



GREEN, ENERGY & ENVIRONMENT AUDIT REPORT (FY 2020-21)



**GOUR MOHAN SACHIN MANDAL
MAHAVIDYALAYA**

Village & P.O. Bireswarpur, South 24
Parganas, 743336

3/29/2021

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1 ACKNOWLEDGEMENT

TECHNO CONSULTANT team thanks to the management of Gour Mohan Sachin Mandal Mahavidyalaya for assigning the work of Green, Environment & Energy Audit. We appreciate the co-operation extended to us for completion of the project. Our special thanks are extended to:

Principal- Dr. Abdullah Jamader Hasan
IQAC Co-Ordinator– Ms. Ranjini Guha

Also, our sincere thanks to teaching & non-teaching Staff of College for giving us necessary inputs to carry out this very vital project of Green Audit. We are also thankful to other staff members who were actively involved while collecting the data and conducting field assessments.

2 DISCLAIMER

TECHNO CONSULTANT Green Audit Team has prepared this report for Gour Mohan Sachin Mandal Mahavidyalaya based on input data submitted by the representatives of college complemented with the best judgment capacity of the audit team. It is further informed that the conclusions are arrived following best estimates and no representation, warranty or undertaking, express or implied is made and no responsibility is accepted by Audit Team in this report or for any direct or consequential loss arising from any use of the information, statements or forecasts in the report. If you wish to distribute copies of this report external to your Institute, then all pages must be included. TECHNO CONSULTANT, its staff and auditors shall keep this report confidential and shall not disclose any such information to any third party, except that in the public domain or required by law or relevant accreditation bodies. TECHNO CONSULTANT also confirms that during this audit, no environmental monitoring was done with the help of instruments.

The entire report is compiled by Mr. Dev Deepta Nandy, Lead Auditor- ISO 14001:2015 (Environment Management System) IRCA Certificate No. 11606 dated 13th November 2006 & Team Member. On Site audit was conducted on 19th & 20th March 2021.

3 ABOUT GOUR MOHAN SACHIN MANDAL MAHAVIDYALAYA

Gour Mohan Sachin Mandal Mahavidyalaya was founded by Dr. Satyendranath Naskar, M.A.(Double), B.T., Ph.D., a torch-bearer in the field of education of the backward community, a renowned educationist, a social reformer and formerly Principal of this College (1968-1994). In the year 1968 Late Sachindranath Mandal, son of Late Gourmohan Mandal of the village Bireswarpur donated land and a substantial sum of money towards the establishment of this college in this remote rural area. Numerous other benevolent persons including Late Kazem Ali Molla also came forward and contributed labour, land and money for this purpose. But the early and tragic death of Sachindranath Mandal stopped the enthusiasm of the members of his family. But within a short period, his mother, widow, daughters, brothers, and nephews took up the challenge of building this College. The College was then named Gour Mohan Sachin Mandal Mahavidyalaya.

The University of Calcutta granted affiliation in 1968 for B.A.(Pass) course and B. Com (Pass) course in 1978. Honours courses were started in Bengali, Political Science and Education in 1985. In 1995 Honours Course in History was opened. Honours in Accountancy was introduced in 1996 and Philosophy in 1998. Honours in English and Geography were introduced in 2002. The Science

Department came into existence in 2000. The expansion of the science course in Zoology and Botany received University approval in 2006. Today there are courses like BA(Hons) in English, Bengali, History, Philosophy, Political Science, Education and Geography, Sanskrit, B. Com (Hons) in Accountancy and Finance, B.Sc. (Hons) in Mathematics and B.Sc. (General) in Physics, Chemistry, Mathematics, Botany, Zoology, Computer Science. Environmental Science, and Food and Nutrition. The College has introduced Music, Journalism & Mass Communication, Physical Education as general subjects from the academic session of 2012-13. The C.U. has granted fresh extension of Affiliation in Economics from this session 2013-14. The college runs a Study Centre of Netaji Subhas Open University and conducts vocational and career training courses in Amin Survey and Tailoring.

The College is at a stone's throw from Madhabpur Station on the Sealdah- Lakshmikantapur Railway Line. The environment of the surroundings is simply charming. The Calcutta – Kulpi Road runs past the College. The college is situated at about 40 bighas of completely elevated lands of its own. The Bireswarpur Post Office is located just adjacent to the hostel buildings.

3.1 Aims and Objects:

The college endeavours to educate the young boys & girls according to the best traditions of the country, while instructing them in modern arts, science and commerce.

3.2 Vision

According to David Taylor the four stages of success are:

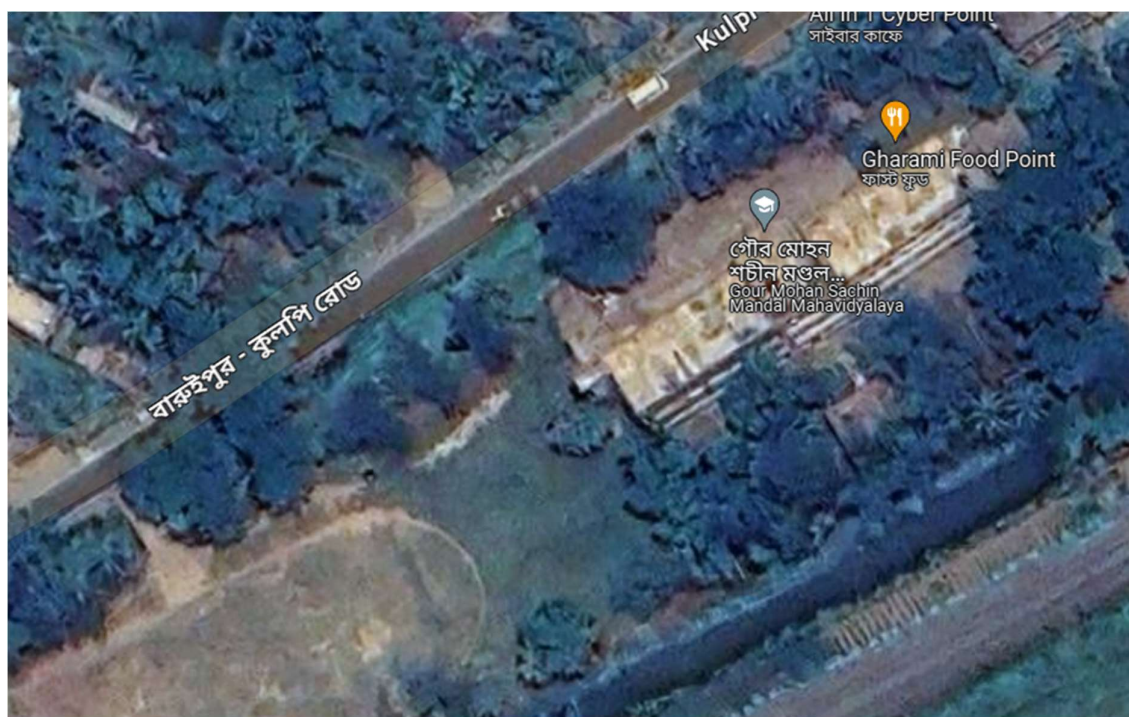
- a) know where you want to go
- b) know where you are now
- c) know what you have to do to get where you want to go
- d) do it.

Gour Mohan Sachin Mandal Mahavidyalaya perceives education and the process of educating as a total integral contextual process which includes students, teachers, parents' administration and the environment.

The college therefore strives to impart quality and equitable education to many at affordable costs. Serving the cause of social justice, ensuring equity and increased access to arenas of higher education in the wider global scenario are the primary endeavours of the college. The college seeks to provide holistic education to diverse strata of students cutting across boundaries of caste, creed, religion and gender. The college believes innately that pleasure in the job puts perfection in the work. The college seeks to inculcate among the students the road to success.

3.3 Mission

- ✓ To enrich the mind of the learner and to enable them to think analytically and to understand what is happening around them.
- ✓ To enable the learners to do productive work and access gainful employment including self-employment particularly contextual in the area's socio-economic reality of poverty and employment.
- ✓ To inspire the students to become national and global citizens through activities of NCC and NSS.
- ✓ To bolster community development through vocational courses and distance education programmes.
- ✓ To create an environment for inclusive growth through participation of all the stakeholders in the advancement of the college.



Map View of Gour Mohan Sachin Mandal Mahavidyalaya

3.4 The student and faculty strength of the college

Number	Gents	Ladies	Total
No of students	1510	2066	3576
No of teachers	49	27	76
No of Non-teaching staffs	23	5	28

3.5 Physical Structure

Departments' Room	8
Classrooms	30
Girl's common room	1
Gymnasium	1
Staff Room	1
Principal Room	1
Smart Class Room	3
Boys Toilets	5
Ladies Toilets	4
Male Staff Toilet	4
Female Staff Toilet	3
Laboratories	8
Conference Hall/Seminar Hall	1
Meeting room	1
IQAC Room	1
Office Room	1
Guest Room	2
Library Reading Room	1
Library Stock Room	1
Union room	1
NSS Office	1
NCC Room	1
Canteen	1
Store Room	1
Generator Room	1

3.6 List Of Departments

- ✓ Bengali
- ✓ English
- ✓ Education
- ✓ History
- ✓ Philosophy
- ✓ Political Science
- ✓ Sanskrit
- ✓ Sociology
- ✓ Journalism & Mass Communication
- ✓ Physical Education
- ✓ Music
- ✓ Physics
- ✓ Mathematics
- ✓ Chemistry
- ✓ Botany
- ✓ Zoology

- ✓ Food & Nutrition
- ✓ Geography
- ✓ Economics
- ✓ Environmental Science
- ✓ Computer Science
- ✓ Commerce

3.7 Course Offered

Subjects offered by the Faculty of Arts:

- ✓ Advanced (Honours) Courses in Bengali, English, Education, History, Sanskrit, Political Science
- ✓ General Degree Courses in Bengali, English, Geography, History, Journalism, Music, Political Science, Sanskrit, Philosophy, Physical Education, Sociology and Education.

Subjects offered by the Faculty of Science:

- ✓ Advanced (Honours) Courses in Mathematics, Geography, Chemistry, Botany, Zoology, Physics.
- ✓ General Degree Courses in Mathematics, Botany, Physics, Chemistry, Environmental Science, Zoology, Computer Science and Food & Nutrition.

Subjects offered by the Faculty of Commerce:

- ✓ Advanced (Honours) Courses in Accountancy.
- ✓ General Degree Courses in Economics & Accountancy.

4 SCOPE OF AUDIT

- ✓ To identify opportunities to sustainable development practices
- ✓ Assessment of environmental aspects within the facility
- ✓ Material management, savings and alternatives,
- ✓ Energy management and savings,
- ✓ Water management and economy of use,
- ✓ Waste generation, management, and disposal,
- ✓ Noise reduction, evaluation, and control,
- ✓ Air emissions and indoor air quality,
- ✓ Environmental emergency prevention and preparedness.

5 NAME OF AUDITEE

Sl. No.	Name of Auditee	Position/Department
1	Dr. Abdullah Jamadar Hasan	TIC
2	Ms. Piyali das	NAAC Co-ordinator
3	Ms. Ranjini Guha	IQAC Co-ordinator
4	Ms. Anupama Maitra	Associate Professor

6 GREEN AUDIT & ITS OBJECTIVES

A Green audit is an audit, in which one assesses campus performance in complying with applicable environmental laws and improving environment management system through awareness & systematic approach. 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. The main objective of the green audit is to promote the Environment Management and Conservation in the College Campus. The purpose of the audit is to identify, quantify, describe, and prioritize framework of Environment Sustainability in compliance with the applicable regulations, policies and standards. The main objectives of carrying out Green Audit are:

- ✓ To introduce and create awareness among stakeholders to the real concerns of environment and its Sustainability.
- ✓ To secure the environment and cut down the threats posed to human health by analysing the pattern and extent of resource use of the campus.
- ✓ To establish a baseline data to assess future sustainability by avoiding the interruptions in environment that are more difficult to handle and their corrections requiring high cost.
- ✓ To bring out a status report on environmental compliance.

This audit report contains observations and recommendations for improvement of environmental consciousness.

7 METHODOLOGY

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 summarise the present status of environment management in the campus:

- ✓ Water Management
- ✓ Waste Management (solid, liquid & e-waste)
- ✓ Energy Management
- ✓ Management on Carbon Foot-print
- ✓ Ambient Air & Noise Monitoring
- ✓ Green area management

8 OBSERVATIONS & RECOMMENDATIONS

8.1 Water Conservation

SOURCE OF WATER		
Sl no	Parameters	Response
1	No of Bore-well	1
2	No of motors used	4
3	Horse power – Motor	1.5 HP
4	Number of water tanks on top	5 no tanks
5	Capacity of tank	1000 ltr * 5 = 5000 ltr
6	Rainwater harvest available?	Yes
7	Is there any water recycling System.	No

Water consumption in the University:

Due to Covid-19 college was closed in this year hence very low consumption for occasional cleaning and use wash basin, toilets or urinals and making tea.

Sr. No.	Sector	Total yearly use (kl)
1	Toilet	Approximately 600 litre in this year
2	Urinal	
3	Drinking	
4	Garden	
5	Wash Basin	
6	Shower	

Water Management Practices Adopted by the College:

- ✓ College adopted Rain Water Harvesting System to avoid wastage of rain water.
- ✓ Aquagaurd installed by the institute for drinking purpose of students & staffs.

Recommendations

- ✓ Gardens may be watered by the water of Rain harvesting tank to save the pond water.
- ✓ Spread awareness through posters like: "Save Water", "Please Turn off the Tap" to save wastage of water.
- ✓ Half Yearly 1 camp/Program should be done to spread awareness for water conservation.
- ✓ Drinking water should tested from recognized laboratory.

8.2 Waste Management (Waste Generation and Disposal)

Waste management or waste disposal includes the processes and actions required to manage waste from its inception to its final disposal. This includes the collection, transport, treatment, and disposal of waste, together with monitoring and regulation of the waste management process and waste-related laws, technologies, and economic mechanisms. Waste can be solid, liquid, or gases and each type have different methods of disposal and management.

The aim of waste management is to reduce the dangerous effects of such waste on the environment and human health. A big part of waste management deals with municipal solid waste, which is created by industrial, commercial, and household activity

Category wise solid waste generation at college (kg/year)

Category of waste	Quantity (Kg)
Paper Waste	Data not available
Plastic Waste	
E Waste	
Metal Waste	
Glass Waste	
Wood Waste	
Kitchen Waste	

Types of waste	Particulars	Disposal method
E-Waste	Computers, electrical and electronic parts	Direct selling
Plastic waste	Pen, Refill, Plastic water bottles and other plastic containers, wrappers etc	Direct selling
Solid wastes	Damaged furniture, paper waste, paper plates, food wastes	Direct selling
Chemical wastes	Laboratory waste	Draining to local drain
Wastewater	Washing, urinals, bathrooms	Soak pits
Glass waste	Broken glass wares from the labs	Direct selling
Canteen Waste	Waste Foods, Peels of vegetables	Vermicomposting

Waste Management Practices Adopted by the College:

- ✓ Waste bins are placed inside the college building.
- ✓ College adopted Vermicomposting Method.
- ✓ College organized cleanliness drive through NSS Students.

Recommendation

- ✓ Recommended to placed bins outside the college building to keep the surroundings clean.
- ✓ Reduce the absolute amount of waste.
- ✓ Advised to check quality of chemical waste from laboratory then treat as per requirement and then drain to local drainage system.
- ✓ It is advised to contract with a waste collection agency.
- ✓ Maintain a record of quantity of waste.
- ✓ It is advised to start “Swach Bharat Abhiyan Camp” to keep the surroundings clean.

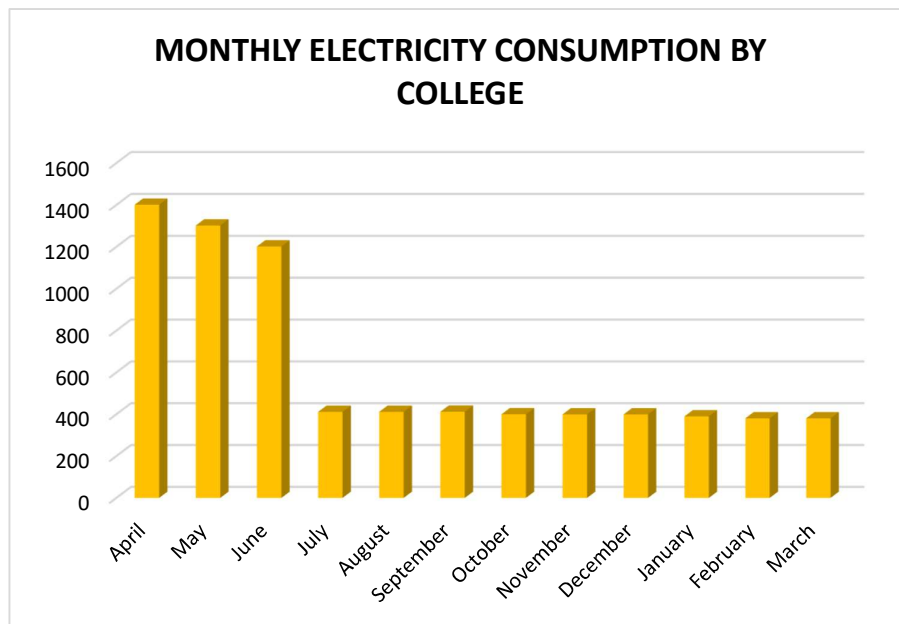
8.3 Energy management

Source of Power

Electricity Power at institute is supplied by WBSEDCL (West Bengal State Electricity Distribution Company Limited).

Electricity Consumption details

Sl. No	Month	Electric power consumption (Unit)
1	April	1401.33
2	May	1302.01
3	June	1202.01
4	July	411.33
5	August	411.67
6	September	412
7	October	399.86
8	November	399.6
9	December	399.6
10	January	390.17
11	February	380.67
12	March	380.67
Total		7490.92



Fossil Fuel Power

Details of major Fuel consuming Machines in college campus

Sr. no	Equipment	Number/year	Consumption/year
1	LPG for Lab	—	Due to lockdown, there was no fossil fuel consumption by college
2	LPG for canteen	—	
3	DG set	—	

Energy Management Practices Adopted by the College:

- ✓ College replaced the damaged light by LED lights.
- ✓ College Installed Solar Panel at rooftop.
- ✓ College Installed Green Generator.

Recommendation

- ✓ Appoint One or Two dedicated staff/peons in the concerned section should take responsibility of monitoring where electrical things are unnecessarily on.
- ✓ Replacement of all the no-LED lights to LED lights.
- ✓ Energy saving awareness spread among the students & staffs by displaying boards at appropriate place.
- ✓ Replacement of existing electric fans with BLDC fans can significantly reduce power consumption.
- ✓ To use Common or public Vehicle instead of individual vehicle to conserve fossil fuel
- ✓ Installation of solar power system.

8.4 Ambient Air Management & Noise Monitoring

- ✓ No ambient air monitoring done by college. It is advised to start monitoring the quality of college air.
- ✓ Noise level is not monitored by the college.
- ✓ It is advised to start monitoring the air quality & noise level from recognized lab.

8.5 Green Area Management

Campus is located in the vicinity of different types of flora, fauna & seasonal flowering plants. Various tree plantation programs are being organized yearly at college campus and surrounding villages through NSS team. College celebrated "World Environment Day". This program helps in encouraging eco-friendly environment which provides pure oxygen within the institute and awareness among villagers.

List of Some Trees in college campus:

- ✓ Coconut Tree
- ✓ Krishnachura
- ✓ Jhau Plant
- ✓ Debdaru Plant
- ✓ Rose Plant
- ✓ Patabahari Plant
- ✓ Mango plant
- ✓ Hibiscus Plant
- ✓ Marigold Plant
- ✓ Dalia Plant
- ✓ Neem Plant
- ✓ Morogjhuti Plant
- ✓ Bottle Palm Plant
- ✓ Dopati Plant
- ✓ Teak Tree
- ✓ Guava Plant
- ✓ Various Seasonal Flowering Plant

Green Management Practices Adopted by the College:

- ✓ College has 60% area reserved for plantation.
- ✓ College arranged camp twice or thrice in every year through NSS team.
- ✓ College Students celebrate "World Environmental Day" & plant trees on this day at inside and outside of the college.
- ✓ College selects an area for Social Forestry.
- ✓ College segregates an area for planting medicinal Plants.
- ✓ They deputed one dedicated person for watering plants.
- ✓ College established an Environ Club to organize the environment related curriculum.

Recommendations

- ✓ Use of recycled water shall be promoted in place of fresh water from pond.
- ✓ Review periodically the list of trees planted in the garden, allot numbers to the trees and keep records.
- ✓ College should make an environment Policy.
- ✓ Segregate a place for Organic farming.
- ✓ Spread awareness of environmental sustainability through board displayed and take actions to ensure environmental sustainability.
- ✓ Constitute of a College Environmental Committee that will hold responsibility for the enactment, enforcement, and review of the Environmental Policy.
- ✓ College should conduct annual internal audit to review & action is taken on the basis of recommendation mentioned in audit report.
- ✓ College could increase the camp to spread awareness on outreach community.

9 EMERGENCY PREPAREDNESS

- ✓ In case of any emergency incident, College staffs arrange ambulance & sent to the hospital which is located within 1 km near the college.
- ✓ There was no emergency preparedness procedure, neither any emergency numbers displayed at prominent locations.
- ✓ College can start doing mock drills with expert organizations to overcome possible environmental disaster in future
- ✓ Emergency numbers, like nearest police station, nearest hospital, ambulance, nearest fire brigade can be displayed at various strategic locations in the institute.

10 SOME PHOTOGRAPHS



College Garden



College Pond



Fire Extinguisher



Rain water harvesting System Installed

11 CONCLUSIONS

This audit involved extensive consultation with all the teams, interactions with key personnel. Overall

60% of the campus is for landscaping. The audit has identified a few observations & some recommendations for making the campus premise more environment friendly. Few things that are important to initiate for better improvement. Overall, the College Campus is well-maintained from the environmental perspective. Report compiled & prepared by Mr. Devdeepa Nandy.

12 REFERENCES:

- ❖ The Environment [Protection] Act – 1986 (Amended 1991) & Rules-1986 (Amended 2010)
- ❖ ISO 14001:2015 standard.



******END OF REPORT******