



DEPARTMENT OF ENVIRONMENTAL SCIENCE
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From

Ref. No.

Date ...7.8.19.....

To **Dr Apurba Ratan Ghosh**
Professor

The Principal
B N Mahavidyalay
Itachuna
Hooghly

Sir,

Here, I am sending the Report of "Green Audit" of your Institution in the attached sheet as an Annexure-I.

Acknowledge and oblige.

Yours,

[Apurba Ratan Ghosh]

Professor
Environmental Science
The University of Burdwan
Burdwan

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1.0 Executive Summary

In accordance with the Format of Green Audit and Evaluation Plan of B N Mahavidyalaya, Itachuna, Hooghly for the year 2018 – 19, this Audit was conducted a green audit of the college in the month of August, 2019.

The purpose of the audit was to ensure that the practices followed in the campus are in accordance with the Green Policy adopted by the institution. With this in mind, the specific objectives of the audit were to evaluate the adequacy of the management control framework of Environment Sustainability as well as the degree to which the Departments are in compliance with the applicable regulations, policies and standards.

During the initial planning of the audit, an analysis was conducted in order to identify, evaluate and prioritize the risks associated with the environmental sustainability. The analysis was based upon an examination of the policies, manuals and standards that govern the environmental sustainability, on data analysis, and on the results of preliminary interviews with personnel considered key in the environmental management in the campus. The criteria and methods used in the audit were based on the identified risks.

The methodology used included physical inspection of the campus, review of the relevant documentation, and interviews.

2.0 Statement of Assurance

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

3.0 Summary of Findings

The main findings of the audit show that, in general, all the departments and students are aware about the need for environmental protection at a general level. It was also observed that a number of best practices such as maintaining potted plants, introducing plastic free zone etc., are followed in the campus.

However, on detailed review, it was observed that, as the college is implementing Green Policy for the first time, many of the practices followed in the institution are not in compliance with the Green Policy of the institution, and the applicable standards. In addition, certain processes could benefit from further review in order to improve their efficiency, fairness and consistency.

4.0 About the college

This College, named Bijoy Narayan Mahavidyalaya located in the agriculture-based rural areas under the district Hooghly. This College has already accredited by NAAC during the years 2007 and 2015. College is devoted to serve the boys and girls of this rural area to provide higher education as well as quality education.


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Green Audit Report

5.0 Audit Framework and detailed findings

The following audit framework is used for conducting Green Audit in Year 2018- 19. 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 college staff offices.	Yes, the College has used some control measures to reduce the amount of wastes that it produces from the College.
	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 has taken initiative to dispose the all sorts of solid wastes, recycling facilities through Panchayat.
	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.	Yes, the College has developed the composting facility for organic wastes, green wastes or wastes collected from kitchens, gardens, offices and rooms, etc.
	Recycle or safely dispose of white goods, computers and electrical appliances.	College has proposed to dispose the computers and electrical wastes through authorized agents.
	Use reusable resources and containers and avoid unnecessary packaging where possible	College has no such reusable resources and containers.
	Always purchase recycled resources where these are both suitable and available.	Recycled resources are not readily available in the rural market.
	Provide sufficient, accessible and well-publicized collection points for recyclable waste, with responsibility for recycling clearly allocated	College is intending to provide sufficient, accessible and well-publicized collection points for recyclable wastes as far as practicable.
Maximize the proportion of waste that is recycled & minimize the quantity of non-recyclable refuse	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	Yes, students are engaged during those cultural Events, internal and external seminars and conferences, where significant recyclable wastes are produced.
	Dispose all waste, whether solid or otherwise, in a scientific manner and	Yes, the college disposes all waste, whether solid or otherwise,

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	ensure that it is not released directly to the environment	in a scientific manner and ensures that it is not released directly to the environment. They are going to sign an agreement with Panchayat for this disposal.
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.	The College does not have any choice of renewable and carbon-neutral electricity options right now. They are getting the supply only from WBSEDCL.
	Appreciate that it is preferable to purchase electricity from a company that invests in new sources of renewable and carbon-neutral electricity	The College has no choice other than CESC.
	Look in to the possibility of on-site micro-generation of renewable electricity.	We are sincerely implementing the SOLAR Panels.
	Give preference to the most energy efficient and environmentally sound appliances available, this includes only using energy-saving light bulbs	The College is using energy efficient appliances as far as practicable.
Reduce energy consumption, especially of energy derived from fossil fuels	Provide energy efficient heating systems, with adjustable controls for individual heating appliances wherever possible, and ensure that comprehensible instructions are available to staff and students on the use of heating controls	In the present climate of locality heating system is not necessary
	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	Misuse of electricity is controlled by turning off the appliances when not required.
	Monitor and understand the importance of different sources of college energy consumption, and set appropriate and measurable targets for a reduction in certain areas of consumption and/or in the overall consumption of energy.	They try our best to put the main switch off or MCB when there is no need of electricity.
	Conduct switch off drills at regular intervals	Yes, College conducts switch off drills at regular intervals among students

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	Ensures 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	It is practised.
	If there are equipment's running on standby mode, reduce the energy consumption on standby mode or minimize the running of equipment's on standby mode	Yes, there are very few equipments running on standby mode.
	Seek and act upon professional advice in order to minimize the adverse environmental impact of any new developments and exceed government regulatory requirements. This includes efficient heating and water systems, appropriate space for recycling, and the use of recycled and/or sustainable building materials where possible	No, the College have not seeked and act upon professional advice in order to minimize the adverse environmental impact of any new developments and exceed government regulatory requirements
	Purchase efficient and environmentally sound appliances in order to fulfill the commitments in section 2, and consider replacing old stock with 'greener', more efficient alternatives.	College is positive about increasing greenery by planting in the College premises as well as approaching road.
	Purchase food that has been produced and delivered with minimal impact on the environment, this includes buying locally produced, organic and free-range food wherever possible	No, College has no such intention.
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 well connected through roadways and close to major railway terminus, so they mostly avail bus/local transport/TOTO and railway service.
Minimize the use of unsustainable transport	Reduce the proportion of travel on College business carried out in private transport and eliminate unnecessary and inefficient use of college vehicles	College has no separate vehicle.
	Promote car sharing / car pool among the students and faculty members	Yes, College do 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	Checking and maintenance of pipelines are done as and when

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	possible.	requirement basis.
	Install appliances which reduce water consumption	Practised as much as possible.
	Encourage a decrease in water usage among staff, students and conference guests	College encourages students, staff members regarding water usage.
	Purchase the most efficient washing machines and dishwashers available which have an economy setting as default	No, College does not require such appliances.
	Use an efficient and hygienic water storage mechanism is to minimize the loss of water during storage	College is advised to use an efficient and hygienic water storage mechanism to minimize the sudden unwanted incidences.
	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	All the departments are advised to use the water filtration processes.
	Install Water recycling mechanism, such as rain water harvesting system	College through Govt. initiative has already installed Rain water harvesting and groundwater recharging etc.
	Ensure that all cleaning products used by college 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 washing liquids are used in the College and all the toilet cleaners are Eco friendly.
	Minimize the use of fertilizers and pesticides in college grounds, opting for the use of compost produced on site wherever possible	Negligible amount of fertilizers and pesticides are used in the college.
	Dispose the chemical waste generated from the laboratories in a scientific manner	No toxic chemicals are included in Burdwan University practical curriculum. Most of the waste generated is water-soluble and ultimately disposed through sock pits; diluted largely so biomagnifications is negligent. Thus they are proceeding towards

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		Green Chemistry.
	Reduce the practice of burning plastic and other materials that emit the harmful gas on burning is prevented in the campus.	No such burning.
	Establish a Garden in the campus	College maintains four gardens with the active participation of students. College has made silviculture with 900 nos. of teak plants in the hostel premises.
	Encourage the faculties and students to plant trees in the garden.	College has CANOPY, the named ecoclub, and students are actively engaged in the process plantation.
Ensure that environmental awareness is created	Conduct environmental awareness workshops as a part of the program.	There is an active ecoclub, named ac CANOPY for monitoring this.
	Conduct events such as plant trees to spread environmental awareness among the students	College has adopted three villages, namely, Mandaron, Itachuna and Ilshoba and students are actively engaged in plantation in those villages.
	Create awareness of environmental sustainability and takes actions to ensure environmental sustainability.	Seminars and awareness programmes are conducted periodically on Nature and natural resources; College has prepared an Avian Records of the locality
	Reduce the rate at which the College contributes to the depletion and degradation of natural resources	College contributes a little directly or indirectly in depletion and degradation of natural resources.
	Promote environmental awareness as a part of course work in various curricular areas, independent research projects, and community service	Compulsory ENVs paper of 100 marks as per University Syllabus for all the students of all streams to develop Environmental Awareness.
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	New constructions are in compliance with green standard.
Ensure that the Environmental Policy is enacted, enforced and reviewed	Establish a College Environmental Committee that will hold responsibility for the enactment, enforcement and review of the Environmental Policy. The Environmental Committee shall be the	College has an Environment Committee.

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	source of advice and guidance to staff and students on how to implement this Policy	
	Ensure that on the Nature Club there will be appropriate representatives of the relevant college departments and authorities -- such as catering, gardening, maintenance, cleaning and finance	Representative from all such departments.
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	The Green Committee is conducting meetings on regular basis and catering the need of the requirement.
	Ensure that the Environmental Committee will review the Environmental Policy on an annual basis, and will monitor progress and set measurable targets wherever possible	Environmental Committee maintaining the actions plans through activities.
	Ensure that the Environmental Policy is enforced regardless of whether its requirements exceed the mandate of the law	Green policy is enforced. They maintain a Butterfly Garden
	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 Environment Committee have taken so many green initiatives for creating a good ambience in the College.
	Ensure that an audit is conducted annually and action is taken on the basis of audit report, recommendation and findings	Green audit be conducted annually.

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6.0 Recommendations

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

Criteria	Recommendations
Maximize the proportion of waste that is recycled & minimize the quantity of non-recyclable refuse	<ol style="list-style-type: none"> 1. Mechanism to dispose solid wastes through Panchayat 2. Mechanism to dispose e-wastes through licensed agents 3. Disposal and composting of organic wastes in a more scientific manner.
Reduce energy consumption, especially of energy derived from fossil fuels,	<ol style="list-style-type: none"> 1. Use energy efficient lighting fully
Proper cleaning of water storage Tanks	<ol style="list-style-type: none"> 1. Proper initiative for cleaning the water tanks on regular basis considering the health & hygiene of the all stakeholders
Project-based learning on Environment related subjects	<ol style="list-style-type: none"> 1. Creation of an opportunity to start with Environment related general subjects for intense use of natural resources available in the Institute.

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

In order to meet its objectives, this audit combined physical inspection with a review of relevant documentation and interviews with various stakeholders.

Review of the Documentation

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, and also faculties and students.

Physical Inspection

The audit team was in the college to inspect the campus.

9.0 Declaration

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


 Original signed by
 Principal with Seal
Principal
 Bejoy Narayan Mahavidyalaya
 P.O.- Itachuna, Dt.- Hooghly.


 8/8/19
 Professor
 Environmental Science
 The University of Burdwan
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