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SAGAR MAHAVIDYALAYA GREEN AUDIT REPORT FY 2020-21

Techno Consultant

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1 ACKNOWLEDGEMENT

TECHNO CONSULTANT, Green Audit Team thanks the management of Sagar Mahavidyalaya for assigning work of Green, Environment, Energy Audit. We appreciate the co-operation extended to us for completion of the green audit. Our special thanks are extended to:

Principal- Mr. Pradip Kumar Khatua (TIC)
IQAC Co-Ordinator– Mr. Shivdayal Chaudhari

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

2 DISCLAIMER

TECHNO CONSULTANT Green Audit Team has prepared this report for Sagar 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 22nd & 23rd March 2021.

3 ABOUT SAGAR MAHAVIDYALAYA

Sagar Mahavidyalaya played the role of a trailblazer in the field of higher education for Sagar Island. Sagar Islanders found an outlet to peep into the wider world of education as soon as Sagar Mahavidyalaya started its dream journey from Sundarban Janakalyan Sangha Vidyaniketan, Rudranagar with some budding students on and from 12th Sept. 1998.

Despite the remoteness and the transportation inaccessibility to Sagar Island, Sagar Mahavidyalaya sailed off through uncharted sea with flying colours opening its door to welcome the students to flutter their wings freely in order to achieve perfection in their respective fields and to reach the pinnacle of success in a congenial atmosphere.

In spite of the constant dearth of permanent faculty members, we have been striving to provide quality education to the students and trying to equip them with practical skills necessary for leading an honest and successful professional life and a decent and committed personal as well as social life. Keeping in mind the demands and needs of the pupils of the Islands, we are trying to introduce new courses of study which would be of benefit both to the students and the Islanders.

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We made a commendable mark in games and sports for the last few years. We regularly celebrate Annual Social programme (Aswamedh), Independence Day, Republic Day and Saraswati Puja with due pomp and grandeur and in colourful manner. We have introduced Smart Class Room, Career Counselling Cell, Multigym, Virtual Class Room and other technological accessories for the betterment of the students. It is worth mentioning that our dream has been translated to reality with the opening of a new science faculty and Sanskrit Honours in the year 2015. We are really grateful to the hon'ble Chief Minister of West Bengal - Ms. Mamata Banerjee, for her benevolent hands for opening the new science faculty as well as the erection of new science building. We actually believe in holistic development of the students. Sagar Mahavidyalaya has successfully opened Netaji Subhas Open University 'Study centre' to pursue M.A. in English, Bengali, History, Education, Political Science and Social Work. Students can also pursue BLIS and MLIS.

We now need the co-operation and encouragement from the parents and guardians of the students and the other Islanders so that we can continue our efforts for providing proper academic atmosphere and opportunities to our students in spite of our infrastructural constraints. We know that whatever has been achieved is 'petty' compared to the 'undone vast but let us hope and strive together. Where there is a will, there is a way. So let us take inspiration from the great poet, Tennyson and pledge to "To strive, to seek, to find, and not to yield".

3.1 Vision

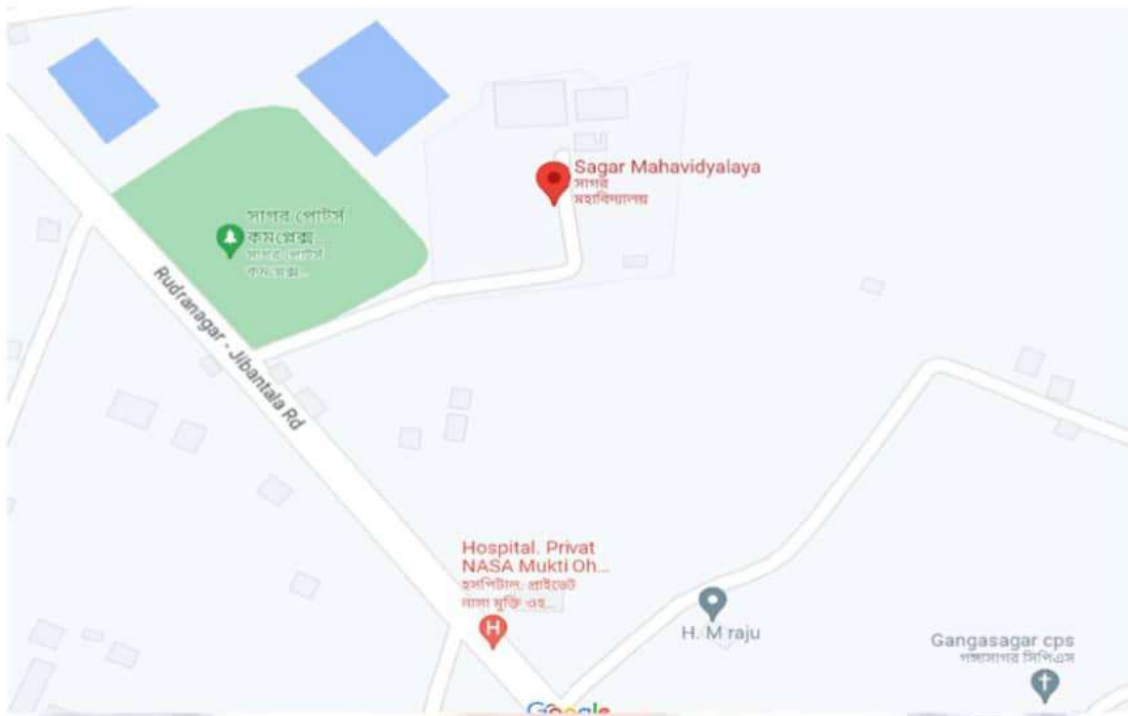
- ✓ The motto of Sagar Mahavidyalaya; "Knowledge is Freedom", is indeed the guiding force behind the policies taken by the institute in order to uphold the mission and vision of the college.
- ✓ The governance and decision making in this college is based on participative management and democratic views. The Governing Body of the college cooperates with the Teacher-in-Charge in every matter to establish and regulate a cordial and scholastic environment in the college. The Teacher-in-Charge personally communicates with the teaching and non-teaching staff members to ensure they are not facing any incongruities in their work.
- ✓ The academic and co-curricular activities of the college are regularly discussed in the Teachers' Council and Academic Sub- Committee meetings which are held regularly. The institution strictly adheres to the Academic calendar.
- ✓ The administration of this college is very student friendly. In cases of emergency and natural calamities, the college is always quick to take necessary official actions like reducing the admission and semester fee or arrange books for the students.
- ✓ All faculty members actively participate in designing and implanting strategic plans and also collaborate with the students in arranging functions and fests.

3.2 Mission

- ✓ To provide quality education to the students irrespective of caste, creed, religion, and diverse socio-economic status
- ✓ To nurture a sense of inclusiveness and ensure equity
- ✓ To promote a culture which is sensitized properly about sensitive issues like gender equality, climate change, freedom of speech, creativity
- ✓ To stimulate an academic environment where young minds can thrive on individuality, experimentation and innovation and become intellectually sound, empathetic and self-reliant.

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Location of Sagar Mahavidyalaya

3.3 The student and faculty strength of the college

Number	Gents	Ladies	Total
No of students	759	923	1682
No of teachers	7	4	11
No of Non-teaching staffs	7	3	10

3.4 Physical Structure

The college is located in about 2.9 acres of land. The built-up area of the college is 14000 Sq. ft

Departments' Room	8
Classrooms	30
Girl's common room	1
Gymnasium	1
Staff Room	1
Principal Room	1
Smart Class Room	1
Boys Toilets	5

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Ladies Toilets	4
Male Staff Toilet	4
Female Staff Toilet	3
Laboratories	4
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
NSOU Office	1
NCC Office	1
Canteen	1
Garbage collection bins	
Store Room	1
Generator Room	1

3.5 List Of Departments

- ✓ Bengali
- ✓ English
- ✓ Sanskrit
- ✓ Physical Education
- ✓ Political Science
- ✓ History
- ✓ Geography
- ✓ Education
- ✓ Physics
- ✓ Chemistry
- ✓ Mathematics
- ✓ Botany
- ✓ Zoology

3.6 Course Offered

Subjects offered by the Faculty of Arts:

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

Subjects offered by the Faculty of Science:

- ✓ General Degree Courses in Physics, Chemistry, Zoology, Botany and Mathematics.

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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	Mr. Prabir Kumar Khatua	TIC
2	Dr. Shivdayal Chaudhari	IQAC Co-ordinator
3	Mr. Avishek Mistry	IQAC Member
4	Mr. Hafijul Haque	IQAC Member
5	Mr. Pabitra Biswas	IQAC Member

6 GREEN AUDIT & ITS OBJECTIVES

The main aim objective of this green audit is to assess the environmental compliances and the management strategies being implemented in Sagar Mahavidyalaya. The specific objectives are:

- ✓ To monitor the energy consumption pattern of the college
- ✓ To quantify the liquid and solid waste generation and management plans in the campus.
- ✓ To assess the carbon foot print of the college
- ✓ To secure the environment and cut down the threats posed to human health.
- ✓ To impart environment management plans to the college.
- ✓ To identify the gap areas and suggest recommendations to improve the Green Campus status of the College.
- ✓ To suggest the best protocols for adding to sustainable development.
- ✓ To provide systematic corrective actions and future plans.
- ✓ To assess whether extracurricular activities of the Institution support the collection, recovery, reuse and recycling of solid wastes.
- ✓ To make sure that rules and regulations are complied with.

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7 EXECUTIVE SUMMARY

Due to Covid-19, College was closed in this Year (2020 -2021) from March 2020 to March 2021. Due to this it is not possible to kept all record & documents properly. Some office staff used to come to do office job and some maintenance work. During this time canteen was also closed. Hence water, electricity, diesel, petrol & LPG consumption was very low during this time. Also during this period the college was badly affected by cyclone "AMPHAN", which resulted in destruction/damage of many important files, overall campus also. This audit report contains observations and recommendations for physical part of the college mainly.

8 OBSERVATIONS & RECOMMENDATIONS

8.1 Water Conservation

Sl no	Parameters	Response
1	No of Bore-well	2
2	No of motors used	2
3	Number of water tanks on top	7 no tanks
4	Capacity of tank	1000 ltr * 6 = 7000 ltr
5	Rainwater harvest available?	No
6	Is there any water recycling System.	No

Water consumption in the College:

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 gardening.

Water Management Practices Adopted by the College:

- ✓ UV Plant installed by the institute
- ✓ College has plan to install Rain Water Harvesting Management System.

Recommendations

- ✓ Complete the "Rain Water Harvesting" project as soon as possible.
- ✓ Gardens should be watered by using drip/sprinkler irrigation system to minimise water use.
- ✓ Half Yearly 1 camp/Program should be done to spread awareness for water conservation.
- ✓ "Please Tap Off" poster should be fixed in front of the wall of every tap.
- ✓ Drinking water should tested from recognized laboratory.

8.2 Waste Management (Waste Generation and Disposal)

College was closed due to lockdown. So, no Biodegradable & non-biodegradable waste generated.

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Type of waste particulars and disposal method in college:

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
Wood wastes	Damaged furniture	Direct Selling
Paper Waste	Banners, examination papers, paper plates, useless official papers	Direct Selling
Food Waste	Rotten Vegetables, Vegetables Peel, Rotten food, fruits	Vermicomposting in college premises
Chemical wastes	Laboratory waste	Direct draining without treating
Wastewater	Washing, urinals, bathrooms	Septic tank then outside drain.
Glass waste	Broken glass wares from the labs	Direct selling

Waste Management Practices Adopted by the College:

- ✓ Waste bins are placed inside the college building to collect waste.
- ✓ College is announced as “plastic free zone”.
- ✓ College has plan to hire an agency for collecting waste in proper way.

Recommendation

- ✓ Reduce the absolute amount of waste that is produced from college staff offices.
- ✓ Complete the agreement process with an agency for collecting waste.
- ✓ Built a vermicomposting area inside the college.
- ✓ Advised to check quality of chemical waste from laboratory then treat as per requirement and then drain to local drainage system

8.3 Energy management

- ✓ Power is supplied by local electricity department. The major electricity consuming equipment installed in the campus are Motors, UV machine, Desktop, Printer, Fan, Tube light.
- ✓ Energy Sources are used in the college are: Electrical, Diesel, Petrol LPG
- ✓ Although there was very low amount of energy used in this year due to Covid-19.

Energy Management Practices Adopted by the College:

- ✓ College installed Solar panel at rooftop to save electricity.

Recommendation

- ✓ Spread awareness for Energy saving among the students & staffs by displaying boards at appropriate place.
- ✓ To use Common or public Vehicle instead of individual vehicle to conserve fossil fuel

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- ✓ Gradual replacement of existing non-LED based lights to LEDs can further bring down costs for lighting.
- ✓ Replacement of existing electric fans with BLDC fans can significantly reduce power consumption and help in a good reduction in electricity charges.

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 monitored by the displayed board organized by PCB (Pollution Control Board)
- ✓ Noise level showed at board was 52 dBA

8.5 Green Area Management

- ✓ College has 80% area as reserved for Greenery.
- ✓ Campus is located in the vicinity of different types of flora, fauna, medicinal plants & seasonal plants.
- ✓ College Celebrate "World Environment Day". Through this program they not only do plantation also they spread awareness to students & villagers about the importance of Environment.
- ✓ College arranges campus for plantation inside & outside the college, twice or thrice in every year.

Inside of campus there are many medicinal plants & oxygen giving plants observed.

List of Trees in college campus:

Common Name	English Name	No. of Trees
Ghritokumari Plant	Aloe vera	25
Anantamul Plant	Hemidesmus indicus	16
Gurmar Plant	Gymnema sylvestre	15
Shewt Cheta	Plumbago zeylanica	17
Sorpogondha Plant	Rauvolfia serpentina	12
Lemon Grass Plant	Cymbopogon nardus	21
Sweet Tulsi Plant	Stevia rabaudiana Bertoni	33
Ayapan plant	Ayapana triplinervis	19
Basak Plant	Justicia adhatoda	26
Aswagandha Plant	Withania Somnifera	12
Ajwain Plant	Trachyspermum ammi	22
Sotomuli Plant	Asparagus racemosus	14
Golap plant	Rosa rubiginosa	2
Neem Tree	Azadirachta indica	2
Coconut Tree	Cocos nucifera	9
Banyan Tree	Ficus benghalensis	1
Chinarose Plant	Hibiscus rosa-sinensis	2

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Banana Tree	Musa spp	11
Mango Tree	Mangifera indica	4
Java apple Tree	Syzygium samarangense	3
Papaya Tree	Carica papaya	2
Tomato Plant	Solanum lycopersicum	2
Dragon Fruit Plant	Hylocereus spp.	1
Horitoki Plant	Terminalia chebula Retz	1
Araucaria Tree	Araucaria araucana	10
Box wood	Buxus Sempervirens	24
Screw Pine	Pondonus veitchii	120
Water Canna	Canna glauca	55
Sayo Palm	Sycas revoluta	8
Areca Palm	Dypsis lutescens	32
Good Luck Plant	Cordyline frutieosa	120
Mauritius hemp	Fureraea foetida	12
Cactus Plant	Opantia dillenii	1
Guava Plant	Psidium guajava	1
Panthpadap Plant	Ravenala madagascariensis	3
Chatim Tree	Alstonia scholaris	2
Seasonal Plant	-	18
Miscellaneous Plant	-	110

Recommendations

- ✓ Reuse of the water shall be done instead of use of fresh water.
- ✓ Watering schedule to be planned according to the season
- ✓ Create awareness of environmental sustainability and take actions to ensure environmental sustainability.
- ✓ Green library may be established.

9 CARBON FOOTPRINT ANALYSIS

Due to Covid-19 everything was closed hence there was no result reflected

10 EMERGENCY PREPAREDENESS

- ✓ 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.

11 SOME PHOTOGRAPHS



College Entrance



College Pond



Green Area of College

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12 REFERENCES:

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



END OF REPORT