Environment Audit Report

2022-23

UTTAR BHARTIYA SANGH'SMAHENDRA PRATAP SHARADA PRASAD SINGHCOLLEGE OF COMMERCE AND SCIENCE

Prepared by

Vrindavan Landscape & Ecological Solutions

20/G, Malvankar House, Worli Fort Mumbai-400030

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1. INTRODUCTION:

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

1.1. NEED FOR ENVIRONMENT AUDITING

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

1.2. GOALS OF ENVIRONMENT AUDIT

PSPSOSAC College has conducted an environment audit with specific goals as:

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

2. EXECUTIVE SUMMARY:

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

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

2.1. OBJECTIVES OF ENVIRONMENT AUDIT

1. To examine the current practices, which can impact on environment such as of resource utilization, waste management etc.
2. To identify and analyze significant environmental issues.
3. Setup goal, vision, and mission for environment practices in campus.
4. Establish and implement Environment Management in various departments.
5. Continuous assessment for betterment in performance in environment

3. BIODIVRSITY OF CAMPUS:

Biodiversity describes the richness and variety of life on earth. It is the most complex and important feature of our planet. Without biodiversity, life would not sustain.

4. DETAILS OF TREES AND PLANTS IN CAMPUS

Botanical Name	Common Name	Total No	Approx Age (Yrs)	Ecological	Economic
Mangifera indica	Amba	10	20	Evergreen	Important commercial fruit
Cocos nucifera	Naral	25	20	Evergreen	Important commercial fruit
Terminalia catappa	Deshi Badam	02	20	Evergreen	Important commercial fruit
Ficus blacki	Ficus sps	01	2	Evergreen	
Areca Palm	Areca Palm	50	3	Evergreen	Cultivated in garden
Ficus Religiosa	Pipal	01	45	Deciduous	
Delonex regia	Gulmohar	02	15	Deciduous	Avenue
Azadirachta indica,	Kaduneem	02	1 2	Evergreen	Medicinal
Sterculiya Foitida	Jungli Badam	01	2 5	Evergreen	Avenue
Ficus Glomuratus	Kala Umber	02	2	Evergreen	
Papaya sps	Papaya	01	1		Important commercial fruit
Tabernum Montanum	Tager	02	2	Cultivated in garden	Flowering
Hibiscus rosa sinensis	Hibiscus	04	2	Cultivated in garden	Flowering
	Total Trees	**103**			

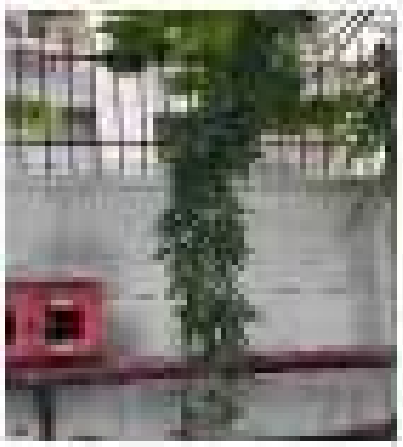
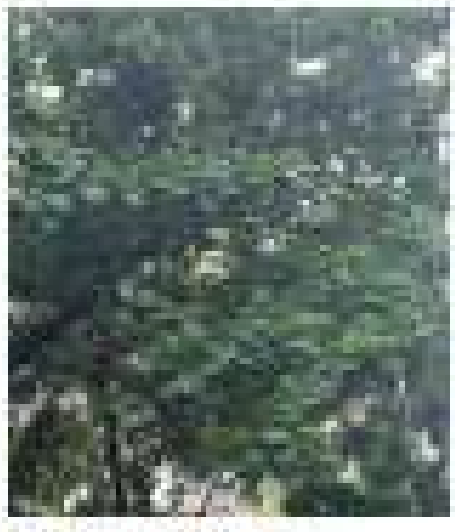
Oriental Magpie Robin

Purple Rumped Sunbird

5. DETAILS OF FAUNA:

COMMON NAME	SCIENTIFIC NAME	LOCAL NAME	SEASONAL STATUS [1]
Order Pelecaniformes			
Family Phalacrocoracidae			
Little cormorant	*Phalacrocorax niger*	Pan kawla	RM
Family Ardeidae			
Gery Heron	*Ardea cinerrea*	Rakhi Balaak	RM
Large egret	*Casmerodius albus*	Lahaan Bagla	RM
Indian pond heron	*Ardeola grayii*	---	R
Cattle egret	*Bubulcus ibis*	Gaay Bagla	RM
Median egret	*Mesophoyx intermedia*	Bagla	RM
Little egret	*Egretta garzetta*	Bagla	R
Western reef egret	*Egretta gularis*	---	RM
Family Ciconiidae			
Order Falconiformes			
Family Accipitridae			
Black kite[2]	Milvus migrans	Ghar	R
Order Columbriformes			
Family Columbidae			
Spotted dove	*Streptopelia chinensis*	Kawda	R
Order Cuculiformes			
Family Cuculidae			
Asian koel	*Eudynamys scolopacea*	Kokila	R
Order Coraciiformes			
Family Alcedinidae			
Common kingfisher	*Alcedo atthis*	Khandya	RM
White throated kingfisher	*Halcyon smyrnensis*	Khandya	R
Order Piciformes			
Family Capitonidae			
Brown headed barbet	*Megaliama zeylanica*	---	R
Family Dicruriidae			
Black drongo	*Dicrurus macrocercus*	Kotwal Pakshi	R
Family Corvidae			
House crow	*Corvus splendens*	Kawla	R
Jungle crow	*Corvus macrohyncos*	Dom Kawla	R
Family Pycnonotidae			
Red vented bulbul	*Pycnonotus cafer*	Laalbudya Bulbul	R
White cheeked bulbul	*Pycnonotus leucotis*		R
Red whiskered bulbul	*Pycnonotus jocosus*	Shipahi Bulbul	R
Family Muscicapidae			
Oriental magpie robin	*Copsychus saularis*	Dayal	R
Indian robin	*Saxicoloides fulicata*	Dayal	R
Family Nectariniidae			

A. PHOTO PLATES OF TREES AND SHRUBS

			29 Coconut Trees
			3 Mango Trees
			24 Ashoka Trees
			
01 Mahua Tree	02 Guava Trees	01 Badam Tree	

6. . WATER MANAGEMENT

Water conservation is a key activity as water availability effects on the development of the campus as well as on all area of development such as farming, industries, etc. Keeping this view water conservation activity is carried out. The source of water used in the college are municipal water supply.

Mumbai Municipal Corporation supplies water to the college. Municipal corporation has installed water meters to monitor water consumption & for water charges.

The rain harvesting is secondary source. The college stores the water in overhead tank and rainwater is stored in underground tank.

The source of wastewater is Domestic Waste Water i.e., Sewage water. The Sewage water mainly comes from Toilets of college, hostel, kitchen and canteen. Wate water treatment tank is installed in the campus

List uses of water in your college:

Basic use of water in campus:

- Drinking – 20.67 KL/day Gardening – 150.47 Kl/day
- Kitchen and Toilets – 250.81 KL/day
- Others – 28.49 KL/month

Water storage:

There is total 4,50,000 litters water storage capacity of two tanks one tank is underground while other is over t head tank campus.

Saving Techniques

- Avoid overflow of water-controlled valves are provided in water supply system.
- Close supervision for water supply system.
- Water Conservation awareness for new students
- Sprinklers usage for gardening and grass cover

Water Management System

Basic use of water in campus:

- Drinking – 20.67 KL/day
- Gardening – 150.47 Kl/day
- Kitchen and Toilets – 250.81 KL/day
- Others – 28.49 KL/month

Water Management System

Basic ways to save water in college campus:

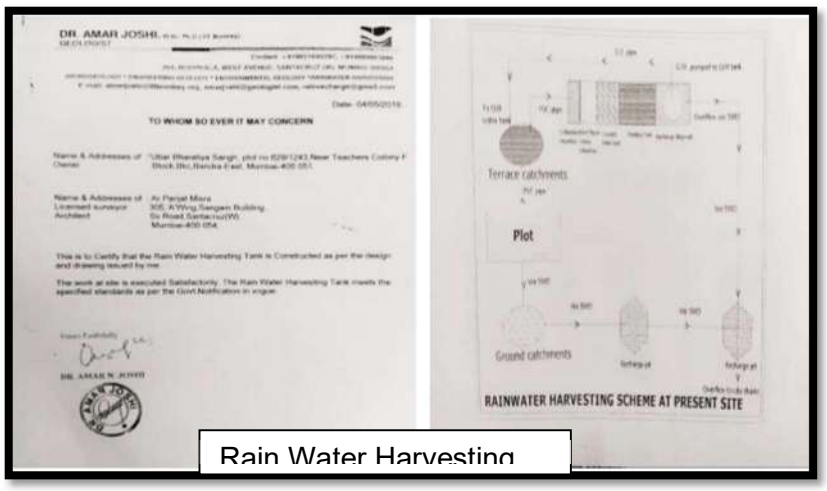
- Close the taps after usage
- Water Conservation awareness for new students
- Maintenance and monitoring of valves in supply system to avoid overflow, leakage and spillag

7. RAINWATER HARVESTING

The college has set-up the rain harvesting unit in different niches within the college campus.

The rainwater that flows off in the college areas are collected and stored to recharge the groundwater level.

Harvested rain water is filtered through several layers of mesh or strainer fixed across the inlet to the storage system and is cleaned on a regular basis. The rain water set-up units satiate the requirements of water for the entire college



Rain Water Harvesting

Rain Water harvesting Certificate

DR. AMAR JOSHI. M.Sc. Ph.D.(IIT Bombay)
GEOLOGIST

Contact: +919821040797, +91986990[illegible]

204, BOOPKALA, WEST AVENUE, SANTACRUZ (W), MUMBAI 400054

HYDROGEOLOGY * ENGINEERING GEOLOGY * ENVIRONMENTAL GEOLOGY *RAINWATER HARVESTING

E mail: amarjoshi@iitbombay.org, amarjoshi@geologist.com, rainrecharge@gmail.com

Date- 04/05/2019

TO WHOM SO EVER IT MAY CONCERN

Name & Addresses of Owner : Uttar Bharatiya Sangh, plot no.629/1243,Near Teachers Colony-F Block,Bkc,Bandra-East, Mumbai-400 051.

Name & Addresses of Licensed surveyor Architect : Ar.Parijat Misra 305,'A'Wing,Sangam Building, Sv.Road,Santacruz(W). Mumbai-400 054.

This is to Certify that the Rain Water Harvesting Tank is Constructed as per the design and drawing issued by me.

The work at site is executed Satisfactorily. The Rain Water Harvesting Tank meets the specified standards as per the Govt.Notification in vogue.

Yours Faithfully

DR. AMAR N. JOSHI

Rain Water Harvesting Units

8. WASTE MANAGEMENT

Waste management is important for an eco-friendly campus. In a college, different types of wastes are generated, its collection and management are very challenging.

❖ **The waste managed in the institute*:***

- Composting is done for horticulture waste management.
- Hydroponics technique is used to recycle the grey water from college mess
- Aerobic Composting is done for bio-degradable waste management.
- Diluted solutions are used instead of concentrated solutions in laboratories
- One side printed Paper is re-used for internal communication.
- Solid waste is taken by Municipal Corporation
- Single use plastic is banned in the campus
- Paper recycling plant is installed in the campus

2[B] Management of Non-degradable waste

Waste- Segregation

9. E-WASTE MANAGEMENT

- E-waste is given to the authorized vendor approved from college.
- E-waste generated in the campus is very less in quantity.
- The cartridges of laser printers are refilled outside the college campus. Administration conducts the awareness programmed regarding E-waste Management with the help of various departments.
- The E- waste and defective item from computer laboratory is being stored properly.
- The institution has decided to contact approved E-waste management and disposal facility in order to dispose E-waste in scientific manner.

E-WASTE ROOM

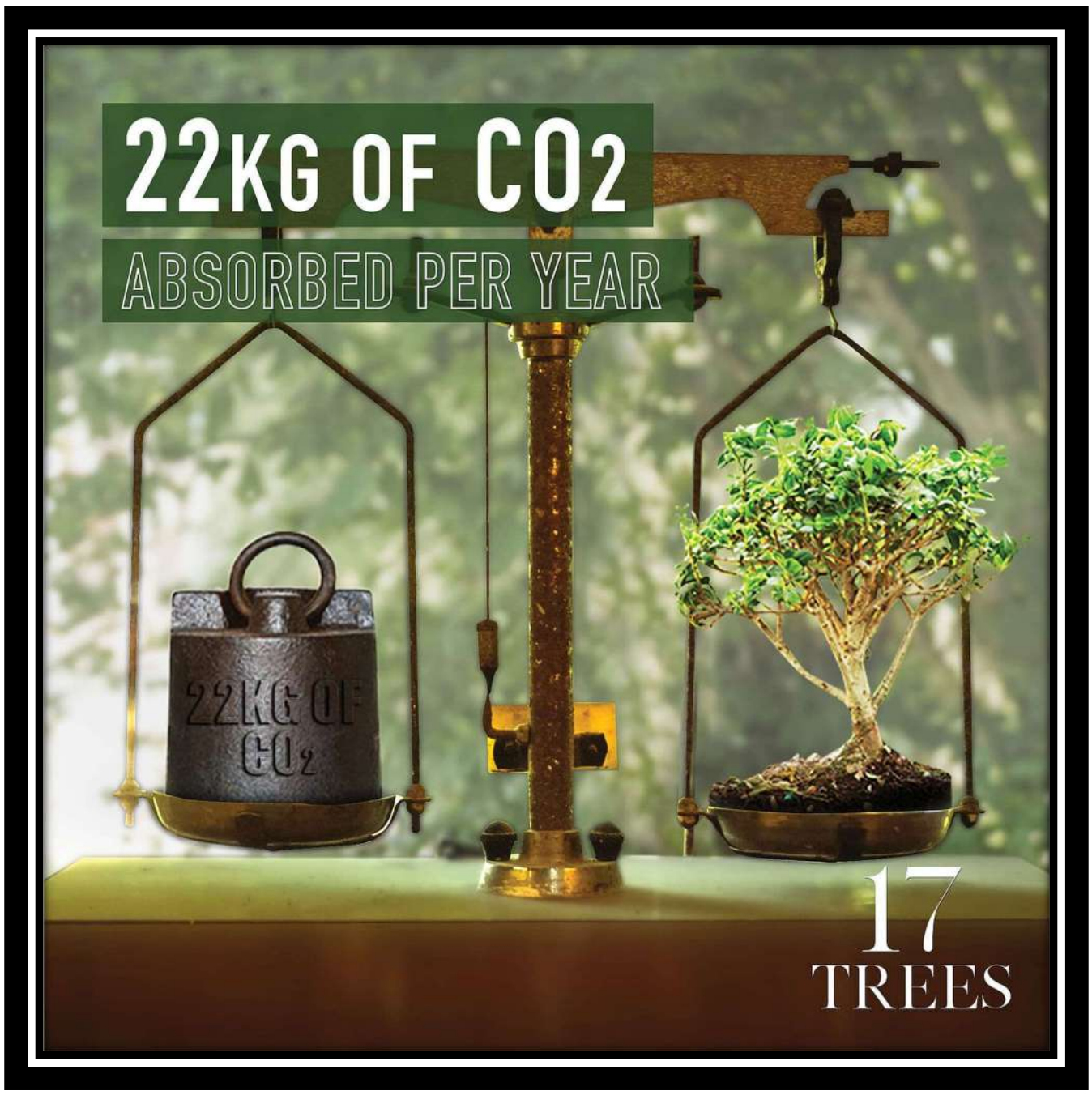
10. CO2 ABSORPTION BY FLORA

There are 103 full grown trees and 200 semi grown trees of different species, on the campus spread over 2 acres.

Carbon absorption capacity of one full grown tree 22 kg CO2 Therefore Carbon absorption capacity of 103 full-grown trees 103 x 22 kg CO2 =2266 kg tons of CO2.

The carbon absorption capacity of 200 semi-grown trees is 50% of that of full-grown trees. Hence the carbon absorption 200 x 6.8 kg of CO2 = 1360 kg of CO2.

Grand total of carbon absorption capacity of the campus is 3362 kg of co2



11.SOLAR LIGHTS:

Solar lights are a clean and green energy source that do not produce any harmful emissions or pollutants. This makes them an environmentally friendly option that can help reduce carbon emissions and improve air quality.

College Utilizing solar LED lighting systems for a street, parking and pathways. This will reduce cost and the l impact on the environment

12.GREEN INITIATIVES BY CAMPUS

Solid Waste Management

- Waste management is done by composting
- Recycling of used paper is carried out in paper recycling plant.
- There is ban on single use plastic and plastic crockery in the campus.

Renewable Energy

- Solar power plant of capacity 7 KW is installed on building roof.
- College has signed an agreement with third party solar power provider for 1 MW.
- The college is using solar lights for street lights.

Tree Plantation Drives

- Five plantation drives were carried out in the current year in the Campus.
- Plants survival rate is around 85%

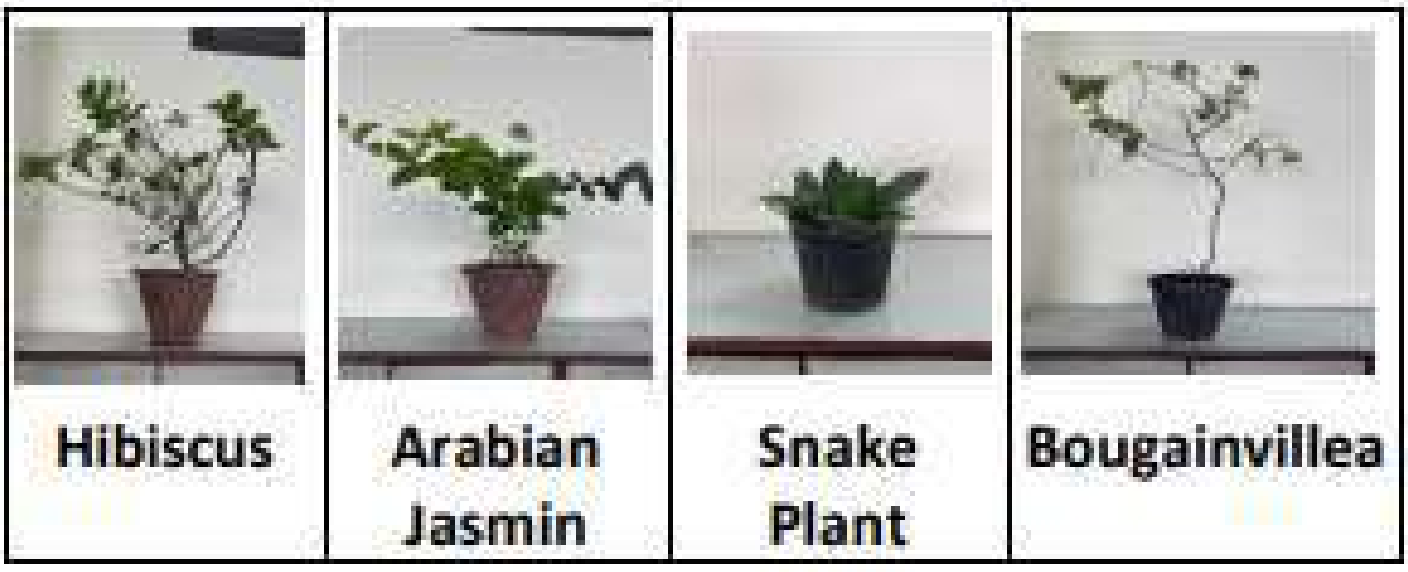
Air Pollution Reduction

- Personal Vehicles (Students) are not allowed in the campus
- College is in process to pursue air quality monitoring system,

13.Back Yard Avenue Trees

			**29 Coconut Trees**
			**3 Mango Trees**
			**24 Ashoka Trees**

14.POTTED SHRUBS:



Hibiscus	Arabian Jasmin	Snake Plant	Bougainvillea

Herbs –

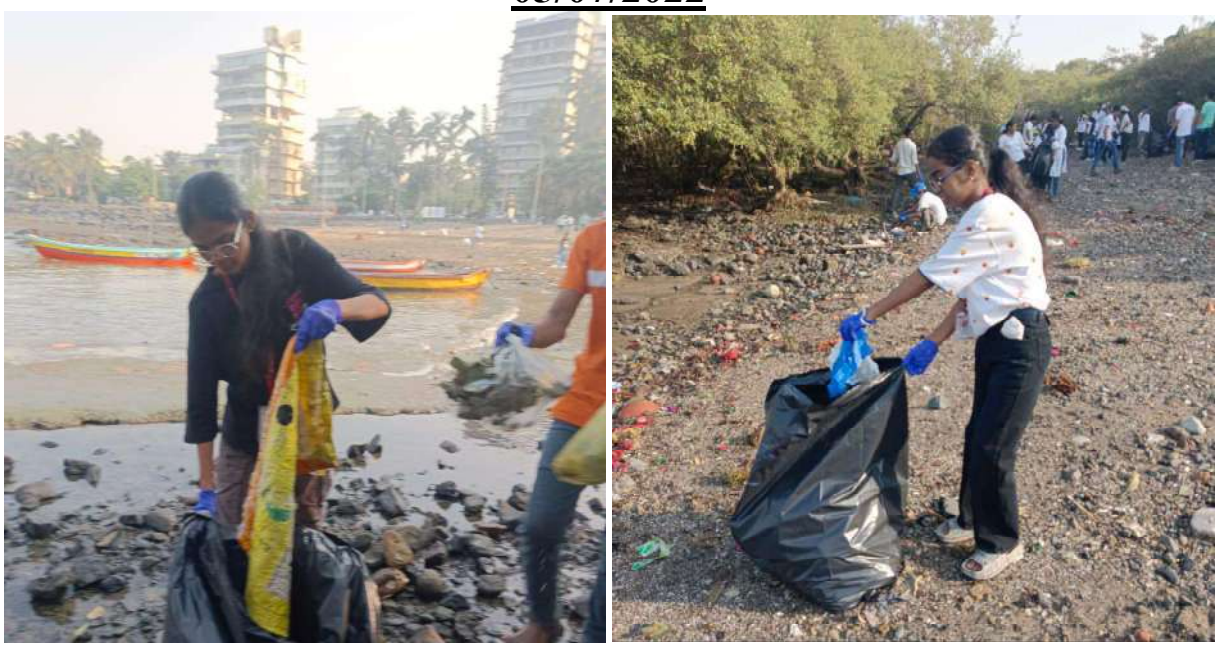
Holy Basil	Ajwain	Insulin	Spider Plant

15.GREEN INITIATIVES

WORLD ENVIRONMENT DAY
DATE-17/6/2022

BEACH CLEANING DRIVE – I
08/07/2022

BEACH CLEANING DRIVE – II
05/07/2022



BEACH CLEANING ACTIVITY (CARTER ROAD, BANDRA WEST)
12/8/22

PLASTIC FREE SOCIETY AREA BASED ACTIVITY

30/09/22

SWACCHATA HI SEVA AT CARTER ROAD(SHRAMDAN)

1/10/22

SWACCHATAABHIYAAN

My Green Society (Mangrove clean up Drive)
28/10/22

B.Sc. Dept & Nature Club Activity 2023

16.RECOMMENDATIONS

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

- A frequent visit should be conducted to ensure that the generated waste is measured, monitored and recorded regularly and information should be made available to administration.
- The solid waste should be reused or recycled at maximum possible places.
- Use back yard open space for gardening.

……END OF DOCUMENT……