

**ENVIRONMENT INTERNAL AUDIT REPORT
2016-17**

**NISTARINI COLLEGE
DESH-BANDHU ROAD, PURULIA**

1. Concept

The term 'Environmental audit' or 'Green audit' means differently to different people. Terms like 'assessment', 'survey' and 'review' are also used to describe similar activities. Furthermore, some organizations/Institutions believe that an 'environmental audit' addresses only environmental matters, whereas others use the term to mean an audit of health, safety and environment-related matters. Although there is no universal definition of environmental Audit, many leading companies/institutions follow the basic philosophy and approach summarized by the broad definition adopted by the International Chambers of Commerce (ICC) in its publication of Environmental Auditing (1989).

The ICC defines Environmental Auditing as: "*A management tool comprising a systematic, documented, periodic and objective evaluation of how well environmental organization, management and equipment are performing with the aim of safeguarding the environment and natural resources in its operations/projects.*"

The outcome of Environmental Audit should be established with concrete evidence that the measures undertaken and facilities in the institution under green auditing.

2. Introduction

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 a 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. Environmental 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 is conducted to evaluate the actual scenario at the campus.

Environmental 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. Environmental 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. Environmental auditing promotes 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 towards 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.

Environmental Management Systems (EMS) is very popular in the industrial sector, but the general belief is that EMS is something pertaining to industries only. Other parts of the world have started adopting compatible environmental management systems either voluntarily or for promoting standards by external certification. International environmental standards do not suit the existing Indian educational system. Hence a compatible system is adopted by developing locally applicable techniques.

A very simple indigenized system has been devised to monitor the environmental performance of educational institutions. It comes with a series of questions to be answered on a regular basis.

Environmental conditions may be monitored from angles that are relevant to Indian requirements, without stress on legal issues or compliance. This scheme is user-friendly and totally voluntary. The environmental monitoring system helps the institution to set environmental examples for the community and to educate young learners. It can be adapted to urban and / or rural situations.

3. Overview of Institute

1.1 Year of Establishment of college: 1957

1.2 NISTARINI COLLEGE, PURULIA

1.2 History behind the establishment of the college: The genesis of NISTARINI (WOMEN'S) COLLEGE, one of the premier academic institutes in the State of West Bengal is intimately entwined with the cause of women's education. The institution was first conceptualized in the Summer House of Deshbandhu Chittaranjan Das – whose family had significantly fostered women's education in Bengal and was an integral part of the national freedom struggle.

Sri Bhuban Mohan Das and Smt. Nistarini Devi, father and mother of Sri Chittaranjan Das came to reside in this house in the year 1902. Both of them were dedicated social workers and pioneered in introducing higher education among the women folk of this place. Amala Devi, their daughter started a school to impart higher education to the girls of Purulia. At that time, there was only one lower Primary School, which was known as NISTARINI VIDYALAYA of which Deshbandhu Sri Chittaranjan Das defrayed the entire expenses. A number of the lady teaching staff was brought in to educate girls on all fronts – literary, musical and artistic. An orphanage and widows' home were run under the guidance

and supervision of Amala Devi. Soon it became a centre of culture for the people of Purulia. Unfortunately, the demise of all the three, Sri Bhuban Mohan Das, Smt. Nistarini Devi and Amala Devi within a short span of time led to the temporary closure of this institutions. Sometime after, Shrimati Basanti Devi, Chittaranjan's wife came to reside here and the tradition of the house was again revived. This time they paid special attention to educate the Harijan children living in the neighborhood. They, along with their parents, were also encouraged to attend religious ceremonies regularly in this house. When Sri Chiraranjan Das, son of Deshbandhu Chittaranjan Das, fell seriously ill, the then Chief Minister Dr. Bidhan Chandra Roy came to attend him and was impressed by the 'Sankirtan' assemblage of Harijans in this house. As a result of the Chief Minister's own initiatives and the request of the eminent leaders and social workers of this district (Sri Jimut Bahan Sen et al) an educational institution for women was set up. Thus, the Summer House of the family was converted into Nistarini (Women's) College.

Total campus area: 9.6 acres

Total built up area: 160 sq mtres

Total open space area: 8 acres

Total green area: 5 acres

Objectives and Scope

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
- Sustainable use of natural resource in the campus.
- 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 College profile
- Developing an environmental ethic and value systems in young people

4. Executive Summary

An environmental audit is a snapshot in time, in which one assesses campus performance in complying with applicable environmental laws and regulations. Though a helpful bench mark, the audit almost immediately becomes outdated unless there is some mechanism in place to continue the effort of monitoring environmental compliance. Nistarini College already done internal green assessment and annual reports published for continual improvements; Programme and doing their bid towards environmental protection and environmental awareness at local and global front. Audit criterion is environmental cognizance, waste minimization and management, biodiversity conservation, water conservation, energy conservation and environmental legislative compliance by the campus. A questionnaire is used during audit. This audit report contains observations and recommendations for improvement of environmental consciousness.

5. Areas of Improvement

- Environment Policy to be adopted by the College Campus.
- Water Meter should be installed and maintain the inventory of ground water extraction resource bore well.
- Plastic Waste Management
- Storage of chemicals like; paints, gums resins, oils; lubricants, acids etc. in designated place and safety/warning signs should be displayed.
- Internal inspection system should be developed for various aspects of environment available in campus
- Waste Management plan should be prepared for the campus.
- Display of environment awareness posters should be there in the prominent areas of campus.

6. Environmental Audit - Questionnaire(As per ISO 19011)

The areas of eco/environmental/green auditing to be followed/practiced by participating institutions:

- Waste Minimization and Recycling
- Greening

- Energy Conservation
- Water Conservation
- Clean Air
- Environmental Legislative
- General Practices

Where is the campus located?

The campus is Located in Gudlavalleru, Krishna District

Which of the following are available in your institute?

1	Garden area	Available
2	Play ground	Available
3	Kitchen	Available
4	Toilets	Available
5	Garbage or Waste Store Yard	Available
6	Laboratory	Available
7	Canteen	Available
8	Hostel Facility	Available
9	Guest House	Available
10	Gymnasium	Available
11	Yoga Practice Hall	Available

Which of the following are found near your institute?

1	Dump yard	Not in vicinity of institute
2	Garbage heap	Garbage heaps present
3	Public convenience	Yes
4	Sewer line	sewer line within campus
5	Stagnant water	No
6	Open drainage	Yes
7	Industry — (Mention the type)	No
8	Bus / Railway station	Near to the campus
9	Public halls	Yes

Waste Minimization and Recycling

1	Does your institute generate any waste? If so, what are they?	Yes, Solid waste, Canteen waste, paper waste, plastic waste, toiletry 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
		50kg	19kg	Nil	<12kg

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 to public Sewer. Domestic Waste is given to Grama Panchayat. 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, Green Club carried out numerous activities. Recycling campaigns, e waste management, Anti-plastic campaigns, sustainable goal awareness programme.
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 without any deviation.

Greening the Campus

1	Is there a garden in your institute?	Yes, about 2.5 Acre is the Green Area.	
2	Do students spend time in the garden?	2-4 Hours a day	
3	Total number of Plants in Campus	Plant type	Approx. number
		Trees	More than 70
		Shrubs	More than 80
		Grass Cover	2.0 Acres
4	Suggest plants for your campus. (Trees, vegetables, herbs, etc.)	Pykas, Cykas, R.K. Palms, Golden durant, Mahagani, Ixora coccinea, Lillies, Pandas, Nerium Oleander, Palmyra Palm, Crepe Jasmine, Bamboos, Alstonia scholaris, Variengated Durant and many more as per geographical regime.	
5	Is the College campus have any Horticulture Department	no	
	Number of Staff working in Horticulture Department	2Gardeners	
6	Number of Tree Plantation Drives organized by College per annum. (If Any)	Yes, Three Tree Plantation Drives are Organized Annually. 50+ trees and 80+ shrubs planted in this financial year.	
7	Number of Trees Planted in Last FY. Survival Rate	80 90%	
8	Plant Distribution Program for Students and Community	Yes, Seed Bank is developed and, Saplings are distributed to Students and visitors at various Occasions.	
9	Plant Ownership Program	No	

Energy

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 every day.	Electricity is saved by use of LED bulbs for illumination; LPG is saved by use of Pressure cookers for cooking food. Alternate source of energy i.e. Solar Panel Installed.
2	Are there any energy saving methods employed in your institute? If yes, please specify. If no, suggest some	Yes, Renewable source of energy through solar plant. A monthly average of 39000 to 40000 units generation through 350 kVA power station with 4 inverters (each 100 kVA) connected to main grid. Messages will be displayed at various locations to aware the People about Energy Savings. Use of Natural Lights and Natural Ventilation are promoted.
3	How many CFL/LED bulbs has your institute installed?	25 % of Total Conventional bulbs are replaced by LED Lights.
4	Are any alternative energy sources employed / installed in your institute? (photovoltaic cells for solar energy, windmill, energy efficient stoves, etc.,) Specify.	Yes, photovoltaic cells for solar energy, energy efficient stoves
5	Do you run "switch off" drills at 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 modes most of the time? If yes, how many hours?	No

Water Conservation

1	List uses of water in your institute	Basic usage of water in campus are; Drinking, Gardening, Kitchen & Toilets, and Others. And total consumption is 3000L/month
2	How does your institute store water? Are there any water saving techniques followed in your institute?	Rain Water Harvesting is used for storage of water.
3	If there is water wastage, specify why and How can the wastage be prevented / stopped?	No
4	Locate the point of entry of water and point of exit of waste water in your institute.	Entry - Ground water Exit - From water drainage system to natural sewage drain.
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 new students
6	Does your institute harvest rain water?	Four number of Modern rain water harvesting system are available.

Clean Air

1	Are the Rooms in Campus are Well Ventilated?	Yes				
2	Window Floor ratio of the Rooms	Very Good				
3	Provide details of school-owned motorized vehicles?	Buses	Cars	Vans	Ambulance	Total
	No. of vehicles		1	-		1
	No. of vehicles more than five years old		1	-	-	
	No. of Air conditioned vehicles		1			
	PUC done					
4	Specify the type of fuel used by your college's vehicles:	Total				
	Diesel	NO				
	Petrol	YES				
	CNG	NO				
	LPG	YES				
	Electric					
5	Air Quality Monitoring Program (If Any)	NO				
6	Students suffer from respiratory ailments? (If Any)	No				
7	Details of Power backup	Yes, About 695 kVA 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 Green Club. All undergraduates are studying the paper of Environmental Sciences, 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 DG sets conducted by the Institute?	No
6	Is any warning notice, letter issued by state government bodies?	No
7	Does any Hazardous waste generated by the Institute?	No
8	Does any Bio medical waste generated by the Institute? If yes explain its category and disposal method	No

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, Swatch 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, Swatch 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
10	Has the institution been audited / accredited by any other agency such as NABL, NABET, TQPM, NAAC etc.?	Yes, NAAC grade A

7. Best Practices/Initiatives for Environment

1	Renewable Energy	Solar
2	Biodiversity Conservation Flora and fauna conservation	We have lush green campus which provides habitat to various species.
3	Tree Plantation Drives Two Drives Annually as well as Every Guest is honoured by Tree Plantation at Campus.	Yes, periodically the plantation drives by students and staff of campus.
4	Ground Water Recharge 4 units of Rain Water Harvesting System.	Yes
5	Pollution Reduction Personal Vehicles (Students) not allowed at campus	NO.
6	E Waste Management Collection of e-waste	E waste is sent to the authorized recyclers for adequate disposal

7	Solid Waste Management Lifting of garbage from campus on alternate day by local authority	Yes, different mechanisms for proper disposal and recycling of e-waste, plastic waste, biodegradable waste and MSW
8	Adoption of Village/society CSR	Yes NSS, NCC AND COLLABORATIVE NGOS
9	Water Conservation	Yes, water saving push taps fitted in the drinking water zone and the toilets to avoid the wastage.

8. Recommendations

- 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 Meter 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.

9. Conclusion

This audit involved extensive consultation with all the campus team, interactions with key personnel on wide range of issues related to Environmental aspects. The College 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 wastemanagement records by monthly inventory of hazardous waste, rainwater harvesting recharge; water balance cycle and periodic inspection of buildings housekeeping and environment policy.

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04/04/2017
Principal
Nisterini College, Purulia

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

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6. Environmental Audit - Questionnaire(As per ISO 19011)

The areas of eco/environmental/green auditing to be followed/practiced by participating institutions:

- Waste Minimization and Recycling
- Greening

- Energy Conservation
- Water Conservation
- Clean Air
- Environmental Legislative
- General Practices

Where is the campus located?

The campus is Located in Gudlavalleru, Krishna District

Which of the following are available in your institute?

1	Garden area	Available
2	Play ground	Available
3	Kitchen	Available
4	Toilets	Available
5	Garbage or Waste Store Yard	Available
6	Laboratory	Available
7	Canteen	Available
8	Hostel Facility	Available
9	Guest House	Available
10	Gymnasium	Available
11	Yoga Practice Hall	Available

Which of the following are found near your institute?

1	Dump yard	Not in vicinity of institute
2	Garbage heap	Garbage heaps present
3	Public convenience	Yes
4	Sewer line	sewer line within campus
5	Stagnant water	No
6	Open drainage	Yes
7	Industry — (Mention the type)	No
8	Bus / Railway station	Near to the campus
9	Public halls	Yes

Waste Minimization and Recycling

1	Does your institute generate any waste? If so, what are they?	Yes, Solid waste, Canteen waste, paper waste, plastic waste, toiletry waste, Horticulture Waste, etc.			
2	What is the approximate amount of waste generated per day? (in Kilograms/month)(approx.)	Bio degradable	Non- Biodegradable	Hazard ous	others
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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 to public Sewer. Domestic Waste is given to Grama Panchayat. 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, Green Club carried out numerous activities. Recycling campaigns, e waste management, Anti-plastic campaigns, sustainable goal awareness programme.
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 without any deviation.

Greening the Campus

1	Is there a garden in your institute?	Yes, about 2.5 Acre is the Green Area.	
2	Do students spend time in the garden?	2-4 Hours a day	
3	Total number of Plants in Campus	Plant type	Approx. number
		Trees	More than 80
		Shrubs	More than 60
		Grass Cover	2.0 Acres
4	Suggest plants for your campus. (Trees, vegetables, herbs, etc.)	Pykas, Cykas, R.K. Palms, Golden durant, Mahagani, Ixora coccinea, Lillies, Pandas, Nerium Oleander, Palmyra Palm, Crepe Jasmine, Bamboos, Alstonia scholaris, Variengated Durant and many more as per geographical regime.	
5	Is the College campus have any Horticulture Department	no	
	Number of Staff working in Horticulture Department	2Gardeners	
6	Number of Tree Plantation Drives organized by College per annum. (If Any)	Yes, Three Tree Plantation Drives are Organized Annually. 50+ trees and 80+ shrubs planted in this financial year.	
7	Number of Trees Planted in Last FY. Survival Rate	80 90%	
8	Plant Distribution Program for Students and Community	Yes, Seed Bank is developed and, Saplings are distributed to Students and visitors at various Occasions.	
9	Plant Ownership Program	No	

Energy

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 every day.	Electricity is saved by use of LED bulbs for illumination; LPG is saved by use of Pressure cookers for cooking food. Alternate source of energy i.e. Solar Panel Installed.
2	Are there any energy saving methods employed in your institute? If yes, please specify. If no, suggest some	Yes, Renewable source of energy through solar plant. A monthly average of 39000 to 40000 units generation through 350 kVA power station with 4 inverters (each 100 kVA) connected to main grid. Messages will be displayed at various locations to aware the People about Energy Savings. Use of Natural Lights and Natural Ventilation are promoted.
3	How many CFL/LED bulbs has your institute installed?	25 % of Total Conventional bulbs are replaced by LED Lights.
4	Are any alternative energy sources employed / installed in your institute? (photovoltaic cells for solar energy, windmill, energy efficient stoves, etc.,) Specify.	Yes, photovoltaic cells for solar energy, energy efficient stoves
5	Do you run "switch off" drills at 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 modes most of the time? If yes, how many hours?	No

Water Conservation

1	List uses of water in your institute	Basic usage of water in campus are; Drinking, Gardening, Kitchen & Toilets, and Others. And total consumption is 3000L/month
2	How does your institute store water? Are there any water saving techniques followed in your institute?	Rain Water Harvesting is used for storage of water.
3	If there is water wastage, specify why and How can the wastage be prevented / stopped?	No
4	Locate the point of entry of water and point of exit of waste water in your institute.	Entry - Ground water Exit - From water drainage system to natural sewage drain.
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 new students
6	Does your institute harvest rain water?	Four number of Modern rain water harvesting system are available.

Clean Air

1	Are the Rooms in Campus are Well Ventilated?	Yes				
2	Window Floor ratio of the Rooms	Very Good				
3	Provide details of school-owned motorized vehicles?	Buses	Cars	Vans	Ambulance	Total
	No. of vehicles		1	-		1
	No. of vehicles more than five years old		1	-	-	
	No. of Air conditioned vehicles		1			
	PUC done					
4	Specify the type of fuel used by your college's vehicles:	Total				
	Diesel	NO				
	Petrol	YES				
	CNG	NO				
	LPG	YES				
	Electric					
5	Air Quality Monitoring Program (If Any)	NO				
6	Students suffer from respiratory ailments? (If Any)	No				
7	Details of Power backup	Yes, About 695 kVA 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 Green Club. All undergraduates are studying the paper of Environmental Sciences, 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 DG sets conducted by the Institute?	No
6	Is any warning notice, letter issued by state government bodies?	No
7	Does any Hazardous waste generated by the Institute?	No
8	Does any Bio medical waste generated by the Institute? If yes explain its category and disposal method	No

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, Swatch 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, Swatch 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
10	Has the institution been audited / accredited by any other agency such as NABL, NABET, TQPM, NAAC etc.?	Yes, NAAC grade A

7. Best Practices/Initiatives for Environment

1	Renewable Energy	Solar
2	Biodiversity Conservation Flora and fauna conservation	We have lush green campus which provides habitat to various species.
3	Tree Plantation Drives Two Drives Annually as well as Every Guest is honoured by Tree Plantation at Campus.	Yes, periodically the plantation drives by students and staff of campus.
4	Ground Water Recharge 4 units of Rain Water Harvesting System.	Yes
5	Pollution Reduction Personal Vehicles (Students) not allowed at campus	NO.
6	E Waste Management Collection of e-waste	E waste is sent to the authorized recyclers for adequate disposal

7	Solid Waste Management Lifting of garbage from campus on alternate day by local authority	Yes, different mechanisms for proper disposal and recycling of e-waste, plastic waste, biodegradable waste and MSW
8	Adoption of Village/society CSR	Yes NSS,NCC AND COLLABORATIVE NGOS
9	Water Conservation	Yes, water saving push taps fitted in the drinking water zone and the toilets to avoid the wastage.

8. Recommendations

- 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)
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- Water Meter 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.

9. Conclusion

This audit involved extensive consultation with all the campus team, interactions with key personnel on wide range of issues related to Environmental aspects. The College 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 wastemanagement records by monthly inventory of hazardous waste, rainwater harvesting recharge; water balance cycle and periodic inspection of buildings housekeeping and environment policy.

[Signature]
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27/04/18

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27/04/2018
Principal
Nisterini College, Parulia

**ENVIRONMENT INTERNAL AUDIT REPORT
2018-19**

**NISTARINI COLLEGE
DESH-BANDHU ROAD, PURULIA**

1. Concept

The term 'Environmental audit' or 'Green audit' means differently to different people. Terms like 'assessment', 'survey' and 'review' are also used to describe similar activities. Furthermore, some organizations/Institutions believe that an 'environmental audit' addresses only environmental matters, whereas others use the term to mean an audit of health, safety and environment-related matters. Although there is no universal definition of environmental Audit, many leading companies/institutions follow the basic philosophy and approach summarized by the broad definition adopted by the International Chambers of Commerce (ICC) in its publication of Environmental Auditing (1989).

The ICC defines Environmental Auditing as: "*A management tool comprising a systematic, documented, periodic and objective evaluation of how well environmental organization, management and equipment are performing with the aim of safeguarding the environment and natural resources in its operations/projects.*"

The outcome of Environmental Audit should be established with concrete evidence that the measures undertaken and facilities in the institution under green auditing.

2. Introduction

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 a 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. Environmental 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 is conducted to evaluate the actual scenario at the campus.

Environmental 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. Environmental 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. Environmental auditing promotes 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 towards 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.

Environmental Management Systems (EMS) is very popular in the industrial sector, but the general belief is that EMS is something pertaining to industries only. Other parts of the world have started adopting compatible environmental management systems either voluntarily or for promoting standards by external certification. International environmental standards do not suit the existing Indian educational system. Hence a compatible system is adopted by developing locally applicable techniques.

A very simple indigenized system has been devised to monitor the environmental performance of educational institutions. It comes with a series of questions to be answered on a regular basis.

Environmental conditions may be monitored from angles that are relevant to Indian requirements, without stress on legal issues or compliance. This scheme is user-friendly and totally voluntary. The environmental monitoring system helps the institution to set environmental examples for the community and to educate young learners. It can be adapted to urban and / or rural situations.

3. Overview of Institute

1.1 Year of Establishment of college: 1957

1.2 NISTARINI COLLEGE, PURULIA

1.2 History behind the establishment of the college: The genesis of NISTARINI (WOMEN'S) COLLEGE, one of the premier academic institutes in the State of West Bengal is intimately entwined with the cause of women's education. The institution was first conceptualized in the Summer House of Deshbandhu Chittaranjan Das – whose family had significantly fostered women's education in Bengal and was an integral part of the national freedom struggle.

Sri Bhuvan Mohan Das and Smt. Nistarini Devi, father and mother of Sri Chittaranjan Das came to reside in this house in the year 1902. Both of them were dedicated social workers and pioneered in introducing higher education among the women folk of this place. Amala Devi, their daughter started a school to impart higher education to the girls of Purulia. At that time, there was only one lower Primary School, which was known as NISTARINI VIDYALAYA of which Deshbandhu Sri Chittaranjan Das defrayed the entire expenses. A number of the lady teaching staff was brought in to educate girls on all fronts – literary, musical and artistic. An orphanage and widows' home were run under the guidance

and supervision of Amala Devi. Soon it became a centre of culture for the people of Purulia. Unfortunately, the demise of all the three, Sri Bhuban Mohan Das, Smt. Nistarini Devi and Amala Devi within a short span of time led to the temporary closure of this institutions. Sometime after, Shrimati Basanti Devi, Chittaranjan's wife came to reside here and the tradition of the house was again revived. This time they paid special attention to educate the Harijan children living in the neighborhood. They, along with their parents, were also encouraged to attend religious ceremonies regularly in this house. When Sri Chiraranjan Das, son of Deshbandhu Chittaranjan Das, fell seriously ill, the then Chief Minister Dr. Bidhan Chandra Roy came to attend him and was impressed by the 'Sankirtan' assemblage of Harijans in this house. As a result of the Chief Minister's own initiatives and the request of the eminent leaders and social workers of this district (Sri Jimut Bahan Sen et al) an educational institution for women was set up. Thus, the Summer House of the family was converted into Nistarini (Women's) College.

Total campus area: 9.6 acres

Total built up area: 160 sq mtres

Total open space area: 8 acres

Total green area: 5 acres

Objectives and Scope

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
- Sustainable use of natural resource in the campus.
- 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 College profile
- Developing an environmental ethic and value systems in young people

4. Executive Summary

An environmental audit is a snapshot in time, in which one assesses campus performance in complying with applicable environmental laws and regulations. Though a helpful benchmark, the audit almost immediately becomes outdated unless there is some mechanism in place to continue the effort of monitoring environmental compliance. Nistarini College already done internal green assessment and annual reports published for continual improvements; Programme and doing their bid towards environmental protection and environmental awareness at local and global front. Audit criterion is environmental cognizance, waste minimization and management, biodiversity conservation, water conservation, energy conservation and environmental legislative compliance by the campus. A questionnaire is used during audit. This audit report contains observations and recommendations for improvement of environmental consciousness.

5. Areas of Improvement

- Environment Policy to be adopted by the College Campus.
- Water Meter should be installed and maintain the inventory of ground water extraction resource bore well.
- Plastic Waste Management
- Storage of chemicals like; paints, gums resins, oils, lubricants, acids etc. in designated place and safety/warning signs should be displayed.
- Internal inspection system should be developed for various aspects of environment available in campus
- Waste Management plan should be prepared for the campus.
- Display of environment awareness posters should be there in the prominent areas of campus.

6. Environmental Audit - Questionnaire(As per ISO 19011)

The areas of eco/environmental/green auditing to be followed/practiced by participating institutions:

- Waste Minimization and Recycling
- Greening

- Energy Conservation
- Water Conservation
- Clean Air
- Environmental Legislative
- General Practices

Where is the campus located?

The campus is Located in Gudlavalleru, Krishna District

Which of the following are available in your institute?

1	Garden area	Available
2	Play ground	Available
3	Kitchen	Available
4	Toilets	Available
5	Garbage or Waste Store Yard	Available
6	Laboratory	Available
7	Canteen	Available
8	Hostel Facility	Available
9	Guest House	Available
10	Gymnasium	Available
11	Yoga Practice Hall	Available

Which of the following are found near your institute?

1	Dump yard	Not in vicinity of institute
2	Garbage heap	no
3	Public convenience	Yes
4	Sewer line	sewer line within campus
5	Stagnant water	No
6	Open drainage	Yes
7	Industry — (Mention the type)	No
8	Bus / Railway station	Near to the campus
9	Public halls	Yes

Waste Minimization and Recycling

1	Does your institute generate any waste? If so, what are they?	Yes, Solid waste, Canteen waste, paper waste, plastic waste, toiletry waste, Horticulture Waste, etc.			
2	What is the approximate amount of waste generated per day? (in Kilograms/month)(approx.)	Bio degradable	Non- Biodegradable	Hazard ous	others
		60kg	10kg	Nil	<8kg

3	How is the waste generated in the institute managed? By 1 Composting 2 Recycling 3 Reusing 4 Others (specify)	composting pits are there in campus, Sewage water is discharged to public Sewer. Domestic Waste is given to Grama Panchayat. 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, Green Club carried out numerous activities. Recycling campaigns, e waste management, Anti-plastic campaigns, sustainable goal awareness programme.
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 without any deviation.

Greening the Campus

1	Is there a garden in your institute?	Yes, about 2.5 Acre is the Green Area.	
2	Do students spend time in the garden?	2-4 Hours a day	
3	Total number of Plants in Campus	Plant type	Approx. number
		Trees	More than 80
		Shrubs	More than 60
		Grass Cover	2.0 Acres
4	Suggest plants for your campus. (Trees, vegetables, herbs, etc.)	Pykas, Cykas, R.K. Palms, Golden durant, Mahagani, Ixora coccinea, Lillies, Pandas, Nerium Oleander, Palmyra Palm, Crepe Jasmine, Bamboos, Alstonia scholaris, Variengated Durant and many more as per geographical regime.	
5	Is the College campus have any Horticulture Department	no	
	Number of Staff working in Horticulture Department	2Gardeners	
6	Number of Tree Plantation Drives organized by College per annum. (If Any)	Yes, Three Tree Plantation Drives are Organized Annually. 90+ trees and 70+ shrubs planted in this financial year.	
7	Number of Trees Planted in Last FY. Survival Rate	80 90%	
8	Plant Distribution Program for Students and Community	Yes, Seed Bank is developed and, Saplings are distributed to Students and visitors at various Occasions.	
9	Plant Ownership Program	No	

Energy

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 every day.	Electricity is saved by use of LED bulbs for illumination; LPG is saved by use of Pressure cookers for cooking food. Alternate source of energy i.e. Solar Panel Installed.
2	Are there any energy saving methods employed in your institute? If yes, please specify. If no, suggest some	Yes, Renewable source of energy through solar plant. A monthly average of 39000 to 40000 units generation through 350 kVA power station with 4 inverters (each 100 kVA) connected to main grid. Messages will be displayed at various locations to aware the People about Energy Savings. Use of Natural Lights and Natural Ventilation are promoted.
3	How many CFL/LED bulbs has your institute installed?	25 % of Total Conventional bulbs are replaced by LED Lights.
4	Are any alternative energy sources employed / installed in your institute? (photovoltaic cells for solar energy, windmill, energy efficient stoves, etc.,) Specify.	Yes, photovoltaic cells for solar energy, energy efficient stoves
5	Do you run "switch off" drills at 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 modes most of the time? If yes, how many hours?	No

Water Conservation

1	List uses of water in your institute	Basic usage of water in campus are; Drinking, Gardening, Kitchen & Toilets, and Others. And total consumption is 3000L/month
2	How does your institute store water? Are there any water saving techniques followed in your institute?	Rain Water Harvesting is used for storage of water.
3	If there is water wastage, specify why and How can the wastage be prevented / stopped?	No
4	Locate the point of entry of water and point of exit of waste water in your institute.	Entry - Ground water Exit - From water drainage system to natural sewage drain.
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 new students
6	Does your institute harvest rain water?	Four number of Modern rain water harvesting system are available.

Clean Air

1	Are the Rooms in Campus are Well Ventilated?	Yes				
2	Window Floor ratio of the Rooms	Very Good				
3	Provide details of school-owned motorized vehicles?	Buses	Cars	Vans	Ambulance	Total
	No. of vehicles		1	-		1
	No. of vehicles more than five years old		1	-	-	
	No. of Air conditioned vehicles		1			
	PUC done					
4	Specify the type of fuel used by your college's vehicles:	Total				
	Diesel	NO				
	Petrol	YES				
	CNG	NO				
	LPG	YES				
	Electric					
5	Air Quality Monitoring Program (If Any)	NO				
6	Students suffer from respiratory ailments? (If Any)	No				
7	Details of Power backup	Yes, About 695 kVA 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 Green Club. All undergraduates are studying the paper of Environmental Sciences, prescribed by UGC.
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4	Does Water and Wastewater Quality monitoring conducted by the Institute?	Yes
5	Does stack monitoring of DG sets conducted by the Institute?	No
6	Is any warning notice, letter issued by state government bodies?	No
7	Does any Hazardous waste generated by the Institute?	No
8	Does any Bio medical waste generated by the Institute? If yes explain its category and disposal method	No

General

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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, Swatch 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
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6	Does Institute participated in National and Local Environmental Protection Movement?	Yes, Swatch Bharat Abhiyan by students at campus
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8	Does Institute using renewable energy?	Yes
9	Does Institution conduct a green/environmental audit of its campus?	Yes
10	Has the institution been audited / accredited by any other agency such as NABL, NABET, TQPM, NAAC etc.?	Yes, NAAC grade A

7. Best Practices/Initiatives for Environment

1	Renewable Energy	Solar
2	Biodiversity Conservation Flora and fauna conservation	We have lush green campus which provides habitat to various species.
3	Tree Plantation Drives Two Drives Annually as well as Every Guest is honoured by Tree Plantation at Campus.	Yes, periodically the plantation drives by students and staff of campus.
4	Ground Water Recharge 4 units of Rain Water Harvesting System.	Yes
5	Pollution Reduction Personal Vehicles (Students) not allowed at campus	NO.
6	E Waste Management Collection of e-waste	E waste is sent to the authorized recyclers for adequate disposal

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8. Recommendations

- Formation of Environment Policy and communicated to all faculties and other staff members.
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9. Conclusion

This audit involved extensive consultation with all the campus team, interactions with key personnel on wide range of issues related to Environmental aspects. The College 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.

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R. Gupta
02/05/19

Aditi
02/05/19

Principal
02/05/2019
Principal
Nisterini College, Purulia

**ENVIRONMENT INTERNAL AUDIT REPORT
2020-21**

**NISTARINI COLLEGE
DESH-BANDHU ROAD, PURULIA**

1. Concept

The term 'Environmental audit' or 'Green audit' means differently to different people. Terms like 'assessment', 'survey' and 'review' are also used to describe similar activities. Furthermore, some organizations/institutions believe that an 'environmental audit' addresses only environmental matters, whereas others use the term to mean an audit of health, safety and environment-related matters. Although there is no universal definition of environmental Audit, many leading companies/institutions follow the basic philosophy and approach summarized by the broad definition adopted by the International Chambers of Commerce (ICC) in its publication of Environmental Auditing (1989).

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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. Environmental auditing promotes 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 towards 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.

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3. Overview of Institute

1.1 Year of Establishment of college: 1957

1.2 NISTARINI COLLEGE, PURULIA

1.2 History behind the establishment of the college: The genesis of NISTARINI (WOMEN'S) COLLEGE, one of the premier academic institutes in the State of West Bengal is intimately entwined with the cause of women's education. The institution was first conceptualized in the Summer House of Deshbandhu Chittaranjan Das – whose family had significantly fostered women's education in Bengal and was an integral part of the national freedom struggle.

Sri Bhuvan Mohan Das and Smt. Nistarini Devi, father and mother of Sri Chittaranjan Das came to reside in this house in the year 1902. Both of them were dedicated social workers and pioneered in introducing higher education among the women folk of this place. Amala Devi, their daughter started a school to impart higher education to the girls of Purulia. At that time, there was only one lower Primary School, which was known as NISTARINI VIDYALAYA of which Deshbandhu Sri Chittaranjan Das defrayed the entire expenses. A number of the lady teaching staff was brought in to educate girls on all fronts – literary, musical and artistic. An orphanage and widows' home were run under the guidance

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6. Environmental Audit - Questionnaire(As per ISO 19011)

The areas of eco/environmental/green auditing to be followed/practiced by participating institutions:

- Waste Minimization and Recycling
- Greening

- Energy Conservation
- Water Conservation
- Clean Air
- Environmental Legislative
- General Practices

Where is the campus located?

The campus is Located in Gudlavalleru, Krishna District

Which of the following are available in your institute?

1	Garden area	Available
2	Play ground	Available
3	Kitchen	Available
4	Toilets	Available
5	Garbage or Waste Store Yard	Available
6	Laboratory	Available
7	Canteen	Available
8	Hostel Facility	Available
9	Guest House	Available
10	Gymnasium	Available
11	Yoga Practice Hall	Available

Which of the following are found near your institute?

1	Dump yard	Not in vicinity of institute
2	Garbage heap	Garbage heaps present
3	Public convenience	Yes
4	Sewer line	sewer line within campus
5	Stagnant water	No
6	Open drainage	Yes
7	Industry — (Mention the type)	No
8	Bus / Railway station	Near to the campus
9	Public halls	Yes

Waste Minimization and Recycling

1	Does your institute generate any waste? If so, what are they?	Yes, Solid waste, Canteen waste, paper waste, plastic waste, toiletry waste, Horticulture Waste, etc.			
2	What is the approximate amount of waste generated per day? (in Kilograms/month)(approx.)	Bio degradable	Non- Biodegradable	Hazard ous	others
		50kg	19kg	Nil	<12kg

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 to public Sewer. Domestic Waste is given to Grama Panchayat. 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, Green Club carried out numerous activities. Recycling campaigns, e waste management, Anti-plastic campaigns, sustainable goal awareness programme.
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 without any deviation.

Greening the Campus

1	Is there a garden in your institute?	Yes, about 2.5 Acre is the Green Area.	
2	Do students spend time in the garden?	2-4 Hours a day	
3	Total number of Plants in Campus	Plant type	Approx. number
		Trees	More than 70
		Shrubs	More than 80
		Grass Cover	2.0 Acres
4	Suggest plants for your campus. (Trees, vegetables, herbs, etc.)	Pykas, Cykas, R.K. Palms, Golden durant, Mahagani, Ixora coccinea, Lillies, Pandas, Nerium Oleander, Palmyra Palm, Crepe Jasmine, Bamboos, Alstonia scholaris, Variengated Durant and many more as per geographical regime.	
5	Is the College campus have any Horticulture Department	no	
	Number of Staff working in Horticulture Department	2Gardeners	
6	Number of Tree Plantation Drives organized by College per annum. (If Any)	Yes, Three Tree Plantation Drives are Organized Annually. 50+ trees and 80+ shrubs planted in this financial year.	
7	Number of Trees Planted in Last FY. Survival Rate	80 90%	
8	Plant Distribution Program for Students and Community	Yes, Seed Bank is developed and, Saplings are distributed to Students and visitors at various Occasions.	
9	Plant Ownership Program	No	

Energy

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 every day.	Electricity is saved by use of LED bulbs for illumination; LPG is saved by use of Pressure cookers for cooking food. Alternate source of energy i.e. Solar Panel Installed.
2	Are there any energy saving methods employed in your institute? If yes, please specify. If no, suggest some	Yes, Renewable source of energy through solar plant. A monthly average of 39000 to 40000 units generation through 350 kVA power station with 4 inverters (each 100 kVA) connected to main grid. Messages will be displayed at various locations to aware the People about Energy Savings. Use of Natural Lights and Natural Ventilation are promoted.
3	How many CFL/LED bulbs has your institute installed?	25 % of Total Conventional bulbs are replaced by LED Lights.
4	Are any alternative energy sources employed / installed in your institute? (photovoltaic cells for solar energy, windmill, energy efficient stoves, etc.,) Specify.	Yes, photovoltaic cells for solar energy, energy efficient stoves
5	Do you run "switch off" drills at 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 modes most of the time? If yes, how many hours?	No

Water Conservation

1	List uses of water in your institute	Basic usage of water in campus are; Drinking, Gardening, Kitchen & Toilets, and Others. And total consumption is 3000L/month
2	How does your institute store water? Are there any water saving techniques followed in your institute?	Rain Water Harvesting is used for storage of water.
3	If there is water wastage, specify why and How can the wastage be prevented / stopped?	No
4	Locate the point of entry of water and point of exit of waste water in your institute.	Entry - Ground water Exit - From water drainage system to natural sewage drain.
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 new students
6	Does your institute harvest rain water?	Four number of Modern rain water harvesting system are available.

Clean Air

1	Are the Rooms in Campus are Well Ventilated?	Yes				
2	Window Floor ratio of the Rooms	Very Good				
3	Provide details of school-owned motorized vehicles?	Buses	Cars	Vans	Ambulance	Total
	No. of vehicles		1	-		1
	No. of vehicles more than five years old		1	-	-	
	No. of Air conditioned vehicles		1			
	PUC done					
4	Specify the type of fuel used by your college's vehicles:	Total				
	Diesel	NO				
	Petrol	YES				
	CNG	NO				
	LPG	YES				
	Electric					
5	Air Quality Monitoring Program (If Any)	NO				
6	Students suffer from respiratory ailments? (If Any)	No				
7	Details of Power backup	Yes, About 695 kVA 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 Green Club. All undergraduates are studying the paper of Environmental Sciences, 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 DG sets conducted by the Institute?	No
6	Is any warning notice, letter issued by state government bodies?	No
7	Does any Hazardous waste generated by the Institute?	No
8	Does any Bio medical waste generated by the Institute? If yes explain its category and disposal method	No

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, Swatch 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, Swatch 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
10	Has the institution been audited / accredited by any other agency such as NABL, NABET, TQPM, NAAC etc.?	Yes, NAAC grade A

7. Best Practices/Initiatives for Environment

1	Renewable Energy	Solar
2	Biodiversity Conservation Flora and fauna conservation	We have lush green campus which provides habitat to various species.
3	Tree Plantation Drives Two Drives Annually as well as Every Guest is honoured by Tree Plantation at Campus.	Yes, periodically the plantation drives by students and staff of campus.
4	Ground Water Recharge 4 units of Rain Water Harvesting System.	Yes
5	Pollution Reduction Personal Vehicles (Students) not allowed at campus	NO.
6	E Waste Management Collection of e-waste	E waste is sent to the authorized recyclers for adequate disposal

7	Solid Waste Management Lifting of garbage from campus on alternate day by local authority	Yes, different mechanisms for proper disposal and recycling of e-waste, plastic waste, biodegradable waste and MSW
8	Adoption of Village/society CSR	Yes NSS,NCC AND COLLABORATIVE NGOS
9	Water Conservation	Yes, water saving push taps fitted in the drinking water zone and the toilets to avoid the wastage.

8. Recommendations

- 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 Meter 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.

9. Conclusion

This audit involved extensive consultation with all the campus team, interactions with key personnel on wide range of issues related to Environmental aspects. The College 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 wastemanagement records by monthly inventory of hazardous waste, rainwater harvesting recharge; water balance cycle and periodic inspection of buildings housekeeping and environment policy.

R. Dulla
08/04/21

M. G. ...
18/04/21

[Signature]
18/04/21
Principal
Nisterini College, Purulia

**ENVIRONMENT INTERNAL AUDIT REPORT
2021-22**

**NISTARINI COLLEGE
DESH-BANDHU ROAD, PURULIA**

1. Concept

The term 'Environmental audit' or 'Green audit' means differently to different people. Terms like 'assessment', 'survey' and 'review' are also used to describe similar activities. Furthermore, some organizations/Institutions believe that an 'environmental audit' addresses only environmental matters, whereas others use the term to mean an audit of health, safety and environment-related matters. Although there is no universal definition of environmental Audit, many leading companies/institutions follow the basic philosophy and approach summarized by the broad definition adopted by the International Chambers of Commerce (ICC) in its publication of Environmental Auditing (1989).

The ICC defines Environmental Auditing as: *"A management tool comprising a systematic, documented, periodic and objective evaluation of how well environmental organization, management and equipment are performing with the aim of safeguarding the environment and natural resources in its operations/projects."*

The outcome of Environmental Audit should be established with concrete evidence that the measures undertaken and facilities in the institution under green auditing.

2. Introduction

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 a 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. Environmental 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 is conducted to evaluate the actual scenario at the campus.

Environmental 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. Environmental 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. Environmental auditing promotes 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 towards 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.

Environmental Management Systems (EMS) is very popular in the industrial sector, but the general belief is that EMS is something pertaining to industries only. Other parts of the world have started adopting compatible environmental management systems either voluntarily or for promoting standards by external certification. International environmental standards do not suit the existing Indian educational system. Hence a compatible system is adopted by developing locally applicable techniques.

A very simple indigenized system has been devised to monitor the environmental performance of educational institutions. It comes with a series of questions to be answered on a regular basis.

Environmental conditions may be monitored from angles that are relevant to Indian requirements, without stress on legal issues or compliance. This scheme is user-friendly and totally voluntary. The environmental monitoring system helps the institution to set environmental examples for the community and to educate young learners. It can be adapted to urban and / or rural situations.

3. Overview of Institute

1.1 Year of Establishment of college: 1957

1.2 NISTARINI COLLEGE, PURULIA

1.2 History behind the establishment of the college: The genesis of NISTARINI (WOMEN'S) COLLEGE, one of the premier academic institutes in the State of West Bengal is intimately entwined with the cause of women's education. The institution was first conceptualized in the Summer House of Deshbandhu Chittaranjan Das – whose family had significantly fostered women's education in Bengal and was an integral part of the national freedom struggle.

Sri Bhuvan Mohan Das and Smt. Nistarini Devi, father and mother of Sri Chittaranjan Das came to reside in this house in the year 1902. Both of them were dedicated social workers and pioneered in introducing higher education among the women folk of this place. Amala Devi, their daughter started a school to impart higher education to the girls of Purulia. At that time, there was only one lower Primary School, which was known as NISTARINI VIDYALAYA of which Deshbandhu Sri Chittaranjan Das defrayed the entire expenses. A number of the lady teaching staff was brought in to educate girls on all fronts – literary, musical and artistic. An orphanage and widows' home were run under the guidance

and supervision of Amala Devi. Soon it became a centre of culture for the people of Purulia. Unfortunately, the demise of all the three, Sri Bhuban Mohan Das, Smt. Nistarini Devi and Amala Devi within a short span of time led to the temporary closure of this institutions. Sometime after, Shrimati Basanti Devi, Chittaranjan's wife came to reside here and the tradition of the house was again revived. This time they paid special attention to educate the Harijan children living in the neighborhood. They, along with their parents, were also encouraged to attend religious ceremonies regularly in this house. When Sri Chiraranjan Das, son of Deshbandhu Chittaranjan Das, fell seriously ill, the then Chief Minister Dr. Bidhan Chandra Roy came to attend him and was impressed by the 'Sankirtan' assemblage of Harijans in this house. As a result of the Chief Minister's own initiatives and the request of the eminent leaders and social workers of this district (Sri Jimut Bahan Sen et al) an educational institution for women was set up. Thus, the Summer House of the family was converted into Nistarini (Women's) College.

Total campus area: 9.6 acres

Total built up area: 160 sq mtres

Total open space area: 8 acres

Total green area: 5 acres

Objectives and Scope

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
- Sustainable use of natural resource in the campus.
- 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 College profile
- Developing an environmental ethic and value systems in young people

4. Executive Summary

An environmental audit is a snapshot in time, in which one assesses campus performance in complying with applicable environmental laws and regulations. Though a helpful benchmark, the audit almost immediately becomes outdated unless there is some mechanism in place to continue the effort of monitoring environmental compliance. Nistarini College already done internal green assessment and annual reports published for continual improvements; Programme and doing their bid towards environmental protection and environmental awareness at local and global front. Audit criterion is environmental cognizance, waste minimization and management, biodiversity conservation, water conservation, energy conservation and environmental legislative compliance by the campus. A questionnaire is used during audit. This audit report contains observations and recommendations for improvement of environmental consciousness.

5. Areas of Improvement

- Environment Policy to be adopted by the College Campus.
- Water Meter should be installed and maintain the inventory of ground water extraction resource bore well.
- Plastic Waste Management
- Storage of chemicals like; paints, gums resins, oils, lubricants, acids etc. in designated place and safety/warning signs should be displayed.
- Internal inspection system should be developed for various aspects of environment available in campus
- Waste Management plan should be prepared for the campus.
- Display of environment awareness posters should be there in the prominent areas of campus.

6. Environmental Audit - Questionnaire(As per ISO 19011)

The areas of eco/environmental/green auditing to be followed/practiced by participating institutions:

- Waste Minimization and Recycling
- Greening

- Energy Conservation
- Water Conservation
- Clean Air
- Environmental Legislative
- General Practices

Where is the campus located?

The campus is Located in Gudlavalleru, Krishna District

Which of the following are available in your institute?

1	Garden area	Available
2	Play ground	Available
3	Kitchen	Available
4	Toilets	Available
5	Garbage or Waste Store Yard	Available
6	Laboratory	Available
7	Canteen	Available
8	Hostel Facility	Available
9	Guest House	Available
10	Gymnasium	Available
11	Yoga Practice Hall	Available

Which of the following are found near your institute?

1	Dump yard	Not in vicinity of institute
2	Garbage heap	Garbage heaps present
3	Public convenience	Yes
4	Sewer line	sewer line within campus
5	Stagnant water	No
6	Open drainage	Yes
7	Industry — (Mention the type)	No
8	Bus / Railway station	Near to the campus
9	Public halls	Yes

Waste Minimization and Recycling

1	Does your institute generate any waste? If so, what are they?	Yes, Solid waste, Canteen waste, paper waste, plastic waste, toiletry 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	10kg	Nil	<10kg

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 to public Sewer. Domestic Waste is given to Grama Panchayat. 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, Green Club carried out numerous activities. Recycling campaigns, e waste management, Anti-plastic campaigns, sustainable goal awareness programme.
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 without any deviation.

Greening the Campus

1	Is there a garden in your institute?	Yes, about 2.5 Acre is the Green Area.	
2	Do students spend time in the garden?	2-4 Hours a day	
3	Total number of Plants in Campus	Plant type	Approx. number
		Trees	More than 70
		Shrubs	More than 80
		Grass Cover	2.0 Acres
4	Suggest plants for your campus. (Trees, vegetables, herbs, etc.)	Pykas, Cykas, R.K. Palms, Golden durant, Mahagani, Ixora coccinea, Lillies, Pandas, Nerium Oleander, Palmyra Palm, Crepe Jasmine, Bamboos, Alstonia scholaris, Variengated Durant and many more as per geographical regime.	
5	Is the College campus have any Horticulture Department	no	
	Number of Staff working in Horticulture Department	6Gardeners	
6	Number of Tree Plantation Drives organized by College per annum. (If Any)	Yes, Three Tree Plantation Drives are Organized Annually. 50+ trees and 80+ shrubs planted in this financial year.	
7	Number of Trees Planted in Last FY. Survival Rate	80 90%	
8	Plant Distribution Program for Students and Community	Yes, Seed Bank is developed and, Saplings are distributed to Students and visitors at various Occasions.	
9	Plant Ownership Program	No	

Energy

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 every day.	Electricity is saved by use of LED bulbs for illumination; LPG is saved by use of Pressure cookers for cooking food. Alternate source of energy i.e. Solar Panel Installed.
2	Are there any energy saving methods employed in your institute? If yes, please specify. If no, suggest some	Yes, Renewable source of energy through solar plant. A monthly average of 39000 to 40000 units generation through 350 kVA power station with 4 inverters (each 100 kVA) connected to main grid. Messages will be displayed at various locations to aware the People about Energy Savings. Use of Natural Lights and Natural Ventilation are promoted.
3	How many CFL/LED bulbs has your institute installed?	25 % of Total Conventional bulbs are replaced by LED Lights.
4	Are any alternative energy sources employed / installed in your institute? (photovoltaic cells for solar energy, windmill, energy efficient stoves, etc.,) Specify.	Yes, photovoltaic cells for solar energy, energy efficient stoves
5	Do you run "switch off" drills at 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 modes most of the time? If yes, how many hours?	No

Water Conservation

1	List uses of water in your institute	Basic usage of water in campus are; Drinking, Gardening, Kitchen & Toilets, and Others. And total consumption is 3000L/month
2	How does your institute store water? Are there any water saving techniques followed in your institute?	Rain Water Harvesting is used for storage of water.
3	If there is water wastage, specify why and How can the wastage be prevented / stopped?	No
4	Locate the point of entry of water and point of exit of waste water in your institute.	Entry - Ground water Exit - From water drainage system to natural sewage drain.
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 new students
6	Does your institute harvest rain water?	Four number of Modern rain water harvesting system are available.

Clean Air

1	Are the Rooms in Campus are Well Ventilated?	Yes				
2	Window Floor ratio of the Rooms	Very Good				
3	Provide details of school-owned motorized vehicles?	Buses	Cars	Vans	Ambulance	Total
	No. of vehicles		1	-		1
	No. of vehicles more than five years old		1	-	-	
	No. of Air conditioned vehicles		1			
	PUC done					
4	Specify the type of fuel used by your college's vehicles:	Total				
	Diesel	NO				
	Petrol	YES				
	CNG	NO				
	LPG	YES				
	Electric					
5	Air Quality Monitoring Program (If Any)	NO				
6	Students suffer from respiratory ailments? (If Any)	No				
7	Details of Power backup	Yes, About 695 kVA 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 Green Club. All undergraduates are studying the paper of Environmental Sciences, 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 DG sets conducted by the Institute?	No
6	Is any warning notice, letter issued by state government bodies?	No
7	Does any Hazardous waste generated by the Institute?	No
8	Does any Bio medical waste generated by the Institute? If yes explain its category and disposal method	No

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, Swatch 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, Swatch 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
10	Has the institution been audited / accredited by any other agency such as NABL, NABET, TQPM, NAAC etc.?	Yes, NAAC grade A

7. Best Practices/Initiatives for Environment

1	Renewable Energy	Solar
2	Biodiversity Conservation Flora and fauna conservation	We have lush green campus which provides habitat to various species.
3	Tree Plantation Drives Two Drives Annually as well as Every Guest is honoured by Tree Plantation at Campus.	Yes, periodically the plantation drives by students and staff of campus.
4	Ground Water Recharge 4 units of Rain Water Harvesting System.	Yes
5	Pollution Reduction Personal Vehicles (Students) not allowed at campus	NO.
6	E Waste Management Collection of e-waste	E waste is sent to the authorized recyclers for adequate disposal

7	Solid Waste Management Lifting of garbage from campus on alternate day by local authority	Yes, different mechanisms for proper disposal and recycling of e-waste, plastic waste, biodegradable waste and MSW
8	Adoption of Village/society CSR	Yes NSS, NCC AND COLLABORATIVE NGOS
9	Water Conservation	Yes, water saving push taps fitted in the drinking water zone and the toilets to avoid the wastage.

8. Recommendations

- 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 Meter should be installed at institute for monitoring of water consumption for landscape.
- Increase in Environmental promotional activities for spreading awareness at campus.
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9. Conclusion

This audit involved extensive consultation with all the campus team, interactions with key personnel on wide range of issues related to Environmental aspects. The College 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 wastemanagement records by monthly inventory of hazardous waste, rainwater harvesting recharge; water balance cycle and periodic inspection of buildings housekeeping and environment policy.

[Signature]
26/05/22

[Signature]
26/05/22

[Signature]
26/05/2022

[Signature]
26/5/22
Principal
Nisterini College, Barilli