



एक कदम स्वच्छता की ओर

Report on Initiatives taken under
Swachh Bharat Abhiyan
(2018-19)



Submitted by

Mehr Chand Mahajan
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www.mcmdavcw-chd.edu

Our Beacon of Light



MAHARISHI SWAMI DAYANAND SARASWATI

Our Guide and Mentor



*Dr. Punam Suri Ji, Padma Shree Awardee
Hon'ble President
DAV College Managing Committee
New Delhi*



MESSAGE FROM THE PRINCIPAL

'Swachhta' is no longer a concept or Government programme. It is an all encompassing movement which strives to spread the message of sustainable development due to its holistic dimensions. Seen in a broader perspective, it involves cleanliness of the planet, Environment protection, inclusive growth and most importantly, cleanliness of the mind. It is heartening to see its impact on grass-root levels due to focussed and intense efforts of all stakeholders.

The involvement of educational institutions, NCC, NSS and NGOs has made it all the more meaningful and relevant. I am elated to know the exemplary work being done by

Team MCM in the area of Swachhta. I also congratulate my colleagues and take pride in the fact that their initiatives have been appreciated by the Government of India and UT of Chandigarh. I am grateful to DAV College Managing Committee, New Delhi for supporting our endeavours in this area. I am obliged to our worthy President, Dr. Punam Suri Ji, Padam Shree Awardee for his pragmatic leadership and guidance. I am sincerely grateful to Sh. H. R. Gandhar, our senior governing body Member and to Dr. Satish Sharma, Director Colleges for their valuable insights and motivation.

It gives me immense pleasure to share with you that our esteemed institution, Mehr Chand Mahajan DAV College for Women, Chandigarh has been awarded the First Prize for the 'Cleanest Residential College' in the country, in the National Swachh Campus Rankings, 2018 by the Government of India, in our momentous Golden Jubilee Year. The college has also won the all India third rank in 'Best Citizen-Led Innovation' in the Swachh Sarvekshan by the Ministry of Housing and Urban Affairs in 2019. On this historic occasion, we wish to catalogue the major Activities organized by our institution under the aegis of Swachh Bharat Abhiyaan in the year 2018-19.

Last, but not the least, I am grateful to the entire Swachhta Team for their single minded devotion to this noble cause. The editorial team of this report deserves special appreciation for bringing it out within the specified time constraint. I am grateful to NCC, NSS and particularly Swachh Bharat Summer Internship (SBSI) Team.

Best Wishes !



Dr. Nisha Bhargava
[Principal]

INTRODUCTION

Swachh Bharat Abhiyan is an initiative by the Government of India to make the country completely clean and hygienic. This mission was launched by Hon'ble Prime Minister, Shri Narendra Modi on 2nd October 2014 and it urges people to fulfill Mahatma Gandhi's vision of a clean India by his 150th birth anniversary in 2019. Therefore, the mission envelops all rural and urban areas of the country to create a clean and hygienic environment. The clarion call given by our Hon'ble Prime Minister Shri Narendra Modi seeking citizen participation has found increasing resonance in the efforts of various stakeholders that have transformed it into a mass movement.

Conscious of its social responsibility, Mehr Chand Mahajan DAV College for Women plunges itself full throttle into this initiative in order to contribute towards this noble cause. Committed to the cause of 'Swachhata', the college undertakes a slew of initiatives inside the campus as well as at the community. The efforts by the college, aim at accelerating the pace of realization of this mission and include plantation drives, solar lighting, rain water harvesting, water boosting system, real-time air quality monitoring system, generating awareness about waste segregation, installation of classified dustbins within the campus, regular and meticulous cleaning of campus and surroundings by a number of dedicated teams, sensitization programmes on sanitation, hygiene and cleanliness and participation in Swachh Pakhwada- an initiative of Ministry of Youth Affairs and Sports, Govt. of India.



Tree Plantation Drive



Solar Lights in college campus



Air quality monitoring sensors



Rain Water Harvesting System



Water Boosting System



Solar Panels



The college has rendered creditable contribution to the cause of Swachhta, at the local and National level. It gives us immense pleasure to share that our esteemed institution has been **awarded the First Prize for the 'Cleanest Residential College' in the country**, in the National Swachh Campus Rankings, 2018 by the Ministry of Human Resource Development, Government of India.

The college has also won the **all India third rank in 'Best Citizen - Led Innovation' in the Swachh Sarvekshan** by the Ministry of Housing and Urban Affairs, Government of India in 2019. We worked with a missionary zeal this year as well, and the catalogue of major activities organized by our institution shall act as a testimony to the same.





Felicitated for Best Management / Maintenance of Wet Waste on the occasion of 70th Republic Day Celebration in 2019 by Municipal Corporation, Chandigarh Administration.

Dr. Vandana Sharma, Asst. Professor, Dept. of Food Science of the college was honoured by Municipal Corporation, Chandigarh for Management / Disposal of Waste at Source on the occasion of 70th Republic Day Celebration in 2019.





In recognition of its exemplary work in the field of community service and youth development, the NSS unit of MCM DAV College for Women was awarded the Best Unit Award 2018-19 by Department of NSS, Punjab University.

The college's NSS unit has been working consistently towards the cause of society, including contributing to **Swachh Bharat Abhiyan, Swachhata Pakhwada, Poshan Maah, Saarthi Project** and doing praiseworthy work in rural areas during **Swachh Bharat Summer Internship**.



Swachhata 'Action Taken Report'

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Index

1. Quarter I : July - September 2018	Pg : 1
2. Quarter II : October - December 2018	Pg : 19
3. Quarter III : January - March 2019	Pg : 42
4. Quarter IV : April - June 2019	Pg : 55
5. Report of Swachh Bharat Summer Internship – 2019	Pg : 60
6. Preliminary Report on the Floral Diversity in the College Campus	Pg : 70
7. Preliminary Report on the Insect Fauna in the College Campus	Pg : 78
8. List of Trees in the College Campus	Pg : 86

Swachhata 'Action Taken Report'

[Quarter I : July - September 2018]



Mehr Chand Mahajan DAV College for Women

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Felicitated for Citizen- Led Initiative



MCM bags national award for innovation

TRIBUNE NEWS SERVICE

CHANDIGARH, MARCH 6
MCM DAV College for Women bagged the all-India third rank in the 'Best Citizen-Led Innovations' category during the Swachh City Awards announced on Wednesday in New Delhi.

The award by the Ministry of Housing and Urban Affairs was recognition for MCM's unique solid-waste management initiative for cultivating oyster mushrooms from agricultural and kitchen waste in used plastic bottles.

A brainchild of Vandana Sharma and Sandeep Kaur of the Food Science Department, the initiative is a sustainable approach with the objective of utilising organic



MCM DAV College for Women. TRIBUNE PHOTO

waste residues while enabling community empowerment through generation of high nutritional value food for all.

Project concept

The need for developing

alternative strategies for effective waste management is mandatory due to the threat posed to our environment and public health. One such strategy for solid waste management is the successful cultivation of one nutri-

tional variety of mushroom called oyster mushroom by utilising kitchen and agricultural wastes as substrates.

The oyster mushroom cultivation in used plastic bottles has a high impact as it offers multiple solutions including generation of a relatively cheap source of high-quality food protein and skill training to the target population, especially women, for setting their own small business units.

Nisha Bhargava, Principal of MCM College, said: "We sent a prototype of the project to the Municipal Corporation, which submitted it to the Ministry of Housing and Urban Affairs. Students and faculty were working upon the project for more than one year."

Cultivation of Oyster Mushroom in Used Plastic Bottles

Under the initiative of adopting modern and scientific solid waste management practices to make MCM a zero-waste zone, B.Sc. (MFT) students and faculty of the Department of Food Science optimized and successfully cultivated highly nutritional variety of edible mushrooms referred to as “Oyster mushroom” scientifically called “*Pleurotusostreatus*” using combination of agricultural and domestic waste during the session 2017-18. Also, the students were able to generate their own in-house spawn for this mushroom variety.

Taking this initiative to next level, as part of research projects of BSc.(MFT)-III year students, Oyster mushrooms were cultivated in **used plastic bottles** collected from the college campus by the students. The process included: **a)** Collection of used thrown away plastic bottles (Bisleri, Coke, Fanta Bottles etc.), **b)** Cleaning and disinfection of the bottles, **c)** Soaking of solid waste (Wheat straw, juice leftover, peels etc.), **d)** Packing of bottles and spawn layering, **e)** Mycelial growth run in bottles, **f)** Pinning and final harvesting of mushrooms.



In addition to this, students have started the process of mushroom fortification. India is home to 197 million undernourished people with a majority of children (4 out of 10 children) being stunted and 51.4% of women anemic. Food fortification is the process of enhancing the nutritional content of any food by adding essential nutrients. Since, Oyster mushroom are themselves highly nutritious, they can serve as an ideal and cheap fortified food to the target population. With this aim, our next research project has already started, aimed at producing **Bio-fortified Oyster mushrooms** which are rich in essential nutrients such as Zinc, Potassium and Magnesium. For this, we shall be using the fruit peels and mixing it with wheat straw in different ratios. Increase in levels of these nutrients will be monitored to optimize the growth conditions.

A ring of Heaven: Hanging Planters from used Tyres



As a part of innovative practices under the Swachhata Mission, the Department of Botany reused old, discarded tyres to prepare hanging planters. A step towards generating best- out- of- waste and adding to the greenery of the forest while making most of the space available, discarded tyres were painted and then prepared for planting. A variety of plants like *Wadeldia Chinensis* (Osbeck) Merr, *Tradiscantia Pallida* (Rose) D.R.Hunt, *Asparagus Densiflorus* (kunth), *Jessop* were planted in tyres and hung in the Artificial Forest of the college, thereby adding to the green cover as well as aesthetics of the area.

New Plantation in the Campus

With the aim of increasing the green cover of the campus and preserving nature, Rishi Vatika, Botanical Garden and Artificial Forest areas of the college were planted with new plants.



'OM' Figure Formation in Rishi Vatika

Rishi Vatika is the meditation area of the college wherein students can experience oneness with nature, away from the hustle and bustle of this otherwise lively institution. Keeping in mind the tradition of Arya Samaj, the Department of Botany created an 'OM' formation from plants in the Rishi Vatika. Created from air purifying plants including

Alternanthera, *Hamelia* and *Duranta*, this formation symbolizes the great values for which Arya Samaj stands and adds to the peace and tranquility of the area.



Workshops on Green Chemistry and Nano-Sciences

The Department of Chemistry has addressed issues regarding the rising environmental pollution and how Green Chemistry and Nano-Sciences have come forward as an aid for the environmental remediation. Both the technologies can help in the attainment of sustainable development without causing damage to the environment. We introduced the overarching goals of green chemistry-namely, more resource-efficient and inherently safer design of molecules, materials, products and processes that can be pursued in a wide range of contexts to our students. Concepts of Nano-Sciences were introduced through workshops and hands on training.

Activity: Detailed classroom discussions were carried on how different organic and inorganic pollutants present in the underground water, rivers and the surrounding ecosystem cause significant damage to the planet earth. For addressing the hazardous environmental concerns, detailed discussions on different methods of utilization of household waste materials were held. A practical demonstration on the application of household waste as a raw material was carried out for the fabrication of bioplastics, as a safer alternative to the current synthetic plastic materials (non-biodegradable).

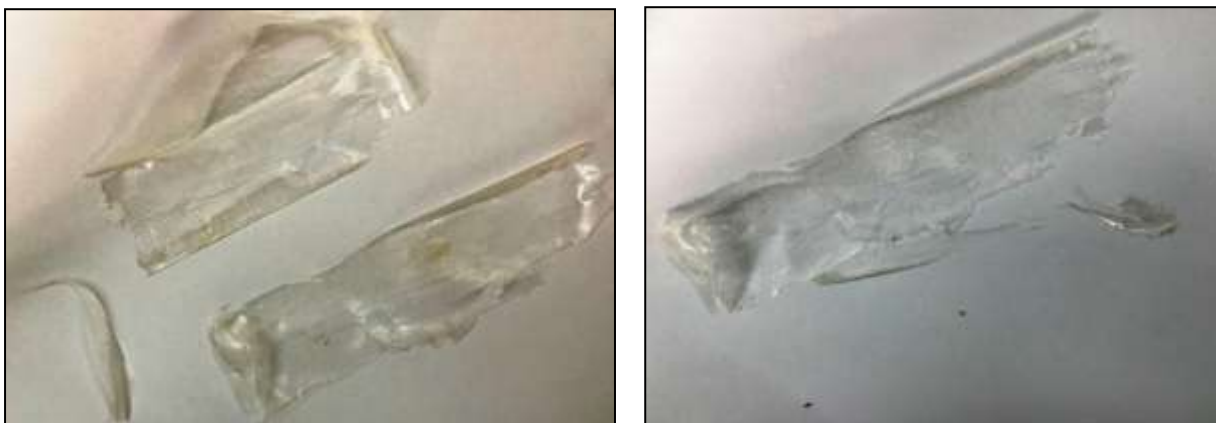


Figure I: Bioplastics prepared as classroom project

Result: Students prepared these bioplastics from corn starch and potatoes. These plastic materials showed excellent strength and stretching properties. The products are economical, easy to prepare and free of any kind of harmful pollutants. The students were encouraged to use these environment friendly products and also educate others about the importance of preserving our environment for the future.

Functioning of Biogas Plant and Composting Units

The college is a pioneer in installation of a Biogas Plant within its campus that utilizes mess food waste for the production of biogas. The functioning of the plant is monitored



on a daily basis. Food waste (around 70 Kg) generated in the college mess and food courts is collected daily in bins and added to the mixing tank of the biogas plant. The food waste is homogenized using the manual agitator in the mixing tank. Feeding of the waste to the digester is done by opening the hole at the bottom of the mixing tank. The digestion is a continuous process.

Feeding of Digester with Food waste

The spent slurry coming out of digester is continuously fed to the attached composting units to accelerate the composting process. The gas, thus generated is being utilized efficiently in the college canteen for cooking purpose. Besides, the green waste in the form of grass and fallen leaves generated in college lawns/garden is continuously dumped in the composting units for the degradation process. Microbial consortia in the biogas digester is maintained by adding cow-dung in the digester once in every six months. Slurry thus obtained from biogas plant is used for hastening the composting process. Further, mixing of compost in the compost pits within the campus is being done on daily basis. For the above said processes, log book is maintained by the team members on daily basis. Also, the biogas plant along with the composting units were cleaned and painted as part of its maintenance.



Competitions on 'Swachh Bharat Swasth Bharat'

With the aim of raising awareness about cleanliness and inculcating a sense of responsibility among youth to work towards realizing the dream of a clean and green nation, the Sanskrit Department of the college organized various competitions. Students enthusiastically participated in Slogan writing, Poster making and Bookmark making competitions on the theme- 'Swachh Bharat Swasth Bharat'.



Starting the new session with a momentum, the college kicked off fortnight long activities under **Swachhata Pakhwada** towards promoting Swachh Bharat Abhiyan. The NSS unit of the college organized following activities:



Swachh Bharat Pledge

On 1st August 2018, Swachh Bharat pledge was administered to more than 250 students and faculty members. Students pledged towards devoting at-least 100 hours per year of voluntary work devoted to cleanliness. Principal Dr Nisha Bhargava reiterated that the endeavours under Swachh Bharat



Abhiyan have been instrumental in bringing about behavioral change towards cleanliness – a concept that has evolved into a wider phenomenon encompassing sustainable development and environment conservation.

Lecture on Swachhata and Sustainable Development



On the inaugural day of the Pakhwada, the NSS unit of the college organized a highly informative lecture on 'Swachhata and Sustainable Development'. The lecture was delivered by Dr. Suman Mor, Department of Environmental Studies and Coordinator, Centre for Public Health, Panjab University. Apprising the

students about the various Swachh Bharat initiatives and their importance in conserving environment and promoting sustainability, Dr. Mor motivated the students to not only adopt a proactive approach towards environmental conservation themselves but also to sensitize others to make cleanliness a habit. Dr. Mor also made the students aware of different techniques to reduce waste generation like optimum utilization of water and paper, recycling and replacement of plastic bags with jute bags.



Speaking at the occasion, Principal of the college, Dr. Nisha Bhargava exhorted students to make cleanliness part of their lives and also asked them to make their family members, friends, neighbours part of the mission. She highlighted upon the segregation of waste as an essential step towards the realization of Swachh Bharat.

Tree Plantation Drive

The NSS unit of the college organized a Tree Plantation Drive under the Swachhta Pakhwada initiative. The drive witnessed participation of 70 NSS volunteers. Over 50 saplings of medicinal plants were planted on the campus. The students of B. Sc. third year helped the NSS volunteers in planting of saplings of medicinal plants such as



Catharanthus rosea (Sadabahar), Citronella cymbopogon, Wedeliachinensis.

Swachhata Pakhwada

Reaffirming its commitment towards the furtherance of the objective of Swachh Bharat Abhiyan, the NSS unit of the college organized Cleanliness Drive as part of Swachhata Pakhwada- a fortnight of activities revolving around the Abhiyan. Along with the NSS volunteers, students of different faculties also enthusiastically participated in these drives.



The drive was conducted in the college and aimed at generating awareness about the mission and bringing about behavioural change towards cleanliness. The NSS volunteers carried out cleaning of different areas of the campus, including classrooms, laboratories and gardens. A “Go Clean” drive was undertaken by students of Home Science in the Clothing and Textile Lab. As part of this drive, all the machines were oiled and serviced properly. Students also cleaned the notice boards and removed old notices. The charts and models in the lab were carefully cleaned to avoid any unwanted alteration.

NSS Volunteers on the Swachhata Mission



Solutions for Social Problems

Continuing its efforts towards creating mass awareness among students regarding Swachh Bharat Abhiyan, a lecture on 'Solutions for Social Problems' was held. Conducted under Swachhta Pakhwada, the lecture was delivered by social entrepreneur Mr. Varun Kashyap, Co-founder, Lets Endorse. Advising the



students against reinventing the wheel, Mr. Kashyap stressed upon the need to adopt an out-of-the box approach in finding solutions to the long-standing social problems ailing our society. He encouraged the volunteers to come up with innovative solutions for various social issues like water sanitation, improvement of the condition of *aanganwadis*, etc. More than 250 students and NSS volunteers attended the lecture.

Survey and Awareness Drive in Adopted Village Badheri

With an aim to spread awareness about cleanliness, the NSS unit of the college visited its adopted village Badheri on 11th August 2018. A survey was conducted by the volunteers. Women, children and senior citizens were made aware about the importance of cleanliness in the surroundings. The volunteers also interacted with the youth of the village. Key points discussed during this interaction included ; vector borne diseases, clean toilets, safe drinking water, garbage segregation at source, use of eco-friendly ways to manage waste, personal hygiene, stagnant water, mosquito breeding, clean roads and associated problems.. The volunteers interacted with residents and educated them about following :

- Cleanliness in and around houses
- Washing hands before cooking and eating food
- Using toilets
- Dumping waste in MC specified locations
- Washing and boiling feeding bottles for babies.
- Using safe drinking water.



Waste Segregation: Blue or Green?



Waste segregation at source into dry waste and wet waste is very important step in maintaining a zero waste zone. This concept has been regularly followed at the college campus. To take it further, all the dustbins of the college campus (including hostel area) were permanently labeled (by paint) depicting wet and dry waste on them (as shown in



picture). Also, few additional dustbins of green and blue color were procured and placed at suitable positions covering all the areas of the college (teaching blocks, canteen area, grounds, washrooms, hostel area, administrative areas etc.).

Workshop on Nanotechnology

The Postgraduate Department of Chemistry of the college organized a lecture-cum-workshop on Nano-science, Nanotechnology and its Environmental Applications. The resource person for the same was Prof. Ahmad Umar, an internationally acclaimed academician with proven knowledge and expertise in nano-science and nanotechnology. Dr. Umar is presently Deputy Director, Promising Centre for Sensors and Electronic Devices (PCSED), Najran University, Saudi Arabia. Over 40 students enthusiastically participated in the workshop during which they received hands on training in the preparation of nano-particles.



Result: Students were explained the method of preparation of Zinc nano-particles. Simple laboratory methods were followed to prepare it.

Poshan-Maah

Under Poshan Abhiyan, the month of September was celebrated as Rashtriya Poshan Maah (Nutrition Month) across the country to address the malnutrition challenges and sensitize our countrymen regarding the importance of holistic nutrition. Poshan-Maah aimed at making people aware of the importance of nutrition and giving them individual access to government services to support nutrition for their children and pregnant

women/lactating mothers. Poshan-Maah was observed with the aim of reaching every household with the message of nutrition— ‘*har ghar poshan tyohaar*’ (every house a celebration of nutrition). The month-long intensive campaign aimed at promoting antenatal care, breastfeeding, fight anemia, and improving nourishment for kids, pregnant women, and lactating mothers. Its vision is to build a malnutrition free nation by 2022.

The youth are the change agents of the society and it is pivotal that the message of nutrition percolates through them in every strata of society. The NSS volunteers of the college took the onus to convey messages about the importance of nutrition for girls and the right age for marriage, the importance of growth monitoring and also promoting hygiene and sanitation to the local village residents surrounding Chandigarh. The entire range of nutrition themes were exhibited and showcased in the form of melas, rallies and interactive campaigns.

In September, 2018, NSS unit of the College conducted social outreach activities, keeping in mind both these themes. As per the directions from NSS Office, September 2018 was observed a ‘Poshan-Maah’ i.e. ‘Nutrition Month’ and from 22nd September to 1st October “*Swachhata Hi Sewa*’ activities were undertaken. Sensing the inter-linkage of nutrition and cleanliness, the volunteers undertook various activities throughout the year.

Lecture on Nutrition at Badheri

To provide information to women regarding the importance of nutrition for health and a better living, 50 NSS volunteers along with 2 faculty members visited the adopted village- Badheri, on the 1st of September, 2018. While observing Nutrition Month 2018, a special lecture and awareness program on “Health and Nutrition



Awareness” was organized by the NSS Unit along with Women Development Cell of the college. Their basic objective has been to intensify the awareness among women about the nutritional diet. A lecture cum demonstration on low cost, healthy nutritious recipes

was organized for village women, aanganwadi workers and helpers. The lecture was delivered by Dietician Sonia Gandhi of Fortis Hospital, Mohali. It was an informational lecture where the women learnt about how their families will suffer if healthy diet is not taken. They were taught to make healthy dishes like salads, sprouts, etc. The total number of beneficiaries was around 100.

Flash Mobs

Two Flash Mobs were organized by the NSS Unit of the college to promote the ongoing theme of **'Poshan-Maah'** on 27-9-2018 wherein 50 NSS volunteers participated and another on 30-9-2018 wherein 70 NSS volunteers participated. Both the flash mobs were organised in Sector 17 Plaza with the main aim of



generating awareness about the importance of nutrition. Informative pamphlets related to benefits of nutrition were also distributed after the flash mob.

Open Eye Foundation Camp

Open Eye Foundation, an NGO, in collaboration with NSS Units of the college put up a canopy at college campus on 26th and 27th September 2018. Through this venture, they encouraged the students of the college to contribute their old books, stationery and clothes to the needy with the help of this foundation.

Saarathi Project

SAARTHI, which literally means someone who guides, is a joint initiative by the Chandigarh Red Cross Society and Chandigarh NSS Cell with an aim to provide service to the patients and their attendants at PGIMER, Chandigarh.

The volunteer support group formed for the purpose offers all kinds of help, guidance and support to needy patients and



their attendants visiting the new OPD Block of the PGIMER. From helping, guiding and

supporting them to reach the right department for treatment, they would also provide physical help by lifting patients, moving their trolleys/ wheelchairs in the case of need. Amongst various challenges of hospitals, helping and assisting patients and their attendants remain a key challenge. SAARTHI not only represents the social face of Chandigarh Administration but also its endeavor to feel the pulse of patients in hospitals.

More than 300 volunteers from various educational institutes of Chandigarh took up the initiative to help the sick patients and their families in the Out Patient Department's Help Desk. The duty required assisting the staff and guiding patients so that they reach appropriate departments for treatment. From the college, 7 NSS students took up the task. The duties were



given out to each volunteer after a gap of 20 days and were required to work for at least 4 hours. There were two shifts for the same 8 a.m. to 12 p.m. and from 12 p.m. to 4 p.m. Before the commencement of duties, a small induction was given to all so as to get familiar with various departments at PGI OPD. Volunteers learned the importance of being considerate, reliable, accurate and tolerant and also developed commiseration and fellow feeling which further helps in understanding the society in a better way and becoming a good human being and a virtuous citizen.

Workshop on Poshan Abhiyan

A State level Workshop on Poshan Abhiyan was organized by the Department of Social Welfare in convergence with the Line Departments as part of the Rashtriya Poshan-Maah Celebration at PGIMER, Chandigarh on 28th September 2018. 25 NSS Volunteers and Faculty members of the



college participated in this workshop. Honourable Governor of Punjab and Administrator of U.T. Chandigarh Sh. V.P. Singh Badnore graced the event as Chief Guest and Sh. Parimal Rai, IAS, Adviser to the Administrator, UT Chandigarh was the Guest Of Honour. During this event a video themed “The Glimpse of POSHAN Journey” was

shown, followed by taking a Poshan pledge and the book named “Suposhan” – a handbook on Nutrition and Low Cost Healthy Food Recipes, compiled by Director Social Welfare, Chandigarh Administration and Govt. Home Science College, Chandigarh.

E-Waste Management

An agreement has been signed with Ramky Enviro Engineers Ltd. (Local office at Nimbua Greenfield (Punjab) Limited, Village Nimbua Tehsil - Derabassi, Punjab) for management of e-waste. A total of 345 kg of e-waste collected from college, students and faculty members was sent to the office of Nimbua Greenfield (Punjab) Limited, Village Nimbua Tehsil - Derabassi, Punjab on 14-9-2018.



Knowing Your plants

On the occasion of Shramdan Diwas (15th September, 2019) students of B.Sc. III (Medical) contributed towards the cause of Swachhata by placing name plates of plants bearing scientific name, common name and family of different plants in Rishi Vatika. In this innovative process, they gathered knowledge about various medicinal plants grown in Rishi Vatika.



Educational Visit to Central Poultry Development Organization

During the last several decades, the environmental impact of the poultry production has received an ever-growing attention. Nowadays, producers are under heavy pressure to minimize the impact of their production on the environment and to adopt welfare friendly practices. With an aim to sensitize students about the above issues, Department of Zoology organized an industrial cum educational tour of B.Sc. Medical (Semester-VI) students to Central Poultry Development Organization (Northern Region), Chandigarh on 28th of September, 2018. Dr. Vineet Kumar, the farm Manager briefed the students about strict bio-security precautions which should be taken to prevent poultry diseases.

He further discussed that the magnitude of environmental impacts is highly dependent on production practices and especially on manure management practices. Dr. Vineet motivated students to find out practical solutions to control the environmental effects mentioned above.



Swachhata Hi Seva

In the run-up to the 4th anniversary of the Swachh Bharat Mission, the Ministry of Drinking Water and Sanitation and Ministry of Human Resource Development, Government of India urged various stakeholders to observe Swachhata Hi Seva- a Janandolan for Swachhata from September 15th to October 2nd 2018. Various activities were organized with respect of the same.

Swachhata: Writing on the Wall

A painting was made reflecting the theme of Cleanliness and its importance towards nation building by 10 NSS volunteers along with the 5 students of Fine Arts Department of the college. The painting is located at a central place in the college campus on one of the corridor walls of academic block of the college. The wall painting attracts a lot of attention of students and staff members crossing the corridor because of its aesthetics and central location. The painting aims to reiterate the significance of Swachhata in the mind of onlookers.



Our Motto: Environment

Cleanliness drives were organized in the adopted village Badheri by the NSS volunteers of the college. The main objective of these drives was to generate awareness among the villagers regarding cleanliness and hygiene. The drives were conducted in the dispensary and aanganwadi of the village. Medicines were checked



for the expiry date. 14 NSS volunteers took part in the activity along with 2 faculty members. Total numbers of beneficiaries were 60-70. The drive included :

- Cleanliness of the campus and storeroom
- Filling of ditches with mud
- Discussion on preventive measures against malaria and dengue
- General hygiene

Change the Menu: Change the mindset!

College canteen is a source of food supply to the students and staff and its maintenance and hygiene are of utmost importance. Storage conditions, raw food materials being used, cleaning of kitchen area and utensils, disposal of waste food etc. are some parameters that need regular checking and maintenance.



As a part of clean and green initiative under Swatchh Abhiyan, faculty and student volunteers of the department participated full throttle into the cleaning of the College canteen. A check list was prepared and worked upon with special emphasis on storage conditions, cleaning of utensils, regular mopping and cleaning of floors and shelves before and after use, waste disposal of left over food.

Points covered under checklist:

1. Cleaning of Fridge, cupboards and microwave.
2. Inspection of expiry date on all food items.
3. Cleaning of all raw vegetable crates.
4. Checking of cleanliness of aprons and usage of headgears and gloves.
5. Using disinfectant for cleaning shelves of cooking area.
6. Restricting sale of junk food.
7. Completing Paint work



South Indian			
Vada	40.00	Rajmah Rice	90.00
Idli	40.00	Channa Rice	90.00
Plain Dosa	50.00	Kadahi Rice	90.00
Masala Dosa	60.00	Fried Rice with Manchurian	100.00
		Fried Rice with Chilly Paneer	100.00
		Atta Noodles with Manchurian	100.00
		Channa Poori	90.00
		Pao Bhaji	90.00
ALL ATTA BAKERY		Beverages	
Veg Burger	30.00	Minute Maid Juice	20.00
Veg Hot Dog	30.00	Mineral Water	20.00
Veg Grilled Sandwich	50.00	Cold Coffee	40.00
Veg Cold Sandwich	30.00	Oreo Shake	40.00
Bread Pakora	10.00	Tea	10.00
Mix Pakora (per plate)	50.00	Coffee	20.00
Honey Cauli Flower	50.00		
Honey Potato	50.00		
Veg Spring Roll	50.00		
Chilly Paneer	100.00		
Chilly Mushroom	100.00		
Veg. Manchurian	90.00		

Also, the old menu showing the sale of junk food was changed and a new menu was put up in the canteen only displaying healthy food.

Swachhata 'Action Taken Report'

[Quarter II : October- December 2018]



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Plant Small: Think Big!



The Department of Botany organized a hands-on **workshop on the popular art of Bonsai making**, sponsored by DBT (Department of Biotechnology, Government of India) under the Star College Scheme, on October 12, 2018.

Bonsai is an ancient art of growing plants which traces its inception to China and was later introduced in Japan where it became quite popular and is now practiced all over the world. The tradition has witnessed various refinements and innovations over the last millennium. Bonsai utilizes horticultural techniques along with



artistic applications to cultivate miniature replicas of trees as they are found in nature, thereby enhancing the beauty of the landscape. The art reflects the aesthetic qualities found in nature through the principles of balance, simplicity and harmony.

The resource person for the workshop, Dr. Jaspreet Kaur, Assistant Professor, Department of Botany, Panjab University, Chandigarh demonstrated the complete step by step procedure of Bonsai making, including soil mixing, choice of the plant, pot setting, cultivation of plants, pruning, cutting, twining and watering etc. to the students, faculty, staff and gardeners.



Some enthusiastic students made Bonsais under the supervision of the resource person.

National Symposium on Waste Management : Poster Presentation on Waste Management Practices

A National Symposium on Waste Management was organized by the Association of Microbiologists of India (AMI), Chandigarh Unit, at DAV College, Sector-10, Chandigarh on the 3rd of October, 2018. A total of 17 students of B.Sc. (MFT) III year participated in the symposium. They presented posters on “Waste management Practices” which included: Biogas production unit installed at the College - a Case Study, Mushroom Cultivation in Used Plastic Bottles, Oyster Mushroom Fortification using Kitchen Waste, etc. as detailed in Table-1. The poster pertaining to MCM’s initiatives of setting up the biogas plant and augmentation process being used for zero waste generation was appreciated and won the third prize. The students’ work aiming at mushroom fortification using spent fruit peels was encouraged as well. A brief description of the work presented by the students has been highlighted in Table 1.



Table-1: Poster Presentation on Waste Management at National Symposium

No.	Name of Students	Title of Posters	Topic/s Highlighted
1.	Navneet Kaur and Jasleen Kaur	"Waste Management and Utilization in Food Industry "	The topic highlighted the use of various by-products and waste formed in fruit juice industry, dairy industry, meat industry, fish industry and beet sugar industry and how these can be put to different uses such as production of fuel, energy, biogas, fermentation products, biofuel, manure production etc.
2.	Bahaar Hundal and Vishawjot Kaur	"Optimization and Cultivation of <i>Pleurotostreat us</i> from Agro and Domestic kitchen waste in used plastic bottles"	The poster highlighted management of solid waste (agri-kitchen waste) by using it as a potential substrate for growth of highly nutritious and edible mushrooms i.e. oyster mushrooms. <i>Pleurotostreatus</i> . The used plastic bottles were used for filling up the substrate and cultivation of the highly nutritious variety.
3.	Vaani Dutta, Himanshi Bansal and Bhavya Arora	"Use of Fruit and Vegetables Peels as substrates for Bio-Fortification of oyster Mushrooms: Step towards Nutrition and Food Security"	The poster highlighted the use of different fruit peels (Banana, pomegranate, apple peels) as potential substrates for production of fortified Oyster mushrooms. This also suggested that small scale mushroom farms can supply nutritionally enhanced mushrooms that can be easily accessible for poor and under-nourished population as well.

4.	Nikita Sharma and Amandeep Kaur	“Waste Management and Bio-fortification through cultivation of mushrooms”	The poster highlighted the production of fortified mushrooms with enhanced lithium levels from agro-kitchen wastes. Such fortified mushroom will serve as therapy food and can be supplied to target populations to prevent attacks of acute mania and depression, as lithium is recommended in psychiatric conditions Besides this, Oyster Mushrooms will additionally serve as a nutritionally enhanced food especially for the target population as well.
5.	Chhavi Dhiman and Gursimran Kaur	“Sustainable Waste Management: A Case Study”	The poster depicted the current practices implemented by MCM DAV College to manage the solid waste generated in the campus. Different approaches to manage solid waste generated in the campus are: a) segregation of waste at the source; b) diverting wet (biodegradable) waste towards composting, vermi-composting and biogas production. It highlighted the useful role of Biogas generation by feeding the digester with food waste of college canteen and mess and utilization of the Biogas for energy generation (as fuel) as an economically beneficial strategy towards zero waste zone. The slurry from the biogas plant is used to augment composting of green waste generated in the college campus.

6.	Sonal Mishra and KomalSukhija	“Conventional plastics to Bio-plastics - Clean and Green way”	The topic focused on exploiting the role of bio-plastics as an alternative to plastic use. It depicted that Bio-plastics are growing rapidly because of their clear advantages in providing excellent biodegradability. Durable plant-based bio-plastics can also be recycled as well as their conventional equivalents assisting the growth of a more sustainable world economy.
7.	Ritika Mittal and Medhavi	“Waste Management Practices Adopted At Higher Educational Institutes: A Step Towards Swachh India”	There is an immense possibility for adopting a sustainable waste management system in the college as the institute is under one authority. Such waste management practices once institutionalized at the university level, will definitely trickle down to the society. The poster studied the various waste management practices adopted by various educational institutes to achieve the vision of a ‘Clean India’.
8.	Ujjwal and Simran Kaur	“Integrating Waste Management and Single Cell Oil Production”	Many microorganisms such as yeast, fungi, bacteria, have the ability to accumulate oil under special conditions. Microbial oil can be used as feedstock for the production of bio-diesel in the future. The aim of the poster was to describe the main aspects related to the use of different oleaginous microorganisms for lipid production and their performance when using bio-wastes.

Setting up of Experimental Aquaponics System

A small scale experimental Aquaponics system was set up in the laboratory by BSc. Medical students in the third week of October, 2018. The objective of the experimental system was to design a cost effective aquaponics system that can easily be set up and managed by student groups.

Aquaponics is an extremely effective example of indoor farming which can be used to sustainably raise fresh fish and vegetables. The only input into an aquaponics system is fish food. The fish eat the food and excrete waste, which is converted by beneficial bacteria into nutrients which the plants can use. By consuming these nutrients, the plants help to purify the water. Herbicides, pesticides or other harsh chemicals are not used in an aquaponics system. In this era of climate change, resource depletion, pollution and lack of access to farmland, it is important for the youth to learn about sustainable practices like Aquaponics. The students were sensitized about the importance of this modern and sustainable food production system that combines aquaculture and agricultural techniques.



Two- Day RUSA Sponsored Workshop on Power Sector Sustainability



The departments of Physics and Zoology organized a two-day RUSA sponsored workshop on 'Power Sector Sustainability' on October 22 and 23, 2018. The main objective of the workshop was to sensitize the participants about the current challenges faced by the power sector and to deliberate upon reforms in the sector so as to chart a sustainable future. On the inaugural day, Dr. Tarlochan Kaur, Chairperson,

Center for Energy Studies, Punjab Engineering College delivered a talk on 'Power Sector Sustainability' and Mr Sanjeev Verma, Head, (Technical), Multi Overseas India Pvt. Ltd. gave a demonstration of solar panels.

During the first session of day 2, Dr Tarlochan spoke about energy crisis and the importance of renewable sources of energy in her talk titled '**Recent Trends in Renewable Energy for Power Generation**'. She highlighted that despite a huge potential in India for renewable energy production, the integration of this energy into the power sector is comparatively low because of factors like resource availability, technological appropriateness, environmental feasibility, institutional preparedness, socio-cultural acceptability and financial viability. Dr Kaur asserted that technological innovation, mass awareness and skill development programmes are vital in increasing renewable energy acceptance in India.



Session 2 witnessed highly informative talks on '**Demand Response using MATLAB platform**' delivered by Ms. Sachpreet Kaur, PEC and on '**Smart Grid Technology**' delivered by Dr. Tarlochan Kaur. An interactive session that followed the talks drew enthusiastic response from the participants wherein they shared innovative ideas. The workshop motivated the students to develop and deploy new and renewable energy sources for supplementing the energy requirements of the country.

Wonders of Science: Inter-College Scientific Model Making Competition

The Department of Chemistry organized an Inter-college Scientific Model Making Competition on October 4, 2018 based on the theme '**Wonders of Science**' to address the environmental issues of rising concern such as global warming, oil spills, food waste and fresh water conservation. Students presented their innovative ideas



on prevention of global warming by capturing excess CO₂ from atmosphere, through a model on '**Carbon Capture Plant**'. They also designed a model to manage oil waste in oceans which spread through Oil Spills. A simple homemade 'Food Waste Recycler' was exhibited through a model. The models on '**Rain**



Harvesting and Hydroponics' were presented as sustainable solutions to prevent water pollution and conserve fresh water. A model on Genetic Engineering was presented to increase the grain production for sustainable development.

Environment Friendly : Organic Clay Modelling



The Fine Arts Department organized a "**Clay Modelling Workshop**" during which students learnt the art of making various articles with natural clay. In order to drive home the message of saving the environment with our conscious efforts, organic clay was used as a substitute for the environment-unfriendly plaster of paris, to make the idols of Lord Ganesha.

67 students participated in this workshop and made eco-friendly Ganesha idols that neither posed a threat to human health nor affected the environment. After preparing the idol, instead of 'visarjan' in water, the students gifted the Lord Ganesha idols to their neighbours and also mixed it with clay in the pots which conveyed the messages of saving environment and water.

What a waste: Not Really!

Best out of waste is a craft-cum-practice that not only adheres to environment-friendly principles but also creates useful and picturesque objects from waste products. In order to make students aware about the uses of waste materials, and the importance of reducing waste to safeguard our future, the Fine Arts Department organized a competition on "Best out of Waste" on November 15, 2018. The students created objects entirely out of waste such as old newspapers, tissue papers, bottles, waste papers, CDs etc. and made creative and beautiful articles from them such as bicycles, wall hangings, flowers, bells, paper bags and many other useful objects. 11 students participated in this



competition with great zeal. It was heartening and informative to learn how scrap could be transformed into such useful and beautiful articles. Riya, Saumya and Sarita won the first, second and third prize respectively.

Waste is in the air: Chandeliers made out of waste !

The college hosted “Beyond Boundaries”- an event under the Cultural Exchange Programme to welcome students from **Western Sydney University, Australia**. The event aimed at encouraging cross-cultural interaction for which adequate arrangements were made wherein the visiting students were not only familiarized with the rich Indian culture and heritage but were also apprised of the Swachhata initiatives of the college. As part of this endeavour, students of Interior Designing and Decoration showcased their chandeliers made from waste material, during a workshop conducted earlier in the college.



A Swachh Brain-space :De-cluttering of Mind



The Swachhata Committee (Languages) organized a lecture on 'Decluttering the Mind' by Prof Rajib Sarkar, School of Management, Bennett University, Greater Noida. The

lecture aimed at sensitizing students about the ways of decluttering one's mind in this age of information explosion. In his highly engaging and informative lecture, Prof Sarkar eloquently described the de-cluttering process with the aid of DIKW Pyramid (Data, Information, Knowledge, and Wisdom) and said that while data de-capacitates the mind, wisdom empowers the mind as it leads to the highest level of connectedness and understanding. Laying out the 6 pronged approach to de-cluttering the mind, Prof Sarkar dwelt upon strategies of self-awareness, elimination, focus, harmonization, detachment and mindfulness. Information overload being a stark reality of our times, the lecture struck a chord with the audience

‘Swachh Bharat- Swasth Bharat’: Say it with Colours

The Swachhata Committee (Arts) organized a **Poster making and Rangoli Competition** in the college on November 16, 2018. The purpose of the competition was to look at art as a noble cause. The topics for both the activities were **Swachh Bharat - Swasth Bharat** and **Save Environment** (Rain water



harvesting, Solar power and Waste management). There was an enthusiastic participation for both the activities. 25 students registered for these activities while for the Rangoli competition, the students were divided into 6 teams. Vrinda, Simran and Jahanvi won the first, second and third prize respectively in Poster Making. Consolation prizes were won by Sonika and Neha. In Rangoli Competition, The team of Sonali and Bhawna stood first and the team of Simrat and Prerna was adjudged second.

Cleanest Hostel Room Competition

The Swachhata Committee of the college organized the “Cleanest Room Competition” in the hostel. Residents of all the blocks participated in the competition. The competition aimed at inculcating in the students, a sense of responsibility to keep their surroundings clean. Teams of teachers were delegated the responsibility of inspecting each room in the hostel and the cleanest room in each block was awarded.

‘Sugandh’ – Musical Parody

We believe in holistic cleanliness. At the **Alumni Meet, 2018**, held on November 17, 2018 two events were organized which directed at conveying the message of a sustainable lifestyle. **‘Sugandh’**, a musical parody was enacted by the students to



portray the real-life stories of ordinary men, women and groups who have been working towards protecting the environment and culture or facilitating a social and economically sustainable way of life.

Phil-Art-Thropy

A stall was also set up on the same day, to showcase and sell the work of underprivileged women by **‘Phil-ART-hropy’**, a non-profit collective endeavour to add to the income of the local women by teaching them art, digitizing their work and then putting it on merchandise. The exhibit **‘Org-art-ic’** was an attempt to help Phil-ART-hropy, by bearing the cost of the merchandise manufacturer.



Green Policy: Awareness Session on e-waste Management

Under the aegis of the Swachhata Committee of the college, the Department of Computer Science and Applications organized an awareness session on e-waste Management on November 19, 2018. Around 170 students of BCA, BSc (Computer applications) and PGDCA attended the lecture. Sh. Vivek Shrivastava,



Associate General Manager in Godrej & Boyce Mfg. Co. Ltd., delivered the talk and sensitized the students and faculty members about e-waste Management as one of the environmental policies and programmes of the government. It is mandatory for the industries to draft and follow a formal green policy as a commitment to sustainability and environmental management by its employees and customers. He emphasized on six options ranging from the most preferred to the least preferred as Avoid, Reduce, Reuse, Recycle, Create (energy) and Disposal. He apprised and encouraged the students to drop the obsolete electronic and electrical material in separate e-waste bins. He also appreciated the fact that the college already provides this facility in the campus.

Maintaining Laboratory Cleanliness

The Department of Chemistry conducted a thorough 'Cleanliness Drive' of all the Chemistry labs as a part of Swachhata Abhiyan during the month of November 2018. The activity involved sequential arrangement of all the chemicals in cupboards and shelves, cleaning of working benches, sinks, glass doors and windows. Acid bath and base baths were made to neutralize the basic and acidic wastes respectively, generated after regular laboratory sessions. In order to discard the left over chemical waste, big storage containers were set up. The broken glassware was collected in a separate glass



waste bin set up in every lab so that broken glassware can be safely handled and can be sent for recycling later. Separate dustbins were placed in every lab to collect dry and wet waste. All these activities were planned and executed to maintain clean and healthy environment inside the labs and in the surroundings of college.



‘Sparkle’: Cleanest Lab Competition

To strengthen the momentum of the Swachh Bharat Abhiyan, all the science departments of the College namely, Physics, Zoology, Botany, Chemistry, Food Science and Computer Science, actively participated in the “Cleanest Lab Competition”. In an effort to provide a safe and clean environment in laboratories, along with the routine cleaning, a special “Lab Cleanliness Drive” was organized by the Swachhata committee.



Sparkle: Lab Excellence Award’18

The primary aim of the drive was to sensitize and ensure good hygiene and health by creating awareness on the cleanliness of laboratories. The drive witnessed an enthusiastic participation from the students. On 29-11-2018, all the science labs were assessed by two senior-most teachers of the college on the basis of the following parameters:



1. Segregation of waste
2. Cleanliness of infrastructure
3. Cleaning and maintenance of lab instruments
4. Labelling of all cupboards and shelves for keeping glassware/ chemicals /other relevant material
5. Instructions for lab safety and availability of first aid measures
6. Informative posters about the subject



The prize distribution ceremony was held in the Principal's office. The Department of Physics bagged the first prize while Zoology and Computer Science departments got the second and third prizes respectively. A neat and clean laboratory is of utmost importance in terms of improving the safety and working efficiency of the students and teachers. The activity thus served as a motivational initiative to disseminate awareness on the concept of safety and the importance of clean surroundings among students and faculty to ensure a healthy environment.

Clean Sweep: Cleanest Desk Competition



With the aim of inculcating the habit of cleanliness and encouraging the maintenance of a clean work space, the **“Cleanest Desk Competition”** was held for the administrative office staff. The workspace of each staff member was judged on the basis of cleanliness, use of sustainable practices and aesthetic appeal of the work space. Results of the competition were as follows: Mr. Pawan Sharma (Clean desk/Cabin), Mr Ashish Mudgal (Clean & Sustainable Practices), Ms Namita Sharma (Aesthetically maintained).

Dedicated to the Cause of Rural Development



With the aim of encouraging discussion on the problems ailing the rural economy, deliberating upon the solutions to those problems and dedicating allegiance to the cause of rural development, the college hosted a national level event '**Unveiling and Dedication Ceremony**' in December, 2018.



Member of Parliament, Lok Sabha, Sh. Feroze Varun Gandhi graced the ceremony as the Chief Guest, while MCM alumna Prof. Nishtha Jaswal, VC, Himachal Pradesh National Law University, Shimla, Prof Sucha Singh Gill, Research Coordinator and Senior Professor, Centre for Research in Rural and Industrial Development (CRRID), Dr. R. S. Ghuman, Professor-Economics, CRRID and Mr. Davesh Moudgil, Chandigarh Mayor partook in the ceremony as Guests of Honour. The ceremony witnessed a galaxy of dignitaries in attendance including Prof Shankarji Jha, DUI, PU, Prof Parvinder Singh,

Controller of Examinations, PU, Prof Emanua INahar, DSW, PU, Justice Amarjit Chaudhary, Vice President, DAV College Managing Committee, Mr. Vijay Sharma, Regional Director DAV Schools, Prof Jagat Bhushan, Director, Dr. Harvansh Singh Judge Institute of Dental Sciences, PU, University Senators Dr Ravinder Nath Sharma, Dr. Gurdip Sharma, and Dr. Jagdish Chander Mehta, Chairpersons of various PU departments and Principals of various schools and colleges.



On this momentous occasion, Hon'ble Chief Guest **Sh. Feroze Varun Gandhi** unveiled his book, ***A Rural Manifesto: Realizing India's Future through Her Villages***. In his thought-provoking and meaningful address, Hon'ble Chief Guest Sh. Feroze Varun Gandhi hinged his perceptive views on adopting alternative approaches in favour of traditional and

theoretical models of rural development, including promotion of unconventional skill and learning based education system, providing impetus to hitherto-neglected indigenous industry like textile and leather rather than hankering after mercenary gains benefitting only the top-notch industrialists and business houses, encouraging active and responsible participation of citizens, working towards much-needed political reforms, and creating an environment conducive for equality and justice along with skill-enhancement.



Prof Sucha Singh Gill focused on the farmers and the agricultural labourers that are forced to look for alternate means of earning a living and in extreme cases are forced to commit suicide. He quoted a recent data by Niti Aayog which concluded that about three crore farmers gave up agriculture in the decade ending 2014-15.

He deliberated about the role of bureaucrats and policymakers for the lopsided development which favours the industrialists.

Prof R.S. Ghuman, Professor of Economics, The Centre for Research in Rural and Industrial Development (CRRID), Chandigarh, highlighted the dismal percentage of rural students of Punjab who attained a university education. He pressed on the need to study rural economy in its heterogeneity and totality. Commending Sh. Varun Gandhi for his academic bent of mind, he also emphasized the need for a correlative and mutual relationship between politics and academia in order to address pertinent social issues.



Mr. Davesh Moudgil, Hon'ble Mayor, MC, Chandigarh stated that well-researched projects catalyze the Government for addressing the pressing issues ailing rural Indian economy. Affirming his belief in the voice of the people, he focused on commitment towards the people of the country and said that it must be exemplified in action and conduct. Calling for social obligation in politics, he urged the people to ensure their active participation in the decision making processes by the casting their vote and participating in citizen led initiatives.



Prof Nishtha Jaswal, Vice-Chancellor, Himachal Pradesh National Law University, Shimla, and also an alumna of the college cited the differences between a political democracy and a transformational democracy. Dwelling on the indispensability of academia in addressing the concerns plaguing rural Indian economy, Prof. Jaswal stressed that the approaches given by academicians were potential theories to be followed by the forthcoming generations.



Swachhta begins from Home: NSS CAMP 2018
(24 December -30 December)



A 7 day and night NSS camp on the theme of Swachhata was organized by NSS unit of the college. More than 100 volunteers and 10 staff members registered for this camp. Satvikaa Singh- the winner of state level award for Swachh Bharat Summer Internship 2018 apprised the participants of the activities and achievements of MCM NSS unit during the year. To elicit wholehearted participation of the youth in making Clean India a reality, Swachhata Oath was administered on this occasion. Dr. Geeta Bhagat, Head, PG Department of Psychology, MCM DAV College delivered a motivational lecture on channelising of energy in a positive manner. With the aim of helping the participants realise their full potential, Dr.Geeta's lecture included engrossing exercises like deep breathing, relaxation through guided imagery, self-compassion and strengths wheel exercise.





Dr. Satish Sharma, Director Colleges, DAV College Managing Committee graced the valedictory session of the inaugural day of the camp and motivated the participants to contribute constructively in nation building. Each day began with a physical exercise session, followed by various interactive sessions, guest lectures as well as field work. There was also a poster making competition on “Water Conservation” and cleanliness campaign to promote PM Modi’s Swachh Bharat Abhiyaan.

Day 2 of the 7 day and night camp at the college was high on Yuletide spirit as the NSS volunteers spread Christmas cheer during their visit to Prabh-Aasra, Kurali, Distt. Mohali (Punjab). Celebrating the festival of gifting, the volunteers gifted smiles to the inmates and destitute of Prabha-Aasra.



Seeking to develop the inner strength of the volunteers, Day 3 of the camp began with a spiritually elevating yoga session by Dr. Neha Sharma, Assistant Professor, Department of History. The session was followed by hands on workshop on Best Out of Waste by Dr. Pooja Sharma, Head, Department of Fine Arts,. The main objective of the workshop was to cultivate a thought in the volunteer’s mind on how to reuse and recycle waste products in a creative as well as constructive work. The volunteers also made a wall painting depicting the camp's theme of Swachhata. Cleanliness Rally at the adopted village Badheri had the volunteers sensitising the residents of the village about the importance of cleanliness. In the evening session the Programme officers interacted with the volunteers to encourage and enlighten them with their words and how to contribute to society and have a different outlook. The volunteers also made posters on various themes such as "Swachhata" and "Water Conservation”.



The fourth day, a lecture was delivered by Dr. Bhasin Nirmal, Director, Jannee Fertility Centre and Gynecologist, IMA. She led emphasis on intimate hygiene and gave information regarding sexually transmitted infections, sex education and other vaginal infections and told the volunteers how to improve one’s lifestyle and personal hygiene. The session was followed by another resource person Dr. Jatinder Dhaiya



from NACO, who imparted knowledge about AIDS, HIV and STD's. He also informed the volunteers about various body fluids, its mode of transmission and prevention.

The 5th day witnessed a lecture on Solid waste management by Dr. Vandana Sharma and another lecture by Dr. Sandeep about Mushroom cultivation at Badheri village. Later Dr. Gaurav Gaur addressed the volunteers through interactive session regarding menstrual hygiene. The next day same content and issues were delivered to the women of Badheri at Community centre by NSS volunteers of Mehr Chand Mahajan DAV College for Women, Chandigarh.



On day 6 volunteers also performed a nukkad-natak about Personal hygiene and cleanliness at adopted village Badheri, which presented a very informative, awakening and thought-provoking drama and inspired them to play their part in Clean India campaign.



The day also witnessed a remarkable lecture cum workshop on issues related to violence against women by Prof. Pam Rajput, a crusader of women empowerment, from Panjab University. Apart from this various awareness rallies were conducted to make people aware and sensitize about Swachhata mission.





During the valedictory, Mr. Bikram Rana, State liaison officer, inspired the volunteers by his motivational words and highlighted the importance of the NSS as a platform for maintaining overall harmony and providing necessary social services to society.



The students pledged to continue working for the Swachh Bharat Abhiyan. Satvikaa Singh was declared 'Best NSS volunteer' and Muskan 'Best camper' - 2018.

Composition of Swachhata Song :The Department of Hindi compiled a song on the theme of **Swachhata**. This song was composed by Music (Vocal) department and it has been submitted to Ministry of Housing and Urban Affairs, Govt. of India. This ministry held a competition whereby a song was to be selected as the theme song for Swachh Survekshan.

Swachhata 'Action Taken Report'

[Quarter III : January- March 2019]



Mehr Chand Mahajan DAV College for Women

Sector 36- A, Chandigarh (U.T.)

www.mcmdavcw-chd.edu

National Energy Conservation Day

The campaign of the national energy conservation is the national awareness campaign launched by the Ministry of Power, Govt. of India, to facilitate the process of energy conservation. Using energy efficiently is very necessary to save it for future usage. An awareness drive on energy conservation was held in the college. In this drive, the



students made posters based on its theme, carrying hard-hitting messages and displayed their creative talents in the form of words and pictures. Keeping in sync with the nation's drive towards saving energy, an information board has been put in the college campus permanently, highlighting the relevant points which would be used on daily basis by the college, so that they contribute personally towards restoring energy. Maintaining institutional social responsibility, the college has undertaken certain initiatives to conserve energy including biogas production, solar energy production, rain water harvesting and vermi-composting.

Cleanliness of the Hostels

The cleaning, scrubbing and washing, though undertaken on a regular basis, was co-timed with the winter vacation (January 1 – 12, 2019). This ensured that the students were not disturbed during their stay. The hostel common rooms, store-rooms, windows, doors, staircase grills, mess chairs, exhaust fans, mirrors and tube lights were cleaned and the cobwebs removed. The enamel painted walls in the corridors as well as the bathroom tiles were scrubbed and all the dustbins of the hostels were washed and dried. Rigorous cleaning activity was undertaken in certain areas of the hostels.



National Youth Parliament participation at Walk-in-Level and District Level

National Youth Parliament Festival, 2019 was organized on the themes; “Be the Voice of New India” and “Find solutions and contribute to policy”. Youth in the age bracket of 18-25 years were invited to participate in the District Youth Parliaments. The aim of this programme was to hear the voice of the youngsters who are allowed to vote but cannot contest in elections.



Around 200 youths of the city competed with one another in the first-of-its-kind initiative, Youth Parliament Festival 2019 of the Central Government at the district level. The Youth Parliament at district level, was organized in the Government College for Commerce and Business on January 25, 2019. It was organized by the Regional Directorate of NSS and Chandigarh NSS Cell. 200 youths registered themselves through digital and walk-in process. Many of them uploaded their content through YouTube videos. Later, nine students of the college participated at walk-in level and four students took part through online participation. The participants were evaluated for articulation, clarity of thought, content knowledge and demeanour. Each evaluation criteria carried 25 points and final evaluation was to be made out of 100 points. Satvikaa Singh from the college participated at the State Level and brought laurels to the institution.

District Youth Parliament

The process started on January 12, 2019 and continued up to February 24, 2019. The sessions were conducted at three levels. 8 volunteers of the college qualified and participated for the District Youth Parliament (DYP) which was conducted at the district level on January 25, 2019. Preliminary rounds of screening were conducted to select youth for participation in the DYP. The participants were shortlisted through two screening processes; digital and walk-in. Discussions were held on the topics: Swachhata & Give It Up (LPG), Inspiring attitudinal change, “Ayushman Bharat: Revolutionizing the Health Sector, Reducing Poverty through Financial Inclusion Programmes— Jan Dhan & Mudra Yojana and 'Beej Se Bazaar Tak' and 'Lab to Land', Doubling farmers income for digital screening. The topics for walk-in screening, DYP,

SYP and NYP were announced on the spot. The candidates participated in Hindi, English or the official language of the state government concerned. Satvikaa Singh from our college was selected and she participated at state level held at Chitkara University on 6th March, 2019.

In Tune with the Municipal Corporation :
Nukkad Natak and Swachhata Rally with Municipal Corporation Team

Reaffirming its commitment towards the furtherance of the objective of Swachh Bharat Mission, MCM DAV College for Women organized an interactive session, in collaboration with the Municipal Corporation, Chandigarh Administration on January 18, 2019. The 'Nukkad Natak' and Swachhata Rally aimed at



generating awareness about the mission and bringing about behavioural change towards cleanliness. Organized under the aegis of NSS unit of the college, the session was conducted by the Municipal Corporation officials. Encouraging community participation through Swachhata-MoHUA app, the officials said that the dream of Clean India can only be realized through active citizen participation.

The NSS volunteers of the college also staged a nukkad- natak on the theme of 'Swachhata' with the aim of sensitizing the audience about various themes of the mission including sanitation and health, composting, segregation of waste, use of toilets, sanitary napkins and more.



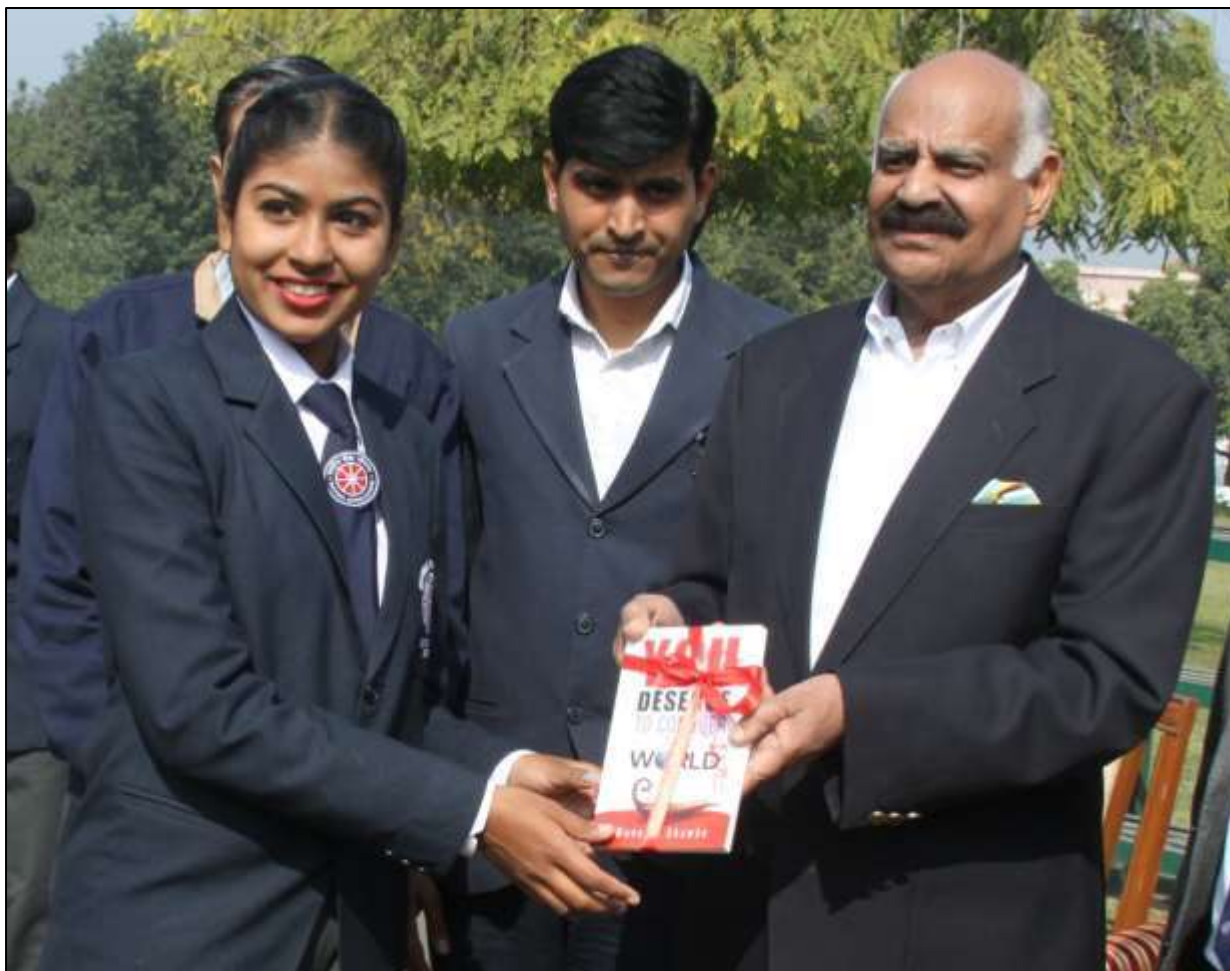


The officials sensitized the students about waste segregation techniques and the importance of making cleanliness a way of life. The College staff and students were honoured by the officials of Municipal Corporation Chandigarh for their laudable initiatives in alignment with Swachh Bharat Abhiyan which include segregation of waste at source, biogas production, solar energy production, rainwater harvesting, composting, vermicomposting, plantation drives, cleanliness drives and awareness drives in the adopted village Badheri

Nikita Bharti: Proud Participant in 70th Republic Day Parade -2019

National Service Scheme (NSS) - an Indian Government Sponsored Public Service Program of Ministry of Youth Affairs and Sports, Government of India conducted Republic Day Parade Camp 2019 from 1st to 31st January, 2019. The main aim of the camp was to develop sportsmanship, patriotism, the spirit of adventure, good character, discipline, tolerance, the value of sacrifice, leadership qualities, secular outlook, enhancement of holistic self-esteem among NSS Volunteers, and to provide a wide area of scope for exchange of rich cultural heritage. Such qualities go a long way in furthering the cause of 'Swachhhta' in all walks of life. Emphasis was laid on inculcating these values in the minds of young NSS Volunteers during the camp days. The camp

imparted training for thirty-one days, mainly for the parade and also to provide opportunities for NSS Volunteers to shape their physical, intellectual and cultural talents. It is a matter of great pride that Nikita Bharati of our college was selected for Republic Day Parade Camp-2019.



Nikita Bharti felicitated by Sh. V.P. Singh Badnore, Honourable Governor of Punjab and Administrator of U.T., Chandigarh at Raj Bhawan, Chandigarh (U.T.) on 4th Feb., 2019.

**Inauguration of RUSA sponsored projects and honouring of SBSI Team by
Education Secretary, UT Administration, Chandigarh
Installation of Water Boosting System and Rainwater Harvesting System**



In a bid to further strengthen the institution's efforts in the direction of sustainability and to ensure quality education in quality ambience, the college has installed water boosting system and rainwater harvesting system in its hostels.



These projects relating to water boosting system and rainwater harvesting system were made possible through grants from Rashtriya Uchhatar Shiksha Abhiyan (RUSA) and were inaugurated by Sh. B. L. Sharma, IAS Hon'ble Secretary (Education), Chandigarh Administration and Dr. Dalip Kumar, Additional State Project Director, RUSA, Chandigarh.



The dignitaries unveiled the reports of Swachhata initiatives and Swachh Bharat Summer Internship, 2018 that document the appreciable contribution of the college to the Swachh Bharat Mission.



The Programme Officers and members of the NSS unit of the college were honoured on this occasion.

Green Marathon

The main objective of this marathon was to create awareness about the serious imbalance between the nature and human life. Officials of State Bank of India in collaboration with Radio Mirchi organized an SBI Green Marathon held in February, 2019. Sixty six NSS volunteers and the Programme officers of the unit participated in Green Marathon 2019. Senior officials of the



Volunteers of Green Marathon

bank also contributed to the 'Run for Green' theme and ran the marathon along with other participants.

All the runners were given organic T-shirts to promote a clean and green city and their bibs consisted of seeds for tree plantation post-Marathon. SBI General Insurance is the health partner for SBI Green Marathon, whereas SBI Life, SBI Mutual Funds and SBI Card also significantly contribute to this zero-waste event.

Dustbin Making Activity

The “Dustbin Making Competition” was held on the 30th of January, 2019 with the aim of making students aware of the clean surroundings and ensure the regular use of dustbins. Students explored their imagination and showcased their creative skills by using simple material to give form to their excellent ideas.

Overall 16 participants including three foreign students contributed to the activity. Their enthusiasm was reflected in the wonderful creations. Riya, Yashaswi, Arshdeep and Simran won the first, second, third and consolation prizes respectively.



Detoxification of Brain through Stress Management Techniques:



An Interactive session on 'Detoxification of Brain through Stress Management Techniques' was organized by the Swachhata Committee (commerce) on the 31st of January 2019. It was conducted by well-known motivational and transformational speaker Mr. Anurag Rishi.

The aim was to raise awareness and enable participants to consider the management of stress at an individual and organizational level, leading to the implementation of effective strategies to prevent and manage stress.

The students were sensitized on the issues like how stress works, developing sustainable behaviour, to identify the cause of unwanted and negative stress, to develop a balanced life style and action plan for stress management.

While addressing the students, Mr. Anurag Rishi laid emphasis that a small concern about a problem, turns into worry, but we give it the name of stress and anxiety and it is very important to develop the skill to overcome it. He advised the participants to practice Law of Gratitude, Time Management and to follow one's passion as it fuels a positive emotion which ultimately leads to stress reduction.

Vertical garden: A green Initiative

Reusing our plastic – Vertical garden: A green Initiative



In order to control this plastic menace, innovative solutions are required that would do away with plastic pollution permanently. With the aim of curbing this plastic menace, around 15 students of B.Sc (I) Medical, under the supervision of Dr. Purnima Bhandari started the initiative of re-using the discarded plastic bottles in the formation of vertical garden in the premises of college botanical garden from the 21st to 23rd February, 2019. This plastic bottle vertical garden was made by stringing the bottles horizontally in a grid along a wall, which then filled up by substrate and plants such as syngonium, pansy, genda. It is a great way to reuse old plastic bottles and to introduce some greenery to a small urban space.



'Essay and Poetry writing competition on 'Sustainable Sanitation'.



The aim of the competition was to educate and sensitize students/ youth regarding importance of sanitation and its sustainability to accomplish the vision of a clean and healthy Bharat. A sustainable framework of sanitation must be economically viable, socially acceptable, easily maintainable, and

should be environmentally friendly. A creative Writing Competition on the topic 'Sustainable Sanitation' was organized for the students of Science and Arts streams on 25-2-2019. Thirty Six students of the college participated in the Essay and poetry Competition with great enthusiasm and interest. During the event, the importance of health, hygiene and cleanliness was also discussed.

All the participants were awarded with the certificates. Muskaan and Parul bagged first and second positions in Essay competition. Prerna and Priya bagged first and second positions in Poetry competition. The students expressed their views and thoughts about the given topic through their writing skills. This activity served as a motivational initiative to embark the concept of hygiene and sanitation among students to ensure a clean and healthy environment.

Slogan Writing Competition

A Slogan Writing Competition and Open Mic were organized to make the students aware of corruption in language. The Swachhta Committee (Arts) organized these activities on the theme "Swachh Bhaasha Swachh Bharat" on 26th of February, 2019 in the college campus. It was an attempt to help the young generation communicate



in a culturally civilized manner and create a better world with a better language. Arshdeep, Simran and Muskaan won the first, second and third prize respectively.

World Water Day Celebration

The World Water Day Celebration was organised with the vision to advocate for sustainable management of water resources and sensitise the students about the need for water conservation. The Swachhta Committee (Arts) began a 3-day awareness drive. With special emphasis on saving water during Holi celebrations, the



drive began with briefing the students about ways to save water. On the inaugural day of the drive, poetry recitation on the theme was organised wherein Principal Dr. Nisha Bhargava also recited her self-composed poem (follows the paragraph), voicing the gravity of the issue and pressing upon the need to act now. Posters carrying impactful messages about water conservation were also displayed during the drive.

जल से जीवन

बहुत दिनों की बात है
मुझे अब तक याद है
नदियों में पानी बहता था
और कुओं में भी रहता था ।

हैंड पम्प का वक़्त फिर आया
वक़्त बचा और मन हर्षाया
घर के बच्चे पानी भरते
हँसी खुशी व्यायाम करते ।

फिर नल में पानी आने लगा
इक नया भय सताने लगा
कुछ घंटे को ही आता था
में दुर्लभ हूँ बतलाता था ।
हरित क्रांति का युग फिर आया

अन्न से घर भंडार भरे

प्रकृति प्रदूषण शुरू हुआ
पर उसकी चिंता कौन करे ।
वायु जल भूमि सब हैं दुखी
ये मूक हैं और इंसान बधिर
बोतल में अब जल बिकता है
आगे की कोई नहीं फ़िकर ।

आओ मिल कर संकल्प ये लें
एक बूँद भी व्यर्थ न होने दें
जल जीवन है जल से जीवन
संदेश ये सबको पहुँचा दें ।

वर्षा जल को संरक्षित कर
वापिस पृथ्वी में लाना है
जल संरक्षण की लहर को
हर घर तक पहुँचाना है ।

Poster Making Activity

The Swacchta committee (languages) organized a poster making activity on the theme 'Swacchta: A national duty' in the month of February. Participants from various disciplines displayed their commitment to their cause by making posters and raising awareness.



Insect and Pest free Hostels

The objective of the activity was to make the hostels insect and pest free. On March 6, 2019, insecticide spray was sprayed in the bathrooms, corridors, lawns and outer walls of all the six hostels. The hostels were finally made insect and pest free.

E-waste Model Making Competition

The main objective of organizing this event was to foster scientific curiosity, creativity related to E-waste management among the students and also to provide a platform to exhibit and share their knowledge and passion for understanding and simulating the E-waste in an environmentally sound manner. Department of Computer Science and Applications organized Intra College E-Waste Model Making Competition as Swacchta initiative on 6th March 2019. Twelve teams (20 students) participated in this competition. The participants were instructed to adhere to the theme of e-waste raw material usage only. Dr. Yogita, Assistant



Professor, Physics Department and Ms. Punam Dawgotra, assistant Professor, DCSA were the judges for this competition. Robot with fan arm, air cooler, water fountains, USB fan, toy car, decorative lamps, village view etc. captivated the attention of onlookers and judges. The students elucidated the judges about their working.

Hands on Training Workshop on Cultivation of Oyster Mushroom *Pleurotus* spp.

The Department of Food Science in collaboration with Skill Development committee organized two days hands on training Workshop on “**Cultivation of Oyster Mushroom (Dhingri)**” on 13th and 14th March 2019. The workshop was focused on imparting hands on training on cultivation of oyster mushroom in used plastic bottles using combination of agro and garden waste detailing all technical and theoretical aspects of mushroom cultivation. The workshop consisted of four modules giving complete training on in house spawn production, substrate collection and sterilization, filling of bottles and bags through spawn layering technique, identifying and optimizing spawn



run, pinning and harvesting stages. A total of 47 students (including students from GGSD College, Sector 32, Chandigarh, Post-Graduate Govt. College for Girls, Sector-11, Chandigarh and our college) actively participated in the workshop.

Swachhata 'Action Taken Report'

[Quarter IV : April - June 2019]



Mehr Chand Mahajan DAV College for Women

Sector 36- A, Chandigarh (U.T.)

www.mcmdavcw-chd.edu

Poster and Oral Presentations related to Swachhta Mission by Students and Faculty of Food Science Department at Varied Conferences

To create awareness regarding waste management strategies adopted at different levels through participation at National and International level and understanding of the challenges and issues associated with waste management and role of Science and Research in exploring solutions in this direction, presentations were done. It also gave an opportunity to students to meet other scientists and employers and learn new ideas and innovations in the field of waste management issues.

Name of Conference: National Conference on “Cutting Edge Research & Innovation in Biotechnology & Other Life Sciences” held at Chandigarh Group of Colleges (CGC), Landran, Punjab on 4th -5th April, 2019.

Under the supervision of Dr.Vandana Sharma, Dr. Sandeep, Dr. Hina and Dr.Shruti Puri, 13 students of B.Sc. MFT 3rd year presented their research work (pertaining to Swachhta mission) in the form of oral presentations

Study Presented (as described below):

Title of Study	Study Highlights
Pesticide degradation: A call to eradicate pesticides from agricultural soil	Excessive and indiscriminate use of pesticides has led to soil, water and environmental pollution with serious impact on human as well as animal (flora and fauna) health. Bioremediation is one of the most environmentally safe and cost-effective methods of decontamination and detoxification of a pesticide-contaminated environment. With this objective, pesticide degrading bacteria were isolated from soil collected from agricultural areas of Punjab with history of continued farming activities for many years. The present study focused on the isolation and characterization of bacterial cultures for biodegradation of pesticides commonly used in the agriculture.

<p>Street vended foods: A gastronomic delight for microbes rather than humans!</p>	<p>The study focused on presenting data on the poor hygiene quality and poor level of cleanliness in street vended foods. The street food sector in India is escalating, owing to vast diversity of inexpensive foods and fast-paced life. However, safety of street vended food remains a serious health concern and it becomes imperative to assess its quality. In view of the same, the present study was conducted to investigate the microbiological quality of street food including momos, samosa, tikki, kulcha, pasta sauce, chutney, fruit juice, mayonnaise, eggs, shakes and lemonade. The samples were collected from different vendors in the vicinity of Sector 36, Chandigarh.</p>
<p>Garden waste management through mushroom cultivation: A sustainability initiative</p>	<p>Solid waste management has become a major cause of concern. With this as the main objective, the present study was focused on management of solid waste especially green garden waste by using it as a potential substrate for growth of highly nutritious and edible mushrooms i.e. oyster mushrooms. The results of the study showed that mushrooms can be grown from dry garden leaves when mixed with wheat straw. Nutritional analysis showed comparable nutritional value of mushrooms grown on dry leaves and wheat straw (1:1) as substrates. This waste management strategy is equally scalable and a possible solution to dry leaf burning and stubble burning contributing to air pollution.</p>
<p>Comparative study of production of single cell protein by utilizing different fruit and vegetable wastes</p>	<p>According to international survey, about 1.3 billion tons of food is being wasted or lost. This waste can be used to produce a lot of value added products such as single cell proteins, ethanol, hydrogen etc. The aim of the study is to compare the single cell protein production by using different fruit and vegetable</p>

	<p>wastes. In this study, <i>Sacchromyces cerevisiae</i> was allowed to grow on different substrates like orange, banana, carrot and pomegranate and single cell protein production was observed.</p>
<p>Transforming food waste into Bioenergy</p>	<p>The paper highlighted on the need to transform waste into useful energy and the various programs adopted and executed under this mission by the college. With the objective of creating a zero waste campus –the college started an ambitious program on waste management under Swachh Bharat Abhiyan initiative of Govt. of India. The main focus was to set up the process for recovery, reduction and recycling waste management program at the campus.</p> <p>In the last six months, the college has made efforts to implement sustainable waste management practices on campus through multiple initiatives such as setting up of biogas plant and composting in an attempt to transform the food waste into bioenergy and biogas. The different types of waste generated in the campus is managed by using comprehensive, scientific and environment-friendly approaches to decentralized solid waste management practices.</p>

Learning Outcome: Awarded 3rd prize in Oral presentation entitled, ‘Street vended foods: A gastronomic delight for microbes rather than humans!’ to Ramneet Kaur, B.Sc. MFT 3rd year.



Go-Green: Swachhta Activity in Hostel

Keeping up with the College tradition of “Go Green”, the outgoing students of the hostel planted 12 trees on April 10, 2019. The outgoing students of the hostel wished to set a precedent and inspire their juniors by planting trees. They were helped by the gardeners of the College in this green



enterprise. A green initiative was launched by the outgoing students of the College hostels by planting 12 trees in the College campus.

Anti-Malaria and Fogging Activity



The hostels were duly disinfected by getting **Anti-Malaria spray** spurted in the **washrooms, kitchens and corridors/lawns** on the following dates during the year 2019: April 15, 18, 29 and 30. In the month of May, the spraying was carried out on the following dates: May 2, 3, 9 and 13. Besides this, fogging was also carried out by the Municipal Corporation in the Hostel premises on May 14, 2019. As the summer season made its onset in April, the College hostels were disinfected, their key areas of washrooms, kitchens and corridors/lawns by getting them treated with **Anti-Malaria spray**.

The activity of **Fogging** also minimized the chances of mosquito breeding in the hostels. The teams carried out Anti-Malaria spray drives in the College hostels on a regular basis. However, since the summer season had made an onset, which was a peak time for mosquito breeding, the spraying drives and fogging were carried out in the hostels in the months of April and May.

Plantation Drive of Medicinal Plants



The Swachhta Committee (Arts) along with the Sanskrit Department organized a **Havan** and a **Plantation drive of medicinal plants** to show respect for mother Earth on **Earth Day** - 22nd April, 2019 in the college campus. It was done to sensitise the young generation about the importance of caring for our planet. The students displayed posters depicting ways to save the Earth and create a sustainable future. Later, a plantation drive of medicinal plants was also carried out on the occasion for a better environment.

World Environment Day

The Swachhta Committee (Arts) in collaboration with the NSS unit of the college,



observed **World Environment Day** on **5th June, 2019**. The staff and students were administered oath for environment protection wherein they pledged to plant more trees, conserve energy and promote

renewable energy. The idea was to create awareness and to sensitize people about the conservation of environment. The students were urged to show love for the planet by contributing to stop global warming, avoid environmental destruction and support green initiatives.



Report of Swachh Bharat Summer Internship - 2019

**Ministry of Water and Sanitation
&
Ministry of Human Resource Development
Government of India**

Swachh Bharat Summer Internship 2.0-50 Hours Program of Swachhta-2019

The Swachh Bharat Summer Internship (SBSI) was launched in 2018 to encourage the involvement of the highly energetic youth in furthering the aim of a cleaner India. The successful completion of this internship last year gave an impetus for the relaunch of the internship as **Swachh Bharat Summer Internship 2019 - 50 Hours of Swachhata** for providing an opportunity to young volunteers to develop their skills and orientation for sanitation-related work and become a part of the *Swachh Bharat Aandolan*.

In order to give their contribution in the 50 hours Program of Swachhta the NSS Units of the college, constituted nine teams and contributed more than 50 hours of service in the selected villages with all the dedication. The internship was to integrate students in the community service in rural areas. The College prepared an action plan on "Swachh Bharat Summer Internship-2.0- 2019" and executed various activities from June -July 2019 and has planned many more for the forthcoming session. A team of 25 interns (registered under the summer internship) was formed in the third week of June 2019 to support and compliment 'Swachh Bharat Mission' by the Government of India. Through the said program, the NSS UNIT of the college initiated a campaign to make the public, especially in the adopted rural areas that are aware about the mission of Swachhta.

During this 50 hour program, the interns were given the opportunity to put forth two particular issues: Plastic Waste Management and Organic Waste management. The interns accomplished the internship in the third week of July 2019 in the selected

villages namely: Kishangarh (U.T. Chandigarh) Dhanas(U.T. Chandigarh) Kajheri (U.T. Chandigarh) Buterla(U.T. Chandigarh) Bihru and Bhudan (H.P) Jitwal Kalan (Sangrur, Punjab), Kanhari Kalan (Haryana) and Niwarsi (Kurukshetra, Haryana).

On 31st July 2019, the interns completed their participation in the program of Swachhata. In the month of June, twenty five NSS volunteers registered for the said program and completed the work under the supervision of twelve faculty members and two program officers with full cooperation, zeal and enthusiasm. The interns participated enthusiastically and did their work with novel techniques and exceptional efforts under the supervision of their nodal officers, Dr. Namita Bhandari and Dr. Manjot Kaur. The volunteers were further guided by their respective mentors from the College namely: Dr Kanika Malhotra, Dr Madhuri Patil, Dr Rishu, Ms Pallavi, Dr Ramandeep Kaur, Dr Sonica, Ms. Navdeep and Dr. Amandeep. A highlight of this event was to inculcate a sense of social service in students and also motivate them to indulge in the development of highly skilled co-curricular tasks. The main endeavor was to involve and evolve the energy of our young girls in community engaged programs so that they can develop their skills and orientation while contributing the cause of rural sanitation in India.

Under this flagship program, special rallies were organized to mark the theme of the internship 'Say No to Plastic' to spread awareness amongst people about the harmful effects of using plastics. A lot of fun filled yet learning activities were organised during Swacchta mela where kids from various slums and village schools came to participate. Interactive sessions of movie screenings related to personal and menstrual hygiene were also held in the Panchayat Ghars of the selected villages. Various campaigns were organised to make people aware about segregation of solid waste into non-biodegradable and biodegradable waste. While delivering distinctive lectures the emphasis was given on Solid Waste Management, 3R's, 4 R's; and compost pits. The students started working for compost pits during the summer vacation and that would help Panchayats and villagers to draw up their plans further. The interns not only participated in various cleanliness drives in the selected villages but also helped in setting up of the sustainable cleanliness and sanitation programs under this program.

As part of the internship, the activities that participants conducted have been categorized into two categories: Information, Education and Communication (IEC), and Solid Waste Management (SWM).

Information, Education and Communication (IEC) activities

- Organized awareness campaigns around better Solid & Liquid Waste Management practices. E.g. segregation of waste as biodegradable and non-biodegradable.
- Village and school-level promotion of the 3Rs (Reduce, Reuse, Recycle), composts pits, no-littering through Nukkad-Naataks /street plays, folk song and dance performances.
- Organized Swachhata Melas/Exhibition on local waste management technologies.
- Make wall paintings in public places (Panchayat ghar, aaganwadis, school etc.) on the theme of a clean village, promotion of compost pits, and proper management of plastic waste.
- Organized plastic – free village campaigns and declaring of plastic – free zones.

Solid Waste Management (SWM) related activities

SWM activities target waste collection, segregation, disposal and a plastic waste free environment :

- Organized waste collection drives for households and common or shared spaces
- Volunteer for segregation of solid waste into non-biodegradable waste.
- Supported communities and panchayats to build compost pits, where organic matter decomposes to for manure. Conducted surveys to illustrate quantum of solid waste generated in the selected villages.
- Organized cleaning of streets, drains and back alleys through awareness drives
- Creation of Infrastructure: compost pits for households, drains for kitchen gardening, soak pits for waste management.

The 50 hour Summer Internship exposed our students to various aspects of community services and helped them to understand how to engage the community in such social outreach programs. They spent the initial week on the field and interacted with the village Sarpanches. During the field work in the selected villages, we learnt about the

behaviour of villagers and ways to enhance awareness in the rural area. Interactive sessions helped the teams transform their minds and actions towards the cleanliness mission. During the internship period students were given a crucial responsibility of changing perspectives, especially of women and the illiterate class of the society, who are unable to break the shackles of orthodox/traditional mind-sets. By this endeavour, our own students learnt the important aspects of Swacchta, cleanliness and hygiene and delivered them well in their experimental work-fields. Overall, the SBSI-2.0 2019 was highly successful in making the people aware of healing practices through counseling and discussions.

Glimpses of SBSI – 2019







Table 1
Swachh Bharat Summer Internship 2.0 2019 Conducted Under NSS Committee
of
Mehr Chand Mahajan DAV College for Women, Sector 36-A, Chandigarh

Sr. No	Adopted Villages	No of Interns Participated	Name of the students	Activities Undertaken	Name of the Mentor
1	Kishangarh (U.T. Chandigarh)	7	1. Ramanpreet Kaur 2. Simran 3. Gauri Kansal 4. Kajal Pradhan 5. Harsimrat Kaur 6. Mahima Kaushik 7. Najeet Kaur	Door to door Awareness, Cleanliness Drives, Movie screening, Lecture on 3Rs, Wall Painting, Waste collection drive, Tree plantation, Construction of Compost pit.	Dr. Kanika and Ms. Navdeep Kaur
2	Dhanas (U.T. Chandigarh)	4	8. Muskaan Lamba 9. Divya Bansal 10. Shiwani 11. Neha Barak	Door to door awareness campaigns, Waste collection drives, Lecture on 4R's, Mushroom Cultivation and Indoor pollution, Wall painting Movie screening, Construction of compost pits, afforestation drive and Awareness rally.	Ms. Pallavi
3	Kajheri(U.T. Chandigarh)	1	12. Himani Chopra	Swachhta Oath, Construction of Compost pit, Wall painting, Door to door awareness drives, Installation of dustbins, Awareness regarding Waste segregation, Cleanliness drives Lecture on 3 R's and SWM, Swachhta Rally, Swachhta Exhibition, Interactive Sessions on Best out of waste and Movie Screening	Dr. Madhuri

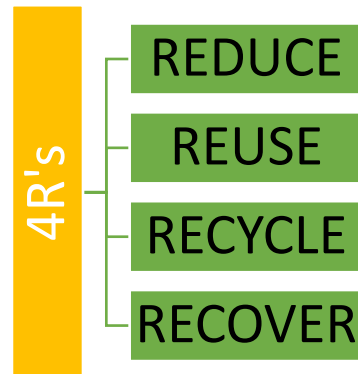
4	Buterla (U.T. Chandigarh)	6	13. Vanshika Garg 14. Rishita Garg 15. Gunjan Bedi 16. Tanya Nagpal 17. Simran Kaur 18. Muskan Soni	Construction of Compost pit, Wall paintings (6), Lectures on Mushroom Cultivation, Segregation of waste and sanitation; Yoga sessions, Distribution of sanitary pads, Cleanliness awareness rallies, Cleanliness drives, Waste collection drives, Tree plantation, Nukkad natak, Awareness regarding personal and menstrual Hygiene and distribution of Paper bags	Dr. Rishu and Dr. Amandeep
5	Bihru and Bhudan (H.P)	1	19. Pallavi kaplesh	Personal and menstrual hygiene camp and distribution of sanitary napkins, Cleanliness drives, Poster making, slogan writing, Wall painting, Lecture on 3R principle, Best out of waste activity, Plastic collection drive, Construction of plastic garden and tree plantation, Awareness drive about Waste segregation, interactive sessions on making organic manure from kitchen waste, Swachhta rally, Movie screening and Door to door campaigns	Dr. Ramandeep and Dr. Sonica
6	Jitwal Kalan (Sangrur, Punjab)	1	20. Snigdha Mehta	Tree plantation, Movie Screening, Swachta rally, Cleanliness drives, Interactive sessions on Menstrual Hygiene and disposal of general waste, construction of bio medical waste pit	
7	Kanhari Kalan, Haryana	4	21. Mitali Singh 22. Manya Kheterpal 23. Pallavi Sharma 24. Cheshta	Poster Making and Slogan writing, Cleaning of streets and drains, Waste collection drive, Door to door campaign on segregation of waste , personal hygiene, menstrual hygiene, construction of compost pits, Lecture on 3R principle, Swachta mela, Performed Nukkad Natak, Lecture on benefits of manure prepared from kitchen waste and how to reuse plastic, Swachhta rally and Declaration of plastic free zone	
8	Niwarsi, Kurukshetra, Haryana	1	25. Ekamjot	Tree plantation, Workshop on 3R's, construction of compost pit, Awareness regarding waste segregation, Cleanliness drives, Poster making competition, Malaria awareness drive and placement of dustbins	


The following activities were also conducted by our volunteers under SBSI 2019

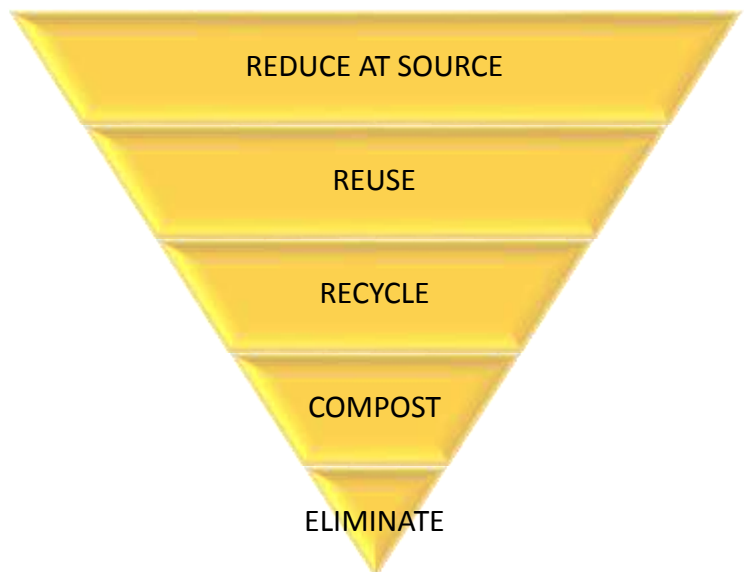
- Conducted awareness drives/programs on Menstrual Hygiene and Sanitation
- Special lecture and demonstrations have been given on Solid Waste Management and Eco Enzymes
- World Environment day was celebrated by conducting Swacchta awareness programs and rallies on "Say No to Plastic".
- Awareness Campaigns/Programs/lectures on Underground Drainage System.
- Special lectures were conducted on Vermicompost Pits" and our interns have already started working on this project.

Duration	: 10 June 2019 to 31 July 2019
Hours Spent	: 50 (per village, per team)
No of Nodal officers	: 2
No of Faculty members participated	: 12
No of SBSI Interns Participated	: 25
No of adopted villages	: 09

The great emphasis was given on **practicing segregation of waste** while focusing on the **4R's** to deal with PLASTIC POLLUTION.



People were sensitized and informed to follow the top-down approach illustrated here 





Preliminary Report on the Floral Diversity in the College Campus



Mehr Chand Mahajan DAV College for Women

Sector 36-A, Chandigarh (U.T.)

www.mcmdavcw-chd.edu

Preliminary Report on the Floral Diversity

Plants emit large amount of volatile compounds / natural plant products that are involved in various ecological functions e.g. they may serve as antiherbivore, antifungal, antibacterial compounds, phytotoxins, as attractants of pollinators and seed dispersers and are also involved in plant-plant interactions, including allelopathy. As far as floral diversity is concerned, the plant species are distributed into different types, viz. herbs, climbers, vines, shrubs and trees.

During the present study, the floral diversity of the campus was studied through visual observations. Regular visits were planned in the college campus, to note the floral diversity growing in the campus and to list them according to their type and family.

List of plant species

S.No.	Name of the plant	Number of species	Family	Common Name	Type
1.	Tagetes erecta	60	Asteraceae	Mexican marigold	Herb
2.	Rosa indica	20	Rosaceae	Rose	Woody Shrub
3.	Duranta erecta	20	Verbenaceae	Golden dewdrop	Shrub
4.	Ficus krishnae	4	Moraceae	Krishna fig	Tree
5.	Asparagus officinalis	15	Asparagaceae	Garden asparagus	Herb
6.	Croton sp.	6	Euphorbiaceae	Rushfoil	Shrub
7.	Ocimum sanctum	25	Lamiaceae	tulsi	Sub Shrub

8.	Mangifera indica	8	Anacardiaceae	Mango	Tree
9.	Citrus limon	3	Rutaceae	Lemon	Tree
10.	Barleria cristata	10	Acanthaceae	Philippine violet	Shrub
11.	Acorus calamus	6	Acoraceae	Sweet flag	Herb
12.	Elettaria cardamomum	1	Zingiberaceae	Elaichi	Herb
13.	Aloe vera	10	Liliaceae	Ghrit Kumari	Herb
14.	Opuntia ficus-indica	12	Cactaceae	Cactus	Succulent
15.	Sansevieria hyacinthoides	15	Asparagaceae	Mother-in-law's tongue	Succulent
16.	Plumeria rubra	1	Apocynaceae	Frangipani	Small tree
17.	Terminalia arjuna	1	Combretaceae	Arjuna	Tree
18.	Cassia fistula	1	Fabaceae	Amaltas	Tree
19.	Eucalyptus globulus	10	Myrtaceae	Safeda	Tree
20.	Phyllanthus emblica	1	Euphorbiaceae	Amla	Tree
21.	Terminalia belerica	4	Combretaceae	Bahera	Tree
22.	Bacopa monnieri	1	Plantaginaceae	Brahmi	Herb
23.	Stevia rebaudiana	1	Asteraceae	Sugar leaf	Herb
24.	Ocimum kilimandscharicum	20	Lamiaceae	Camphor basil	Woody shrub

25.	<i>Adhatoda vasica</i>	2	Acanthaceae	Vasaka	Shrub
26.	<i>Justicia gendarussa</i>	2	Acanthaceae	Kala adulasa	Shrub
27.	<i>Ficus religiosa</i>	7	Moraceae	Peepal	Tree
28.	<i>Bauhinia purpurea</i>	3	Fabaceae	Orchid tree	Tree
29.	<i>Bougainvillea spectabilis</i>	5	Nyctaginaceae	Great Bougainvillea	Woody vine/Shrub
30.	<i>Azadirachta indica</i>	11	Meliaceae	Neem	Tree
31.	<i>Grevillea robusta</i>	24	Proteaceae	Silver oak	Tree
32.	<i>Litchi chinensis</i>	6	Sapindaceae	Litchi	Tree
33.	<i>Saraca asoca</i>	52	Fabaceae	Ashoka	Tree
34.	<i>Cycas revoluta</i>	5	Cycadaceae	Sago palm	Tree
35.	<i>Psidium guajava</i>	5	Myrtaceae	Guava	Shrub or tree
36.	<i>Manilkara zapota</i>	4	Sapotaceae	Sapodilla	Tree
37.	<i>Syzygium cumini</i>	2	Myrtaceae	Jambolan	Tree
38.	<i>Annona squamosa</i>	6	Annonaceae	Sugar apples	Tree
39.	<i>Araucaria columnaris</i>	2	Araucariaceae	Coral reef	Tree
40.	<i>Punica granatum</i>	3	Lythraceae	Pomegranate	Small tree
41.	<i>Alstonia scholaris</i>	3	Apocynaceae	Devil tree	Tree
42.	<i>Ficus pumila</i>	9	Moraceae	Creeping fig	Evergreen vine

43.	Bambusa arundinacea	1	Poaceae	Thorny bamboo	Herb
44.	Murraya paniculata	2	Rutaceae	Jasmine orange	Tree
45.	Ageratum conyzoides	13	Asteraceae	Billy goat weed	Herb
46.	Ficus benghalensis	1	Moraceae	Banyan tree	Tree
47.	Pinus roxburghii	4	Pinaceae	Pines	Tree
48.	Dracaena fragrans	11	Asparagaceae	Cornstalk dracaena	Shrub
49.	Syngonium podophyllum	28	Araceae	Syngonium	Evergreen vines
50.	Euphorbia pulcherrima	2	Euphorbiaceae	Poinsettia	Shrub
51.	Murraya koenigii	1	Rutaceae	Curry tree	Tree





Preliminary Report on Floral Diversity



Annona squamosa



Araucaria columnaris



Grevillea robusta



Samca asoca



Punica granatum



Alstonia scholaris



Cycas revoluta



Manikara zapota



Litchi chinensis



Azadirachta indica



Psidium guajava



Bouganvillea spectabilis



Bauhinia purpurea



Cassia fistula



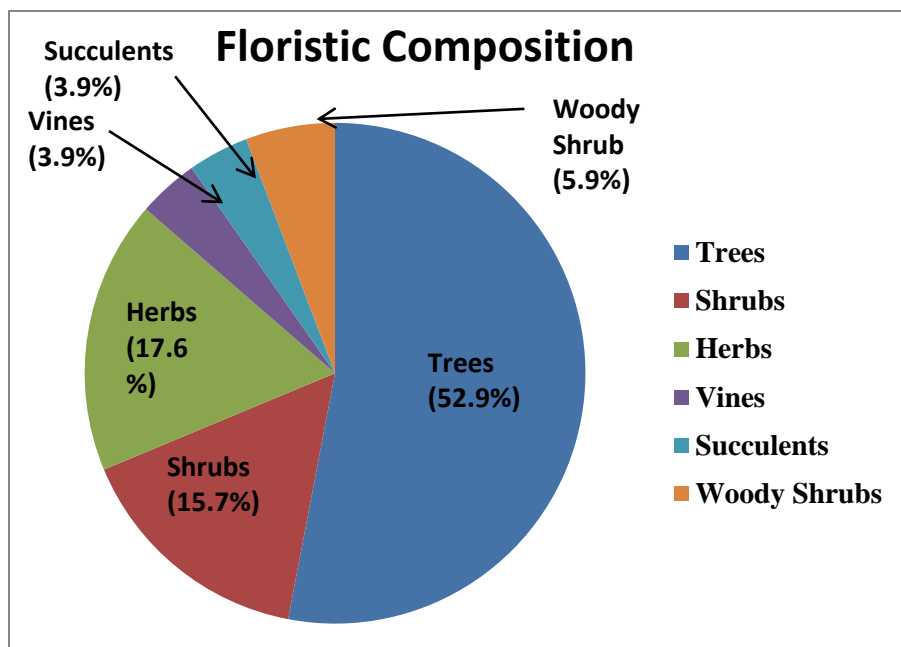
Senecioia hybridata



Opuntia ficus indica



Preliminary Report on Floral Diversity



Type of the plant	No. of species
Trees	27
Shrub	8
Herb	9
Vines	2
Succulents	2
Woody shrubs	3
Total	51

Efforts by: B. Sc. IInd and IIIrd year medical students under the supervision of Dr. Gunjan Sud, Dr. Jasleen Kaur and Dr. Aditi Shreeya Bali from department of Botany

Preliminary Report on the Insect Fauna in the College Campus



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PRELIMINARY REPORT ON THE INSECT FAUNA

Insects are the dominant group of organisms on earth in terms of both taxonomic diversity (50% of all described species) and ecological function. As far as diversity of the insects is concerned, insect species are distributed unevenly among the higher taxonomic groups. Five orders stand out for their high species richness, which include Coleoptera (beetles), Diptera (flies), Hymenoptera (wasps, ants and bees), Lepidoptera (butterflies and moths), and Hemiptera (the true bugs). Among these, beetles comprise almost 40% of described insect species i.e. more than 3,00,000 species. During the present investigations, the insect diversity of the campus was studied through visual observations for a period of six months. Early morning and evening visits were planned during the study period as the insects are more active during this period. The insects were then identified with the help of available standard literature such as Borrer, *et al.* (1992), Gullan & Cranstan (2000), Mauro, *et al.* (1987), Gunathilagaraj, *et al.* (1998), Haribal (1992), Mani (1995), Pradhan (1992) and Saxena (1992).

OBSERVATIONS

I. Order: Lepidoptera

The butterflies and moths are common insects and are well known to everyone. They are most readily recognized by the scales on the wings. Most of the body and legs are also covered with scales. The principal characters used in identifying adult Lepidoptera are those of the wings (venation, method of wing union, wing shape and scaling). Other characters used include the characters of the antennae, mouth parts, ocelli, legs, and frequently some general features such as size and color.

Details of the Lepidoptera species recorded from the College campus

Family	Scientific Name	Common Name	Fig. No.
Pieridae	<i>Eurema hecabe</i>	Common grass yellow	1
	<i>Catopsilia sp.</i>	Common emigrant	2,3
Papilionidae	<i>Papilio polytes</i>	Common mormon	4
Lycaenidae	<i>Chilades pandava</i>	Jewel butterfly	5
	<i>Talicauda nyseus</i>	Red Pierrot	6
	<i>Spindasis vulcanus</i>	Common silverline	7
Nymphalidae	<i>Tirumala sp.</i>	Beautiful tiger	8
	<i>Melanitis</i>	The great evening brown	9



1. *Eurema hecabe*



2. *Catopsilia sp.*



3. *Catopsilia sp.*



4. *Papilio polytes*



5. *Chilades pandava*



6. *Talicauda nyseus*



7. *Spindasis vulcanus*



8. *Tirumala sp.*



9. *Melanitis*

II. Order: Hymenoptera

Hymenoptera is a large order of insects, comprising the sawflies, wasps, bees, and ants. This is the most beneficial order from the human point of view. It contains great many species that are of value as parasites or predators of insect pests and it contains the most important pollinators of plants, the bees. The Hymenoptera are very interesting group in terms of their biology. They exhibit a great diversity of habitat and complexity of behavior in the social organization.

Details of the Hymenoptera species recorded from the College campus

Family	Scientific Name	Common Name	Fig. No.
Apidae			
Subfamily			
Bombinae	<i>Xylocopa sp.</i>	Bumble bee	10
Apinae	<i>Apis mellifera</i>	Honey bee	11
	<i>Apis indica</i>	Honey bee	12
Formicidae	<i>Solenopsis sp.</i>	Black ant	13
Vespidae	<i>Vespula sp.</i>	Yellow wasp	14



10. *Xylocopa sp.*



11. *Apis mellifera*



12. *Apis indica*



13. *Solenopsis sp.*



14. *Vespula sp.*

III. Order: Coleoptera

Coleoptera is the largest order in the class Insecta. As adults, most beetles have a hard, dense exoskeleton that covers and protects most of their body surface. The front wings, known as elytra, are just as hard as the rest of the exoskeleton. They fold down over the abdomen and serve as protective covers for the large, membranous hind wings. At rest, both elytra meet along the middle of the back, forming a straight line that is probably the most distinctive characteristics of the order. The principle characters of beetles used in identification are those of the head, antennae, thoracic sclerites, legs, elytra, and abdomen. Occasionally, characters such as size, shape, and colour are used.

Details of the Coleoptera species recorded from the College campus

Family	Scientific Name	Common Name	Fig. No.
Malachiidae	<i>Anthocomus fasciatus</i>	Soft winged flower beetle	15
Pyrochroidae	<i>Pyrochroa serraticornis</i>	Cardinal Beetle	16
Coccinellidae	<i>Coccinella sp.</i>	Ladybird beetle	17
Cleridae	<i>Trichodes alvearius</i>	Soldier Beetle	18
Meloidae	<i>Mylabris pustulata</i>	Orange blister beetle	19



15. Anthocomus fasciatus



16. Pyrochroa serraticornis



17. Coccinella sp.



18. Trichodes alvearius



19. Mylabris pustulata

IV. Order: Hemiptera

The Hemiptera or true bugs are an order of insects comprising some 50,000 to 80,000 species of groups such as the cicadas, aphids, plant hoppers, leaf hoppers, and shield bugs. Most hemipterans feed on plants, using their sucking and piercing mouthparts to extract plant sap. Some are parasitic while others are predators that feed on other insects or small invertebrates. They live in a wide variety of habitats, generally terrestrial, though some species are adapted to life in or on the surface of fresh water. Two pairs of wings are usually present, the anterior pair of wings most often of harder consistency than the posterior pair.

Details of the Hemiptera species recorded from the College campus

Family	Scientific Name	Common Name	Fig. No.
Pyrrocoreidae	<i>Pyrrhocoris sp.</i>	Cotton stainer	20
Pentatomidae	<i>Erthesina fullo</i>	Yellow spotted stink bug	21
Myridae	<i>Lygus sp.</i>	Tarnished plant bug	22
Coreidae	<i>Acanthocoris scabrator</i>	Squash bug	23
	<i>Cletus sp.</i>	Leaf footed bug	24



20. *Pyrrhocoris sp.*



21. *Erthesima sp.*



22. *Lygus sp.*



23. *Acanthocoris sp.*



24. *Cletus sp.*

V. Order: Odonata

Odonata is an order of carnivorous insects, encompassing the dragonflies (Anisoptera) and the damselflies (Zygoptera). Dragonflies are generally larger, and perch with their wings held out to the sides; damselflies have slender bodies, and hold their wings over the body at rest.

Details of the Odonata species recorded from the College campus

Family	Scientific Name	Common Name	Fig. No.
Aeshnidae	<i>Pantala flavescens</i>	Wandering Glider	25
Coenagrionidae	<i>Ceriagrion sp.</i>	Coromandel Marsh Dart	26



25. *Pantala flavescens*



26. *Ceriagrion sp.*

VI. Order: Orthoptera

Orthoptera is an order of insects that comprises the grasshoppers, locusts and crickets. Orthopterans have a generally cylindrical body, with elongated hind legs and musculature adapted for jumping. They produce sound (known as "stridulation") by rubbing their wings against each other or their legs.

Details of the Orthoptera species recorded from the College campus

Family	Scientific Name	Common Name	Fig. No.
Acrididae	<i>Poicelocera picta</i>	Printed grasshopper	27
Tettigoniidae	<i>Ruspolia</i>	Long horned grasshopper	28



27. *Poicelocera picta*



28. *Ruspolia Sp.*

VII. Order: Diptera

This is one of the largest insect orders in the world and includes many familiar insects such as mosquitoes, midges, sand flies, house flies and blowflies. Many species of Diptera are important due to the role they play in disease transmission, which includes such things as mosquitoes that spread malaria in many underdeveloped countries. Diptera can be distinguished by one pair of membranous wings and hind wings reduced to small club like structures called halteres.

Details of the Diptera species recorded from College campus

Family	Scientific Name	Common Name	Fig. No.
Muscidae	<i>Musca domestica</i>	Housefly	29
Syrphidae	<i>Allograpta sp.</i>	Hoverfly	30
Calliphoridae	<i>Calliphora erythrocephala</i>	Blow fly/blue bottle fly	31
Culicidae	<i>Culex pipiens</i>	Common house mosquito	32
	<i>Aedes aegypti</i>	Yellow fever mosquito	33



29. *Musca domestica*



30. *Allograpta sp.*



31. *Calliphora erythrocephala*



32. *Culex sp.*



33. *Aedes sp.*

VIII. Order: Isoptera

This order includes social and polymorphic insects like termites living in large communities composed of reproductive forms together with numerous apterous, sterile soldiers and workers. Wings are very similar, elongate and membranous, superposed flat over the back when at rest, and capable of being shed by means of basal fractures.

Details of the Isoptera species recorded from College campus

Family	Scientific Name	Common Name	Fig. No.
Termitidae	<i>Odontotermes</i> sps.	White ants	34



34. *Odontotermes sp.*



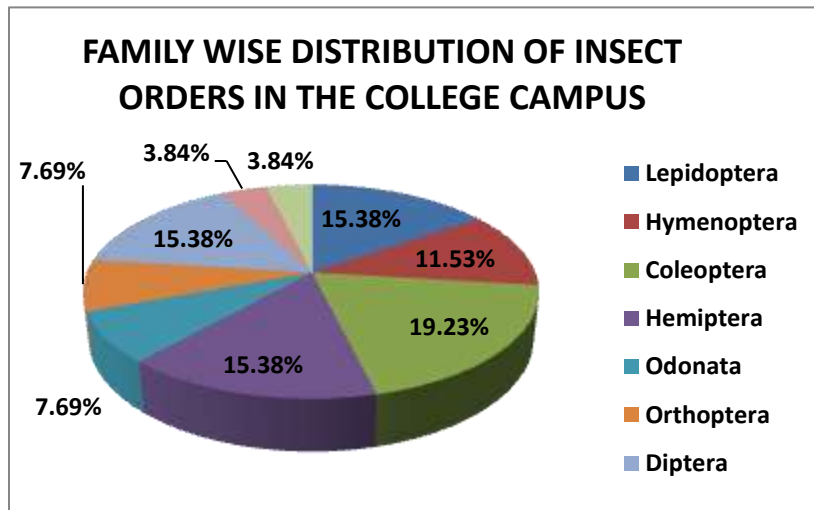
35. *Mantis religiosa*

IX. Order: Mantodea

Mantises are an order (Mantodea) of insects that contains over 2,400 species in about 430 genera in 15 families. The largest family is the Mantidae ("mantids"). Mantises are distributed worldwide in temperate and tropical habitats. They have triangular heads with bulging eyes supported on flexible necks. Their elongated bodies may or may not have wings, but all Mantodea have forelegs that are greatly enlarged and adapted for catching and gripping prey. Their upright posture, while remaining stationary with forearms folded, has led to the common name praying mantis.

Details of the Mantodea species recorded from the College campus

Family	Scientific Name	Common Name	Fig. No.
Mantidae	<i>Mantis religiosa</i>	Mantis	35



Efforts by: B.Sc. I & II Medical students under the supervision of Dr. Ravneet Kaur & Dr. Neetu

List of Trees in the College Campus



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LIST OF TREES IN THE COLLEGE CAMPUS

Botanical name	Family	Common name
<i>Jacaranda mimosifolia</i> D.Don	Bignoniaceae	Neeli gulmohur
<i>Tecoma stans</i> (L.) Juss. ex Kunth	Bignoniaceae	Yellow bells
<i>Delonix regia</i> (Hook.) Raf.	Caesalpiniaceae	Flame Tree, Gulmohar
<i>Grevillea robusta</i> A.Cunn. ex R.Br.	Proteaceae	Silver oak
<i>Alstonia scholaris</i> (L.) R. Br.	Apocynaceae	Scholar Tree, Devil tree
<i>Bauhinia variegata</i> L.	Leguminosae	Kachnar, Mountain-ebony.
<i>Bauhinia purpurea</i> L.	Leguminosae	Purple Bauhinia
<i>Ceiba speciosa</i> (A.St.-Hil.) Ravenna	Malvaceae	Silk floss tree
<i>Neolamarckia cadamba</i> (Roxb.) Bossler	Rubiaceae	Kadamb
<i>Casuarina equisetifolia</i> L.	Casuarinaceae	Jungli Saru
<i>Plumeria obtusa</i> L.	Apocynaceae	Singapore graveyard flower
<i>Magnolia grandiflora</i> L.	Magnoliaceae	Magnolia, Him Champa
<i>Azadirachta indica</i> A. Juss.	Meliaceae	Neem
<i>Chukrasia tabularis</i> A. Juss.	Meliaceae	Indian Mahogany
<i>Polyalthia longifolia</i> (Sonn.) Thwaites	Annonaceae	Ashoka
<i>Manilkara zapota</i> (L.) P.Royen	Sapotaceae	Chikoo
<i>Nyctanthes arbor-tristis</i> L.	Oleaceae	Har singar
<i>Litchi chinensis</i> Sonn.	Sapindaceae	Lychee
<i>Araucaria araucana</i> (Molina) K.Koch	Araucariaceae	Monkey puzzle tree
<i>Cycas revoluta</i> Thunb.	Cycadaceae	Sago palm
<i>Caesalpinia pulcherrima</i> (L.) Sw.	Leguminosae	Peacock flower

<i>Bischofia javanica</i> Blume	Phyllanthaceae	Bishop Wood, Paniala
<i>Annona squamosa</i> L.	Annonaceae	Sharifa
<i>Aegle marmelos</i> (L.) Corrêa	Rutaceae	Bael
<i>Koelreuteria paniculata</i> Laxm.	Sapindaceae	Golden Rain Tree
<i>Markhamia lutea</i> (Benth.) K.Schum.	Bignoniaceae	Siala
<i>Pterospermum acerifolium</i> (L.) Willd.	Sterculaceae	Kanak Champa
<i>Roystonea regia</i> (Kunth) O.F.Cook	Arecaceae	Royal Palm
<i>Barringtonia acutangula</i> (L.) Gaertn.	<i>Lecythidaceae</i>	Samundarphal
<i>Callistemon viminalis</i> (Sol. ex Gaertn.) G.Don	<i>Myrtaceae</i>	Weeping bottlebrush
<i>Mimusops elengi</i> L.	<i>Sapotaceae</i>	<i>Maulsari</i>
<i>Syzygium cumini</i> (L.) Skeels	<i>Myrtaceae</i>	Jamun
<i>Lagerstroemia speciosa</i> (L.) Pers.	<i>Lythraceae</i>	Pride of India
<i>Psidium guajava</i> L.	<i>Myrtaceae</i>	Guava
<i>Citrus limon</i> (L.) Burm. f.	<i>Rutaceae</i>	Lemon
<i>Dalbergia sissoo</i> DC.	<i>Leguminosae</i>	Sheesham
<i>Cassia fistula</i> L.	<i>Leguminosae</i>	Amaltas
<i>Ficus elastica</i> Roxb. ex Hornem.	<i>Moraceae</i>	India Rubber Tree
<i>Carica papaya</i> L.	<i>Caricaceae</i>	Papaya
<i>Thuja occidentalis</i> L.	<u><i>Cupressaceae</i></u>	Northern White-Cedar
<i>Ziziphus mauritiana</i> Lam.	<i>Rhamnaceae</i>	Ber, Chinese date

Trees in the College Campus

<i>Pinus roxburghii</i> Sarg.	<i>Pinaceae</i>	Chir Pine
<i>Eriobotrya japonica</i> (Thunb.) Lindl.	<i>Rosaceae</i>	Loquat
<i>Moringa oleifera</i> Lam.	<i>Moringaceae</i>	Senjana
<i>Mangifera indica</i> L.	<i>Anacardiaceae</i>	Mango
<i>Cascabela thevetia</i> (L.) Lippold	<i>Apocynaceae</i>	Yellow oleander
<i>Ficus religiosa</i> L.	<i>Moraceae</i>	Peepal
<i>Ficus benghalensis</i> L.	<i>Moraceae</i>	Banyan, Bargad
<i>Tectona grandis</i> L.f.	<i>Lamiaceae</i>	Sagwan, Teak
<i>Terminalia chebula</i> Retz.	<i>Combretaceae</i>	Harad
<i>Terminalia bellirica</i> (Gaertn.) Roxb.	<i>Combretaceae</i>	Bahera
<i>Terminalia arjuna</i> (Roxb. ex DC.) Wight & Arn.	<i>Combretaceae</i>	Arjun
<i>Artocarpus heterophyllus</i> Lam.	<i>Moraceae</i>	Jackfruit, Kathal
<i>Eucalyptus camaldulensis</i> Denham	<i>Myrtaceae</i>	Longbeak eucalyptus
<i>Ficus virens</i> Aiton	<i>Moraceae</i>	Pilkhan
<i>Jatropha curcas</i> L.	<i>Euphorbiaceae</i>	Jangli Arandi
<i>Phyllanthus emblica</i> L.	<i>Phyllanthaceae</i>	Amla, Indian gooseberry
<i>Elaeocarpus serratus</i> L.	<i>Elaeocarpaceae</i>	Rudraksh
<i>Lagerstroemia indica</i> L.	<i>Lythraceae</i>	Crepe Myrtle
<i>Vachellia nilotica</i> (L.) P.J.H. Hurter & Mabb.	<i>Leguminosae</i>	Kikar

Besides this, saplings of the following trees have been planted in the campus to add to the species diversity of the college campus.

Botanical Name	Family	Common Name
<i>Pyrus communis</i> L.	<i>Rosaceae</i>	Nashpati
<i>Sapindus mukorossi</i> Gaertn.	<i>Sapindaceae</i>	Soapberry, Reetha
<i>Artocarpus lacucha</i> Buch.-Ham.	<i>Moraceae</i>	Dheu, Monkey Jack
<i>Cordia dichotoma</i> G.Forst.	<i>Boraginaceae</i>	Lasura
<i>Butea monosperma</i> (Lam.) Taub.	<i>Leguminosae</i>	Flame of the Forest, Palash
<i>Saraca asoca</i> (Roxb.) Willd.	<i>Leguminosae</i>	Sita Ashok



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