

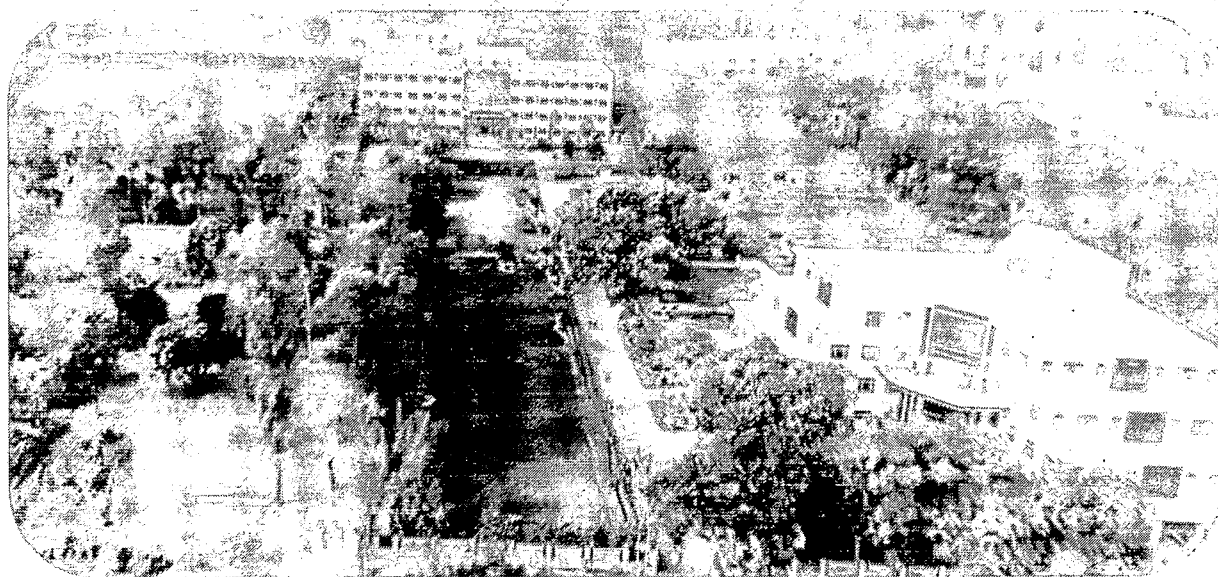
GREEN AUDIT REPORT

OF



SHRI RAM COLLEGE

Muzaffarnagar



Year 2023-24

Prof(Dr)Mahesh Kumar
Department of Botany
J.V. Jain PG College, Baraut
Secretary, Green Audit Committee

Dr Sanjay Kalia
Scientist'E', Deptt of Biotechnology
Ministry of Science & Tech, NewDelhi
Chairman, Green Audit Committee

Shri Ram College, Muzaffarnagar

Green Audit Committee

EXTERNAL AUDITORS

S.NO.	Committee Member	Designation
1	Dr. Sanjay Kalia, Scientist 'E', DBT-India, New Delhi	Chairman
2	Dr. B.K. Tyagi, Retd. Principal, Deptt. of Physics, DAV Degree College, Muzaffarnagar	Secretary
3	Prof. (Dr.) Mahesh Kumar, Department of Botany, J.V. Jain PG College, Baraut.	Member

INTERNAL AUDITORS

S.NO.	Committee Member	Designation
1	Dr. Pooja Tomar, HoD, Faculty of Basic Science, Shri Ram College	Co-ordinator
2	Dr. Naeem Rajput, HoD, Deptt. of Agriculture, Shri Ram College	Member
3	Mr. Vikas Kumar, Assistant Professor, Faculty of Bio Sciences, Shri Ram College	Member
4	Mr. Ankit Kumar, Assistant Professor, Faculty of Bio Sciences, Shri Ram College	Member



Green Audit Report

Shri Ram College, Muzaffarnagar

Contents

Sr. No.	Description	Page Nos.
1	Preamble	04
2	Preface	05
3	Acknowledgement	06
4	Principal's Message	07
5	Executive Summary	08
6	Overview of the College	10
7	About Muzaffarnagar	12
8	Statement of Assurance	14
9	Methodology of Audit	14
10	Summary of Findings	15
11	Audit framework and detailed findings	17
12	Water Audit	21
13	Green Campus Initiative Activities	37
14	Conclusions	50

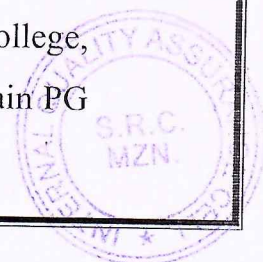


Preamble

It is a fact that the local, regional and global environment is being rapidly destroyed, leading us to a world of “environmental poverty”. Stabilizing the population, adopting environmentally friendly and sustainable technologies, reforestation and ecological restoration are the key factors in creating a just and sustainable future in harmony with nature for all people in society. Therefore, educational leaders must initiate and support the promotion of internal and external resources and knowledge so that their organizations can solve environmental problems.

Shri Ram College, Muzaffarnagar is deeply concerned and unconditionally believes that there is an urgent need to address these fundamental problems and reserves the trends. We believe that humans should be stewards of nature and that we all have a significant responsibility to protect the planet's natural resources. Shri Ram College, Muzaffarnagar, a flagship college, is committed to playing a significant role in education, research, policy formulation and knowledge exchange that is essential for environmental stewardship.

The current Green Audit represents our efforts to build environmental sustainability inside the SRC campus. Our intention was to keep auditor's report as genuine and transparent as possible. That is why we had invited External Auditors as well. The audit was conducted by a team of eminent scientists and researchers. The external auditors were led by Dr. Sanjay Kalia, Scientist 'E', DBT-India, New Delhi and comprised of Prof. Dr. B.K. Tyagi, Retd. Principal, Deptt. of Physics, DAV Degree College, Muzaffarnagar. and Dr. Mahesh Kumar, Department of Botany, J.V. Jain PG



College, Baraut The Internal Auditors included Dr. Pooja Tomar, HoD, Faculty of Basic Science, Shri Ram College, Dr. Naeem Rajput, HoD, Deptt. of Agriculture, Shri Ram College, Mr. Vikas Kumar and Mr. Ankit Kumar (Assistant Professor, Faculty of Bioscience). We have conducted this audit for the college to create awareness not only among the students, but also in the staff and stakeholders about engagement in eco- friendly activities. We wish to make these activities as a regular part of functioning.

The overall goals of this audit were:

- . To introduce students to real concern of environment and its sustainability using the Shri Ram College, Muzaffarnagar Campus as a study site.
- . To analyze the pattern and extent of resources use on the campus.
- . To make the college a more environmentally sustainable institution of higher learning.
- . To bring out a status report on Green compliance.

Summing up, in light of above mentioned goals, we are pleased to submit this Green Audit Report.



Preface

The concept of “GREEN CAMPUS INITIATIVE” was put forth by Hon Dr Subhash Chandra Kulshreshtha, Founder Chairman, Shri Ram Group of Colleges, Muzaffarnagar. Thereafter, the college management decided to pursue this initiative.

Concept of green campus is not limited to the decorating the college campus but also corporate responsibility, with quality education keep college environment eco-friendly with its facilities. Therefore, attempt has been made on that direction by landscaping and plantation, solid waste management, recycling of waste water, conservation of energy, water conservation, rainwater harvesting and minimum usage of paper.

Through the green audit, a direction as how to improve the structure of environment and inclusion of several factors that can protect the environment can be commenced. This audit focuses on the Green Campus, Waste Management, Water Management, Air Pollution, Energy Management & Carbon Footprint etc. being implemented by the institution.

We tried to inculcate value of surrounding environment amongs the students through Environmental awareness activities like nature club, NSS, Cycle Day, No Vehicle Day Celebration, World Water Day, World Environment Day, Plantation Drives, Quiz Competition on Environment, Organic Farming and Vermicomposting Courses and activity like Best out of Waste competition.

Because of the greenery and eco-friendly sustainable environment, college campus becomes more charming, refreshing and healthier. This increases efficiency of every element of the college.

“LIVE LIFE CLEANER BY MAKING EARTH GREENER”



Acknowledgement

We take this opportunity to express our gratitude towards the Chairman of the Institute, Hon Dr S C Kulshreshtha and all Hon. Members of the Management Committee of the college for their valuable guidance, continuous encouragement, generous gift of time with constructive criticism & suggestion during the composition of work of entire “Green Audit Report -2023 – 2024”.

We also express our deep sense of gratitude to our Principal Dr Prerna Mittal and Internal Quality Assurance Cell (IQAC) co- ordinator Dr. Vinit Kumar Sharma who inspired and encouraged us throughout the work. We great fully acknowledge the help provided by him on several occasions.

It is right time to express our deep sense of gratitude to faculties of our sister institutes especially Dr. S N Chauhan, Director, SRGC (IC), Dr. Ashwani Kumar, Principal, SRP, Dr. Manoj Dhiman, Director, SRGC, Dr. Samrat Singh, Director, IIMT, Saharanpur, Dr. Narendra Sharma, Director, CHSCM, Khurja for their continuous help, inspiring resoluteness and sensible suggestion without any reservation whenever we approached throughout investigation. We are also thankful to Dr. Girendra Kumar Gautam, Director, Shri Ram College of Pharmacy for their valuable guidance.

We are equally thankful to our colleagues teachers and students of B.Sc. (Biotechnology) and B.Sc. (Microbiology) – Sharad Malik, Vansh, Riya Malik, Zeeshan, Sharik, Rohit Kumar, Aarzoo which helps during data collection and identification of plants.

Green Audit Committee



Principal's Message

I express my hearty wishes for success of this publication of 'Green Audit 2023- 2024'. SRC is one of the unique spiritual educational campuses with quality of education, where we are aware about the environment with cultural development, as fundamental feature of Indian ancient philosophy is a good environmental sense.

The efforts of our institute and sister schools of SRGC Integrated Campus towards the protection of environment and biodiversity are truly unique and can become experimental projects to show how to protect from impending disasters such as earthquakes, landslides etc.

We try to maintain environment eco-friendly through activities like landscaping and plantation, rain water harvesting, solid waste Management, sewage treatment plant, energy conservation, e-waste management, and paperless technology to minimize the use of paper basically prepare from the plants.

The ultimate aim of our institution is to develop youth as fertile probe who understand for their social responsibilities.

The ultimate aim of our institution is to develop youth as fertile probe who understand for their social responsibilities.

I express my hearty wishes for success of this movement of Green Audit Report for the new beginning of the conservation from the doorstep of the people.

Our green audit reflects assessment and achievement of vision and mission of the college.

(Dr Perna Mittal)
Principal, SRC



Executive Summary

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. Shri Ram College is deeply concerned and unconditionally believes that there is an urgent need to address these fundamental problems and reverse the trends. Being a premier institution of higher learning, the college has started 'Green Campus Initiative' which promoted various environmental friendly practices in combination with curricular education for sustainable and eco-friendly aura in the campus.

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. With this in mind, the specific objectives of the audit are 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. The area of the college premises is 25 acres out of which 'Green Cover' is approx. 19 acre. The tree census was carried out by NSS volunteers along with Green Assessment Committee.

In the present audit report, most of the aspects are covered such as tree plantation, awareness about environment programme evaluated by experts. Green campus is the motto of our college and the college has already taken some steps to protect the environment with help of college staff and students under the guidance of Principal Dr. Perna Mittal, Shri Ram College, Muzaffarnagar.



Introduction

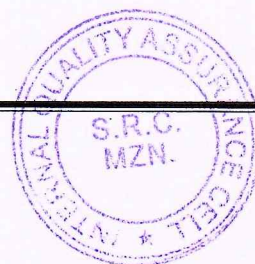
Green Audit can be defined as systematic identification, quantification, recording, reporting and analysis of components of environmental diversity. The 'Green Audit' aims to analyze environmental practices within and outside the college campus, which will have an impact on the eco-friendly ambience. It was initiated with the motive of inspecting the work conducted within the organizations whose exercises can cause 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.

Green audit is assigned to the criteria 7 of NAAC, National Assessment and Accreditation Council which is a self governing organization of India which declares the institutions as Grade A, B or C according to the scores assigned during the accreditation.

Overview of the College

Shri Ram College, Muzaffarnagar, Uttar Pradesh is a NAAC (A++) Grade, 22 years young college having 10 Departments/Faculties with 14 UG and 6 PG courses of various streams. The college is located on a beautiful campus of 25 acres. There are separate laboratories of Chemistry, Botany, Zoology, Biotechnology, Computer Science, Physics, Electronics, Agriculture, Microbiology, Fine Arts and News Studio etc.

The college has also adopted the 'Green Campus Initiatives' for environmental conservation and sustainability. Greening the campus is all about sweeping away wasteful inefficiencies and using conventional sources of



energies for its daily power needs, correct disposal handling, purchase of environment friendly supplies and effective recycling program. Institute has to work out the time bound strategies to implement green campus initiatives 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 'Green Campus Initiative' has been active since last few years both as an assembly group of sub committees that actively promote the various projects. The college administration works on the several facets of 'Green Campus' including Water Conservation, Tree Plantation, Waste Management, Paperless Work, Alternative Energy and Mapping of Biodiversity. College has won the Award for Green Campus also. '**Green Campus Award**' of Himalayan Action Research & Development was given to Shri Ram Colleges by Shri Nitya Nad, Chief Minister of Uttarakhand.

The uniqueness of SRGC Campus is that it demonstrates respect for environment and stewardship of natural resources while ensuring the quality of life on the campus. The Master Plan of the Institution has been designed to ensure and sustain a harmonious blend of human and environmental well-being. The Institution has undertaken various initiatives to setting up an Eco-Friendly campus:

Promotion of biodiversity: In its Endeavour for conservation of healthy ecosystems, the Institution has embarked on a plantation drive spread over its

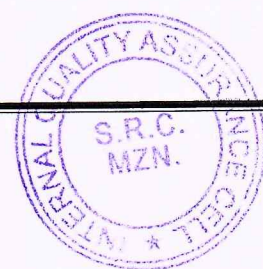


campus. The variegated cropping of flowers such as roses, gerbera, gladiolus etc. have been established as livelihood projects within the scope of demonstration farms and seed gardens to demonstrate and promote scientific research in crop development and inter-cropping. Once they start yielding, the institution will promote such plantations in the villages and facilitate Farmers.

- **Grid connected roof top solar photo voltaic power projects:** The Institution has embarked upon roof-top solar installations at its campus.
- **Water conservation and supply management:** The Institution has invested enormous resources to ensure sustainable water management and use.

About Muzaffarnagar

Muzaffarnagar district is a district of Uttar Pradesh state in northern India. It is part of Saharanpur division. The city of Muzaffarnagar is the district headquarters. This district is the part of National Capital Region. Muzaffarnagar City is situated midway on Delhi – Haridwar/Dehradun National Highway (NH 58), the city is also well connected with the national railway network. The city is located in the middle of highly fertile upper Ganga-Yamuna Doab region and is very near to the New Delhi and Saharanpur, making it one of the most developed and prosperous cities of Uttar Pradesh. It comes under the Saharanpur division. This city is part of Delhi Mumbai Industrial Corridor (DMIC) and Amritsar Delhi Kolkata Industrial Corridor (ADKIC). It shares its border with state of Uttarakhand. It is the principal commercial, industrial and educational hub of Western Uttar Pradesh.



Geography

Muzaffarnagar is 272 meters above sea level in the Doab region of Indo-Gangetic Plain. It is 125 kilometres NE of the national capital, Delhi, and 200 kilometres SE of Chandigarh, and near to Bijnor, Meerut and Hastinapur.

Climate

Muzaffarnagar has a monsoon influenced humid subtropical climate characterized by much hot summers and cooler winters. Summers last from early April to late June and are extremely hot. The monsoon arrives in late June and continues till the middle of September. Temperatures drop slightly, with plenty of cloud cover but with higher humidity. Temperatures rise again in October and the city then has a mild, dry winter season from late October to the middle of March. June is the warmest month of the year.

The temperature in June averages 30.2°C. In January, the average temperature is 12.5°C. It is the lowest average temperature of the whole year. The average annual temperature in Muzaffarnagar is 24.2°C. The highest and lowest temperatures ever recorded in Muzaffarnagar are (73°F) on May 2023 and -0.9°C (30.4°F), respectively. The rainfall averages 915 mm. The driest month is November, with 8 mm of rain. Highest precipitation falls in July, with an average of 261.4 mm.



Statement of Assurance

The audit has been conducted in accordance with the standard procedures for the professional practice of internal auditing.

In our professional judgment, sufficient and appropriate audit procedures were 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 area.

Methodology of Audit

In order to meet its objectives, this audit combined physical inspection with review of relevant documentation and interactions with departmental staff members and students.

- Review of the Documentation: For the purpose of this audit, Green audit framework was reviewed.
- Interviews: Interviews were conducted with the principal, departmental faculties and students.
- Physical Inspection: The audit team was conduct physical observation in the college campus to inspect the green practices.

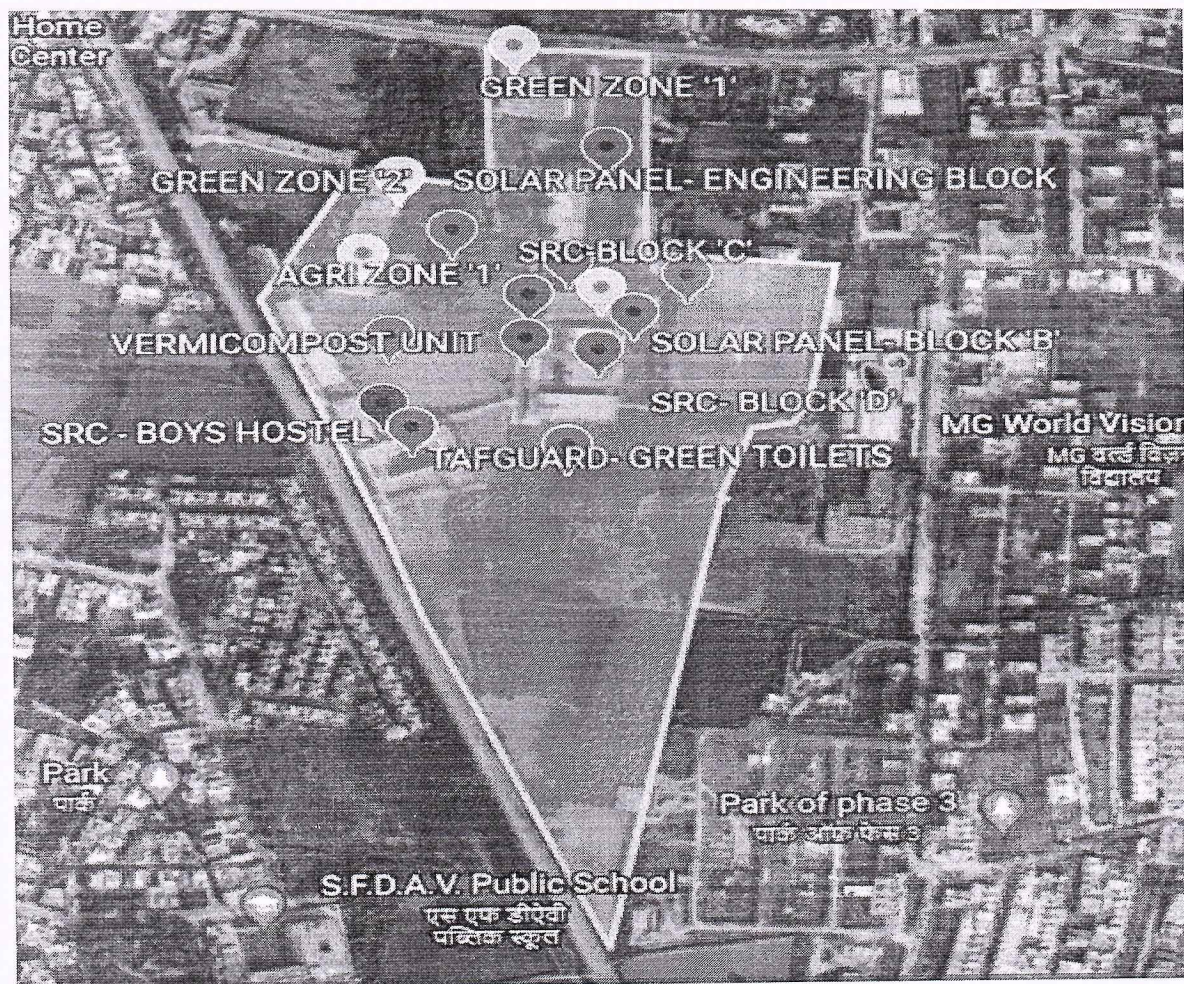


Summary of Findings

The main findings of the audit show that, all the department staff and students are aware about the needed for environmental protection at a general level. It was also observed that a number of best practices such as maintaining the collection of waste separately, introduce rain water harvesting to new building structures, installation of solar panels for energy conservation, Control of vehicular movement in campus by rumble strips, speed bumps and barricading, symbols and signs (energy conservation, save environment, save water) in campus zone, implementing plastic free campus etc. are followed in the college premises.



Google Earth View of SRGC Integrated Campus



Index

- Green Zones
- Agri Zones
- Solar Panel (Energy Management)
- Vermicompost and Gaushala (Waste Management)
- Bio-Toilets



Audit Framework and Detailed Findings

The following audit framework is used for conducting Green Audit in 2018-19. The framework also lists the finding and also observations for every criterion.

Waste Audit

Criteria- 1 (A): Waste Generation and Management

Objective: Maximize the waste recycled and minimize the quantity of non-recycled refuse.

Activity: Segregation of waste

Audit Observation: Waste Material is segregated as per category like Paper, Cardboard, Scrap Wood, Scrap Metal, Plastic scrap, glass, laboratory rags etc. Each waste is stored at departmental level and periodically sending to other purposes.

Type of waste	Audit Observation
Paper Waste	- One side rough paper is used for the printing of Notices, Time Tables etc. in each department. - Waste papers are sending for shredding to prepare thread and card sheet. - Email and Mobile media communication is used for minimize the use of paper.
Plastic waste	Plastic bottles, caps and other waste material are stored separately at departmental level and sold as a scrap material
Glass Waste	Empty chemical glass bottles are sending as a scrap material
Construction Waste	Construction waste is used for land filling and landscaping within the college premises.
Electrical Waste	- Electrical waste like damaged electrical board, switches, cut wires are collect by electrician and replace this with new one and remaining wastage is sold as scrap. - Electrical waste related to computer, key boards, and mouse is collect by Computer science department for repairing and replaces the damaged one and remaining wastage is sold as scrap.



Laboratory Waste	• Microbiological waste is properly sterilized using Autoclave and then dumped in landfills. • Used chemical waste is dumped in landfills.
Kitchen Waste	• Waste from Hostel mess and canteen is used to make compost and manure in vermin-composting unit. • Solid waste is used as feed and fodder for cattles in Dairy farm.

Criteria- 1 (B): Waste Generation and Management Objective:

Collection of Waste Activity: Students as well as faculties of different department concern about waste collection. They do not throw the paper waste in the surrounding premises of college campus.

Audit Observation: Proper dustbins are provided to each department. Also 2 large (Steel and plastic) dustbins are install at various location in the college campus for collection of waste including administration office, college canteen, near garden etc. Some dustbins are provided to Boy's hostel (1 dustbin for 2 rooms) for collection of solid waste. The stored waste is collected by Municipal Corporation on everyday basis.



Waste Audit Lab



Dustbins in the Campus

Criteria- 1 (C): Waste Generation and

ManagementObjective: Plastic free Campus.

Activity: Motivate students about harm of plastic carry bags and items to convince them for no use of plastic in college premises.

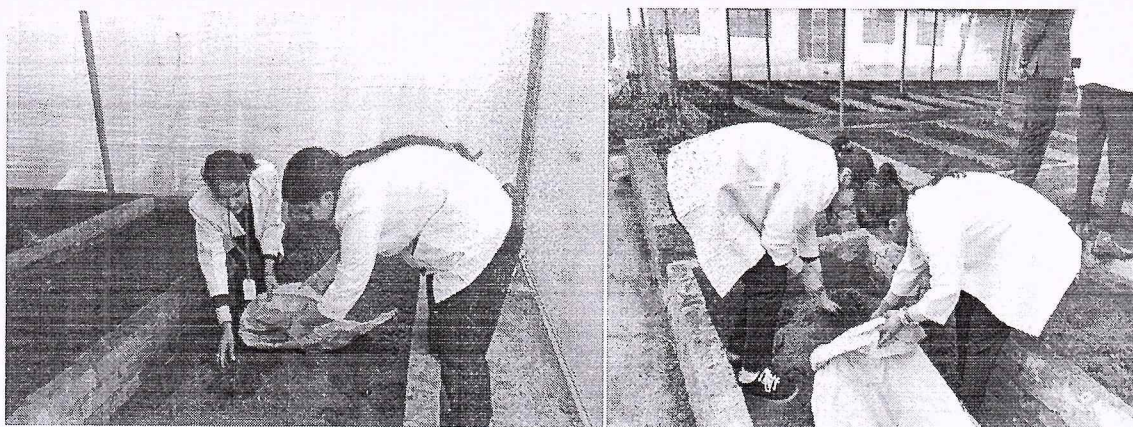
Audit Observation: To aware all students as well as faculties of different department about “No Use of Plastic” in college campus, awareness boards are display at various location in the college campus.

Criteria- 1 (D): Waste Generation and Management

Objective: Management of Garden Waste and Kitchen Waste

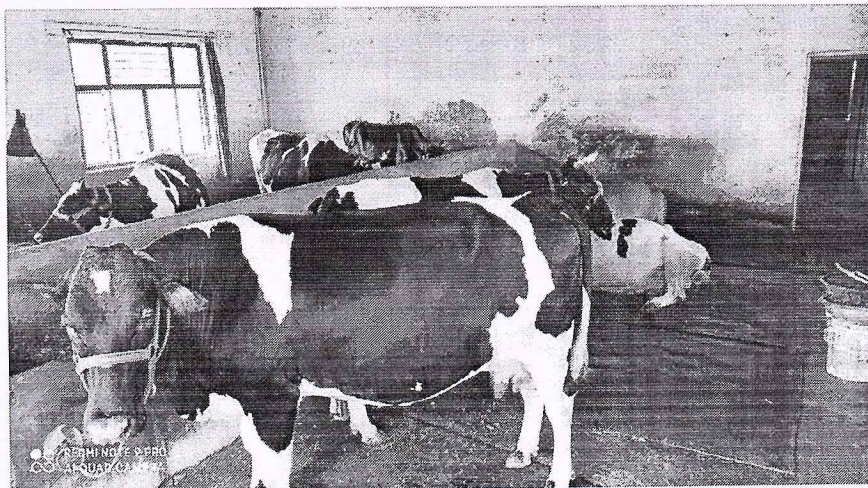
Activity: Installation of Vermi-compost unit and Gaushala with the help of IPR & ED cell

Audit Observation: The collected wastes from garden, debris, leaf litter are collect dumped into vermicomposting unit to prepare the compost manure from the waste. *Eisenia foetida* species of earthworm is used for the process. Kitchen waste is collected as used as feed and fodder for cattles in Gaushala.



Students Working in Vermi-Compost Unit





View of Gaushala

Recommendations (Criteria 1):

- Reduce the absolute amount of waste that it produces from college staff offices.
- Make full use of all recycling facilities provided by City Municipality and private suppliers, including glass, cans, white, colored and brown paper, plastic bottles, batteries, print cartridges, cardboard and furniture.
- Single sided paper to be used for writing and photocopy.
- Provide sufficient, accessible and well-publicized collection points for recyclable waste, with responsibility for recycling clearly allocated.

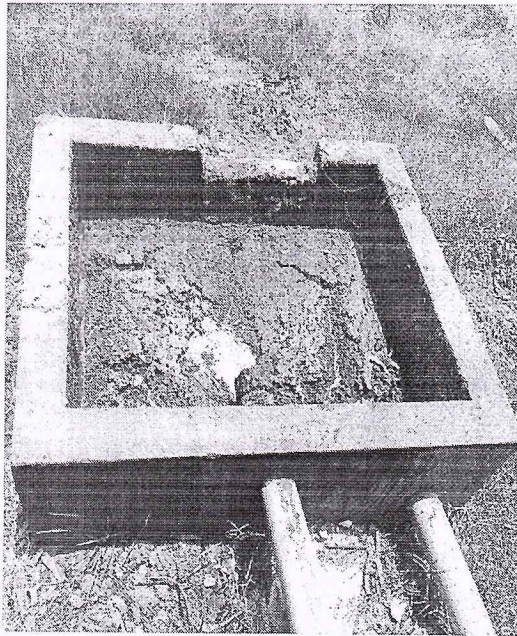
Criteria- 2 (A): Water conservation

Objective: Water conservation.

Activity: Rain Water Harvesting

Audit Observation: Rain water harvesting facility is provided to main building and new COE buildings. Block 'A' and Block 'B' collects rain water in cemented water tanks (20000 liter capacity) and use this water for practical, washing and other departmental purpose. A soak pit is constructed in open ground where the roof water is lain down for water conservation.





Bio-Toilet Pit



Digital Underground Water Level Recorder



Water Audit

(Academic Year 2023-24)

Water User Profile:

Water User Includes students, staff, visitors etc.

- a. Total number of water users: 2000 (Daily average)
 - b. Number of Employee: 153 (Daily average)
 - c. Number of students : 2012 (Daily average)
 - d. Number of visitors (Daily Average Basis) : 100
 - e. Average working days: 06
 - f. College timings: 9:00 AM to 5:00 PM
 - g. Rain water harvesting system availability : Yes
 - h. Is rain water harvesting system working?: Yes
- **Total submersible Pumps (Ground Water): 07**
- Assessment of water requirement**

Sr. No.	Site	Total no. of Sources	Measurement of water Uses (Daily)				
			Rate of Discharge (Liter/min)	Average Duration of Use (min)	Average Quantity per use (liter)	No. of Uses (No.)	Total Daily Use (liter)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.	Urinals	92	0.5	1.00	0.5	2000	1000
2.	Toilet/ WC	257	0.80	5.00	4.00	500	2000
3.	Laboratory	25	03	05	15	60	900
4.	Canteen	3	05	225	800	03	2400
5.	Garden	33,190 Sq.M.	04	01	04	33,190	132760
6.	Other (Drinking purpose with RO)	20	0.50	10	05	2500	12500
TOTAL							151560

Water Storage:

Water from our submersible pumps is directly pumped to the overhead tank and direct groundwater is used for gardening and irrigation purposes.

Details of the storage structures:

Storage Tanks	Capacity (Liters)	Number	Number of times it is topped (or filled) daily	Average time of water inflow	Flow rate of water inflow
Overhead 1	20000	08	Once a day	4 hrs 30 min	275 lit/ min
Overhead 2	2000	05	Once a day	15 min	275 lit/min
Overhead 3	1000	12	Once a day	08 min	275 lit/min
Overhead 4	500	04	Once a day	4 min	275 lit/min
Total	23500	28	Once a day	4 hrs 57 min	1100 lit/min

Water losses:

Sr. No.	Site	Total No. of Sources	Measurement of water uses (Daily)		
			Rate of Discharge (lit in hour)	Daily loss (4) x 24 (lit)	Total Loss (lit)
(1)	(2)	(3)	(4)	(5)	(6)
1	Urinals	92	0.20	4.80	33.7
2	Toilet/ WC	257	0.5	12	48
3	Laboratory	25	0.5	12	72
4	Kitchen	3	2.0	48	48
5	Garden	33,190 Sq.M.	0.25	6.0	45519.78
6	Other (Drinking Purpose with RO)	20	0.20	4.80	4.80
Total					45726.28



Criteria- 2 (B): Water conservation**Objective:** Water Saving.**Activity:** Water Audit**Audit Observation:**

- The storage (overhead/underground tank) checked periodically for any leakage.
- The departmental Tap was checked periodically to prevent from any leakage.
- The leakage Tap replace by new one.

Recommendations (Criteria 2):

- Need of monitoring, controlling overflow is essential and periodically supervision drills should be arranged. In campus small 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 and the wastage of water is not below the industry average for such equipment's used in similar capacity.
- Ensure that all cleaning products used by college 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

Criteria- 3 (A): Energy Consumption (Electrical Energy)**Objective:** To save the electrical energy.**Activity:** Installation of "Solar Panels".**Audit Observation:**

Energy source utilized by all the departments and common facility centre is electricity only. Total energy consumption is determined per day 200 KW and annually 2400 KW in 1 year by major energy consuming equipments.

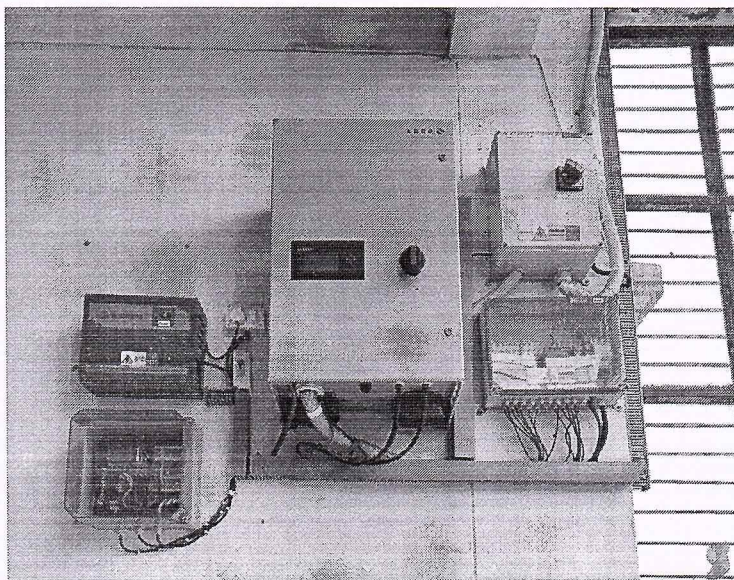


Understanding the importance of energy conservation Shri Ram College, in the year 2017, took an initiative and installed Rooftop Solar Panels in the campus producing 160 Kilo Watt of electricity. The reason behind this is to take a bigger step towards environmental protection. We have taken lot of energy initiatives and our managing committee approved a 160 KW Rooftop Solar Panel System worth Rs. 1.05 crore. The area covered by this solar panel system is 3562.37 square meter which results in 22.26 square meter/ KW. The average production of electricity by this system is 960 KW per day and 350400 KW per year. The configuration of this solar Rooftop system depicts >300 Wp PV modules and string inverter of 160 KWP. They operate with a free resource and do not produce greenhouse gas emissions when converting sunshine to electric power.

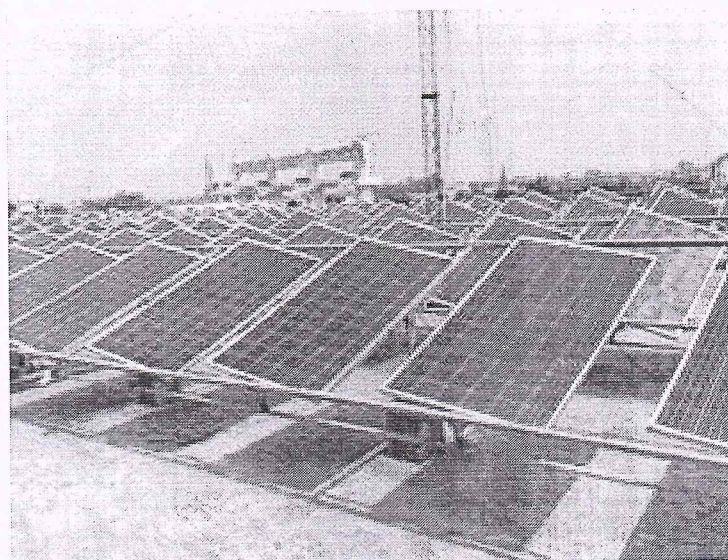


Electricity Generator Room





Solar Inverter and Metering

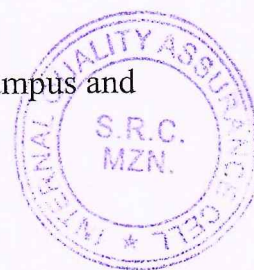


Solar Panel Installation

Criteria- 3 (B): Energy Consumption (Electrical Energy)

Objective: To save the electrical energy.

Activity: Installation of LED lights/ lamps at major locations in campus and laboratories.



Audit Observation:

All the departments and common facility centers are equipped with LED tubes, Lamps, Fans, coolers and AC, Central AC etc. Equipments like Computers are used with power saving mode. Also, campus administration runs switch –off drill on regular basis. In science department like Physics, Chemistry, Biotechnology, Electronics, Computer Science, Botany and Zoology electricity was shut down after occupancy time is one of green practices for energy conservation.

Criteria- 3 (C): Energy Consumption (Electrical Energy)

Objective: To save the electrical energy.

Activity: Conservation of Electrical Energy at Departmental Level

Audit Observation:

- All laboratory having panel boards MCB switch to control the electrical supply within the department. The responsibility is given to non-teaching staff to “Switch-off” this switch without any ignorance to avoid the wastage of electrical energy.
- Sign boards like “Switch off the fans / light when not in use” are displayed in the departments.
- The water pumps are regularly maintained for minimum consumption of electricity.
- Solar panel system is installed for entire college campus.
- LED lamps, LCD monitors, Branded fans are used to minimize the consumption.

Criteria- 4: Energy Consumption (Transportation)

Objective: To save the fuel energy.

Activity: Motivate to students and faculties for reduce the use of vehicles in college campus.

Audit Observation: Every Saturdays of each month is declared as a “No vehicle



day” by college authority to minimize the use of personal vehicles with in the college campus. To motivate and aware the students regarding minimum use of vehicles “Cycle Day” programme is arranged by college faculty.

Criteria- 5: Energy Consumption (LPG Cylinder) and IGL Connection

Objective: To save the LPG energy

Activity: Conserve the LPG at departmental Level

Audit Observation:

- The gas burners, tubes are checked periodically to prevent the leakages of gas.
- Slow flame is adjusted during the practical work to minimize the excess use of gas.
- The practical is listed as per use and non use of LPG
- The empty cylinder are stored centrally and labeled as “EMPTY”
- The use and requirements of each department about LPG is monitored by controlling sheet and send to office.

Criteria-6: Cyber Waste Generation

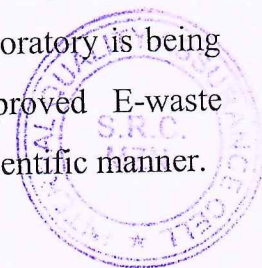
Objective: To minimize E-waste

Activity: Proper disposal of E-waste generated

Audit Observations:

E-waste can be described as consumer and business electronic equipment that is near or at the end of its useful life. This makes up about 5% of all municipal solid waste worldwide but 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.

E-waste generated in the campus is very less in quantity. The cartridges of laser printers are refilled outside the college campus. Administration conducts the awareness programmes regarding E-waste Management with the help of various departments. 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.



Recommendations (Criteria 3-6)

- Recycle or safely dispose of white goods, computers and electrical appliances.
- Use reusable resources and containers and avoid unnecessary packaging where possible.
- Always purchase recycled resources where these are both suitable and available.

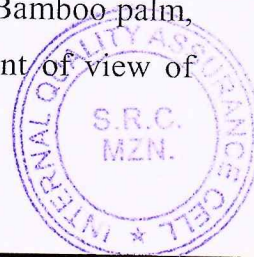
Criteria- 7: Green Campus

Objective: To increase the Green Cover within the college campus.

Activity: Establishment of lawns and gardens, Plantation programmes, Shade Net House

Audit Observations:

The college campus is covered with the various species of the plants and maintained by the gardener all time. The varieties includes *Melia azedarach*, *Populus*, *Neolamarckia kadamba*, *Delonix Regia*, *Tectona grandis*, *Toona ciliata*, *Pine*, *Cycas*, *Maulsari*, *Ficus*, *Eucalyptus*, Jade Plant, *Casaurina*, Pistol Palm, Areca palm, *Platycladus orientalis*, Rudraksh, Silver Oak, *Bismarckia Palm*, *Raphis Palm*, *Sapodilla*, Mango, Monkey Jack, Litchi, Guava, Java Plum, *Sideroxylon inerme*, *Murraya Paniculata*, *Crepe jasmine*, *Peace Lily*, *Hibiscus*, Rose, Bamboo etc. and many other medicinally important plant such as Shatavari, Bakayan, Harsingar, Aak, Patthar chatta, Karipatta, Lemongrass, Doob ghaas, Calendula and Sadabahar etc. Campus also has several indoor plants including Ficus removes (formaldehyde, & benzene), Spider plants (carbon mono oxide, benzene & trichloroethylene), Snake plants, Bamboo palm, Rubber plant, chrysanthemum, Peace lily, & Gerbera etc. In point of view of importance of the assessment, zones were divided as:



Green Zone '1': (Includes Block 'A', From Main Gate Entrance to Block 'B' Internal Gate Entrance, Parking Area)

No. of trees: 80

No. of Plants: 700

Grass Lawn Area: 6200 sq. m.

Haze Area: 2575 sq. m.

Green Zone '2': (Includes College of Technology, College of Architecture, Boys Hostel)

No. of trees: 470

No. of Plants: 1425

Grass Lawn Area: 2405 sq. m.

Haze Area: 3652 sq.m.

Green Zone '3': (Includes Block 'B', 'C', 'D', Playground and Shri Ram College)

No. of trees: 172

No. of Plants: 905

Grass Lawn Area: 24,585 sq.m.

Haze Area: 654 sq.m.

Green Zone '4': (Includes Block 'G', In Front Agriculture, Shri Ram College)

No. of trees: 102

No. of Plants: 307

Grass Lawn Area: 1585 sq.m.

Haze Area: 2354 sq.m.

Agriculture Zone '1': (Behind of Block 'G', 'E')

Crops Grown: Rice, Vegetables, Herbs and Wheat

Area: 1.5 Acre

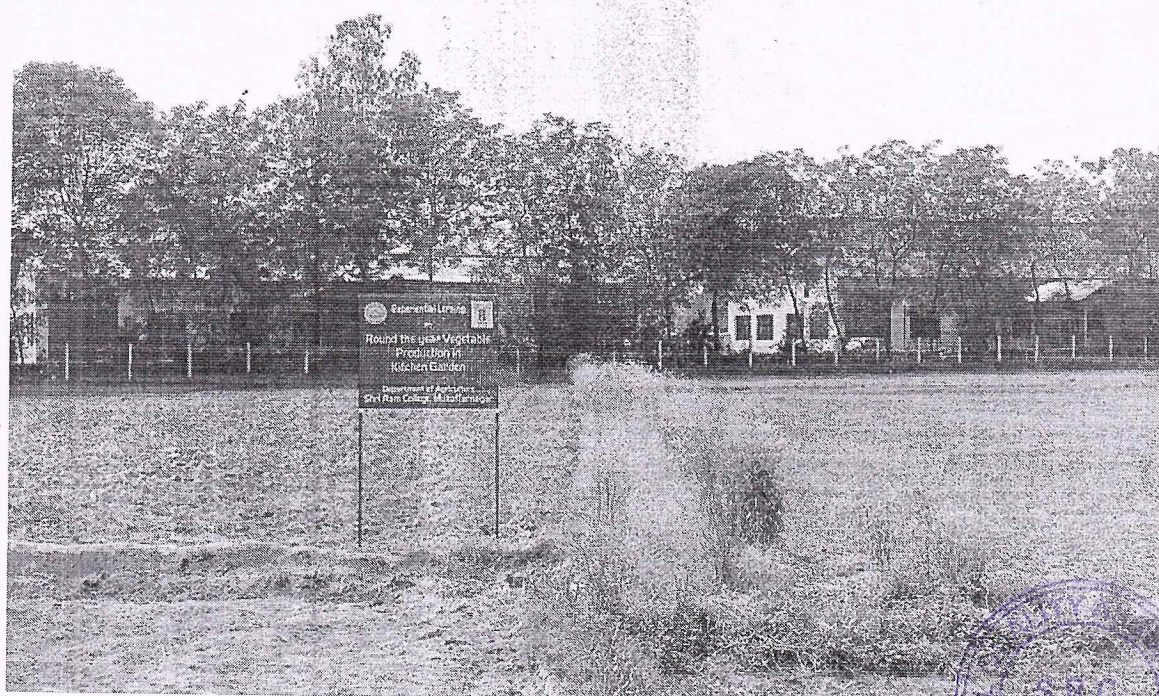
Agriculture Zone '2': (Behind Block 'C', 'D' and Shri Ram College)

Crops Grown: Seed Production

Area: 3 Acre



Area: 3 Acre



Seed Production Technology





Mushroom Cultivation in SRC



Table: List of Fauna in SRGC (integrated campus)

SN	ZOOLOGICAL NAME	COMMON NAME	FAMILY
MAMMALS			
DOMESTIC TYPE			
1.	<i>Felis catus</i>	Domestic Cat	Felidae
2.	<i>Sus scrofa</i>	Pig	Suidae
3.	<i>Canis lupus</i>	Dog	Canidae
4.	<i>Capra aegagrus hircus</i>	Goat	Bovidae
5.	<i>Pteropus giganteus</i>	Indian Fruit Bat	Pteropodidae
6.	<i>Equus caballus</i>	Khachhar/Mule	Equidae
7.	<i>Bubalus bubalis</i>	Buffalo	Bovidae
WILD TYPE			
8.	<i>Herpetes edwardsii</i>	Nevala	Herpestidae
9.	<i>Boselaphus tragocamelus</i>	Neelgai	Bovidae
10.	<i>Funambulus pennanti</i>	Gilhari	Sciuridae
11.	<i>Lepus nigricollis</i>	Khargosh	Leporidae
12.	<i>Rattus rattus</i>	Chuha	Muridae
13.	<i>Pteropus giganteus</i>	Indian Fruit Bat	Pteropodidae
14.	<i>Semnopithecus entellus</i>	Langur	Cercopethicidae
REPTILES			
16.	<i>Ptyas mucosus</i>	Common rat snake / Dhaman	Colubridae
17.	<i>Bungarus caeruleus</i>	Common Indian Krait	Elapidae
18.	<i>Hemidaetylus maculates</i>	Rock Gaecko	Gekkonidae
19.	<i>Chamaleo chamaleons</i>	Chameleon	Gekkonidae
20.	<i>Hemidaetylus brooki gray</i>	Chipkali	Gekkonidae
AMPHIBIANS			
21.	<i>Rana tigrina</i>	Common Frog	Ranidae
22.	<i>Bufo bufo</i>	Toad	Bufonidae
INSECTS			
23.	<i>Eurema hecabe</i>	Common grass yellow butterfly	Pieridae
24.	<i>Delias eucharis</i>	Common Jezebel	Pieridae
25.	<i>Acheta domesticus</i>	Jhingur/Cricket	Gryllidae
26.	<i>Apis dorsata</i>	Honey Bee	Apidae



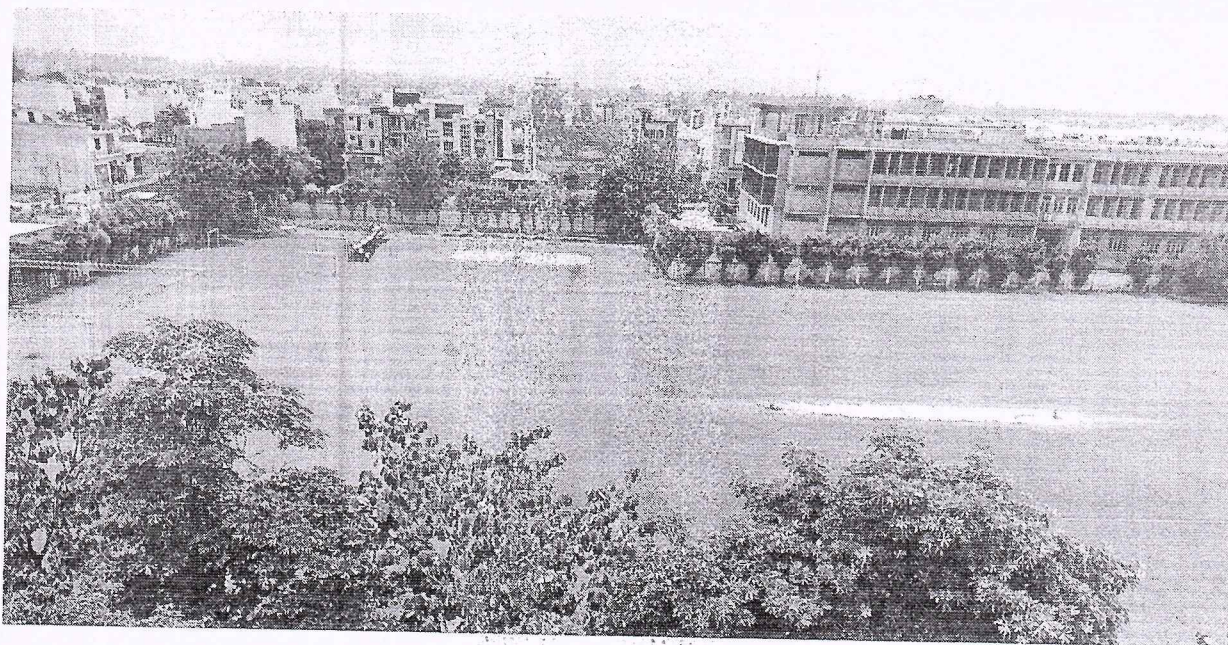
Table: List of Avi Fauna in SRGC integrated campus

S. No.	ZOOLOGICAL NAME	COMMON NAME	FAMILY
1.	<i>Achridotherus tristis</i>	Common Myna	Stumidae
2.	<i>Corvus splendens</i>	Crow	Corvidae
3.	<i>Eudynamys scolopaceus</i>	Koel	Cuculidae
4.	<i>Psittacula krameri</i>	Parrot	Psittaculadae
5.	<i>Pycnonotus cafer</i>	Bulbul	Pycnonotidae
6.	<i>Saxicoloides fulicatus</i>	Robin	Muscicapidae
7.	<i>Ploceus philippinus</i>	Baya Weaver	Ploceidae
8.	<i>Coturnix coturnix</i>	Quail	phasianidae
9.	<i>Picidae</i>	Wood pecker	Picidae
10.	<i>Vanellus indicus</i>	Red Wattled Lapwing	Charadriidae
11.	<i>Columba livia</i>	Pigeon	Columbidae
12.	<i>Passer domesticus</i>	Sparrow	Passeridae
13.	<i>Luscinia megarhynchos</i>	Nightingale	Muscicapidae

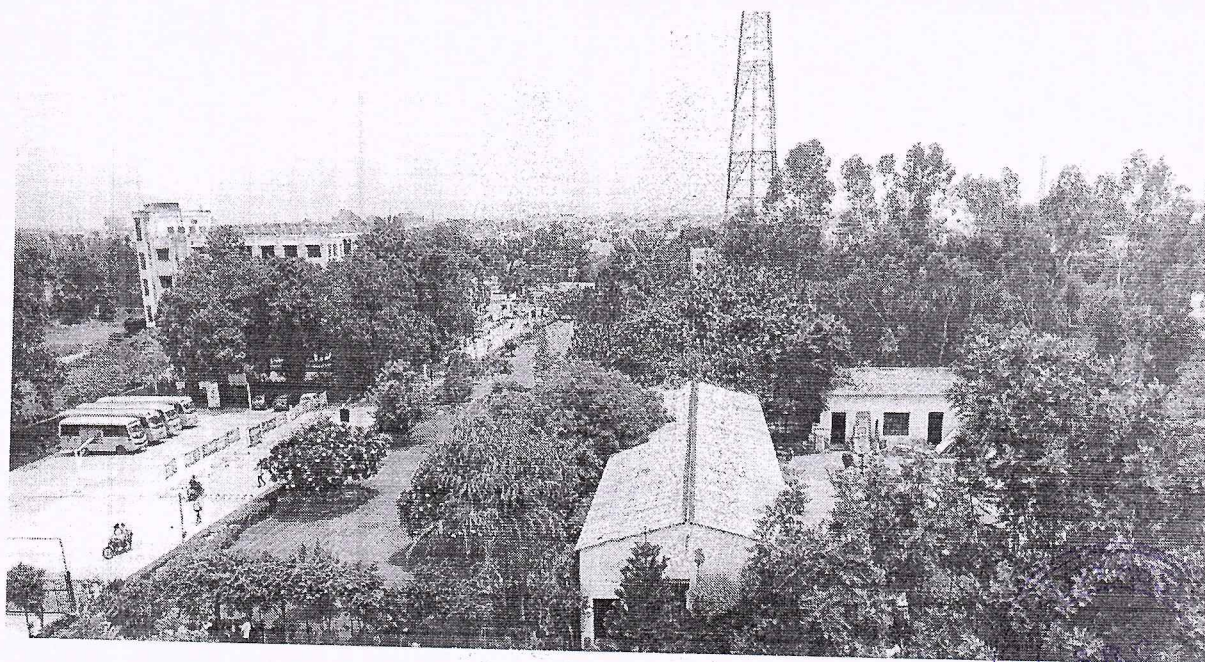
Recommendations (Criteria 7):

- Reviews periodically the list of trees planted in the garden, allot numbers to the trees and keep records. Give scientific names to the trees.
- Promote environmental awareness as a part of course work in various curricular areas, independent research projects, and community service.
- Create awareness of environmental sustainability and takes 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.
- Ensure that an audit is conducted annually and action is taken on the basis of audit report, recommendation and findings.
- Celebrate every year 5th June as 'Environment Day' and plant trees on this day to make the campus more Green.
- Plant exhibition arranged regularly in college campus.





Shri Ram College Playground



Shri Ram College Lawn at Entrance





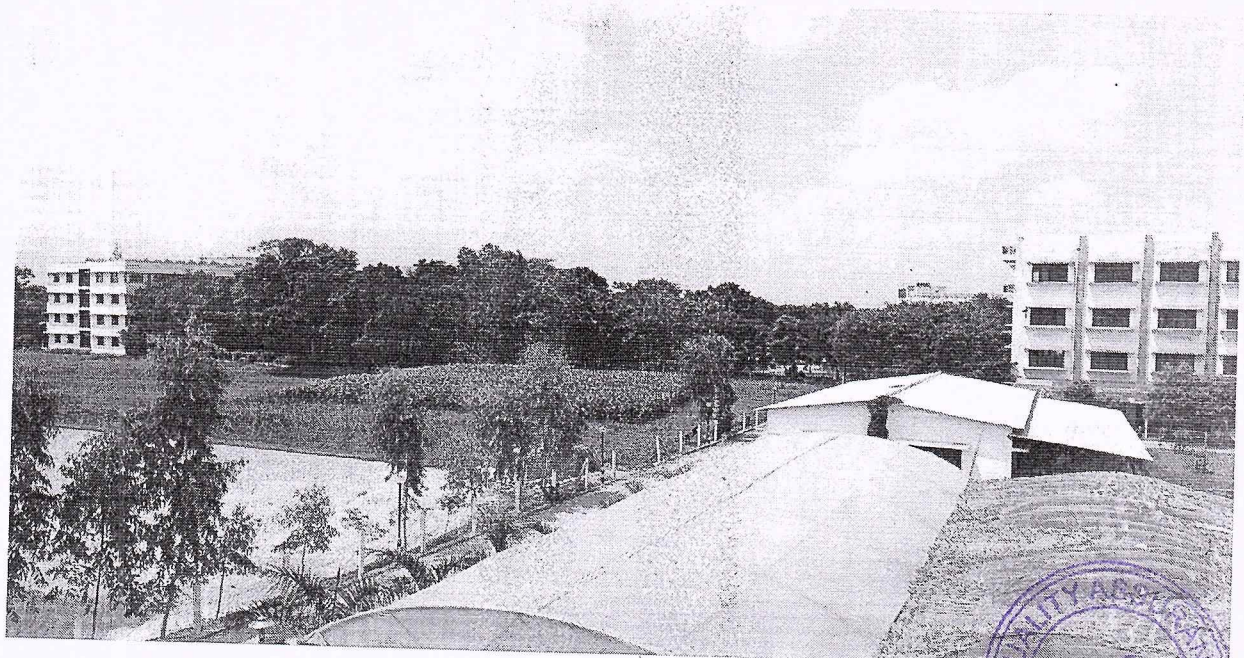
Shri Ram College Block "B"



Open Art Studio of Shri Ram College



Agriculture Zone '1'

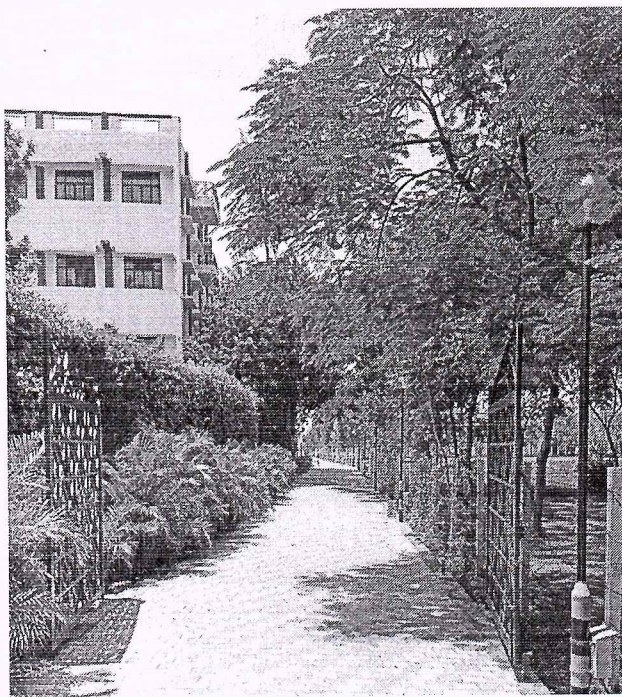


Backside View of Green Campus

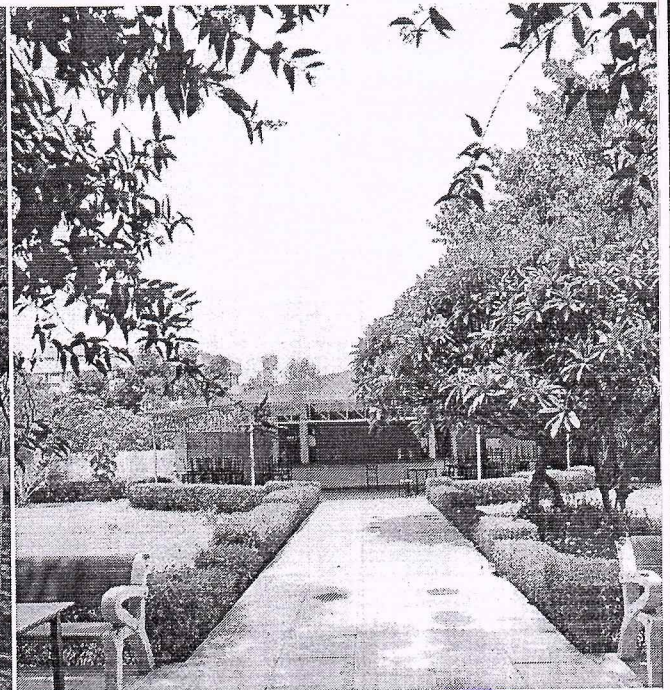




Agriculture Zone '2'



Pavement



Canteen



B. SURVEY OF VEHICLES AND CARBON FOOTPRINT

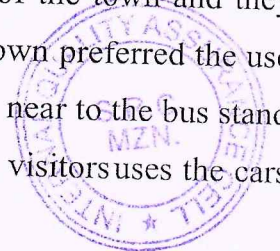
Air pollution is one of the serious environmental concerns of the urban cities where majority of the population is exposed to poor air quality. The rapid urbanization in India has resulted in a tremendous increase in the number of motor vehicles. As the number of vehicles continues to grow and the consequent congestion increases, vehicles are now becoming the main source of air pollution in urban India. The country has taken a number of measures for the improvement of the air quality in cities. These include the improvement in the fuel quality, formulation of necessary legislation and enforcement of vehicle emission standards, improved traffic planning and management, etc.

Automotive vehicles emit several pollutants depending upon the quality of the fuel they consume and engine efficiency. The emission of pollution from the car also includes the leakage of fuel and resources and the level of emissions, depending on the type of car, its maintenance, etc.

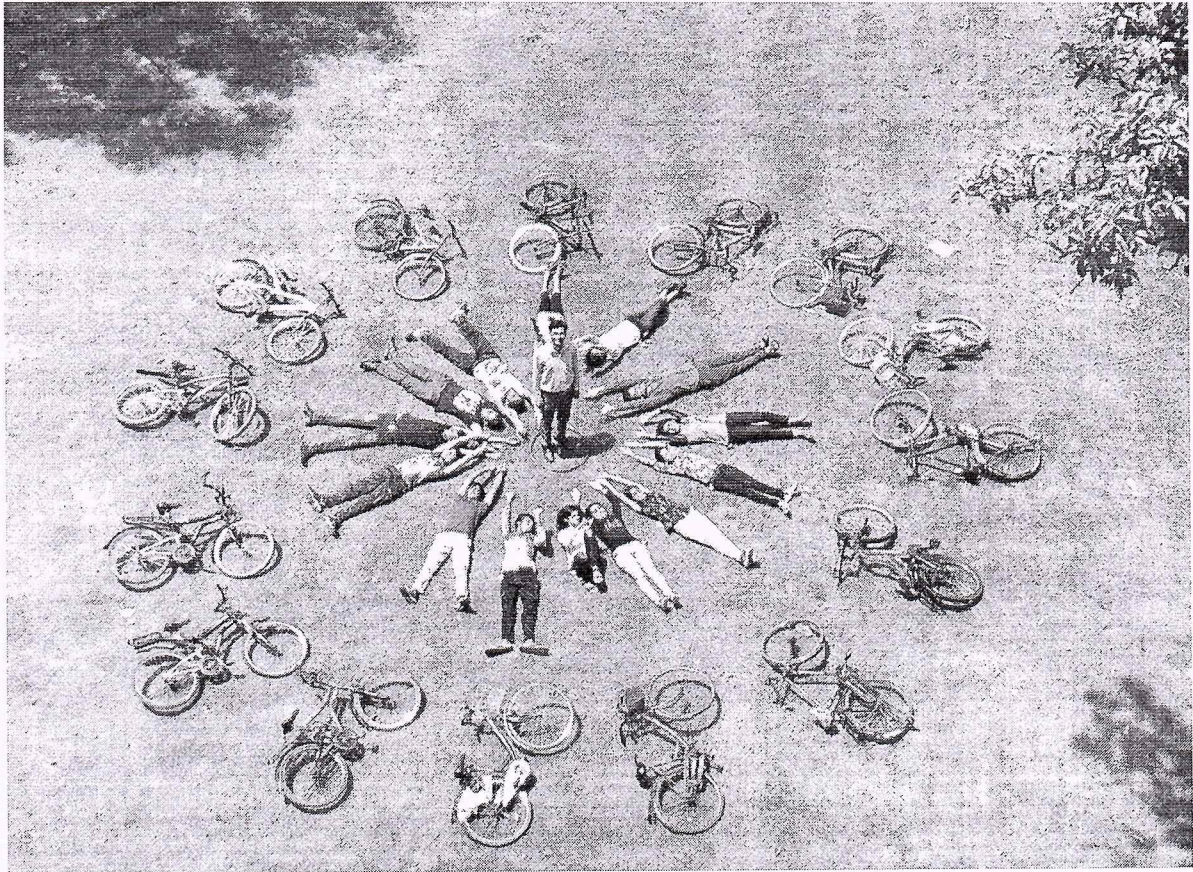
The major pollutants released as vehicle/fuel emissions are, carbon monoxide (CO), nitrogen oxides (NO_x), photochemical oxidants, air toxics, namely benzene (C₆H₆), aldehydes, 1,3 butadiene (C₄H₆), lead (Pb), particulate matter (PM), hydrocarbon (HC), oxides of sulphur (SO₂) and polycyclic aromatic hydrocarbons (PAHs). While the predominant pollutants in petrol/gasoline driven vehicles are hydrocarbons and carbon monoxide, the predominant pollutants from the diesel based vehicles are Oxides of nitrogen and particulates.

Staff members and students uses the number of vehicles for the transportation. These cause pollution.

But to overcome this big problem of pollution college has adopted the systematic policy of transportation. The most of students are from outside of the town and they use the public transport for the transportation. Student from the town preferred the use of bicycle mostly the girl student's used bicycles. As the college is near to the bus stand student used to walk to college. Staff members of the college and visitors uses the cars



Tree Plantation at Shri Ram College



Green Cycle Campaign at SRC



GREN CAMPUS INITIATIVE ACTIVITIES

a. TREE PLANTATION IN CAMPUS

Tree plantation is the major tools to control the air pollution and maintain the environmental balance.

It is found that one fully grown trees absorbs 6.8 kg carbon dioxide CO₂ at the same time it gives oxygen gas more than 6.8 kg. It shows the importance of plantation and conservation of trees.

Every year planted trees growing responsibility and conservation of that plant is given to each volunteer of the NSS. After plantation each volunteer take the responsibility of one plant of its care. NSS unit organized environmental awareness programmes time to time. During the festival season the volunteer creates the awareness among the people to stop or reduce the water pollution, noise and air pollution.



or bikes or auto rickshaw and some staff member uses bicycles.

To manage the transportation system, the college has implemented policies such as requiring college employees to use the sharing transportation system. Colleges have taken another step toward reducing their carbon footprint by celebrating a vehicle-free day on which students and staff members use the state transportation system.

1.ABSORPTION OF CARBON

The economic value of a fully grown tree in terms of oxygen producing capacity is nearly equal to Rs 23.72 Lacs per year, according to a report by NGO DELHI GREENS. The claim is based on facts that an average adult at rest inhales nearly 7-8 litres of air per minute, or about 11,000 litres per day, of which about 20% is oxygen and nearly 15% is exhaled, according to the NGO "economic valuation of oxygen supplying ecosystem service of healthy tree." Every day, humans consume about 550 litres of pure oxygen. According to a market survey, the average cost of 2.75 portable oxygen cylinders is Rs. 6500, and humans consume oxygen worth Rs. 6500 at this rate.about rupees 13 lakhs per day.

By taking some consideration the following numbers comes out,

- Number of full-grown Trees in campus=600.
- Carbon absorption capacity of 600 trees=carbon emission during run of 25,000miles.25,000 miles = 40223.6km
- Petrol / Diesel consumes by a Vehicle for 40233.6 km= 2011.68ltr.
- The carbon emitted by a Vehicle by consumption of 01 ltr of diesel is 2.68kg.
- Thus carbon emitted by 2011.68 ltr is 5391.30 kg (2011.68 ltr x 2.68kg)

Amount of carbon absorbed by the one full grown tree is



$$5391.30 \text{ kg}/600 = 8.9855.$$

Absorption of carbon dioxide:

As the college campus having number of plants, trees. The huge amount of carbon dioxide is absorbed and converted in oxygen.

- College campus having 600 full grown trees there it absorbs $(600 \times 8.9855) = 5391.3 \text{ kg CO}_2$ or **5.3913 tons**
- College campus having 2793 semi grown plants, flowers and 40,000 sq. m. of Lawn and Bush area (equivalent to 50 semi grown plant), therefore it absorbs one third of full grown trees $(2793 \times 2.9952 \text{ kg}) = 8365.5936 \text{ kg CO}_2$ or **8.365 tons**.

Total Absorption of Carbon dioxide = $5.3913 + 8.365 = 13.7563$ Tons

2. Oxygen emission in Campus:

According to the growing air foundation,

- Trees renew our air supply by absorbing carbon dioxide and producing oxygen.
- The amount of oxygen produced by an acre of trees per year equals the amount consumed by 18 people annually. One tree produces nearly 260 pounds or 117.934 kg of oxygen each year.
- One acre of tree removes up to 2.6 tons of carbon dioxide each year.
- Trees lower air temperature by evaporating water in their leaves.



Therefore, Total oxygen emitted by the 600 full grown trees is

$$(600 \times 117.934) = 70760.40 \text{ kg or } 70.760 \text{ tons}$$

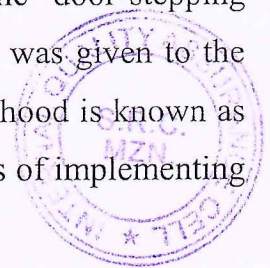
By the semi grown plants, lawns and bushes is about $(2793 \times 39.311) = 109796.554 \text{ kg or } 109.796 \text{ tons}$

Total oxygen emitted by the campus greenery = 180.56 tons / per annum

A pilot study on organic waste separation behavior by households in collaboration with MIT, USA:

A high fraction of the total waste is organic waste. If this waste is separated at the household level, there is potential for the waste to be utilized in organic waste technologies. A pilot study was designed and conducted in two neighborhoods in Muzaffarnagar, to test incentives to increase organic waste separation behavior by households. In collaboration of Massachusetts Institute of Technology, USA and Nagar Plaika Muzaffarnagar, the students of Bio Science department of SRC Development worked upon a project of "Decision Support Tool for Planning Municipal Solid Waste Management Systems".

Two neighborhoods of similar income levels, Gandhi Colony and Teachers Colony, were chosen as the test neighborhoods for the pilot study. In one neighborhood (Gandhi Colony), no feedback was given to the households on their waste separation quantities or separation rate. This neighborhood is known as the door-stepping neighborhood. In the other neighborhood (Teachers Colony), feedback was given to the households on a weekly basis for a period of one month. This neighborhood is known as the feedback neighborhood. Finally, an analysis of the benefits and costs of implementing



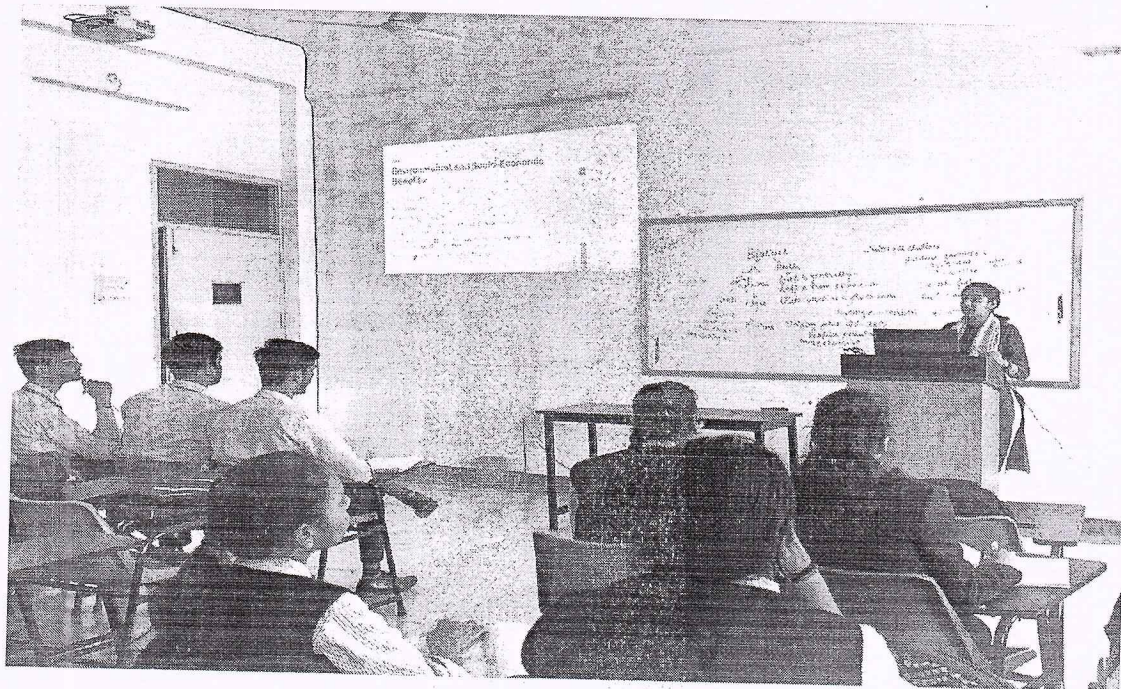
3. AWARENESS PROGRAMMES

To define environmental awareness we must first understand the environmentalist movement. Environmentalism is an ideology that evokes the necessity and responsibility of humans to respect, protect, and preserve the natural world from its anthropogenic (caused by humans) afflictions. Environmental awareness is an integral part of the movement's success. By teaching our friends and family that the physical environment is fragile and indispensable, we can begin fixing the problems that threaten it.

A good course of action that ensures your continued participation is to pick an environmental issue that strikes you as the most urgent. The amount of environmental issues seems limitless, and while they are all important, it's easy to get overwhelmed. Thus, Shri Ram College time to time arranged such type of programmes in this session, some of the noteworthy are:

1. "NO POLYTHENE CAMPAIGN" with Muzaffarnagar District Administration
2. Best of WASTE Competition
3. World Environment Day
4. Plantation Programmes with NSS Unit time to time
5. International seminar of "Problem of Waste water" with Japan's Taf Guard JICA foundation.
6. Seminar on Waste Management
7. World Water Day
8. Green Cycle Campaign





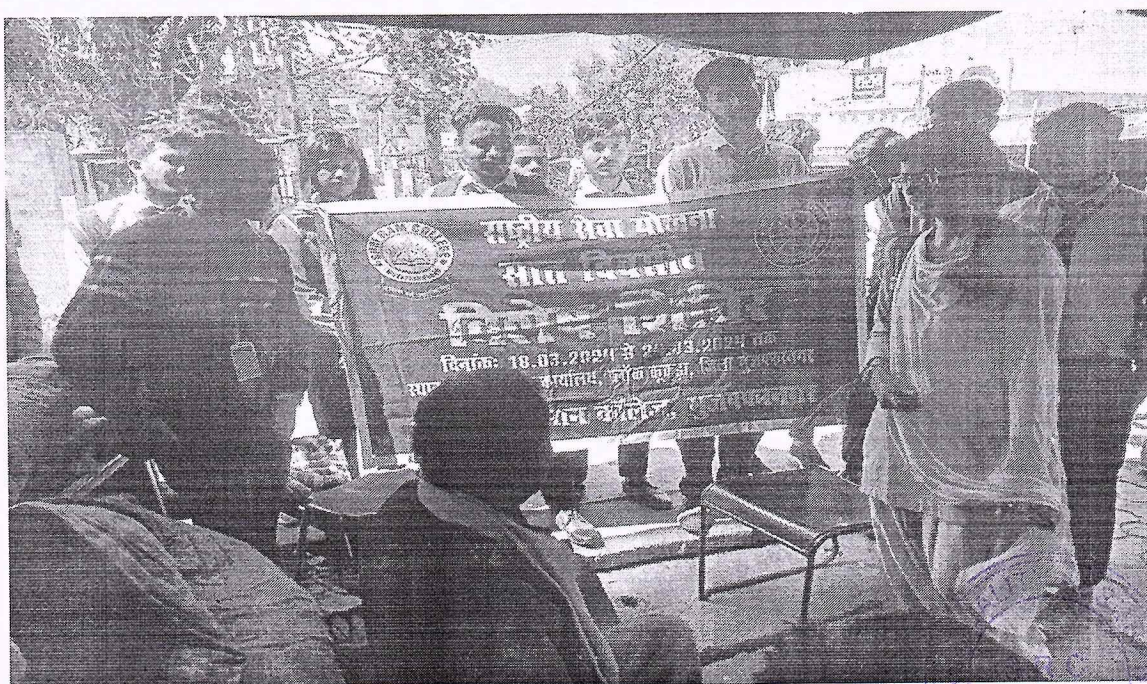
World Environment D



International Seminar on "Problems of Waste Water Treatment"

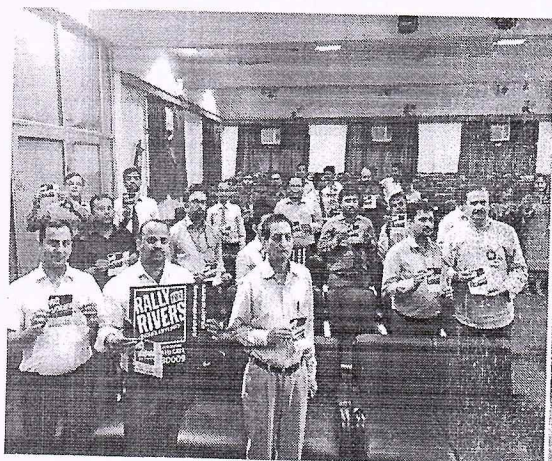


Japan's Taf Guard Technology Team at Shri Ram College



Polythene Campaign by NSS Unit





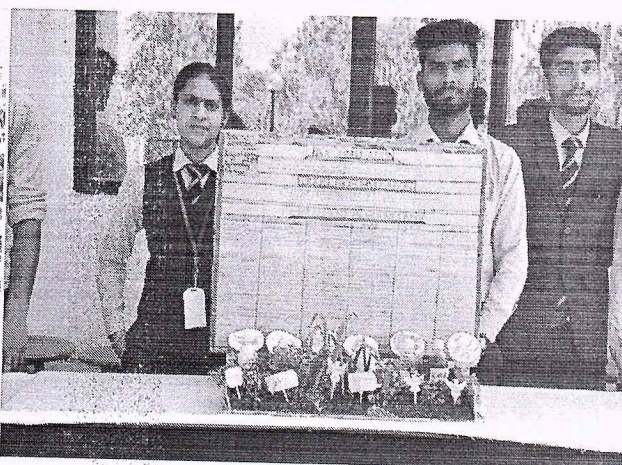
Rally for Rivers



Unnat Bharat Abhiyaan



Best Out of Waste Competition



Science Exhibition





Tree Plantation by NSS volunteers of Shri Ram College

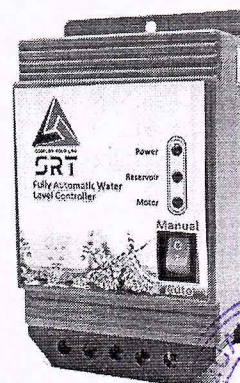


Swachh Bharat Abhiyaan

Water Awareness by students of SRC



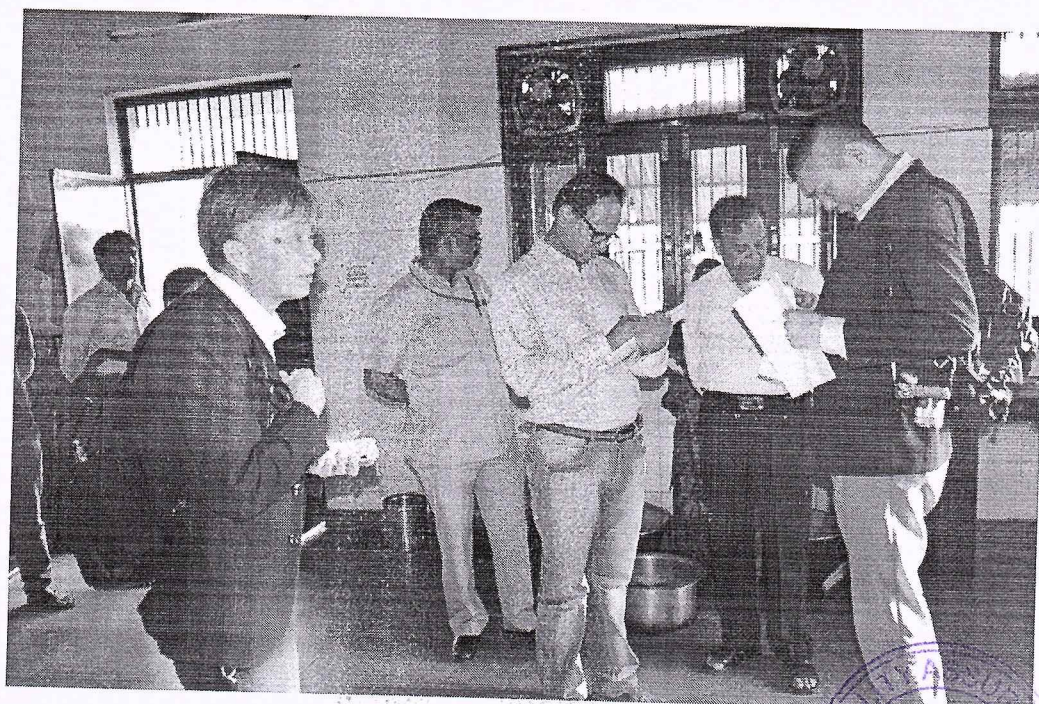
Gur Mahotsav (Promoting Herbal Jaggery)



Water Level Indicator developed by SRT

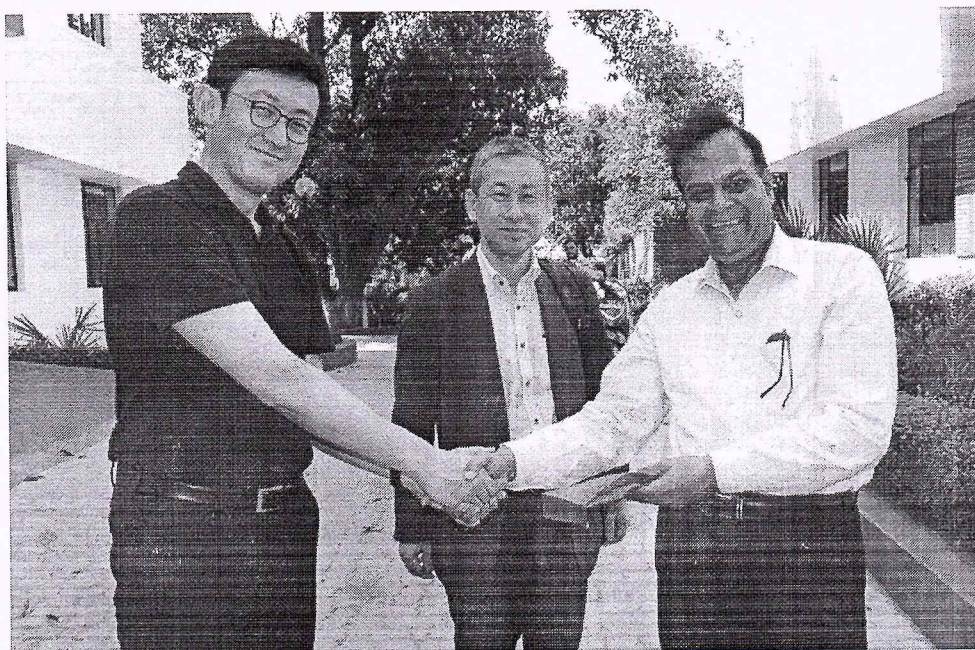


Seminar on Taisei Soil System-Japan's Tavgard Technology



JAPAN's Expert Team visit at Shri Ram College





Chairman Welcoming Japan's Team



Green Toilet Project





MIT Seminar on "Waste Management System"



CARBON EMISSIONS

Carbon emissions refer to the release of carbon dioxide (CO₂) and other greenhouse gases (GHGs) into the atmosphere, primarily due to human activities. These emissions are significant contributors to climate change as they trap heat in the Earth's atmosphere, leading to global warming.

Major Sources of Carbon Emissions:

1. Burning Fossil Fuels:

- **Energy Production:** Coal, oil, and natural gas burned for electricity and heat.
- **Transportation:** Vehicles powered by gasoline and diesel.

2. Deforestation:

- Trees absorb CO₂, and cutting them down reduces this natural carbon sink.

3. Industrial Processes:

- Cement production, chemical manufacturing, and metal refining.

4. Agriculture:

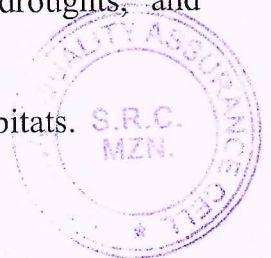
- Methane from livestock and rice paddies, and nitrous oxide from fertilizers.

5. Waste Management:

- Landfills emit methane as organic waste decomposes.

Impacts of Carbon Emissions:

- **Climate Change:** Increased global temperatures, melting ice caps, and rising sea levels.
- **Extreme Weather:** More frequent and intense storms, droughts, and heatwaves.
- **Ecosystem Disruption:** Loss of biodiversity and changing habitats.

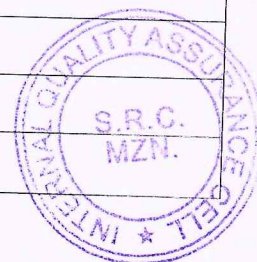


- **Human Health Risks:** Air pollution and heat stress-related illnesses.

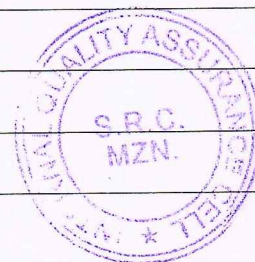
Solutions to Reduce Carbon Emissions:

1. **Transition to Renewable Energy:** Solar, wind, and hydropower reduce dependence on fossil fuels.
2. **Energy Efficiency:** Improved technologies and practices in buildings, appliances, and transportation.
3. **Reforestation and Afforestation:** Planting trees to absorb CO₂.
4. **Adopting Sustainable Practices:**
 - Reducing waste, recycling, and using sustainable materials.
5. **Carbon Capture and Storage (CCS):**
 - Technologies that capture and store CO₂ emissions from industrial sources.
6. **Policy and Regulation:**
 - Carbon pricing, emission caps, and international agreements like the Paris Agreement.

Average carbon dioxide (CO ₂) levels in the atmosphere worldwide from 1959 to 2024		
(in parts per million)		
S.N.	Year	AMOUNT
1	1959	315.98
2	1960	316.91
3	1961	317.64
4	1962	318.45
5	1963	318.99
6	1964	319.62
7	1965	320.04



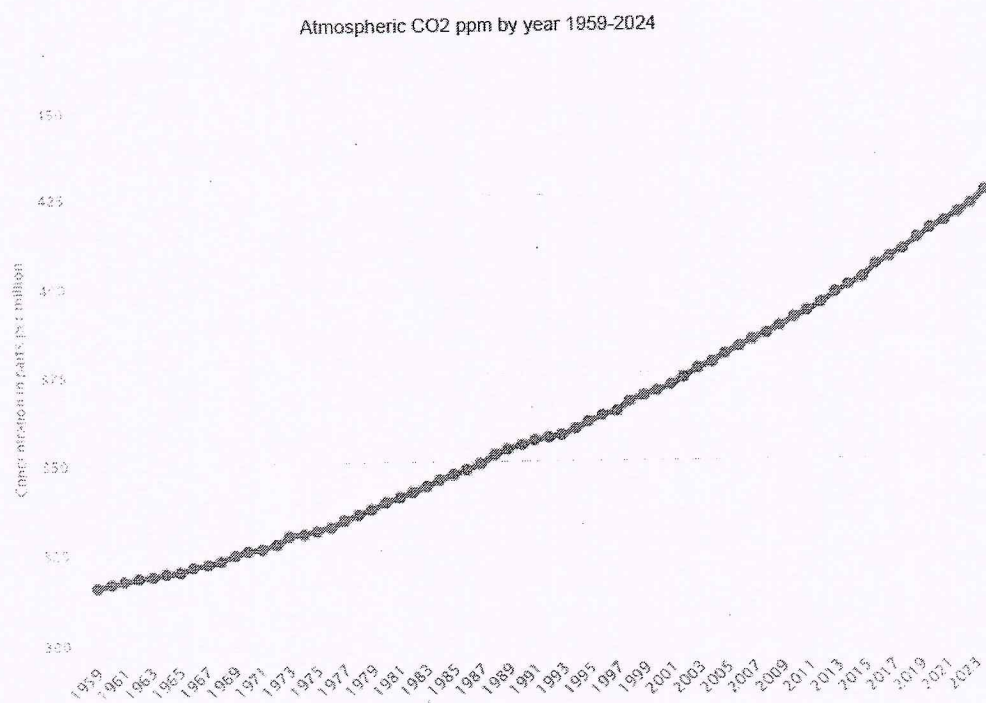
8	1966	321.37
9	1967	322.18
10	1968	323.05
11	1969	324.62
12	1970	325.68
13	1971	326.32
14	1972	327.46
15	1973	329.68
16	1974	330.19
17	1975	331.12
18	1976	332.03
19	1977	333.84
20	1978	335.41
21	1979	336.84
22	1980	338.76
23	1981	340.12
24	1982	341.48
25	1983	343.15
26	1984	344.85
27	1985	346.35
28	1986	347.61
29	1987	349.31
30	1988	351.69
31	1989	353.20
32	1990	354.45
33	1991	355.70
34	1992	356.54



35	1993	357.21
36	1994	358.96
37	1995	360.97
38	1996	362.74
39	1997	363.88
40	1998	366.84
41	1999	368.54
42	2000	369.71
43	2001	371.32
44	2002	373.45
45	2003	375.98
46	2004	377.70
47	2005	379.98
48	2006	382.09
49	2007	384.02
50	2008	385.83
51	2009	387.64
52	2010	390.10
53	2011	391.85
54	2012	394.06
55	2013	396.74
56	2014	398.87
57	2015	401.01
58	2016	404.41
59	2017	406.76
60	2018	408.72
61	2019	411.65



62	2020	414.21
63	2021	416.41
64	2022	418.53
65	2023	421.08



Details: Worldwide: 1959 to 2024

© Statista 2025

Sources

National Oceanic and Atmospheric Administration; ESRL



CARBON MITIGATION

Carbon mitigation is the process of reducing and stabilizing the amount of greenhouse gases in the atmosphere. This is done to slow the rate of global warming and reduce the effects of climate change.

How is carbon mitigation achieved?

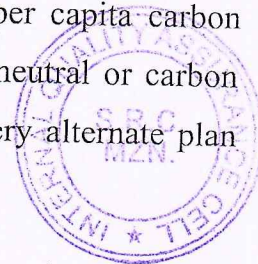
- **Carbon sequestration:** Capturing carbon dioxide emissions before they enter the atmosphere
- **Carbon credits:** Tradable certificates that represent a reduction in greenhouse gas emissions
- **Renewable energy:** Using energy from sources like solar or wind power
- **Energy efficiency:** Using appliances and systems that use energy more efficiently
- **Low-carbon transportation:** Using public transportation, electric vehicles, or other low-carbon transportation options
- **Landscaping:** Using native plants to help reduce carbon emissions
- **Food waste reduction:** Reducing and composting food waste

Carbon mitigation initiatives

- **Carbon Mitigation Initiative (CMI):** An academic research program that develops carbon mitigation strategies
- **Carbon mitigation hierarchy:** A structured approach that helps companies prioritize emission reduction actions

Carbon Mitigation Plans

Emission reduction plans were prepared to bring the existing per capita carbon footprint to zero or below so as to bring the campus a carbon neutral or carbon negative campus. This can be achieved in many ways but, every alternate plan



must be in such a way that, it must fulfill the actual purpose of each activity that is considered. Here, three major methods are taken in to account as the plans for reducing the carbon emission of the campus.

- Resource optimization
- Energy efficiency
- Renewable energy

Resource Optimization

The effective use of resources can limit its unnecessary wastage. Optimal usage of the resources (such as fuels) can save the fuel and can also reduce the carbon emission due to its consumption. This technique can be effectively implemented in the 'transportation' and 'waste' sectors of the campus.

Waste Minimization

Optimal utilisation of paper and plastic stationaries can reduce the frequency of purchase of items. This can reduce the unnecessary wastage of money as well as the excess production of waste. In the case of food, proper food habits and housekeeping practices can optimise its usage. Currently, the campus is taking an appreciable effort to reduce the unnecessary production of wastes. But the campus still has opportunities to reduce the generation of waste and can improve much more. Resource optimisation can be effectively implemented in all type of waste generated in the campus and the campus can expect about 50% reduction the total waste produced.

Energy Efficiency

Energy efficiency is the practice of reducing the energy requirements while achieving the required energy output. Energy efficiency can be effectively



implemented in all the sectors of the campus.

Fuels for Cooking

The campus uses commercial LPG cylinders and biogas for its cooking purpose. The biogas plant to treat food waste and the biogas thus generated can be used in kitchen. Installation of a solar water heater to rise the water temperature to a much higher level, then it has to consume only very less amount of thermal energy for preparing the same amount of food is another method. This can make a positive benefit to the campus by saving money, energy and can reduce the carbon emission of the campus due to thermal energy consumed for cooking.

Transportation

Energy efficiency of the transportation sector is mainly depended on the fuel efficiency of the vehicles used. Here mileage of the vehicle (kmpl - Kilometres per Litre) is calculated to assess the fuel efficiency of the vehicle. Percentage of closeness is the ratio of actual mileage of the vehicle to its expected mileage. If the percentage of closeness of mileages of each vehicle is greater than that of its average, then the efficiency status of the vehicle is considered as 'Above average' and else, it is considered as 'Below average'.



CONCLUSIONS

Considering the fact that the institution is predominantly an undergraduate college, there is significant environmental research both by faculty and students. The environmental awareness initiatives are substantial. The installation of solar panels, paperless work system and vermin-composting practices 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 includes Illumination, Noise level, Ventilation and Indoor Air quality of the class room. It was observed that Illumination and Ventilation is adequate considering natural light and air velocity present. Noise level in the campus well within the limit i.e. below 50 dB at daytime.

College authority forms a committee for the plantation program and environmental awareness, this committee continuously work throughout the year with the help of NSS student. College appointed NSS students for the awareness of tree plantation.



The land is in a constant state of birth,
Giving life to all who live on Earth.
Our carelessness and fears
Have taken a toll over the years.
Her land is parched and scorched
As man continues to light the torch.
We continue a want of speed and ease,
All while our pesticides kill off our bees.
Stand up and see Mother Earth's pain
As humanity's selfishness is becoming insane.
Soon her cries will turn to gloom,
And man will cause its own doom.

