GREEN AUDIT REPORT

(2021-2022)

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SARKAGHAT

DISTT. MANDI HIMACHAL PRADESH-175024

Aerial View of RNT Government Degree College Sarkaghat

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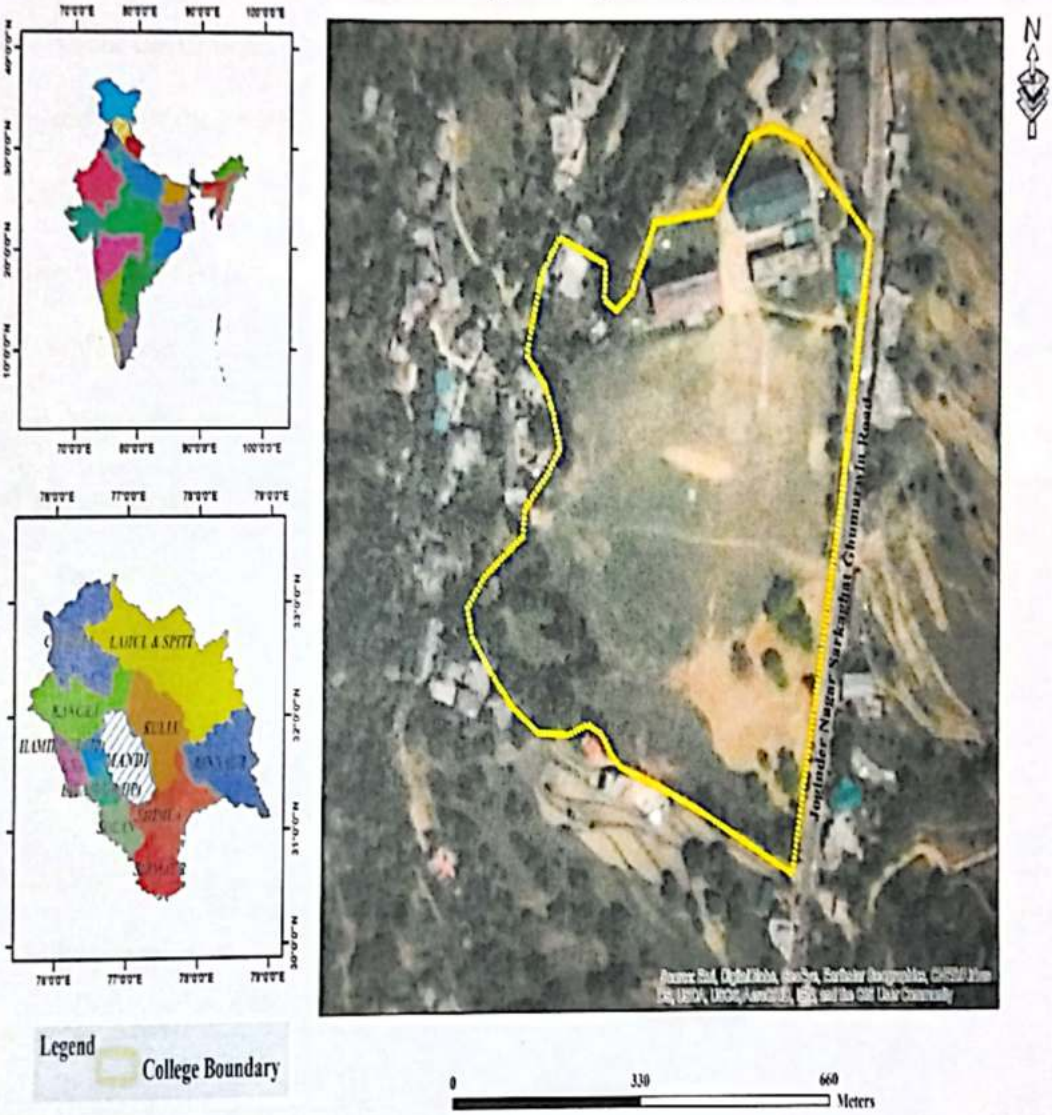
Location Map of RNT GDC Sarkaghat -Mandi HP

Goverment Degree College Sarkaghat, Mandi, Himachal Pradesh



Satellite view of RNT Govt. Degree College Sarkaghat (Source: Google Map)

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Introduction

The rapid urbanization and economic development at local, regional and global level has led to several environmental and ecological crises. On this background it becomes essential to adopt the system of the Green Campus for the institute which will lead for sustainable development.

RNT Govt. Degree College is deeply concerned and unconditionally believes that there is an urgent need to address these fundamental problems and reverse the trends. 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 included: physical inspection of the campus, observation and review of the documentation, interviewing key persons and recommendations. It works on the several facets of 'Green Campus' including Water Conservation, Tree Plantation, Waste Management, and Paperless Work. With this in mind, the specific objectives of the audit was to evaluate the adequacy of the management control framework of environment sustainability as well as the degree to which the Departments are in compliance with the applicable regulations, policies and standards. It can make a tremendous impact on student health and learning college operational costs and the environment. The criteria, methods and recommendations used in the audit were based on the identified risks.

1.1 About the College

A confluence of the old and the new, Government Degree College Sarkaghat draws its sustenance from its thirty four years old rich heritage while it continues to pursue the contemporary goals it has set for itself with a vision to provide a distinct environment of excellence in education with human values. The college, with its elegant and majestic campus, came into existence in April, 1985 as a multi faculty co-educational institute to quench the educational desires of the rural people. Affiliated to the Himachal Pradesh University, Shimla, the college is nestled in the outskirts of Sarkaghat town in the lush green fields and it lies between Chandrakhri hill range in the North West and Devabrarta hill range in the East. With the inceptive enrolment of 586 students and the recognition from the UGC under 2 f & 12 B, the college has seen proliferation in the enrolment of students over the years. In spite of many restraints and tough hilly terrain in the feeding areas, the college has been able to carve a unique image which always attracts students across the state. The vegetation display a seemingly endless variety of shapes, forms, texture,

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vibrant colors hence improving the aesthetic value of the region. Even individual plants vary their appearance throughout the course of the year as the seasons change. The college has been playing a significant role in maintaining the environment of the entire campus and its surrounding areas.

2. Objective of the study

The main objective of the green audit is to promote the Environment Management and Conservation in the College Campus. The purpose of the audit is to identify, quantify, describe and prioritize framework of Environment Sustainability in compliance with the applicable regulations, policies and standards. The main objectives of carrying out Green Audit are:

- To introduce and aware students to real concerns of environment and its Sustainability.
- To provide a healthy environment in campus.
- To bring out a status report on environmental compliance.
- To enhance awareness towards environmental guideline and responsibilities.
- To identify cost saving methods through minimizing and effectively managing waste.

3. Methodology

In order to perform green audit, the methodology included different tools such as 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
- Waste management
- E-waste management
- Green area management

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4. Observations and Recommendations

4.1 Water Use

This indicator addresses water consumption, water sources, irrigation. A water audit is an on-site survey and assessment to determine the water use and hence improving the efficiency of its use.

a) Observation

The study observed that the Water supply system involves the connection provided by JAL SHAKTI VIBHAG GOVERNMENT OF HIMACHAL PRADESH, are major sources of water in college and in the Girls hostel. Water is used for drinking purpose, toilets and gardening. The waste water from the RO water purifier is used for gardening purpose. During the survey, no loss of water is observed, neither by any leakages, or by over flow of water from overhead tanks. Rain water harvesting units are also functional for recharging ground water level.

b) Recommendations

- In campus small scale/medium scale/ large scale reuse and recycle of water system is necessary.
- 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.
- Ensure that all cleaning products used by college staff have a minimal detrimental impact on the environment, i.e. they are biodegradable and non-toxic, even where this exceeds the Control of Substances Hazardous to Health (COSHH) regulations.
- Gardens should be watered by using drip/sprinkler irrigation system to minimize water use.
- Display boards for switching off the taps to be put on at appropriate place.
- Rain water harvesting as per the guidelinesof central ground water board shall be done

4.2 Waste Generation

This indicator addresses waste production and disposal of different wastes like paper,

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food, plastic, biodegradable. Solid waste generation and management is a burning issue. Unscientific handling of solid waste can create threats to everyone. The survey focused on volume, type and current management practice of solid waste generated in the campus.

a) Observations

Waste generation from tree droppings and lawn management is a major solid waste generated in the campus.

Single sided used papers reused for writing and printing in all departments and recently both side printing is carried out as per requirements. The waste generated in the form of newspapers, magazine and of cartons. Very less plastic waste is generated by the department, office, garden etc. but it is neither categorized at point source nor sent for recycling. Metal waste and wooden waste is stored and given to authorized scrap agents for further processing.

b) Recommendations

- Reduce the absolute amount of waste that is produced from college staff offices.
- Vermicomposting should be adopted on at least 200 sq. ft. of land.

4.3 E-Waste Generation

E-waste can be described as consumer and business electronic equipment that is near or at the end of its useful life. E-waste is much more hazardous than other waste because electronic components contain cadmium, lead, mercury, and Polychlorinated biphenyls (PCBs) that can damage human health and the environment.

a) Observations

E-waste generated in the campus is very less in quantity. The E-waste and defective item from computer laboratory is being stored properly. The institution has decided to contact approved E-waste management and disposal facility in order to dispose E-waste in scientific manner.

b) Recommendations

- Recycle or safely dispose of white goods, computers and electrical appliances.
- Use reusable resources and containers and avoid unnecessary packaging where

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- Use reusable resources and containers and avoid unnecessary packaging where possible.
- Always purchase recycled resources where these are both suitable and available.
- Defective systems are upgraded by replacing their parts.

4.4 Green Area

This includes the plants, greenery and sustainability of the campus to ensure that the buildings conform to green standards. This also helps in ensuring that the Environmental Policy is enacted, enforced and reviewed using various environmental awareness programmes.

Campus Flora of Government Degree College Sarkaghat

Sr.No.	Name of Plant	Sr.No.	Name of Plant
1	*Achyranthes aspera*	14	*Berberis vulgaris*
2	*Achyranthes bidentata*	15	*Biota orientalis*
3	*Aegle marmelos*	16	*Boehmeria rugulora*
4	*Albizia chinensis*	17	*Bombax ceiba*
5	*Aloe vera*	18	*Bougainvillea glabra*
6	*Anisomeles indica*	19	*Brugmansia suaveolens*
7	*Araucaria columnaris*	20	*Callistemon citrinus*
8	*Asparagus adscendens*	21	*Berberis vulgaris*
9	*Asparagus racemosus*	22	*Biota orientalis*
10	*Azadirachta indica*	23	*Boehmeria rugulora*
11	*Bauhinia purpurea*	24	*Bombax ceiba*
12	*Bauhinia variegate*	25	*Bougainvillea glabra*
13	*Berberis lyceum*	26	*Brugmansia suaveolens*
27	*Ficus religiosa*	46	*Cestrum nocturnum*
28	*Grewia asiatica*	47	*Citrus limon*
29	*Hibiscus rosa-sinensis*	48	*Citrus medica*
30	*Jasminum grandiflorum*	49	*Cryptolepis buchananii*
31	*Lantana camara*	50	*Cycas circinnalis*
32	*Mangifera indica*	51	*Dalbergia sissoo*
33	*Melia azedarach*	52	*Duranta repens*
34	*Mirabilis jalapa*	53	*Elaceocarpus ganitrus*
35	*Murraya koenigii*	54	*Emblica*

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36	*Nerium indicum*	55	*Eucalyptus globulus*
37	*Pogostemon benghalense*	56	*Eucalyptus tereticornis*
38	*Populus deltoids*	57	*Euphorbia pulcherrima*
39	*Psidium guajava*	58	*Ficus auriculata*
40	*Punica granatum*	59	*Ficus bengalensis*
41	*Ricinus communis*	60	*Ficus elastic*
42	*Calotropis procera*	61	*Ficus palmate*
43	*Cassia fistula*	62	*Tinospora cordifolia*
44	*Ceiba pentandra*	63	*Vitex negundo*
45	*Celtis australis*	64	*Xanthium indicum*

a) Observations

Campus is located in the vicinity of many trees (species) to maintain the bio-diversity. Various tree plantation programs are being organized at college campus and surrounding villages through NCC (National Cadet Core) and NSS (National Service Scheme) and Eco Club unit. This program helps in encouraging eco-friendly environment which provides pure oxygen within the institute and awareness among villagers. The plantation program includes various types of indigenous species of ornamental and medicinal wild plant species.

b) Recommendations

- Review periodically the list of trees planted in the garden, allot numbers to the trees and keep records. Assign scientific names to the trees.
- Create awareness of environmental sustainability and take actions to ensure environmental sustainability.
- Establish a College Environmental Committee that will hold responsibility for the enactment, enforcement and review of the Environmental Policy. The Environmental Committee shall be the source of advice and guidance to staff and students on how to implement this Policy.
- Celebrate every year 5th June as 'Environment Day' and plant trees on this day to make the campus more Green.
- The biodiversity is to be maintained while considering the plantation in future

RAIN WATER HARVESTING AND ITS USES

- Girl Hostel of RNT Government Degree College Sarkaghat has big

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building and its rain water harvested through under-ground rain water structure constructed in the year 2011.

- It has been constructed by HIMUDA agency.
- Roof top rain water is properly preserved in this under-ground tank.
- This tank not only caters our water needs but saves our valuable soil from erosion.

Underground roof top rain water harvesting tank

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Students Participating in Weed Eradication Programme

Students Participating in Waste |Disposal Campaign

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Students of NCC, NSS and Rovers & Ranger Participating in Swachh Bharat Campaign

Students Participating in Tree Plantation Drive

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Incinerator installed inside the girl's washroom

Sanitary Vending Machine installed inside girl's common room

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4. Conclusions

The environmental awareness initiatives are substantial. The installation of solar panels and rain water harvesting system are noteworthy. Besides, environmental awareness programmes initiated by the administration shows how the campus is going green. Few recommendations are added to curb the menace of waste management using eco-friendly and scientific techniques. This may lead to the prosperous future in context of Green Campus & thus sustainable environment and community development.

As part of green audit of campus, we carried out the environmental monitoring of campus including Illumination and Ventilation of the class room. It was observed that Illumination and Ventilation is adequate considering natural light.

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