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SIDHO-KANHO-BIRSHA UNIVERSITY

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Green Audit - Nistarini College, Purulia

CERTIFICATE

This is to certify that the Green Audit Report of Nistarini College, Purulia is based on the original data collected during the period of study. This has been independently assessed and is applicable to the service range of providing quality Education, Training and Mental Support to the students for their enriched future and career. Further, it is certified that the baseline data was prepared by internal Green Audit Team of Nistarini College, Purulia and submitted to us. The content of the baseline data of the study has been personally verified by the Green Audit Team constituted by Sidho-Kanho-Birsha University, Purulia including one external expert member from other university, 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 either taken by the Audit Team or are provided by the Internal Audit Team.

Certificate Memo No.: R/Cert/250/SKBU Dt:- 17-02-2023

Date of Issue of the Certificate: 17th February, 2023.

The certificate is valid for one year from the date of issue.

N. Bandyopadhyay

Dr. Nachiketa Bandyopadhyay,
Registrar
Sidho-Kanho-Birsha University,Purulia

Registrar
Sidho-Kanho-Birsha University
Purulia-723104

Date: 15/02/2023

To
The Principal
Nistarani College
Purulia
West Bengal

Ph: 9434009555
Website: www.nistarinicollege.ac.in
e-mail: collegenistarini@gmail.com

Subject: Audit Report Submission from Experts

Sir
After verification of all the aspects in the College and necessary assessment of the report on "Green Audit" / "Environmental Audit" submitted by your College for the periods of 2020-'21 and 2021-'22, here, we are submitting the Audit Report of "Environmental Audit/ Green Audit" of your College of the periods of 2020-'21 and 2021-'22 for your kind perusal in the attached sheet.

We request you to please acknowledge and oblige.

Yours

15/2/23

Dr. Subrata K. Dey
Professor, Dean of Science
Sidho Kanho Birsha University
Purulia

15.02.2023

Tapan Kumar Hazra
Inspector of Colleges
Sidho Kanho Birsha University
Purulia

15/2/23

Dr Apurba Ratan Ghosh
Professor, Environmental Science
The University of Burdwan
PurbaBardhaman

SIDHO-KANHO-BIRSHA UNIVERSITY · ESTD 2010 ·

Report of Environmental Audit/Green Audit

1.0 Introduction

Environmental Audit or Green Audit is a systematic identification, quantification, recording, reporting and analysis of the different aspects as well as components of the environmental status of the HE Institutes. The objectives of'Environmental Audit'/ 'Green Audit' are to evaluate the various parameters linked with environmental practices in and around the HE Institutional campus, actually, it can help in creating the congenial and environment-friendly atmosphere for the stakeholders. It is framed with an objective of looking after the practices performed by the authority within the institution, otherwise which may cause risk to the health of dwellers and the environment. Under the present format of AQAR and SSR proposed by NAAC Environmental Audit/Green audit is a mandatory parameter. It is one the key components of Criteria VII.

1.1 About the College

Nistarini College, located at Purulia was established in 1957 under the initiative of the then Chief Minister Dr. Bidhan Chandra Roy and request of the eminent leaders and social workers of this district for the propagation of women's education in the rural sector of West Bengal.

Initially, it was affiliated to the University of Burdwan, but recently it is under the affiliation of Sidhu-Kanho-Birsha University since 2011. Bearing both 2(f) & 12(B) of UGC Act. The motto of this Institute is to equip the women students with professional efficiency and social competencies by providing latest teaching technology, use of ICT, etc.

College started with subjects like Bengali, Economics, Education, English, Geography, History, Political science, Philosophy, Sanskrit and Mathematics. In course of time altogether they have 10 additional subjects including PG in Bengali in 2017.

It was first accredited by NAAC with Grade B^{++} on 2004; and Second accreditation was held during 2016 with Grade of A (3.13).The College has a lush green garden containing few very rare old and heritageplants, more than 70 years, sprawling over a vast expanse of land inside the campus. The canopy of the trees provides carbon neutrality also hosts a wide variety of wild creatures. Including different types of butterflies and insects. There is no sponsored project in this College.

There isthreeUGC Girls Hostel inside the College campus.

2.0 Executive Summary

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.

In accordance with the Format of Green Audit and Evaluation Plan,Nistarini College,Purulia, West Bengalhas prepared it for the year 2021-'22 and audit was conducted in the month of February 2023.College, is concerned and believes on the students' appropriate knowledge, experience, guidance and skills for development of teaching ability and art. The College has initiated 'The Green Campus' programsince Dec 2015 under the Green Policy.

The purpose of the audit is to ensure that the practices followed in the campus are in accordance with the green campus adopted by the institution. With this in mind, the specific objectives of the audit are to evaluate the adequacy of the management control framework of environmental sustainability as well as the degree to which the departments are in compliance with the applicable regulations, policies and standards.The analysis was based upon an examination of the status,

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.

3.0 Significant Observations

1. College has a good green ambience coveringapprox. 2.0 acres.
2. They have constituted the Environmental Committee and Eco-club including the NSS units. They have conducted so far eightmeetingsduring the year 2021-'22and has taken efforts for maintaining greenery in the College campus.
3. College maintains one Butterfly garden with the help of students. Students are trained to study the behavior of insects, birds, and plant diversity in the campus.
4. College has adopted some practices to dispose the solid and liquid wastes of laboratories.
5. College has taken initiative to install the solar panels.
6. College is maintaining the disposal of all sorts of wastes. E-wastes are managed through licensed vendors.
7. College started vermicomposting, medicinal plants and aromatic plant cultivation.
8. All teaching and non-teaching staff members, students are advised to use recyclable materials for storing their food, water *etc*., to reduce the wastes.
9. College is conducting some environmental awareness programmes, taking initiative in making bird-nests on some trees in the campus.
10. College has so many heritage plant species inside the campus and one deep-well fully inhabited by Indian pipistrelle
11. College has 7 solar street lamps.

However, after detailed paper examinations and physical verification it is noted that, some of the practices are required to be followed by the College in implementing the Green Policy of the institution and the applicable environmental standards. In addition, certain processes could benefit from further review in order to improve their efficiency, fairness and consistency.

4.0 Statement of Assurance

As far as possible and appropriate audit procedures 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.

GREEN AUDIT WORKING FORMAT

5.0 Audit Framework and detailed findings

The following audit framework is used for conducting Green Audit inthe Year 2021-'22. 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 control measures to reduce the absolute amount of wastes.
	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 been advised to take initiative for disposal of wastes through Purulia Municipality and formal MoU may beinitiated.
	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 bins for disposal of differently wastes.
	Recycle or safely dispose of white goods, computers and electrical appliances.	Electrical wastes, printer cartridges *etc*., are negligible, and disposed through E-License holder for collection of E-wastes particularly.
	Use reusable resources and containers and avoid unnecessary packaging where possible	No, the College has not so far used reusable resources and containers.
	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.
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	The College practicesa fewenvironment-friendlyarrangements for such events, such as Cultural Events, International and National seminars and Conferences.
	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 and students.
	Dispose all waste, whether solid or otherwise, in a scientific manner and ensure that it is not released directly to the environment	It is advised to College to dispose all wastes, whether solid or otherwise, through Purulia Municipality and ensures that it is not released directly to the environment.
Reduce energy consumption,	Support renewable and carbon-neutral electricity options on any energy-purchasing	College has taken the initiatives for production of Solar electricity.

especially of energy derived from fossil fuels	consortium, with the aim of supplying all college properties with electricity that can be attributed to renewable and carbon-neutral sources.	College is dependent on energy-purchasing consortium.
	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 State Electricity Board.
	Look into the possibility of on-site micro-generation of renewable electricity.	Proposal of Solar Panels is initiated.
	Give preference to the most energy efficient and environmentally sound appliances available, this includes only using energy-saving light bulbs	The College is using mostly mostly dependent on tube light, CFL and LED; producing 70% e-notice for academic & administrative purposes.
Reduce energy consumption, especially of energy derived from fossil fuels	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	Students be engaged to check misuse of electricity. All the stakeholders be aware in 'switch off drill' to save electricity.
	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	Less number of electrical appliances/equipments, so regular monitoring system is rarely required.
	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	There is no such equipments.
	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 has huge natural greenery; cleanliness is maintained by the students. Tree plantation programmes are followed in different occasions.
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 has its own Cycle Stand, Bike Stand and is well connected throughtrain and bus services, so all of them mostly avail bus/train services, *etc.*
Minimize the use of unsustainable transport	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 require 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

		because of other conveyance.
Minimize consumption of water.	Repair sources of water leakage, such as dripping taps and showers as quickly as possible.	Misuse and wastage of water from sources are taken care of.
	Install appliances which reduce water consumption	Practised as much as possible.
	Encourage a decrease in water usage among staff, students and conference guests	College inspires a decrease in water usage among staff, students and conference guests.
	Use an efficient and hygienic water storage mechanism is to minimize the loss of water during storage	Department of Environmental Science is engaged in testing/monitoring the quality of drinking water to maintain the hygienic water on regular basis.
	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	College has all together 17Aqua Guards - nine in Girls Hostels and eight in the college campus.
	Install Water recycling mechanism, such as rain water harvesting system	There is a system of collection of rain water from the S N BoseBuilding.
	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.
	Minimize the use of fertilizers and pesticides in the University/Institutional gardens, opting for the use of compost produced on site wherever possible	Negligible amount of fertilizers and pesticides are used in the campus for maintenance of garden,*etc*.
	Dispose the chemical waste generated from the laboratories in a scientific manner	Minimum use of hazardous chemicals in the laboratory.
	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 has already started to prepare a garden within the Campus. College has a small medicinal plants' garden.

	Encourage the faculties and students to plant trees in the garden.	Students are engaged in tree plantation programme in different occasion like WED *etc.* Choice-plantation, fruit-plantations are practised in the campus.
	Reviews periodically the list of trees planted in the garden periodically	Periodical maintenancebe followed as observed in the accounts.
Ensure that environmental awareness is created	Conduct environmental awareness workshops as a part of the program.	Environmental awareness programmes organized for conservation of nature and natural resources, wildlife, and biodiversity, Unnat Bharat Abhiyan on water quantity and quality conservation.
Ensure that environmental awareness is created	Create awareness of environmental sustainability and takes actions to ensure environmental sustainability.	College conducts seminars and awareness programmes; and involvement of students is encouraging.
	Reduce the rate at which the University/Institute contributes to the depletion and degradation of natural resources	College is not directly or indirectly participating 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 50 marks (4 credits) in the syllabus as per University guidelines is followed.
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	During new constructions are furnished by PWD.
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 constituted anEnvironmental Committee and conducted so far eightmeetings during 2021-'22. College has a vast areas of natural plants contribute in carbon neutrality.
	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	Environmental Committee is constituted by the representative from all such sections to maintain the campus.
Ensure that the Environmental Policy is enacted, enforced	Ensure that on the Environmental Committee there will be the Green Officer from an external agency who is engaged in the	College has constituted"Environmental Committee" headed by Principal

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and reviewed	profession of providing guidance on environmental impact	as Chairperson and one Convener.
	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 has taken the responsibility to follow the environmental policy.
	Ensure that the Environmental Policy is enforced regardless of whether its requirements exceed the mandate of the law	Initiative has been taken to adopt the Green policy.
	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 Environmental Committee are following the practices of maintaining Biodiversity Register, developing greenery, man-made nests for birds, *etc.*
	Ensure that an audit is conducted annually and action is taken on the basis of audit report, recommendation and findings	This 'Green Audit' for the year 2021-'22is conducted on February 2023.

6.0 Recommendations

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

Criteria	Recommendations
Publication of Audit Report	Resolutions of the "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	1. College may initiate for getting accreditation from ISO 9001 (2015) 2. The College should go for MoU with local Municipality. 3. Composting system may be developed for bio-wastes including food wastes, vegetables and organic wastes. 4. College may intensify the partnership with local bodiesin creating different awareness campaigningthrough outreach programmes.
Reduce energy consumption, especially of energy derived from fossil fuels	1. Use energy efficient lighting fully in and around the campus; outdoor lighting be managed and followed in the order of eco-friendly system. 2. Number of Energy and flow meters to be installed for monitoring of energy and water consumption building wise/department wise.
Maintenance of Campus and biodiversity	1. PUC (Pollution under control) certificate for all the vehicles entering the campus to be made mandatory and to be checked by security. 2. Correct measure of maintenance of PBR year wise for different locations by students. 3. College is advised to developthe Butter-fly garden inside the campus.
Proper maintenance of wastes	1. Total wastes including solid, liquid, *etc*., wastes be managed carefully.
Project-based learning on Environment related subjects	1. Teachers may be encouraged 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 ofCollege Environmental Committeeand also members of the Committee.

Physical Inspection

Physical inspection was made on 15th of February 2023 and report was prepared based on the physical 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: 15/02/2023
Place: Nistarini College, Purulia

15/02/23

Signed by
College Principal with Seal

Principal
Nistarini College, Purulia

15/2/23

Dr. Subrata K. Dey
Professor, Dean of Science
Sidho Kanho Birsha University
Purulia

15.02.2023

Tapan Kumar Hazra
Inspector of Colleges
Sidho Kanho Birsha University
Purulia

15/2/23

Dr Apurba Ratan Ghosh
Professor, Environmental Science
The University of Burdwan
PurbaBardhaman

NISTARINI COLLEGE, PURULIA

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 is 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 include: 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:
1957

1.2 NISTARINI COLLEGE, PURULIA

1.2 History behind the establishment of the college: The genesis of NISTARINI (WOMEN'S) COLLEGE, one of the premier academic institutes in the State of West Bengal is intimately entwined with the cause of women's education. The institution was first conceptualized in the Summer House of Deshbandhu Chittaranjan Das – whose family had significantly fostered women's education in Bengal and was an integral part of the national freedom struggle.

Sri Bhuban Mohan Das and Smt. Nistarini Devi, father and mother of Sri Chittaranjan Das came to reside in this house in the year 1902. Both of them were dedicated social workers and pioneered in introducing higher education among the women folk of this place. Amala Devi, their daughter started a school to impart higher education to the girls of Purulia.At that time, there was only one lower Primary School, which was known as NISTARINI VIDYALAYA of which Deshbandhu Sri Chittaranjan Das defrayed the entire expenses. A number of the lady teaching staff was brought in to educate girls on all fronts – literary, musical and artistic. An orphanage and widows' home were run under the guidance and supervision of Amala Devi. Soon it became a centre of culture for the people of Purulia. Unfortunately, the demise of all the three, Sri Bhuban Mohan Das, Smt. Nistarini Devi and Amala Devi within a short span of time led to the temporary closure of this institutions.Sometime after, Shrimati Basanti Devi, Chittaranjan's wife came to reside here and the tradition of the house was again revived. This time they paid special attention to educate the Harijan children living in the neighborhood. They, along with their parents, were also encouraged to attend religious ceremonies regularly in this house.When Sri Chiraranjan Das, son of Deshbandhu Chittaranjan Das, fell seriously ill, the then Chief Minister Dr. Bidhan Chandra Roy came to attend him and was impressed by the 'Sankirtan' assemblage of Harijans in this house. As a result of the Chief Minister's own initiatives and the request of the eminent leaders and social workers of this district (Sri Jimut Bahan Sen et al) an educational institution for women was set up. Thus, the Summer House of the family was converted into Nistarini (Women's) College.

1.3 Total campus area: 9.6 acres
1.4 Total built up area: 8383.44 sq mtrs
1.5 Total open space area: 8 acres
1.6 Total green area: 5 acres

1.7 Whether the college is implementing the Green Policy for the first time: **"yes", "no" and "not applicable"**
(Mention date/month/year)-
No, December 2015.

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"-**
Yes.

1.9 Whether college has constituted the "College Environmental Committee", **"yes", "no" and "not applicable"** (if so, give the details of it)-
Yes

Composition of the Committee

1. Principal of the college- Chairperson
2. IQAC Coordinator - Secretary
3. Faculty Representative nominated by the Principal
4. Student Representative-General Secretary of the college
5. Non-Teaching Staff Representative-Office Superintendent
6. Parent Representative-Secretary of the Parent Teacher Association
7. Industry Representative-Member of Alumni Association

1.9.1 Name of the Committee members.

1. Dr. Indrani Deb-Chairperson
2. Dr. Nandadulal Sannigrhi- Secretary
3. Prof.Debabrata Roypramanik- Bursar
4. Coordinator -Dr. Moumita Sinha
5. Prof. C.N. Nayek (Dept. of Political Science)
6. Dr. Tapasi Basu-Roy
7. Prof. Renuka Gupta
8. Dr. Uttam Kumar Mukherjee
9. Dr. Rajib Basu
10. Prof. Sonali Ghosh
11. Dr. Supriya Dutta
12. Dr. Animesh Shahana
14. SriPriyabrata Mukherjee
15. Dr.Sabyasachhi Mukherjee.
16. Smt.Punam Roy

1.9.2 Number of meetings conducted so far: 8

1.9.3 Resolution of the meetings:

1. Environmental committee and Eco-club including NSS Units work on water and energy conservation practices in college premises.
2. As per reviews of last twelve months' environmental activities, we involve more students from different departments and our targeted number of students is around 400.

3. Our committee monitors different environmental activities like awareness programmes, rational utilization of water, energy, sanitation, etc.
4. For biodiversity conservation we need artificial nests of birds that visit our green campus.
5. For plant health our committee members monitor each week and tending, thinning and weeding programmes are carried on for proper health of different tree species.
6. Our committee has decided that for beatification and conservation we will establish a Butterfly garden in the near future.
7. For sustainable life style among students and staff members we always campaign about adverse effects of junk food, solid waste minimization and how to reduce the carbon footprint and water footprints.
8. Establishing MOU with different NGOs at National and International level for collaborative works on Conservation as well as environmental protection.
9. One task force is made under this committee for proper disposal of solid and liquid waste that comes from different laboratories of our college. The team monitors the existing facilities of Clinical waste management. In this case we also recruit consultancy if needed.
10. Our students study the insects, birds and plant diversity in our college campus. In these studies faculty members of Botany, Zoology and Environmental Science departments work as mentors and guide the students.
11. Arranging a Training programme for staff and faculty members including different vendors on environmental protection, solid waste management, reducing carbon footprints, water footprints and special training for laboratory attendees for proper disposal of solid and liquid waste practices.
12. The Environment Committee has decided that every Year our college will conduct internal environmental audit involving students and NSS Volunteers.
13. As per committee decisions all vendors and their workers will be given training about waste management that will reduce environmental impact.
14. Our Committee has decided that through workshops and seminars our students should sensitize people about how to reduce their ecological as well as water footprints.
15. E-waste is a big challenge and the environmental committee has involved vendors for managing the waste and we have decided that our priority will be to repair and reuse of different electronic gadgets and computers, including different laboratory instruments.
16. For laboratory solid waste and liquid waste our committee has decided to appoint a vendor for proper disposing of waste.
17. We conduct different training for students on green entrepreneurship like Vermi-composting, ecotourism, plastic recycling, medicinal and aromatic plant cultivation
18. We decided that we will start different certificate courses for students on Environmental Advocacy, Green Technology, Nursery technology, gardening, Women empowerment, child protection, Ecotourism and Sustainable Development.
19. Environmental committee and Eco-club including NSS Units work on water and energy conservation practices in the college premises.
20. Our committee monitors different environmental activities like awareness programmes, rational utilization of water, energy, sanitation, hygiene.
21. Use of bio-fertilizers and bio-stimulating pest control systems.

1.9.4 **Action taken by the Committee**

The impetus for a successful Green Campus must begin at the top and emanate through out the rest of the campus. Without a strong message of commitment and involvement from both the Chairperson and Members of the Committee, well-intentioned initiatives may be too fragmented to allow for Institute-wide participation. Thus in view of this, the committee plans and executes to:

1. Involve Stakeholders to make the Go Green Campus initiative function all throughout the year.
2. Conduct the Campus environmental impacts to identify the targets for improvements.
3. Establish a Green Campus Environmental Ethics Awareness campaign.
4. Set for a Green Campus Mission and a Statement of Principle
5. Link Green-Campus activities to Academics in the Institute.
6. Organize Awareness Programs for the students, faculty and society.
7. Chart out a yearly planner for the Institute, local community and Stakeholders.
8. Develop a strategic plan and create student teams to carry out specific task soft plan. For instance, a plan to save energy at the institute level with time bound plan to install Solar Power Station mandatorily either at the top of the Institute building or in the open field. This will enable the institute to have 24 x7 power supply.
9. Phase out the CFL and conventional light source such as bulb s and tube lights, halogen and mercury street/campus lights and get them replaced by LEDs.
10. Conduct an Annual Green, Environment and Energy Audit.
11. Purchase only Energy Efficient Computers viz:“ ENERGYSTAR”or any other equivalent.
12. Establish public/private partnerships with personnel from federal, state, and local environmental agencies, utilities, and the business community.
13. Evaluate daily operations in terms of pollution prevention, waste stream management, and energy efficiency reducing, reusing, recycling, and repairing wherever possible.

1.9.5 Future programmes of the Committee

1. Secure a commitment up front from the people in charge that well-founded recommendations will be acted upon once audits are completed. Environmental committee and Eco-club including NSS Units work on water and energy conservation practices in college premises as early as possible.
2. As per reviews of last twelve months’ environmental activities, we will involve more students from different departments and our targeted number of student is around 400.

3. Our committee monitors different environmental activities like awareness programmes, rational utilization of water, energy, sanitation, hygiene, etc.
4. For biodiversity conservation we need artificial nests of birds that visit our green campus.
5. For plant heath our committee members will monitor each week and tending, thinning and weeding programmes will be carried on for proper health of different tree species.
6. Our committee has decided that for beatification and conservation we will establish a Butterfly garden in the near future.
7. For sustainable life style among students and staff member we should start campaign about adverse effects of junk food, solid waste minimization and how to reduced their carbon footprint and water footprints.
8. Establishing more MOU-s with different NGOs at National and International level for collaborative works on Conservation as well as environmental protection.
9. One task force is made under this committee to proper disposal of solid and liquid waste that comes from different laboratories of our college. The team monitoring the existing facilities of Clinical waste management. In this case we will also recruit consultancy if needed.
10. Our students study the insect, birds and plant diversity at our college campus. In these study faculty members of Botany, Zoology and Environmental Science departments work as mentor and guide the students.
11. Arranging a Training programme for staff and faculty members including different vendors on environmental protection, solid waste management, reducing carbon footprints, water footprints and special training for laboratory attendees for proper disposal of solid and liquid waste practices.
12. The Committee decided that Every Year our college will conduct internal environmental audit involving students and NSS Volunteers.
13. As per committee decisions all vendors and their worker need training about waste management that will reduce environmental impacts.
14. Our Committee has decided that through workshop and seminars our students should sensitize about how to reduce their ecological as well as water footprints.
15. E-waste is a big challenge and the environmental committee has been involving vendors for managing the waste and we have decided that our priority will be repair and reuse of different electronic gadgets and computers including different laboratory instruments.
16. For laboratory solid waste and liquid waste our committee has decided to appoints a vendor for proper disposing of waste.
17. We conduct different types of training for students on green entrepreneurship like Vermi-composting, ecotourism, plastic recycling, medicinal and aromatic plant cultivation
18. We have decided that we will start different certificate courses for students on Environmental Advocacy, Green Technology, Nursery technology, gardening, Women empowerment, child protection, Ecotourism and Sustainable Development.

1.9.6 Policy enforcement strategies

Vision

The College recognizes that in pursuing its strategic objectives, not least in relation to research and teaching, it has a responsibility towards, and should aim to protect and nurture the environment. By exercising proper control over all its activities the College will aim to ensure sustainable use of resources and prevent the damage of the natural attributes and landscape of the college.

The College will aim to manage its operations in ways that are environmentally sustainable economically feasible and socially responsible. Therefore, this policy represents an important component of the College broader sustainability strategy. The aims and objectives of the College has always been for safeguarding the environment, and. It applies to all land, premises and activities within the control of the College.

The Environmental policy aims and objectives will be supported by a series of specific policies aimed at identified environmental issues (for example Paper Policy). The specific policies will set the management standards for these issues and will be further supported by guidance to assist responsible groups and individuals.

Aim sand Objectives

Environmental Management

- To promote sound environmental management policies and practices throughout the College.
- To reduce and, where practicable, prevent pollution of all kinds.
- To adopt targets for improving environmental performance.
- To ensure a sound Carbon Management
- To implement a carbon management strategy, including the efficient use of energy.
- To reduce green house gas emissions in line with College targets; 6% on 2005/06 levels by 2025.
- To ensure the uptake of low carbon technologies in buildings and equipment.

Water

- To make efficient and environmentally responsible use of water, including identifying opportunities for water reuse.

Procurement

- To promote life cycle thinking in the procurement of goods and services.
- To work with suppliers to promote sustainable resource management practices.

Waste Reduction and Recycling

- To set and achieve targets for reducing resource use.
- To minimize the adverse environmental impacts of the decommissioning and disposal of College assets.
- To increase the rate of recycling of all appropriate materials based on life-cycle principles.
- To implement sustainable resource management practices, based on reduce, reuse and recycle principles.

Transport

- To implement sustainable transport practices across all activities with the aim of achieving the carbon reduction targets of the College.

College Estate

- To develop and implement a College estate strategy based on sound environmental and sustainability principles.
- To manage the College estate with a view to enhancement of biodiversity wherever possible.
- To require a sustainable construction plan for any new College development and refurbishment project.

Awareness and Training

- To communicate internally and externally the College environmental objectives and performance.
- To raise awareness of staff and students of the College regarding environmental impact, activities and performance and good practice.
- To provide appropriate environmental educational programmes for staff and students.
- To encourage and facilitate feedback and suggestions on ensuring good practice.

Evaluation of Environmental Policy

- To undertake a regular review of environmental management procedures and activities to ensure suitability, adequacy and effectiveness.

Responsibilities

The main responsibility for implementation of this policy lies with the Environmental Protection Committee and the Principal as the Chief Executive.

The Heads of Departments and the NSS, NCC Services are responsible for ensuring compliance with College Environment Policy within their area of control.

The Environmental Committee will actively monitor the performance of College and Departments in the implementation of the aims and objectives of this Policy in the activities under their control.

Whilst the College accepts the main responsibility for implementation of this policy, individuals have a very important role in co-operating with those responsible for safeguarding the environment. Individuals are required to abide by rules and requirements made under the authority of this policy.

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"
Yes.

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"-**
Yes

1.15Whether the institute has department of Law/Environmental Science/3-Year degree Course/Course curriculum
"yes", "no" and "not applicable"-
Yes, Department of Environmental Science as UG programme and environmental studies in all programmes as per university curriculum. It takes part in greening programmes by taking a pro-active role in the Environment Committee of the college, and all plantation and conservation activities.
(if so, how does it takes part in greening programmes)

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

1.17Whether 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- Yes
1.18.2 Formation of Natural club/Eco club: Y / N- Yes
1.18.3 Management of natural resources, wildlife, conservation of species: Yes / N-Y Any project sponsored by national funding agency/NGO, independent project related to environmental issues: Y / N -- Yes
1.18.4 Is there any incidence of burning of plastics containing garbage within the campus for necessary reduction: Y / N-N -- Minimal
1.18.5 Celebration of 5th June, Ozone day, Earth Day on 22th April, etc.: Y / N-Y -- Yes
1.18.6 Number of field visits/survey records: Y / N (if Y number)- Yes, according to curriculum.
1.18.8 Campus biodiversity register- Yes (**If required, to be attached**)

1.19 General aspects (express in statements)- The college caters to a biodiversity register in order to assess the existing status of the biodiversity and to monitor the existing status of the different flora and fauna of the campus. The register also tries to maintain the other issues related to biodiversity of the campus in the related issues.

1.19.1 Campus cleanliness- The campus cleaning is the most cultivated process as we believe. “Cleanliness is the next to godliness”. The entire process is executed with the mutual collaboration of NSS , NCC, Eco-Club and other wings for having the pleasure of clean, green and plastic-free eco-friendly campus.

1.19.2 Rainwater harvesting- The college tries to optimize the uses of water by searching the alternative methods of rain water harvesting by installing the desired resources for the same.

1.19.3 Solar street lamps- No Solar street lamps is yet to be executed but future planning prospects to be exercised in the near future.

1.19.4 Carbon dioxide neutrality on the campus by developing greenery- The Carbon neutrality is being exercised by the mass afforestation & fruition programmes as a part of the celebration of the different days related to the issues of carbon neutrality.

1.19.7 Man-made nest to attract some birds to maintain ecological balance- Yes, we have installed amber of man-made nests along with the provision of water facilities of the birds visit our campus during the different seasons.

1.19.8 Restriction in use of plastic and plastic products- Yes, We have promised to keep the campus plastic free in order to maintain green, clean and eco-friendly campus in this endeavour.

1.19.9 Culture of some ducks, swans etc., for scenic beauty in pond or any water body resources (if available)- No

1.19.10 Green monitoring by green committee/volunteers/team- The Green committee along with the green volunteers also give attention for monitoring the green ambience around the college campus by exercising the different parameters in order to maintain a sustainable ecosystem.

1.19.11 Training on Vermi-composting- Yes, Vermi-compost pit is present, and vermi-compost training is also conducted.

1.19.12 Celebration of ‘No vehicle Day’ on a particular day- Yes

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-Yes, Fire safety installation is a common practice. We also used to refill the fire extinguishers device from time to time as far the system directed us to do so maintaining the protocol of fire safety standards offered by the concerned agency.

1.19.15 Toilets/separate toilets for differently abled (PC) students- One separate toilet has been designed and developed io order to cater the need of the differently able students along with the designed ramps for their smooth running around the campus as far as possible.

1.20 Over all noise level

Sl no.	Inside campus area	Outside campus	Class room	Lawn	Office	Laboratory	Canteen
1	67dB(A)	7467dB (A)	4867dB(A)	5767dB(A)	5867dB(A)	5167dB(A)	7167dB (A)

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"**

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"-**
Yes

2.4 Is there any rainwater harvesting unit in college: **"yes", "no" and "not applicable"-**
Yes
(if so, what are the uses of this water:)
a) For washing the different instruments used by the labs
b) For uses in the medicinal plant gardens
c) For watering other tree species
d) For ground water recharge if the rest are available

2.5 Whether college has developed any reuse and recyclable of water system: **"yes", "no" and "not applicable"-**
Yes, for reusing in gardening

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*.)-
Yes, The department of Environmental Science along with the department of Chemistry and Botany handle the basic parameters checking as far as the water quality of the campus. For potability of water quality, external certified agency like PHE is consulted for maintaining the potable condition of water quality.

2.7 Lab-wise water consumption (lt/d)
Chemistry-- 100 li/day
Zoology-100 lit/day
Botany---50 lit/day
Geography-20 lit/day
Nutrition-50 lit/day
Environmental Science-50 lit/day

2.8 Whether college has sufficient/adequate drainage system: **"yes", "no" and "not applicable"-**
Yes
Note: Total Amount of holding capacity of Water including Hostel, Laboratory 65000 lit per day.

3. ENERGY CONSERVATION

3.1 Reduction of energy consumptions, especially fossil fuel energy

3.1.1 Total electric consumption amount --95KWH/Yr
3.1.2 Average electrical consumption in a month …8 KW /month…
3.1.3 Total No. of
i)LED-89
ii) CFL-117
iii) Tube lights-712
iv) Incandescent lamps- 04
v) Fans-2733+66+14=2813
vi) Air conditioners/Air Coolers-08

3.1.4 Whether college has any provision/choice of renewable and carbon-neutral electricity options: **"yes", "no" and "not applicable"-**
No

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) Proposed date of installation-
March 2023

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

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"-**
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"-
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"-**
Yes

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

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

3.1.11 whether college has its own mechanism in repairing of electrical fault:
"Yes", "no" and "not applicable"-
Yes

3.1.12 whether the class rooms are with sufficient illumination in day time and ventilation:
"Yes", "no" and "not applicable"-
Yes
Number of lights & fans in class room (average): 06
Use of light & fans in the day time (average hours): 7 hours
Number of windows per class: 8
Natural light source in day time (in hours) (average per class):6 hours

3.1.13 how many (%) e-notice generated by the college for academic/administrative purposes in a month-
70%

3.1.14 how many (%) paper-notice generated by the college for academic/administrative purposes in a month-
30%

3.1.15 Total number of computer, printer, Laptop, Xerox machine:
Number of computers---140, Printers--20, Laptop---5, Xerox Machine----5

3.1.16 whether college has organized lectures on energy conservation in order to give awareness to the students:
"Yes", "no" and "not applicable"
Yes

3.2 Energy conservation strategies
3.2.1 Whether the architectural design for college is based upon use of natural lighting & ventilation, to save extra power for bulbs and fans: **"yes", "no" and "not applicable"-**
Yes

3.2.2 Whether florescent bulbs are replaced with CFL bulbs/LEDs: **"yes", "no" and "not applicable"-**
Yes

3.3 Minimize the use of unsustainable transport
3.3.1 What are the available/maximum transport facilities used by the staff members/students etc., - mention the number (in average per day):
01

3.3.2 Whether college has any common car sharing/car pool among the students and faculty:
"Yes", "no" and "not applicable"
No

4.WASTE MANAGEMENT

4.1 Maximization of the process of wastes & minimization of non-renewable refuse
4.1.1 Is there any method of segregation of waste materials?**"Yes", "no" and "not applicable"-**
Yes, We have different collection Bins for biodegradable and non-biodegradable waste.

4.1.2 Total amount of solid waste generated in the campus (including tree droppings & Lawn wastes)
Total number of staff- 150, Amount / capita- 5kg/ day along with tree droppings that are subjected to very from season to season

4.1.3 Whether college arrange any workshop/seminar/conference for awareness the students/staff for specific arrangements for recyclable wastes: **"yes", "no" and "not applicable"-**
Yes

4.1.4 Whether college follow specific disposal method for solid or liquid waste in specific manner:
"yes", "no" and "not applicable"-
Yes

4.1.5 Whether the recycling/collection facilities are provided by the city Municipality and/or private suppliers (including glass, white plastic bottle, printer cartridges, cardboard, furniture, plastics, thermocol, waste papers, electrical goods & alliances, electronic gadgets, instruments, equipment, packing materials):Yes, Private Suppliers
"yes", "no" and "not applicable"-
Yes

4.1.6 Whether college has any composting ground/vat or any collection unit *etc*.:
"yes", "no" and "not applicable"
Yes.
(if yes, what is the percentage of waste undergone composting and the final use of the products)

4.1.7 Is there any mechanism of treatment/uses of domestic influent in the college campus (if so, what is the capacity of treatment plant/composting *etc*.): **"yes", "no" and "not applicable"-Yes**

Sl No.	Department	Name of the waste			Total (a+b+c)	Characterization(if any)	Method of disposal	Agency if any
		Chemical (a)	Biological waste (b)	Microbial waste (c)				
1.	Chemistry	A. Havy Metals like Hg,Pb,Cr,Cd B. inorganic and Organic Acid C. Bases D. Organic and inorganic Solvents E. Alliphatics and Aromatics	A.	A.	1	Very low concentration and not regularly discharged	Neutralization, absolution, adsorption and solidification	

		Compounds						
2.	Zoology	A. Dye and Stunning Materials B. Organic and inorganic solvents, C. organic and inorganic Acids D. oil	A. Animal dead body and body parts B. Insects and earth worms		2	Mostly Biodegradable and chemicals in high concentration	Biodegrade with the help of composting, chemical control with Neutralization, absolution, adsorption and solidification	
3.	Environmental Science	F. Heavy Metals like Hg, Pb, Cr ,Cd G. inorganic and Organic Acid H. Bases I. Organic and inorganic Solvents Aliphatic and Aromatics	A. Animal dead body and body parts B. Plant Materials	Bacterial culture medium	3	Very low concentration and not regularly discharged. Solid waste are bio degradable	Biodegrade with the help of composting, chemical control with Neutralization ,absolution, adsorption and solidification	
4.	Botany	A. Organic and Inorganic Solvents. B. Staining materials and dyes C. Nutrients	A. Plant body b and body parts like leafs, stems, roots	Bacterial culture midium	3	very low concentration and not regularly discharged. Solid waste are bio degradable	Biodegrade with the help of composting, chemical control with Neutralization, absolution, adsorption	

							and solidification	
5.		A.Organic and Inorganic Solvents. B. Staining materials and dyes C. Nutrients Oil and Fats	A. Food Waste B. Plant and vegetable Waste		3	very low concentration and not regularly discharged. Solid waste are bio degradable	Biodegrade with the help of composting, chemical control with Neutralization, absolution, adsorption and solidification	
6.		E-Waste			1		Dumping in a inaccessible place	Viswakarma Computer

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
1		Biodegradable	Non-biodegradable	Plastic waste	kg/day	5 pm	
1.	Near S. N Bose building	1	1	1	1	Do	Yes
2	J. C. Bose building	1	1	1	1	Do	
3	Main academic building	2	1	1	2	Do	
4.	Office premises	1	1	1	1	Do	
5.	Subarnarekha Auditorium	2	1	1	2	Do	
6.	Hostel blocks	2	2	1	4	Do	

7.	Staff quarters	1	1	1	2	do	

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

Whether the college is using fertilizers, pesticides for any purposes, if so, amount used per month and places of uses
Use of public transport: **"yes", "no" and "not applicable"-**
Yes

5. E-WASTE MANAGEMENT

5.1 Quantity of e-waste generated: 25
5.2 Number of cartridge used month-wise: 20
5.3 Number of cartridge disposed in a year (average): 50
5.4 Number of times refilling & reusing method of disposal of e-waste (if any)-100
5.5 Whether college has conducted any awareness programme on e-waste management:
"yes", "no" and "not applicable"-
Yes
5.6 Is there any means of disposal of unused computers, printers and electronic wastes through authorized agents:
"yes", "no" and "not applicable"-
Yes

5.7 Disposal methods

Sl No.	Location	Amount of generation	Method of disposal	Name of the Agency (if any) for disposal
1	College Premise	Rs 1000=00	Third party involvement	Globule Institute of Information Technology, Dulmi, Purulia

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"-**
No

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*.
"yes", "no" and "not applicable"-
Yes

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
1.	College Campus	2 acres	Indigenous plants	Medicinal plants	Ornamental plants	Exotic plants	100 +	Mentioned below	One species in each with app. number
			45	20	30+5		*Mangifera indica*	Anacardiaeece	58
							Machelia chapmpaka	Magnoliaceae	02
							Aegle mermolos	Rutaaec	
							Gmelaea arborea	Meliaceac	26
							Cygium gouava	Myrtaceae	29
							Litchi chinensis	Sapindaceae	03
							Shorea robusta	Dipterocarpaceae	17
							Artocarpus hetrophillus	Moraceae	12
							Cocos neucefera	Aricaceae	10
							Tectona grandis	Verbinaceae	76
							Alstonia scholiris	Apocynaceae	01
							Swetinia mahagonoy	Meliaceae	31
							Anthocephalu	Rubiaceae	03

						s cadamba		
						Tamarandus indica	Fabaceae	03
						Dalergia sisasoo	Fabaceae	10
						Beutea manosparma	Fabaceae	03
						Delonix regia	Fabaceae	15
						Schleichera oliosa	Sapindaceae	02
						Ficus reliozosa	Moreceae	04
						Embelica officinalish	Philentheace	03
						Myocardium oxydentalish	Anacardiaace	01
						Bombyx ceiba	Bombacaceae	02
						Acacia auruculoformis	Fabaceae	04
						Polienthium longifolia	Annonaceae	33
						Bhawrunia valli	Fabaceae	11
						Ficus resimoza	Morecea	04
						Melia azadirecta	Maleace	08
						Terminalia chebula	Combretaceae	03
						Murraya paniculata	Rutaceae	02
						Malachra Capitata	Malvaceae	01
						Madhuca longifolia	Sapotaceae	02
						Syzygium cumini	Myrtaceae	06
						Punica granatum	Lathraceae	02
						Pterocarpus santalinus	Fabaceae	02
						Tamarixdioica	Tamaricaceae	07

						Musa paradisisea	Musaceae	07
						Spanduss mombin	Sapindaceae	01
						Terminalia bellarika	Combretaceae	05
						Santalum album	Santalaceae	3
						Murraya koenigee	Rutaceae	03
						Elaeocarpus ganitrus	Elaeocarpaeceae	07
						Zizphus mauritinea	Ramneceae	02
						Termnelia arjuna	Combretaceae	02
						Averrhoa carmbola	Oxalidacae	02
						Schleaichera oleose	Sapindaecae	02
						Arecha catechue	Arecaceae	02
						Mimusops elengi	Sapotaceae	12
						Moringa oleaifera	Moringaceae	07
						Cathranthus roseus	Apocynaceae	Multiple
						Adhatoda vesica	Acanthaceae	Do
						Ocimum sactum	Lamiaceae	do
						Aloe vera	Liliaceae	do
						Miomosa pudica	Fabaceae	1
						Bigonia sp.	Bignoniaceae	
						Centella asiatica	Apiaceae	Multiple
						Andrographis paniculata	Acanthaceae	do
						Datira metel	Solanaceae	2
						Calotropis zygantia	Asclepiadaceae	2
						Piper betel	Piperaceae	2
						Solanum torvum	Solanaceae	2

						Cinamomum tamala	Lauraceae	3
						Curcuma longa	Zingiberaceae	1
						Cinamomum verum	Lauraceae	2
						Withania somnifera	Solanaceae	1
						Bacopa monieri	Plantaginaceae	1
						Hemidesmus indicus	Apocynaceae	1
						Asparagus racemosus	Liliaceae	Multiple
						Tinospora cordifolia	Menispermaceae	1
						Swertia Chirayita	Gentianiaceae	2
						Hylocereus undatus (Dragon)	Cactaceae	4
						Dilenia indica	Diliniaceae	1
						Grewia asiatica	Malvaceae	1
						Eclipta prostrata	Asteraceae	2
						Curcuma amada	Zingiberaceae	2
						Piper nigraum	Piperaceae	2
						Ipomea obscula	Convolvulaceae	1
						Mentha piperata	Lamiaceae	1
						Hibiscus rosa-sinensis	Malvaceae	Multiple
						Rosa alba	Roisaceae	do
						Tagetus patula	Asteraceae	do
						Ixora arborea	Rubiaceae	do
						Tabomontana divaricata	Apocynaceae	do
						Nerium indicum	Apocynaceae	do
						Clitoria tarnetea	Fabaceae	do

						Lantana camera var.	Verbenaceae	do
						Jasminum sambace	Oleaceae	2
						Ipomea purpurea	Convolvulaceae	2
						Bougainvilea glabra	Nyctaginaceae	Multiple
						Tradescantia spathacea	Commeliniaceae	1do
						Artaucaria columnaris	Araucariaceae	do
						Carica papaya	Caricaceae	do
						Albizia lebbeck	Fabaceae	2
						Delonix regia	Fabaceae	2

6.6 Records of Plantation programmes

	Programme conducted	Date of functioning	No. of tree planted	Present status of the species	Documentation (if any)	No. of beneficiaries
1	Bon-mahotsav	5th June Every year	50	40	Yes	Entire college
2.	Earth day	22 April	10	5	yes	do

Social Outreach Programmes and Environment related Programmes - 2021-2022

1.Online programme on "Sustainable Rural Development - 2021" (SH-SRD 2021) National Level Virtual Hackathon, on 1st July,2021

"Sustainable Rural Development - 2021" (SH-SRD 2021) National Level Virtual Hackathon was organized by Unnat Bharat Abhiyan - SRM Institute, RCI-IIT Madras on 1st July 2021. Three students -- Neha Ray, Kajol Kumari and Papiya Das, along with the NSS Programme Officers, Sri Priyabrata Mukherjee and Dr.Nabanita Dutta, participated in this programme with their projects on tribal development in Purulia. The Smart e – Hackathon on "Sustainable Rural Development - 2021" (SH-SRD 2021) is a fully online mode of student-level innovative ideas challenge for the sustainable rural development of our nation, which is organized by UBA-SRMIST in association with UBA-Regional Coordinating Institute - IIT Madras. **The themes were :**

a. Renewable Energy- **Affordable solar cooker for rural households**

b. Water Management -**Cost-effective wastewater treatment for rural areas**
c. Waste Management-**Smart Agri-tech solutions for stubble management**

2. Poster/ Video Competition for the Students of UBA Participating Institute with the objective to create awareness material in Regional Languages/Dialects for circulation among the village clusters for COVID-19 Awareness and Cash Prize has been kept in an effort to motivate the students.8th July 2021

On 8th July 2021, NCI - IIT Delhi organised a Poster/ Video Competition for the Students of UBA Participating Institute with the objective to create awareness material in Regional Languages/Dialects for circulation among the village clusters for COVID-19 Awareness and Cash Prize was kept in an effort to motivate the students. Nine Students participated in this Competition and submitted Video and Posters trough online mode. This competition was organized by NCI - IIT Delhi and UBA on 8th July 2021. The themes were : COVID-19 Awareness on Importance of Vaccination Importance of Healthy lifestyle, Yoga, Meditation and Ayurvedic practices Usage and Disposable of protection items against Covid-19, Importance of Physical Distancing, Home isolation and medication. Priti Karmakar, Jannat Sagufta,Neha Roy and Papia Das participated in this competition and got certificates.

3. Celebrating Plantation Programme in virtual mode, a webinar arranged on plantation technology and vertical gardening process on 9th July ,2021

As pandemic situation was still present in July, 2021 we arranged a programme on Plantation Technology Process through virtual mode, for giving technical knowledge towards our students and that helped students to arrange plantation programme in their villages and localities as plantation is not possible at college premises due to physical distancing.

It was a 2:30 hour webinar organized jointly with a NGO – The Centre for Biodiversity and Conservation Ethics, Purulia. The programme was inaugurated by our Principal Dr. Indrani Deb and the welcome address was delivered by the President of the NGO, Sri Suva Sundar Daripa and our NSS Programme Officer Dr. N.Dutta delivered a speech on the Need of Plantation. After the inaugural session, which was of about 30 minutes, we started the technical session.

Experts discussed about different dimensions of plantation technology. Four technical experts were Dr. Pratap Toppo, Asst. Professor, Department of Forestry,I ndira Gandhi Agriculture University, Raipur, Chhatisgarh; Dr. Nandadulal Sannigrahi, HoD, Department of Botany, Nistarini College, Purulia and Sri Priyabrata Mukherjee, teacher in the ENVS Dept., Nistarini College, Purulia. The experts discussed about different aspects of plantation design, soil science and topography, irrigation system and social motivation for plantation.

4. Submitted tribal women development Project on Marketing and Value Addition of NTFP and Established centre of Tribal India with TRIFED on 10.07.21

Sri Priyabrata Mukherjee UBA Convener of our college submitted the Tribal Women Development Project on Marketing and Value Addition of NTFP and established centre of Tribal India with TRIFED. The details of the project are as follows:

1. Socio-economic development for endangered and endemic tribal women mainly Sabar and Bihor.
2. Enrich tribal culture and tradition through economical and technological interventions.
3. Enrich handicraft and other artisan productions and value addition with modern technology and fashion.
4. Proper marketing of above said products from local to global market.
5. Proper Price of products that will maximize their profits through proper marketing chain without any middle man system.
6 .As these artisans are traditionally from tribal communities, so, it also conserves tribal culture and heritage.
7. Fulfil Sustainable development goals.
8. Use of local resources and provide alternative ways for employment generation among marginal and women.
9. Skill development and capacity building among tribal specially women and production of export quality artisans.
10. Minimize migration and displacement of labors.
11. Conservation of natural resources.
12. Establishment of marketing centre in our college with TRIFED and Tribal India in our district.

Project components:

The Number of adopted Villages will be 04.(four)

A. Akorbaid
B. Damodarpur
C. Fatepur
D. Phuljh

5. Webinar on Towards Sustainable, Inclusive and Responsible Mineral Resources Governance Post-COVID-19,- 15-7-21

On 15 July (1:30pm CEST), Nistarini College NSS Units and students joined the GGKP and the United Nations Environment Programme (UNEP) for the event *Towards Sustainable, Inclusive and Responsible Mineral Resources Governance Post-COVID-19*, held on the margins of the 2021 High-level Political Forum on Sustainable Development.

Experts discussed on the findings of stakeholder consultations on implementation of the UNEA-4 Resolution on Mineral Resource Governance, undertaken in the context of a green and inclusive recovery and the Sustainable Development Goals (SDGs).

Discussion

1. Opportunities for mining and metals sector to contribute to a **green** and inclusive recovery as well as achievement of the SDGs.
2. Where to concentrate national, regional and global efforts to pursue these opportunities.
3. How intergovernmental organizations can best work with countries to support more sustainable and responsible mineral resource governance.

The Speakers were: Dr Stephen Barrie (Deputy Director of Ethics and Engagement), Kristi Disney Bruckner(working on complex law and policy issues with governments, communities, companies, and multi-stakeholder initiatives as Senior Policy Advisor at IRMA,) Rohitesh Dhawan(Managing Director for Energy, Climate & Resources at Eurasia Group and Global Head of Sustainability for the Mining Sector at KPMG.), Daniel Franks (Professor at the University of Queensland's Sustainable Minerals Institute), Victoria Tauli Corpuz **(**Former Special Rapporteur on Indigenous Peoples Rights, United Nations**),**and Corli Pretorius (Deputy Director of the UN Environment World Conservation Monitoring Centre (UNEP-WCMC), based in Cambridge, UK.)

6.. Webinar on Implementing Sustainable Low and Non-Chemical Development in Small Island Developing States (ISLANDS) Program on, 28th of July 2021

The GGKP executed the Coordination, Communications and Knowledge Management (CCKM) project of the Global Environment Facility funded Implementing Sustainable Low and Non-Chemical Development in Small Island Developing States (ISLANDS) Programme.

This event, organized by Pac Waste Plus Programme in collaboration with ISLANDS, will provide a peer-to-peer learning opportunity for countries implementing or expanding a Sustainable Financing scheme. It will also serve as an opportunity to launch the Sustainable Financing for Waste Management in the Pacific community of practice.

7. Unnat Bharat Abhiyan(UBA) e-Workshop on Water Quantity and Quality Conservation July28-30,2021, IIT Kharagpur

Day1: Wednesday; July28, 2021

On the first day of the programme, the distinguished speakers were Prof. Vivek Kumar (II Delhi), SEG, Coordinator, UBA Prof. Rintu Banaerjee (IIT, Kharagpur), Coordinator RCI

Prof. Virendra K Vijay (IIT, Delhi), National, Coordinator UBA. Prof. Manoj KumarTiwari, Coordinator-Water Recourses SEG, UBA, spoke about the scope of the sessions on Water Resources. In the session on Water Resources Conservation, Prof. K.N. Tiwari, IIT Kharagpur spoke about "Water-Efficient Micro-Irrigation systems", Prof. P.K. Singh, MPUAT, Udaypur, spoke about "Climate Smart Land and Water Management for Sustainable Agriculture", Prof. Renji Remesan, IIT, Kharagpur, spoke about "Storm water Management through Low Impact Development Strategies", and Mr. Sunil Kumar Singh, PETCINGO, Dhanbad spoke on "Local Perspectives on Water Harvesting and Uses". There were also various other speakers.

Day2: Thursday; July29, 2021

On the second day of the programme, Prof. Sambuddha Mishra, IISc, Bangalore spoke on "Quantifying Pollutants in Natural Waters: Dos and Don'ts", Prof. M. K. Tiwari, IIT, Kharagpore spoke on "Low-Cost Household Water Purification Systems", Prof. P. K. Tewari, IIT Jodhpur spoke on "Low Carbon Desalination Systems", and Prof. P. S. Ghosal, IIT ,Kharagpore spoke on "Removal of Geogenic Pollutants from Water", among other speakers.

Day3: Thursday|:July30,2021

On the third day, Mr. Pawan Sachdeva, WMIPL, Singapore spoke on "Phnom Penh Water-An Inspirational One", Prof. Pranjal Deekshi,TISS, Mumbai spoke on "Community Engagement and Participation in Water Management", Prof. Vivek Kumar, IIT, Delhi spoke on "Sustainability Analysis in Water Resource Management", and Prof.Ashish Pandey, IIT, Roorkee, spoke on "Water Use Efficiency Enhancement in Agriculture", among other speakers. The programme ended after taking feedback from the audience.

8. Webinar On Tribal Development on 02-8-2021

This Webinar was organized in collaboration with Tapananda rural development Society and UBA.

9. Meeting with Stakeholders: discussion on implementation of Vitamin D2-enriched Shiitake mushroom production and processing technology on 3/8/21:

A meeting with the stakeholders for the implementation of Vitamin D2-enriched Shiitake mushroom production and processing technology was organized by IIT Delhi, CSIR - National Institute of Science Communication & Policy Research (CSIR-NIScPR), New Delhi and CSIR-UBA-VIBHA on 3rd August 2021. The list of participants with our stakeholder is as follows --

Name of participants
Dr.Indrani Deb,Principal,Nistarini College
Dr. Nabanita Dutta,Programme officer NSS
Prof. Nanda Dulal Sannigrahii
HoD Department of Botany, Nistarini College
Sri Priyabrata Mukherjee, Convenor , UBA(PI),Nistarini College
Mr. Hari Pada Mahato
Secretary, Tapananda Rural Development Society
Mr.Suva Sundar Daripa
President, CBCEE
Mr. Biduyt De
Member, Tapananda Rural Development Society
Mr. Suraj Kundu
Member,Pratigya Foundation, Purulia
Smt. Punam Roy, Department of Nutrition, Nistarini College
College Teacher, Department of Nutrition, Nistarini College

10. **Investment Awareness Programme on 05.08.2021 virtual mode:**

A webinar on Investment and Investor Awareness was organized jointly with Gurukul Edutech, SEBI and National Stock Exchange, Govt. of India, on 05/08/2021. The main objective of this programme was to build awareness about proper investment among students, faculties and non teaching staff. As students are future investors our primary goal was to sensitize them earlier that they will make proper

planning for their future. In this webinar two resource persons gave detailed lectures on Investment opportunities with National Stock Exchange and different rules and regulations of SEBI under the Govt. of India. All the lectures were very technical with power point presentations. After the lectures there were open house discussions, and students, and faculty members asked different questions that helped them have a clear idea about safe investment and legal forms of investment. Every participant was awarded online certificates. A total of 80 students and 37 faculty members joined the programme.

11. Clean Air Champions Cohort on 27.08.21

14 .NSS volunteers and 2Programme Officer of NSS participated in the Clean Air Champions Cohort on 27.08.21, organized by the partnership with Greenpeace, OKC Sweden, Earth Day Network, Y-east and Switch on Foundation. Different Projects about awareness campaigning discuses.

12. **COVID-19 Awareness** on *28th of July 2021.*

The NCI - IIT Delhi organized a Poster/ Video Competition for the Students of UBA Participating Institute with the objective to create awareness material in Regional Languages/Dialects for circulation among the village clusters for COVID-19 Awareness and Cash Prize was kept in an effort to motivate the students. Five students of our college participated in this programme.

Themes:

Importance of Vaccination

Importance of Healthy lifestyle, Yoga, Meditation and Ayurveda practices

Usage and Disposable of protection items against covid-19

Importance of Physical Distancing, Home isolation and medication

13. One-to-one meeting on implementation framework for diffusion of Shiitake mushroom technology [IIT Kharagpore PI-s on 03.09.2021

A One-to-one meeting on implementation framework for diffusion of Shiitake mushroom technology was organized by IIT Kharagpore PIs and IIT Delhi CSIR - National Institute of Science Communication & Policy Research (CSIR-NIScPR), New Delhi and CSIR-UBA-VIBHA on 03.09.2021. Six faculty members and our Principal Dr. Indrani Deb were present in this meeting. There was a detailed discussion about planning and implementation of the proposed project on Shiitake mushroom technology.

14. Critical Conversation for Small Island at *the* *Commonwealth* *Platform on 14 September 2021:*

The Commonwealth Foundation of UK organized a virtual programme on Climate Reparations: Opportunities and Obstacles for the *Commonwealth*'s Small Island States. Mr. P. Mukherjee was invited as a resource person in this event on 14 September2021 and the discussion was as follows:

Small island states pay huge sums to account for the loss and damage caused by global warming, yet they are responsible for a tiny proportion of historical pollution. The Commonwealth has a role to play in ensuring that small island states get the compensation that are due to them. That is why we are bringing together policy makers, climate experts, and reparations advocates to assess the opportunities and challenges to come.

15.Volunteers and Programme Officer participated in the District Level freedom Run 2.0 organized by Nehru Yuba Kendra, on 18th September 2021 at Bharat Sebasram.

23 NSS volunteers and 2 of our NSS Programme Officers participated in the District Level freedom Run 2.0 organized by Nehru Yuba Kendra on 18th September 2021 at Bharat Sevasram. Different other colleges and local clubs also participated in this Run. Mrs. Madhuri Toppo, District Coordinator of Nehru Yuba Kendra and NSS District Nodal Officer, and Prof. Pankaj Sarkar and our NSS Programme Officer Sri Priyabrata Mukherjee, along with 20 NSS volunteers participated in this event.

16. Celebrating NSS Day on 24.09.2021

Celebration of NSS Day was done through a seminar and poster competition on 24.09.2021. 79 volunteers and 9 teachers, including Programme Officers, participated in this programme. Our Principal Dr. Indrani Deb inaugurated the programme, Dr. Uttam Kumar Mukherjee, Dept of Philosophy, Nistarini College gave a lecture on morality and Echics of Youths. One of our NSS programme officers Dr. Nabanita Dutta gave a lecture on Need of NSS in colleges. Folk Dance, Speech on NSS activities and a Drama performed by NSS volunteers.

17. COVID-19 Vaccination programme in Nistarini College on 30/09/21

This Programme was organized by Purulia Deben Mahato Sadar Hospital under Ministry of Health and Office of CMOC for Covid19 Vaccination 1st Dose for Students. The students first enrolled through a Google form, and on that day Doctors, Nurses and Medical technicians were present in this programme. About 750 students were given this vaccine. The programme stated at 11.30am and continued up to 5:00 pm. Our Principal Dr. Indrani Deb, NSS Programme officers and 10 faculty members, as well as 8 members of the non-teaching staff were also engaged in this programme. .

18. 11th Chhatra Samsad Programme from 23 – 28 September 2021:

From 23rd to 28th September 2021, 56 volunteers participated on the occasion of 11th Chhatra Samsad programme virtually. The programme was organized by the NSS Regional Director, Kolkata. Two Programme Officers from this college guided the students.

19. **Celebration of Birth Day of Mahatma Gandhi on 02.10.21**

On the occasion of the Birthday of Mahatma Gandhi, the NSS units of the college arranged a webinar on National Integration, in collaboration with the IQAC and the Department of Political Science. It was a 2 hour programme on virtual platform. This programme was inaugurated by our Principal and after that Prof. C.N. Nayek gave a speech on the Sociological thoughts of Mahatma Gandhi. She discussed about the present social problems of our society, Nation and its development. After her lecture our Principal Dr. Indrani Deb gave a speech on social integration processes. It was a successful webinar as 250 students and NSS volunteers learnt about National Integration the Social Problems in our country, and

they also got idea that how we will be able to make an equitable society. 35 teachers also participated in this programme.

20. The Climate Social Forum and the Scientific and Organizing Committee, Selected Sri Priyabrata Mukherjee as resource person. Topic on Marketplace of Sustainable Consumption and productions.

Speech on 19/10/202

On 19/10/2021 the Climate Social Forum and the Scientific and Organizing Committee, Selected Sri Priyabrata Mukherjee, NSS Programme Officer of this college, as resource person on the topic -- Marketplace of Sustainable Consumption and productions. It was an international webinar, where the teachers and NSS students of this college also participated.

21. "Clean India Programme" on 26th Oct , 2021

The NSS Units of this college, along with the 'Soloana Durga Puja' Committee organized "Clean India Programme" from 26th Oct 2021. Our volunteers cleaned the college campus, public temples and roads. In all, 17 volunteers participated in this programme, guided by a Programme Officer.

22.On 25th October 2021 Our Principal inaugurated virtually Azadi Ka Amrit Mahotsav

On 25th October 2021 our Principal, Dr. Indrani Deb, inaugurated virtually the programmes of Azadi Ka Amrit Mahotsav, where different programmes were included as per guidelines of the Regional Director, NSS, Kolkata. These programmes were executed by the NSS units of Nistarini College. On this day 34 NSS volunteers participated, guided by two Programme Officers.

23. Celebrating Sadbhabwana Divas on 31/10/2021:

Celebration of Sadbhabwana Divas took place online on 31/10/2021, with 67 volunteers, and 6 teachers, including two Programme Officers. This one a virtual programme, our principal gave a lecture on views of Sardar Bhllav Bhi Patel in Mordarn India.Dr Portia Sarkar one of our NSS PO gave a lecture on Indian Integrity and Diversity. One of NSS Volunteers Gave a Power Point presentation on Indian Heritage and Culture. It was two hour programme.

24. Study of Local Birds diversity in Purulia town on 01.11.2021:

The NSS Units of Nistarini College and the CBCEE (Centre for Bio-diversity Conservation and Ecological Ethics) jointly conducted the Study of Local Birds diversity in Purulia town on 01.11.2021, particularly in the Saheb Bandh area. 23 volunteers and one Programme Officer participated in this programme, aimed at increasing the understanding of the students regarding the bio-diversity of Purulia

district. Total 47 species of different birds identified by observation and help of bird identifying books like Birds of India, by Salim Ali.

25. Azadi Ka Amrit Mahotsav : 4th November 2021:

On 4th November,2021, 9 NSS volunteers celebrated Azadi Ka Amrit Mahotsav by singing in the Desh Bhakti GEET Programme. They were highly appreciated.

26. Corporate Of Parties 26 Side Event under United Nations Framework Convention on Climate Change(UNFCCC) : 6th November 2021:

On Saturday, November 2021 in Drain water, side event room 3 (Armadillo) from 11.30 am - 12.45 pm. Discussion of the importance of climate conservation between all stakeholders in the climate emergency - from young people to decision makers - our panelists reflected on the successes of the international events and demonstrated the urgency of an open and inclusive dialogue. The aim was to empower students to enact changes in the community and country, to fight against the climate emergency.

27. Corporate Of Parties 26 Side Event under United Nations Framework Convention on Climate Change(UNFCCC)— Journalism in a Changing World : Improving Climate Coverage and including more Voices. Wednesday, November 10, 2021.Glasgow,Vurtual

Journalism in a Changing World: Improving **Climate** Coverage and Including More Voices.Climate change impacts communities around the world in disparate ways. National and local journalists have an important role to play in both helping their communities make sense of global developments and also bringing new perspectives to the climate change discourse from diverse and under-represented voices. Dated on 10.11.2021, the event was from the UN Climate Talks (COP26) in Glasgow, Scotland, featuring journalists from around the world actively reporting on the historic climate negotiations.

Panelists included Chinese journalist and policy expert Hongqiao Liu, Brazilian journalist Daniela Chiaretti, Ugandan journalist Fred Mugira, and Earth Journalism Network Asia-Pacific Manager Amy Sim. The discussion was moderated by international journalist and broadcaster Isabel Hilton, founder of ChinaDialogue.net and former correspondent for *The Sunday Times*, *The Independent*, *The Guardian*, and *The New Yorker*.

This panel discussion was organized by the Climate Change Media Partnership, a program that brings journalists from developing countries to attend and report on global climate change summits, led this year by the Stanley Centre for Peace and Security and Internees' Earth Journalism Network.

28. Discussion of COP-26 by Common wealth Foundation and **United Nations Framework Convention on Climate Change(UNFCCC)On 23 November 2021,**

This programme was on issues such as climate change and the equitable distribution of vaccines. Resource persons of this programme were the host, award-winning Kenyan journalist Victoria Rubadiri, diplomat, businessman and academic Sir Ronald Sanders, Queer black feminist and Director of Equality Bahamas Alicia Wallace, Scientist and President of the International Science Council Sir Peter

Gluckman, journalist and activist William Shoki Leo, Senior Programme Officer, Common wealth Foundation.

29. Webinar on Investing Nature : Financing Nature Based Sollution In India on 25th November, 2021

This webinar was organized by Indian Climate Collaborative speakers were, Tim Christopherson, Head Nature and Climate Branch, UNEP, Carolina Lisa,Director of Social and sustainable Finance, KPMG, Australia, Mr. Nitin Pandit ,CEO, Asoka Trust for Research in Ecology and The Environment .Sameer Shishdia, CEO, Rainmateer Foundation, Sandeep Roy Chudhury, Director, VNV Advisory Service, Seema Paul, Programme Director, Squeoia Climate Funds. One of our faculty members Sri Priyabrata Mukherjee was invited in this event and participated in the discussion actively.

30. World Aids day Observation with seminar about AIDS awreness, on 1st December, 2021,

World AIDS Day was observed by Nistarini College NSS Units and Red Ribbon Club and SKBU, NSS Cell. A Seminar and quiz competition was organized among the students. The Principal inaugurate the programme.

31. **Webinar on 1.5. lifestyle, changes**

"1.5-Degree Lifestyles: Targets and options for reducing lifestyle carbon footprints," was launched by a group of experts from an international consortium of research and policy institutes.

On 1 December there was a chat with sustainability influencer Louise Mabulo — founder of The Cacao Project and an ardent proponent for equitable and disaster-resistant food systems.

Panelists delved into conversations about the government context we need to build better and new business models that can help make healthy, sustainable living a reality for all. The Speaker, Hugo Schally is the Head of the Multilateral Environmental Cooperation Unit at the Directorate-General for Environment, European Commission, and is an award-winning chef, farmer, and entrepreneur. She is the Founder of The Cacao Project, a social venture aimed at equipping farmers for sustainable success; Dr Lewis Akenji serves as Executive Director of SEED, Sebastián Muñoz Experiences Design and UX at Rutopia. He holds a degree in Industrial Design in Mexico City, Solitaire Townsend is a British businesswoman, focused on the application of marketing principles to the cause of sustainability and climate change solutions.

32. Azadi Ka Amrit Mahotsav

On 3rd December, 2021, we arranged cleanliness programme at Sahib Bandh Purulia, We cleaned the Banks of the lake and collect plastics and other solid waste from the water under the flagship of Azadi ka Amrit Mahotsav Programme. The NSS and Purulia Municipality organized this programme jointly.

33. Volunteers participated in 3 day online energy conservation day workshop series organized by SwitOn Foundation and NSS Nistarini College from11th December to 14th December, 2021

Volunteers participated in a 3 day energy conservation day workshop series organized by SwitOn Foundation and NSS Nistarini College from11th December to 14th December, 2021.On the occasion of National Energy Conservation Day on 14th Dec 2022, a series of online workshops that address the

issue of Energy Saving, Conservation, and Renewable Energy in collaboration with experts and key stakeholders. Our college nominates a student team to join the workshop. 10 numbers of students join as per 2 students per workshop. The workshop has different participation of students from leading schools, colleges, and universities from across West Bengal, Jharkhand, and Odisha
As a part of this virtual workshop, our college was invited to nominate a student team of 10 students - 2 students per workshop. The workshops covered varied topics to spread awareness and educate people on various aspects of Energy Conservation, Renewable energy and were delivered by subject matter experts. The topics of the workshops are mentioned below:–

Forms of Energy Efficiency - Design, Equipment & Payback calculation
Renewable Energy and how it will help achieve Net Zero.
The impact of Energy Use on Climate Change and how you can conserve Energy.
How to lead a Low carbon lifestyle.
Importance of Waste Management & Recycling and how you can start.
Through this Zoom Workshop, we inculcated in students the passion to conserve energy.

34. National Integration Camp (NIC) at Jagannath Kishore College

A 7 Day National Integration Camp (NIC) was organized at Jagannath Kishore College Two of our Volunteers participated from 16.12.21 to 22.12.2021. It was organized by RD,NSS Kolkata, Ministry of Sports and Youth, Govt. of India. Two NSS Volunteers actively participated one is Neha Roy and 2nd is Debosmita Kar.

35. Victory of Bangladesh War under the the flagship of Azadika Amrit Mahatsov Programme

On 19th December, we celebrated the victory of Bangladesh war. Our volunteers visited Hari pada Sahitya Mandir (small historical museum) and Netaji Bhaban where Netaji Subhas Chandra Bose stayed at once and cleaning the statue of Netaji at Namopara, Purulia, under the the flagship of Azadi ka Amrit Mahotsav Programme .It was a 4 hour programme.

36. STUDENTS WEEK CELEBRATION, 2021-22

This Programme was organized by the Cultural sub-committee of Nistarini College and NSS Units in this webinar The welcome speech was given by Sarmistha Karmakar, Convenor of cultural sub-committee and the programme was inaugurated by Dr. Indrani Deb, Principal Nistarini College. In this webinar a speech given on Student welfare activities in Nistarini College by Prof. N.D. Sannigrahi. A speech on student Credit card for College Students was delivered by Dr. N. Dutta, A Speech on Student and Youth welfare activities and success by Government of West-Bengal as a major step of Sustainable Development Goals was delivered by Priyabrata Mukherjee. It was a one week programme where different cultural competitions like poster, folk dance, essay and quiz were held on in different dates.

37. Swachh Bharat Mission survey at villages

NSS volunteers surveyed four adopted villages on social economic and health issues. 15 household samples were collected from each village and data was collected from each household.

38. Celebration of National Youth day-12-1-21

Celebration of National Youth day and Birth day of Swami Vivekananda on 12/01/2021 with a National Webinar on Cultural Diversity was organized jointly by IQAC, Government College, Chamba, Himachal Pradesh & IQAC, NSS Unit, Department of History, Equal Opportunity Cell and UBA, Nistarini College, Purulia, West Bengal and NSS under Academic and Student Exchange Programme

39. **Establishment of Learning Management System on the Occasion of International Day of Education, 24-1-2022 in Collaboration with Switch on Foundation.**

40. Technology diffusion from Government research organizations to grassroots

CSIR-National Institute of Science Communication and Policy Research (NIScPR), the nodal CSIR laboratory (who is coordinating the process of dissemination of CSIR technologies in the villages associated with select PIs under IIT Kharagpore organized an online brainstorming session to deliberate on various aspects of technology diffusion from Government research organizations to grassroots on January 14th, 2022 from 2:30 PM - 4:30 PM. Sri Priyabrata Mukherjee was invited as resource person in this event and he delivered a lecture on Implementation of new technology in rural India. This programme was organized by IIT Delhi Alumni Association (IITDAA) in association with the Centre for Rural Development & Technology (CRDT) and CSIR - National Institute of Science Communication & Policy Research (CSIR-NIScPR), New Delhi.

41. "Global Village Conclave - ग्रामोदय 2022" (Gramodaya)

This conclave was organized by IIT Delhi Alumni Association (IITDAA) in association with Centre for Rural Development & Technology (CRDT) and CSIR - National Institute of Science Communication & Policy Research (CSIR-NIScPR), New Delhi.25 students and 2 faculty members, Dr. N.Dutta, department of History and Mr. P. Mukherjee, UBA convenors , join this venture. IIT Delhi Alumni Association (IITDAA) will organize a "Global Village Conclave - ग्रामोदय 2022" (Gramodaya) in association with Centre for Rural Development & Technology (CRDT) and CSIR - National Institute of Science Communication & Policy Research (CSIR-NIScPR)**,** New Delhi**.** The event is part of the National Initiative, Unnat Bharat Abhiyan which is aimed at identifying development challenges and evolving appropriate solutions for accelerating sustainable growth in rural areas. The theme of this event is "Redefining the Paradigm of Development". The sessions were organized on January 24th (Mon) and 25th (Tues) to address 5 identified areas – Rural Energy, Water Resources, Livelihood, Waste Management, and Environment**.** The event was held in webinar mode and webcast through various online platforms.

42. GGKP webinar - Preparing Green Investment Projects on 27.01.21

This webinar was organized by Green Growth Knowledge Partnership U.K.. It was a virtual conference and one faculty and 08 students participated actively.

43.UGC Master Trainers Training Programme (first batch), Launch January14, 2022

11am-1pm virtual

UGC Master Trainers Training Programme (first batch) for Community based Participatory Research (CBPR) under Unnat Bharat Abhiyan for nominated faculty members was organized as per list received from the respective UGC Regional Centers (Maximum 40 participants from each UGC Regional Centers) on 27th January, 2022 through virtual mode. 2 faculty members, Dr. N. Dutta, department of History and Mr. P. Mukherjee, UBA convenor were selected for this National level training and joined this training programme. This training programme was organized by the Ministry of Higher Education, Govt. of India, UGC, and the UBA. Schedule of Training of Master Trainers in Community-based Participatory Research.

44. **Eco-industrial parks design on 9 February (2pm CET)**

How can eco-industrial parks be designed and organized to be highly economically, socially and environmentally sustainable **and** how can donors, governments and park managers utilize the International Framework on Eco-Industrial Parks – this was the discussion in the programme. On 9 February , Green Growth Knowledge Partnership (GGKP) and the Donor Committee for Enterprise Development (DCED) collaborated in a drive into the International Framework on Eco-Industrial Parks, which was developed jointly by the United Nations Industrial Development Organization (UNIDO), World Bank Group and the *Deutsche Gesellschaft für Internationale Zusammenarbeit* (GIZ). The Speakers were Mareike Boll, Advisor, Environment and Coordinator of the Working Group on Sustainable Industrial Areas,Mary Ezzat, Industrial Park Manager, Engineering Square, Bernd Oellermann, Director of Regional Industrial Development, Dario Quaranta, a Senior Expert in the Finance, Competitiveness and Innovation Global Practice at the World Bank Group, Klaus Tyrkko is the Chief Technical Adviser for the Global Eco-Industrial Parks Programme (GEIPP) implemented by the United Nations Industrial Development Organization (UNIDO).

45. International Webinar on Climate Smart Agriculture Collaboration on 10th February, 2022

International Webinar on Climate Smart Agriculture Collaboration with Climate Social Forum, Milan Italy was organized with the Dept of History and NSS Nistarini College. Around 69 students and faculty members join this webinar.

46. "UNEA 5 (Fifth Session Of The United Nations Environment Assembly)Side Event: Green **Forum Global Launch – Pursuing Collaboration at Scale".**

On 18 February the Green Growth Knowledge Partnership (GGKP) launched the Green Forum—an online community space for exchanging insights on emerging knowledge and learning related to the pursuit of a sustainable economic transition. At this launch event, panelists discussed about how the Green Forum can support the implementation of UNEA decisions and the achievement of the Sustainable Development Goals.

Speakers: Jenitha Badul, Senior Policy Advisor, Sustainability Programmes and Projects, National Department of Environment, Forestry and Fisheries, South Africa, Stephan Contius, Commissioner for

the 2030 Agenda, Head of Division United Nations, Developing Countries and Emerging Economies, Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU), Germany, Dr. Medrilzam, Director for Environmental Affairs, National Development Planning Agency, Indonesia (Bappenas), Stephan Sicars, Managing Director of the Environment and Energy Directorate, United Nations Industrial Development Organization (UNIDO), Martine Rohn-Brossard, Head of Section Europe, Trade and Development/Deputy Head of International Division, Swiss Federal Office for the Environment (FOEN). The programme was moderated by: Ligia Noronha, Director, Economy Division, UNEP.

47.UGC Master Trainers Training Programme, First Module

UGC's Master Trainers Training Programme for Community Based Participatory Research (CBPR). Second Module: Understanding Principles& Methodology of Community-based Participatory Research on the Virtual platform, with national experts, supported by readings. Date: February15, 2022 at 10.30-12noon.

UGC digital platform : Learning objectives related to competencies in CBPR require face-to-face training with field-based practice.

48. Seminar and Rally on Swacch Bharat Abhiyan-19-2-2022

Seminar on Swacch Bharat Abhiyan was organised by NSS units of Nistarini College, Purulia . Shri Vinay Kumar, Regional Director was present as a guest. Swachh Bharat Mission rally and Seminar were organized by NSS Units of Nistarini College in collaboration with RD NSS, Kolkata, and 12 Different colleges of Purulia District and NSS Cell of SKB University on 19th February, 2022.

49. Doughnut Economics- 19-2-2022

On 24 February (4pm CET/10am EST) a webinar featuring Kate Raworth, author of Doughnut Economics: Seven Ways to Think Like a 21st-Century Economist, and a panel of experts that will explore how the doughnut approach can help us Build Back Better from COVID-19 and drive inclusive, green growth in emerging and developing markets was organized.

Much of the discussion focused on the role of the development agencies in supporting a transition "from GDP to doughnut" around the world. This webinar was organized jointly by the Green Growth Knowledge Partnership (GGKP) and Korea Green Growth Trust Fund, World Bank Group. Speakers are Richard Damania is the Chief Economist of the Sustainable Development Practice Group, Juergen Voegele, Ph.D., assumed the position of Vice President for Sustainable Development at the World Bank, Zeenat Niazi, vice-president of Development Alternatives Group, Kumi Kitamori is Head of Green Growth & Global Relations Division at the OECD Environment Directorate, Kate Raworth, Senior Research Associate, Environmental Change Institute, University of Oxford**.**

50. Blood Donation and Blood Science Training- 27-2-2022

Blood Donation Camp and Blook Science Training was organized in Collaboration with Purulia blood donors Society and NSS Unit of Nistarini Collage.

51. Celebration of International Women's Day - 08-3-2022

Celebration of International women Day and organization of International Seminar in collaboration with Department of Political Science, Department of History, United Nation Peace Foundation, Japan and Brambha Kumaries World Spiritual University, Mount Abu, Rajasthan.

This Programme was inaugurated by our GB president, Dr. Subal Chandra De and welcome address was made by our Principal Dr. Indrani Deb. All faculty members of Political Science Department and NSS Programme officers and other teaching and non-teaching staff present in this programme. In this seminar Smt Puja Dutta and her officers were present as guests. From Brambha Kumaries World Spiritual University Sister Sefali and Sister Sandhya along with 8 volunteers were also invited as guests in this Seminar. Smt. Priya Dutta gave a lecture on Women equality and its problems, Sister Sefali gave a lecture on responsibilities and life style improvement of girls and women in modern situation. Sister Sandhya gave a lecture on Women Rights and Spirituality. It was a 3 hours seminar and Prof. Chhabi Rani Nayek, HoD, Department of Political Science gave Vote of Thanks. Around 400 students participated in this programme.

52. CSF DIALOGUE SERIES Topic On GENDER AND CLIMATE.

On 8th March, 2022, we celebrated Women's Day and the leadership role that women play in the society. It was a part of the CSF Dialogue Series with the first one having the topic Gender and Climate. It was organized in collaboration with CSF with NGOs, ONG AFRIQUE ESPERANCE, Caroline Wambui and speakers were Caroline Wambui , Founder Of Cwam Foundation, Bo Guerreschi, Bon't Worry Ngo, Balogoun Oyeoussi Charles**,** President ONG AFRIQUE ESPERANCE.

53. Virtual International Conference On Impact of Climate Change on Ancient Civilization- 15-3-2022

This webinar was organized by the Department of Archaeology, University of Bologna, Italy and Climate Social Forum, Milan Italy with Dept of History and NSS Nistarini College collaboratively on Impact of Climate Change on Ancient Civilization. Around 240 students and 45 faculty members joined this webinar. It was a 2-hour webinar organized jointly. The programme was inaugurated by GB President of Nistarini College Dr. Subal Chandra De. Welcome address was by our Principal Dr. Indrani Deb, who delivered a speech on the history of climate change. After the inaugural session, we started the technical session. Our second expert Marcellina Opeyemi Aderinto from THE AFRICAN CENTRE FOR HUMAN ADVANCEMENT, SOCIAL AND COMMUNITY DEVELOPMENT an International NGO from Nigeria, gave a lecture on effects of climate change on rural Africa. Dr. Dominico Vitero of CSF, Italy gave a short description about ancient Climate change. Our Key Note address was given by **Dr. Giacomo Benati** Department of History and Culture, Archaeology Section, University of Bologna, Alma Mater Studiorum – Università di Bologna, UNIBO, Italy.

This webinar was very helpful for our students as it opened new dimensions of effects of Climate change, and they learned about sustainable development and how we are connected through Climate Change Mitigation activities.

54. International webinar on The Dynamics of the Third Great Energy Transition for a Fossil Free World

This Webinar on "The Dynamics of the Third Great Energy Transition for a Fossil Free World " was held on 19.03.22, and was organized by India Climate Collaborative and Renew Power. 20 students and 5 faculty members participated in this programme actively.

55. Online Meeting on CSRI and UBA Livelihood Programme

The NSS Units of this college attended an online meeting on CSRI and UBA Livelihood Programme on CSRI Technology on 19.03.22, where two teaching staff Dr. N. Dutta and Sri P. Mukherjee discussed on different aspects of rural livelihood.

56. Webinar on Climate Change adaptation

This Webinar on Climate Change adaptation was organized on the occasion of World Climate Day on 23.03.22. This Programme was organized by NSS Nistarini College, in collaboration with Climate Social Forum, Italy.

57. Critical Conversation on Health Justice in the **Commonwealth,** on 29 March,2022.

The topic on "One year after the initial vaccine formulas were approved," one billion people in the Commonwealth are yet to have a single vaccination against Covid-19, was organized on 29 March 2022 to discuss Health Justice in the Commonwealth: We may be able to mitigate the worst effects of future pandemics through the proper distribution of medical treatments and technology. Yet there continues to be considerable legal barriers for countries in the Global South who wish to manufacture vital medicines and medical supplies. Commonwealth states have been at the forefront of efforts to democratize the production and supply of medicines. India and South Africa recently led a historic push for a waiver of intellectual property rights on life-saving vaccine technology at the World Trade Organisation. Momentum to improve global access to medicines and medical technology is growing.

58. Webinar on Solid waste Management

Webinar on Solid waste Management and handicraft development from waste material was organized on 05.05.2022. This programme was organized by Switch on Foundation and Bengal Can, an International NGO where 34 students participated. Different handicrafts were shown, that were made from solid waste like small flower pots from water bottles, pen stands, etc Two NSS Programme Officers also joined for mentoring the programme.

59. Edu Webinar #4 - Energy Efficiency

On May 19, 2022 our College and Climate Social Forum organized an educational webinar on Energy Efficiency. In this programme Dr. Dominico Vitro from CSF and Ray Khiliho were present as Speakers and around 68 students and 7 faculty members from this college were present. This webinar discussed about alternative energy and its implementation.

60. State Level Conference on Domestic Violence

Conference on Domestic Violence, was organized by Women's Commission, Kolkata, Ministry of Social Welfare Govt. of West Bengal on 30th May at Subhanna Bhaban, Kolkata. It was held in Kolkata in the presence of Honorable Minister of Ministry of Social welfare and President of Dr. Sashi Panja inaugurated the programme. Two students, Vidya Bannerjee and Priyanka Choudhury attended the programme and our teacher Sri P. Mukherjee also joined this programme.

61. Unnat Bharat Gram Arogya Series

Unnat Bharat Gram Arogya Series in regional language on 10.06.21 was organized by IIT Kharagpur, RC, UBA in collaboration with IIT Delhi, NC, UBA. 89 students and two UBA members of our college (PI) joined this programme.

62.Rally andAwareness World Blood Donation Day, on 14.06.2022

This was a one day training programme with different youth groups, 4 clubs and 5 NGO and our NSS units and NSS units of J.K. College were present in this programme. This programme was organized by Environmental Committee of Nistarini College. Youths, students and NGO Members were sensitized about the Environmental laws and the responsibly of youth for clean Purulia and how to make a plastic free Purulia.

63. Yoga programme of IDY-2022 on 21st June,2022

On the occasion of Yoga Day NSS and Physical Education department of our college arranged a Yoga Programme at our College campus, our GB President Dr. Subal Chandra De inaugurated the programme and welcome address was given by our Principal, Dr. Indrani Deb. The IQAC convener Prof. N.D. Sannigrahi gave a Speech on positive Lifestyle and need of Yoga. Around 120 students made different yoga postures and Prof. Pasupati Mahato spoke about the benefits of each type of Yoga. 34 faculty members and non –teaching staff were present in this programme.

64. The Africa Green Economy Conference

From 14-30 June, the Africa Green Economy Conference was organized
by Green Growth Knowledge Partnership (GGKP), Capitals Coalition, Green Economy
Coalition (GEC), and World Wildlife Fund (WWF) under the auspices of the Economics for

Nature (E4N) and Natural Capital for African Development Finance (NC4-ADF) initiatives with support from the MAVA Foundation for Nature and the Federal Ministry for Economic Cooperation and Development of Germany, implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. From 14-30 June, the Africa Green Economy Conference brought together global and regional leaders, experts, and practitioners to put nature at the heart of economic development and policy in Africa.

65. Stockholm+50 discussion on 30th June,2022

On **30 June 2022 (17:00-18:30 CEST)** the fourth and final session of the Stockholm+50 GGKP webinar series was organized. One of our faculty members Sri Priyabrata Mukherjee was invited. This session provided space for reflection on what we achieved at Stockholm+50. It was aimed to collectively empower all stakeholders to effect Generation Restoration, implement the UN Decade of Action and achieve the Sustainable Development Goals.

The Speakers were --

Johanna Lissinger-Peitzm, Ambassador for Stockholm+50, Government of Sweden

Ligia Noronha, UN Assistant Secretary-General and Head UNEP New York Office, Nozipho Tshabalala Conversation Strategist, Global moderator & broadcaster.

Emmanuela Shinta, Dayak leader, activist, environmentalist, filmmaker and writer

David Passarelli, Executive Director, United Nations University

Clea Kaske-Kuck, Director, Policy Advocacy and Member Mobilization & Member of the ELG World Business Council for Sustainable Development (WBCSD).

Principal

Principal
Nistarini College Purulia

ENERGY AUDIT REPORT

NISTARINI COLLEGE, PURULIA

D.B.ROAD, PURULIA (W.B) 723101

www.nistarinicollege.ac.in

NISTARINI COLLEGE, PURULIA

HERITAGE WITH MODERNITY

History behind the establishment of the college: The genesis of NISTARINI (WOMEN'S) COLLEGE, one of the premier academic institutes in the State of West Bengal is intimately entwined with the cause of women's education. The institution was first conceptualized in the Summer House of Deshbandhu Chittaranjan Das – whose family had significantly fostered women's education in Bengal and was an integral part of the national freedom struggle.

Sri Bhuban Mohan Das and Smt. Nistarini Devi, father and mother of Sri Chittaranjan Das came to reside in this house in the year 1902. Both of them were dedicated social workers and pioneered in introducing higher education among the women folk of this place. Amala Devi, their daughter started a school to impart higher education to the girls of Purulia. At that time, there was only one lower Primary School, which was known as NISTARINI VIDYALAYA of which Deshbandhu Sri Chittaranjan Das defrayed the entire expenses. A number of the lady teaching staff was brought in to educate girls on all fronts – literary, musical and artistic. An orphanage and widows' home were run under the guidance and supervision of Amala Devi. Soon it became a centre of culture for the people of Purulia. Unfortunately, the demise of all the three, Sri Bhuban Mohan Das, Smt. Nistarini Devi and Amala Devi within a short span of time led to the temporary closure of these institutions.Sometime after, Shrimati Basanti Devi, Chittaranjan's wife came to reside here and the tradition of the house was again revived. This time they paid special attention to educate the Harijan children living in the neighborhood. They, along with their parents, were also encouraged to attend religious ceremonies regularly in this house. When Sri Chiraranjan Das, son of Deshbandhu Chittaranjan Das, fell seriously ill, the then Chief Minister Dr. Bidhan Chandra Roy came to attend him and was impressed by the 'Sankirtan' assemblage of Harijans in this house. As a result of the Chief Minister's own initiatives and the request of the eminent leaders and social workers of this district (Sri JimutBahanSen et al) an educational institution for women was set up. Thus, the Summer House of the family was converted into Nistarini (Women's) College.

- Total campus area: 9.6 acres
- Total built up area: 160 sq miters
- Total open space area: 8 acres
- Total green area: 2 acres

EXECUTIVE SUMMARY

In accordance with the Risk-Based audit and evaluation plan of Nistarini College, Purulia, the energy audit has been done.

The purpose of the energy audit was to evaluator the approaches of the college in search of the energy harnessing from the non-conventional energy sources along with top observe the amount of energy used to maintain the campus for their economic uses of thetraditional energy in practices. The audit was also conducted in search of the approaches toward the sustainability as well as to observe the approaches for the reduction of carbon which is the call of the time. The audit also observed their approaches of the college whether the institution is in compliance with the applications of the regulations, policies and standards.

During the audit conducted by the team, the much more attention was given towards the different policies adopted by the government from time to time and the college attitude towards it to follow as a part of their sustainable approaches in their day to day's working policies. The analysis is based upon the standard protocols and the parameters as available in the different domains of the environment regulatory agencies. The methodology was included the physical observation of the ongoing practices around the campus along with the data available from the authority for their proof of credentials used for energy uses from the different government agencies like WNSEDCL and others.

ACKNOWLEDGEMENT

We would like to convey our sincere thanks to Dr. I. Deb, Principal, Nistarini College, Purulia for her heartfelt gesture to have the pleasure of this energy audit. We are highly acknowledged to all the staff, students and stakeholders' of the college for their support. We sincerely convey our thanks to all the departments specially the Science deportments to make our journey smooth and full of pleasure.

ENERGY AUDIT

Energy Audit:

It mainly concerned with the energy conservation and methods to reduce the consumption of conventional energy sourcesrelated pollution along with an approach to carbon neutrality.

Energy Conservation:

This indicator addresses energy consumption, energy sources, energy monitoring, lighting, appliance like AC, high consuming energy device of science laboratories, natural gas and vehicles. Energy use is clearly an important aspect of campus sustainability and thus requires no explanation for its inclusion in the assessment. Use of least papers in daily basis substituted by the electronic messages and notices are the another aspects of the energy conservation strategies are exercised here.

a**) Observations**

Total energy consumption is determined as 97 KWH/Year by major energy consuming equipment. All the departments and common facility centers are equipped with CFL lamps. The college has eight numbersAir conditioning machine (2 tons each). Besides this, photovoltaic cells are also installed in the campus as an alternate renewable source of energy. Equipments like Computers(100nos with TFT monitors) are used with power saving mode. Also, campus administration runs switch –off drill on regular basis. In Science departments like Physics, Chemistry, Botany, Zoology, Computer Science,Mathematics,and Geography, the switches were shut down after occupancy time and are one of green practices for energy conservation. Along with this, college has installed 07solar street lamps as a part of the green practice to minimize the emission of CO2 in the atmosphere. The summary of the observations are as followed;

1. College has seen ambience covering approx. 2.0 acres,
2. Imitative solar panels installment as street lights another approaches.
3. College is monitoring all sorts of approaches to use the biodegradable wastages to generate power ion the forthcoming days,
4. College always tries to practice all the electric appliances in switch off mode whenever is required.
5. Most of the devices are run as per need and demand basis.
6. The use of the AC is very restricted here that is reflected by a very small number of ACs around the campus.

b) Recommendations

Sustainability and an approach towards carbon neutrality are the call of the time. 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. It is preferable to purchase electricity from a company that invests in new sources of renewable and carbon-neutral electricity. Installation of LED lamps instead of CFL is although becomes the normal practices of the college which is reflected by the following data- LED 89, CFL-117, Tube lights 712, Only 4 incandescent lamps out of large network, Fans 2813. These figures are enough to speak about the approaches to go green concept' materialized here. It has least number of water heating systems. Most of the instruments not run by standby mode that also reflects the use of the conservation of energy strategies.

ENERGY AUDIT WORKING FORMAT

Audit Framework and detail findings

The following audit framework is used for conduction energy Audit Value in the year 2021-22. The framework also lists the findings and observation for every criterion.

Control Objective	Control	Audit Observations
Reduce Energy consumption especially of energy derived from fossil fuels	Support renewable and carbon neutrality options in any energy purchasing consortium	The college mostly runs by the electric derived from the non-renewable sources although college opted the options for green energy by harvesting solar energy in the solar street lamps.
	It is expected to purchase the electricity of that company that invests money on green energy	The college has no choice of alternative as west Bengal State electricity distribution Company is the only source of power distribution
	Look in to the possibility of onsite micro generation of renewable electricity	College has installed solar street lamps panels
	Give preference to the most energy efficient appliances	The college has maximum LED bulbs, CFL bulbs with tube lights. Incandescent bulb near about Zero.
	Energy efficient heating systems	College has a energy heating system which is negligible
	O promote the slogan of save energy by campaign	The college has the pleasure of beauty to raise the voice against the over utilization and practice least energy consumption. Switch off slogan without the requirement is most important practices here.
	Monitor and understand the importance of different sources of college energy consumption and set	Disconnection of power supply is done when not in use

	appropriate and measurable targets for a reduction of certain areas of consumption	
	Ensures that all electronic and electrical equipments such as computers, are switched off when not in use and is generally configured in power off mode	All the devices having electric connection are switched off when not in use
	Is there any instrument running on standby mode , reduce energy consumption	Equipments running on standby mode

CONCLUSIONS

After the delicate observation of the different parameters related to the energy uses in the different wings of the college, it has been observed that there is a significant concern over environmental conservation along with the use of energy both by the faculty and the students along with the other stakeholders. The Go green awareness initiatives are substantial. The installation of solar panels as pilot project and the optimum use of the paperless work system are note worthy. The college has an sound, vibrant and dynamic Eco club and Green volunteers to promote the sustainable use of the energy sources along with there is a wide circulation of the messages of the 'Go green' concept. The undergraduate college very often organizes the different kinds of the environmental campaign by organizing seminars, workshops and other activities round the year to promote the culture of sustainability in all respects.

As a part of the Energy audit of campus, I along with my team members also carried out the different the environmental monitoring includes illumination, solar street lamps observation and the wastage recycling management practices. We have observed the sufficient illumination and ventilation in the class rooms and office premises that speak the minimum requirement of artificial source of light particularly in the complete day time. We hope, that the girls are the future citizen of our country who play a very important role in the sustainability of energy and nature. It is our pleasure to have the exercise of all the stakeholders in this regard.

Office of the Project officer cum District Welfare Officer
Backward Class Welfare and Tribal Development, Purulia

Mr. Jadab Nandi *Ph No-9775696866*

Email id-yadavnandi90@gmail.com

Ref. no.-

Date: 17.06.2022

This is to certify that Nistarini College, Purulia has conducted an Energy audit Report for the year 2021-22 for their campus and the necessary data and the desired credentials for scrutiny. The activity and the measure carried out by the college and were found satisfactory. The efforts taken by the administration, students, staff and all the stakeholders towards environmental sustainability and the exploration of green energy deserves appreciation and the commendable. I wish him all the best.

J. Nandi. 17.06.2022

Jadab Nandi
Sub-Assistant Engineer (Electrical)
Office of the P. O.-Cum-D.W.O.
B.C.W./T.D.D., Purulia

Sub-Assistant Engineer (Electrical)
Office of the P.O.-Cum-D.W.O.
B.C.W./T.D.D., Purulia


GPS Map Camera
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10. Auditorium LED
GPS Map Camera
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1. LED High Mast@Entrance
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2. Outside Auditorium LED
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3. High Mast@Central Library
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4. Admin Building LED
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5.High Mast@Principal's Quarters
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6.High Mast@Hostel
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GUEST HOUSE
7.High Mast@Basket Ball Ground
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8.LED@Qtr No. 2
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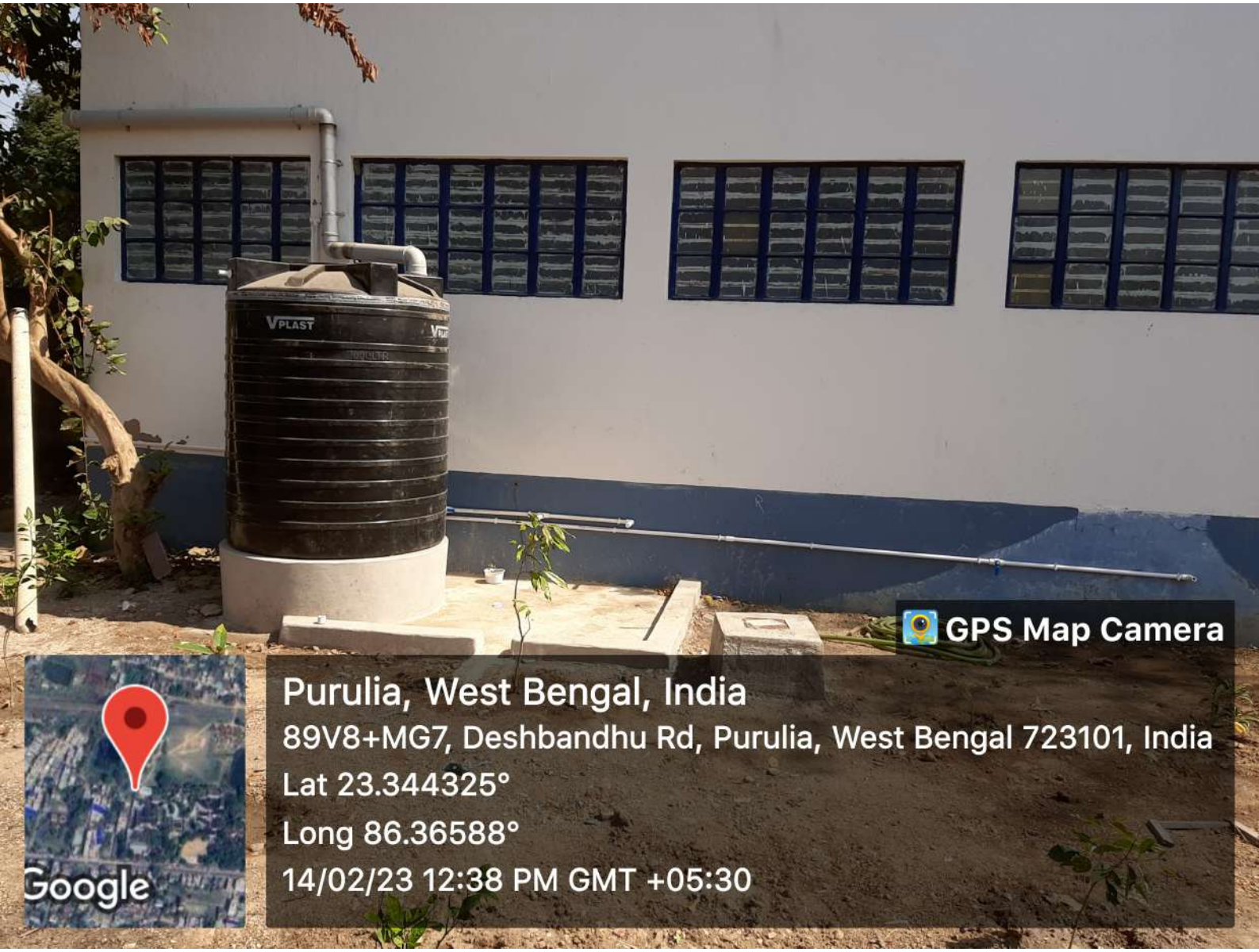
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Padmashree E.K. Janaki Ammal (1897-1984)
(Mother of Indian Botany)
Orchard & Herbal Garden
Nistarini College, Purulia
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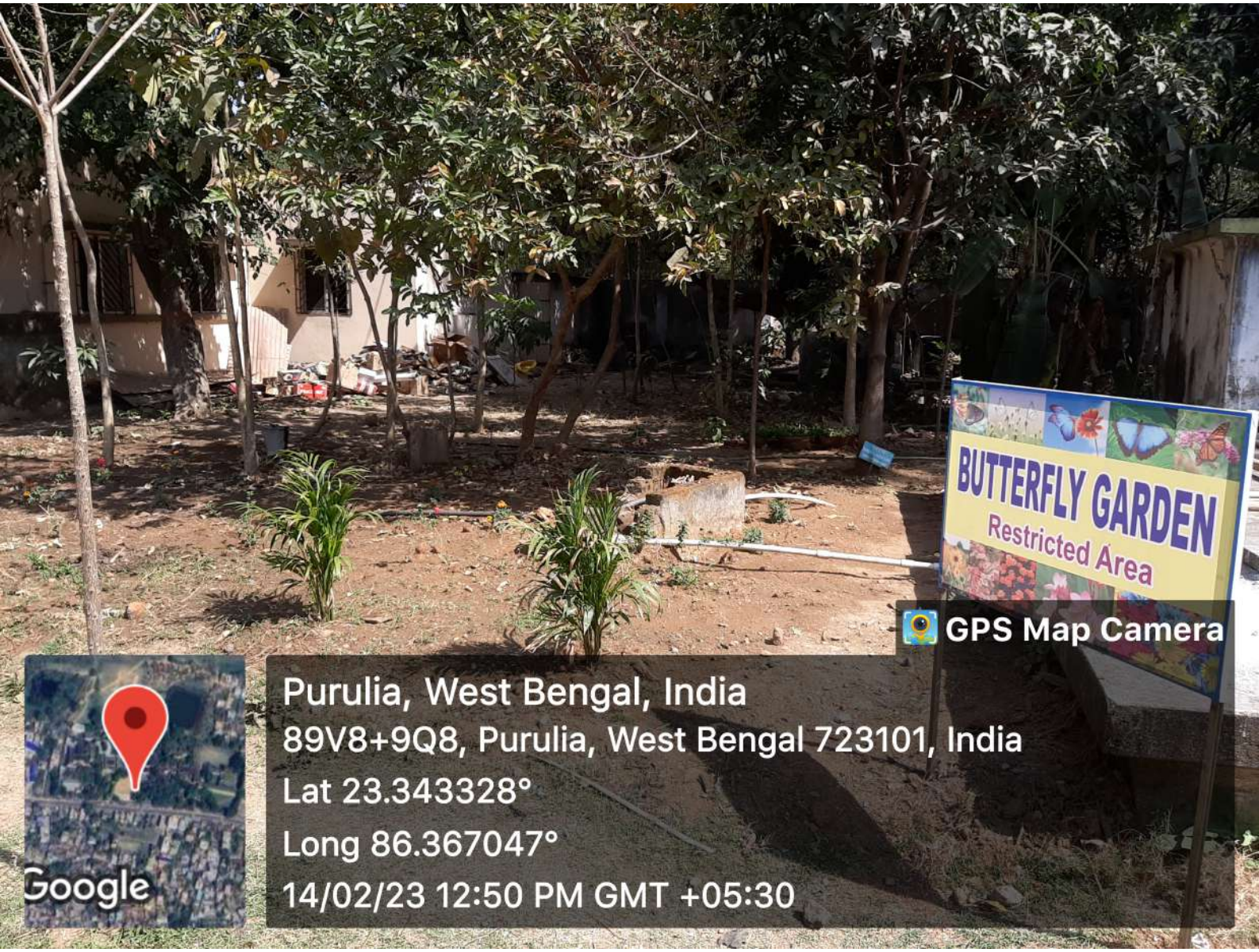
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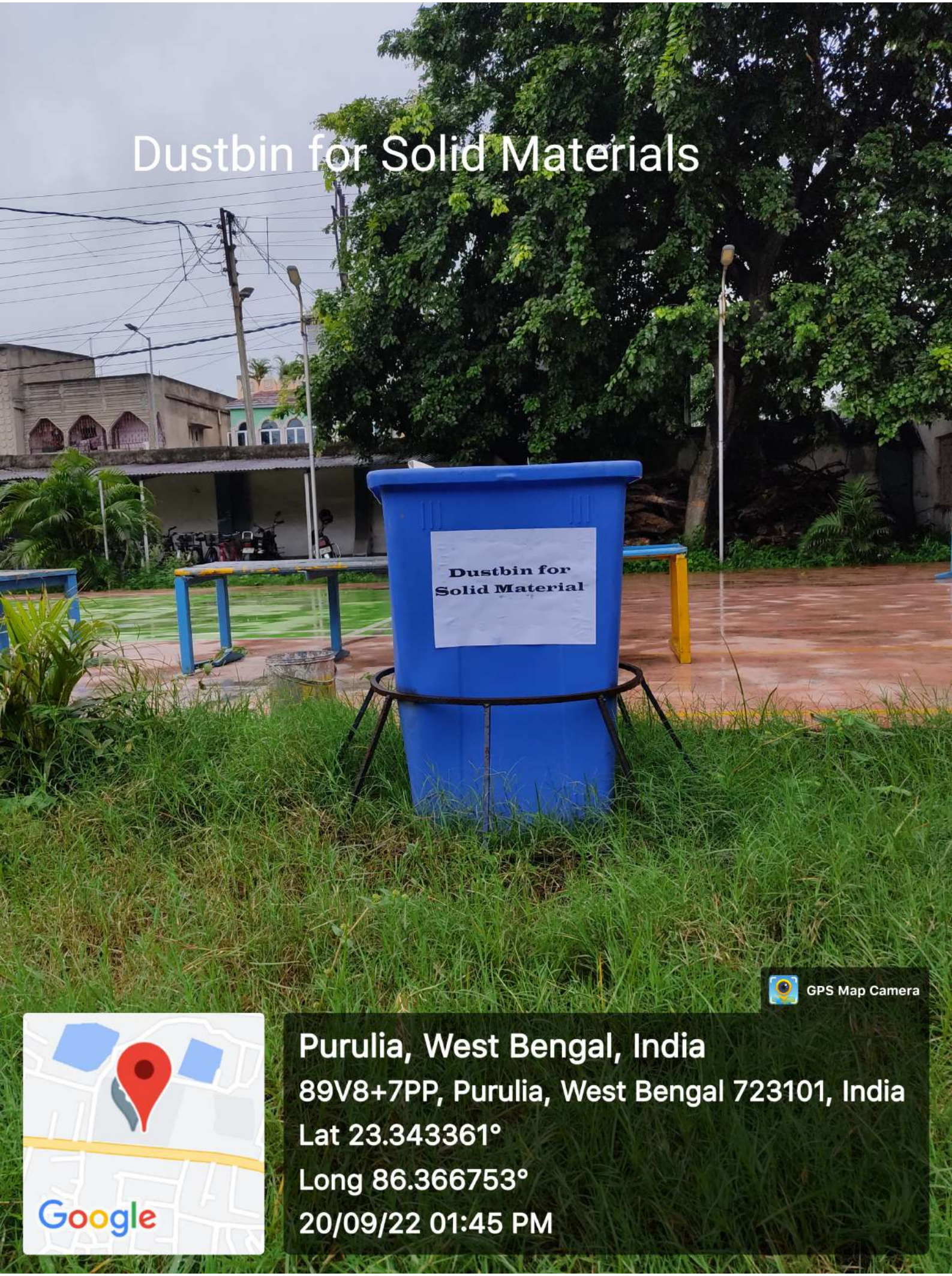
Dustbin for Solid Materials
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Solid Material
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Dustbin for Disposable Materials
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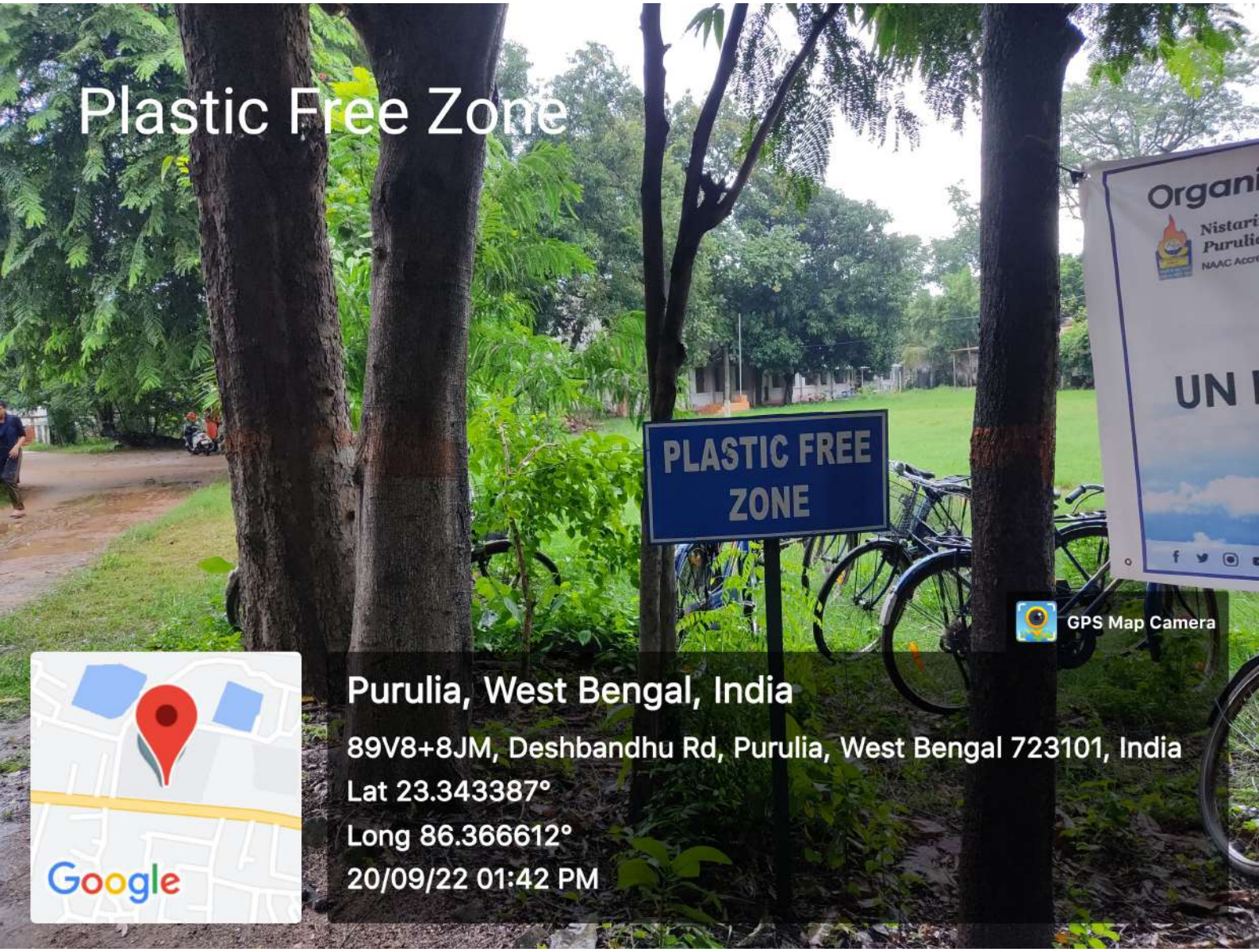
GPS Map Camera
Google
Purulia, West Bengal, India
Deshbandhu Road, N.H 60 A, Purulia, 723101, Purulia,
West Bengal 723101, India
Lat 23.343459°
Long 86.366226°
20/09/22 01:48 PM


Non-disposable Materials
Dustbin for Non-disposable Materials
GPS Map Camera
Purulia, West Bengal, India
89V8+8H3, Purulia, West Bengal 723101, India
Lat 23.343312°
Long 86.366449°
20/09/22 01:51 PM
Google


Plastic Free Zone
PLASTIC FREE ZONE
GPS Map Camera
Purulia, West Bengal, India
89V8+8JM, Deshbandhu Rd, Purulia, West Bengal 723101, India
Lat 23.343387°
Long 86.366612°
20/09/22 01:42 PM
Google


No Smoking Zone
NO SMOKING ZONE
GPS Map Camera
Google
Purulia, West Bengal, India
89V8+8JM, Deshbandhu Rd, Purulia, West Bengal
723101, India
Lat 23.343503°
Long 86.366465°
20/09/22 01:44 PM