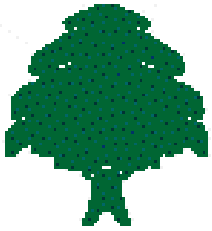
POST GRADUATE GOVERNMENT COLLEGE FOR GIRLS
SECTOR-11, CHANDIGARH

NAAC Accredited 'A' Grade with CGPA 3.52



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CRITERION: 7- Institutional Values and Best Practices

Metric No. 7.1.3

INDEX

EnergyAuditReport 2022

POST GRADUATE GOVERNMENT COLLEGE FOR GIRLS, SECTOR-11, CHANDIGARH

1. Background

The Post Graduate Government College for Girls, Sector-11, Chandigarh has campus area sprawling in 34.93 acre. .

(i) The campus has one main line of 11 KV is source of electricity in the building.

(ii)The management has planned for the improvement in power efficiency and has shown improvement in the electricity bill.

(iii) The building has installed 495 KWP Solar Photovoltaic grid System for in-house green energy generation which is catering the lighting conventional electricity load.The system is maintained properly and cell cleaning is also done to maintain the higher generation.

(v) Under the process of retro-fitting, LED lights are installed in the building to reduce the energy consumption and it is observed that the energy consumption has reduced compared to the relevant years.

(v)For future management is purchasing the LED lights, Energy Efficient AC units etc. as replacement of the existing low efficient installations.

(vi) The log books of all blocks are maintained regarding the conservation protocols..

(vii)The awareness of all staff about the installed equipment and detailing is good.

*2.*Objective

Audit is mainly an examination of the present state of environment footprint and impact of the College. Green auditing is a process whereby an organization‘s environmental performance is tested against its environmental policies. Since the institute does not have a documented environment policy or environment management system in place and green audit is being conducted for the first time, so accordingly we have defined the scope and objective of the current green audit as below:

1. To review on a basic level, the activities and operations of the College and identify main sources of resource utilization, and their environmental impacts.
2. Understand the sustainability related initiatives undertaken.
3. Identify the gaps, best practices or initiatives undertaken by the college to maximize energy saving.
4.As part of the audit report-share audit observations and findings along with suggestions and recommendations for the future

3. Electricity Bill Analysis

Table 1: Monthly Electricity Bill –During first Phase of Installation

Expenditure on Electricity Charges for last 5 bills before installation of Solar Panel		Expenditure on Electricity Charges for last 5 bills before installation of Solar Panel	
Date	Amount	Date	Amount
21.06.2013-21.08.2013	5,58,295.00	21.06.2014-21.08.2014	5,40,260.00

22.08.2013-21.10.2013	14,47,178.00	22.08.2014-21.10.2014	5,96,518.00
22.10.2013-21.12.2013	10,35,992.00	22.10.2014-21.12.2014	5,03,531.00
22.12.2013-21.02.2014	3,39,429.00	22.12.2014-21.02.2015	4,17,135.00
22.02.2014 -21.04.2014	6,36,189.00	22.02.2015 -21.04.2015	4,48,532.00
TOTAL	4,017,083.00		2,505,976.00

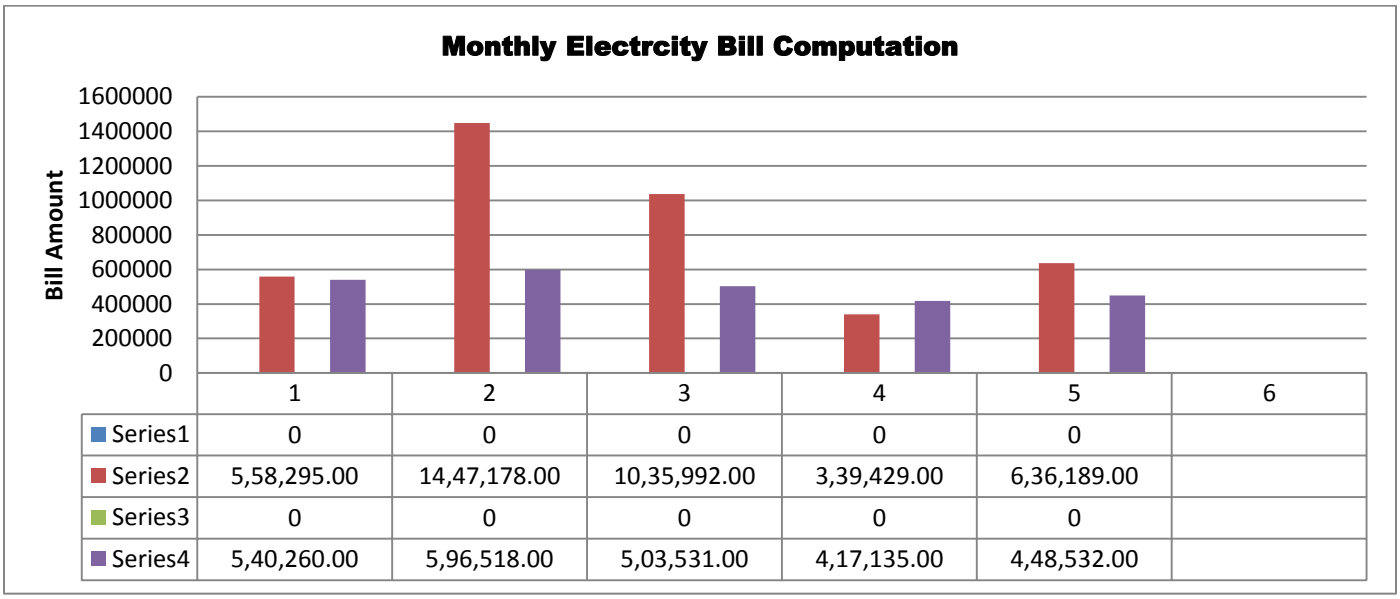


Fig.2: Compilation and Computation of Bill of 2013-2014(in Red) and 2014-2015(in Blue)

Table 2: Monthly Electricity Bill –Before and After Solar Panel Installation

Expenditure on Electricity Charges for last 5 bills before installation of Solar Panel		Expenditure on Electricity Charges for last 5 bills before installation of Solar Panel	
Date	Amount	Date	Amount
21.06.2013-21.08.2013	5,58,295.00	21.06.2021-21.08.2021	**189262.00**
22.08.2013-21.10.2013	14,47,178.00	22.08.2021-21.10.2021	**744,116.00**
22.10.2013-21.12.2013	10,35,992.00	22.10.2021-21.12.2021	**539,586.00**
22.12.2013-21.02.2014	3,39,429.00	22.12.2021-21.02.2022	**361,516.00**
22.02.2014 -21.04.2014	6,36,189.00	22.02.2022-21.04.2022	**531,826.00**
TOTAL	4,017,083.00		**2,366,306.00**

The major outcome of the bill analysis are as below:

A solar roof top system is the investment that appreciate with time as there is constant increase in savings and every unit of solar energy helps prevent 0.7 kg of carbon dioxide emission. Installing I KWp solar roof top plant is thus equivalent to planting two trees in terms of carbon Sequestration .A solar energy plant installed in April1, 2014 with capacity 495 KWp in Post Graduate Government College for Girls, Sector-11, Chandigarh, providing the benefit of 60 thousand units and the comparative electricity bills for 10months before and after the installation of solar panel(June 2013 to April 2014 and June 2021-April 2022;Table1) reduce the electricity usage by 41.09 % , saving42 metric ton carbon dioxide, generating 42 carbon credits

4. Energy Efficiency measures:

(i)Data Collection

All the data of active instruments and their year of manufacture in tabulated form, so assessment will be done about their efficiency.

Table 1.Compilation of Energy Data for Energy Auditing

Type	Wattage	Hourly Electricity Consumption	Daily Electricity consumption	Yearly Consumption	Amount in Rupee (Approx.Rs6/unit)	Carbon Footprint (kg of CO_2) Annually
Regular Fan	75 watt	7.5 hrs.	0.075x7.5=0.563	205 units	1231.87	143.5
Tube Light	40 watt	6hrs	0.24 unit/day	87.6 units	525.60	61.32

Total Number of Fans in Class Rooms in Campus: 250; Total units Generated: 205x 250=51,250 units worth approximately 3 lakhs and Total Number of Tubes in Class Rooms in Campus: 220; Total units Generated: 205x 220=45,100 units worth approximately 2.70 lakhs annually

Table 2.ENERGY AUDITING(SESSION:2020-21

Data of Electrical and Electronic Equipment

Department	AC	Refrigerator	Computer and its peripherals/ Laptop	Heater	Micro wave	Water Dispenser	Water Purifier /Water Cooler	Laboratory Equipment's(Chimney/Electric Iron//Fashion maker/Electric Toaster/food processor/Electric Tandoor/OTG/Mixer /Rice cooker/Music System/Electric Oven)	Electric Kettle	Printer
Botany	01 2017-2018	03 2019	Computer(01;) Scanner(01; 2011)	01 2008	O1 2010-2011	01	-	Electric Oven(02;200;2019)	-	01
Geography	01 2016	01 2019	Desk Top(02;2013-14)	01	01 2010	01	-	-	-	01

Hindi	01	- NF	01	01	01	-	-	-	-	-
Home Science	01 2007	01 2012	01 2006	-	01 2003	01 2020	01 2012	Chimney(01;2011) Electric Iron(01;2012) Fashion maker(02;2003,2017) Electric Toaster (01;2007) Food Processor(01;2011) Electric Tandoor(01;2007) OTG(01;2007) Mixer(01;2007) Rice cooker(01;2007)	01 2012	01 2019
Political Science	01	01	01	01	01	-	-	-	01	01
Physica	03		19	01	01					01
Psychology	02 (i)Hitachi(2011) (ii)Mitsubi shi (2017)	01 2008	01 2007		01 2010	-	-	-	-	-
Punjabi	01	01	- NF	01	01	01		-	01	01
Sanskrit,Phil osphy and French	01	01	03	03	01	-	-	-	02	03
Sociology	04 01(Staff Room) 03(Room No.210)	01	01 (2013-2014)	01	-	01	-	-	01	-
Department of Computer Application	Window AC-14 (i)1.5 ton(5;2007) (ii)2 ton(9;2007) Split AC-2 i)1.5 ton(2;2012 -13)		101 ((i)Wipro(30 ;2008) (ii)HP(30;20 12) (III)Desk top(21:2015) (iv)Lenovo(20;2018) Laptop(01;2 010-11)			03 2007	Water Cooler (02;201 1)	-		01(H P Lase r jet20 19) 01(H P Lase r jet20 06)
Department of Public	01 2018-19	01	01 Monitor:201	01	01	-	-	-	01	01

Administration			**3-14 CPU:2019**	**2007**					**2019**	**2020-21**
Music (Instrumental)	**-**	**01 Yes**	**01 Yes**		**01 Yes**	**01 Yes**	**-**	**Music System(Yes)**		

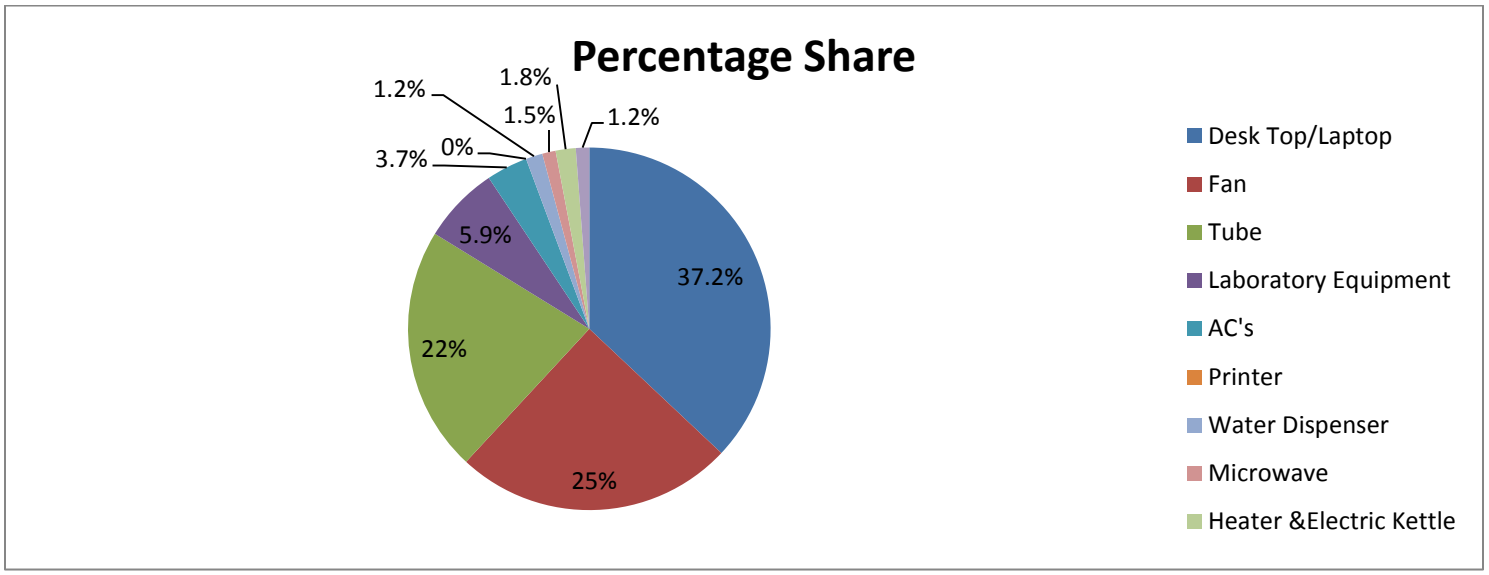


Fig1.Energy Data compilation

The pie chart helps in compilation and computation of data in survey analysis to get retrofitting in order to have building resilience in energy conservation (Fig.1).The trend to modify the existing structure of buildings with retrofitting in terms of energy efficiency and load equipment has shifted to a new paradigm of energy conservation.It was proved that significant energy cost savings can be achieved through integrated energy auditing in the building energy supply sources with emphasis on the full utilization of solar energy and optimization of the operation of electrical storage. In this direction, the college electrical auditing protocol have integrated students in regularly monitoring the lights,fans,computers,ACs are switched off when not in use as a "Students Light Patrol" in every department to check empty classrooms,laboratories and other spaces to make sure the lights have been turned off when they're not in use.A student energy patrol is to streamline the input process. The inputs done by student light patrol to conserve the energy are;

- Turn off and unplug all appliances(cell phone,Laptop/DeskTop) while not in use and fully charged.
- Keep your electronics on a low brightness setting to save energy
- Turn off lights and AC when you leave a classroom/office room/staff room
- During the day, maximize natural daylight by using natural light instead of overhead or fluorescent lights. Turning off one fluorescent light for an hour a day can save 30 kg of carbon dioxide emissions per year
- Shut down computers or use the "sleep" setting when not in use.
- Turning off screens and monitors when you're done using them.
- Making sure that computers shut down completely at the end of the day
- Check the thermostats for potential energy saving adjustments. Setting the heat for 68 °F (20 °C) degrees in the colder months and 78 °F (26°C) degrees for cooling in the warmer months can significantly reduce energy costs. Check the thermostat in your office/Department/staff room to see if these settings have already been applied.

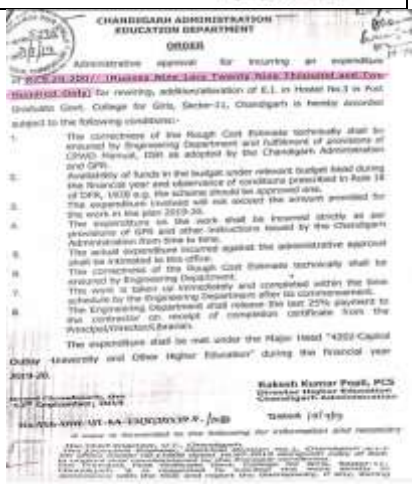
(ii)In order to create awareness in the students, the college has conducted survey **"ENERGY SAVING AWARENESS QUESTIONNAIRE**" on APRIL 09-30, 2022,which comprises of 14 questions on energy sustainability and the mitigation of carbon footprints. The students both day scholars and hostellers participated in the survey and total of 436 students participated (link enclosed).

https://docs.google.com/forms/d/e/1FAIpQLSeSMN_4Cmfy-zRUmrogIFo_ITSzgXUfDYNYUVr1ToDDZgXTmA/viewform?usp=pp_url

5. Recommendation of Energy Retrofitting

Retrofitting is the addition of new technology to already existing system in order to improve the energy efficiency and to achieve the de-carbonization target in line with the United Nations Framework Convention on Climate change.

S. No	Energy Retrofitting	Year	Vide Letter No.	Budget (Rs)	Status	Proof
1	Replacement of old flood light & street light fitting in the campus	2017 - 2018	69-DHE-UT-A4-23(4)2012/137;dated:5.3.18	11,24,400 /-	Completed	
2.	Replacement of old light fittings with LED fittings in class rooms, Toilets	2017 - 2018	102-DHE-UT--A4-23(12)2010-III/201;dated:16.3.18	11,24,400 /-	Completed	
3.	Replacement of Floodlights,1x40w Tube lights with LED lights and Exhaust fans in Hostel 2	2018 - 2019	360-DHE-A4-23(8)2012/137;dated:30.8.18	1,47,200/ -	Completed	

4.	Replacement of old ceiling fans & fittings with New ceiling fans and LED fitting	2018 - 2019	563-DHE-A4-23(44)2013/347;dated:9.1.19	7,58,200/-	Completed	
5.	Replacement of old flood lights with LED flood lights at Gate	2018 - 2019	59-DHE-A4-23(2)2019/ 172 ; dated:25.2.19	82,700/-	Completed	
6.	Rewiring&Renovation of college canteen and kitchen area	2018 - 2019	606-DHE-A4-23(2)2019/ 124 ; dated:25.2.19	3,03,100/-	Completed	
7.	Rewiring&Renovation /alteration of EI in Hostel 3	2019 - 2020	456-DHE-A4-23(8)2012PF/ 1088; dated:17.9.19	9,29,200/--	Completed	

8.	Replacement of Aluminium wore with copper wire & Defunct 2x40w tube-light and ceiling fans in Home Science Lab	2021 - 2022	DHE-A4-23(8)2012PF/ 935; dated:11.3.22	1,96,400/ -	Completed	
9.	Replacement of CFL fittings with 2x2' LED fittings in Principal office and Administration block	2022	456-DHE-A4-23(8)2012PF/ 1088; dated:17.9.19	4,50,300/ --	Completed	

In conclusion ,the T- 5 tube(40W) lights was replaced with the energy efficient 20W LED lights. The LED lights give better lux level and reduce energy consumption by 100%. The copper wire replacing aluminium wiring decreased energy loss, hence increases energy efficiency

5. Solar Energy

A grid connection photovoltaic (mono crystalline Silicon Solar PV) power system of 495 kV, which consists of solar panels, conditioning unit and grid connection equipment. When conversely, onsite energy generation exceeds the building energy requirements, due to energy storage cost limitations the surplus energy was off sets, hence, the grid connection is necessary to enable the Net Zero Energy balance

A Solar Energy Plant installed in Post Graduate Government College for Girls, Sector-11, Chandigarh, with a **capacity of 495KWP SPV**.

- Location of Solar Panels:

1. Administrative Block
2. Auditorium Block
3. BCA Block
4. Physics and Zoology Block
5. Music, Sociology, Psychology Block
6. Political Science, Botany and Geography Block
7. New Block (BCA, Mathematics, Hindi, Punjabi Departments)
8. Chemistry and History Block
9. English and Home Science Block
10. Dance Department Block
11. Physical Education Block
12. Hostel no 1, 2, 3
13. Canteen

The sun is a major source of inexhaustible free energy (i.e., solarenergy) for the planet Earth. Currently, new technologies are beingemployed to generate electricity from harvested solar energy. Theseapproaches have already been proven and are widely practicedthroughout the world as renewable alternatives to conventional

non-hydro technologies.The sun is a major source of inexhaustible free energy (i.e., solar energy) for the planet Earth. Currently, new technologies are being employed to generate electricity from harvested solar energy. Solar energy is one of the best options to meet future energy demand since it is superior in terms of availability, cost effectiveness, accessibility, capacity, and efficiency compared to other renewable energy sources. Solar energy is considered to be a non-polluting, reliable, and clean source of energy. Unlike other energy sources, its use is not accompanied by the release of harmful gases (e.g.,oxides of C/N/S and/or volatile organic compounds (VOCs) and particles (e.g., soot, carbon black, metals, and particulate matter (PM). Such fossil fuel emissions from gas-fired power plants have been indicted with regard to causing neurological damage, heart attacks, breathing problems, cancer, etc. The development of novel solar power technologies is considered to be one of many key solutions toward fulfilling a worldwide increasing demand for energy. A rapid decline in solar technology costs in recent years, the overall costs to generate solar power still remain high. Incentives and rebates which are crucial for the development of the solar energy market are making it apparent that innovative approaches are still necessary to reduce the fiscal burden of various policy incentives. However, the solar industry should focus more on the quality and development of its technology. India comes under Tropical Climatic Zone that is why here a huge solar energy potential is available throughout the year.

Solar Lights:

Solar lights,a renewable energy, is an eco-friendly, cost effective, low maintenance, self-sufficient and a green alternative to the conventional energy. Solar lighting help in reducing the carbon footprint created with the utilization of non-renewable energy. Hence solar lighting systems pave way for a sustainable future and can significantly help in erasing the problems of energy crisis.

GreenAuditReport 2022

POST GRADUATE GOVERNMENT COLLEGE FOR GIRLS, SECTOR-11, CHANDIGARH

Post Graduate Government College for Girls, Sector-11, Chandigarh

Solid Waste management in the college campus has been assessed by external and internal committee and a report has been generated to study environmental impact of institution and to fulfil the requirement for the Green Audit.

The solid waste auditing in the college and steps taken by institution to manage the solid waste has been found to be satisfactory.

Date of Analysis: 2019-2022

Signature
Full Name: Dr Vishal Sharma
Designation: Associate Professor
PGGCG-11. Chandigarh
Incharge of the Botany Deptt.
Govt. College for Girls
Sector-11, Chandigarh

Chander Mohan
Chander Mohan, C.S.I, M.O.H, M.C.C.
Mob: 9872541264
Signature
Full Name: Sh. Chander Mohan
Designation: C.S.I, M.O.H
Municipal Corporation, Chandigarh

Principal
Post Graduate Government College for Girls,
Sector-11, Chandigarh
Principal Post Graduate Govt. College for Girls
Sector 11, Chandigarh

Post Graduate Government College for Girls, Sector-11, Chandigarh

Floral diversity in the college campus has been assessed by external and internal committee and a report has been generated to study environmental impact of institution and to fulfil the requirement for the Green Audit.

The floral diversity in the college and steps taken by institution to conserve the floral diversity has been found to be satisfactory.

Date of Analysis:

Signature
Full Name; Dr Vishal Sharma
Designation: Associate Professor
PGGCG-11, Chandigarh

Incharge of the Botany Deptt.
Govt. College for Girls
Sector-11, Chandigarh

Signature
Full Name: Prof. Promila Pathak
Designation: Professor &Chairperson
Botany Department, Panjab University, CHD

Chairperson
Botany Department
P.U. Chandigarh

Principal
Post Graduate Government College for Girls,
Sector-11, Chandigarh

Principal
Post Graduate Govt. College for Girls
Sector 11, Chandigarh

Report of Post Graduate Government College for Girls-11,Chandigarh

About Institution

Ever since its inception in 1956, Post Graduate Government College for Girls, Sector 11,Chandigarh has established incredible traditions and legacies by shaping young, impressionable minds, and nurturing them as discerning individuals and empowered nation builders. The intellectual treasure is supplemented with highly qualified and dedicated academic family, state of the art infrastructure, well-equipped labs, well-stocked library, value-added amenities and periodic launch of innovative and job-oriented courses. We promise 'going beyond the classroom' approach, cultivating a spirit of 'giving back to the society', and garnering the young women for multi-faceted holistic development.Our record of brilliance is reflected from the assessments and acknowledgements by various authorities - selection under Unnat Bharat Abhiyan by the MHRD, Govt. of India; provisions of grants under DST-FIST; award of Three Star Status to the Institution Innovation Council; selection by the Department of Industries, Chandigarh Administration to conduct Entrepreneurship Development Program;winning the Overall trophy in the Panjab University Zonal Youth and Heritage Festival for the ninth consecutive year; Best NSS Unit Award by Panjab University ; Best Environment Society Award by the Chandigarh Administration; "Eat Right Campus" certification by FSSAI with Bain-marie, simplest technique where food being heated with hot water to preserve nutrients during reheating.; signing of MOU with prestigious institutions for providing 'hands on' training to students and enhancing applied research, or selection of faculty members and PG students by CIBioD, Centre for Innovation and Bio-design, PGI Chandigarh for internship to work on innovation and multidisciplinary research; our impeccability spans all platforms. Recently, the Chandigarh MC conducted Swachh ward survey on basis of indicators such a waste segregation, adoption of composting, principles for sustainable zero waste micro-climate.PGGG-11,Chandigarh, adjudged Rank 1 with highest Score (95.5%) in all categories of 35 wards of Chandigarh.

In view of the NAAC circular regarding Green Auditing, the college management decided to conduct internal Green Auditing for which the Green Audit Committee was reconstituted on 04.08.2022.

The members of the Green Audit Committee are mentioned below:

Chairperson: Prof. (Dr.) Anita Kaushal, Principal, Post Graduate Government College for Girls, Sector-11, Chandigarh

Member: Mr. Ajay Kumar Sharma, Dean and Chief Coordinator, Post Graduate Government College for Girls, Sector-11, Chandigarh

Member: Dr Sadhana Verma, Head of Department, Chemistry and Incharge Environment Society

Member: Dr Umesh Bharti,Head of Department, Zoology

Member; Dr Vishal Sharma,Head of Department, Botany

Member: Dr Parul Virk, Department of Environment Science

The institution has policy for the campus micro-climatic eco-restoration and out of the many committees of the institution, 10 are primarily involved with the sustainability of the campus environment (Table 1).

Table-1. Environment related Committees

S.No	Name of Committee	Date
1	Rain water Harvesting Committee	16.11.2005
2	Environment Committee	24.09.2010
3	Green Audit Committee	10.2.2018
4	Floriculture and Landscaping Committee	04.08.2012
5	Renewable Energy Committee	22.08.2012
6	Campus Hygiene Committee(Eat Right Campus)	14.03.2018
7	Cleanliness Committee	12.09.2018
8	Solid Waste Management Committee	19.03.2019
9	Swachhta Committee(Waste segregation)	22.01.2020
10	Plastic free Campus Committee	10.02.2021

The institution has undertaken various environmental activities to achieve the aim of 'Zero waste campus'. The student oriented environment related activities are:

(i)**Cleanathon Report**

Postgraduate Government College for Girls-11, Chandigarh, a NAAC accredited Grade 'A', with CGPA 3.52, organized a cleanliness and fumigation drive in the sprawling campus of 42.6 acres on November1-5,2022.The college stands to the fundamentals of prosperity with cleanliness and nurturing the young girls' minds, who are about to set their feet in the world scenario with value based education regarding cleanliness and fumigation, its awareness and benefits.

Cleanliness and Fumigation Drive: The five day cleanliness drive (Nov1-5, 2022) called Cleanathon was launched in college, and one day has been enmarked for scheduled activity. The PGGCG-11, winner of 'Best Maintained Campus 'award for consecutively three years(47^{th},48^{th} and Rose festival, Chandigarh(2019-2022) is the cleanest campus in the area. The college organized its first Cleanathon (28.6.20) on the outskirts of the campus including Hostels, Lawns, Class rooms and Botanical Garden in the scheduled manner, which should have a positive ambience for students in the prevailing Malaria-Dengue session. The cleanliness drive is also conducted in which after the classes, the laboratories of science departments are cleaned. The state of cleanliness remains a power indicator and pillar of the campus sustainable environment, as it protects the students from disease and also protects college infrastructure, electrical equipment, instruments from damage (Figs.1-4).The Cleanathon is a social project in which the hostels and the adjoining areas are also cleaned to promote healthy and hygienic surroundings. The fumigation and cleanliness drive creates the infectionless micro-environment, to avoid the infection sneak into the cleaner and safer campus area (Figs.4-8).

Figs.1-4: Fumigation Drive (Nov, 2,2022) to create infectionless micro-climate of campus




Figs.5-8: Sanitation Drive (Nov,1-5,2022) to create infectionless micro-climate in classrooms and Laboratories

Compilation of Data pertaining to Cleanathon procedure in the Campus

S.No	Cleanathon	Date	Remarks
1	First(1^{st})	23-28 June,2020	Cleanliness and Sanitation
2.	Second(2^{nd})	18-23 November,2020	Cleanliness and Sanitation
3.	Third(3^{rd})	23 -28 August,2021	Cleanliness and Sanitation
4.	Fourth(4^{th})	27-31 December,2021	Fumigation and Sanitation Composting
5.	Fifth(5^{th})	20-25 june,2022	Cleanliness and Fumigation
6.	Sixth(6^{th})	1-5 November,2022	Cleanliness and Fumigation

(ii) Colloquium-An intellectual Interaction

Colloquium, an intellectual discussion, is derived from Latin word which means to talk together. The word conveys a conversation that is both structured and informal, a meeting of minds that is both series and spirited and together make the idea of intellectual freedom possible. Colloquium provides an opportunity to share research and constructive feedback and provides freedom to pick a topic that mirrors your interests and to pursue questions that fire your imagination and meeting for discussion. A colloquium is an academic conference, which occurs bi-annually in the first and last quarter of the year, where the distinguished speakers present papers, analyse and discuss a particular topic and students harvest knowledge by listening to the series of lectures. The Colloquium also showcases student research through poster and oral presentations and provides platform to the undergraduates and postgraduates students to share their views and research and improve their diction and presenting skills. The objectives of colloquium are:

(i) The colloquium provides a friendly interface that allows panel members to serve data inputs and monitor the execution study.

(ii) It has an academic excellence with practical relevance.

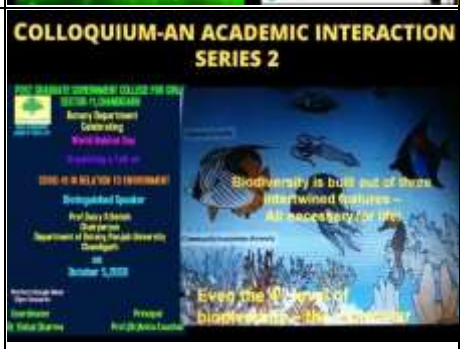
(iii) It aims at students with a diverse array of background, which have deep concern for the challenges arising from rapid climate change and to enhance its sustainability and human wellbeing.

(iv)The Colloquium boosts your network, helping you to develop soft skills, communication and time management.

(v) To introduce students to dedicated researchers and diverse group of scholars representing multiple disciplines.

(vi)To introduce students to a range of challenging assignment, digital power point presentations and archival research.

Schedule of Academic Interactions (Series of Lectures) Under Formative Assessments

S.No	Date	Colloquium Series	Level (Strength)	Topic and Distinguished Speaker	Proof
1	June30 2020	Series1	UG&PG 104	**Harvest from Pollution (Encash Pollution)** Prof. Neelu Sood Chairperson, Kurukshetra University Kurukshetra	
2	October5 2020	Series2	UG&PG 102	**Covid-19 in relation to Environment** Prof. Daizy R. Batish, Chairperson, Botany Department Panjab University, Chandigarh Dr. Daizy R. Batish, presently working as Professor in Department of Botany, Panjab University, Chandigarh, has to her credit Rajib Goyal Young Scientist Award in Environment and Research Award for Excellence in Research by UGC, New Delhi	
3	April 16 2021	Series 3 International Chapter	UG&PG 104	**Mitigation Measures to Control GHGs release and Solid waste Management** Dr. Himangana Gupta Postdoctoral Fellow at the University of Tokyo and United Nations University (UNU-IAS)	

4,	May 22,2021	Series 4	UG&PG 100	**Role of Biotechnology in Conservation of Biological Materials** Prof. Raj Kumar Salar, Professor Department of Biotechnology, Chaudhary Devi Lal University, Sirsa, was awarded fellowship research grant from the Govt. of Norway, Japan and Slovak Republic.	
5.	February 29,2022	Series 5	UG&PG 104	**Climate Change and Covid-19** Prof. Daizy R. Batish, Chairperson, Botany Department Panjab University, Chandigarh	
.	June 6,2022	Series 6	UG&PG 104	**"Waste to Wealth" Lecture cum Workshop & Exhibition** Mr Samarth Sharma, Consultant, MGNCRE, Ministry of Education, Government of India. 	 

The institute is pioneer in the environment activities for eco-restoration and environment sustainability and won awards at national and International forum (Table 2):

S.No	Year	Awards
1	2017-2018	01
2	2018-2019	01
3	2019-2020	03
4	2020-2021	04
5	2021-2023	12

Green Audit Report

Topic1: Floristic Composition

Post Graduate Government college,Sector-11,Chandigarh,affiliated to Panjab University, Chandigarh,was established in present campus in 1956 .The college has established itself as an educational hub in region with accreditation of Grade 'A' by NAAC.Apart from records of forest Department,the field surveys were undertaken to study the floristic composition of the campus.The main species of trees are as shown in Table 1.A sprawling campus of 34.93acres has been meticulously planned in number of functional blocks separated by lush green grass lawns.

Table1: Trees /shrubs diversity of Post Graduate Government. College For Girls-11, Chandigarh

	Botanical Name (Common Name)	Family
1	*Abrus precatorius*(Ratti)	Fabaceae

2	*Acorus calamus*(Vacha)	Acoraceae
3	*Adhatoda vasica*(Vasaka)	Acanthaceae
4	*Adina codifolia*(Kurmi)	Rubiaceae
5	*Albizzia lebbeck* (Siris)	Mimosaceae
6	*Aloe barbedensis*(Ghrit Kumari)	Asphodelaceae
7	*Alstonia scholaris*(Saptaparni; Scholar tree)	Apocynaceae
8	*Andrographis paniculata*(Kalmegh)	Acanthaceae
9	*Anthocephalus chinensis*(Kadamb)	Rubiaceae
10	*Annona squamosa* (Sitaphal; custard apple)	Annonaceae
11	*Asparagus officinalis*(Asparagus)	Asparagaceae
12	*Asparagus racemosus*(Satavari)	Asparagaceae
13	*Artocarpus lakoocha*(Lakooch)	Moraceae
14	*Artocarpus heterophyllus*(Kathal;Jack tree)	Moraceae
15	*Azadirachta indica*(Neem)	Meliaceae
16	*Bacopa monnieri*(Brahmi)	Asparagaceae
17	*Bambusa vulgaris*(Bamboo)	Poaceae
18	*Barleria prionites*(Kala Bansa)	Acanthaceae
19	*Bougainvillea sp(*Bouganvillea)	Nyctaginaceae
20	*Bauhinia purpurea*(Gulabi Kachnar)	Fabaceae
21	*Bauhinia variegate*(Kachnar)	Fabaceae
22	*Bombax ceiba(=Salmalia,*Silk Cotton *)*	Malvaceae
23	*Butea frondosa* (Dhak)	Fabaceae
24	*Butea monosperma(Palash)*	Fabaceae
25	*Cactus and Succulents*	Cactaceae
26	*Callistemon viminalis*(Bottle Brush)	Myrtaceae
27	*Carissa congesta*(Karonda)	Apocynaceae
28	*Casuarina equisetifolia*(Jangli Saru)	Casuarinaceae
29	*Catharanthus roseus*(Sadabahar)	Apocynaceae
30	*Cestrum* noctuum(Raat Ki Raani)	Solanaceae
31	*Cestrum diurnum*(Din Ka Raja)	Solanaceae

32	*Citrus limon*	Rutaceae
33	*Citrus sinensis*(Narangi)	Rutaceae
34	*Clitoria ternatea*(Aparajita)	Fabaceae
35	*Coleus barbatus*(Patharchat)	Lamiaceae
36	*Chukrasia tabularis*(Indian Redwood)	Meliaceae
37	*Cinnamomum tamal*(Tejpatta)	Lauraceae
38	*Curcuma longa*(Haldi)	Zingiberaceae
39	*Cymbopogon citratus*(Lemon grass)	Poaceae
40	*Cycas circinalis*(Queen Sago)	Cycadaceae
41	*Cycas revoluta*(Sago Palm)	Cycadaceae
42	*Dalbergia sissoo(*Shisham)	Fabaceae
43	Datura *alba*(Dhatura)	Solanaceae
44	*Delonix regia(*GulMohar)	Fabaceae
45	*Dendrocalamus strictus*	Poaceae
46	*Eclipta alba*(Bhringaraj)	Asteraceae
47	*Emblica officinalis*(Amla)	Euphorbiaceae
48	*Eriobotrya japonica*(Loquat)	Myrtaceae
49	*Eucalyptus hybrida*	Myrtaceae
50	*Ficus benghalensis*(Banyan)	Moraceae
51	*Ficus carica*(Anjeer)	Moraceae
52	*Ficus glomerata*(Gular)	Moraceae
53	*Ficus infectoria*(Pilkhan)	Moraceae
54	*Ficus panda*	Moraceae
55	*Ficus religiosa*(Peepal	Moraceae
56	*Ficus virens*(Pakhar)	Moraceae
57	*Grevillea robusta*(Silver Oak)	Proteaceae
58	*Hamelia patens*(Read Head)	Rubiaceae
59	*Hibiscus rosa-sinensis(*Gurhal)	Malvaceae
60	*Ixora coccinea* (Jungle ceranium*)*	Rubiaceae
61	*Jacaranda mimosifolia*(Nili Gulmohar)	Bignoniaceae
62	*Lawsonia inermis* (Henna*)*	Lathyraceae

63	*Litchi chinensis*(Litchi)	Sapindaceae
64	*Lagerstroemia speciosa (Pride of India)*	Lathraceae
65	*Madhuca indica*(Mahua)	Sapotaceae
66	*Mangifera indica*(Mango)	Anacardiaceae
67	*Manilkara zapota(Chiku)*	Sapotaceae
68	*Mentha x piperita*(Peppermint)	Lamiaceae
69	*Michelia champa*(Champa)	Magnoliaceae
70	*Mimosa pudica* (Lajwanti)	Fabaceae
71	*Mimusops elengi*(Maulsiri)	Sapotaceae
72	*Moringa oleifera(*Moringa)	Moringaceae
73	*Morus alba(*Shahtoot)	Moraceae
74	*Murraya koenigii*(Curry patta)	Rutaceae
75	*Nerium oleander(Kaner)*	Apocynaceae
76	*Nyctanthes arbor-tristis*(Harshingar)	Nyctanthaceae
77	*Ocimum basilicum*(Kali Tulsi)	Lamiaceae
78	*Ocimum gratissimum*(Ram Tulsi)	Lamiaceae
79	*Ocimum sanctum*(Tulsi)	Lamiaceae
80	*Plumeria alba(White Frangipani)*	Apocynaceae
81	*Polyalthia longifolia*((Asoka Tree)	Annonaceae
82	*Pinus roxburghii*	Pinaceae
83	*Psidium guajava*(Guava)	Myrtaceae
84	*Pterospermum acerifolium*(Kanak Champa)	Sterculiaceae
85	*Punica granatum* (Pomegranate)	Lythraceae
86	*Putranjiva roxburghii*(Putranjiva)	Euphorbiaceae
87	*Roystonea regia*(Royal Palm)	Arecaceae (Palmae)
88	*Saraca indica*	Caesalpinaceae
89	*Schleichera oleosa(Kusum)*	Sapindaceae
90	*Syzygium aromaticum*.(Clove)	Myrtaceae
91	*Syzygium cumini*(Jamun)	Myrtaceae
92	*Tabernaemontana divaricta*(Crape Jasmine)	Apocynaceae
93	*Tecoma argentea*(Yellow Tabebuia)	Bignoniaceae
94	*Tecoma capensis*(Honey Suckle)	Bignoniaceae
95	*Terminalia arjuna*(Arjun)	Combretaceae
96	*Terminalia bellirica(*Behera)	Combretaceae
97	*Terminalia chebula (*Harad)	Combretaceae
98	*Thuja compacta* (Vidya tree)	Cupressaceae

99	*Tinospora cordifolia* (Giloe)	Menispermaceae
100	*Vitex negundo*(Nirgundi)	Verbenaceae
101	*Withania somnifera*(Ashwagandha)	Solanaceae
102	*Ziziphus mauritiana*(Ber)	Rhamnaceae

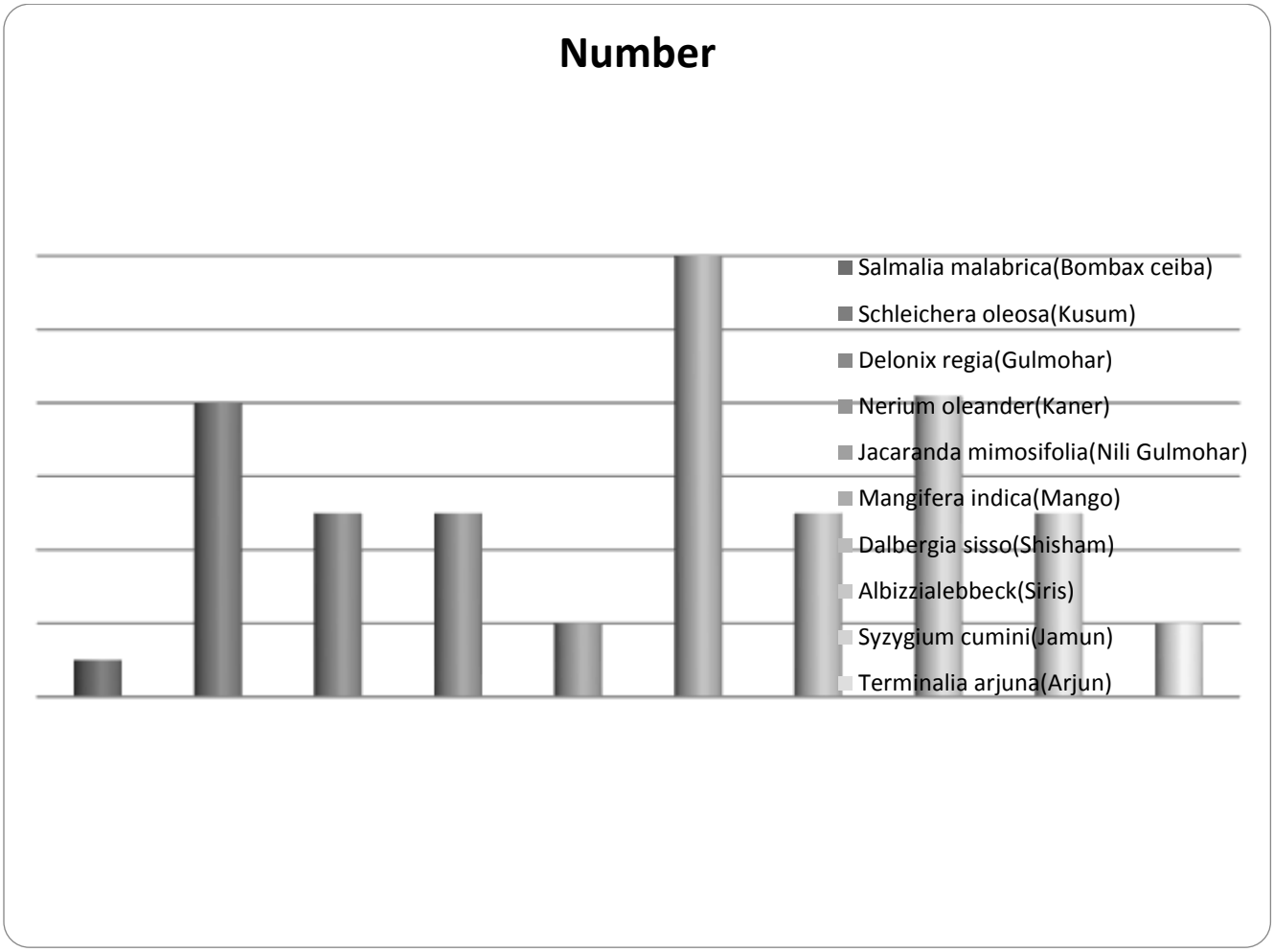


Fig1:Floristic composition(Trees) of the College Campus

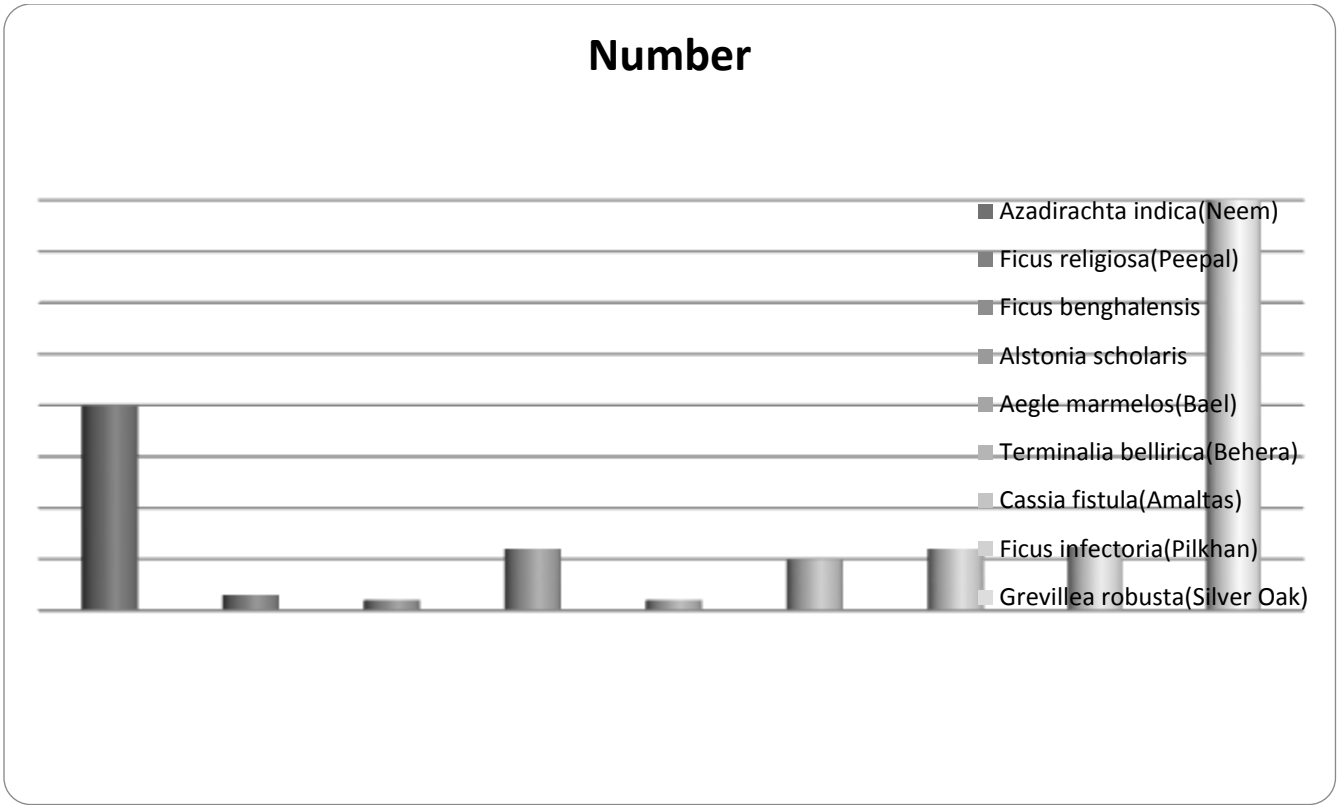


Fig2:Floristic composition(Trees) of the College Campus

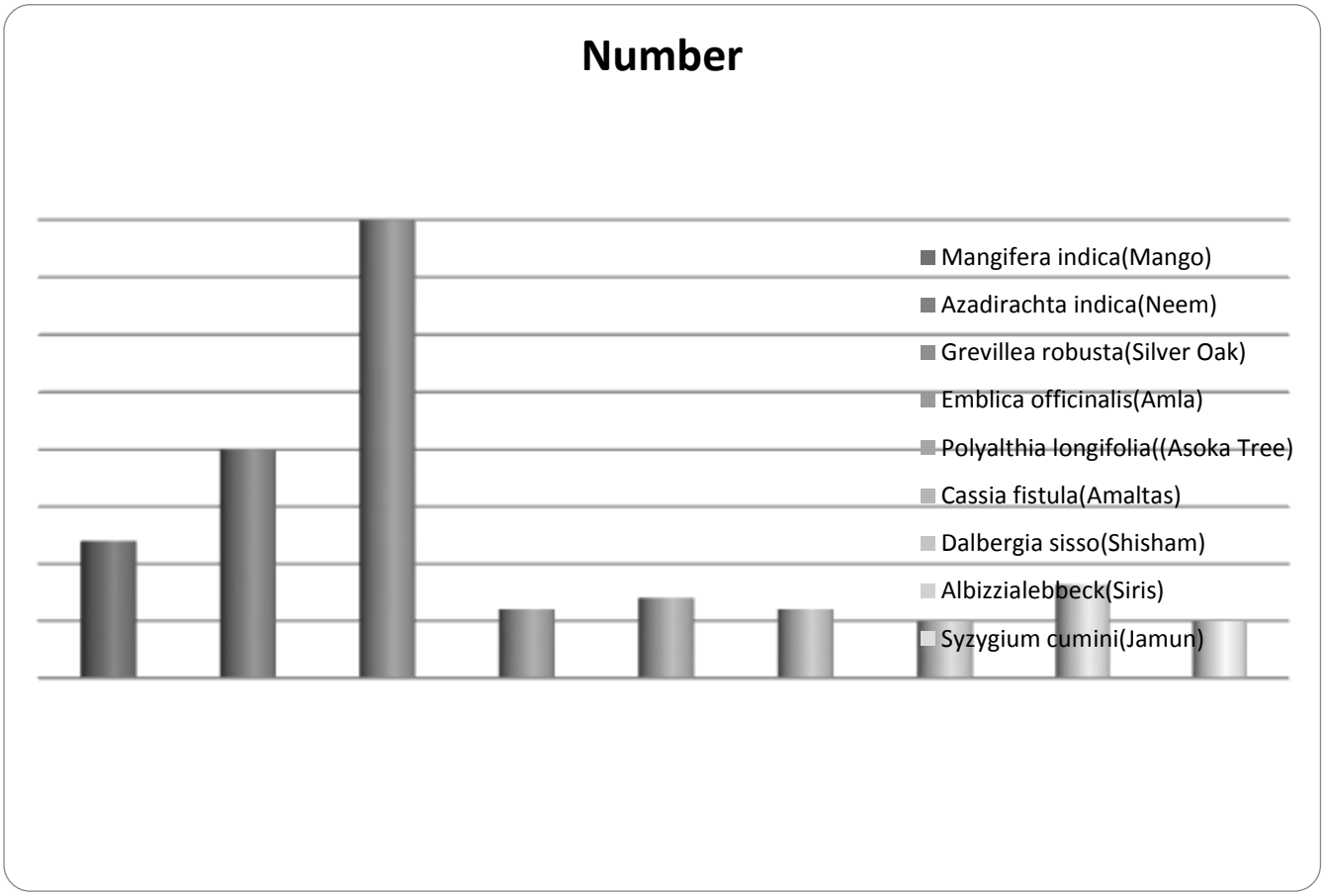


Fig3:Floristic composition of most abundant trees of the College campus

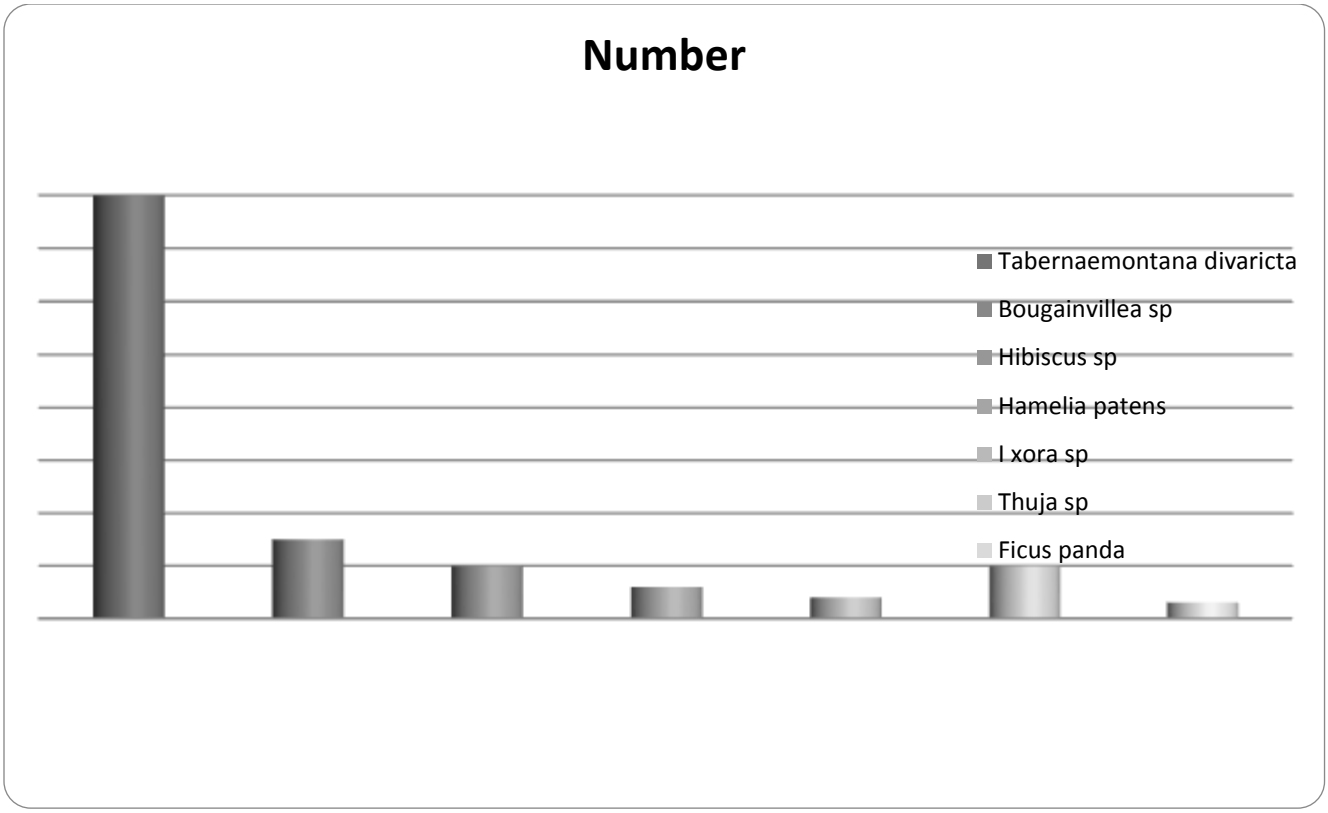
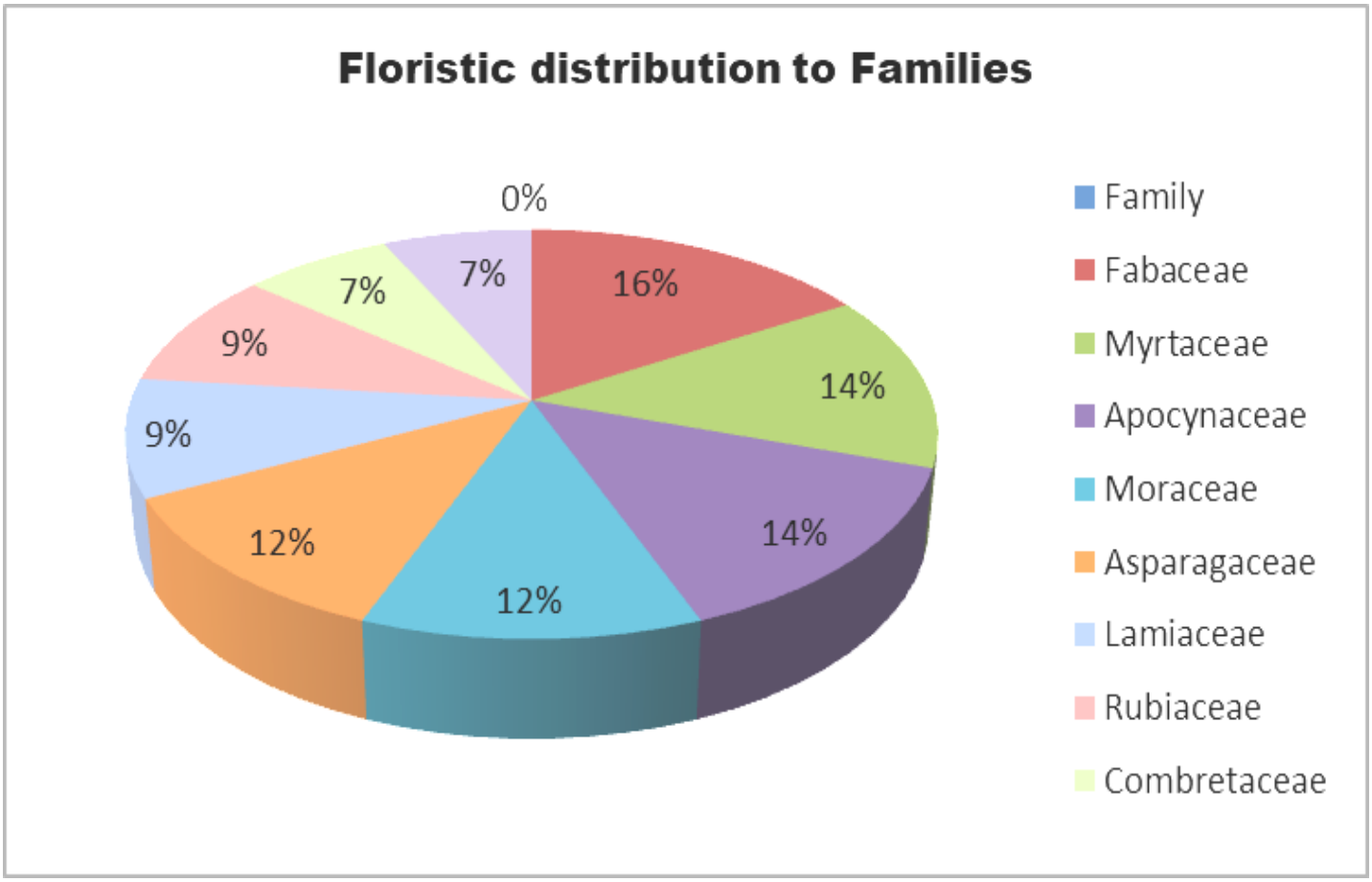
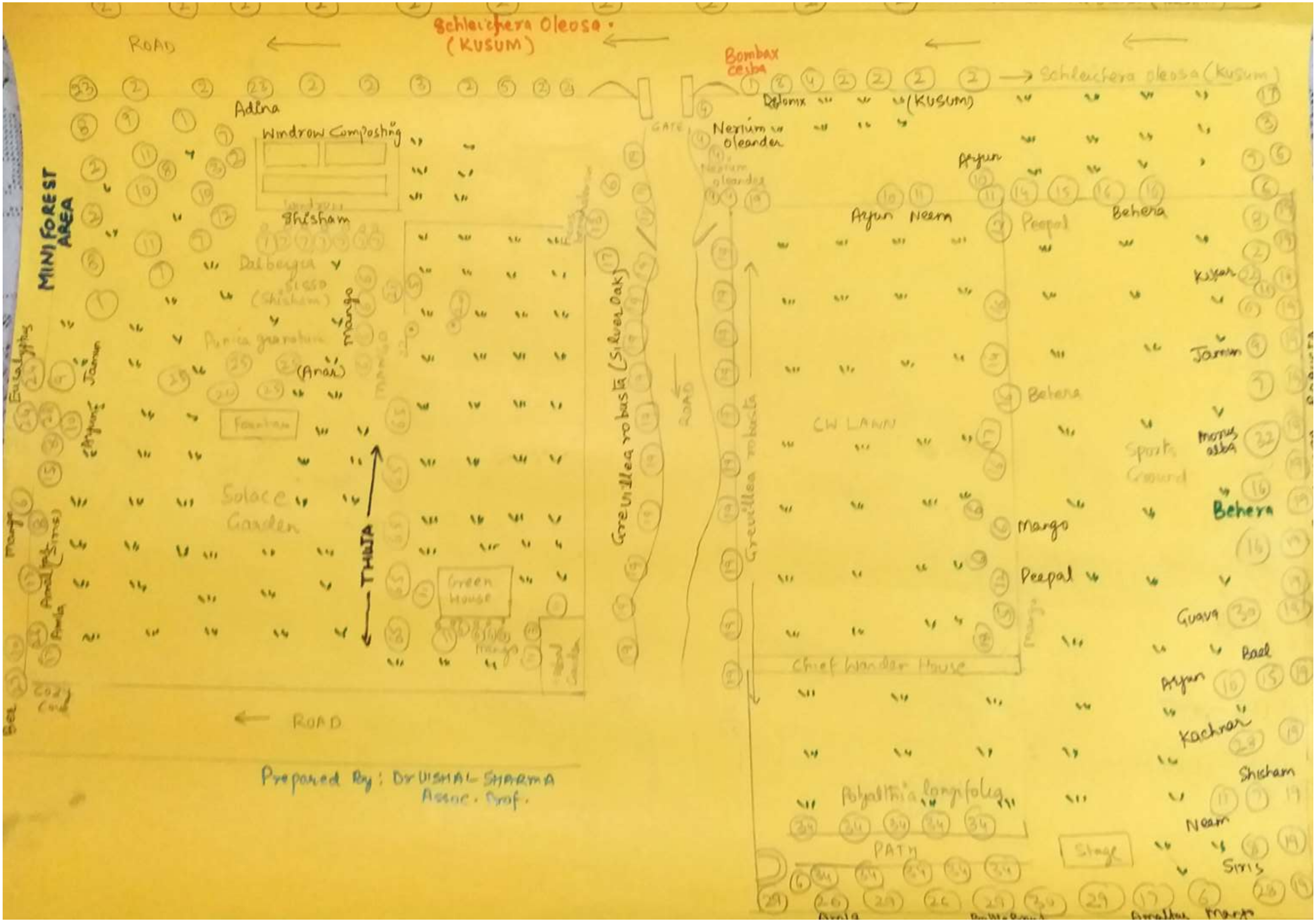


Fig4:Floristic composition of most abundant Shrubs of the College campus

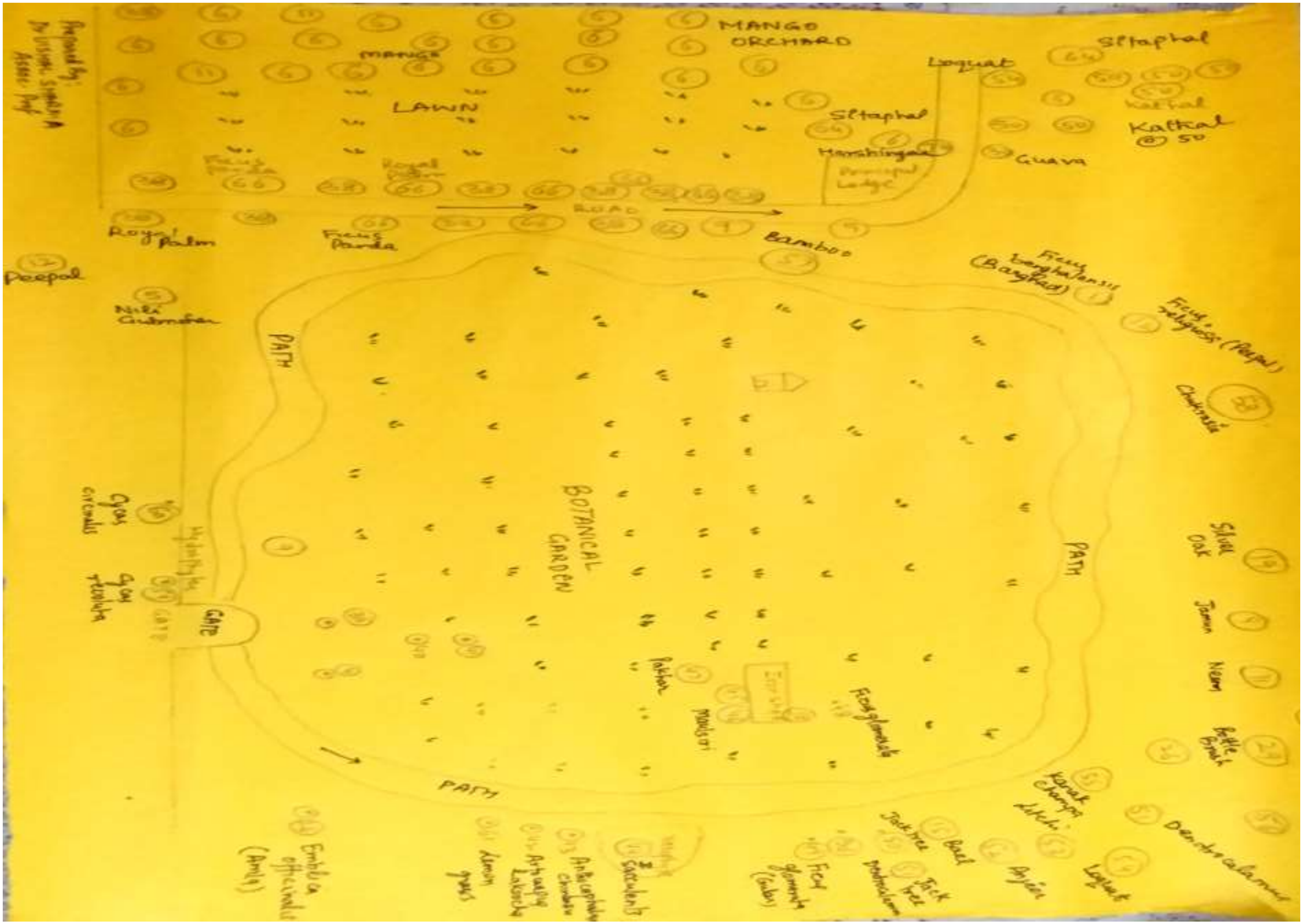
The floristic composition of the college is given in Table1, and the histograms(Figs.1-4) and the maps are prepared in coorelation with the floristic composition given in Table-1and the floristic composition is replicated in the maps at the location these trees are present in the college camus(Maps2-3).


Floristic distribution to Families
0%
7%
16%
7%
9%
14%
9%
12%
14%
12%
Family
Fabaceae
Myrtaceae
Apocynaceae
Moraceae
Asparagaceae
Lamiaceae
Rubiaceae
Combretaceae

Topic 2:Mapping of Diversity and Forest Cover


Schleichera Oleosa. (KUSUM)
ROAD
Bombax ceiba
Schleichera oleosa (kusum)
MINI FOREST AREA
Adina
Windrow Composting
Shisham
Dalbergia sissoo (Shisham)
Punica granatum (Anar)
Mango
Fountain
Solace Garden
THUJA
Green House
Eucalyptus
Jamun
Arjun
Mango
Amaltas (Siris)
Amla
Bel
ROAD
Prepared By: Dr VISHAL SHARMA
Assoc. Prof.
Grevillea robusta (Silver Oak)
GATE
ROAD
Grevillea robusta
Nerium oleander
Delonix
(KUSUM)
Arjun
Arjun
Neem
Peepal
Behera
Kusum
CW LAWN
Behera
Jamun
Sports Ground
Morus alba
Behera
Mango
Peepal
Guava
Bael
Chief Warden House
Arjun
Kachnar
Shisham
Polyalthia longifolia
Stage
Neem
PATH
Siris

MAP2:Floristic Diversity of the PGGCG-11,ChandigarhCollege Campus


Prepared by:
MANGO ORCHARD
Mango
LAWN
Loquat
Sitaphal
Kathal
Guava
ROAD
Royal Palm
Ficus Panda
Bamboo
Peepal
Ficus benghalensis (Banghad)
Ficus religiosa (Peepal)
PATH
GATE
BOTANICAL GARDEN
Chukrasia
Silver Oak
Jamun
Neem
Bottle Brush
Dendrocalamus
Loquat
Arjun
Bael
Jack tree
Ficus glomerata
Embilca officinalis (Amla)
Succulents
Pakhar
Maulsari

MAP 3:Floristic Diversity of the Botanical Garden and Mini Forest Area(Plant Conservation Site) of Post Graduate Government College For Girls-11,ChandigarhCollege Campus

TOPIC 3: Solid Waste Management-Practice and Procedure

The paradigm of 'waste to energy, mitigation of carbon and its sequestration is relegated to a secondary level whichconversely results in India discarding 68.8 million tonne in landfills and comes third after China and US in total GHGs emission. Conforming to these, the collegehighlights the use of adept schemes for successful co-composting of food, fruit and green waste, with a mechanism to mitigate carbon leakage in the developing countries. The work is a pioneer attempt to produce bio-stable, organoleptic and agronomic feasible organic compost evaluating the physicochemical parameters using the two stage composting (TSC) comprising bioreactor and windrows using mixture of raw materials: 50%green waste (60% leaves,35%grass clippings and 5%tree branches),50%food and fruit waste of total 300 per day , to produce compatible compost in 110 days in TSC, hence making the college fully organic. The high quality final compost has 40^{o}C temperature, 7.6 pH, 42% moisture content, 3.36ds/m electrical conductivity and 25 C/N ratio.The main objective of practice isto analyse and overview the configuration technology, analytical parameters and feasibility of net zero energy improving building resilience, to achieve de-carbonisation target to limit the global temperature rise to 1.5^{O}C, to meet the goals of the Paris agreement to avoid catastrophic impacts of climate change.The inference of study is the mitigation of carbon leakage of 346.7 metric ton CO_2 and generating 564 quintals organic compost to achieve sustainable zero waste future. The concept of circular economy, restorative and regenerative system by design has contributed to a paradigm shift in the transformation of Waste-to-Energy (WtE) which the management of municipal solid waste. The present study entails ascertaining how WtE can serve as a circular economy tool toward carbon foot print benefits and climate change mitigation.The study bagged **United Nations SDG Action Award 2020 and** finalists **UN Green Gown International Awards** 2022.

Composting procedure

The present model has devised two strategies(i)Single stage windrow composting (SSC) (ii)Two stage windrow composting **(TSC),**to highlight best organic waste management strategies to achieve co-composting of food, fruit and green waste using aerobic windrow composting to reduce their volume and mass and achieve carbon foot print benefits.

1. Single Stage Composting (SSC)

The energy efficiency initiatives mitigate the carbon foot prints and energy requirement of the building. The composting process was carried out in batch-wise operation in the open site windrow composting plant (30.7583° N, 76.7841° E) of 0.5 TPD capacity situated in the campus of Post Graduate Government College for Girls, Sector-11, Chandigarh. The windrow plant consists of screening facilities, solid waste separator, charging and composting units.where the organic wastes are accumulated in 3x4m brick lined charging unit with basal bulking agent(green waste) layer, which sequentially alternates with food,fruit and vegetable waste(30cm each) in three different layers. The repetition of the layers is done till the cumulative pile reaches 1.5m height. The piles in windrows are turned manually on 6^{th} and 11^{th} day to generate micro-positive pressure making windrows aerobic.

2. Two stage Composting (TSC)

In TSC, a mechanical -manual integration, the organic waste is initially added to a bioreactor 'FOODIE' for and after 7days the semi-digested organic cakes are de-confined from the bioreactor and transferred to windrow composting plant.The cakes are added to square $64m^2$open site windrow composting plant and follow the same procedure as above in SSC.

Advantages of the practice

(i)The existing solid waste management practice in the campus includes segregation of waste at source into dry waste, wet waste, E-waste and medical waste through coded dustbins(Blue, green, red and black),placed at prominent places in the college and hostels(Figs.7-10). The waste thus generated within campus is collected from labelled dustbins placed at various locations and shifted to the windrow plant site located in the campus for composting.

(ii)The practice providesa better insight on the feasibility, applicability and reproducibility of the single stage windrow composting and two stage composting technology to ensure the efficiency and effectiveness of TSC in producing bio-fertilizer. The two-stage composting (TSC) is used as an alternative process in solid waste management and this new technology can reduce the composting time, land area and GHG emission

(iii) Every region on earth is generating dry waste (grass, leaves) and wet waste (Vegetable and fruit peelings) in bulk and their dispensing and management is a global problem. The practice is aimed at converting waste into organic compost with C:N ratio 25:1,which is best for agronomic practices

(iv)The organic compost generated increased the yield of agronomic and floriculture crops and in this era of increasing population, the both aspects help in the development of the nation.

(v) The blue prints are prepared regarding the standardization of temperature, humidity, C:N ratio in single stage and two stage composting and these blue prints are replicated with ease, irrespective of area and country.

(v)The problems solved due to the bioconversion of solid waste and its management are:

- Unscientific land filling
- Maintaining soil fertility
- Avoiding a breeding grounds for mosquitoes, casual organism of many diseases
- Saving precious Farm yard Manure(FYM),which are used in Agriculture fields and in Biogas Plants for sustainable development
- The need of market is the organic compost to have more yield, and protect human race from bio-magnification of pesticides and weedicides. The organic compost is used as an alternative renewable source of energy saving the non-renewable fossil fuels (Coal, Petroleum, Diesel etc.).
- The micro-climate of campus has become moderate, as reduction in landfills and dumping sites has reduced the emission of greenhouse gases (GHGs).
- The concept of circular economy (CE), restorative and regenerative system by design has contributed to a paradigm shift in the transformation of Waste-to-Energy (WtE) in the management of municipal solid waste. The practice entails ascertaining how WtE can serve as a circular economy tool toward carbon foot print benefits and climate change mitigation.

(vi) The computation of the meteorological data pertaining to the city average minimum and maximum temperature fluctuations ranges from 0.63-1.78^{0}C due to urban heat island effect, a most documented phenomenon of climate change. However, the campus micro-climate has a moderate effect as the temperature remains on the negative side of fluctuation (i.e 1.5^{0}C less than the city temperature), primarily due to 56.84% green area with tree basal area of 55%which results in evaporative cooling and mitigation of greenhouse gases due to aerobic windrow composting of campus solid waste, which prevents micro-climatic global warming, hence improving building resilience, to achieve de-carbonization target to limit the global temperature rise to 1.5^{O}C, to meet the goals of the Paris agreement to avoid catastrophic impacts of climate change.

Awards: The Third Party Verification

The college is a pioneer in waste management practices in country as well as in Asia. The college work on solid waste management has been acclaimed at National and International forum as follows:

1 The work was acclaimed by United Nations and bagged United Nations (UN), Sustainable Development Goals (SDG) Action award in Individual category (“Environment Sustainability”) for the practice on Solid waste management(UNDP),an excellent community outreach in Covid-19 era. The present Solid waste windrow project study is the second after Mumbai to get this award and shared stage with actor Sonu Sood and Philanthropist S. P. S. Oberoi for their exemplary and humanitarian work during Covid-19.

2. Skoch awards, instituted in 2003, is the highest honour in the county, which recognise projects and institutions that go extra mile to make India a better nation and covers the best of efforts in capacity building, empowerment and excellence in technology, based on extensive documentation based on desk and secondary research followed by an evaluation presentation to the eminent jury of domain. Skoch are competitive awards, which recognise leadership and excellence in accelerating socio-economic changes and benchmark of best

practice in the fields of technology and inclusive growth. The institute is a pioneer among the colleges/institutes in the country to be the winner of 66 Skoch order of merit-Semi-finalists and joined the selected group finalists like CM Haryana, Madhya Pradesh, Rajasthan, HAL, SAIL, Ministry of Rural development, Government of India.

3. The college work on solid waste management"Windrow composting-An Aerobic Bio-Conversion and Stabilization of Municipal Solid waste (MSW) in Chandigarh" was recognised and awarded in category of 'Climate Change and Sustainability of Health care System' in 26th International Congress of IFHE-International Award 2020 organised by IFHE (International Federation of Health Care Engineering) in Italy(Jan24-28,2021).

4. Green Champion Award –Swachhta Action Plan- Exemplary Performance Award-2020-2021

The college was awarded Green Champion Award (2020-2021) by Mahatma Gandhi National Council of Rural Education (MGNCRE), Department of Higher Education, Ministry of Education, Government of India for its contribution to contribution to the field of Swachhta aspects and practice and figured in the India Today's list of 400 prominent colleges in the country for work on environment sustainability.

5. The Rose festival of Chandigarh is one of the biggest rose shows held in the country. It is a colourful bonanza which showcases the diverse beauty of flowers. At the same time, the festival has also made efforts to ensure that such diversity and heterogeneity is reflected at the organization level, and to spread awareness about the need to preserve nature The institute has been conferred with the Best Maintained Campus in 47th, 48th and 50th Rose Festival in Section H(Category H3) since the year 2018 till the present year 2022; a creditable achievement by the Government institute. The flowers in the all competitions are raised through waste generated compost.an excellent **'Best of Waste scenario'**.

6. The institute work on solid waste management "Windrow Composting-An aerobic Bio-conversion and Stabilization of Municipal Solid Waste (MSW) in Chandigarh" was awarded as Innovative Environment Project by Confederation of Indian Industry(CII) in their 8th edition of National Awards on July20-30,2021 for their Carbon foot print Benefit.

7.The institute was acclaimed and awarded in "Innovation in Recycling process and Technology" Category, in the Business World prestigious award "Recycling for Greener Tomorrow Conclave Awards 2022 on January 16, 2022.

8. The Green Gown International Awards in partnership with Association of Common with Universities (ACU), AUF, International Association of Universities (IAU) and United Nations Environment Program (UNEP), recognized the International Sustainability initiatives being undertaken across the world. The ethos of the awards is to ensure the lessons and examples of good practice. Green Gown International Award, a prestigious award of UK, is the leading global environmental authority which promotes the coherent implementation of environmental dimensions of sustainable development, announced finalists shortlisted from 19 countries and the work "Windrow Composting: Stabilization of Municipal Solid Waste (MSW) in Chandigarh for Sustainable Zero Waste Future**",** was shortlisted as one of the finalists of United NationsGreen Gown International Awards 2022,a pioneer project from India.

9. On Environment Day (June 5, 2022), the National Environmental Science Academy, New Delhi has conferred 'Green Technology Innovative Awards-2022 to the institute in International Conference on Agriculture Science and at ICAR-IGFRI, Jhansi, Uttar Pradesh, for the contribution in the field of mitigation of Carbon footprints and Green awards for Innovation & Environment Awareness at World Environment Expo (Pragati Maidan, New Delhi).

10.Recently, awarded "Green Technology Award 2022" in ESDAWorld Environment Summit (WES) organized by United Nations Environment Program(UNEP) with Ministry of Environment and Climate Change ,Government of India and in association with CSRI-NEERI,CSRD JNU and foreign partner, Maldives, Nepal and Switzerland and Indian counterpart(NABARD) at Vallabhbhai Patel Chest Institute at Delhi University, New Delhi on October16,2022.

पीजीजीसीजी-11 में अब हर शनिवार को मनाया जाएगा नो प्लास्टिक डे

चंडीगढ़। पोस्ट ग्रेजुएट गवर्नमेंट कॉलेज फॉर गर्ल्स सेक्टर 11 में पर्यावरण दिवस पर नो प्लास्टिक डे : बी पार्ट ऑफ द सॉल्यूशन की शुरुआत की गई। अब कॉलेज हर शनिवार को नो प्लास्टिक डे मनाएगा। इसका मकसद है युवाओं और आम लोगों को प्लास्टिक के खतरे के बारे में बताना। नॉन बायोडिग्रेडेबल प्लास्टिक प्रोडक्ट पर्यावरण के लिए सबसे बड़ा खतरा है। इस कॉलेज को हाल ही में मिनिस्ट्री ऑफ एजुकेशन की ओर से ग्रीन चैंपियन अवार्ड मिला है। कॉलेज की प्रिंसिपल प्रो अनीता कौशल के अनुसार ऐसी चोट में करीब 170 किलो सॉलिड वेस्ट प्रतिदिन होता है जिसमें से 17.6 फीसदी प्लास्टिक वेस्ट है। इसी को कंट्रोल करने के लिए हर शनिवार अब नो प्लास्टिक डे मनाया जाएगा।

प्लास्टिक प्रदूषण के खिलाफ की वर्चुअल रैली

चंडीगढ़। पोस्ट ग्रेजुएट गवर्नमेंट कॉलेज फॉर गर्ल्स के वनस्पति विज्ञान ने वीरवार को प्लास्टिक प्रदूषण के खिलाफ वर्चुअल रैली निकाली। इसमें छात्रों, शिक्षण संकायों और सफाई कर्मचारियों ने भाग लिया। प्लास्टिक प्रदूषण कम करने के प्रेरक कदम के रूप में करीब 100 छात्रों ने पोस्टर व नारों के साथ हिस्सा लिया। कॉलेज प्राचार्या प्रोफेसर डॉ. अनीता कौशल ने छात्रों को प्रोत्साहित किया और पर्यावरण की बहाली के लिए प्लास्टिक के कम से कम उपयोग पर जोर दिया। ब्यूरो

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न्यूज बीफ

अंतर्राष्ट्रीय प्लास्टिक बैग मुक्त दिवस मनाया

चंडीगढ़, 3 जुलाई (आशीष): उच्च शिक्षा निदेशालय के तत्वावधान में शिक्षा संस्थानों ने शनिवार को प्लास्टिक बैग नहीं पर एक अभियान शुरू किया। 3 जुलाई को अंतर्राष्ट्रीय प्लास्टिक बैग मुक्त दिवस के रूप में मनाया जाता है।

यह एक वैश्विक पहल है जिसका उद्देश्य प्लास्टिक बैग के उपयोग को खत्म करना है। पोस्ट ग्रेजुएट गवर्नमेंट कॉलेज फॉर गर्ल्स, सेक्टर-11 की प्रिंसीपल प्रो. अनीता कौशल ने कहा कि अभियान ने संस्थानों में लगभग 17.6 फीसदी प्लास्टिक कचरे के प्रबंधन के लिए प्लास्टिक बैग को कम करने, पुन: उपयोग, रि-साइकिल प्लास्टिक बैग को बढ़ावा दिया है। अभियान का उद्देश्य पर्यावरण को संरक्षित करने के सरकारी प्रयासों का समर्थन करना और पर्यावरण की बहाली पर परिवारों के बीच ज्ञान आगरूकता में सुधार करना है। इस दौरान 50 हजार से अधिक छात्रों और कॉलेजों के शिक्षण और गैर-शिक्षण कर्मचारियों ने एकल उपयोग प्लास्टिक और प्लास्टिक की वस्तुओं के नकारात्मक प्रभावों को कम करने का संकल्प लिया।

स्वच्छता एक्शन प्लान | **बिजली की 30 से 32 फीसद कम खपत के लिए मिला सम्मान**

जीसीजी-11 को मिला ग्रीन चैंपियन अवॉर्ड

जासं, चंडीगढ़ : पोस्ट ग्रेजुएट गवर्नमेंट कालेज फार गर्ल्स (जीसीजी) सेक्टर-11 को ग्रीन चैंपियन अवार्ड मिला है। यह अवॉर्ड महात्मा गांधी नेशनल काउंसिल आफ रूरल एजुकेशन, मिनिस्ट्री आफ एजुकेशन भारत सरकार की तरफ से स्वच्छता एक्शन प्लान के तहत दिया गया है। अवॉर्ड में कालेज को पांच हजार रुपये कैश अवॉर्ड के साथ प्रशस्ति पत्र हासिल हुआ है। गवर्नमेंट आफ इंडिया की तरफ से अवॉर्ड घोषित होने के बाद मंगलवार को डायरेक्टर स्कूल एजुकेशन आरएस बराड़ ने अवार्ड प्रिंसिपल डा. अनीता कौशल को हैंडओवर किया।

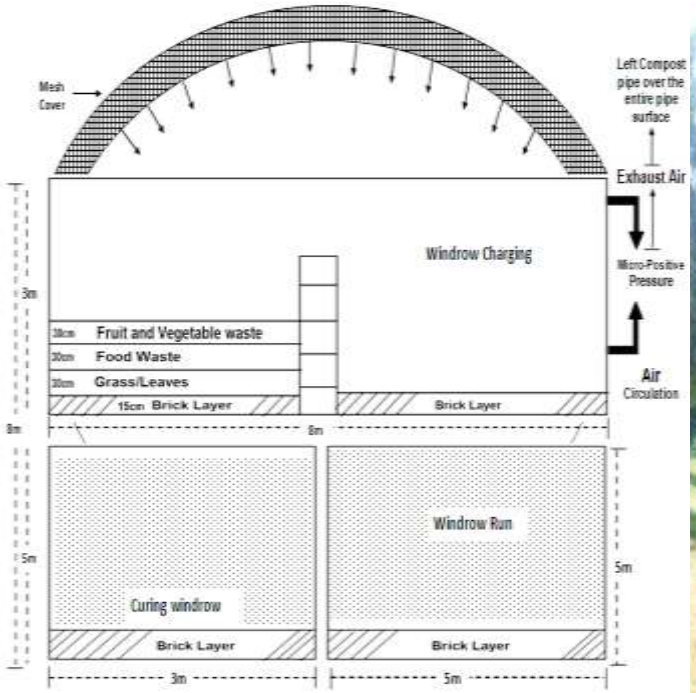
यह किया है कालेज ने : जीसीजी-11 ने एनर्जी सेविंग की दिशा में काम किया और 30 से 32 फीसद बिजली की खपत कालेज कैंपस में कम करके दिखाई है। इस प्रोजेक्ट के लिए कालेज के लेक्चरर डा. विशाल शर्मा ने काम किया है। बिजली के अलावा कूड़ा निपटान और जल संरक्षण की दिशा में भी कालेज कैंपस में काम किया गया है, जिसके लिए एमएचआरडी पहले भी कालेज को सम्मानित कर चुकी है। कूड़ा निपटान के लिए सीआइआइ भी कालेज को बेस्ट प्रैक्टिस में चुन चुकी है।

बिजली बचाने के लिए पोस्ट ग्रेजुएट गवर्नमेंट कालेज फॉर गर्ल्स सेक्टर-11 को ग्रीन चैंपियन अवॉर्ड मिला। यह अवॉर्ड गवर्नमेंट ऑफ इंडिया की तरफ से मंगलवार को डायरेक्टर हायर एजुकेशन आरएस बराड़ ने प्रिंसिपल अनीता कौशल को सौंपा ■जागरण

एक हजार आवेदन में जीसीजी को मिला पहला स्थान : ग्रीन चैंपियन अवार्ड पाने के लिए चंडीगढ़ सहित पंजाब से एक हजार से ज्यादा आवेदन गए थे। जिसमें से जीसीजी-11 को पहला स्थान मिला है। कालेज प्रिंसिपल डा. अनीता कौशल ने बताया कि पर्यावरण की सुरक्षा के लिए सहयोग जरूरी है।

यह रहा है खास

ग्लोबल नेशन (ग्रीन) कमरे में चलने वाले एसी का तापमान 26 स्वास्थ्य के लिए बेहतर घोषित कर चुकी है। डा. विशाल बीते तीन सालों से कालेज कैंपस में चलने वाले एसी का तापमान 26 तक चला रहे है। डा. विशाल के अनुसार यदि एसी का तापमान 26 डिग्री तक रहता है तो सबसे पहले बिजली की खपत 30 से 32 फीसद कम होगी और कमरे में बैठने के लिए बेहतरीन माहौल मिल सकेगा। कमरे में ऑक्सीजन का स्तर ठीक रहेगा और ऑक्सीजन का स्तर ठीक रहने से शरीर में थकान और सुस्ती नहीं आएगी और इंसान सामान्य लाइफस्टाइल जी सकता है।


Mesh Cover
Left Compost pipe over the entire pipe surface
Exhaust Air
Micro-Positive Pressure
Air Circulation
Windrow Charging
3m
10cm Fruit and Vegetable waste
20cm Food Waste
10cm Grass/Leaves
15cm Brick Layer
Brick Layer
8m
8m
5m
Curing windrow
Windrow Run
5m
Brick Layer
Brick Layer
3m
5m

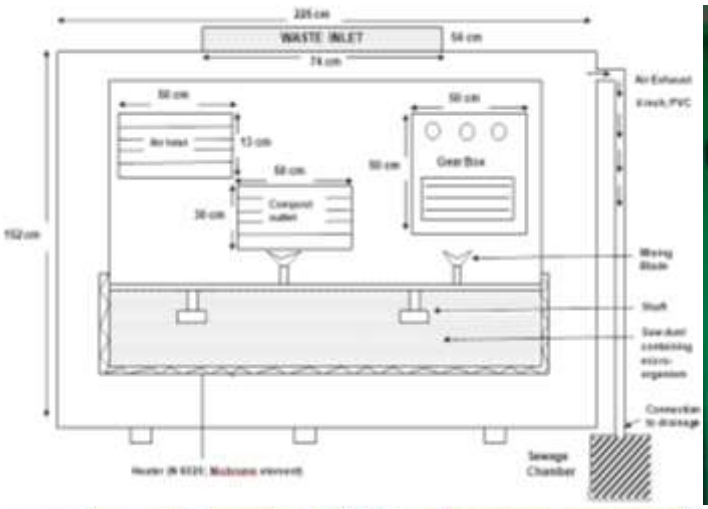


Fig.1.Design of Windrow composting plant;Fig.2-Layout windrow composting plant in PGGCG-11,Chandigarh;Figs.3-4-Field layout of membrane covered charging and curing windrow unit(0.5 TPD);Fig.5-Outlay of Bioreactor; Fig.6-Bioreactor 'Foodie' Figs.7-10;Segregation of waste

Challenges faced during the Composting process

1. Solid waste auditingThe first and foremost if the solid waste auditing, which plays an important role in devising the composting strategy i.e Layout designing ,sizing and capacity.

2. Segregation: The segregation at source presents a major challenge, as composite culture is dumped in landfills which results in greenhouse gases (GHGs) emission.It also hampers the composting process.

3. House hold composting: The major obstacle stands in way of household composting is the misconception that the composting is smelly and attract flies and maggots.

4. Budgetary constraint: The budget limitations concerning community composting can be addressed by starting low cost windrow composting.
5. Designing of the windrow plant: While designing the plant,its economic aspect and land saving has to be kept in mind.
6. Maintenance: Due to financial constraint, manual turning has to be done on every 6th and 11th day.
7. Standardizing the compost monitoring the physico-chemical parameters (Temperature, pH,Moisture content, Electrical conductivity and C/N ratio) to make compost feasible to floriculture and Landscaping operation.

Table2:Total Waste Generated:

S.No	Number of Day Scholar	Total Faculty (Teaching &Non-Teaching	Collection of Solid Waste	Total waste Generated
DAY SCHOLAR@50gram/day				
1.	3462	196	3658x50 gram	182.9Kg/day
HOSTELERS@200 gram /day				
2.	797	4	801x200 gram	160.2 Kg/day

Total waste to be generated as per Strength and formula of MGNCRE, GOI:
182.9+160.2=343.1
Plastic waste=72 Kg
Wet waste=343.1-72=271.1 Kg/day ----------1

Waste Generated in Month of February, 2022

Wet waste generated per Day (Actual)= 3760/24=156.66
Wet waste generated as per strength (Formula; as depicted in reference 1)=271.1
Wet waste Saved from generation=114.4 kg/day

Waste Generated in Month of March, 2022

Wet waste generated per Day=4305/27=159.44
Wet waste generated as per strength (Formula; as depicted in reference 1)= 271.1
Wet waste Saved from generation=117.7 kg/day (Computation of yearly date in Summary enclosed below:

Total Solid Waste Generated as per MGNCRE Formula (8133x12) = 97596
Total waste actually generated: 79800
Waste Generation Less: 97596-79800=48596 kg (Reduced with constant Workshops, Survey and Awareness of Stakeholders).

SOLID WASTE AUDITING

MONTHWISE LOG BOOK/RECORD OF WASTE GENERATION & PROCESSING OF THE BWG.

NAME OF THE BULK WASTE GENERATOR — GCG - 11 (APROX — Round figure given)

DATE	TOTAL WASTE GENERATED	WET WASTE	DRY WASTE	WET WASTE PROCESSED THROUGH COMPOSTING
01/04/2019	190 Kg	130 Kg	60 Kg	130 Kg
02/04/2019	185 Kg	130 Kg	55 Kg	130 Kg
03/04/2019	192 Kg	129 Kg	63 Kg	129 Kg
04/04/2019	165 Kg	119 Kg	46 Kg	119 Kg
05/04/2019	196 Kg	129 Kg	67 Kg	129 Kg
06/04/2019	172 Kg	108 Kg	64 Kg	108 Kg
07/04/2019	187 Kg	135 Kg	52 Kg	135 Kg
08/04/2019	194 Kg	126 Kg	68 Kg	126 Kg
09/04/2019	190 Kg	134 Kg	56 Kg	134 Kg
10/04/2019	195 Kg	133 Kg	62 Kg	133 Kg
11/04/2019	185 Kg	125 Kg	60 Kg	125 Kg
12/04/2019	178 Kg	124 Kg	54 Kg	124 Kg
13/04/2019	166 Kg	116 Kg	50 Kg	116 Kg
14/04/2019	175 Kg	105 Kg	70 Kg	105 Kg
15/04/2019	182 Kg	114 Kg	68 Kg	114 Kg
16/04/2019	197 Kg	141 Kg	56 Kg	141 Kg
17/04/2019	170 Kg	122 Kg	48 Kg	122 Kg
18/04/2019	183 Kg	118 Kg	65 Kg	118 Kg
19/04/2019	196 Kg	144 Kg	52 Kg	144 Kg
20/04/2019	187 Kg	143 Kg	44 Kg	143 Kg
21/04/2019	162 Kg	122 Kg	40 Kg	122 Kg
22/04/2019	156 Kg	106 Kg	50 Kg	106 Kg
23/04/2019	176 Kg	108 Kg	68 Kg	108 Kg
24/04/2019	194 Kg	124 Kg	70 Kg	124 Kg
25/04/2019	190 Kg	125 Kg	65 Kg	125 Kg
26/04/2019	158 Kg	118 Kg	40 Kg	118 Kg
27/04/2019	182 Kg	130 Kg	52 Kg	130 Kg
28/04/2019	160 Kg	96 Kg	64 Kg	96 Kg
29/04/2019	170 Kg	112 Kg	58 Kg	112 Kg
30/04/2019	194 Kg	128 Kg	66 Kg	128 Kg
AVG -	181 Kg	123 Kg	57.76 Kg	123 Kg

Signature of the Incharge of Facility Chander mohan

Chander Mohan, C.S.I. M.I.
Mob:-98725-11264

Apx round figure given

MONTHWISE LOG BOOK/RECORD OF WASTE GENERATION & PROCESSING OF THE BWG.

NAME OF THE BULK WASTE GENERATOR — GCG-11

DATE	TOTAL WASTE GENERATED	WET WASTE	DRY WASTE	WET WASTE PROCESSED THROUGH COMPOSTING
01/12/2019	190 Kg	130 Kg	60 Kg	130 Kg
02/12/2019	196 Kg	132 Kg	65 Kg	132 Kg
03/12/2019	178 Kg	131 Kg	55 Kg	131 Kg
04/12/2019	194 Kg	134 Kg	60 Kg	134 Kg
05/12/2019	186 Kg	116 Kg	70 Kg	116 Kg
06/12/2019	192 Kg	137 Kg	55 Kg	137 Kg
07/12/2019	196 Kg	136 Kg	60 Kg	136 Kg
08/12/2019	180 Kg	125 Kg	55 Kg	125 Kg
09/12/2019	162 Kg	102 Kg	60 Kg	102 Kg
10/12/2019	168 Kg	98 Kg	70 Kg	98 Kg
11/12/2019	162 Kg	117 Kg	45 Kg	117 Kg
12/12/2019	190 Kg	120 Kg	70 Kg	120 Kg
13/12/2019	154 Kg	89 Kg	65 Kg	89 Kg
14/12/2019	170 Kg	101 Kg	69 Kg	101 Kg
15/12/2019	192 Kg	132 Kg	60 Kg	132 Kg
16/12/2019	186 Kg	116 Kg	70 Kg	116 Kg
17/12/2019	190 Kg	125 Kg	65 Kg	125 Kg
18/12/2019	169 Kg	99 Kg	70 Kg	99 Kg
19/12/2019	160 Kg	110 Kg	50 Kg	110 Kg
20/12/2019	170 Kg	110 Kg	60 Kg	110 Kg
21/12/2019	182 Kg	112 Kg	70 Kg	112 Kg
22/12/2019	186 Kg	121 Kg	65 Kg	121 Kg
23/12/2019	174 Kg	104 Kg	70 Kg	104 Kg
24/12/2019	160 Kg	105 Kg	55 Kg	105 Kg
25/12/2019	158 Kg	98 Kg	60 Kg	98 Kg
26/12/2019	192 Kg	117 Kg	75 Kg	117 Kg
27/12/2019	186 Kg	121 Kg	65 Kg	121 Kg
28/12/2019	180 Kg	110 Kg	70 Kg	110 Kg
29/12/2019	154 Kg	104 Kg	50 Kg	104 Kg
30/12/2019	170 Kg	155 Kg	55 Kg	155 Kg
31/12/2019	190 Kg	115 Kg	75 Kg	115 Kg
Avg:-	177 Kg	116 Kg	62 Kg	116 Kg

Signature of the Incharge of Facility Chander mohan

Chander Mohan
C.S.I. M.C.

MONTHWISE LOG BOOK/RECORD OF WASTE GENERATION &PROCESSING OF THE BWG

NAME OF THE BULK WASTE GENERATOR- POST GRADUATE GOVERNMENT COLLEGE FOR GIRLS-11,CHANDIGARH;MONTH: January 2020

DATE	TOTAL WASTE GENERATED(kg)	WET WASTE (Kg)	DRY WASTE (Kg) (Windrow Plant)	WET WASTE PROCESSED THROUGH COMPOSTING(Kg) (APPROX-ROUND FIGURE GIVEN) "Foodie" Composting Machine
1.1.20	190	124	65	124 Kg
2.1.20	164	120	44	120 "
3.1.20	179	134	44	WP 134 "
4.1.20	194	126	68	126 Kg
6.1.20	192	130	62	130 "
7.1.20	196	130	66	130 Kg
8.1.20	180	122	58	122 Kg
9.1.20	162	126	36	126 "
10.1.20	168	124	44	CM 124 Kg
11.1.20	162	122	40	BA 122 Kg
13.1.20	154	118	36	118 Kg
14.1.20	170	121	49	121 Kg
15.1.20	192	140	52	140 Kg
16.1.20	186	128	58	128 Kg
17.1.20	190	132	58	132 Kg
18.1.20	164	128	36	128 Kg
20.1.20	160	133	27	133 Kg
21.1.20	165	122	43	122 "
22.1.20	170	118	52	MP 118 Kg
23.1.20	182	112	70	112 Kg
24.1.20	186	136	50	130 Kg
25.1.20	160	116	44	116 Kg
27.1.20	192	146	46	146 Kg
28.1.20	186	126	60	126 Kg
29.1.20	180	146	34	146 "
30.1.20	155	126	29	BA 126 Kg
31.1.20	144	116	28	116 Kg
AVERAGE	4722/27 = 174.89	126.78	1299/27 = 48.11	126.78

Signature of the Incaurge of Facility

MONTHWISE LOG BOOK/RECORD OF WASTE GENERATION &PROCESSING OF THE BWG

NAME OF THE BULK WASTE GENERATOR- POST GRADUATE GOVERNMENT COLLEGE FOR GIRLS-11,CHANDIGARH;MONTH: DEC 2020

DATE	TOTAL WASTE GENERATED(kg)	WET WASTE (Kg)	DRY WASTE (Kg)	WET WASTE PROCESSED THROUGH COMPOSTING(Kg) (APPROX-ROUND FIGURE GIVEN) Windrow Plant
1.12.20	18 Kg	—	18 Kg	18 Kg
2.12.20	15 Kg	—	15 Kg	15 Kg
3.12.20	10 Kg	—	10 Kg	10 Kg
4.12.20	16 Kg	—	16 Kg	16 Kg
5.12.20	20 Kg	—	20 Kg	20 Kg
7.12.20	20 Kg	—	20 Kg	20 Kg
8.12.20	18 Kg	—	18 Kg	18 Kg
9.12.20	20 Kg	—	20 Kg	20 Kg
10.12.20	15 Kg	—	15 Kg	15 Kg
11.12.20	16 Kg	—	10 Kg	10 Kg
12.12.20	15 Kg	—	15 Kg	15 Kg
14.12.20	22 Kg	—	22 Kg	22 Kg
15.12.20	20 Kg	—	20 Kg	20 Kg
16.12.20	18 Kg	—	18 Kg	18 Kg
17.12.20	13 Kg	—	13 Kg	15 Kg
18.12.20	16 Kg	—	16 Kg	16 Kg
19.12.20	20 Kg	—	20 Kg	20 Kg
21.12.20	18 Kg	—	18 Kg	18 Kg
22.12.20	15 Kg	—	15 Kg	15 Kg
23.12.20	10 Kg	—	10 Kg	10 Kg
24.12.20	12 Kg	—	12 Kg	12 Kg
25.12.20	10 Kg	—	10 Kg	10 Kg
26.12.20	8 Kg	—	8 Kg	8 Kg
28.12.20	12 Kg	—	12 Kg	12 Kg
29.12.20	10 Kg	—	10 Kg	10 Kg
30.12.20	15 Kg	—	15 Kg	15 Kg
31.12.20	8 Kg	10 Kg	18 Kg	28 Kg
AVERAGE	15.04	0.40 Kg	15.04	15.41

Added to Composting machine by Bulking agent

Added to composting machine as Bulking agent

Added to composting machine as Bulking agent

Signature of the Incharge of Facility

Approx Round figure Given

MONTHWISE LOG BOOK/RECORD OF WASTE GENERATION &PROCESSING OF THE BWG

NAME OF THE BULK WASTE GENERATOR- POST GRADUATE GOVERNMENT COLLEGE FOR GIRLS-11,CHANDIGARH:MONTH: January 2021

DATE	TOTAL WASTE GENERATED(kg)	WET WASTE (Kg)	DRY WASTE (Kg)	WET WASTE PROCESSED THROUGH COMPOSTING(Kg) (APPROX-ROUND FIGURE GIVEN) Windrow Plant	
1.1.21	10	05	05	05 Kg	Composting
2.1.21	16	08	08	8 "	
4.1.21	13	06	07	6 Kg	
5.1.21	18	10	08	10 Kg	
6.1.21	22	12	10	12 Kg	
7.1.21	18	12	06	12 Kg	
8.1.21	18	12	06	12 Kg	
9.1.21	16	11	05	11 Kg	
10.1.21	18	10	08	10 Kg	
12.1.21	20	12	08	12 Kg	
13.1.21	22	10	12	10 Kg	
14.1.21	16	06	10	06 Kg	
15.1.21	20	08	12	08 Kg	
16.1.21	18	06	12	06 "	
18.1.21	16	04	12	04 "	
19.1.21	14	4	10	04 Kg	
20.1.21	12	4	08	04 "	
21.1.21	10	04	06	04 "	
22.1.21	16	06	10	06 "	
23.1.21	18	06	12	06 Kg	
25.1.21	20	04	16	04 Kg	Bulking agent "Foodie"
26.1.21	10	04	6	4 Kg	
27.1.21	18	10	8	10 Kg	
28.1.21	12	4	8	4 Kg	
29.1.21	16	6	10	6 Kg	
30.1.21	22	10	12	10 Kg	
AVERAGE	≤ 16.5	≤ 194/26 = 7.46	≤ 9.04	≤ 7.46	

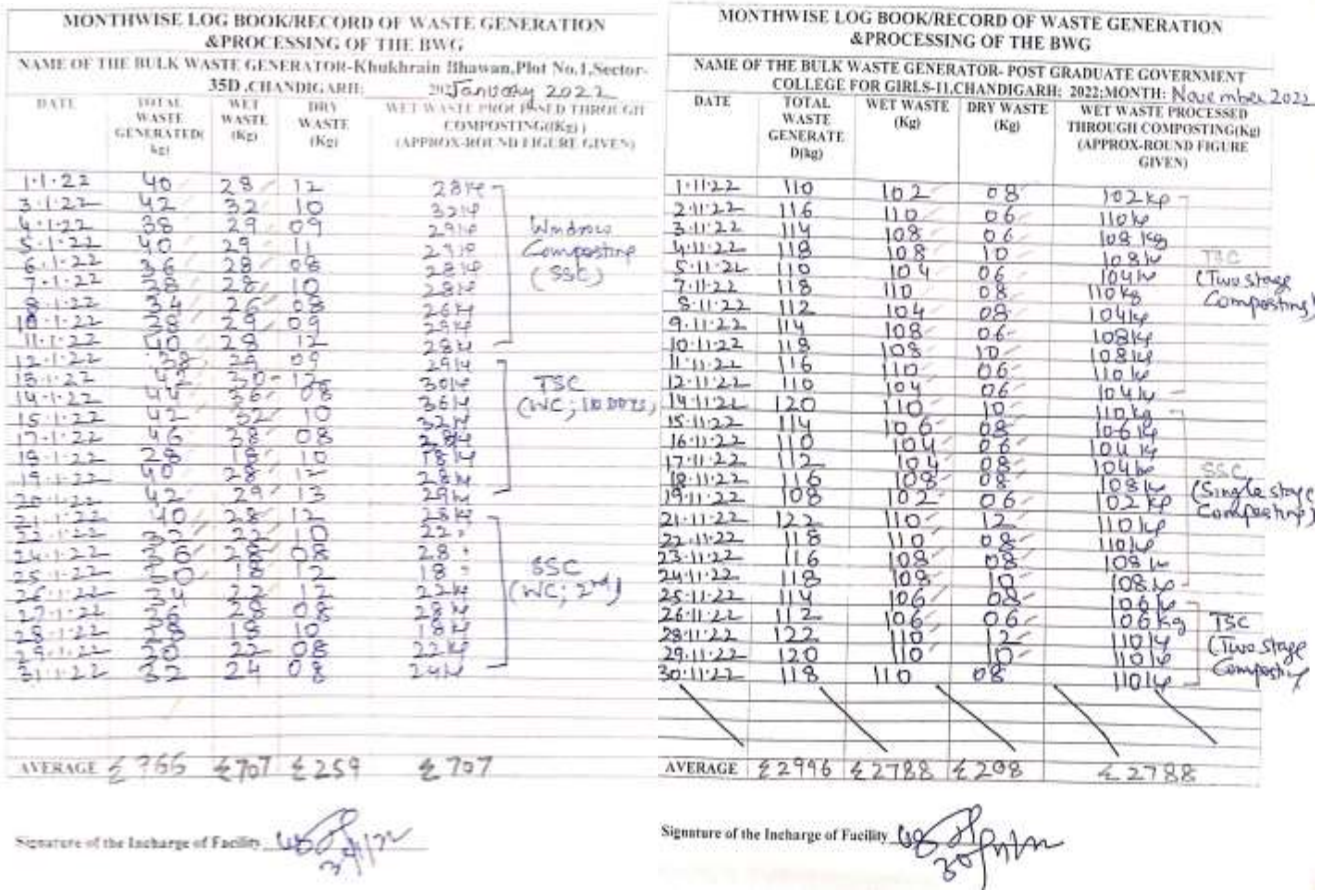
Signature of the Incharge of Facility ____________

MONTHWISE LOG BOOK/RECORD OF WASTE GENERATION &PROCESSING OF THE BWG

NAME OF THE BULK WASTE GENERATOR- POST GRADUATE GOVERNMENT COLLEGE FOR GIRLS-11,CHANDIGARH; 2021;MONTH: December 2021

DATE	TOTAL WASTE GENERATED(kg)	WET WASTE (Kg)	DRY WASTE (Kg)	WET WASTE PROCESSED THROUGH COMPOSTING(Kg) (APPROX-ROUND FIGURE GIVEN) Windrow Composting Plant (TSC	
1.12.21	140	120	20	120 Kg	TSC Windrow Composting Plant: (i) Bioreactor (ii) WC
2.12.21	148	126	22	126 Kg	
3.12.21	152	128	24	128 Kg	
4.12.21	138	120	18	120 Kg	
6.12.21	160	140	20	140 Kg	
7.12.21	138	120	18	120 Kg	
8.12.21	130	112	18	112 Kg	
9.12.21	126	114	12	114 Kg	
10.12.21	128	112	16	112 Kg	
11.12.21	124	110	14	110 Kg	
13.12.21	158	140	18	140 Kg	SSC (WCP)
14.12.21	148	130	18	130 Kg	
15.12.21	152	140	12	140 Kg	
16.12.21	140	126	14	126 Kg	
17.12.21	136	120	16	120 Kg	
18.12.21	128	112	16	112 Kg	
20.12.21	152	136	16	136 Kg	
21.12.21	130	112	18	112 Kg	
22.12.21	142	122	20	122 Kg	
23.12.21	128	116	12	116 Kg	
24.12.21	142	128	14	128 Kg	TSC (i) Bioreactor (ii) WC
25.12.21	140	126	14	126 Kg	
27.12.21	156	138	18	138 Kg	
28.12.21	142	130	12	130 Kg	
29.12.21	148	130	18	130 Kg	
30.12.21	150	140	10	140 Kg	
31.12.21	146	132	14	132 Kg	
AVERAGE	≤ 141.56	≤ 125.2	≤ 16.36	≤ 125.2	

Signature of the Incharge of Facility ____________ 31/12/21



MONTHWISE LOG BOOK/RECORD OF WASTE GENERATION &PROCESSING OF THE BWG

NAME OF THE BULK WASTE GENERATOR-Khukhrain Bhawan,Plot No.1,Sector-35D ,CHANDIGARH: 2022 January 2022

DATE	TOTAL WASTE GENERATED(kg)	WET WASTE (Kg)	DRY WASTE (Kg)	WET WASTE PROCESSED THROUGH COMPOSTING(Kg) (APPROX-ROUND FIGURE GIVEN)	
1·1·22	40	28	12	28kg	Windrow Composting (SSC)
3·1·22	42	32	10	32kg	
4·1·22	38	29	09	29kg	
5·1·22	40	29	11	29kg	
6·1·22	36	28	08	28kg	
7·1·22	38	28	10	28kg	
8·1·22	34	26	08	26kg	
10·1·22	38	29	09	29kg	
11·1·22	40	29	12	28kg	
12·1·22	38	29	09	29kg	
13·1·22	42	30	12	30kg	TSC (WC; 10 DAYS)
14·1·22	44	36	08	36kg	
15·1·22	42	32	10	32kg	
17·1·22	46	38	08	38kg	
19·1·22	28	18	10	18kg	
19·1·22	40	28	12	28kg	
20·1·22	42	29	13	29kg	
21·1·22	40	28	12	28kg	SSC (WC; 24)
22·1·22	32	22	10	22kg	
24·1·22	40	28	08	28kg	
25·1·22	30	18	12	18kg	
26·1·22	34	22	12	22kg	
27·1·22	36	28	08	28kg	
28·1·22	28	18	10	18kg	
29·1·22	30	22	08	22kg	
31·1·22	32	24	08	24kg	
AVERAGE	₹766	₹707	₹259	₹707	

Signature of the Incharge of Facility

MONTHWISE LOG BOOK/RECORD OF WASTE GENERATION &PROCESSING OF THE BWG

NAME OF THE BULK WASTE GENERATOR- POST GRADUATE GOVERNMENT COLLEGE FOR GIRLS-11,CHANDIGARH: 2022;MONTH: November 2022

DATE	TOTAL WASTE GENERATED(kg)	WET WASTE (Kg)	DRY WASTE (Kg)	WET WASTE PROCESSED THROUGH COMPOSTING(Kg) (APPROX-ROUND FIGURE GIVEN)	
1·11·22	110	102	08	102kg	
2·11·22	116	110	06	110kg	
3·11·22	114	108	06	108 kg	
4·11·22	118	108	10	108kg	TSC (Two stage Composting)
5·11·22	110	104	06	104kg	
7·11·22	118	110	08	110kg	
8·11·22	112	104	08	104kg	
9·11·22	114	108	06	108kg	
10·11·22	118	108	10	108kg	
11·11·22	116	110	06	110kg	
12·11·22	110	104	06	104kg	
14·11·22	120	110	10	110kg	
15·11·22	114	106	08	106kg	
16·11·22	110	104	06	104kg	
17·11·22	112	104	08	104kg	
18·11·22	116	108	08	108kg	SSC (Single stage Composting)
19·11·22	108	102	06	102kg	
21·11·22	122	110	12	110kg	
22·11·22	118	110	08	110kg	
23·11·22	116	108	08	108kg	
24·11·22	118	108	10	108kg	
25·11·22	114	106	08	106kg	
26·11·22	112	106	06	106kg	TSC (Two stage Composting)
28·11·22	122	110	12	110kg	
29·11·22	120	110	10	110kg	
30·11·22	118	110	08	110kg	
AVERAGE	₹2996	₹2788	₹208	₹2788	

Signature of the Incharge of Facility

Topic 4:Vermi Composting

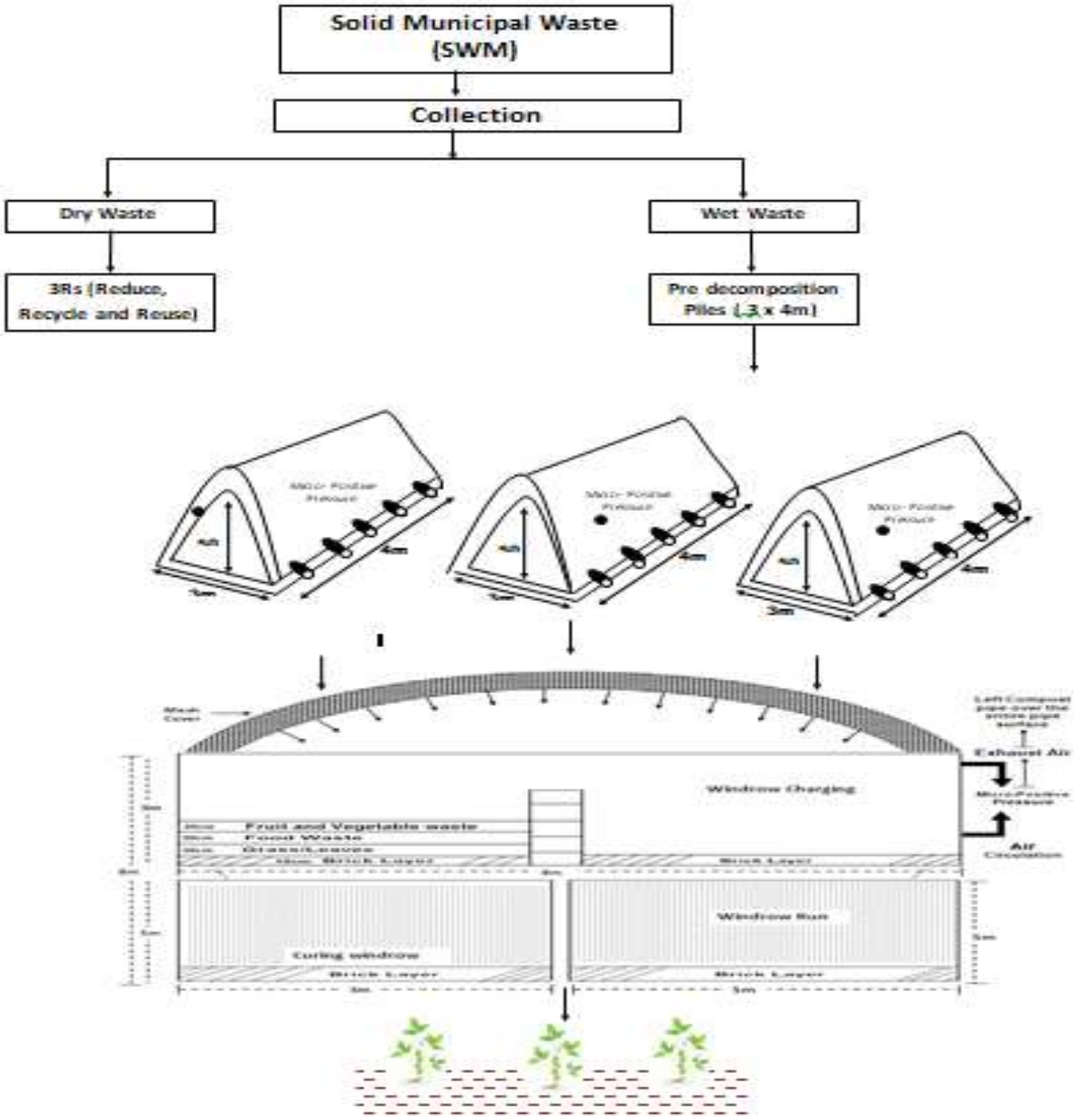
PGGCG-11, Chandigarhis carrying out vermicomposting in four pits below ground level inoculated with red earthworms (*Eisenia fetida*).The entire leaf litter of the college is periodically being added to the pits (10x3x2 feet) along with farm yard manure (FYM). Cow dung and chopped dried leafy materials are mixed in the proportion of 1:1 and are kept for partial decomposition for 15 – 20 days. A layer of 20cm of chopped dried leaves/grasses is kept as bedding material at the bottom of the bed and middle layer 10 cm of cow dung. Red earthworm (1500-2000) is released on the upper layer of bed. Bed is kept moist by sprinkling of water (daily), and it should be turned once after 30 days for maintaining aeration and for proper decomposition. Compost gets ready in 60 days. The finished product is 40-50% of the raw materials. Every 2-3 months the black and granular vermi-compost is being harvested, sieved, graded and utilized

Total Greenery of the campus (PGGCG-11, CHD)

Total Area of Campus: 1521600 Sq.ft
Covered Area (Building Area):603485.88 Sq.ft **(39.66%)**
Total Green Area = 918114.12 Sq.ft (60.34%)
Water Harvesting Area =21666.5 Sq.ft
Windrow Composting Plant and Bioreactor=1496 Sq.ft
Vermicomposting=344.4 Sq.ft
Total Area for Greenery and Environment Services including Water Harvesting, Windrow Composting plant and Bioreactor=**918114.82+21666.5+1496+344.4=941621.02**
Percentage of Greenery and Environment Services including Water Harvesting, Windrow Composting plant and Bioreactor =941621.72/1521600x100=61.88%
Basal Tree cover Area=504962.77(55%)

Topic 5: Audit of Campus Green Infrastructure, site planning and layout

(i)Layout of Windrow plant



(ii)Rainwater Harvesting Unit

POST GRADUATE GOVERNMENT COLLEGE FOR GIRLS, SECOR 11, CHANDIGARH

RAIN WATER HARVESTING UNIT

FILTRATION TANK

(35 ft x 11.5 ft x 6 ft)

RAINWATER TRAP UNIT

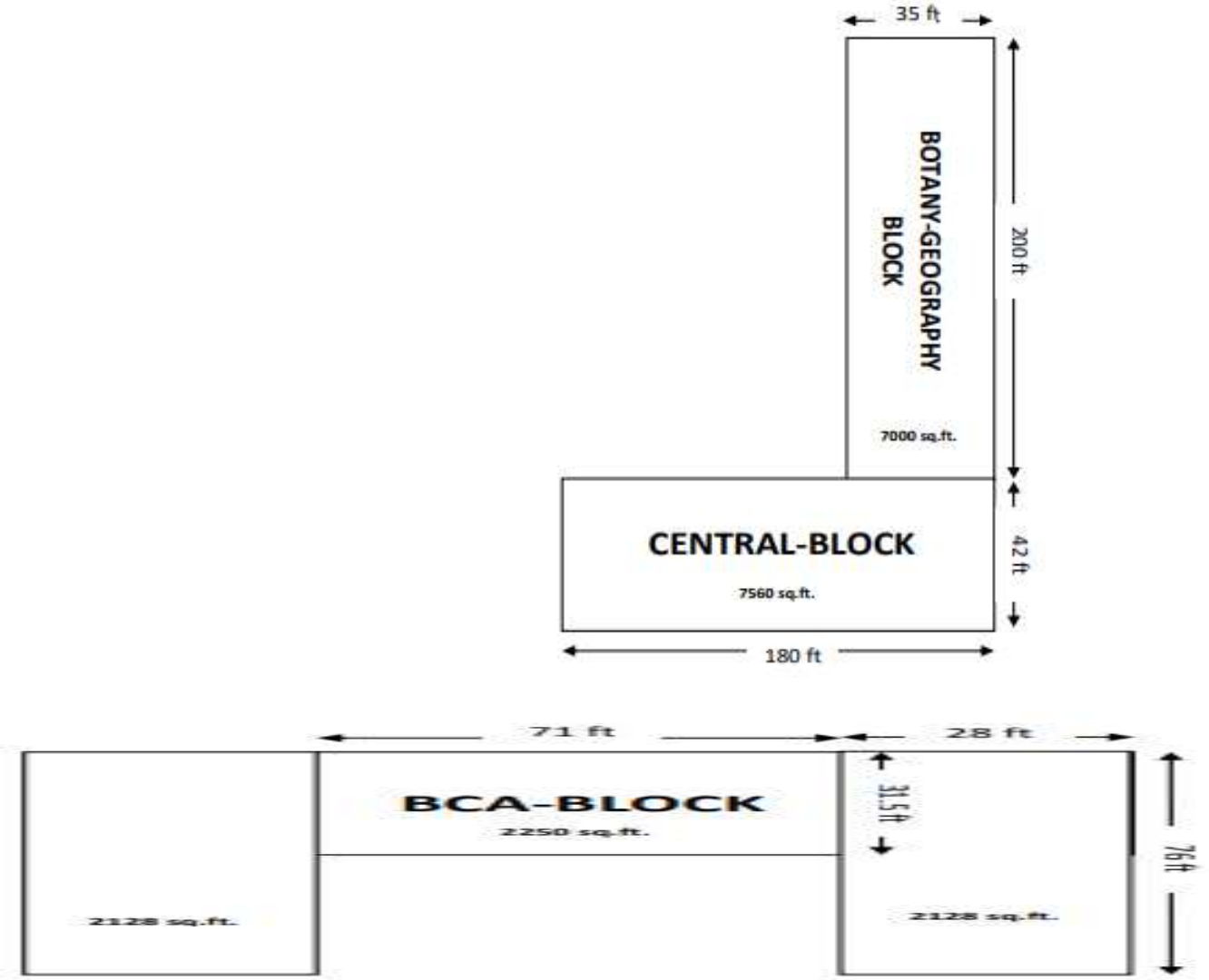
(3 ft x 3 ft x 3 ft)

Total roof top area for rain water harvesting

Botany Geography Block:	7000 sq. ft.
Central Block:	7560 sq. ft.
BCA Block:	6506 sq. ft.
TOTAL AREA:	**21,066 sq. ft.**

Total rainwater trap units connected to above said rooftop area: 22

Rain Water Harvesting UNIT
Roof Top Measurements in Blocks



(iii)Solar Grid System


Post Graduate
Government College...

WaterAuditReport
2022

POST GRADUATE GOVERNMENT COLLEGE FOR GIRLS, SECTOR-11, CHANDIGARH

PreparedandSubmittedby

IQAC and BOTANY DEPARTMENT
PGGCG-11, CHANDIGARH

1. **ExecutiveSummary**

The Post Graduate Government College for Girls, Sector-11, Chandigarh has a campus area sprawling in 35 acre and located at the foothills of the Shivalik Mountains. The College has four separate hostels for girls within its campus. There is almost189.44 m^3/daywater consumption.An intensivewaterauditisconductedand outcomesofauditareasbelow:

1. The main source for potablewater is Government supply and rest is tertiary water supplied through water supply grid system from Dagian village, Mohali.
2. The water supply is 24x7 with underground and roof storage tanks.
3. The building is well-maintainedand a lotofefforts are made to ensure zerowater loss dueto leakages as a result ofwhich, no major leakages were found mainly from the taps andwatercooler.
4. The reuse of potable water in form of grey water is used in the mopping and floriculture operations.
5. Thereis also a provision of rain-waterharvesting and recharging systeminstalledinthecampus.Thisindicatesmanagementconsciousnessaboutthegr ound-water levelandcontributingitsownparttowardstheartificialrecharge.
6. Thesprinklersystemisalsoinstalledforefficientuseofwater, minimizing its wastage.

2. ObjectiveofWaterAuditat Post Graduate Government College for Girls, Sector-11, Chandigarh

Theobjective ofthewater auditis toensureoptimumwater consumption in alloperations inthecollege campus. Another objective is to generate and maintainawareness onoptimumutilization ofwaterresources.Thefollowingarethemajoroutputsofwateraudit:

Establishment ofwaterbalance of the facility to understand thewater consumption anddischargebytheplantandthequantumofwaterlossinthesystem.

1. Data analysis for the water supply system from the direct and stored water reservoir to water consumingunits,storages,canteen,processes,domesticuseetc.includingraw-watertreatment,waste-watertreatmentanddischarge.
2. Exploring possibilities and options for appropriate and suitable water conservation activitiessuchasrain-waterharvesting,ground-waterrecharge,recycling&reuseetc, aretobesuggestedundertherecommendationsforwaterconservationandmanageme ntplanbasedontheoutcomesoftheobservationsandanalysis,
3. Basedonthedataavailability anattemptshallalsobe made forcost-benefit analysis onwatersaving.
4. Identificationof additionalsourcesofwatersupply.
5. Identificationofmajorareasofwaterconsumption.
6. Identificationofleakagesandwaterlossareas.
7. Scopeofimprovementofwaterconservation.

3. **WaterStorageCapacity**

The water is distributed in the entire campus. There are total 90 water storage tanks other thanunderground main storage tank. These 90 water storage tanks are installed in differentareas.Thelistofthetanksandthestoragetankcapacityisasbelow:

- Total Number of 5000 litres Tank=20
- Total Number of 2000 litres Tank=24
- Total Number of 1000 litres Tank=43
- Total Number of 500 litres Tank= 02
- Total Number of 300 litres Tank= 01

Number of times the water Tanks filled per Day: 2 Times

Fresh Water Available is; 100,000+48000+43000+1000+300 x 2=
384600 litres of water is made available

Water Requirement in the campus the Campus:

Total Strength: 4259
Hostel Students: 797
Day Scholar: 3462
Faculty: 196
No. of Day scholars+ faculty+ staff) X (30 litres) + (No. of hostellers X 100 litres) =

(3462+196x30)+(797x100)=189440 litres

Hence, the college has a storage capacity of twice the requirement of the stakeholders on the campus.

4. Water Consumption

The water consumption is calculated based upon twotypesofwater: PotableandNon-potablewater.

A. Potablewaterconsumptionisinfollowingareas:
    1. WaterCooler(DrinkingWaterandR.O.Rejection)
    2. Washbasin
    3 Canteen
B. Non-potableisusedinfollowingareas:
    1. Washrooms
    2. Gardening
    3. FireWaterTanks

Thebreak-upforwaterconsumptionisasbelow

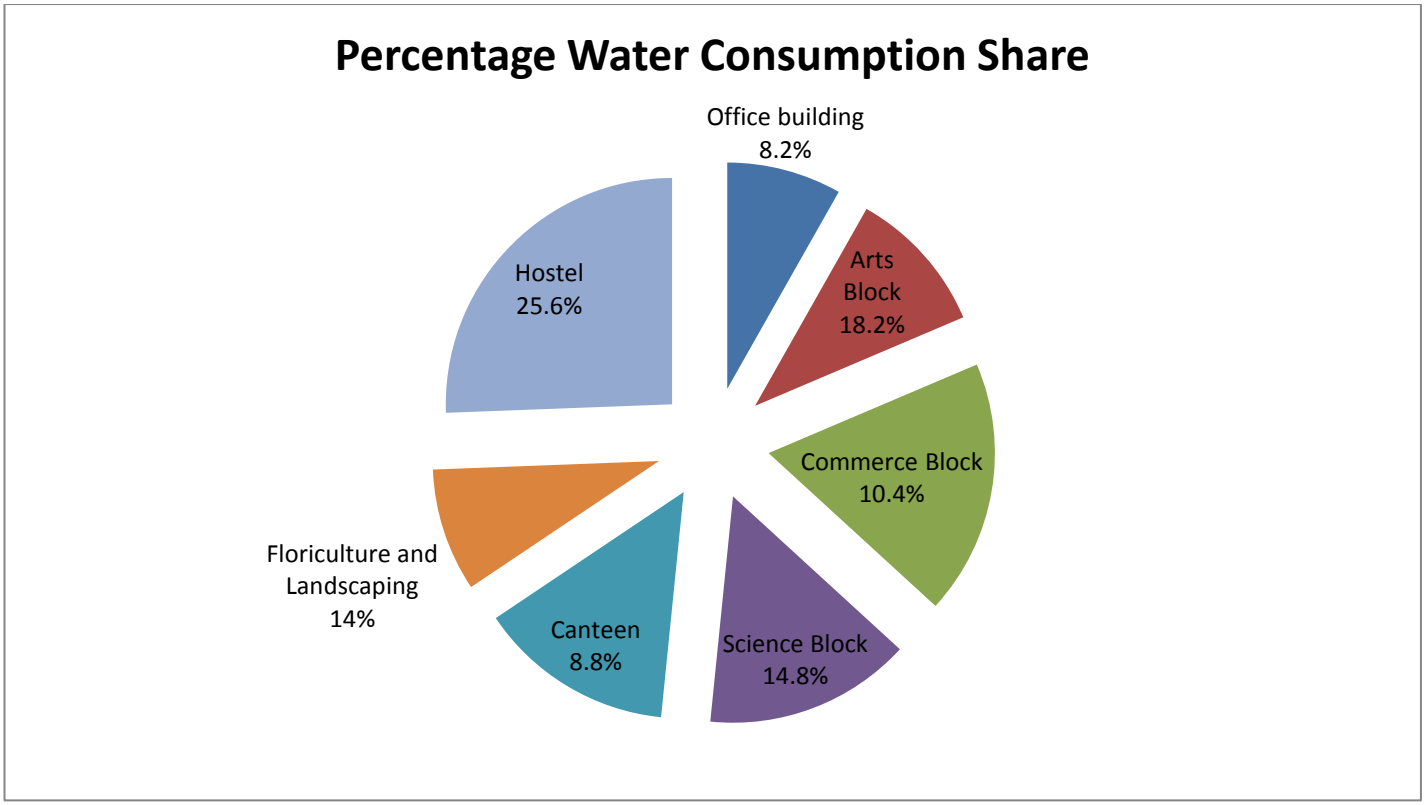


Figure1: Percentageshareofwaterconsumption

5. WaterConservationMeasures

(i) Rain-waterHarvesting

Rain-water harvestingis a techniqueused forcollecting,storing,andusingrainwater for floriculture and landscaping operations and recharging of the water table. Normallywhen it rains, therainwaterpours offthe roof,downthroughtheguttersandrunsoffintotheyardorstreet.Withrain-waterharvesting,rainwateriscollectedinawaterstoragetankorcisternandstoredforlateruse.

Thebenefitsofharvestingrainwaterareasbelow:

- Rainwaterisarenewable,sustainableandahighqualitywatersourceforyourhome.Someofthebenefitsofcollectingandstoringrainwaterinclude:
- Makinguseofavaluableresourcethatis“freeofcost”.
- Improving plantgrowthbyusing rainwater for irrigationbecausestoredrainwater is freefrompollutantsaswellassalts,minerals,andothernaturalandman-madecontaminants.
- Reducingwater bills anddemandon the community’s drinkingwater supplyby usingrainwaterforflushingtoilets,washingclothes,wateringthegardenandwashingcars.

POST GRADUATE GOVERNMENT COLLEGE FOR GIRLS, SECOR 11, CHANDIGARH

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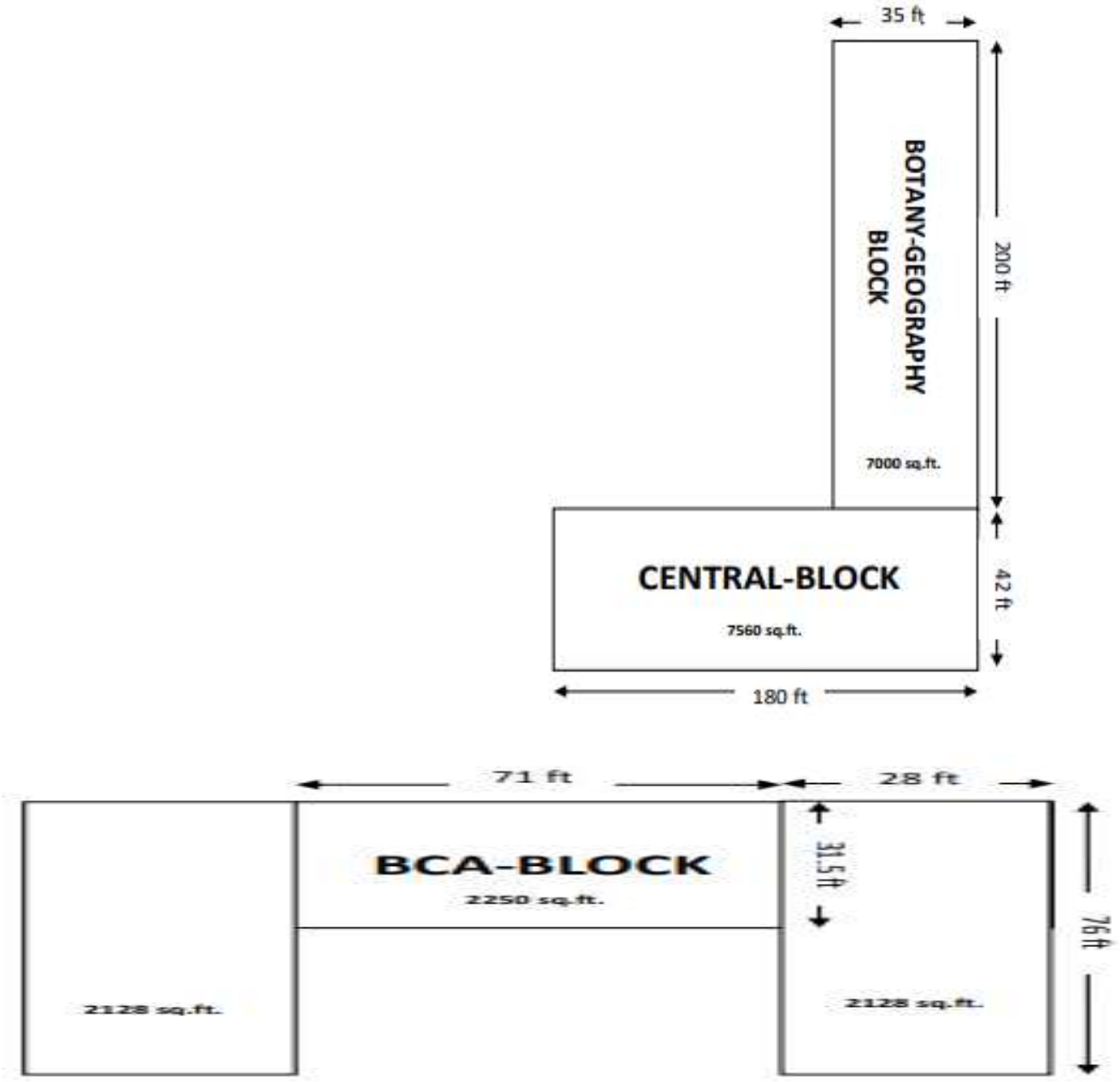
TOTAL AREA:	**21,066 sq. ft.**

Total rainwater trap units connected to above said rooftop area: 22

Water trapped in 22 trap units from rooftop areas is collected in filtration tank. Filtration tank is further connected to the recharge well

Rain Water Harvesting Unit

Roof Top Measurements in Blocks



Rain Water harvesting per day per 100Sq.mts in Chandigarh=98
Number of Rainy Days=71(2020-2021)
Catchment Area of Roof top in Sq. mts in the PGGCG-11, CHD Campus =2012.8 sq. mts
Rain Water Harvesting (in Litre) for Season= 98x71x2012.8/ 100
=140050.6 litres of water

(ii) Tertiary water supply in the college

To conserve and to prevent the wastage of potable fresh water, the college has taken connection of tertiary water supply from sewerage treatment plant (STP) situated at Diggian village in Mohali. This treated water is used to water the lawns and all floriculture and Landscaping operations, hence meeting 100% demand of all floriculture and horticulture activities of the college campus with the help of 15 hydrants.

(iii) Grey-water

Grey water streamisdefinedasallwastewaterstreamsgenerated fromofficebuilding and different blocksexceptforthewastewaterfromtoilets.Sourcesofgrey-waterinclude water coolers and filters. Grey water is easy to onsite recycle foruses such mopping and floriculture and landscape irrigation, or even irrigation of crops for project work. Grey water (GY) harvesting, a futuristic approach for sustainable growth, can contribute in reducing pressure on water resources and plays a fundamental role in its sustainable management. Grey water is the amount of waste water from filters, water coolers, which has immense reuse potential, hence reducing load on potable water.The innovative resource recovery strategy utilizing onsite grey water recycling, tertiary water and rain water harvesting, meet 25% of the demand for various non-potable uses such as mopping, horticulture and floriculture crops. The GY, a dual economy process, which can not only provides efficient irrigation but also has economic environment benefits, where it mitigates 47.7 metric tonne of CO_2 annually.

(iv) Useofsprinklerirrigationsystem in lawns

The sprinklers are installed in thecampus for effectiveuseofwater. These are installed all over the campus starting from lawns and grounds of hostels,and differentblocks for minimizing thewater loss. In this method, water is sprayed to the airand allowed to fall on the ground surface.

AWARDS

ENVIRONMENT SOCIETY AWARD-2019

6-6-2019: Prakriti, the Environment Society of Post Graduate Government College for Girls, Sector-11, Chandigarh has been awarded the Environment Society Award-2019 by the Environment Department, Chandigarh Administration under the Green Corps Programme for carrying out outstanding environmental awareness activities during the year 2018-19.

INTERNATIONAL BEST SCIENTIST AWARD'

30-01-2020: Post Graduate Government College for Girls, Sector-11, Chandigarh added another feather to its cap with an international award for research in sciences. Dr. Vishal Sharma, Associate Professor, Department of Botany, of the college has been conferred the 'International Best Scientist Award' in Plant Biotechnology under Research Leadership Award 2020.

The award has been given by a Malaysia based research organization, RULA (Research Under Literal Access) accrediated by US based World Research Council (WRC) and United Medical Council (UMC). Dr. Vishal Sharma was given this award in Trichy, Tamil Nadu. It is noteworthy that 80 journals and 187 institutions from 54 countries are accrediated to the WRC and UMC.

Prof. Anita Kaushal, Principal of the college congratulated Dr. Vishal for his excellence, and observed that the college is always forthcoming in guiding and supporting the academic endeavours and research initiatives of the faculty.

EAT RIGHT CAMPUS AWARD

21-01-2020: Post Graduate Government College for Girls, Sector-11, Chandigarh added yet another feather to its cap by winning the EAT RIGHT CAMPUS AWARD. The institution is the first college in the tricity to have won this award, and has been awarded as per the guidelines established by Food Safety and Standards Authority of India (FSSAI).

The declaration of the award was under the complete audit conducted by the Food Safety Department, UT Chandigarh and FSSAI. All the hostel messes, college canteen and kiosks were audited under the parameters of hygiene, quality of food and infrastructure. Presenting the award to the institution, Dr. G. Diwan, Director Health, UT Chandigarh congratulated the college and applauded the efforts of the college authorities towards establishing and following appropriate standards in providing healthy and hygienic food to the students.

Prof. Anita Kaushal, Principal of the college observed that the college administration always works for the safety and well-being of the students so that they are able to concentrate on their holistic development. A quality check on all the eatables is regularly enforced on the campus, she added.

PGGCG-11 BAGS BEST NSS UNIT AWARD IN PU

25-04-2019: The Post Graduate Government College for Girls, Sector-11, Chandigarh NSS unit has bagged the ***BEST NSS UNIT AWARD*** among the 140 colleges affiliated to Punjab University, Chandigarh. The award was given to the Principal Dr. Anita Kaushal by Dr Shankerji Jha, Dean University Institutions of PU in the presence of Dr Navdeep Sharma, NSS Coordinator PU, and Shri Bikram Rana, State Liaison Officer at a function organised by NSS department of Panjab University.

The college has 8 units of NSS wherein 800 NSS volunteers carry out community-centric activities aimed at awareness generation and sensitisation on various social issues. Upholding the spirit of NSS- "Not Me But You", the volunteers under the guidance of Programme Officers accomplished several campaigns. They played a pivotal role in propagating the governmental programmes such as Swachh Bharat, Unnat Bharat and Digital India. It is noteworthy that the college volunteers undertook these drives in five villages adopted by the college, namely Khuda Jassu, Khuda Lahora, Khuda Ali Sher, Sarangpur and Dhanas throughout the year. The NSS units also organised an Executive Development Programme in these villages this year for motivating the rural youth towards self-employment and making them economically self-reliant.

The Principal thanked the UT Administration and PU for providing invaluable leadership and playing an instrumental role for the cause of national service. She complemented the efforts of hard working faculty and extremely dedicated NSS volunteers of the college.

CLEAN AND GREEN CAMPUS INITIATIVES & BEYOND THE CAMPUS ENVIRONMENTAL PROMOTIONAL ACTIVITIES

(I)495 KWP Solar Grid System

(ii)Ramp

(iii)Best Practice: Windrow Composting

Bioreactor

(iv)Environment related Activities:

Segregation of Waste in dustbins and Insignia for awareness;


GPS Map
Sector 11 C, Sector 11 D, Sector 11 D, 11C, Sector 11, Chandigarh, 160011, India
Latitude
30.755051700398326°
Longitude
76.78252559155226°
Local 11:01:05 AM
GMT 05:31:05 AM
Altitude 311 meters
Thursday, 04-07-2022
Note : Hostel 4, Post. Graduate Government College for Girls, Chandigarh


go zero waste
GPS Map
Sector 11, 11C, Sector 11, Chandigarh, 160011, India
Latitude
30.7544883526861 67°
Longitude
76.781309209764°
Local 10:57:46 AM
GMT 05:27:46 AM
Altitude 310 meters
Thursday, 04-07-2022
Note : Hostel 3, Post. Graduate Government College for Girls, Chandigarh


GPS Map
11c, Madhya Marg, 11C, Sector 11, Chandigarh, 160011, India
Latitude
30.756153794936836°
Longitude
76.78062030114233°
Local 10:50:07 AM
GMT 05:20:07 AM
Altitude 309 meters
Thursday, 04-07-2022
Note : Post. Graduate Government College for Girls, Chandigarh


11c, Madhya Marg, 11C, Sector 11, Chandigarh, 160011, India
Latitude
30.75636581517756°
Longitude
76.78071057423949°
Local 10:49:39 AM
GMT 05:19:39 AM
Altitude 308 meters
Thursday, 04-07-2022
Note : Post. Graduate Government College for Girls, Chandigarh


No Plastic Bags!
No Plastic Bags!
GPS Map
Sector 11C, Chandigarh, 160011, CH, India
Latitude
30.756052 N
Longitude
76.780980 E
Local 01:22:02 PM
GMT 07:52:02 AM
Altitude 357.12 meters
Thursday, 03/24/2022
Note: Ban on use of plastic Post Graduate Government College For Girls,Sec 11

(V)Inputs from Botany –Environment related Activities

(i)To create awareness about negative effects of single use plastic items and Municipal Solid Waste:

In process to the implementation of the comprehensive action plan for mitigation of plastic pollution and to create mass awareness, in students and faculty, Post Graduate Government College for Girls,Sector-11, Chandigarh organized a orientation program for the awareness of faculty and NSS volunteers on September 9,2022 which includes skit by students; talk with stakeholders(Sweepers, workers of Mess, Canteen and other food services (juice, cafeteria),in order to aware them about the negative effects of single use plastic .

(ii) **To conduct orientation program to create mass awareness single use plastic items and Municipal Solid Waste Segregation at Source:**

Orientation Program organised in Post Graduate Government College for Girls, Setor-11, Chandigarh on
29 August, 2022, in order to sensitize students and create awareness about Segregation at source and Solid waste Management. More than 450 students participated in the orientation program.

(iii)Interactive Session on Environment Climate Change on 10.9.2022

An Interactive Session on Environment Awareness(Climate Change) in collaboration with SPICMACAY on 10.9,2022 with Dr. Kiran Seth, Padam Shree awardee, an eminent academician and philanthropist, as Guest Speaker. The students were sensitized towards personal hygiene and the awareness of segregation and single use plastic mitigation measures. More than 450 students attended the program.

(iv)Post Graduate Government College for Girls, Sector 11,Chandigarh organized an orientation program on personal Hygiene and Societal Cleanliness drive sensitizing the students and NCC volunteers about environment challenged and the guest speaker for the function is Ms Prabhjot Kaur Atwal, Nodal Officer, Social Welfare Department, Chandigarh Administration.

Ms Prabhjot Kaur Atwal, Nodal Officer, Social Welfare Department, Chandigarh Administration emphasized on the need to be aware students to make society clean to mitigate climate change due to social problems. In nutshell, to nip the evil in the bud is the most imperative endeavor that we all can make to make environment sustainability for better future for generations to come.

(vi)Tree Plantation drive (February 10-26, 2022) to celebrate Azadi ka Amrit Mahotsav.

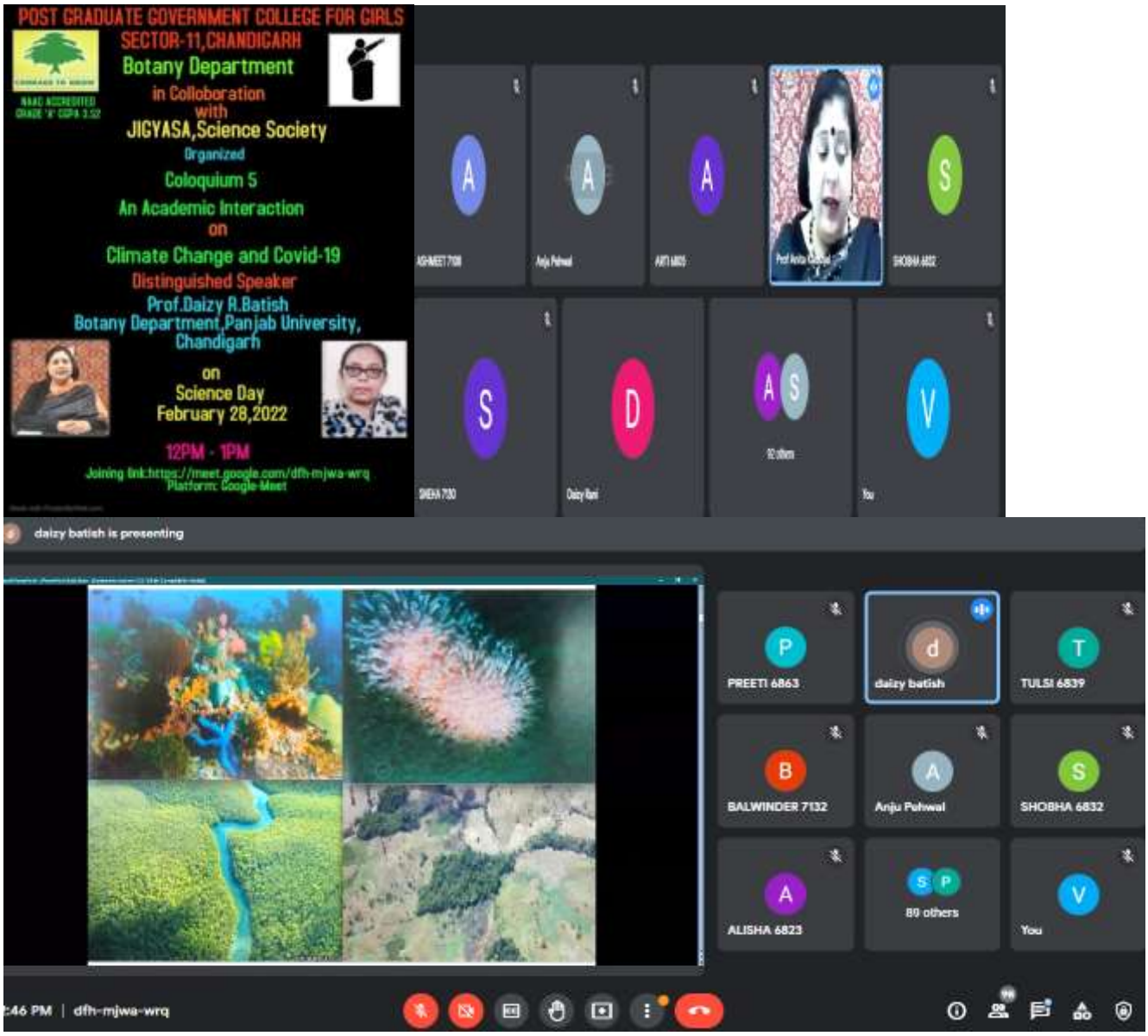
Botany Department has organised plantation drive on February 10-26, 2022 to celebrate Azadi ka Amrit Mahotsav. More than 200 saplings of medicinal and ornamental trees of *Azadirachta indica*(Neem),*Butea monosperma*(Flame of the Forest; Palash),*Cassia fistula* (Amaltas),Mangifera indica(Mango),*Mimusopselengi(*Maulsari),Tamarindus indica(Imli),Putranjiva roxburghii(Putranjiva),*Tinospora cordifolia*(Giloy) were planted across the campus

(vii)Colloquium-An Academic Interaction (Series 5):

Colloquium, an intellectual discussion, is derived from Latin word which means to talk together. The word conveys a conversation that is both structured and informal, a meeting of minds that is both series and spirited and together make the idea of intellectual freedom possible. Colloquium provides an opportunity to share research and constructive feedback and provides freedom to pick a topic that mirrors your interests and to pursue questions that fire your imagination and meeting for discussion. A Colloquium is an academic conference , which occurs bi-annually in the first and last quarter of the year, where the presenter present papers ,analyze and discuss a particular topic and students harvest knowledge listening to the series of lectures. The Colloquium showcased student research through poster and oral presentations and provide platform to the undergraduates and postgraduates students to share their views and research and improve their diction and presenting skills.

National Science Day (NSD) is celebrated on February28 to commemorate the discovery of the 'Raman Effect'. The theme of the National Science Day (NSD) is Integrate approach in science and technology for a sustainable future'. Botany department in collaboration with Jigyasa, Science society of Post Graduate Government College for Girls, Sector-11, organized fifth series of colloquium on "Climate Change and Covid-19" delivered by Prof. Daizy R.Batish, Botany Department, Panjab University, Chandigarh, which was attended by

almost 500 students as well as faculty members from various colleges. The objective of the lecture was to bring science closer to society by highlighting the major global challenges which society is facing today. The relationship between climate change and coronavirus is ambiguous , hence it is becoming a serious threat to lives of billions of people and the planet. The inference drawn from the lecture is that there is a possibility of association between Covid-19 and climate change and the resource persons highlighted that safeguarding biodiversity is essential to prevent the next pandemic. Prof. Anita Kaushal, Principal of the college, said that the college has always mobilized resources for various pro-environment programmes, such as cleanliness and plantation campaigns in and around the campus for the micro-climatic eco-restoration.



(viii).Tree Plantation Drive(Selfie with Plant)

Mahatma Gandhi National Council of Rural Education(MGNCRE),Ministry of Education,Government of India organised Tree Planation drive(Selfie with Plant) contest in the colleges of the Chandigarh(May25-June,2022).Post Graduate Government College,Sector-11,Chandigarh have been in the awarded by MGNCRE,Ministry of Edcuation

for achieving the top position with around 900 selfie,a marvellous achievement under the dynamic leadership of the Principal(Prof.)Dr.Anita Kaushal and PGGCG fratenity.

Mahatma Gandhi National Council of Rural Education
Department of Higher Education Ministry of Education
Government of India

CERTIFICATE OF APPRECIATION

This certificate is presented to Post Graduate Government College for Girls, Sector-11 Chandigarh for successfully conducting the largest Environment awareness activity **'Selfie with Plant'** in Higher Education Institutions across Chandigarh which speaks volumes of your dedication and commitment to make not only your institution exemplary, but also is an inspiration to your students.

It is our privilege to express our gratitude and recognise the outstanding work done by the college.

05.06.2022
DATE

MR. SAMARTH SHARMA
PROGRAMME COORDINATOR
MGNCRE, MINISTRY OF EDUCATION
GOVERNMENT OF INDIA

CER NO: MGNCRE/GOI/7549

Azadi Ka Amrit Mahotsav

Certificate of Appreciation

This certificate is in recognition of the outstanding work done by **Dr Vishal Sharma Nodal officer** from PosteGraduate Government College for Girls,Sector-11,Chandigarh for carrying out environment awareness activity' Selfie with plant' on the occasion of World Environment Day. The activity is initiated by the college in collaboration with MGNCRE, Ministry of Education Government of India.

Your kindness, courage, and strength are greatly appreciated.

Mr. Samarth Sharma
Programme Coordinator
MGNCRE, Ministry of Education
Government of India

Dr. Shatrughan Bhardwaj
National Coordinator
MGNCRE, Ministry of Education
Government of India

Mahatma Gandhi National Council of Rural Education
Department of Higher Education, Ministry of Education
Government of India

(ix).Selfie with Jute /Cloth Bag to mitigate single use Plastic (SUP): "International Plastic Bag free Day (JULY 3, 2022)

International Plastic Bag free Day, celebrated on July 3, 2022, is a global initiative that aims to eliminate the use of plastic bags.In order to create mass awareness on this day, PostGraduate Government College for Girls, Sector-11, Chandigarh, organising "Selfie withJute/Cloth Bag" in Plastic Free Week (June29 -July 4, 2022) to create awareness amongstudents and community to combat the great environmental challenge. The InternationalPlastic Bag Free Day-is a unique opportunity to spread the word that a plastic bag free world is possible. With "Beat Plastic Pollution", we have to follow the following steps to avoid plastic usage in the campus to protect our micro-environment for eco-restoration:

Here are steps we use today and in coming days to avoid plastic usage in our daily lives andhelp in eco-restoration:

(x). **Sapling Plantation arrest Ozone layer Depletion**

Today the world is facing environmental problems like Global warming, Ozone depletion and pollution. The solution of these problems lies in planting more

trees as forests are the only natural industry which is prime source of environmental purification and beautification.T he importance of growing trees to bring down carbon dioxide emissions and thereby hampering depletion of the ozone layer. The ozone layer which was located 10km to50km above the earth prevents high frequency ultraviolet rays of the sun from reaching the earth, thus protecting human beings from skin cancer and host of other diseases. Botany Department of Post Graduate Government College for Girls, Sector 11, Chandigarh, on the occasion of International Ozone day(September16,2022),planted more than 100 multipurpose trees of medicinal and ornamental value i.e Ashoka(*Saraca indica*),*Azadirachta indica* (Neem), GulMohar (*Delonix regia*), Mango (*Mangifera indica*), Harshingar(Nyctanthes arbortristis), Palash (*Butea monosperma*),Tecoma(*Tecoma* stans). Principal, Prof (Dr)Anita Kaushal ,who participated as Chief guest, planted saplings on the sprawling college campus to mark the occasion and stressed that investing in nature and restoring nature help us address specific global environmental problems.

(xi). **Tree Plantation Drive (30th September, 2022)**

Van Mahotsav is an annual tree plantation movement in India celebrated to create awareness about the bad effects of deforestation. Botany Department, Post Graduate Government College for Girls, Sector11, Chandigarh, a NAAC Accredited 'Grade A', CGPA3.52 in collaboration with State Bank of India, Chandigarh, is taking initiative to organize "Tree Plantation drive " today with a theme "If you plant a tree, you plant a life". The objective of campaign is to encourage community outreach and to raise public awareness on environmental pollution and plant conservation. The plantation drive organized under able

guidance of Principal, Prof. (Dr) Anita Kaushal with Dr Vishal Sharma, coordinator of institute. More than 100 multipurpose trees of medicinal and fruiting value i.e *Azadirachta indica* (Neem),Guava(*Psidium guava*),Lithchi(*Litchi chinensis*),Kinoo(*Citrus reticulata*) , Jackfruit (Artocarpus heterophyllus),Papaya(*Carica papaya*), Harshingar (Nyctanthes arbortristis),Mango(*Mangifera indica*),Palash (*Butea monosperma*),Tecoma (*Tecoma stans*) are planted by the college students. The campaign is attended by more than 200 participation including faculty members and the students.


THE BOTANICAL SOCIETY
GREEN THUMBS
GPS Map Camera
Chandigarh, Chandigarh, India
Post Graduate Govt. College for Girls,Sector 11-C Chandigarh Post Graduate Govt. College for Girls, (Computer Application Department)Sector, 11C, Sector 11, Chandigarh, 160011, India
Lat 30.754195°
Long 76.780328°
30/09/22 12:43 PM GMT +05:30
Google
THE BOTANICAL SOCIETY
GREEN THUMBS

Pictures of Day Celebrated

(i)Celebration of World Water Day at Regional Institute of English

Dr. Vishal Sharma. HOD, Botany has delivered lecture at Regional Institute of English (RIE),Sector-32,Chandigarh on "Mitigation of Climate Change-An Assessment of Carbon Foot Print Models of an Educational Institute For Sustainable Future" on World Water Day(March22,20220,as a resource person.

(V)Awards related to environment

Awards: The Third Party Verification

The college is pioneer in waste management practices in country as well as in Asia. The college work on solid waste management is acclaimed at National and International forum as follows.

1 The work is acclaimed by United Nations and bagged United Nations (UN) , Sustainable Development Goals (SDG) Action award in Individual category ("Environment Sustainability") for this study on Solid waste management(UNDP),an excellent community outreach in Covid-19 era. The present Solid waste windrow project study is the second after Mumbai to get this award and sharing stage with actor Sonu Sood and Philanthropist S. P. S. Oberoi for their exemplary and humanitarian work during Covid-19.

2. Skoch awards, instituted in 2003, is the highest honour in the county, which recognise projects and institutions that go extra mile to make India a better nation and covers the best of efforts in capacity building, empowerment and excellence in technology, based on extensive documentation based on desk and secondary research followed by an evaluation presentation to the eminent jury of domain. Skoch are competitive awards, which recognise leadership and excellence in accelerating socio-economic changes and benchmark of best practice in the fields of technology and inclusive growth. The institute is pioneer from the College institutes in the country to be the winner of 66 Skoch order of merit-Semi-finalists and joined the selected group finalists like CM Haryana, Madhya Pradesh, Rajasthan, HAL, SAIL, Ministry of Rural development, Government of India.

3.The college work on solid waste management"Windrow composting-An Aerobic Bio-Conversion and Stabilization of Municipal Solid waste (MSW) in Chandigarh" was recognised and awarded in category of 'Climate Change and Sustainability of Health care System' in 26th International Congress of IFHE-International Award 2020 organised by IFHE (International Federation of Health Care Engineering) in Italy(Jan24-28,2021).

4. Green Champion Award –Swachhta Action Plan- Exemplary Performance Award-2020-2021

The college was awarded Green Champion Award (2020-2021) by Mahatma Gandhi National Council of Rural Education (MGNCRE), Department of Higher Education, Ministry of Education, Government of India for its contribution to contribution to the field of Swachhta aspects and practice and figured in the India Today's list of 400 prominent colleges in the country for work on environment sustainability..

5. The Rose festival of Chandigarh is one of the biggest rose shows held in Chandigarh. It is a colourfulbonanza which showcase the diverse beauty of flower. At the same time, the festival has also made efforts to ensure that such diversity and heterogeneity is reflected at the organization level as well to spread awareness about the need to preserve nature The institute conferred the Best Maintained Campus in 47th, 48th and 50th Rose Festival in Section H(Category H3) since the year 2018 till the present year 2022;a pioneer and marvelous achievement by the Government institute. The flowers in the all competitions are raised through waste generated compost.an excellent **'Best of Waste scenario'**.

6. The institute work on solid waste management "Windrow Composting-An aerobic Bio-conversion& Stabilization of Municipal Solid Waste (MSW) in Chandigarh" was awarded as Innovative Environment Project by Confederation of Indian Industry(CII) in their 8th edition of National Awards on July20-30,2021 for their Carbon foot print Benefit.

7. The institute was acclaimed and awarded in "Innovation in Recycling process and Technology" Category, in the Business World prestigious award "Recycling for Greener Tomorrow Conclave Awards 2022 on January 16, 2022.

8. The Green Gown International Awards in partnership with Association of Common with Universities (ACU), AUF, International Association of Universities (IAU) and United Nations Environment Program (UNEP), recognized the International Sustainability initiatives being undertaken across the world. The ethos of the awards is to ensure the lessons and examples of good practice. Green Gown International Award, a prestigious award of UK, is the leading global environmental authority which promotes the coherent implementation of environmental dimensions of sustainable development, announced finalists shortlisted from 19 countries and the work "Windrow Composting: Stabilization of Municipal Solid Waste (MSW) in Chandigarh for Sustainable Zero Waste Future**",** was shortlisted as one of the finalists of United NationsGreen Gown International Awards 2022,a pioneer project from India.

9 On Environment day (June 5, 2022), the National Environmental Science Academy, New Delhi has conferred 'Green Technology Innovative Awards-2022 to the institute in

International Conference on Agriculture Science and at ICAR-IGFRI, Jhansi, Uttar Pradesh, for the contribution in the field of mitigation of Carbon footprints and Green awards for Innovation & Environment Awareness at World Environment Expo (Pragati Maidan, New Delhi).

10.Recently, awarded "Green Technology Award 2022" in ESDAWorld Environment Summit(WES) organized by United Nations Environment Program(UNEP) with Ministry of Environment and Climate Change ,Government of India and in association with CSRI-NEERI,CSRD JNU and foreign partner, Maldives, Nepal and Switzerland and Indian counterpart(NABARD) at Vallabhbhai Patel Chest institute at Delhi University, New Delhi on October16,2022.

Fig.1: United Nation Award (UN-SDG-2020)

Fig.2:66 Skoch Semi-Finalist Order of Merit

Fig.3:Awarded in category of 'Climate Change and Sustainability of Health care System' in 26th International Congress of IFHE-International Award 2020 in Italy(Jan24-28,2021).

Fig4: The project is awarded as Innovative Environment Project by Confederation of Indian Industry(CII) in their 8th edition of National Awards on July20-30,2021

District Green Champion Certificate

This is to certify that **Post Graduate Government College for Girls, Sector-11, Chandigarh** is hereby recognized as **District Green Champion** for **Chandigarh** District for the Academic Year 2020-21. The Institution has successfully set up the Swachhta Action Plan Committee, adopted and implemented best practices in the areas of Sanitation, Hygiene, Waste Management, Water Management, Energy Management and Greenery Management.

This certificate is given in the presence of **Shri. Rubinderjit Singh Brar PCS, Director Higher Education, Chandigarh.**

August 2021

Dr W G Prasanna Kumar
Chairman
MGNCRE, Ministry of Education
Government of India

Certificate of Recognition

Figs5-6: District Green Champion Award (2020-2021) and certificate of Recognition; MGNCRE, Ministry of Education, Government of India

Figs.7-8: Business recycling Award-2022-23 and Holcim Awards; 2021-22

Fig.9: United Nation Green Gown International Awards-2022-2023

Figs.10-11-Fig.10:Green Award conferred Dr. Ajay Mathur, Director General, International Solar Alliance(ISA), at UNEP(United Nation Environment Programme and Ministry of Environment Forest &Climate Change, Government of India at World Environment Expo, Pragati Maidan, New Delhi on eve of Environment Day,June5,2022 for mitigation of Carbon footprints; Fig.11: Mahatma Gandhi National Council of Rural Education (MGNCRE), Department of Higher Education, Ministry of Education, Government of India, awarded Dr Vishal Sharma for the exemplary during Environment Day Celebrations (June5, 2022) and Environment awareness.

Figs: 12-13:Dr VISHAL SHARMA has conferred 'Green Technology Innovative Awards-2022 by The National Environmental Science Academy, New Delhi in International Conference on Agriculture Science and Technology: Challenges and Prospects (AST 2022) on 6-8 May at ICAR-IGFRI, Jhansi, Uttar Pradesh, for his contribution in the field of mitigation of Carbon footprints