

FORMAT OF GREEN AUDIT: QUESTIONNAIRE

Environmental audit or **Green audit** is a general term that can reflect various types of evaluations intended to identify environmental compliance and management system implementation gaps, along with related corrective actions. In this way they perform an analogous (similar) function to financial audits. The term “Green” means eco-friendly or not damaging the environment. This can acronymically be called as “Global Readiness in Ensuring Ecological Neutrality” (GREEN). “Green Auditing”, an umbrella term, is known by another name “Environmental Auditing”.

There are generally two different types of environmental audits: compliance audits and management systems audits. Compliance audits tend to be the primary type in the US or within US-based multinationals.

The term "protocol" in environmental audit means the checklist used by environmental auditors as the guide for conducting the audit activities. Current technology supports many versions of computer-based protocols that attempt to simplify the audit process by converting regulatory requirements into questions with "yes", "no" and "not applicable" check boxes.

Green Audit can be defined as systematic identification, quantification, recording, reporting and analysis of components of environmental diversity. The ‘Green Audit’ aims to analyze environmental practices within and outside the college campus, which will have an impact on the eco-friendly ambience. It is based on exercises that can help to measure the risk to the health of inhabitants and the environment. Through Green Audit, one gets a direction as how to improve the condition of environment and there are various factors that have determined the growth of carrying out Green Audit. This includes the plants, greenery and sustainability of the campus to ensure that the buildings conform to green standards. This also helps to monitor the Environmental Policy is enacted, enforced and reviewed using various environmental awareness programmes.

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. The methodology includes: preparation and filling up of questionnaire, physical inspection of the campus, observation and review of the documentation, interviewing key persons and data analysis, measurements and recommendations. It works on the several facets of ‘Green Campus’ including Water Conservation, Tree Plantation, Waste Management, Paperless Work, Alternative Energy and Mapping of Biodiversity.

‘Green Audit’ aims to analyze the environmental practices within and outside the college campus, which will have an impact on the eco-friendly ambience. Green audit is assigned to the criteria 7 of NAAC.

There are main three pillars i.e., zero environmental foot print, positive impact on occupant health and performance and 100% graduates demonstrating environmental

literacy. The goal is to reduce CO₂ emission, energy and water use, while creating an atmosphere where students can learn and be healthy. The college has to work on the several facets of 'Green Campus' including Water Conservation, Tree Plantation, Waste Management, Paperless Work, Alternative Energy and Mapping of Biodiversity.

Methodology

In order to perform green audit, the methodology included different tools such as preparation of questionnaire, physical inspection of the campus, observation and review of the documentation, interviewing key persons and data analysis, measurements and recommendations. The study covered the following areas to summarize the present status of environment management in the campus:

- Water management
- Energy Conservation
- Waste management
- E-waste management
- Green area management

A water audit is an on-site survey and assessment to determine the water use and hence improving the efficiency of its use and method(s) of conservation. Water is used for drinking purpose, canteen, toilets, laboratory and gardening. Loss of water must be checked, neither by any leakages, nor by over flow of water from overhead tanks. The green audit practically involves use of renewable sources, conservation of the energy, rain water harvesting program, and efforts of carbon neutrality, plantation of trees, E-waste management and hazardous waste management.

QUESTIONNAIRE FORMAT

1.GENERAL INFORMATION

1.1 Year of Establishment of college: 2013

1.2 **History behind the establishment of the college:** The first initiative to establish an institute of higher education at Gotan was taken in 2008 by the local educationists under the sponsorship of Sri SriRamkrishnaSaradhamoni Ashram. The college was inaugurated on 25 April 2013 by the name of the great philologist and ... of the soil AcharyaSukumarSen . This brought into actuality a long cherished dream in the mind of thousands of people who came up with active support, generous donations and untiring labour to bring the college to what it is today. The University of Burdwan granted Provisional affiliation to this college from the academic session 2013-14. In the year 2018, the college was granted permanent affiliation by the University. The college is now running in its own Three storied Building constructed by the govt. Grant, MPLAD and Public donation.

1.3 Total campus area: 5.77 acre

1.4 Total built up area: 0.18 acre

1.5 Total open space area: 5.59 acre

1.6 Total green area: 250 sqmt.

1.7 Whether the college is implementing the Green Policy for the first time: "yes", "no" and "not applicable"

(mention date/month/year): Yes (01.04.2022)

1.8 Whether green audit is followed annually, if so, please produce the year-wise recommendations of the auditor along with report (as Annexure): "yes", "no" and "not applicable": No

1.9 Whether college has constituted the "College Environmental Committee", "yes", "no" and "not applicable"

(if so, give the details of it): Yes

1.9.1 **Name of the Committee members :**

1. Principal : President

2. Dr. Nirmal Chattopadhyay : Convenor

3. Prof. Sarama Nayak : Member

4. Prof. Kausik Mallick : Member

5. Mr. Pijush Karmakar : Member

1.9.2 Number of meetings conducted so far:

1.9.3 **Resolution of the meetings:**

1. **Meeting date :** 2/4/2022

Resolutions : a) A green campus is to be initiated. b) NSS volunteers be requested for plantation in the campus

c) Governing Body of the college be requested for the boundary wall

2. **Meeting date:** 16/8/2022

Resolutions : a) A medicinal plant garden be set up in the college. b) Plantation work by the side of the children's park be initiated c) Principal of the college be requested to construct fencing of the medicinal plant garden

3. **Meeting date :** 4/2/2023

Resolutions : a) NSS volunteers be requested for plantation in the campus b) Solid waste disposal process be renewed at an early date.

1.9.4 **Action taken by the Committee ;** The Environmental Committee requested the IQAC of the college for arrangement of the fencing of the medicinal plant garden. As a result , a new medicinal plant garden has been set up in the college.

1.9.5 Future programmes of the Committee : The committee requested the G.B. through the IQAC of the college for construction of the boundary wall of the campus. As and when the same will be ready , large scale plantation programme will be undertaken within the campus. Besides, rainwater harvesting measures will be undertaken in the college.

1.9.6 **Policy enforcement strategies** : The committee requested the G.B. through the IQAC for allotment of college fund for green campus initiatives in the campus. Principal of the college be requested to move to the local Gram Panchayat for free supply of saplings.

1.10 Whether college has conducted any awareness/responsibility programme among the staff members: **yes, "no" and "not applicable" : Yes**

1.11 Whether all the departments/teachers/non-teaching members/students are aware about the need of the environmental protection and audit: **"yes", "no" and "not applicable" : Yes**

1.12 Whether college has involved the students as volunteers in greening programmes: **"yes", "no" and "not applicable" : Yes**

1.13 Whether construction/demolition/repairing are in compliances with green standard: **"yes", "no" and "not applicable" : No**

1.14 Whether college has conducted any workshop/seminar/lecture on environmental awareness programme inside and/or outside the campus: **"yes", "no" and "not applicable" : No**

1.15 Whether the institute has department of Law/Environmental Science/3-Year degree Course/Course curriculum **"yes", "no" and "not applicable" : (if so, how does it takes part in greening programmes)**

Yes ,One course of 100 marks with Project work of Environmental Studies is included in the curriculum. Students are taught different aspects of environmental issues

1.16 Whether college provides any community services, if so, give details (as Annexure): **"yes", "no" and "not applicable"**

1.17 Whether the students are aware about the use of medicinal plants (any lecture/seminar/conference organized on it): **"yes", "no" and "not applicable" . Yes**

1.18 Comments on the following:

1.18.1 Plantation program: Y / N : Response :Y

1.18.2 Formation of Natural club/Eco club: Y / NResponse :Y

1.18.3 Management of natural resources, wildlife, conservation of species: Y / NResponse : Yes (Pisciculture)

1.18.4 Any project sponsored by national funding agency/NGO, independent project related to environmental issues: Y / N Response :No

1.18.5 Is there any incidence of burning of plastics containing garbage within the campus for necessary reduction: Y / N Response : No

1.18.6 Celebration of 5th June, Ozone day, Earth Day etc.: Y / NResponse :Yes

1.18.7 Number of field visits/survey records: Y / N (if Y number) : Response :Y. (Number : 1)

1.18.8 Campus biodiversity register :Response :Y

1.19 General aspects (express in statements)

1.19.1 Campus cleanliness :Campus is maintained by sweeper and NSS volunteers. Students are well aware of campus cleanliness.

1.19.2 Rainwater harvesting : At present, there is no Rainwater harvesting system

1.19.3 Solar street lamps : The campus is provided with street lamp.

1.19.4 Carbon dioxide neutrality on the campus by developing greenery.: The college is situated within lush greenery

1.19.7 Man-made nest to attract some birds to maintain ecological balance : Not now.

1.19.8 Restriction in use of plastic and plastic products : The campus is plastic free

- 1.19.9 Culture of some ducks, swans etc., for scenic beauty in pond or any water body resources (if available) : Not now
- 1.19.10 Green monitoring by green committee/volunteers/team : The Environmental Committee and NSS team periodically monitor the green campus
- 1.19.11 Training on vermicomposting : No
- 1.19.12 Celebration of 'No vehicle Day' on a particular day : No Vehicle Day is voluntarily observed on every 5th of each month
- 1.19.13 Dams inside the campus to meet the demand for water ; No
- 1.19.14 Installation of fire safety instruments in all the buildings/departments : No
- 1.19.15 Toilets/separate toilets for differently abled students : One Toilets/separate toilets for differently abled students is present

1.20 Over all noise level

Sl no.	Inside campus area	Outside campus	Class room	Lawn	Office	Laboratory	Canteen
	40 db	20db	45db	50db	30db	10db	45db

1.21 Is there any device (preferably HVS: High Volume Sampler) for measuring ambient air quality in the campus (if so, pl mention the data month wise): **"yes", "no" and "not applicable" : No**

2. WATER MANAGEMENT

2.1 Whether college has an efficient and hygiene water storage mechanism to minimize the loss of water during storage

"yes", "no" and "not applicable" : Yes

2.2 Whether college is using water filter with RO, Aqua Guard and/or large water filter with cooler at the strategic locations in the college. If so, are they under AMC: **"yes", "no" and "not applicable" : Yes**

2.3 Whether college has its own mechanism in repairing of water leakage: **"yes", "no" and "not applicable" : No**

2.4 Is there any rainwater harvesting unit in college: **"yes", "no" and "not applicable" : No**
(if so, what are the uses of this water:)

- a)
- b)
- c)
- d)

2.5 Whether college has developed any reuse and recyclable of water system: **"yes", "no" and "not applicable" : No**

2.6 Is there any scope of measurement of water quality parameters used in hostel, lab, office, canteen, tap water (if so, parameters: pH, EC, TDS etc.) :Response :No

2.7 Lab-wise water consumption (lt/d) :Response :No

Chemistry

Zoology

Botany

Physiology

Geography

2.8 Whether college has sufficient/adequate drainage system: **"yes", "no" and "not applicable"**

Response :Yes

3. ENERGY CONSERVATION

3.1 Reduction of energy consumptions, especially fossil fuel energy

3.1.1 Total electric consumption amount ...8160..... KWH/Yr

3.1.2 Average electrical consumption in a month : 680 KWH.....

3.1.3 Total No. of

i)LED : 35

ii) CFL :0

iii) Tube lights : 85

iv) Incandescent lamps : 0

v) Fans : 105

vi) Air conditioners/Air Coolers ; 0

3.1.4 Whether college has any provision/choice of renewable and carbon-neutral electricity options:

"yes", "no" and "not applicable" :Response :Yes

3.1.5 Whether college has planned to install solar panels: **"yes", "no" and "not applicable" : Yes**

(if so, Project installed/working: Date/Month/Year) Installed on 10/05/2018

3.1.6 Whether college has efficient water heating system: **"yes", "no" and "not applicable" : Not applicable**

3.1.7 Whether the staff members of all sectors are concerned in turning off electrical appliances when not in use in both commercial and residential area: **"yes", "no" and "not applicable" :Response :Yes**

3.1.7 Is there any monitoring system – like put off the main switch where there is no need of electricity?

"yes", "no" and "not applicable" : Response :Yes

3.1.8 Whether the users follow the appropriate and measurable targets for a reduction of energy, such as, computer, printers, electrical equipment when not in use: **"yes", "no" and "not applicable" :Response :Yes**

3.1.9 Is there any options for equipment's running on standby mode: **"yes", "no" and "not applicable" :Response :No**

3.1.10 Whethercollege has taken initiative to purchase efficient and environmentally sound appliances in order to fulfill the green budget: **"yes", "no" and "not applicable" :Response :Yes**

3.1.11 Whether college has its own mechanism in repairing of electrical fault:

"yes", "no" and "not applicable" : Response : No

3.1.12 Whether the class rooms are with sufficient illumination in day time and ventilation:

"yes", "no" and "not applicable" : Response :Yes

Number of lights & fans in class room (average): Lights : 2 Fans : 2

Use of light & fans in the day time (average hours):Lights : 0 Fans :4

Number of windows per class: 3

Natural light source in day time (in hours) (average per class): All day

3.1.13 How many (%) e-notice generated by the college for academic/administrative purposes in a month .Response : 10 percent

3.1.14 How many (%) paper-notice generated by the collegefor academic/administrative purposes in a month :Response : 90 percent

3.1.15 Total number of computer, printer, Laptop, Xerox machine : Laptop 1, Xerox 1, Computer 6,Printer 5

4.1.9 Records of dustbins/collection bins inside the campus

Sl no.	Location of dustbin	No. of dustbins			Quantity of collection (per day)	Disposal time	Cleaning by ecofriendly product Y/N
		Biodegradable	Non-biodegradable	Plastic waste			
1	Lawn	3	3	1	500 g	9 a.m.	No

4.1.9 Whether the cleaning products used by the college staff are ecofriendly and under the COSHH (Control of Substances Hazard to Health) regulations: **"yes", "no" and "not applicable" : No**

Whether the college is using fertilizers, pesticides for any purposes, if so, amount used per month and places of uses :Response :No

Use of public transport: **"yes", "no" and "not applicable" :Response :Yes**

5.E-WASTE MANAGEMENT

5.1 Quantity of e-waste generated: 5 kg

5.2 Number of cartridge used month-wise: 1

5.3 Number of cartridge disposed in a year (average): 12

5.4 Number of times refilling & reusing method of disposal of e-waste (if any) No

5.5 Whether college has conducted any awareness programme on e-waste management: No
"yes", "no" and "not applicable"

5.6 Is there any means of disposal of unused computers, printers and electronic wastes through authorized agents: "yes", "no" and "not applicable" : No

5.7 Disposal methods

Sl No.	Location	Amount generation	of	Method of disposal	Name of the Agency (if any) for disposal

6. GREEN AREA MANAGEMENT

6.1 Is there any garden in the college campus/outside the campus under college custody: "yes", "no" and "not applicable" : Yes

6.2 Whether the garden is watered by using drip/sprinkler irrigation system: "yes", "no" and "not applicable" : Yes

6.3 Is there any mechanism of review of periodical monitoring of tree species: "yes", "no" and "not applicable": Yes

6.4 Whether the college has taken any programme for plantation of some fruit trees which can attract birds, bees etc. : No

"yes", "no" and "not applicable"

6.5 Biodiversity mapping

Sl No.	Name of the place	Area	Type of plantation				Species name & quantity	Name of the Family	Total no. of species
			Indigenous plants	Medicinal plants	Ornamental plants	Exotic plants			
1	Campus	250s qm					Buckwood Tree, Banyan tree, Acacia, Caesalpina,	1 2 6 1	

6.6 Records of Plantation programmes

Sl No.	Programme conducted	Date of functioning	No. of tree planted	Present status of the species	Documentation (if any)	No. of beneficiaries
1	World Env. Day	5 th June	4	2 dried	Pictures available	Not applicable
2	Netaji	23 rd January	2	Dried		NA

[Signature] 28.06.2023
[Signature of Coordinator]



[Signature]
[Signature of Principal]
28.06.2023

Principal
Acharya Sukumar Sen Mahavidyalaya
Vill. & P.O. - Gotan, Dist.-Purba Bardhaman