

Date: 11/11/2023

AUDIT REPORT ON ENVIRONMENTAL AUDIT/ GREEN AUDIT

CERTIFICATE

This is to certify that the Environmental Audit/Green Audit Report and Energy Monitoring & Management System followed at Indas Mahavidyalaya, Indas, Bankura is based on the original data collected during the period of 2022-'23. This has been assessed and is applicable to provide quality ambience for continued Higher Education, Training and Mental health to the students for their smart future and career. Further, it is certified that the baseline data was prepared by internal College Environmental Committee team members of Indas Mahavidyalaya, Indas and submitted to us. The content of the baseline data of the study and Energy Monitoring & Management System has been personally verified by the Expert Team constituted by the Bankura University, Bankura for validity and reliability. The data used in the study are original in nature and have not been presented or published elsewhere. Data & Photographs used in the report are taken by the College Environmental Committee team members during preparing their Report of the concerned year 2022 - '23.

Bms 11/11/23

Dr Bappaditya Mandal
Principal
Sonamukhi College
Sonamukhi
Bankura

**Principal
Sonamukhi College
Sonamukhi, Bankura**

*Dr Samir Kumar Mukherjee
11/11/23*

Dr Samir Kumar Mukherjee
Principal
Bankura Sammilani College
Kenduadihi
Bankura

**PRINCIPAL
Bankura Sammilani College
Kenduadihi, Bankura**

*Dr Apurba Ratah Ghosh
11/11/23*

Dr Apurba Ratah Ghosh
Professor & Head
Deptt. of Environmental Science
The University of Burdwan
Burdwan

**Professor & Head
Deptt. Environmental Sc.
The University of Burdwan
Burdwan, W.B.**

11/11/2023

To
The Principal
Indas Mahavidyalaya
Khosbag, Indas
Bankura
West Bengal

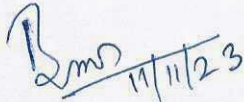
Subject: Submission of Audit Report

Sir

After verification of all the aspects in the College and necessary assessment of the report on "Environmental Audit"/"Green Audit" submitted by your College for the period of 2022-'23, here, we are submitting the Audit Report of "Environmental or Green Audit" mentioning the "Energy Monitoring & Management System" followed at your College for the period of 2022-'23. It is presented for your kind perusal in the attached sheet.

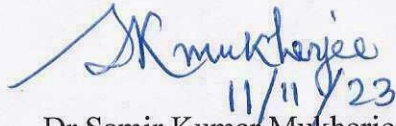
We request you to please acknowledge and oblige.

Yours,


11/11/23

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Sonamukhi College
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Dr Apurba Ratan Ghosh
Professor & Head
Deptt. of Environmental Science
The University of Burdwan
Burdwan

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Report of Green Audit

1.0 Introduction

Green Audit or Environmental Audit is a systematic identification, quantification, recording, reporting and analysis of components of environmental diversity within an academic institute. The 'Green Audit' aims to analyze environmental practices followed within and outside the College campus, which can provide an eco-friendly ambience for the stakeholders. Objectives are to ensure good health and good environment for the inhabitants. Presently, Green audit is a requirement of evaluation process by NAAC, National Assessment and Accreditation Council in their AQAR and SSR under the components of Criteria VII.

1.1 About the College

Indas Mahavidyalaya was established in 2006 to cater the need of the rural students (basically the second generation learner) of Indas Block, Bankura. Initially, College was under the affiliation of the University of Burdwan, then shifted to Bankura University and obtained UGC recognition under Sections 2(f) and 12(b) of the UGC Act in the year 2017. Presently, College has two running streams, viz., Arts and Science courses having a total of 14 disciplines with Hons. and Pass as usual. The institution basically aspires to empower the underprivileged segment of society, also by providing skill-based education. College is intended to provide quality education to that underprivileged segment of society, especially SC, ST & OBC. Presently, College has 42 number of regular teaching faculty, 2 contractual non-teaching staff members and 6 permanent non-teaching staff members.

2.0 Executive Summary

In accordance with the Format of Green Audit and Evaluation Plan, this Green Audit/Environmental Audit of the Indas Mahavidyalaya, Indas, Bankura, West Bengal was conducted in the month of November 2023.

The rapid urbanization and economic development in this area and adjacent areas have led to several environmental and ecological crises. On this background it becomes essential to adopt the system of the Green Campus inside and outside of the College which will lead for sustainable development and be the spokesman of the present Panchayat area. College is seriously concerned and believes that there is an urgent need to address these local problems and redress the conditions. Being quite an old institution of higher learning, the College has initiated 'The Green Campus' program few years back.

The purpose of the audit is to ensure that the practices followed in the Campus. The specific objectives of the audit were to evaluate the adequacy of the management control framework of environmental sustainability as well as the degree to which the different departments are in compliance with the applicable regulations, policies and standards.

3.0 Observations

a. General

1. College has a total campus area of 4.52 acre and has taken efforts for sustainable development in the College campus and to maintain greenery in an area of 1.76 acre.
2. College has constituted 'College Environmental Committee' as per guidelines and is working to maintain the greenery on the campus and also participate in preventing pollution in and around the campus.
3. Some of the best practices such as campus cleaning, maintaining tree plantation, introducing plastic free zone, celebration of No Vehicle Day, World Environment Day, World Water Day, Wetland Day, National Science Day, World Sustainable Day, Energy Day, etc., are followed in the campus.
4. College is processing one Composting Pit.
5. College has conducted Environmental Awareness programmes for faculty and students, and involved the students in maintaining the cleanliness of the campus.
6. NSS participates in campus cleaning program; they have adopted one village in nearby areas.
7. Rainwater is to be installed.

b. Suggestions

1. College will be requested to frame the 'Environmental Policy'.
2. College will maintain the Medicinal Garden.
3. Students should be aware to maintain the Biodiversity Register through training, workshop *etc.*, every year with the help of Department of Botany.
4. College has to develop a mechanism of rainwater harvesting process for groundwater recharge through recharge system considering the importance of the locality.
5. Confirm the use of LED as much as practicable by replacing the tube light, *etc.*
6. Composting Pit be used for management of biodegradable waste.
7. E-waste be disposed through proper/authorized License holder party.

4.0 Statement of Assurance

In our professional judgment, as far as possible and appropriate audit procedures were completed and evidence gathered to support the accuracy of the conclusions reached and contained in this report. The conclusion is based on a comparison of the situations as they existed at the time of the audit with the established criteria.

GREEN AUDIT WORKING FORMAT

5.0 Audit Framework and detailed findings

The following audit framework is used for conducting Green Audit in Year 2022-'23. The framework also lists the findings and observations for every criterion.

Control objectives	Control(s)	Audit Observations
Maximize the proportion of waste that is recycled & minimize the quantity of non-recyclable refuse	Reduce the absolute amount of waste that it produces from the Institute & Staff offices.	The College has used some controls to reduce the absolute amount of waste that it produces from the departments, staff offices, inside Campus, etc.
	Make full use of all recycling facilities provided by City Municipality and private suppliers, including glass, cans, white, coloured and brown paper, plastic bottles, batteries, print cartridges, cardboard and furniture.	College is managing its all wastes through its own system. <i>Formal MoU with Local Panchayat be maintained for long-term basis and periodical monitoring.</i>
	Compost, or cause to be composted, all organic waste, green waste and un-recycled cardboard produced in or collected from kitchens, gardens, offices and rooms.	The College uses different bins for disposal of different types of wastes. <i>Food-wastes from Canteens, and the fallen dead leaves from the garden be managed as much as possible Through composting/cistern pit.</i>
	Recycle or safely dispose of white goods, computers and electrical appliances.	<i>Safe disposal methods should be adopted for electrical wastes, printer cartridges etc., through proper disposal methods/license holder vendors.</i>
	Use reusable resources and containers and avoid unnecessary packaging where possible	No, the College has not so far used reusable resources and containers and unnecessary packaging where possible.
	Provide sufficient, accessible and well-publicized collection points for recyclable waste, with responsibility for recycling clearly allocated	The College has limited scope of accessible and well-publicized collection points for recyclable waste.
Minimize the quantity of wastes during special events/occasions	Make specific arrangements for events, such as cultural Events, internal and external seminars and conferences, where significant recyclable waste is likely to be produced, in order to both minimize the waste produced and maximize what is recycled/reused	Amount of wastes generated during special events or occasions, such as Cultural Events, International and National seminars and Conferences, etc., are disposed through Panchayat.

Control objectives	Control(s)	Audit Observations
	Promote reuse of items and waste recycling among staff, students and conference guests through training, posters and incentives	The College has limited scope of reuse of items and waste recycling among staff, students and conference guests through some incentives.
	Dispose all waste, whether solid or otherwise, in a scientific manner and ensure that it is not released directly to the environment	Yes, the College disposes all wastes, whether solid, liquid or otherwise, through its own collection system and ensures that it is not released directly to the environment.
Reduce energy consumption, especially of energy derived from fossil fuels	Support renewable and carbon-neutral electricity options on any energy-purchasing consortium, with the aim of supplying all college properties with electricity that can be attributed to renewable and carbon-neutral sources.	College follows paper-less communications through using digital media like Website notice, e-notice in 80% for academic/administrative purposes.
	Appreciate that it is preferable to purchase electricity from a company that invests in new sources of renewable and carbon-neutral electricity	<i>College has been advised to take initiative to install new sources of renewable and carbon-neutral electricity.</i>
	Look into the possibility of on-site micro-generation of renewable electricity.	College must take initiative to install Solar Panels in collaboration with WBSEDCL and maintaining grid facility.
	Give preference to the most energy efficient and environmentally sound appliances available, this includes only using energy-saving light bulbs	The College is using LED, CFL as much as feasible and advised to replace with old tube lights with LEDs.
Effective energy consumption and management practices	Encourage staff, students and conference guests to save energy through visible reminders, incentives and information to increase awareness. This particularly concerns turning off electrical appliances when not in use in both communal and residential rooms	<i>College has to develop a mechanism to reduce the misuse of electricity by turning off the appliances when not required. All the stakeholders are to be aware and doing their best and practices to save electricity.</i>
	Ensure that all electronic and electrical equipment's, such as computers, are switched off when not in use, and is generally configured in power saving mode when such option is available	Students and all the members are used to follow this practice.
	Ensure that the equipment's running on standby mode, reduce the energy consumption on standby mode or minimize the running of equipment's on standby mode	Some of the equipment's are running on standby mode.

Control objectives	Control(s)	Audit Observations
	Purchase efficient and environmentally sound appliances and consider replacing old stock with 'greener', more efficient alternatives.	Presently, College is using environmental-friendly appliances and taking initiative to replace the tube lights with LEDs 60 in number, etc., as effective alternatives.
Minimize the use of unsustainable transport	Make available information about bicycle and pedestrian routes, public transport services and car share schemes to staff and students.	The College is connected through bus services; usually, most of them avail bus services.
	Reduce the proportion of travel on the University/Institute business carried out in private transport and eliminate unnecessary and inefficient use of the University/Institute vehicles	College does not have any common bus services to all stakeholders.
	Promote car sharing / car pool among the students and faculty members	No, the College does not promote car sharing/car pool among the students and faculty members.
Minimize consumption of water	Repair sources of water leakage, such as dripping taps and showers as quickly as possible.	Regular checking and maintenance of pipelines are done to control the water wastage through dedicated personnel.
	Install appliances which reduce water consumption	Practised as much as possible.
	Encourage a decrease in water usage among staff, students and conference guests	All the stakeholders of the College are encouraged injudicial use of water.
	Use an efficient and hygienic water storage mechanism is to minimize the loss of water during storage	College is taking some steps to aware about use of hygienic water, proper storage of water. <i>Sensor-based system be introduced to minimize the loss of water during storage.</i>
	Minimize wastage of water and use of electricity during water filtration process, if used, such as RO filtration process and ensure that the equipment's used for such usage, are regularly serviced, and the wastage of water is not below the industry average for such equipment's used in similar capacity	Inside the Campus building there are two Aqua guards at the strategic location for the students and other members. <i>AMC be processed accordingly.</i>
	Install Water recycling mechanism, such as rain water harvesting system	<i>Rainwater harvesting mechanism be developed.</i>

Control objectives	Control(s)	Audit Observations
Minimize the risk of environmental health	Ensure that all cleaning products used by the University/Institute staff have a minimal detrimental impact on the environment, i.e., are biodegradable and non-toxic, even where this exceeds the Control of Substances Hazardous to Health (COSHH) regulations	Negligible amount of cleaning/washing liquids are used in the College. College is maintaining a 'Green Budget' for the said purposes.
	Minimize the use of fertilizers and pesticides in the University/Institutional gardens, opting for the use of compost produced on site wherever possible	College uses mostly organic fertilizers, and herbicides are used for maintenance of gardens, infected plants as and when required basis.
	Dispose the chemical waste generated from the laboratories in a scientific manner	Disposal of solid wastes are managed. <i>Chemical wastes are to be managed properly.</i>
	Reduce the practice of burning plastic and other materials that emit the harmful gas on burning is prevented in the campus.	No such burning.
Maintenance of green campus	Ensure the green environment	College is positive about increasing greenery by planting in front of the campus and maintaining plants as much as possible.
	Establish a Garden in the campus	College has a garden in front of the Campus. <i>Students should be trained to handle Biodiversity Register.</i>
	Encourage the faculties and students to plant trees in the garden	College conducts tree plantation programmes through students and staff members on year-wise. <i>Choice-plantation, fruit-plantation like palm, dates etc., may be encouraged mostly considering the suitability of the region.</i>
	Reviews periodically the list of trees planted in the garden periodically	<i>Periodical maintenance of plants be followed.</i> <i>Man-made nests be constructed to attract some birds to maintain ecological balance.</i>
Ensure that environmental awareness is created	Conduct environmental awareness workshops as a part of the program.	College celebrates World Environment Day, World Water Day, Wetland Day, Energy Day, etc.
	Create awareness of environmental sustainability and takes actions to ensure environmental sustainability.	College conducts environmental awareness programmes, World Sustainable Day, etc., to ensure environmental sustainability.
	Reduce the rate at which the University/Institute contributes to the depletion and degradation of natural resources	College is not directly or indirectly responsible in depletion and/or degradation of natural resources.

Control objectives	Control(s)	Audit Observations
	Promote environmental awareness as a part of course work in various curricular areas, independent research projects, and community service	Compulsory ENVIS paper as per University guidelines for all the students of all streams are mandatory to have an awareness on Environmental.
Ensure that the buildings conform to green standards	Review architecture of existing buildings and reviews ways, in consultation with experts, to reduce usage of energy for such buildings, offering greatest efficiency for energy and water usage, and reducing carbon emission	Presently, there is no proposal of new construction. <i>New constructions be followed in compliance with green standard in near future.</i>
Ensure that the Environmental Policy is enacted, enforced and reviewed	Establish the University/Institute Environmental Committee that will hold responsibility for the enactment, enforcement and review of the Environmental Policy. The Environmental Committee shall be the source of advice and guidance to staff and students on how to implement this Policy	College has framed an Environmental Audit Committee and conducted so far three meetings and conducting different awareness programmes.
	Ensure that on the Nature Club/Environmental Committee there will be appropriate representatives of the relevant university departments and authorities – such as catering, gardening, maintenance, cleaning and finance	College Environmental Committee has prepared a perspective plan for near future for maintenance of the campus.
Ensure that the Environmental Policy is enacted, enforced and reviewed	Ensure that on the Environmental Committee there will be the Green Officer from an external agency who is engaged in the profession of providing guidance on environmental impact	College has Coordinator; Green Officer in the Environmental Committee may be adopted, if possible. Principal acts as Chairman of the Committee.
	Ensure that the Environmental Committee will review the Environmental Policy on an annual basis, and will monitor progress and set measurable targets wherever possible	<i>College should follow the 'Green Policy'.</i> <i>College campus must be declared as 'Plastic Free Zone'.</i>
	Ensure that the Environmental Policy is enforced regardless of whether its requirements exceed the mandate of the law	<i>College Environmental Committee has to take the responsibility to reframe the Green Policy of the College for strengthening.</i>
	Require that every staff and student member recognizes their responsibility to ensure that the commitments in the Environmental Policy are properly put into practice	Members of the College Environmental Committee are actively engaged in maintaining green practices.
	Ensure that an audit is conducted annually and action is taken on the basis of audit report, recommendation and findings	First 'Green Audit' is conducted on Nov. 2023 based on the report of year 2022-'23.

6.0 Recommendations

Following the audit, several recommendations were made to the management.

Criteria	Recommendations
Publication of Audit Report	Resolutions of the "College Environmental Committee" along with audit report be published in the College website.
Maximize the proportion of waste that is recycled & minimize the quantity of non-recyclable refuse	<ol style="list-style-type: none"> 1. The College should go for ISO 9001:2015 Certification. 2. Composting system be developed for solid wastes & bio-wastes in a proper way. 3. College may go for partnership with local Panchayat in monitoring the disposal of solid wastes through sharing some outreach programs also. 4. Formal MoU with Local Panchayat be signed. 5. Vermicomposting should be developed in the College Campus. 6. Mushroom cultivation be extended as one of the skill development programmes for the students with a knowledge base as start-up program.
Reduce energy consumption, especially of energy derived from fossil fuels and safety measures	<ol style="list-style-type: none"> 1. Use energy efficient lighting fully in and around the campus; outdoor lighting be managed in order to develop eco-friendly system. 2. Installation of number of control switch, MCB for monitoring of energy and sensor-based system for water consumption building-wise/department-wise be followed. 3. Initiatives for installation for Solar Panels be taken. 4. Installation of fire safety instruments be processed in the buildings/departments. 5. College has to prepare a landscape mapping of the campus.
Maintenance of Campus and biodiversity	<ol style="list-style-type: none"> 1. PUC (Pollution under control) certificate for all the vehicles entering the campus to be made mandatory. 2. Proper training, workshop on maintenance of PBR for campus and different locations as an outreach program be initiated. 3. Choice-plantation, fruit-plantation, artificial nesting, <i>etc.</i>, be followed to maintain attract birds and other animals within the campus. 4. Students will be motivated/inspired to prepare man-made nest to attract some birds to maintain ecological balance inside the campus. 5. College may adopt one Butterfly Garden.
Proper cleaning of water storage Tanks	<ol style="list-style-type: none"> 1. Proper cleaning of the water tanks on regular basis considering the health & hygiene of the all stakeholders be followed. 2. Wastage of water be managed properly. 3. Divyangian-friendly washroom facility be maintained.
Project-based learning on Environment related subjects	<ol style="list-style-type: none"> 1. Creation of opportunity to start with technical, skill-oriented and hands-on-training programmes for environmental monitoring.

7.0 Objectives and Scope

The purpose of this audit was to ensure that the Green Policy is followed and implemented in the campus, across all departments, administrative bodies and students.

8.0 Methodology

The methodology includes - preparation and filling up of questionnaire, screening of the report, physical interaction with the members in presence of Principal and the Members of the College Environmental Committee as well as Members of IQAC, record checking and review of the submitted documentations, interviewing key persons and data analysis, measurements and recommendations. It works on the several aspects of 'Green Audit' including Water Conservation, Tree Plantation, Waste Management, Paperless Work, Alternative Energy and Mapping of Biodiversity.

- a. In order to meet these objectives, this audit was based on report submitted by the College authority and reviewing of relevant documents as far as possible and interviews with authority, Coordinator and staff members physically.
- b. Review of the Documentations
- c. For the purpose of this audit the Green Policy of the institute was reviewed. Other relevant standards, Green audit framework *etc.*, was also considered.

Interviews

Interviews were conducted with the Principal, IQAC Coordinator, Coordinator of College Environmental Committee and also members of the Committee.

Physical Inspection

Report was prepared based on the verification and validation and interaction with the members of the College.

9.0 Declaration

I agree with all the recommendation and observations mentioned in this report.

Date: 11/11/2023

Place: Indas Mahavidyalaya, Khosbag, Bankura

Principal *Rajil Bag*
Indas Mahavidyalaya
Indas, Bankura 11/11/23

Signed by
College Principal with Seal

Bms
11/11/23

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