trees	More than 350
		Shrubs	More than 1000
		Grass Cover	4 Acres Area
4	Suggest plants for your campus. (Trees, vegetables, herbs, etc.)	Mostly dominant Plant Species <i>Acacia</i> sp., <i>Cynodon</i> grass, <i>Butea monosperma</i> , <i>Hibiscus</i> sp. etc & also present persistent plants spe. ie. <i>Coccinucifera</i> , <i>Osmium</i> sp. and fruits and Ornamental plants also.	
5	Is the College campus have any Horticulture Department	No, But for the Surveillance of College Garden & Management Has One Gardener.	
	Number of Staff working in Horticulture Department	One Gardener	
6	Number of Tree Plantation Drives organized by College per annum. (If Any)	No, in an institution has specific kind of organization but by the students through projects tree Plantation program organized.	
7	Number of Trees Planted in Last FY. Survival Rate	80-90% persistent plants are survive but in case of Ephemeral plants they are vanished.	
8	Plant Distribution Program for Students and Community	Yes, by and for the students has plant distribution for community & also college.	
9	Plant Ownership Program	No	

## Energy Conservation & Management

1	List few ways that you use energy in your institute. (Electricity, LPG, firewood, others). Using this list, try to think of ways that you could use less energy everyday.	Electricity is saved by use of LED bulbs for illumination; The LPG gas use in science laboratory for general purpose. Alternate source for energy i.e. inverter Installed.
2	Are there any energy saving methods employed in your institute? If yes, please specify. If no, suggest some	Alternate source for energy i.e. inverter Installed. & also Messages will be displayed at various locations to make the people aware about Energy Savings. Use of Natural Lights and Natural Ventilation are promoted.
3	How many CFL/LED bulbs has your institute installed?	80% of Total Conventional bulbs are replaced by LED/CFL Lights.
4	Are any alternative energy sources employed/installed in your institute? (photovoltaic cells for solar energy, windmill, energy co server, energy efficient stoves, etc.,) Specify.	Yes, Alternate source for energy i.e. inverter Installed
5	Do you run "switch off" drills in institute?	Yes
6	Are your computers and other equipment's put on power-saving mode?	Yes, In Practice
7	Does your machinery (TV, AC, Computer, weighing balance, printers, etc.) run on standby mode most of the time? If yes, how many hours?	No

## Water Management & Conservation

1	List uses of water in your institute	Basic usage of water in campus are; Drinking, Gardening & Toilets, and Others. And total consumption is 270KL/month
2	How does your institute store water? Are there any water saving techniques followed in your institute?	Pond Water is Casual usage for Gardening & college has water Harvesting System.
3	If there is water wastage, specify why and How can the wastage be prevented/stopped?	Yes, the collage is situated In low rainy area & for the prevention of water wastage the college has water harvesting system
4	Locate the point of entry of water and point of exit of wastewater in your institute.	Entry-Groundwater Exit-1. Extra drinking water flows in plants community 2. the sewage water dispose into a sewage pits.
5	Write down few ways that could reduce the amount of water used in your institute	By Following ways: 1. RWH, Close the taps after usage 2. Maintenance and monitoring of valves in supply system to avoid overflow, leakage and spillage 3. Water Conservation awareness for students.
6	Does your institute harvest rain water?	Four number of Modern rain water harvesting system are available.



## Air Quality

1	Are the Rooms in Campus are Well Ventilated?	Yes				
2	Window Floor ratio of the Rooms	Good				
3	Provide detail of school-owned motorized vehicles?	No, any kind of motorized vehicles for students or other collage prospective.				
	PUC done	None	None	None	None	None
4	Specify the type of fuel used by your college's vehicles:	IN college has not own vehicles but the college faculty are use different kind of vehicles and also consumptions different kind of fuel's				
	Diesel	Some cars				
	Petrol	Bikes				
	CNG	None				
	LPG	Laboratory usage				
	Electric	induction				
5	Air Quality Monitoring Program (If Any)	No				
6	Students suffer from respiratory ailments? (If Any)	No				
7	Detail of Power backup	Yes, About 695kVA Generator Power backup is provided				

## Environmental Legislative Compliance

1	Are you aware of any environmental Laws pertaining to different aspects of environmental management?	Yes
2	Does your institute have any rules to protect the environment? List possible rules you could include	We have banned single use plastic. Their environment policy includes awareness, and environmental conservation efforts through science Club. All undergraduates are studying the paper of Environmental Science, prescribed by UGC.
3	Does Environmental Ambient Air Quality Monitoring conducted by the Institute?	NA
4	Does Water and Wastewater Quality monitoring conducted by the Institute?	Yes



5	Does stack monitoring of $\text{NO}_x$ gas is conducted by the Institute?	No
6	Is any warning notice, letter issued by state government/bodies?	Yes
7	Does any Hazardous waste generated by the Institute?	Yes, in a form of Hazardous material sulphuric acid nitric acid and their derivatives. And their management did by the neutralizer
8	Does any Bio-medical waste generated by the Institute? If yes explain its category and disposal method	Yes in form of sanitary pads and their disposal for in college has also gas distraction machine

## General

1	Are you aware of any environmental Laws pertaining to different aspects of environmental management?	Yes
2	Does your institute have any rules to protect the environment? List possible rules you could include	Yes, there are some rules like banned single use plastic. Their Environmental Policy includes awareness and environmental conservation.
3	Does housekeeping schedule in your campus?	Yes, Swachata Bharat movement
4	Are students and faculties aware of environmental cleanliness ways? If Yes Explain	Yes, Periodically pollution reduction, plantation, energy conservation awareness campaigns carried out by institute
5	Does Important Days Like World Environment Day, Earth Day, and Ozone Day etc. eminent in Campus?	Yes
6	Does Institute participated in National and Local Environmental Protection Movement?	Yes, Swachata Bharat Abhiyan by students at campus.
7	Does Institute has any Recognition/certification for environment friendliness?	No
8	Does Institute using renewable energy?	Yes
9	Does Institution conduct a green/environmental audit of its campus?	Yes, This is first environmental audit done By the College.
10	Has the institution been audited/ accredited by any other agency such as NABL, NABET, TQPM, NAAC etc.?	No

## Initiatives for Environment

1	Renewable Energy	Yes the Solar power plant installed in an Institute. The solar plant produces 300kWh hours in a month
2	<b>Biodiversity Conservation</b> Flora and fauna conservation	We have lush green campus which Provides habitat to various species.
3	<b>Tree Plantation Drives</b> Two Drives Annually as well as Every Guest is honoured by Tree Plantation at Campus.	Yes, periodically the plantation drives by student and staff of campus.
4	<b>Ground Water Recharge</b> 4 units of Rain Water Harvesting System.	Yes, 100% recharge of the rainwater
5	<b>Pollution Reduction</b> Personal Vehicles (Students) not allowed at campus	Reduction in Air Pollution through vehicular emission.
6	<b>E Waste Management</b> Collection of e-waste	Dump into specific pit, collected by garbage collector or Recycle through specific methods.

# Recommendations

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- Formation of Environment Policy and communicated to all faculties and other staff members.
- Environmental Monitoring i.e. (Ambient Air Quality monitoring, Stack Monitoring of DG sets, Water monitoring need to be conducted by A.P. State Pollution Control Board, approved laboratory with frequency of six months)
- Reduction in use of paper work by go digital system.
- Water Meters should be installed at institute for monitoring of water consumption for landscape.
- Increase in Environmental promotional activities for spreading awareness at campus.

As practically feasible avoid use of personal vehicles inside the campus

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# Conclusion

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This audit involved extensive consultation with all the campus team, interactions with key personnel on wider range of issues related to Environmental aspects. An Indira Gandhi Government College, Pandaria has Environmental Committee for sustainable use of resources. Overall 60% of the campus is for landscaping. The audit has identified several observations for making the campus premise more environmental friendly. The recommendations are also mentioned with observations for campus team to initiate actions.

The audit team opines that the overall site is maintained well from environmental perspective. There is no major observations but few things are important to initiate urgently are waste management records by monthly inventory of hazardous waste, rain water harvesting recharge; water balance cycle and periodic inspection of buildings house keeping and environment policy.

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