GURU NANAK COLLEGE BUDHLADA

NAAC Accredied 'A' Grade, Star College Status by DBT Govt. of India &

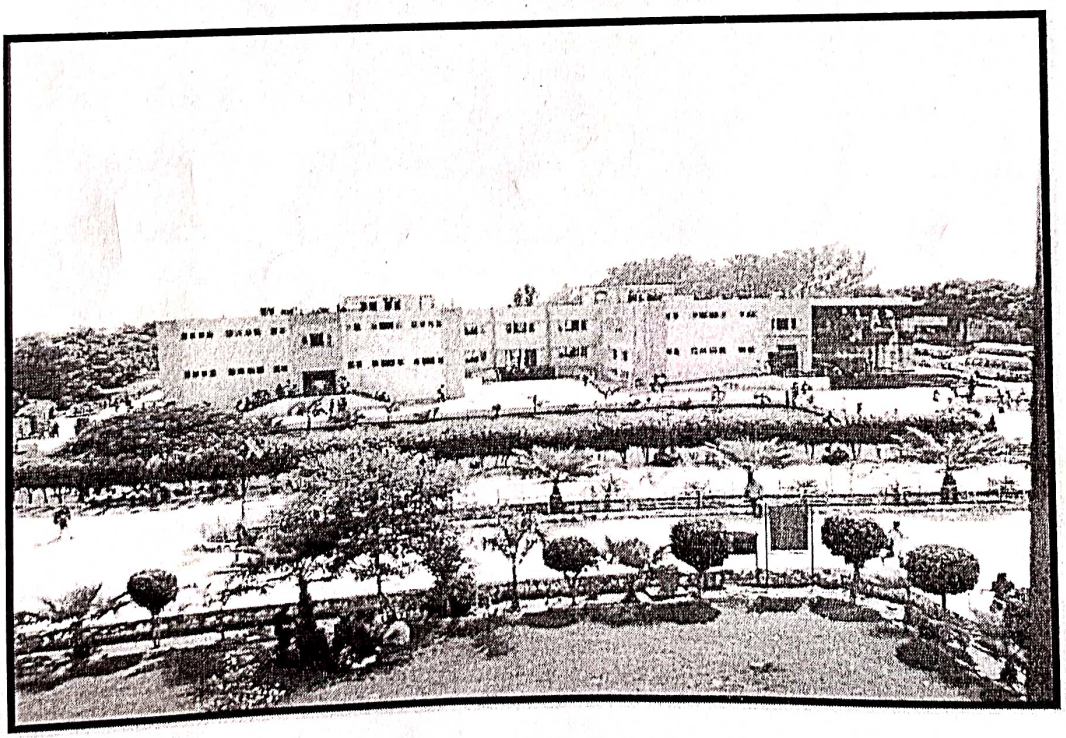
Skill Hub Institute selected by NSDC, Govt. of India

Under the management of S.G.P.C. Sri Amritsar Sahib

Affiliated with Punjabi University, Patiala & Approved by AICTE

GREEN AND ENVIRONMENT AUDIT REPORT

2022-23



Environment & Green Audit Team

We, the members of Green and environment Audit Committee, have carried out the Environment & Green Audit of Guru Nanak College Budhlada- 151502 (Mansa) Punjab, assessed the flora, fauna, green & environmental conservation practices conducted in the Campus and supporting documents presented by the internal committee were examined and certified.

ExternalCommittee

1. Dr. Amit Kaul, Extension Scientist, Department of Agronomy, PAU, Ludhiana
2. Dr. Ajay Dhul Prof. Department of Geography, National Govt. College, Sirsa(Haryana)
3. Dr. Jaspal Singh Shawney, Rtd. Prof. Soil Science PAU Ludhiana
4. S. Jagmail Singh Rtd. S.D.O., PSPCL Budhlada (Punjab)
5. Dr Gulshan Kumar Jawa Associate Prof. Department of Chemical Engineering & Technology SLIET, Longowal

Internal committee

1. Dr. Rishi Kumar, Coordinator IQAC
2. Dr. Gurjasjeet Kaur, Assist. Prof. Department of English
3. Dr. Jagdeep Singh, Assist. Prof. Department of Economics
4. Dr. Jatinder Singh, Assist. Prof. Department of Chemistry

21.4.23

GURU NANAK COLLEGE BUDHLADA, Distt. Mansa, Punjab-151502 IQAC

GURU NANAK COLLEGE BUDHLADA, Distt. Mansa, Punjab-151502

Principal
Guru Nanak College
Budhlada, Distt. Mansa

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1. Introduction

The green audit aims to analyze environmental practices within and outside the educational campuses, which will have an impact on the eco-friendly atmosphere. Green Audit can be defined as systematic identification, quantification, recording, reporting and analysis of components of College environment. It was initiated with the motive of inspecting the effort within the institutions whose exercises can cause threat to the health of inhabitants and the environment. Through the green audit, a direction as how to improve the structure of environment and there are include several factors that have determined the growth of carried out the green audit.

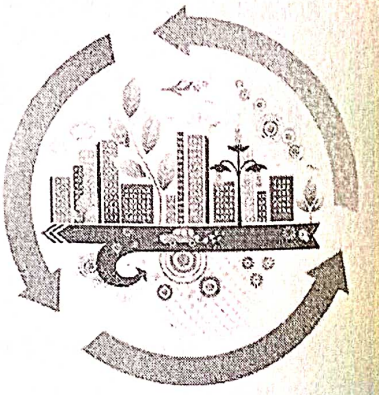
1.1. Need For Green & Environment Auditing

Green auditing is the process of identifying and determining whether institutions practices are eco-friendly and sustainable. Traditionally, we are good and efficient users of natural resources. But over the period of time excess use of resources like energy, water, are become habitual for everyone especially, in common areas. Now, it is necessary to check whether our processes are consuming more than required resources? Whether we are handling resources carefully? Green audit regulates all such practices and gives an efficient way of natural resource utilization. In the era of climate change and resource depletion it is necessary to verify the processes and convert it in to green and clean one. Green audit provides an approach for it. It also increases overall consciousness among the people working in institution towards an environment.

1.2. Goals of Green & Environment Audit

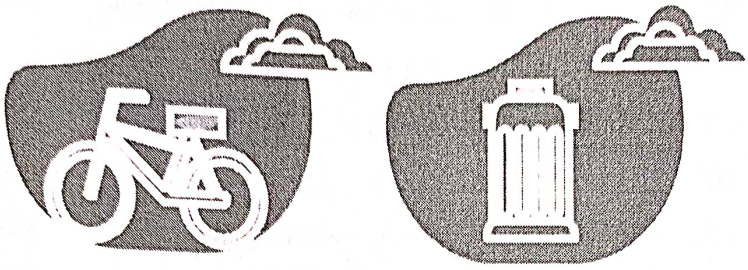
College/University has conducted a green audit with specific goals as:

1. Identification and documentation of green practices followed by university/ College.
2. Identify strength and weakness in green practices.
3. Analyze and suggest solution for problems identified.
4. Assess facility of different types of waste management.
5. Increase environmental awareness throughout campus
6. Identify and assess environmental risk.
7. Motivates staff for optimized sustainable use of available resources.
8. The long-term goal of the environmental audit program is to collect baseline data of environmental parameters and resolve environmental issue before they become problem.



1.3. Objectives of Green & Environment Audit

The overall objective of green auditing is to help safeguard the environment and minimize risks to human health. The key objectives of an environmental audit therefore are to:



Target Areas of Green Audit

3. Executive Summary

An environmental audit is a snapshot in time, in which one assesses campus performance in complying with applicable environmental laws and regulations. Though a helpful benchmark, the audit almost immediately becomes outdated unless there is some mechanism in place to continue the effort of monitoring environmental compliance.

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

4. Methodology

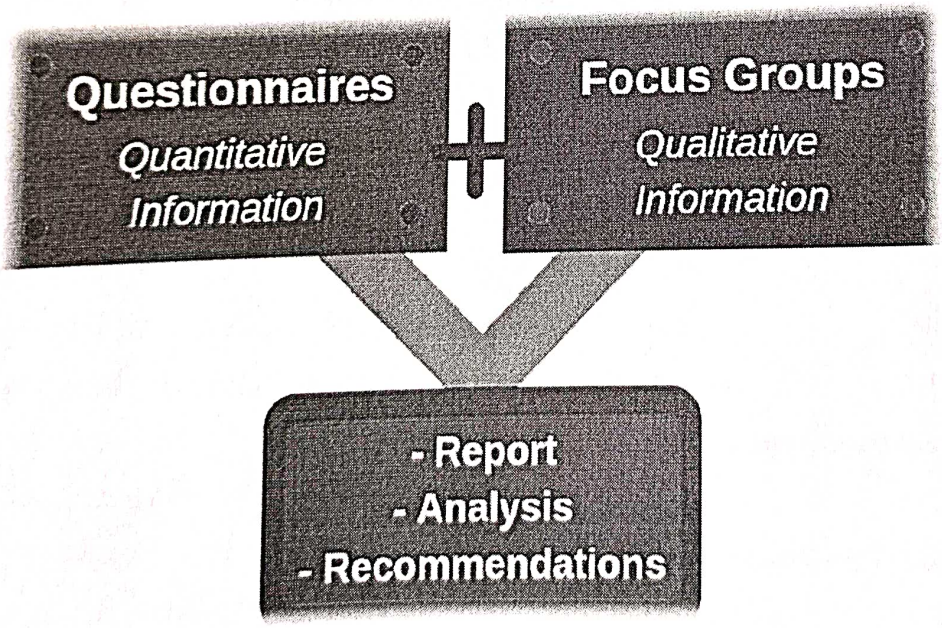
4.1 Data Collection In preliminary data collection phase, exhaustive data collection is performed using different tools such as preparation of questionnaire, physical inspection of the campus, observation and review of the documentation, interviewing key persons, etc. Focus groups, if practiced, can also be a vital part of data collection stage to acquire qualitative information. The discussion should be focused on identifying the attitudes and awareness towards environmental issues at the institutional and local level. Questionnaire (Annexure) prepared to conduct the green audit in the campus is in accordance with the guidelines, rules, acts and formats prepared by Ministry of Environment and Forest, New Delhi, Central Pollution Control Board and other statutory organizations. The data covers the target areas to summarize the present status of environment management in the campus.

4.2 Survey by Questionnaire Baseline data for green audit report preparation was collected by questionnaire survey method. Most of the guidelines and formats are based on broad aspects. Therefore, using these guidelines and formats, combinations, modifications and restructuring was done and sets of questionnaires were prepared as solid waste, energy, water, biodiversity, carbon footprint. All the questionnaires comprises of group of modules. The first module is related to the general information of the concerned department, which broadly includes name of the department,

month and year, total number of students and employees, visitors of the department, average working days and office timings etc. The next module is related to the present consumption of resources like water, energy, or the handling of solid and hazardous waste. One separate module is based on the questions related to the losses. Another module is related to maintaining records, like records of disposal of solid waste, records of solid waste recovery etc.

4.3 Data Analysis: The data required for the analysis is taken from the data collection, it includes: calculation of energy consumption, analysis of latest electricity bill of the campus, measuring water consumption, carbon foot printing, etc. The data from questionnaire and survey forms is tabulated for the convenience of data availability; Recommendations and Environmental Management Plan is built according to the analysis done in this step.

4.4 Recommendations and Reporting: Based on the data analysis step, some recommendations in the target areas are made. Specific measures are suggested to reduce water and energy consumption. Proper treatments of waste are suggested with respect to waste collection, waste disposal and recycling. Recommendations to reduce the use of fossil fuels are made for the betterment of community health. Proper disposal of hazardous waste is suggested to prevent mishaps. Management also takes into account the suggestions related to reducing their carbon footprint.



GreenAuditMethodology

5. About the College

Guru Nanak College, affiliated to Punjabi University, Patiala (listed in 12(b) & 2(f) sections of UGC Act 1956) is situated on the outskirts of Budhlada city - a small town of district Mansa in Punjab. To tribute the 500th birth anniversary of **"Sri Guru Nanak Dev Ji"**, it was started in 1971 by some eminent personalities of the region to keep in mind the noble cause of making affordable education accessible to all the people of this backward, rural and remote area. In the beginning, it was functioning under the local management but later on handed over to SGPC (ShiromaniGurdwaraParbandhak Committee, Sri Amritsar Sahib), an apex and philanthropic body of the Sikhs committed to serving humanity, on 09 November 1994 due to meager financial resources and some other executive problems.It was followed by some significant reforms in both college functioning and infrastructure. The growth of the college has been at a phenomenal pace since 2008 with a radical adjustment in a number of courses, faculty, infrastructure and other teaching learning resources. At present, it has become the foremost organization in the area, having 16 PG and 12 UG courses (including 03 skill-development vocational and industry oriented courses), 151 faculty members, 4446 students (2042 girls and 2404 boys) with state-of-the-art infrastructure and technology to provide quality education.In addition to it, the institute was awarded 'A' grade assessed by NAAC in1st cycleduring 2017.

5.1. Motto, Vision, Mission and Objectives, Quality Policy

Motto- earning with Perseverance; Rising with Honour

Vision- 'Enlightening Human Minds and Social Empowerment through Education'

Mission-Transforming the youth into a productive asset of society through value-based quality education focusing on their all round development so that they are able to contribute to the progress of society to their utmost potential.

Objectives-

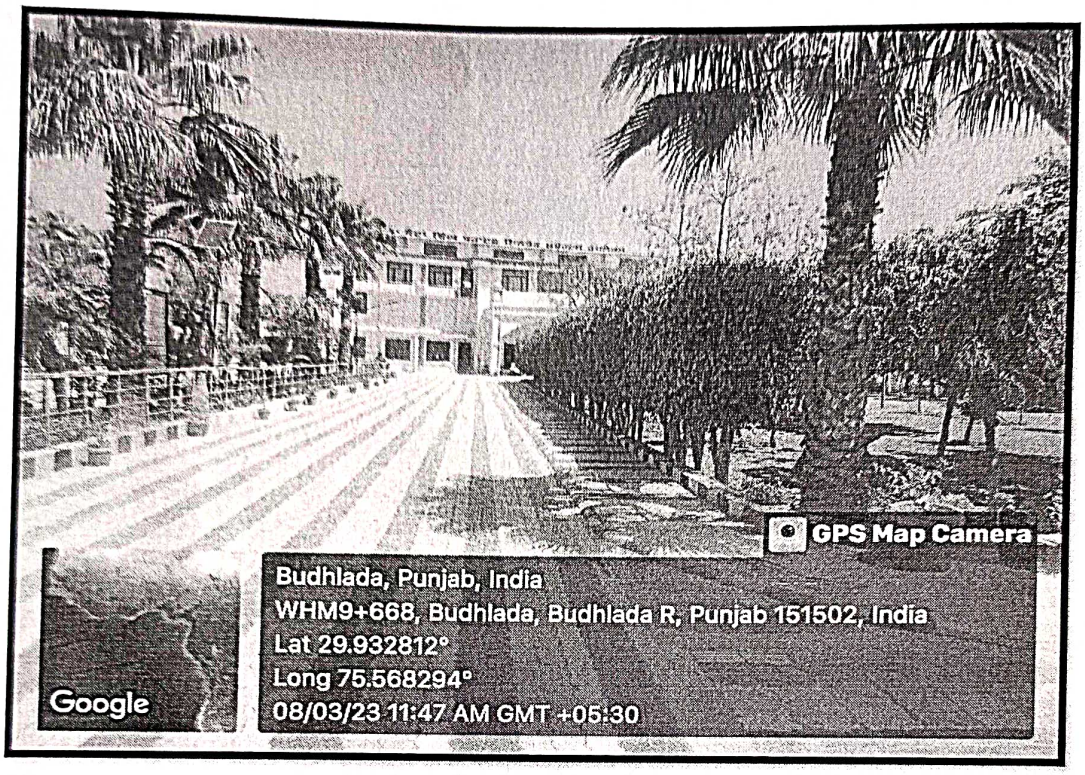
- ✓ To achieve excellence in teaching and learning.
- ✓ To inculcate social, moral and spiritual values among the students.
- ✓ To sensitise the students towards social issues and make them responsible citizens.
- ✓ To make the students skilled and productive.
- ✓ To groom the students intellectually with a scientific temper, providing congenial ambience.
- ✓ To enable the youth to become tomorrow's leaders of change.
- ✓ To provide educational opportunities for the under-privileged sections of society.
- ✓ To ensure all round development of the students through extra-curricular activities.

Quality Policy

The institute is committed to promoting and supporting all-round effective learning and teaching with a view to contributing to development through increasing equal access and participation in higher education.

Our quality policy aligns with our vision, mission and objectives. The policy aims to achieve perfection and excellence in every step we take to shape the future of the younger generation towards a brighter tomorrow. To this end, each academic program is designed to hone students' skills inside and outside the classroom. Each program allows them to discover something beyond the syllabus and motivates them to read between the lines. We believe that children are agents of change, and every effort is made to engage them in meaningful discussions. Our Quality Policy seeks to celebrate and recognize quality in teaching and learning and to ensure that the premier quality education is always with us in every field.

6. Overview of Administration block and other buildings of GNC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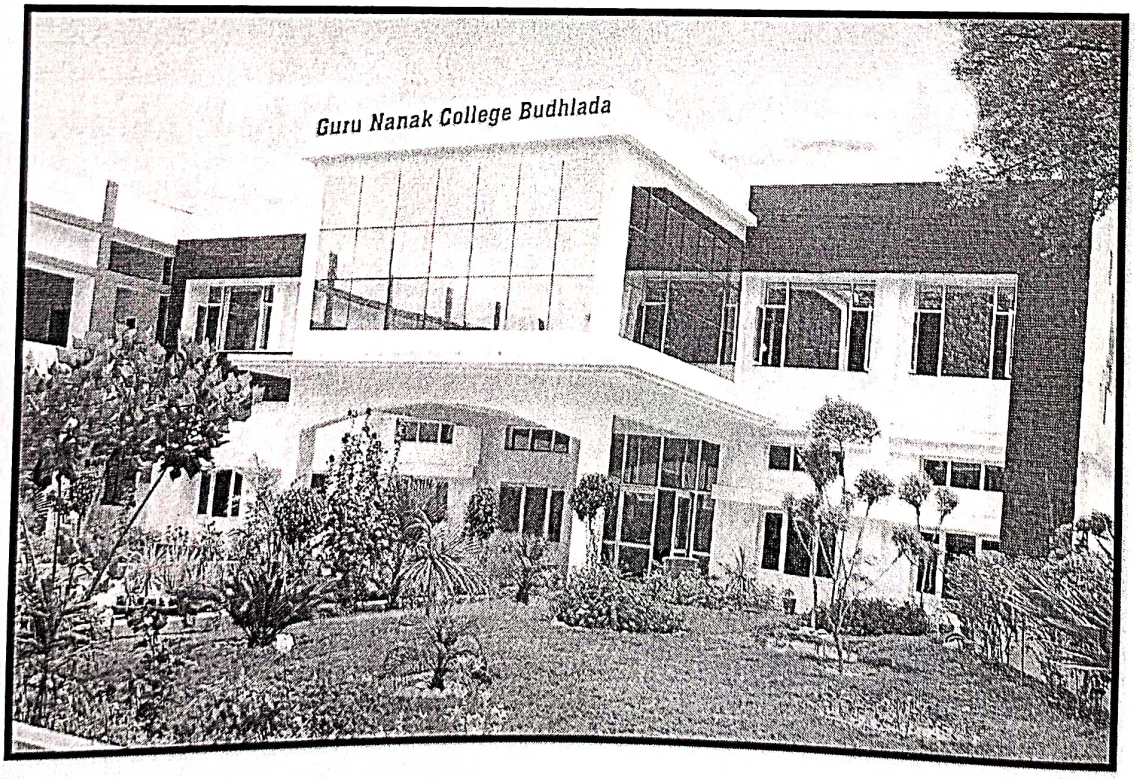
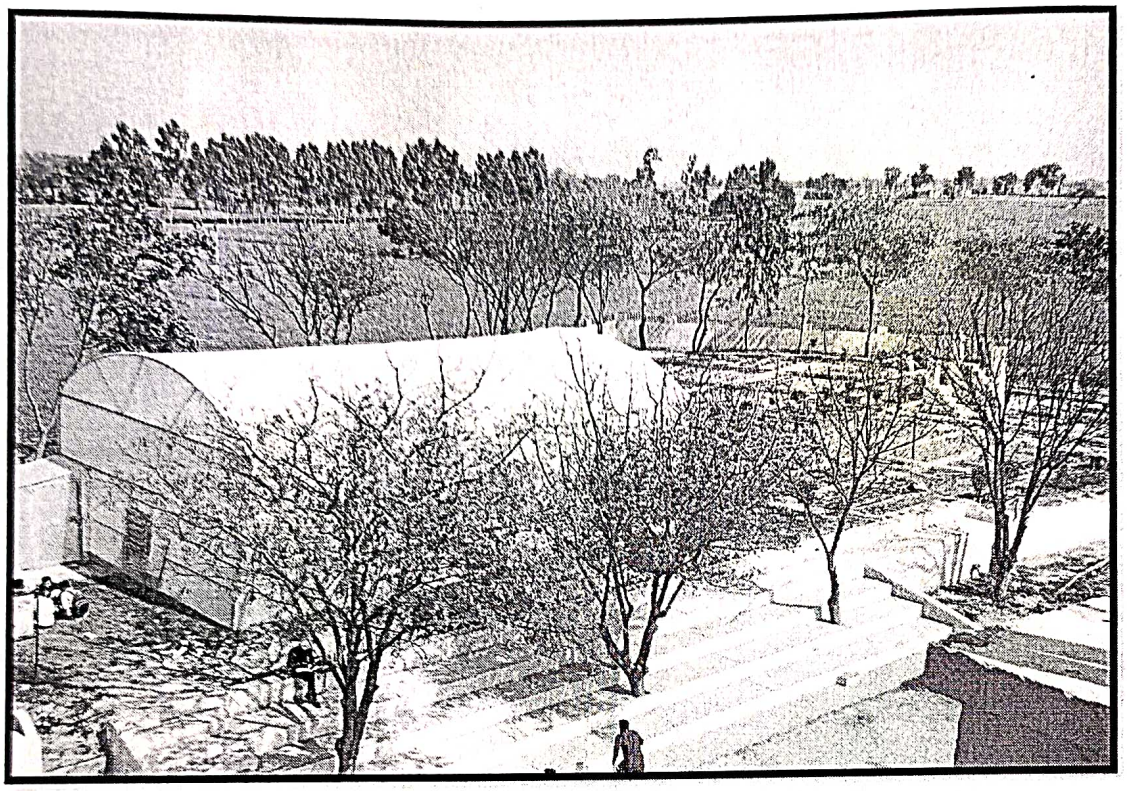

Guru Nanak College Budhlada

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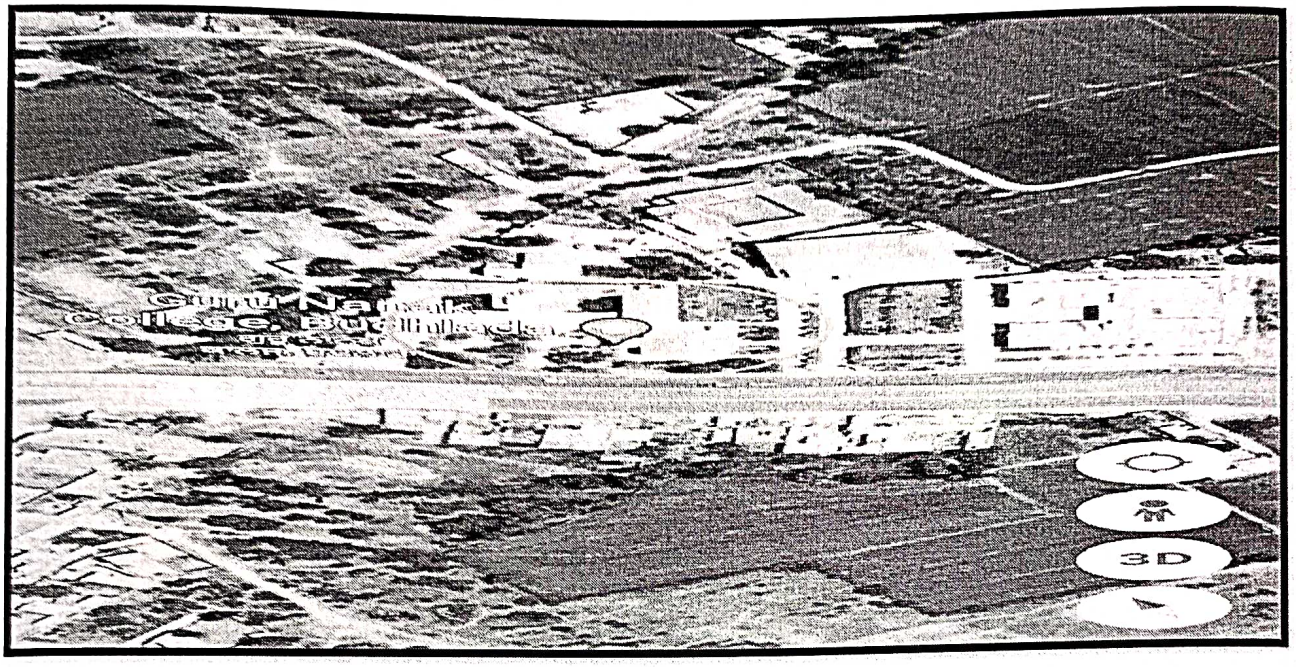
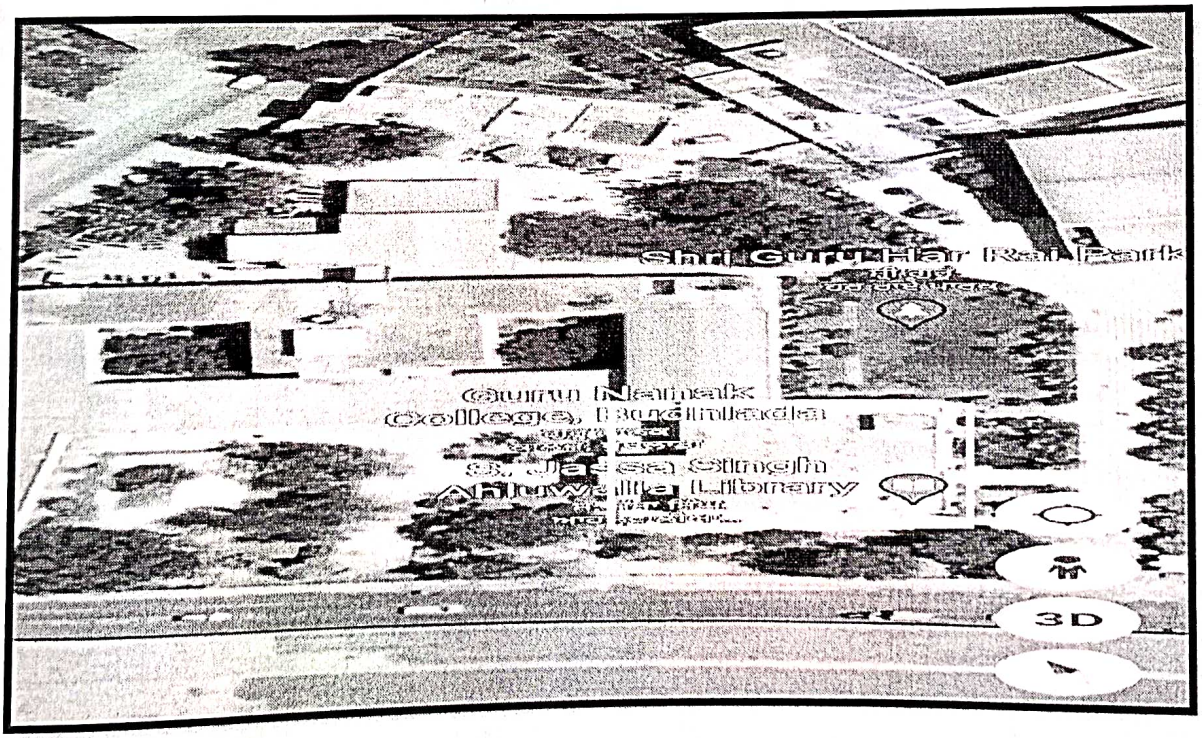
6.1. Earth image of Guru Nanak College Budhlada



6.2. Google Earth image of Library at GNC College



7. Detailed Analysis

7.1 Mite Infrastructure

7.1.1 Floral &Faunal Diversity in College Campus

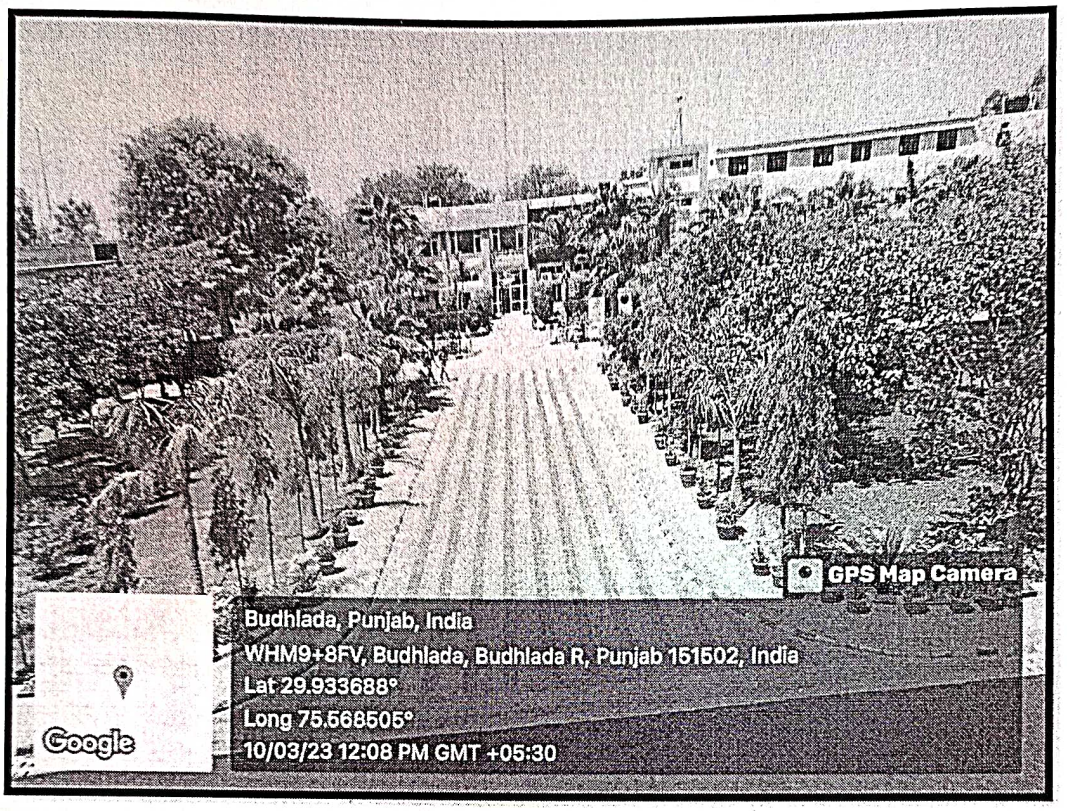
The term biodiversity (from "biological diversity") refers to the variety of life on Earth at all its levels, from genes to ecosystems, and can encompass the evolutionary, ecological, and cultural processes that sustain life. This aspect addresses all the flora and fauna of the campus. The list below has the name and quantity of trees as well as bird species.

Sr.No.	NameofPlant	BotanicalName	Family	No. of plants
1	AshokaTree	*Saracaasoca*	Caesalpiniodae	43
	Arjun	*Terminaliaarjuna*	Combretaceae	12
2	Ber	*Ziziphusmauritiana*	Rhamnaceae	9
3	Amaltas	*Acaciafistula*	Fabaceae	6
4	Amla	*Phyllanthusemblica*	Phyllanthaceae	15
5	Alstonia	*Alstoniascholaris*	Apocyanaceae	5
6	Ficus	*Ficus sp.*	Moraceae	100
7	Bohad/ Banyan	*Ficusbenghalenisis*	Moraceae	03
8	Hibiscus	*Hibiscus sp.*	Malvaceae	31
9	Dek	*Meliaazedarch*	Meliaceae	11
10	Araucaria	*Araucaria sp.*	Araucariaceae	02
11	Bottlebrush	*Callistemonviminalis*	Myrtaceae	04
12	BottlePalm	*Hypophorbelagenicaulis*	Arecaceae	43
13	Areca palm	*Dypsislutescens*	Arecaceae	06
14	Date palm (Phoenix plam)	*Phoenix sp.*	Arecaceae	45
15	Cheeku	*Manilkarazabota*	Asparagaceae	1
16	Lantena (West Indian Lantana)	*Lantenacamra*	Verbenaceae	14

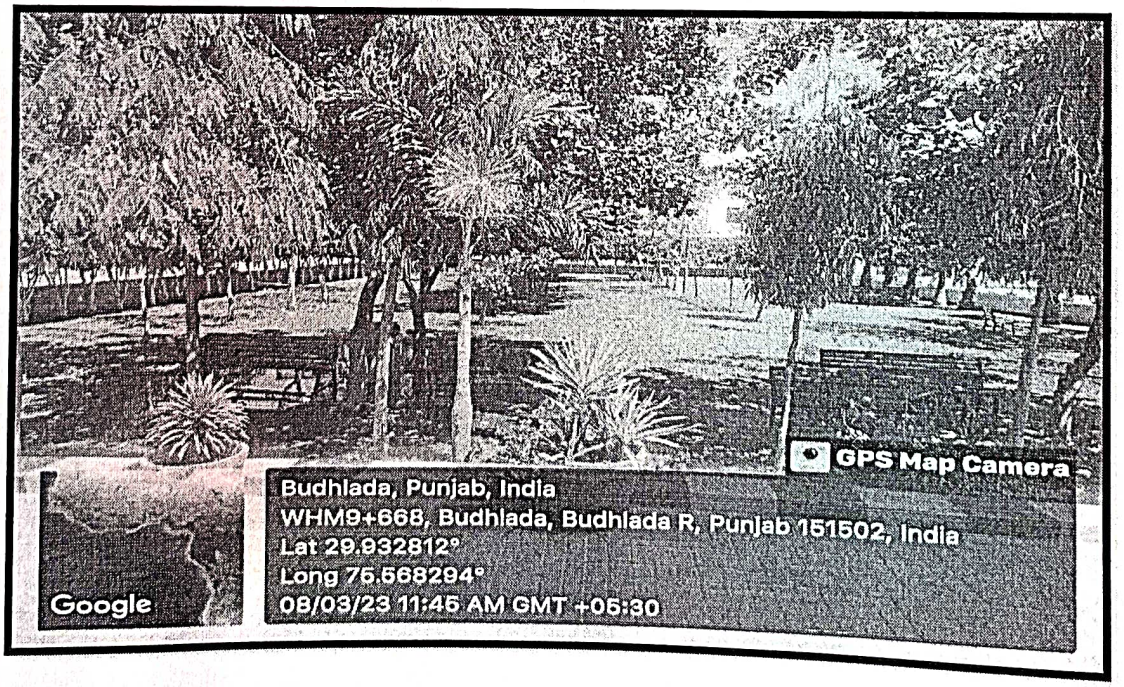
17	Cycas	*Cycasrevoluta*	Cycadaceae	9
18	China palm	*LivistonaChinensis*	Arecaceae	01
19	Golden shower tree	*Cassia fistula*	Fabaceae	01
20	Double Chandni	*Tabernaemontanadivaricata*	Apocynaceae	03
21	Bougainvillea	Bougainvillea sp.	Nyctaginaceae	10
22	Rose (Gulab)	*Rosa indica*	Rosaceae	
23	Guava	*Psidiumguajava*	Myrtaceae	32
24	Gulmohar	*Delonixregia*	Fabaceae	9
25	Kadam (Burflower Tree)	*Neolamarckiacadamba*	Rubiaceae	03
26	Harshingar	*Nyctanthesarbortristis*	Oleaceae	01
27	Cheel tree (Narrow leaved paperbark)	*Melaleuca alternifolia*	Myrtaceae	01
28	Jamun	*Syzygiumcumini*	Myrtaceae	02
29	Jatropha	*Jatrophacurcus*	Euphorbiaceae	02
30	Kachniar	*Bauchiniavariegata*	Caesalpinaceae	02
31	Kachniar	*Bauchiniavariegata*	Caesalpinaceae	01
31	Nolina (Ponytail palm)	*Beaucarnearecurvata*	Asparagaceae	04
32	Washingtonia tree (Maxican Fan plam)	Washingtoniarobusta	Arecaceae	51
33	Lasuda	*Cordiamyxa*	Boraginaceae	01
34	Mango	*Mangiferaindica*	Anacardiaceae	03
35	Neem	*Azadirachtaindica*	Meliaceae	30
36	Peepal	*Ficusreligiosa*	Moraceae	02
37	Rabishpalms	*Rhapisexcelsa*	Arecaceae	09
38	RubberPlant	*Ficuselastica*	Moraceae	01

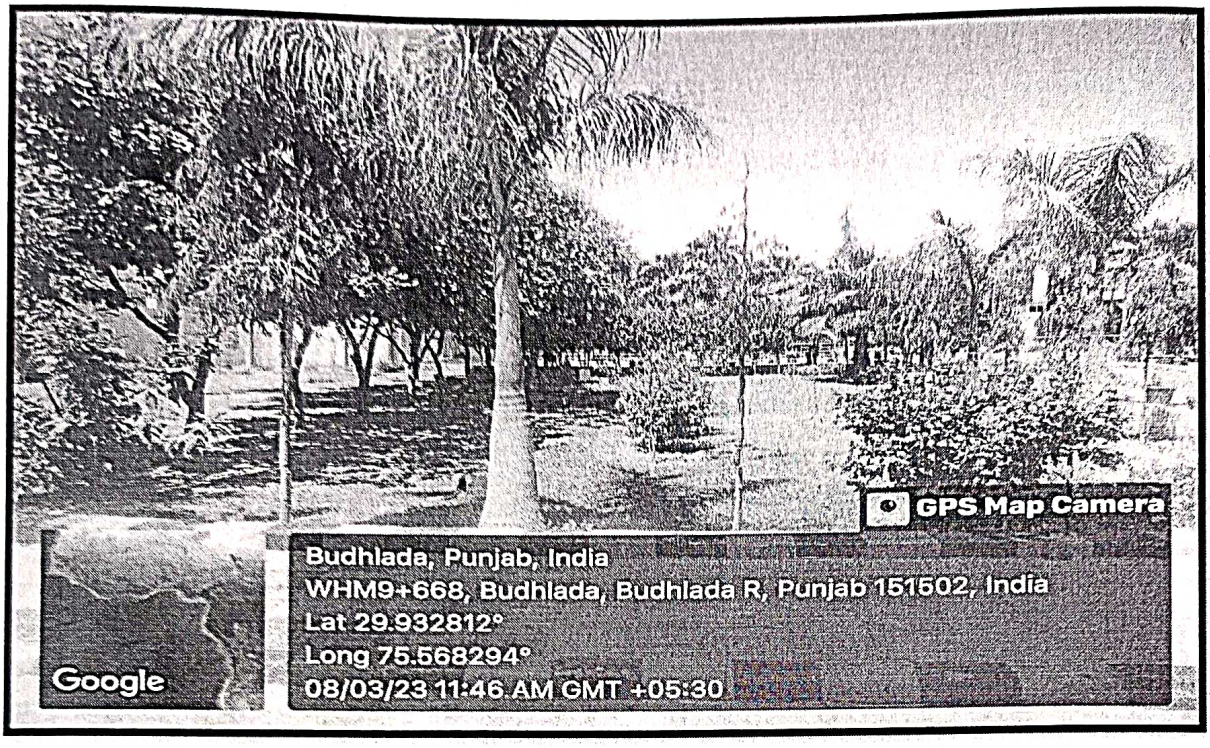
39	Safeda	*Eucalyptusobliqua*	Myrtaceae	11
40	Sarien	*Albegialebbeck*	Fabaceae	01
41	Sukhchain	*Millettiapinnata*	Fabaceae	43
42	Tahli	*Delbergiasisso*	Fabaceae	16
43	Tecona	*Tecona sp.*	Bignoniaceae	09
44	Cupressus	Cupressus sp.	Cupressaceae	01
45	Ixora (West Indian Jasmine)	*Ixora sp.*	Rubiaceae	03
46	Furcraea	*Furcraea sp.*	Asparagaceae	02
47	White Marigold	*Caltha sp.*	Ranunculaceae	100
48	Baheda	*Terminaliabellirica*	Combretaceae	14
49	Coral tree	*Erythrinavariegata*	Fabaceae	02
50	Graps	*Vitis vinifera*	Vitaceae	20
51	Pear	Pyrus	Rosaceae	10
52	Pomegranate	Punica granatum	Lythraceae	10
53	Peach	Prunus persica	Rosaceae	05
54	Lemon	Citrus limon	Rutaceae	05
55	Phalsa	Grewia asiatica	Malvaceae	10
56	Chandni	*Tabernaemontanadivaricata*	Apocynaceae	04

Floral Diversity in GNC College Campus

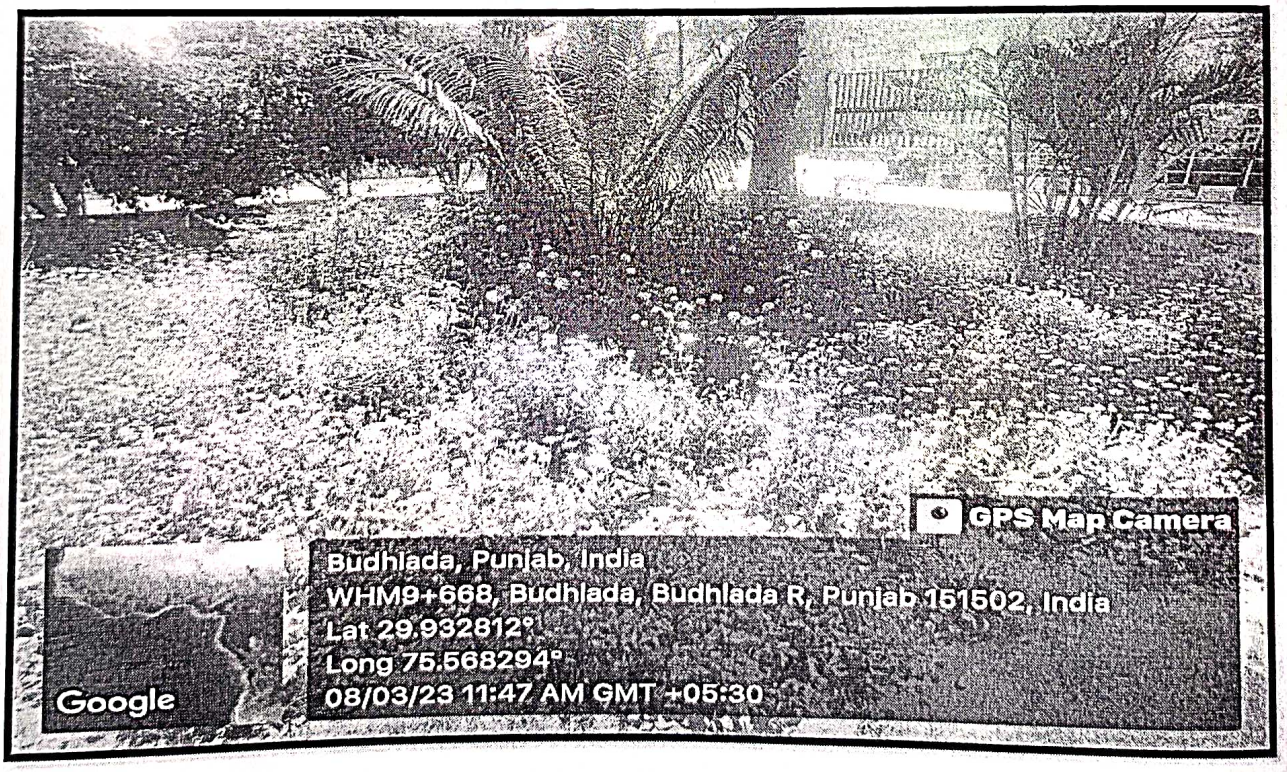


Ashoka Tree Plantation on Road Side in Campus

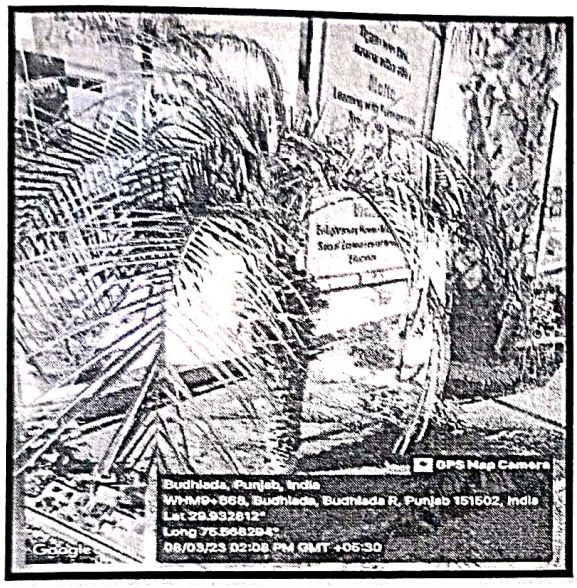




Different Types of Plantation in Lawns

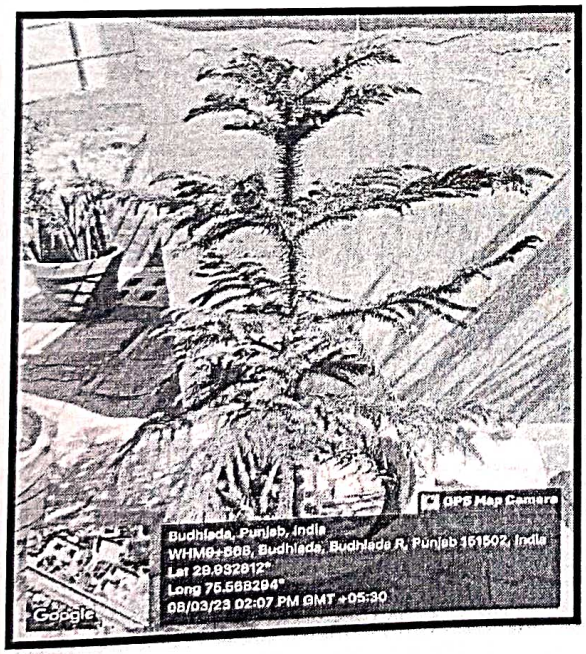


View of lawn near administration block



Palm Tree

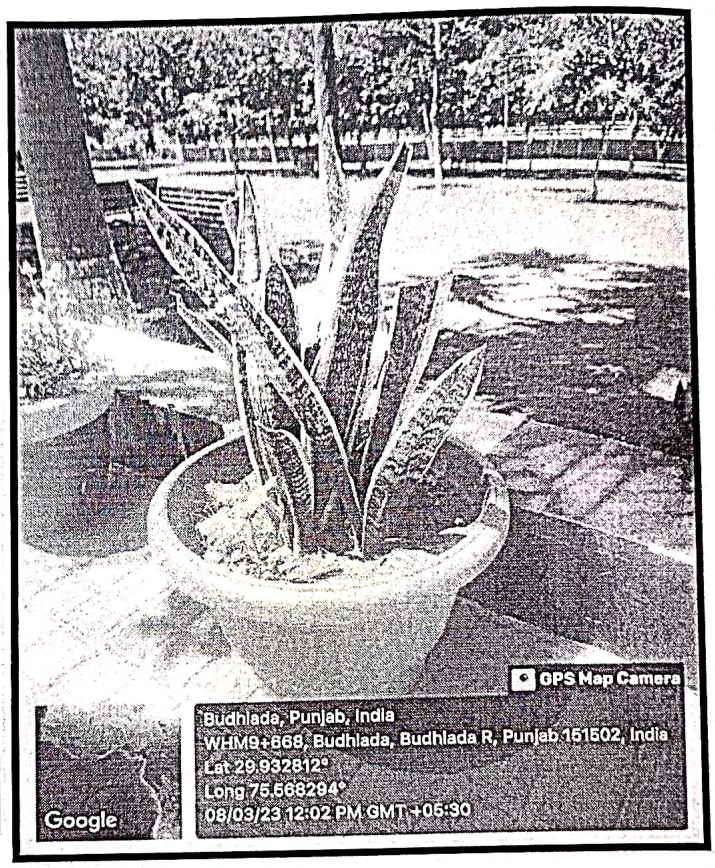
Cycassp



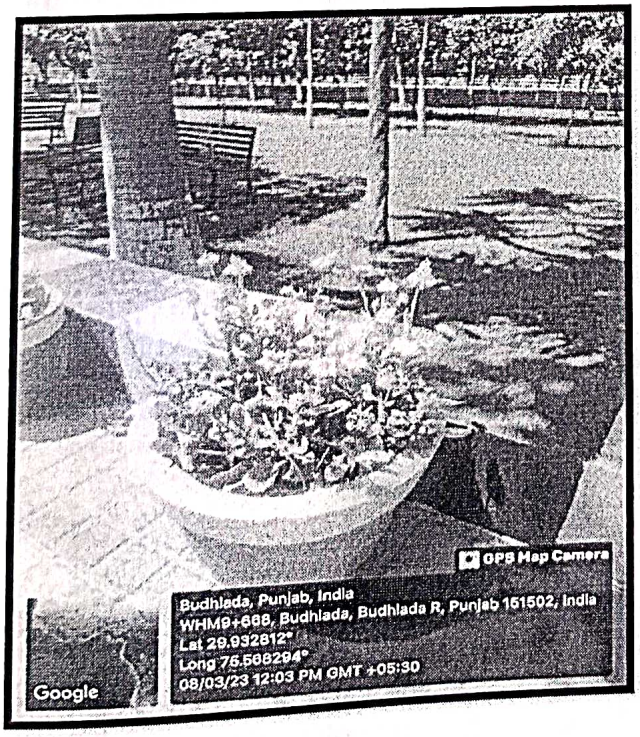
Christmas treeb

Areca Palm

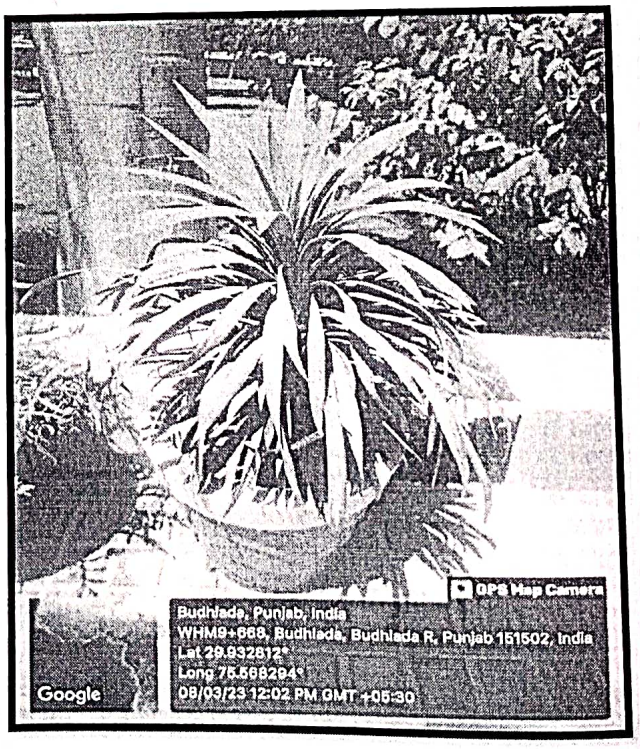
Feather Palm



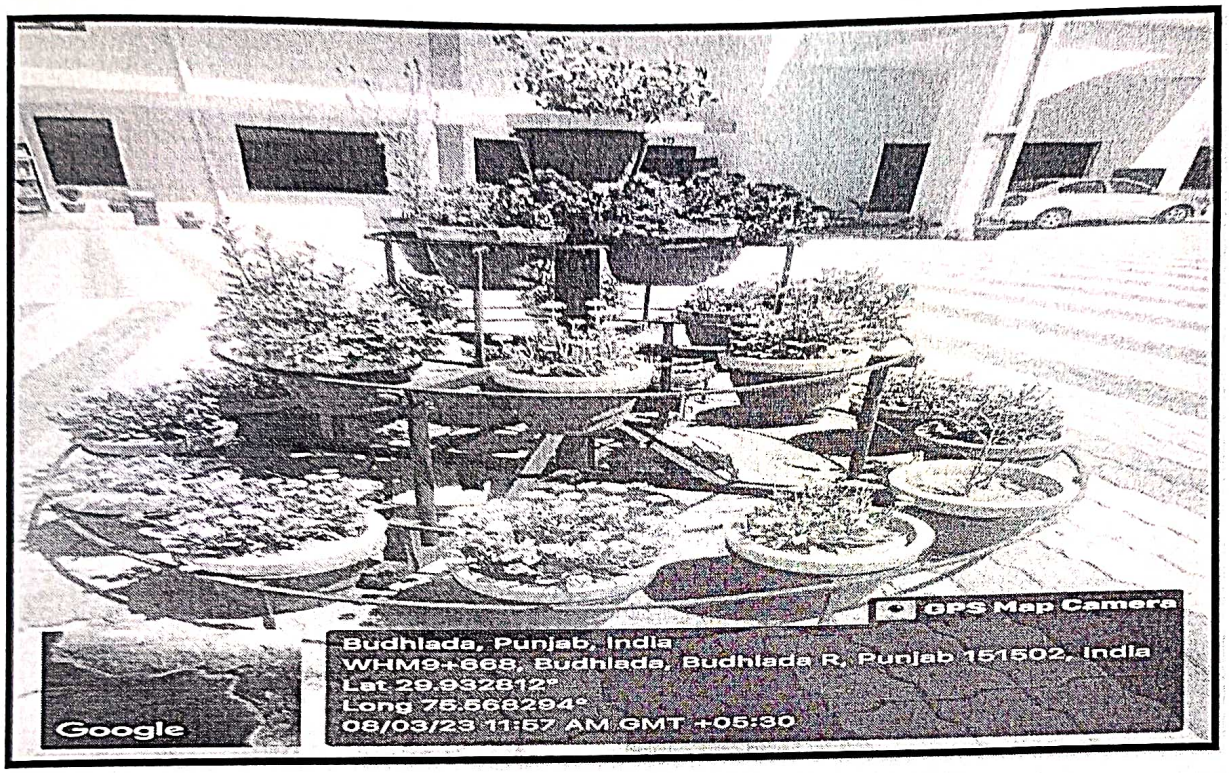
Snake plant



Candullla



Silver yucca plant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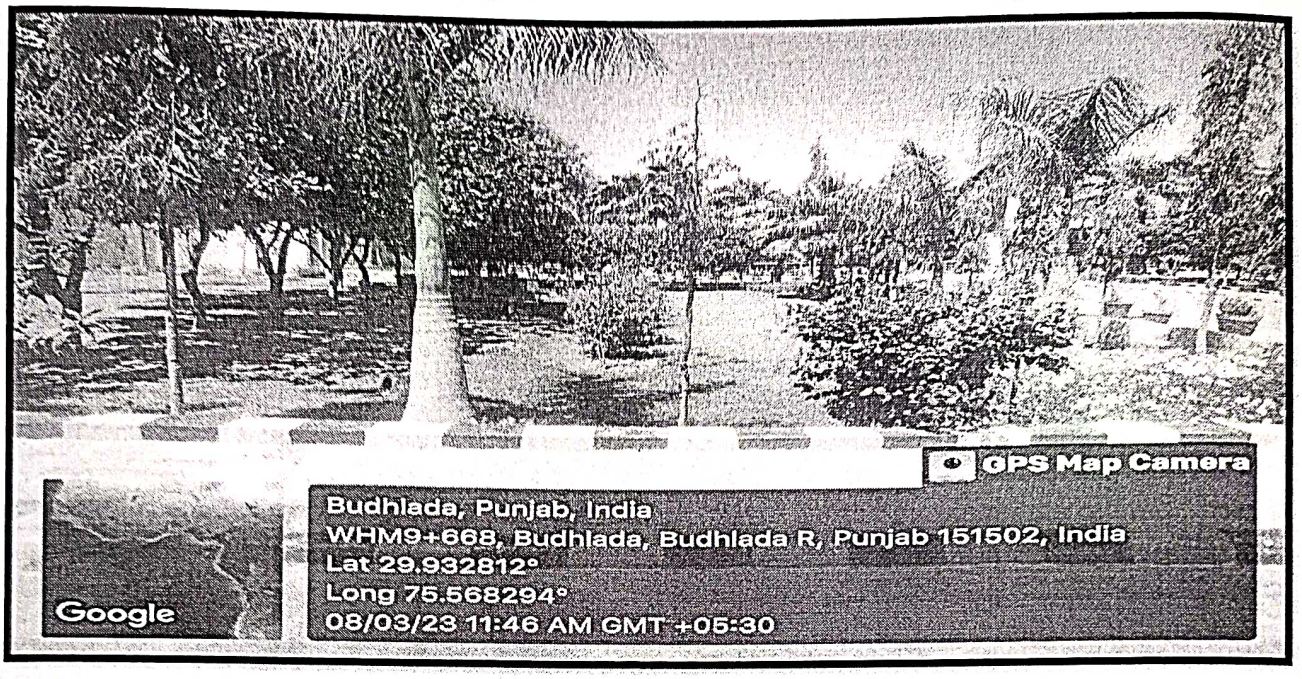
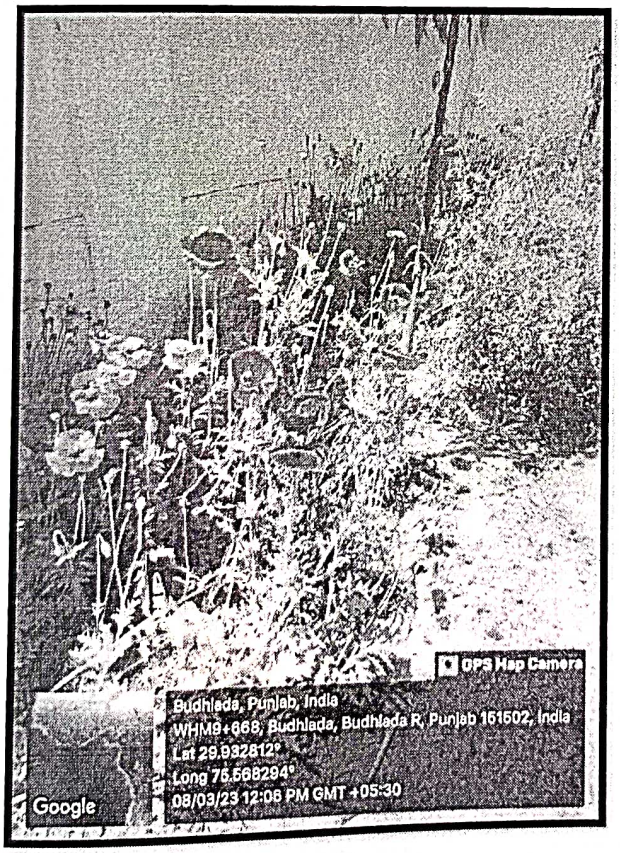
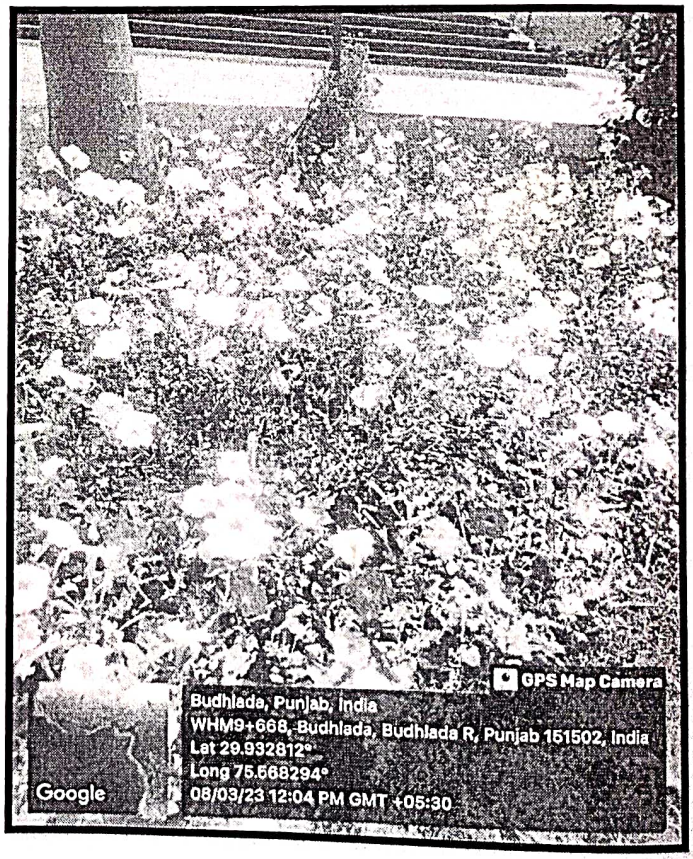
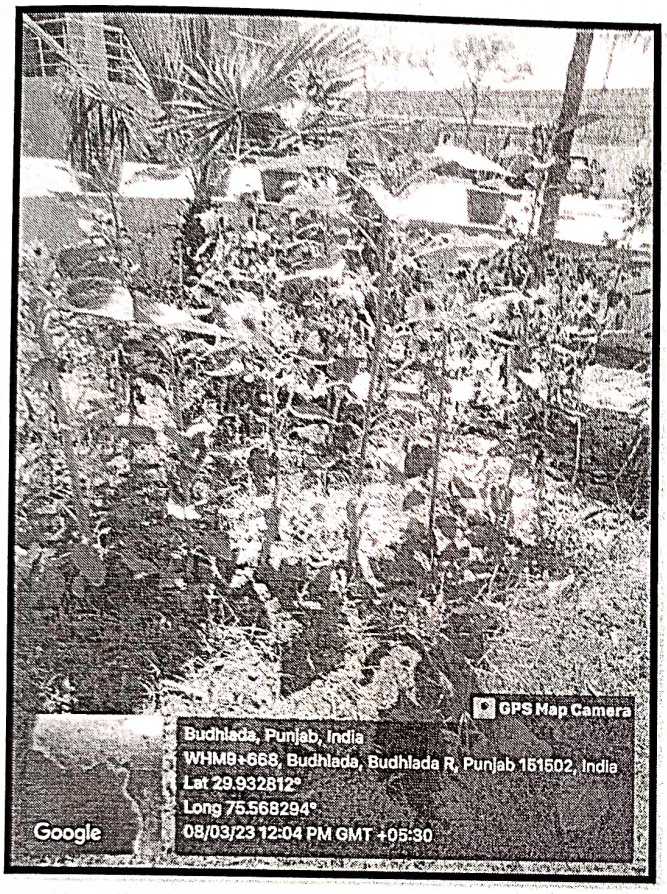
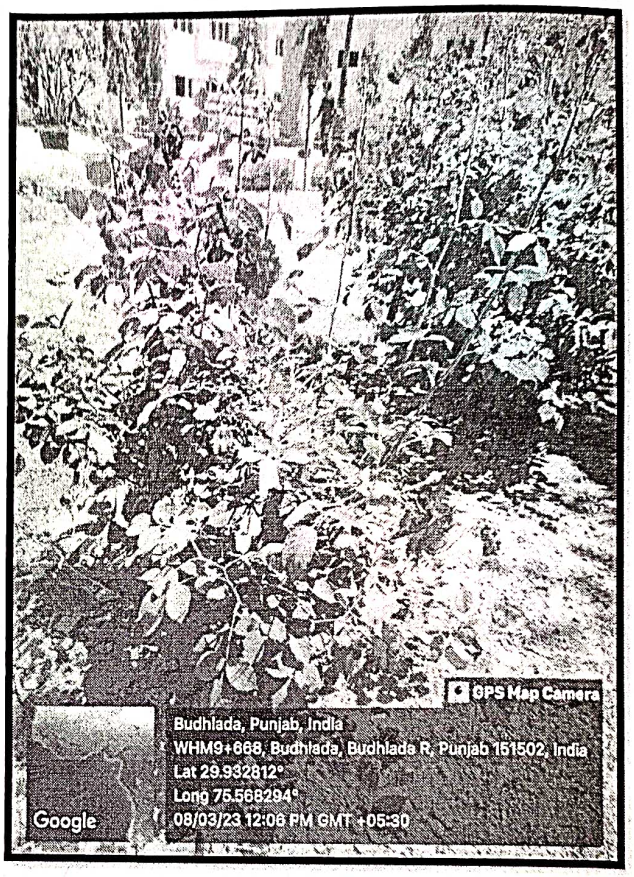


View of different Trees Planted in Girls' Lawn









7.1.2 Faunal Diversity in GNC Campus Budhlada

The faunal Diversity of GNC campus has been studied and documented as below:

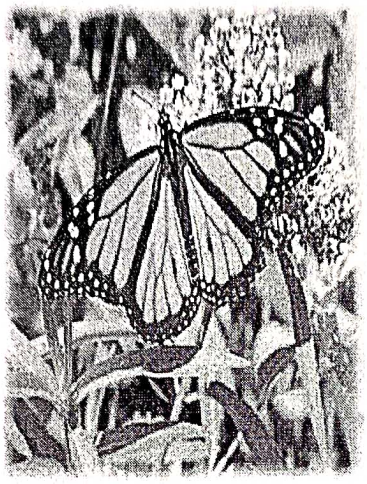
S.No.	CommonName	ScientificName
1.	Grasshopper	*Caelifera*
2.	WaterBeetle	*Hydrophilinae*
3.	DungBeetle	*Scarabaeus*
4.	Dragonfly	*Anax*
5.	Redpierrot	*Talicada*
6.	JewelBug	*Chrysocoris*
7.	SkipperButterfly	*Pelopidas*
8.	CommonmormonButterfly	*Papilio*
9.	RedCottonBug	*Dysdercus*
10.	BlisterBeetle	*Mylabris*
11.	Housefly	*Muscadomestica*

12.	CabbageButterfly	*Peiris*
13.	MoleCricket	*Gryllotalpa*
14.	CommonShieldBug	*Palomena*
15.	Indianpalmsquirrel	*Funambulus*
16.	PunjabToad/Indianmarbledtoad	*Duttaphrynus*
17.	GardenLizard	*Calotes*
18.	Rat	*Rattusrattus*
19.	Earthworm	*Pheretima*
20.	Slug	*Limax*
21.	HouseCricket	*Acheta*
22.	GardenSnail	*Cornu*
23.	PrayingMantid	*Mantis*
24.	StableFly	*Stomoxys*
25.	BlowFly	*Calliphora*
26.	White-throatedKingfisher	*Halcyon*
27.	Honeybee	*Apisspp.*
28.	BluetigerButterfly	*Tirumala*
29.	Carpenter Ants	*Camponotus*
30.	Cockroaches	*Periplaneta*
31.	Plaintigerbutterfly	*Danaus*
32.	LemonButterfly	*Papilio*
33.	Hornbill	*Buceros*
34.	CommonKingfisher	*Alcedo*
35.	CrowPheasant	*Centropus*
36.	TheCommonPierrot	*Castaliusrosimon*
37.	ThePeaBlue	*Lampidesboeticus*
38.	TheCommonSilverline	*Spindasisvulcanus*
39.	YellowWasp	*Polistes*
40.	Ladybirdbeetle	*Coccinella*
41.	Rockdove, rockpigeon, orcommonpigeon	*Columba livia*
42.	CommonmynaorIndianmyna	*Acridotheres*

43.	Ringneckedparakeet	*Psittacula*
44.	JungleBabbler	*Turdoides*
45.	Greatercoucalorcrow pheasant	*Centropus*
46.	White-throatedKingfisher	*Halcyon*
47.	Rufoustreepie	*Dendrocitta*
48.	Owl	*Tyto*
49.	CommonCrow	*Corvus*
50	HouseSparrow	*Passer*

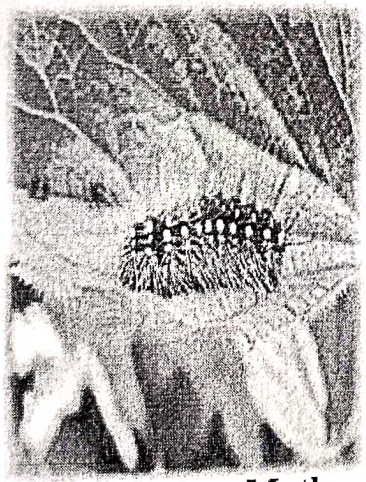
Faunal Diversity in GNC Campus Budhlada

Yellow Wasp

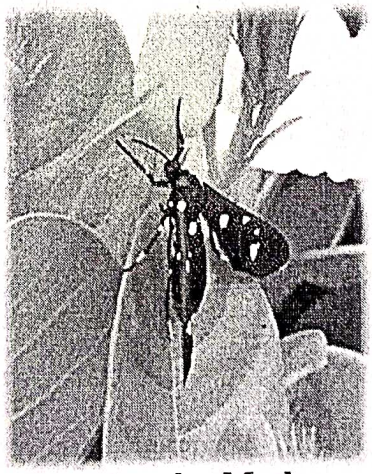


Butter Fly

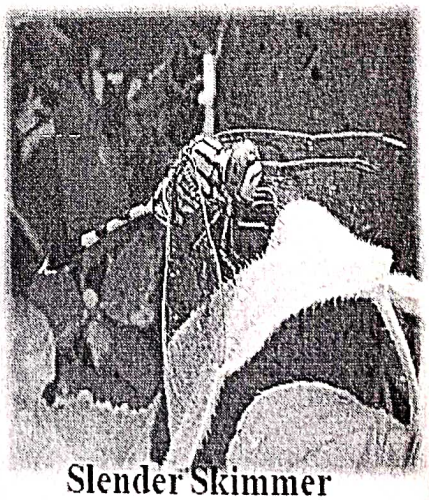
Beetle insect



Garden Tiger Moth



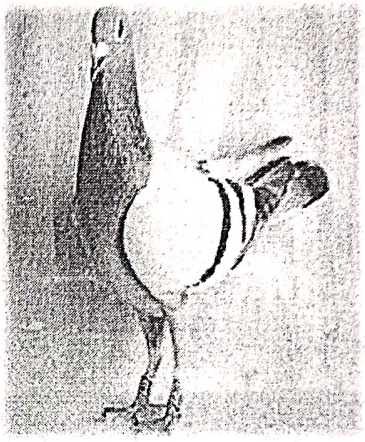
Oleander Moth



Slender Skimmer

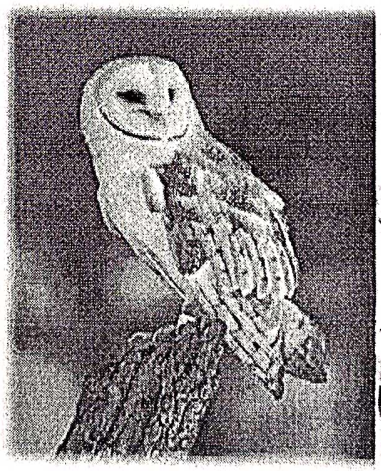
Pied Myna

Common Wood shrike



Common Pigeon

Ring necked parakeet



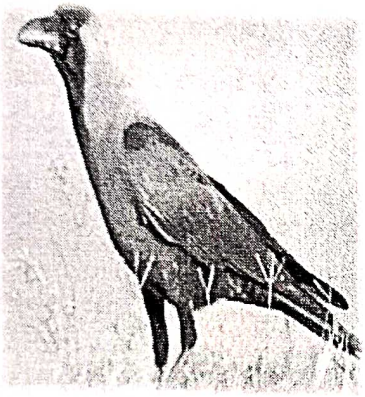
Tyto (Owl)

Centropus

Red-Vented Bulbul

Skylark

Common Myna



House Crow

House Sparrow

Cuckoo

7.1.3 Weather Data of GNC campus

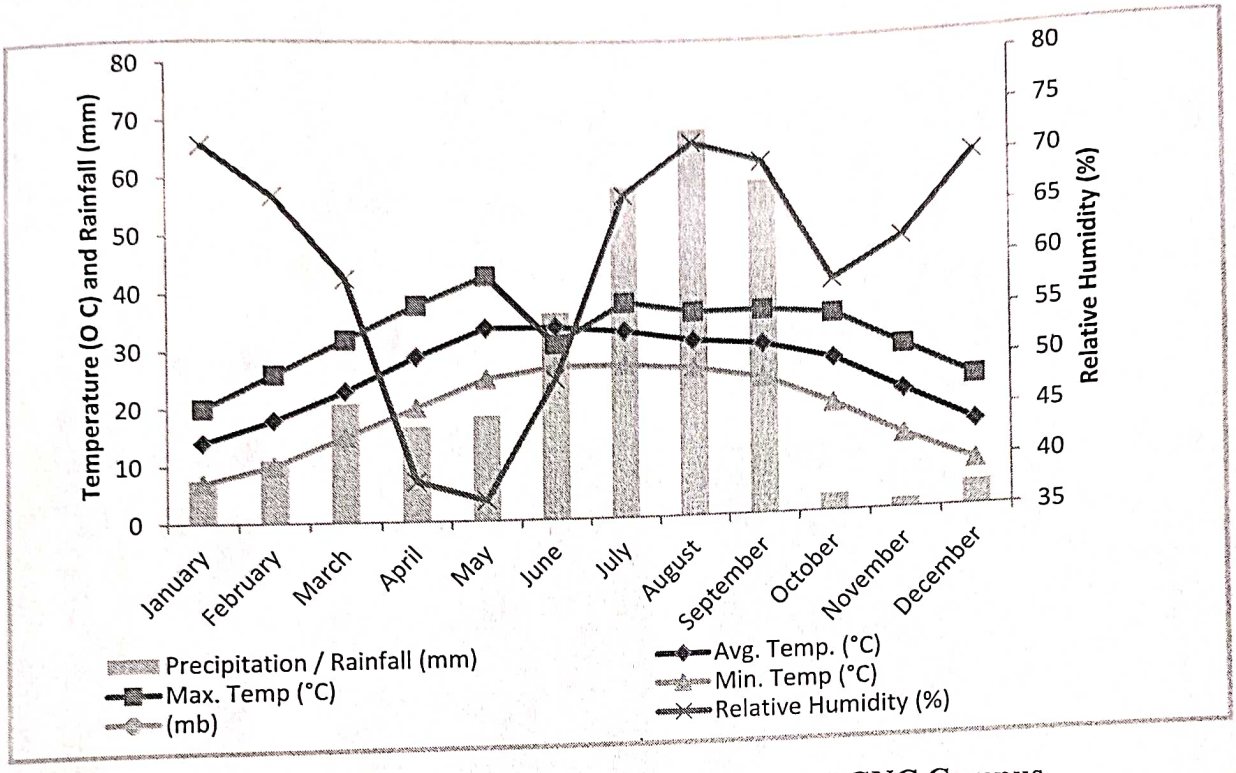
Weather Data Month Wise (averages) of Budhlada city and GNC Campus: 2022

The climate of budhlada mainly comprises of three seasons i.e., summer, rainy and winter. The summer season spans from mid-April to the end of June. The rainy season spans from the month of July to September. The winter season starts from the end of November to the end of February with lowest temperatures in December and January. The climatic conditions bear a strong resemblance with the other cities in the northern part of India. The summers are usually very hot and the winters are very cold. The summers are prevalent during the months of April to September with June, July, August, and mid of September being the hottest months. The winter is prevalent from the month of November till the month of March. There is onset of monsoon in September and from the mid of September to November one experiences the transitional weather. It is worth mentioning that an extreme type of climatic conditions is found in Budhlada Mansa as the location of the region is continental and far away from sea coast. Therefore, the average annual range of temperature is up to 19°C due to extremely high temperatures in summers and extremely low temperatures in winter season

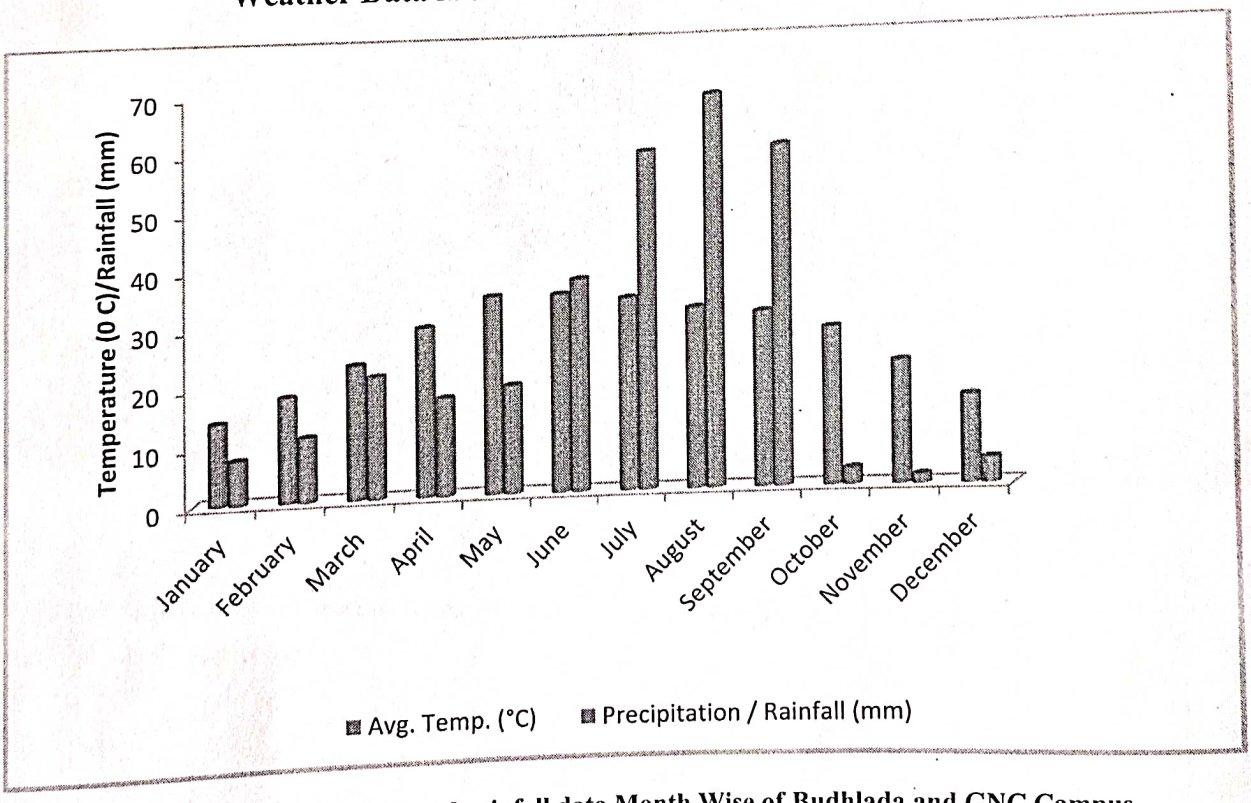
Table: **Weather Data Month Wise of Budhlada and GNC Campus**

Parameters \ Month	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Avg.Temp.(°C)	14	18	23	29	34	34	33	31	30	27	21	15
Max.Temp(°C)	20	26	32	38	43	31	38	36	36	35	29	23
Min.Temp(°C)	7	10	15	20	25	27	27	26	24	19	13	8
RH (%)	72	67	59	39	37	49	67	72	70	58	62	70
Av.Pressure (mb)	1018	1015	1011	1007	1001	998	997	1000	1004	1010	1014	1017
Precipitation /Rainfall(mm)	7.6	11.1	20.9	16.8	18.6	36.5	58.3	68.1	58.8	2.9	1.6	4.3

(Source Google)



Weather Data Month Wise of Budhladaand GNC Campus

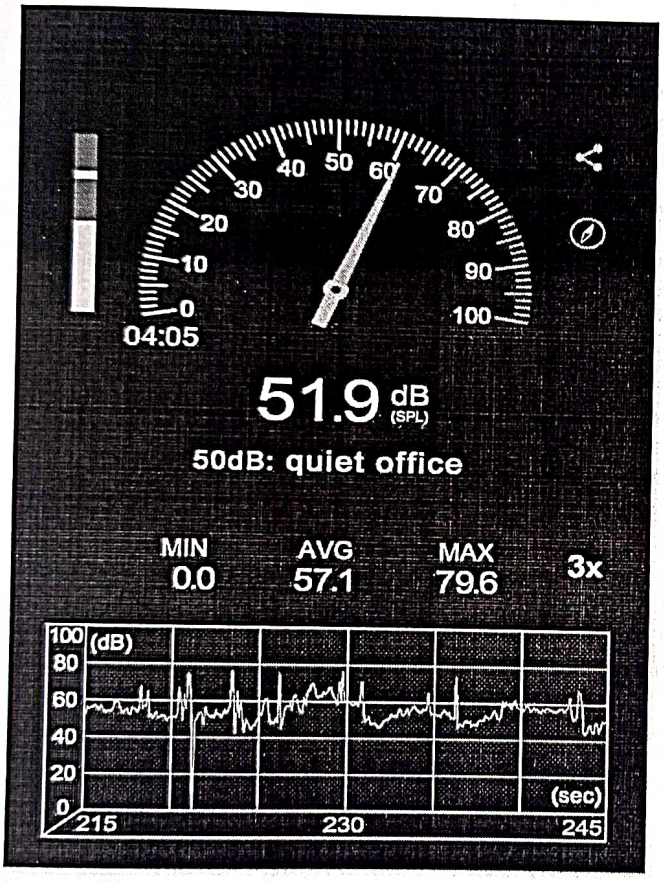


Average temperature and rainfall data Month Wise of Budhlada and GNC Campus

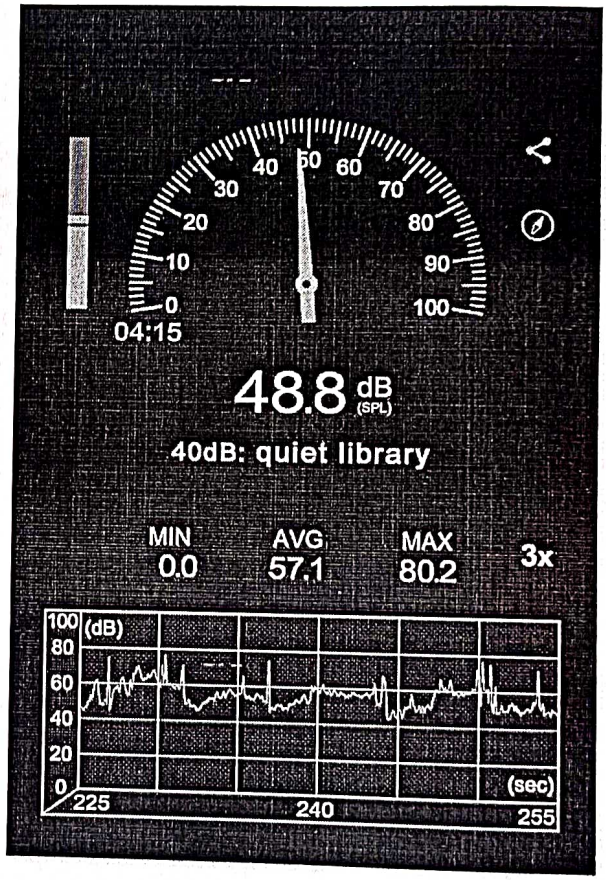
7.1.4 The Noise Level at the Campus:

Loudness is the strength of the sensation of sound received by the individual. It is measured in decibels (dB). The loudest sound a person can tolerate without much discomfort is about 80 dB. Sound beyond 80 dB is considered noise pollution as it harms the hearing system of humans. According to a report of WHO, 45 dB is safe for city and its surroundings.

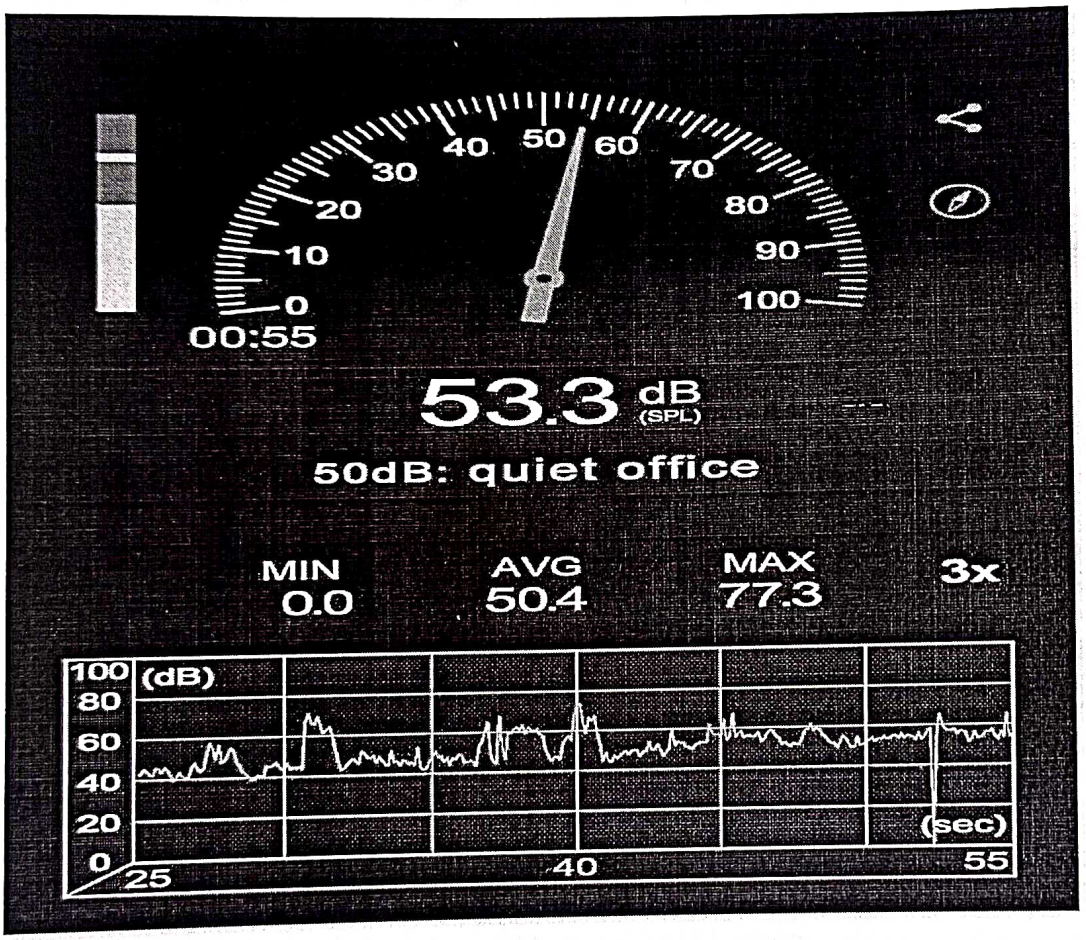
The noise level of the college campus was measured by Sound Meter App (Data source: Sound Meter App)



Noise pollution in Bhai Nanad Lal block (Agriculture Department)



Noise pollution in Library



Noise pollution in Administration Office

7.1.5 Air quality in Budhlada and College Campus:

Air pollution is the contamination of air due to the presence of substances in the atmosphere that are harmful to the health of humans and other living beings, or cause damage to the climate or to materials. There are many different types of air pollutants, such as gases, particulates, and biological molecules.There is predictability to the narrative around North India's air pollution. Air

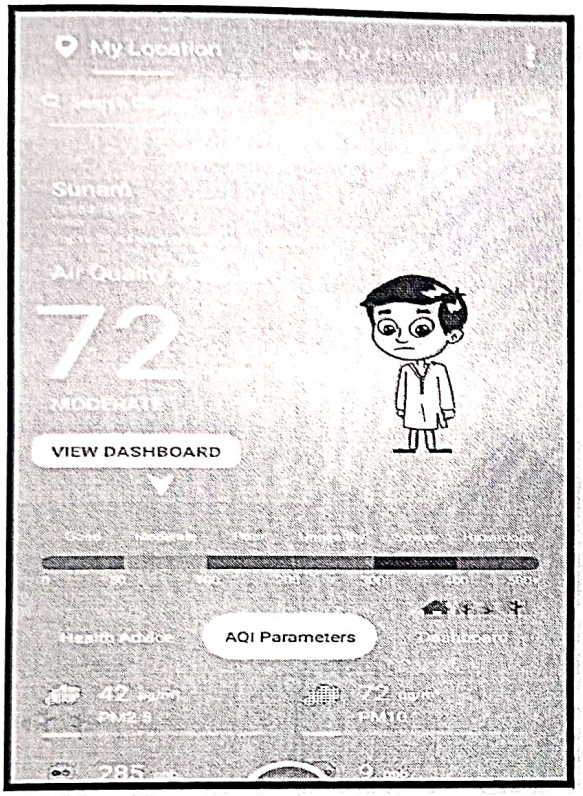
that is unhealthy all year-round becomes unbreathable during winter, largely due to particulate matter in emissions from farm fires in Punjab, Haryana, and Western Uttar Pradesh. This contributes to the portrayal of farmers as the primary architects of Delhi's air pollution crisis, and short-term solutions sustain only till the skies clear up.

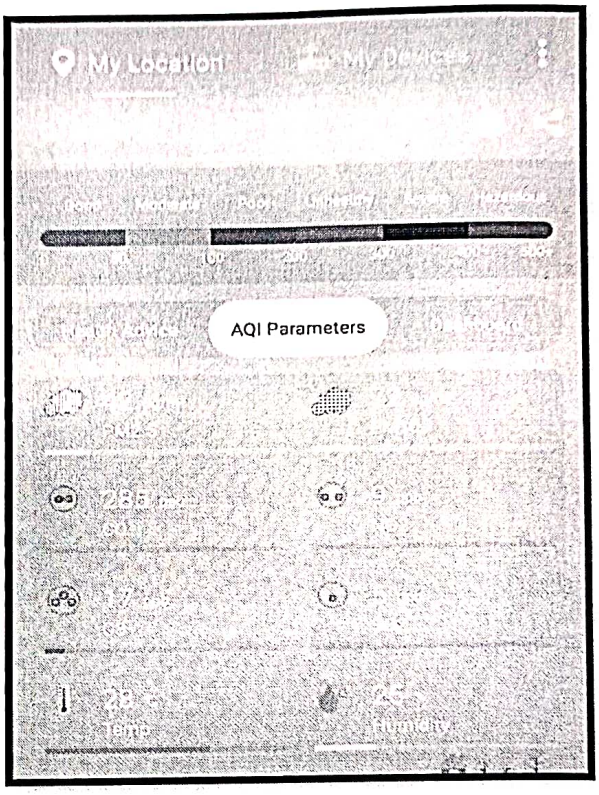
Punjab pollution control board is regularly monitoring the Ambient Air Quality at different locations. The major source of air pollution is duet and less plantation, construction activity and poor condition of road etc. The Sunam city (Patiala) is nearer monitoring station show for air quality on google map.

The Ambient Air Quality of the near monitoring station and Budhlada city is found Moderate (data source: AQI App).There are six AQI categories, namely Good, Satisfactory, Moderately polluted, Poor, Very Poor, and Severe. The proposed AQI will consider eight pollutants (PM10, PM2.5, NO2, SO2, CO, O3, NH3, and Pb) for which short-term (up to 24-hourly averaging period) National Ambient Air Quality Standards are prescribed.

AQI Category, Pollutants and Health Breakpoints

AQI Category (Range)	PM_{10} 24-hr	$PM_{2.5}$ 24-hr	NO_2 24-hr	O_3 8-hr	CO 8-hr (mg/m^3)	SO_2 24-hr	NH_3 24-hr	Pb 24-hr
Good (0-50)	0-50	0-30	0-40	0-50	0-1.0	0-40	0-200	0-0.5
Satisfactory (51-100)	51-100	31-60	41-80	51-100	1.1-2.0	41-80	201-400	0.5 –1.0
Moderately polluted (101-200)	101-250	61-90	81-180	101-168	2.1- 10	81-380	401-800	1.1-2.0
Poor (201-300)	251-350	91-120	181-280	169-208	10-17	381-800	801-1200	2.1-3.0
Very poor (301-400)	351-430	121-250	281-400	209-748*	17-34	801-1600	1200-1800	3.1-3.5
Severe (401-500)	430 +	250+	400+	748+*	34+	1600+	1800+	3.5+





AQI of nearest monitoring city

AQI of College, Campus

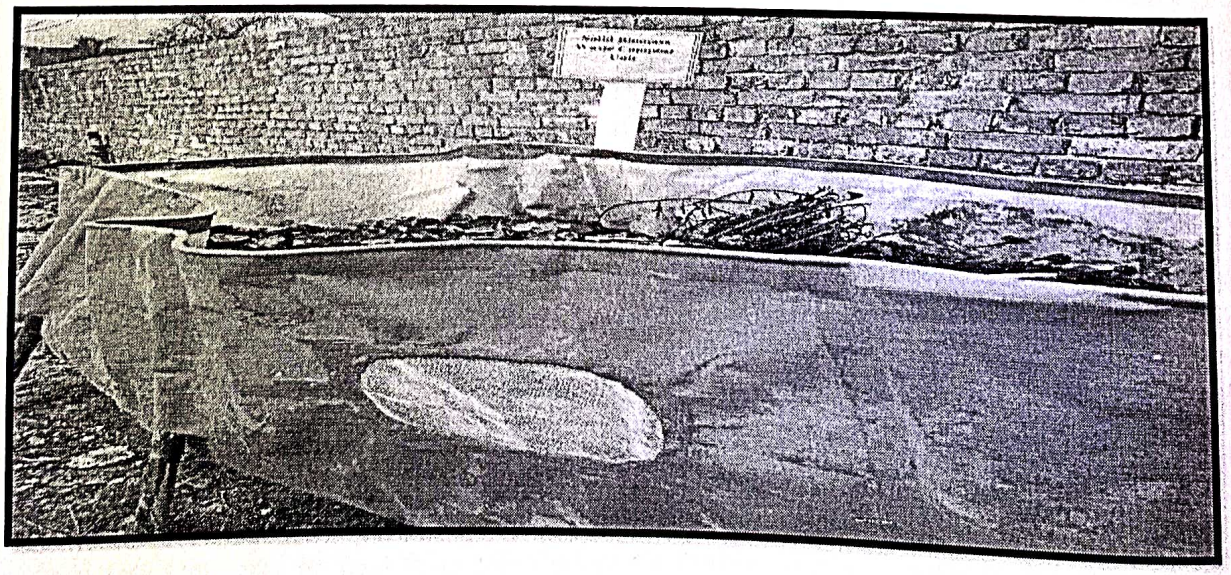
AQI of Budhlada

8. SOLID WASTE MANAGEMENTOFGURU NANAK COLLEGE, BUDHLADA

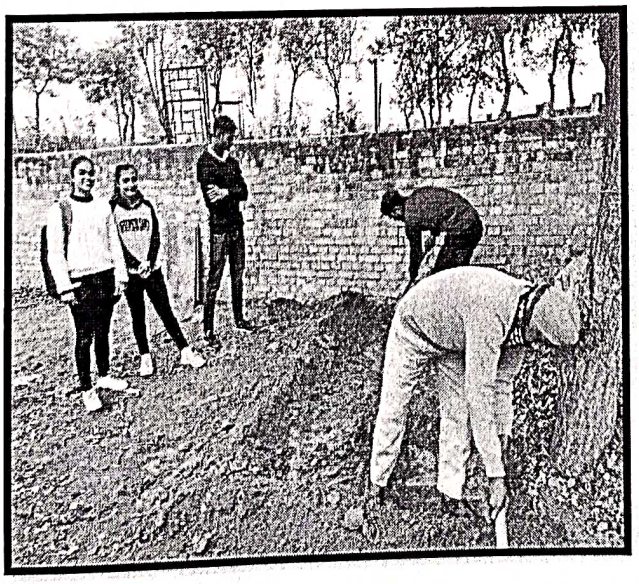
Waste disposal are the activities and actions required to manage waste from its inception to its final disposal. This includes the collection, transport, treatment and disposal of waste, together with monitoring and regulation of the waste management process.

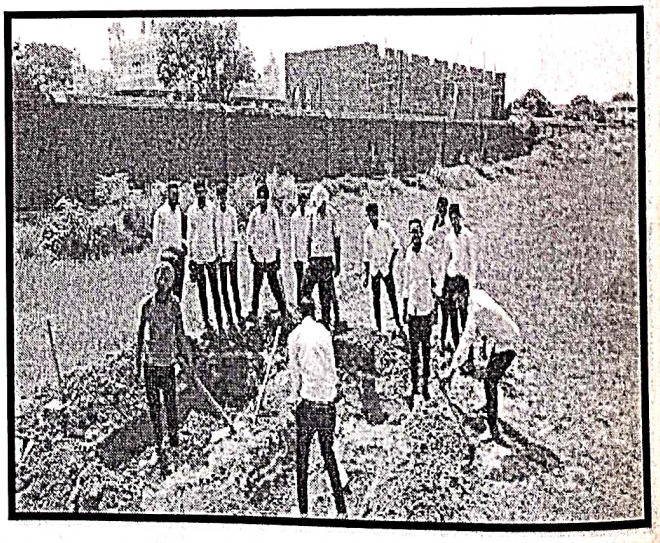
The waste from all around the college is separated daily as wet and dry waste in different bags which are disposed separately. Dry waste includes paper, cardboard, glass tin cans etc. on the other hand; wet waste refers to organic waste such as vegetable peds, left-over food etc. Separation of waste is essential as the amount of waste being generated today causes immense problem. The material was composted and evaluated as a fertilizing material. Disposal of these waste results in the production of good quality organic manure that can be used as soil amendments and source of plant nutrients.

With smart initiatives like **"Think Green Campus Model",** waste management is helping colleges and universities to achieve a higher level of environmental performance. By reusing or recycling we are contributing to the conservation of natural resources, saving energy, helping to protect the environment, reducing landfill. We will also reduce our impact on the environment by minimizing the carbon emissions associated with both disposing of old products and obtaining new ones. GNC adopts environment friendly practices and takes necessary actions such as energy conservation, waste recycling, carbon neutral etc. The biological reusable waste are processed as organic manure for the plants available in the college campus and the other solid waste generated in the college campus is taken to the community bin of Budhlada municipality for recycling and disposal.



Waste collection pit for preparation of manure



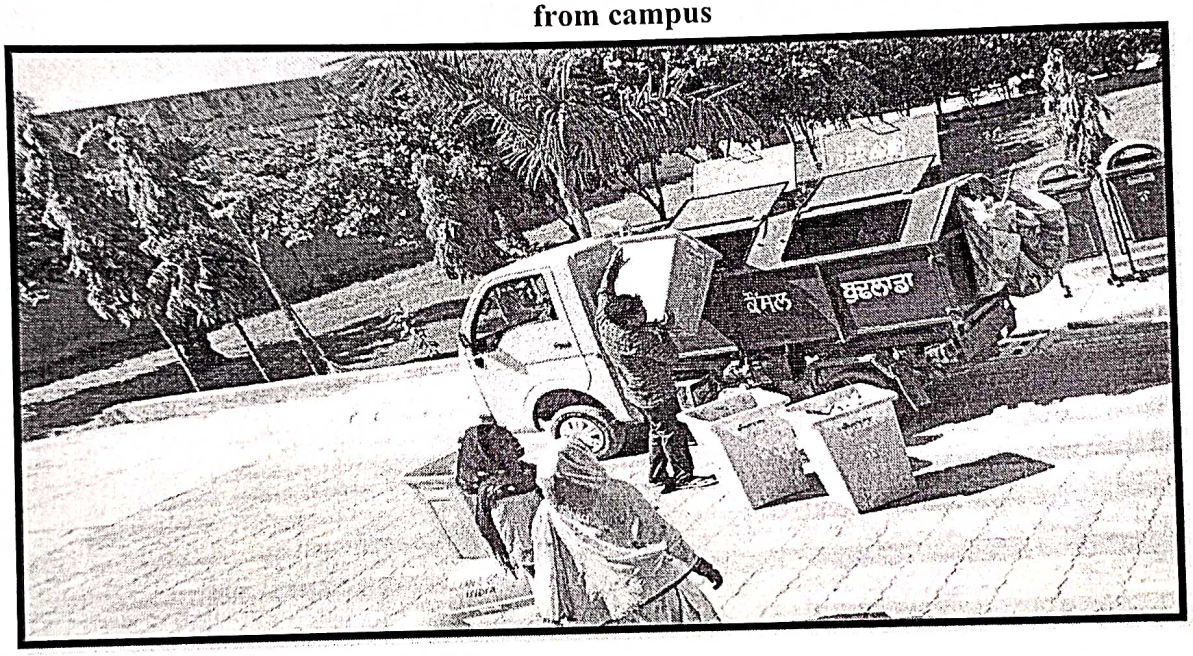


Pit Preparation for Green disposal by students of Agriculture Department

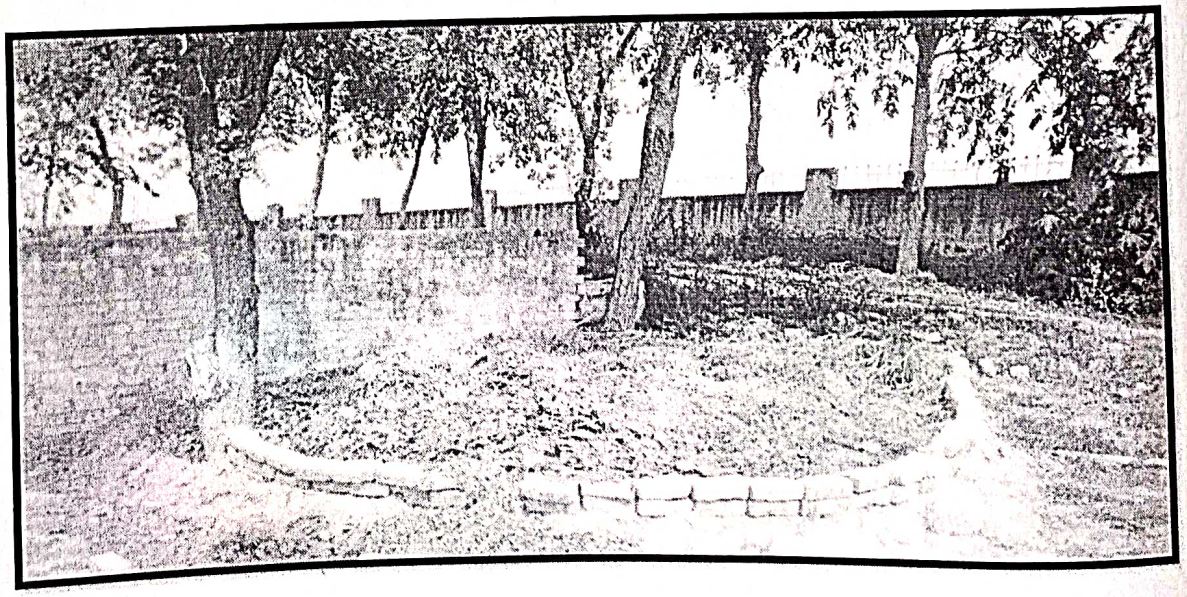
SEGREGATION OF WASTE

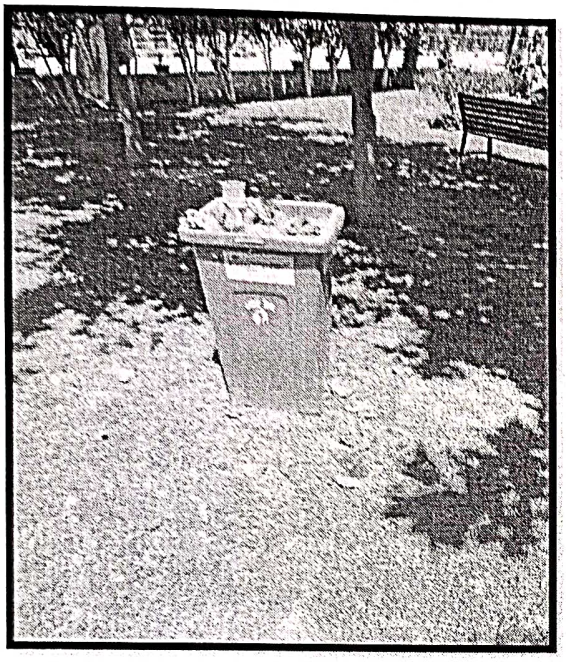
All the solid waste is sorted in the dump yard by the college employees so that the degradable and non-degradable materials can be separated and dumped according to the standard protocols of the administration. The resultant non-biodegradable materials are collected. Separate bins have been installed in the college campus for segregation of non-biodegradable and biodegradable solid waste segregated and disposed of by Municipal Corporation Budhlada.

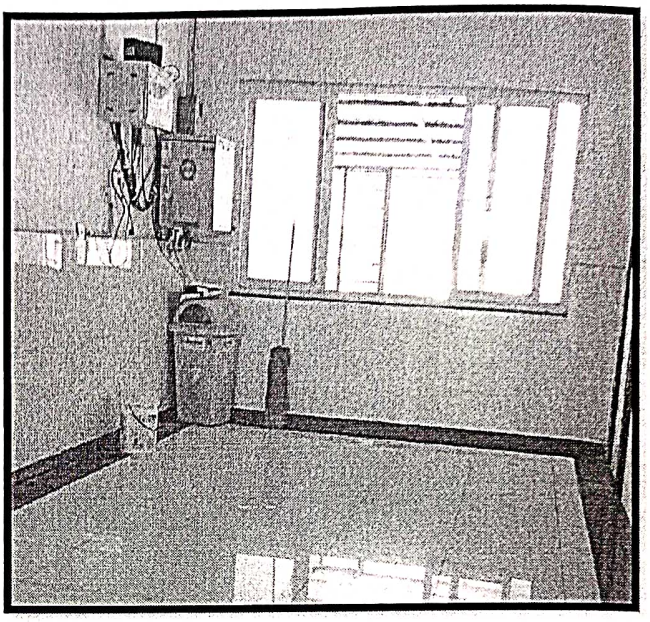
Vehicle of Municipal Corporation Budhlada for collection of waste segregated materials from campus

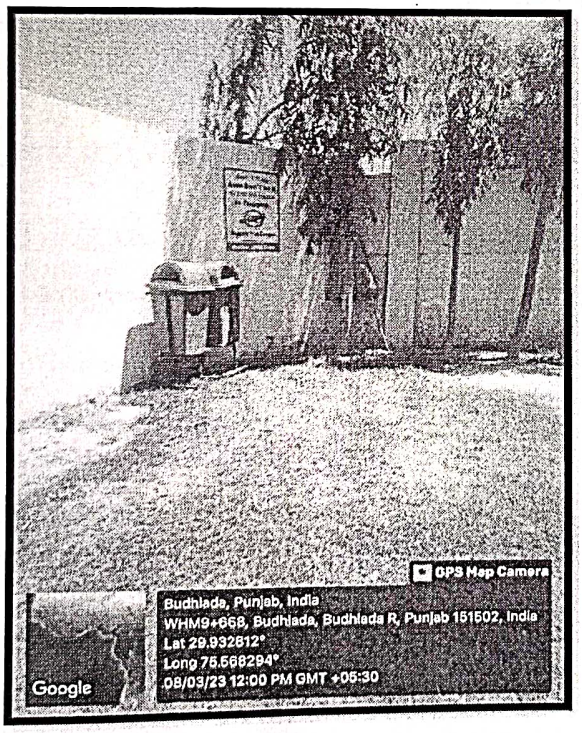


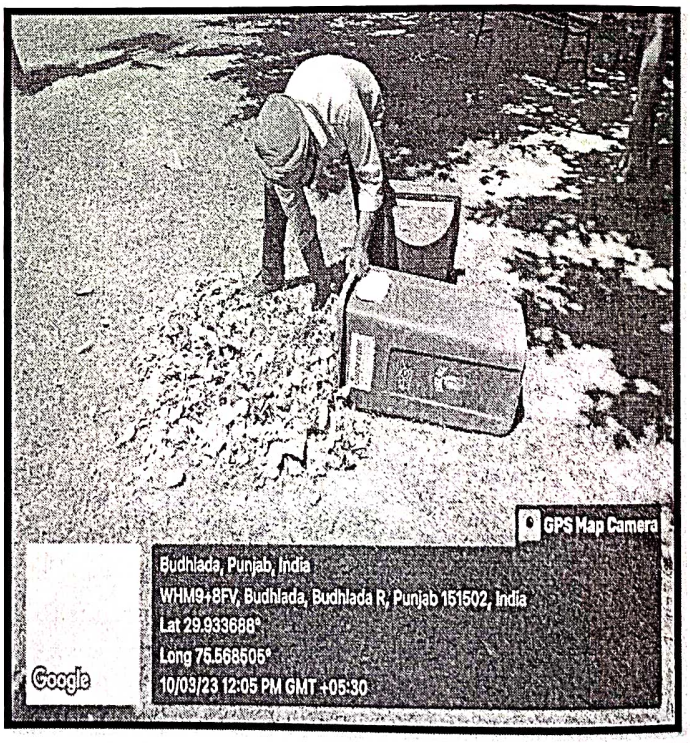
Composting pit for green dry waste material







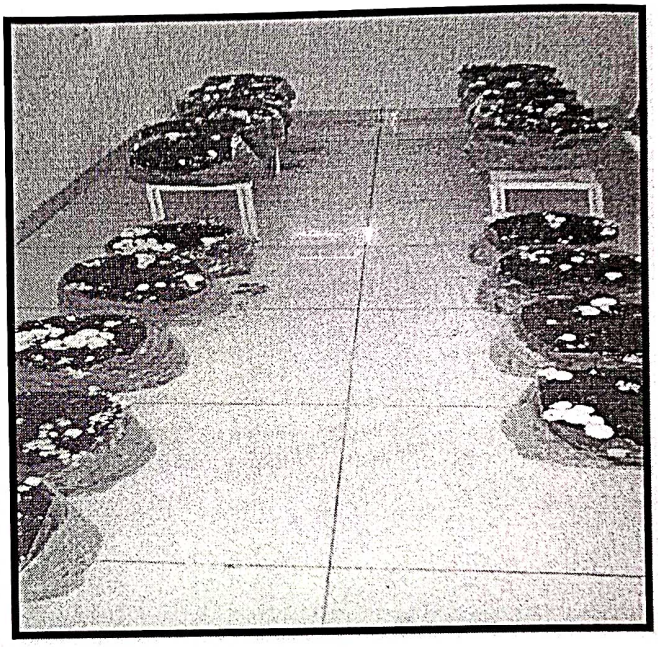




Dustbins of different colour in campus for waste segregation

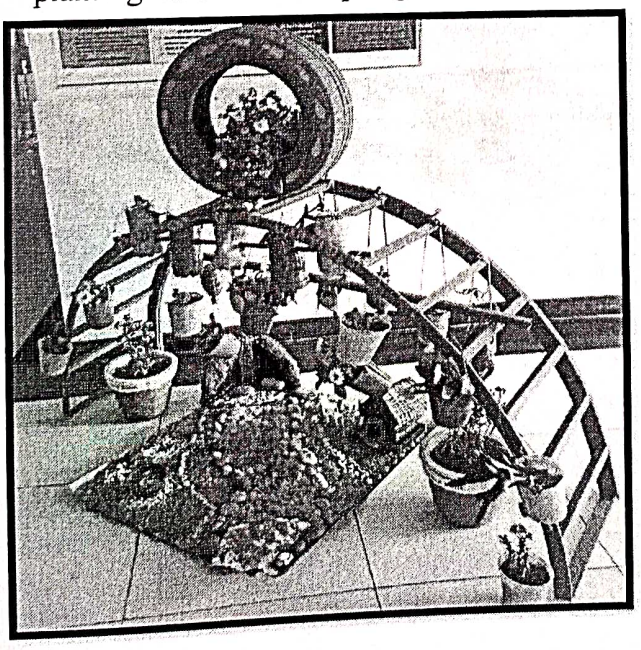
Management of crop Residue/ waste material through Mushrooms production

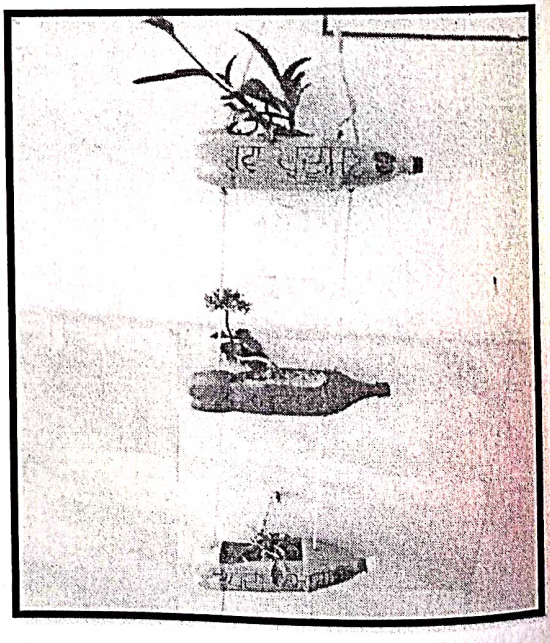
Department of Agriculture organized awareness programme on time to time on crop residue management and also conduct training/ demonstration/ project work by students for Production of Button Mushrooms in the college campus.

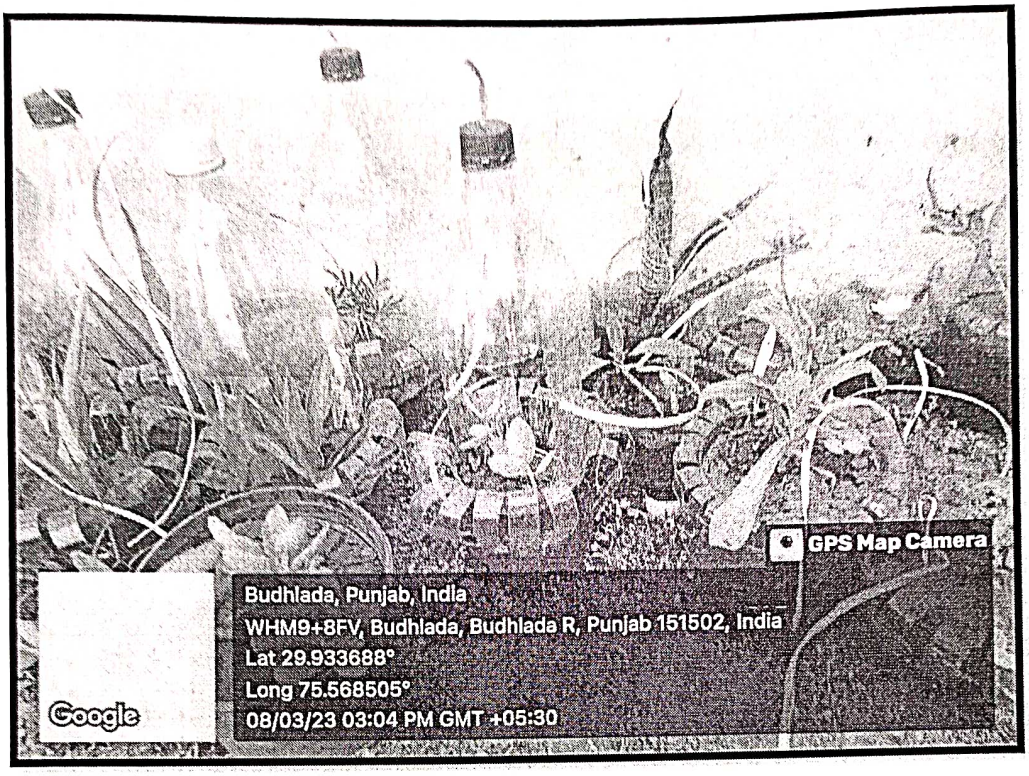


Green wall making by the students

The waste plastic bottles have been collected from the college campus and are being used as the planting base for the saplings.

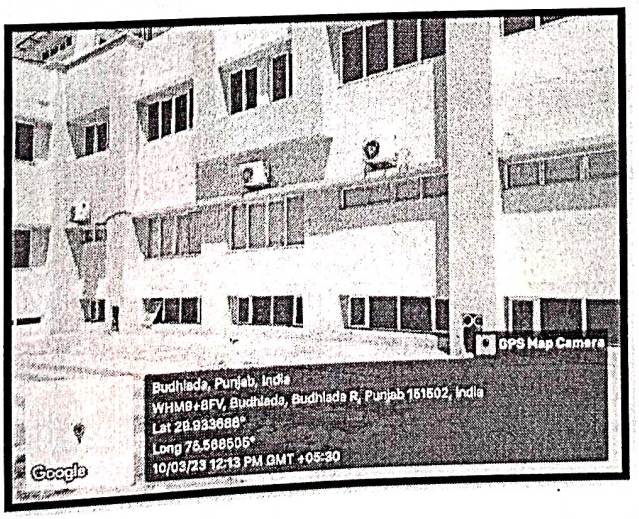


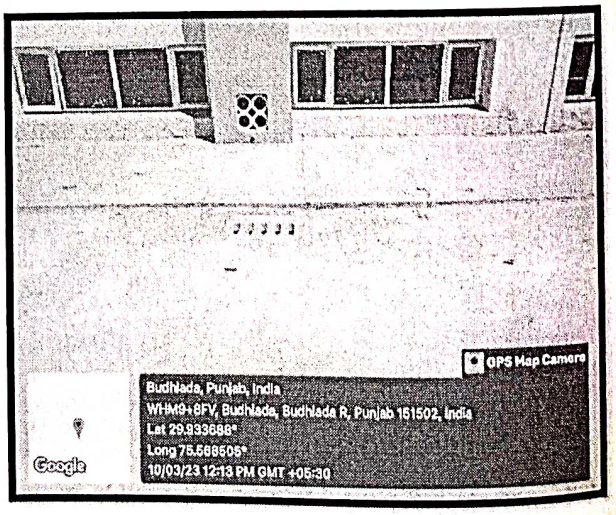




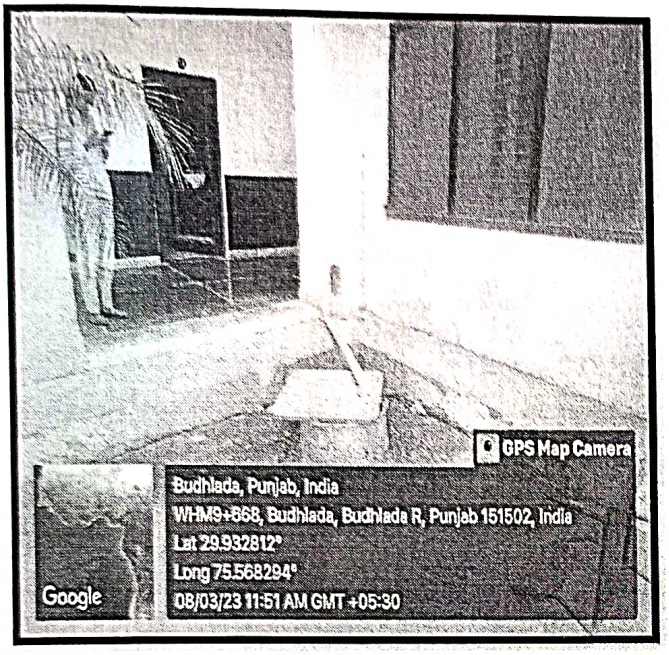
9. Liquid waste management

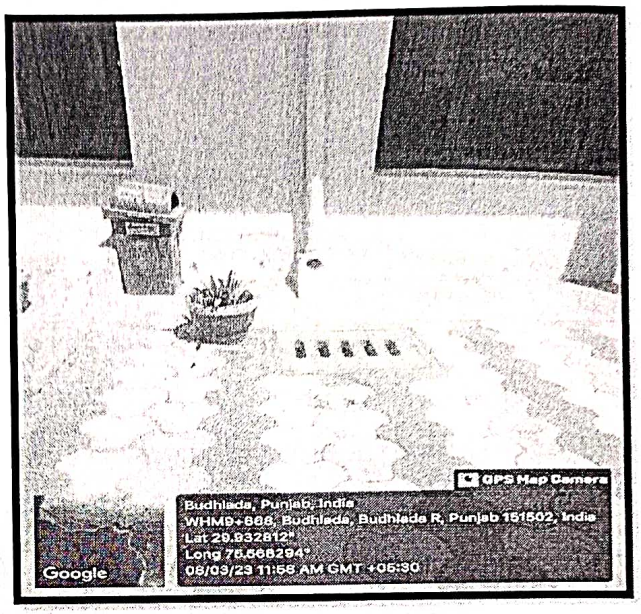
The waste chemicals mixed water from laboratory passes through concealed pipe line into soak pit & recycled water is used for the watering trees or non-potable usage.Liquids are diluted by getting mixed with the washroom and toilet liquid wastes in to the common drainage. Oue College has MOU with MedwasteSolution Pvt Ltd during the pandemic COVID-19 for the maintain then cleanness of campus and recently MOU with Municipal corporation committee Budhlada for the collection of liquid waste material from laboratory.



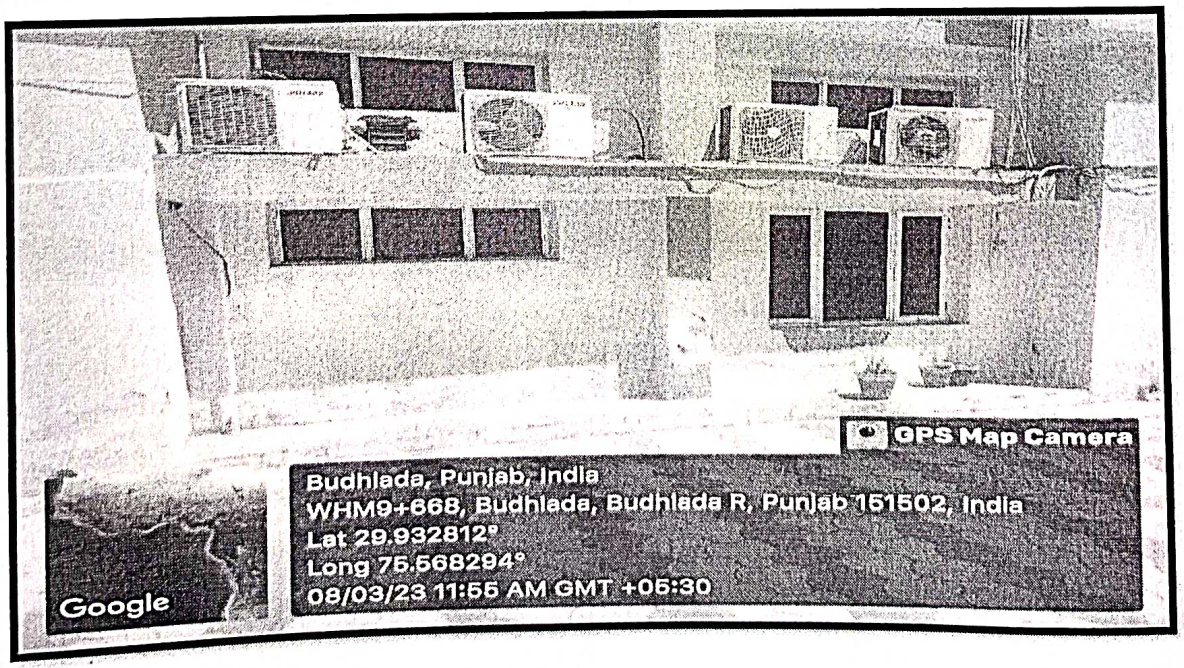


AC water discharge collection



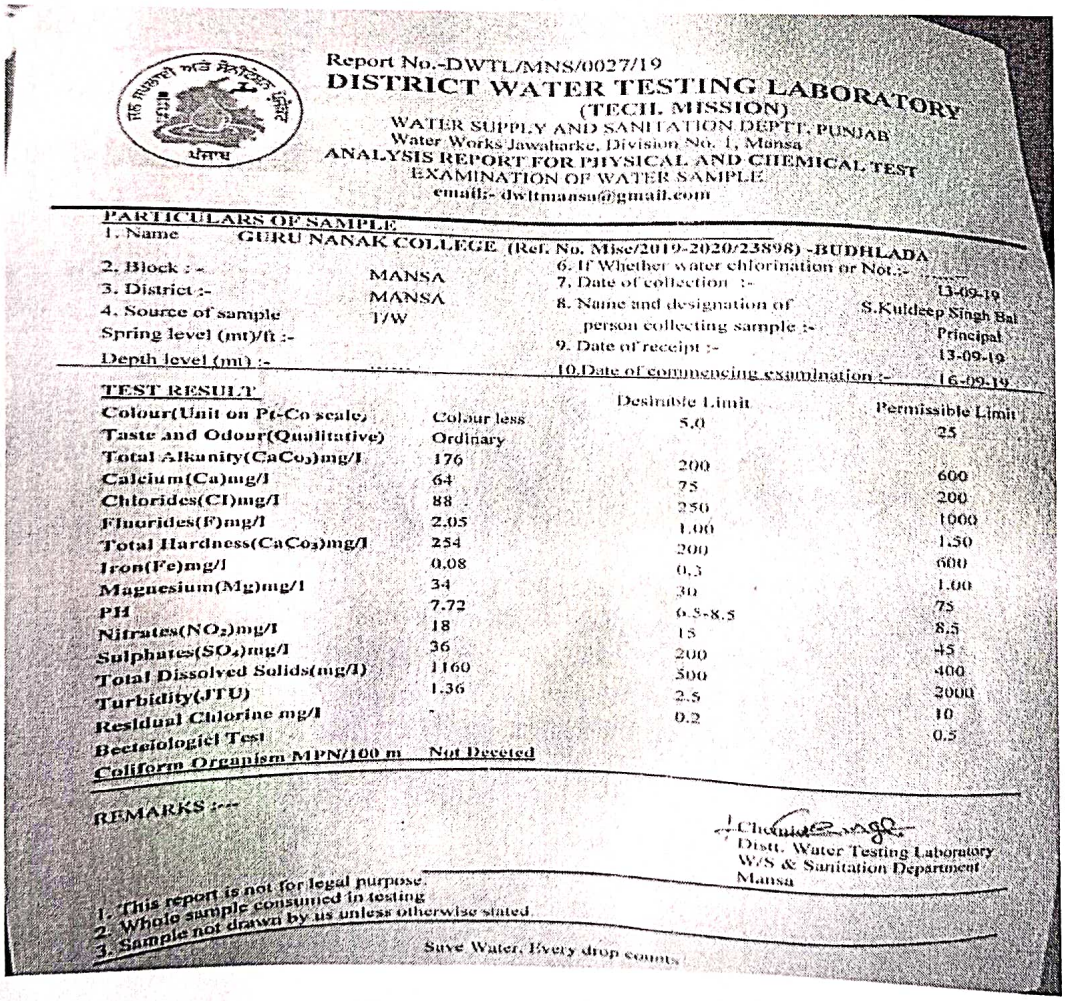


AC discharge collection



10. WATER ANALYSIS REPORT OF GURU NANAK COLLEGE

Water is life. Water quality analysis is important because it identifies pollutants and prevents water-borne diseases. Using contaminated water can result in severe illness. That's why it is important to ensure that drinking water is safe and clean from bacteria and disease. That is why it is important to ensure that drinking water is safe, clean and free from bacteria and disease. The parameters for water quality are determined by the intended use. Work in the area of water quality tends to be focused on water that is treated for human consumption, or in the environment. The following is a list of indicators often measured by situational categories like Alkalinity, Color of water, pH value, Taste and odor (Geosmin,2-Methylisoborneol(MIB),etc.), Dissolved metals and salts (Sodium, Chloride, Potassium, Calcium, Manganese, Magnesium), Micro organisms etc.



Report No.-DWTL/MNS/0027/19

DISTRICT WATER TESTING LABORATORY
(TECH. MISSION)
WATER SUPPLY AND SANITATION DEPTT. PUNJAB
Water Works Jawaharke, Division No. 1, Mansa
ANALYSIS REPORT FOR PHYSICAL AND CHEMICAL TEST
EXAMINATION OF WATER SAMPLE
email:- dwltmansa@gmail.com

PARTICULARS OF SAMPLE

1. Name: GURU NANAK COLLEGE (Ref. No. Misc/2019-2020/23898) -BUDHLADA
2. Block :- MANSA
3. District :- MANSA
4. Source of sample: T/W
Spring level (mt)/ft :-
Depth level (mt) :- .....
6. If Whether water chlorination or Not :- .....
7. Date of collection :- 13-09-19
8. Name and designation of person collecting sample :- S.Kuldeep Singh Bal Principal
9. Date of receipt :- 13-09-19
10. Date of commencing examination :- 16-09-19

TEST RESULT

		Desirable Limit	Permissible Limit
Colour(Unit on Pt-Co scale)	Colour less	5.0	25
Taste and Odour(Qualitative)	Ordinary		
Total Alkanity($CaCo_3$)mg/l	176	200	600
Calcium(Ca)mg/l	64	75	200
Chlorides(Cl)mg/l	88	250	1000
Fluorides(F)mg/l	2.05	1.00	1.50
Total Hardness($CaCo_3$)mg/l	254	200	600
Iron(Fe)mg/l	0.08	0.3	1.00
Magnesium(Mg)mg/l	34	30	75
PH	7.72	6.5-8.5	8.5
Nitrates(NO_3)mg/l	18	15	45
Sulphates(SO_4)mg/l	36	200	400
Total Dissolved Solids(mg/l)	1160	500	2000
Turbidity(JTU)	1.36	2.5	10
Residual Chlorine mg/l	-	0.2	0.5
Bectelologicl Test			
Coliform Organism MPN/100 m	Not Dected		

REMARKS :-

Chemist
Distt. Water Testing Laboratory
W/S & Sanitation Department
Mansa

1. This report is not for legal purpose.
2. Whole sample consumed in testing
3. Sample not drawn by us unless otherwise stated.

Save Water, Every drop counts

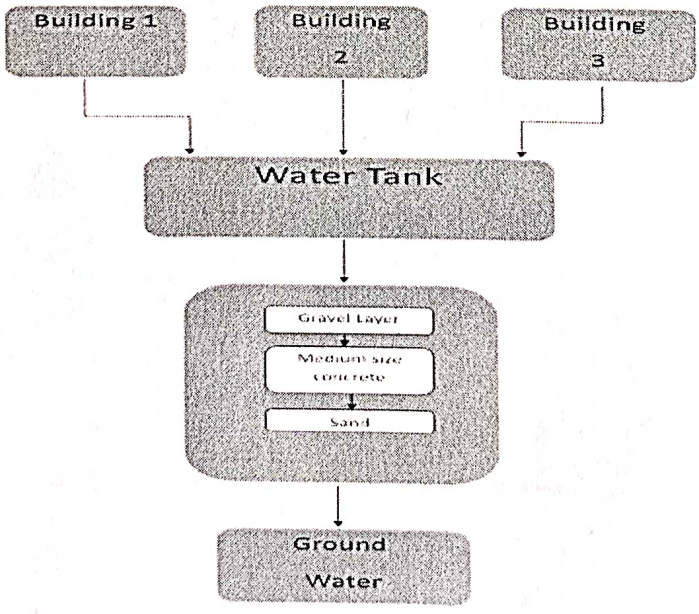
11. Water Conservation at GNC Campus

The college has planned to conserve water at different level by harvesting, reuse and groundwater recharge. As per geographical area this place is received very less amount of av. annual rainfall 300-400 mm. So need and supply of water for the green belt and other uses is main challenges. College area are divided into four major group all area interconnected with proper channel to collect the rainwater for the supplementary uses in green belt and to filter it and direct discharge into groundwater for the recharge of groundwater

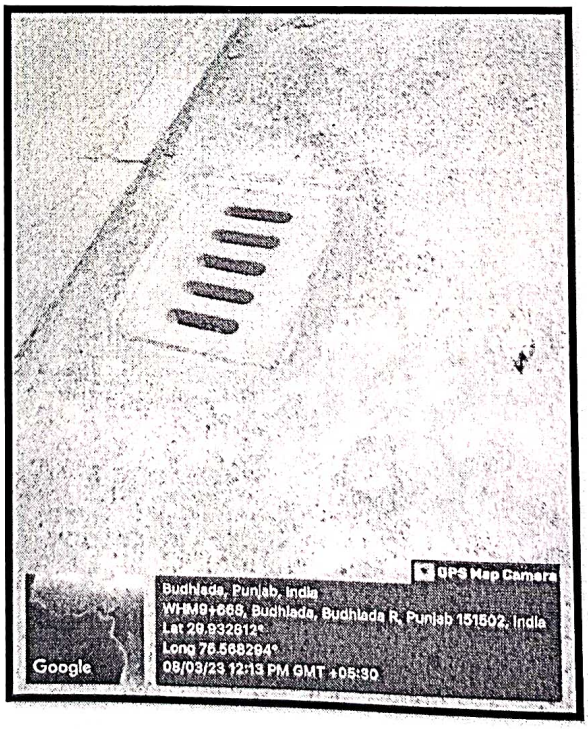
College has very precise facilities to avoid any kind of wastes of water in different way that mentioned below.

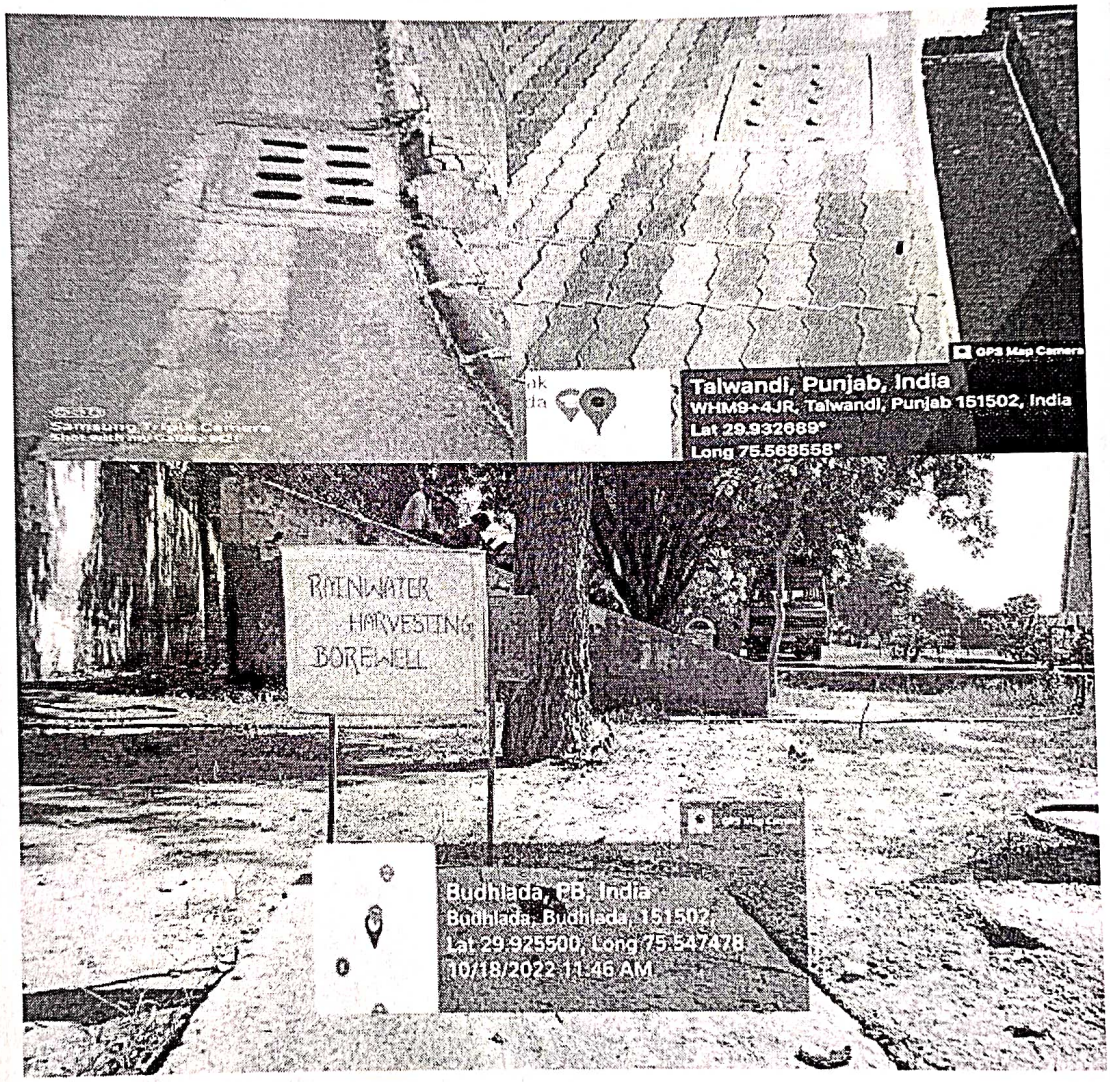
- Rain water collection
- Rainwater harvesting and uses for irrigation of green belt
- Excess amount of harvested water use to filter and recharge of ground water
- College has proper storage tank to supply water as per need only
- Proper GI pipe and polymer pipe for proper circulation water and drip and sprinkler irrigation system to irrigate green belt.
- Department level water conservation awareness practices

Ground Water Harvesting Flow Diagram

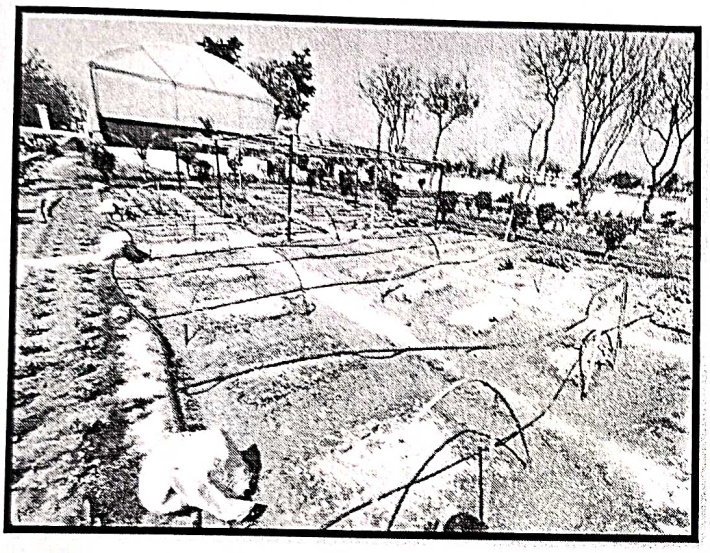


Water drains in Footpaths and Lawns

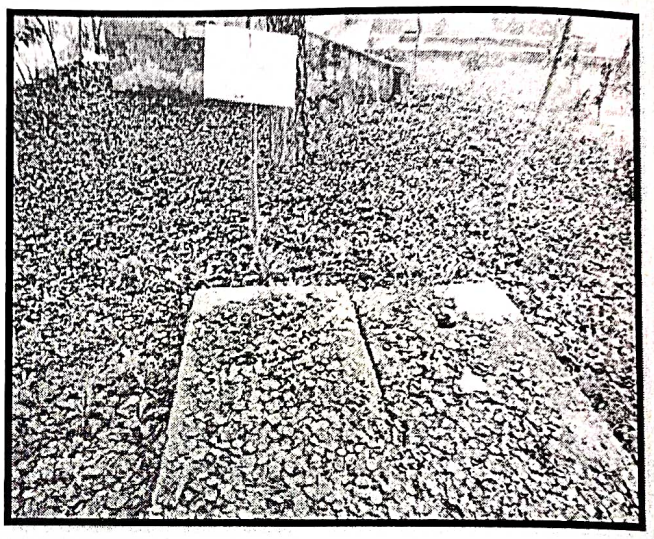




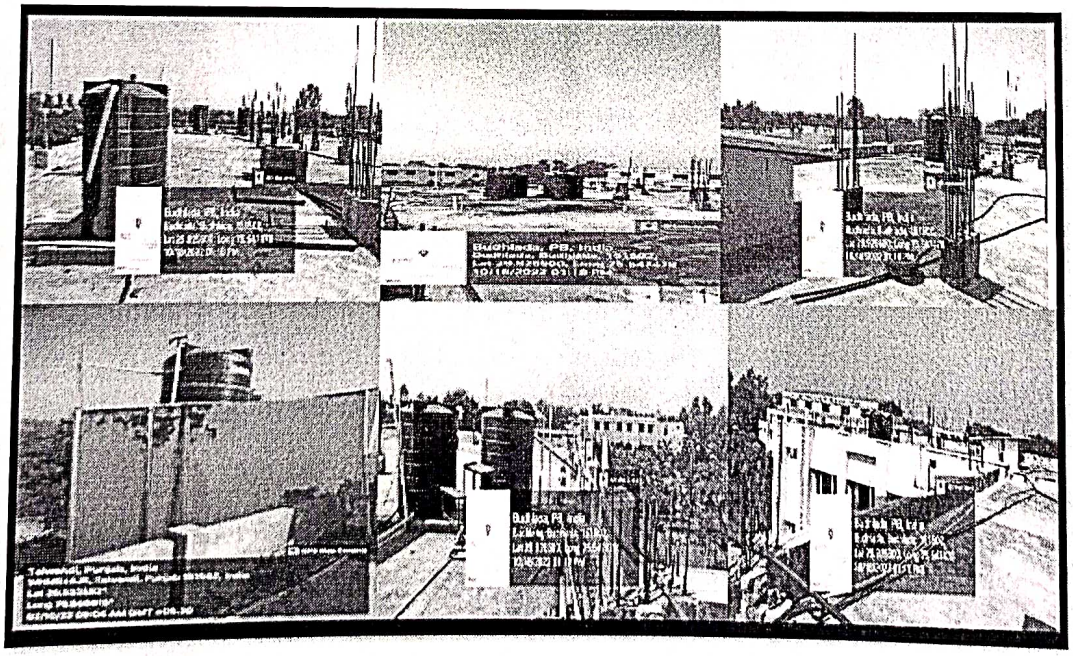
Rain Water Harvesting Borewell at College Campus



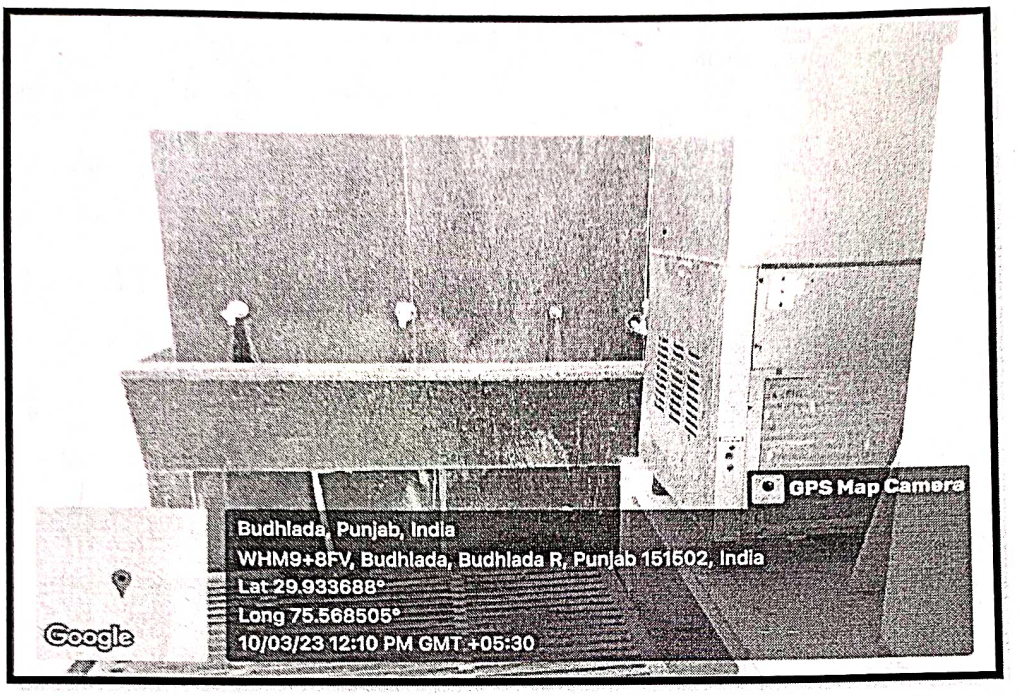
Micro Irrigation system installed in campus



Water Harvesting System



Water storage Tank at College Campus



Drinking Water Facility

12. Energy Resource managements

Electricity Load of Guru Nanak College campus approved by Punjab State Power Corporation Limited (PSPCL) is 229 KW. Average units of energy consumed per month is 12,000- 15,000 to maintain its volumetric activities throughout the year. The average expenditure per month is around Rs 1,15,000 -1,20,000/-. Different measures of the college for efficient power consumption are as follows:

- Most of the PCs and LED screens in the campus have the feature of auto screen off to save electricity.
- The college has been replacing the old filament bulbs, CFL bulbs and tube lights by low energy consuming LED bulbs and LED tubes and bulky high-power consuming fans by energy efficient fans.
- The college has installed solar panel installation is helping offset of the institute's daytime peak electricity demand from the grid. With the installation of solar rooftop at old building, The College is able to offset 50% of its energy usage from the state grid. Thus moving towards a more reliable and greener option and reducing its carbon footprint.
- Underground water pumping motor of power 5 KW, which works for almost 4 hours a day, has an inbuilt feature of auto power cut to save energy and water.
- Outer lighting is completely on solar energy

USE OF LED LIGHTS

LED Lights the LED lights has been installed in Library, Administration Block, Computer Science Block, Conference room and principal office etc

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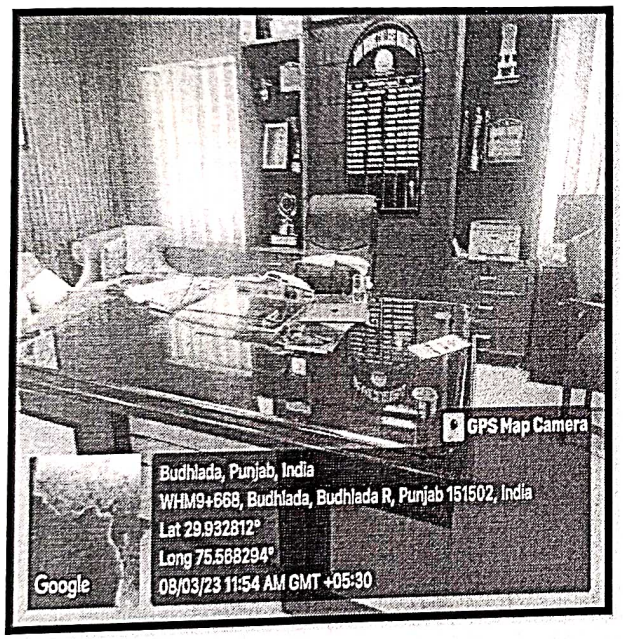


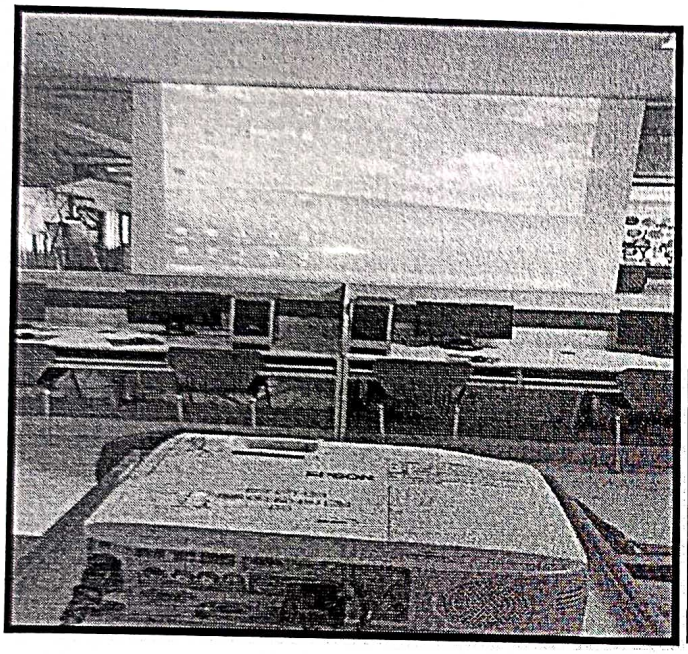
View of Principal Office

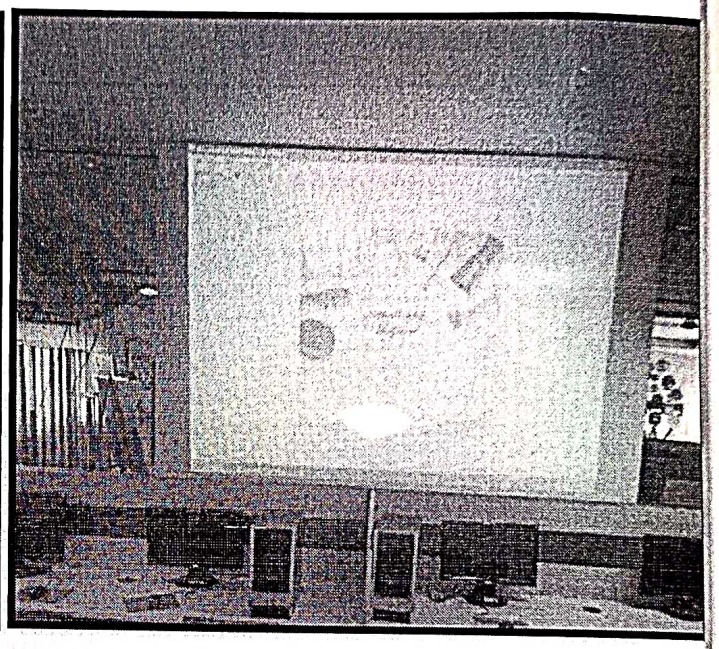
View of Seminar Hall

View of Meeting Hall

POWER EFFICIENT LEDs

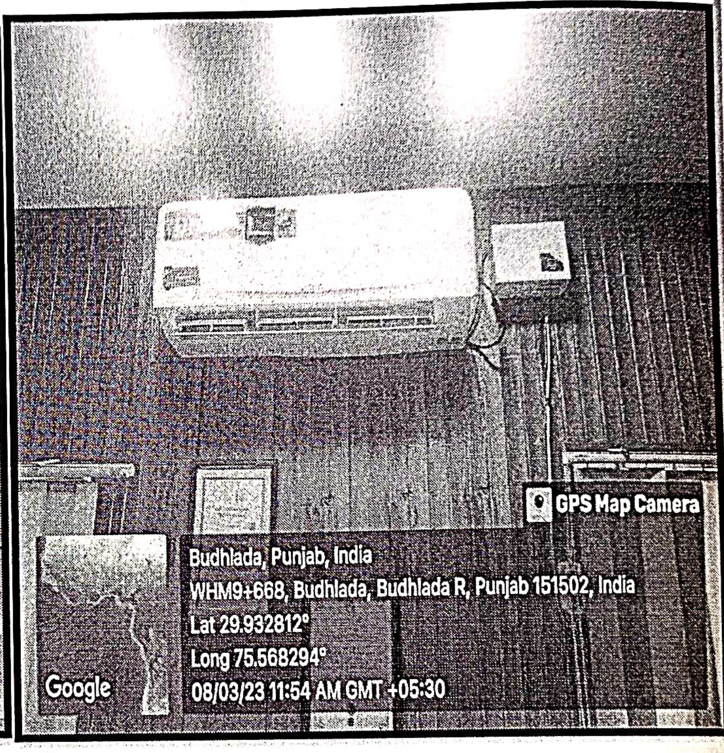
In addition to the computer labs and principal office, energy star rated LED screens have installed in different buildings to display notices or any other information

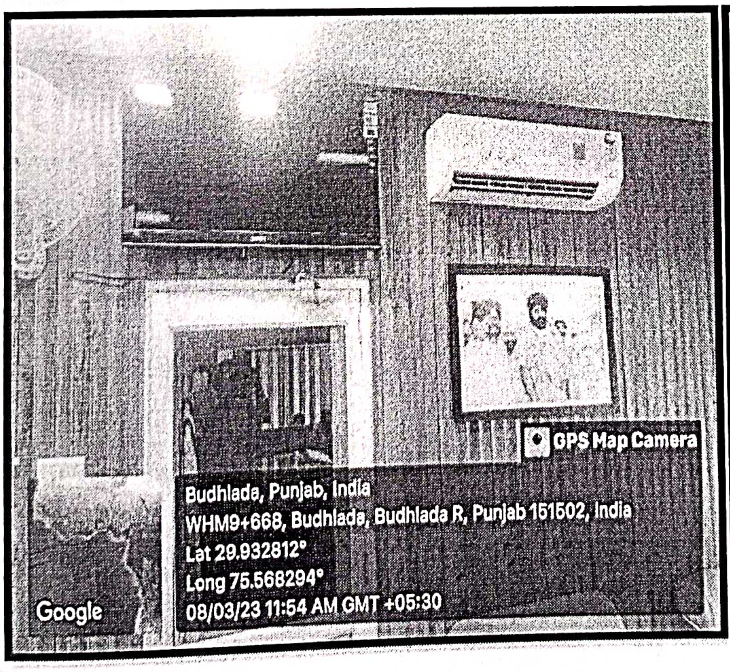


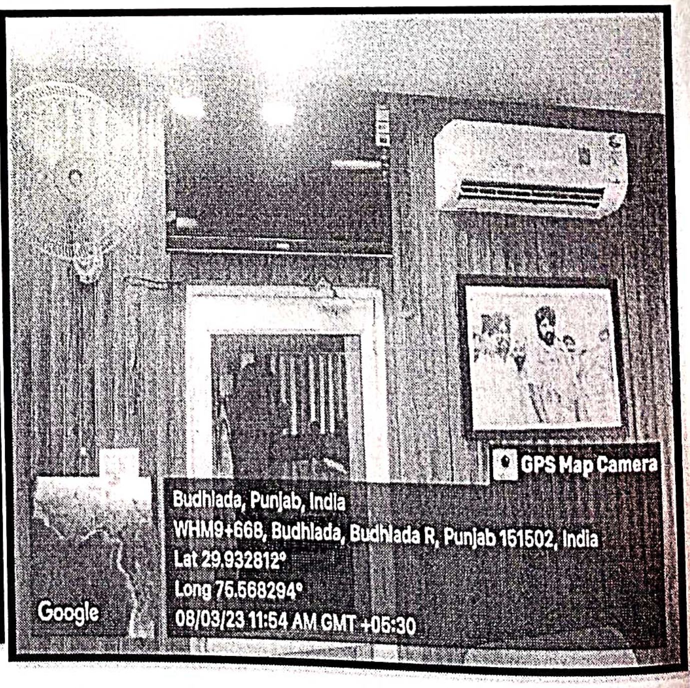


ENERGY STAR CERTIFIED ACs

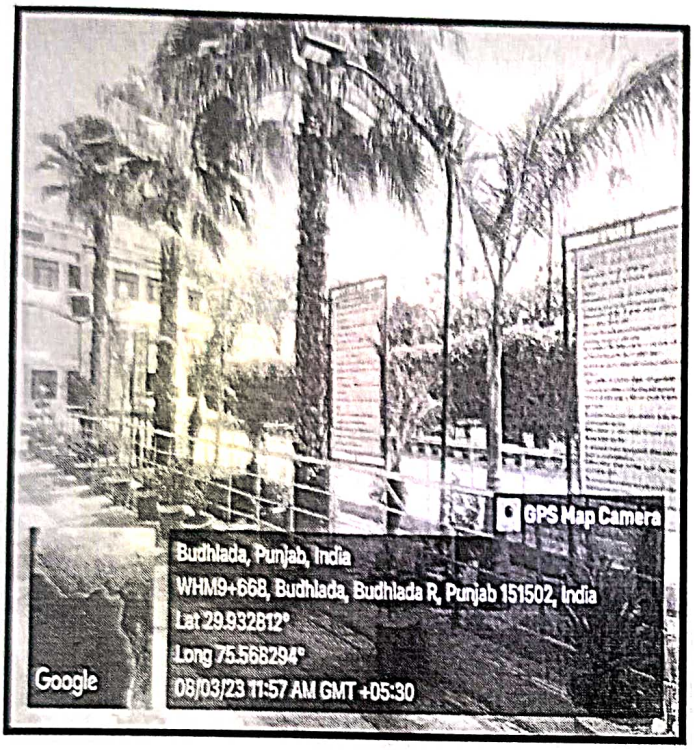
Most of the air conditioners in the college are energy star certified with higher energy efficiency ratio

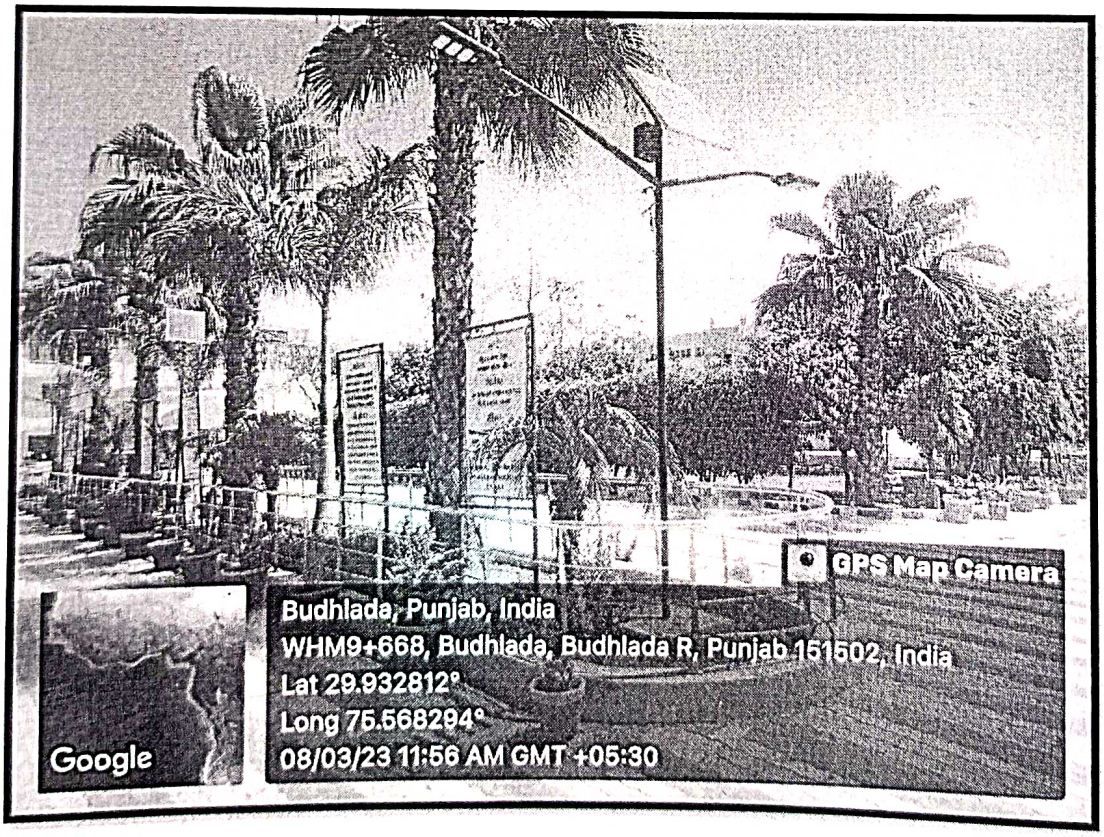






SOLAR LIGHTS IN CAMPUS ROAD





13. Transportation Facility at GNC:

Being a largest campus in the region and located centrally, GNC faculty, staff and studentscommute on their own. The college is dedicated to provide its students and staff all the comfortand convenience to help them to achieve their targets. The students are encouraged to usecycles,two wheelersratherthanfourwheelerswhichleadstofuelsavingandalsothecontributionof pollutants to atmospheres less. College has five own bus for transport facility specially for female students as given below

College Bus and Routes

Sr. No.	Bus No.	Name of Driver	Contact No.	Define route
1	PB-31F 6855	Mr. Amandeep Singh	9815922640	Reondkalan, Gandhukalan, Boha, Rampur Mander,kalipur etc.
2	PB-31 L9157	Jagdeep Singh	8146556247	Phulera,Rattakheda, Daska, Ranghrial, Ralli etc.
3	PB-31 H 9158	Binder Singh	9876269078	Sidhani, Chandpura, Kulrian, Mander, Juglanetc
4	PB-31 H 9159	Hariender Singh	9915259009	Kishangarh, Bareta, Jalwehra, sangreri, govindpuraetc
5	PB-31 H 9160	Jisvir Singh	9464419004	Mansa, Jwaherke, Chakerian, Phaprebhai k, Hasanpur, Gurne etc.

14. College Initiatives for Environment

College has adopted environment conservation and preservation as best practices done last five years.

- College is organized the plantation drives periodically by students and staff of campus.
- Reduction in Air Pollution through vehicular emission
- Biodiversity Conservation Flora and fauna conservation in College campus have lush green campus which provides habitat to various species. Recently conducted bird count reports Indian peafowl, paraqueets, Sunbird, black kite, house crow, Humeswasbler, large billed crow, wood pecker, jungle babler, roofers trrpie, common tailor bird, Eurasian collar dove, oriental magpie Robin, bulbul, Green bee eater, brown headed green barbet, Brahmini Starling, Parocistatus, Indian Robin etc
- 100% recharge of rain water by the harvesting system
- Awareness programme/ workshop/ guest lecture organized by the college on stable burning and waste material management, water saving etc.

15. Summary

Green Audit is one of the important tools to check the balance of natural resources and its judicial use. Green auditing is the process of identifying and determining whether institutional practices are eco-friendly and sustainable. It is a process of regular identification, quantification, documenting, reporting and monitoring of environmentally important components in a specified area. Guru Nanak College, Budhlada has conducted a "Green Audit" in the academic year 2021-2022. The main objective to carry out green audit is to check the green practices followed by GNC and to conduct a well-defined audit report to understand whether the GNC is on the track of sustainable development

16. Conclusion

Formation of Green and Environment Policy and communicated to all From the green audit following are the conclusions, which can be taken for improvement in the campus.

1) All departments generate paper waste. Especially, academic building is using more one paper for printing and writing is good practices.

2) Food waste generated in campus is mostly from is collected from dining areas. The food waste is diverted to nearby farm

3) E- waste are segregated, handled and disposed properly in an eco-friendly manner.

4) Reducing the use of one-time use plastic bottles, cups, folders, pens, bouquets, decorative items will be useful to solve the problem of plastic pollution to some extent.

6) Rainwater is collected from rooftop to recharge the ground water level table

17. Recommendation

Following are some of the key recommendations for improving campus environment:

- Increase in Environmental promotional activities for spreading awareness at campus.
- As practically feasible avoid use of personal vehicles inside the campus.
- Reduction in use of paper work by go digital system.
- Water Meter should be installed at institute for monitoring of water consumption for landscape.
- The solid waste should be reused or recycled at maximum possible places.
- Water monitoring need to be conducted by Punjab state Pollution Control Committee approved laboratory with frequency of every year month.
- A frequent visit should be conducted to ensure that the generated waste is measured, monitored and recorded regularly and information should be made available to administration

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GURU NANAK COLLEGE BUDHLADA, District Mansa, Punjab-151502

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Principal
Guru Nanak College
Budhlada, Distt. Mansa