BJS
Bharatiya Jain Sanghatana

BHARATIYA JAIN SANGHATANA'S

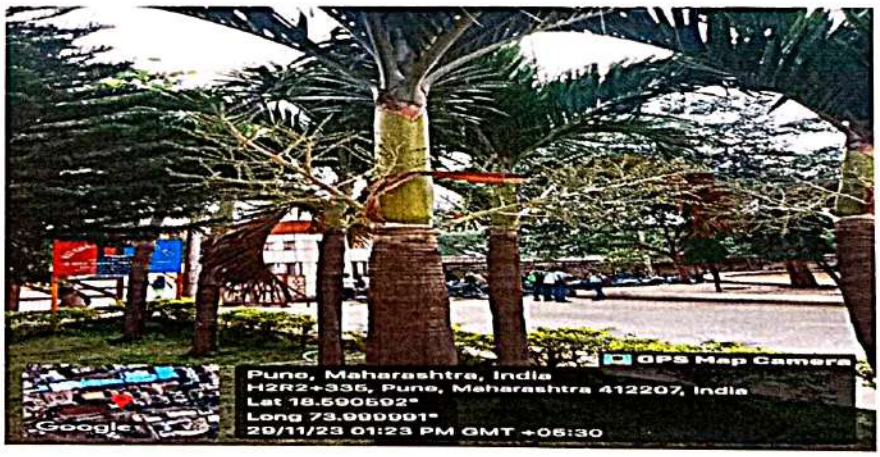
ARTS, SCIENCE AND COMMERCE COLLEGE, WAGHOLI, PUNE

BHARTIYA JAINSANGHATANA'S "WAGHOLI EDUCATIONAL REHABILITATION CENTER"

(WERC)

ENVIRONMENT AUDIT REPORT

2022-23



Principal Message....

I express my hearty wishes for success of this publication of 'Environment Audit 2022-23

WERC is one of the unique spiritual educational campus with quality education we are aware about the environment with cultural development, as fundamental feature of Indian ancient philosophy is a good environmental sense..

Efforts made by our institution and senior college for the protection of environment and biodiversity conservation is really unique, which may become pilot project gives the appropriate message about to avoid the fore coming natural disaster like global warming, land sliding, cyclone etc.

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

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

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

Our Environment audit reflects ecofriendly environment which enhance the teaching learning process more productive and smooth.

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CERTIFICATE

This to certify that Bharatiya Jain Sanghatana's Arts, Science and Commerce College, Wagholi, Pune.has conducted "Environment Audit" in the Year 2022-23 to assess the green initiative planning, effort, activities implemented in the college campus like plantation, waste management, Rain water harvesting, conservation of energy, Paperless technology and various Environmental Awareness activities. This green audit is also aimed to assess impact of green initiatives for maintainance of the campus eco-friendly.

Place: Wagholi

Date: 20-10-2023

Dr.Madhuri Pagariya
Internal Auditor

Dr. Devidas Patil
Coordinator

Environment Audit Committee

Dr. Madhuri Deshmukh
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Bharatiya Jain Sanghatana's
Arts, Science & Commerce College,
Wagholi, Pune- 412207.

20/10/2023

Dr. Sanjay Gaikwad
Off. Principal
B.J.S. ASC College,
Wagholi, Pune.

HISTORY:

About the WERC

Hon.Shri Shantilalji Gulabchandji Muttha, Founder President - Bharatiya Jain Sanghatana, Pune is a role model in three wings - Social Service, Disaster Management, and Permanent Rehabilitation through Quality Education.

Building future for earthquake-hit orphans - Latur, Maharashtra - 1993 : During a massive earthquake across Latur district in 1993, Hon.Shri ShantilalMuttha began a hostel-cum-school at Wagholi Educational and Rehabilitation Center (WERC), Pune, and re-built lives of nearly 1,200 earthquake-hit orphans from standard 5, who had lost everything in the quake, and educated them till graduation

The Wagholi Education and Rehabilitation Center (WERC) was built in a record time on a 10 acre plot of land with assistance from the World Bank and the Government of Maharashtra and 1200 children from Latur were shifted to this location. Since then the WERC has offered educational rehabilitation to many other children from the Jabalpur earthquake as also the Melghat malnutrition affected, to name a few. 500 students from Jammu & Kashmir affected by the earthquake were also shifted to WERC and assured of undisrupted education. This facility is also made available to the tribal children from Maharashtra for undergoing social and academic education and can be equated to rehabilitation of the deprived sections of the society.

Malnourished children of Melghat (Maharashtra) - 1996: Nearly 400 malnourished children from the tribal area of Melghat of Vidarbha region in Maharashtra were brought to WERC, Pune in 1996 with the belief and hope that these children would educate the tribals and bring about a radical change in the area.

Jabalpur Earthquake - 1997: Nearly 50 children were again brought from Jabalpur 1997 to WERC, Pune to rebuild their lives. This ultra-modern rehabilitation center continues to offer shelter to orphans even today. Hon'ble President Dr. A. P. J. Abdul Kalam visited WERC, Pune and gave donation from his personal account.

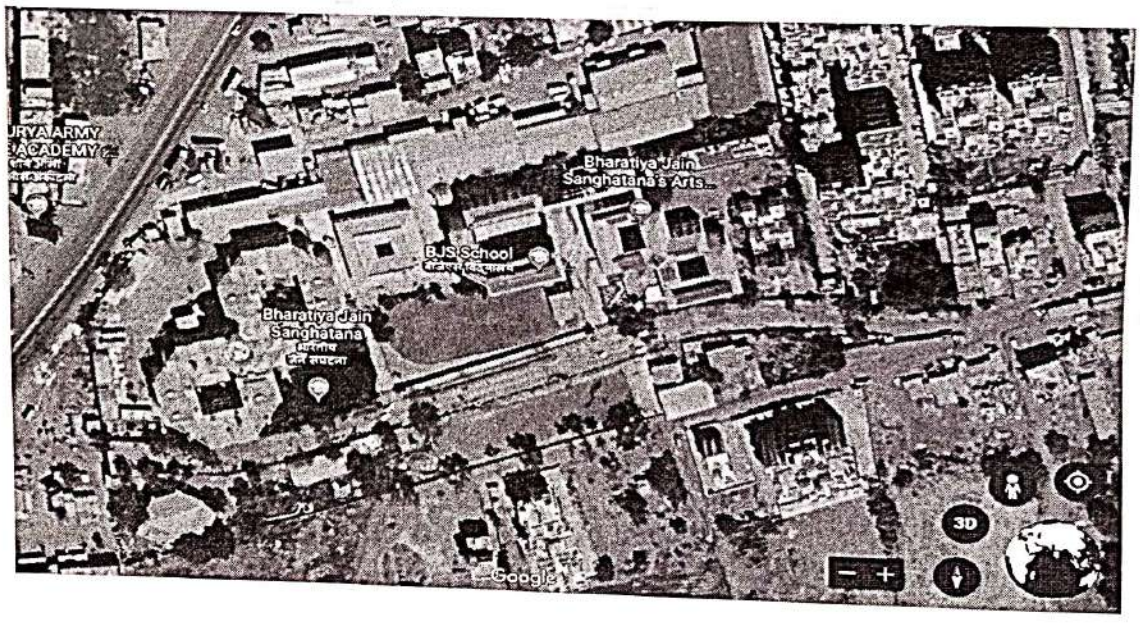
The tremendous success of BJS-EDUQIP prompted Education Department of Goa Government to execute the same programme in about 1,700 state-run schools in Goa State. The same programme is being implemented in all the 550 Navodaya Vidyalayas all over India.

Location (WERC)

WERC is located on Pune-Ahamadnagar National Highway (Maharashtra), East of the Pune City at Wagholi as sub urban area of Pune City speeded over 10 acres.

Country	India
State	Maharashtra
District	Pune
Taluka	Haveli
Village	Wagholi
Government Type	Grampanchayat
Sarpanch	Vasundharatai Shivdas Ubale
Area[2]	
Metropolis	10 acres
Population	7,169
Demonym	BJS
Area Code (s)	+91-20
Official language	Marathi

Satellite Image of BJS Campus



A) **Geography :**

Pune is located 560 m (1,840 ft) above sea level on the western margin of the Deccan plateau. It is situated on the leeward side of the Sahyadri mountain range, which forms a barrier from the Arabian sea. It is a hilly city, with its tallest hill, Vetal Hill, rising to 800 m (2,600 ft.) above sea level. Just outside the city, the Sinhagad fort is located at an altitude of 1300 m. It lies between 18° 32"North latitude and 73° 51"East longitude.

Central Pune is located at the confluence of the Mula and Mutha rivers. The Pavana and Indrayani rivers, tributaries of the Bhima river, traverse the northwestern outskirts of metropolitan Pune.

B) **LATITUDE AND LONGITUDE (WGS84):** 18° 34' North , 73° 58' East

C) **SOIL TYPE**: Lateritic, hard rock.

D) **CLIMATE: Pune** has a hot semi-arid climate bordering with tropical wet and dry (Aw) with average temperatures ranging between 20 to 28 °C (68 to 82 °F).

Pune experiences three seasons: summer, monsoon and a winter

Typical summer months are from March to May, with maximum temperatures ranging from 30 to 38 °C (86 to 100 °F). The warmest month in Pune is April; although summer doesn't end until May, the city often receives heavy thunder showers in May (and humidity remains high). Even during the hottest months, the nights are usually cool due to Pune's high altitude. The highest temperature ever recorded was 42.3 °C (108.1 °F) on 30 April 1897.

Table –III: NUMBER OF PLANTS PRESENT IN CAMPUS

R NO.	BOTANICAL NAME	COMMON NAME	FAMILY	NO. OF PLANTS IN CAMPUS
	Adenium obesum (Forssk.)Roem.&Schult.	Adenium	Apocynaceae	6
	Albizia lebbeck	Rain Tree	Miomsaceae	1
	Allamanda cathartica L	Golden Trumpet	Apocynaceae	10
	Allium cepa L	Onion	Liliaceae	10
	Allium sativus L.	Garlic	Liliaceae	10

	Aloe vera L.	Korphad	Liliaceae	5
	Alstonia scholaris (L.) R. Br.	Satptparni	Apocynaceae	2
	Annona reticulate L.	Raamphal	Annonaceae	5
	Annona squamosa L.	Shitaphal	Annonaceae	10
	Araucaria columnaris G.Forst.) Hook.	X- Mass Tree	Araucariaceae	1
	Aristolochia ringensvahl.	BadakVel	Aristolochiaceae	10
	Asparagus racemosus L.	Shatavari	Liliaceae	50
	Asplenium nidus L.	Bird Nest Fern	Aspleniaceae	2
	Azadirachata indica L	Kaduneem	Meliaceae	15
	Bambusa dendrocalamus	Bamboo	Poaceae	50
	Bauhonia .purpuria	Bauhonia Apta	Fabaaceae	2
	Bougainvillea spectabilis Willd.	KagdiPhul	Nyctaginaceae	5
	Canna indica L	Kardal	Cannaceae	5
	Capsicum annum L.	Chili	Solanaceae	5
	Carica papaya L.	Papaya	Caricaceae	1
	Caryota urens L.	Fish Tail Palm	Aracaceae	10
	Cassia Fistula Linn	Golden Shower	Fabeaceae	2
	Casurina equisetiflia L.	Suru	Casurinaceae	2
	Cesalpinia pulcherrima	Shankasur	Leguminaceae	5
	Cestrum nocturnum L	Raatrani	Solanaceae	1
	Colocasia esculenta(L.) Schott	Colocasia	Arecaceae	17

Combretum indicum (L.)	Madhumalti	Combretaceae	11
Curcuma longa	Turmeric	Zingiberaceae	5
Cycas revolute Thunb.	Cycas	Cycadaceae	5
Cynodon dactylon (L.)	Durva	Poaceae	437
Cyperus Sp.	Cyperus	Cyperraceae	25
Delonix regia Rafin	Gulmohor	Caesalpiniaceae	21
Dieffenbachia amoenaBull	Dumb Cane	Araceae	40
Dracaena brauniiEngl.	Lucky Bamboo	Asparagaceae	2
Dracaena marginataLam.	Dracaena	Asparagaceae	50
Dypsis lutescens (H.Wendl.) Beentje&J.Dransf	Butterfly Palm	Arecaceae	95
Epipremnum aureum(Linden & André) G.S.Bunting	Money Plant	Araceae	20
Eucalyptus globulusLabill.	Neelgiri	Myrtaceae	15
Ficus bengalensis L.	Banyan Tree	Moraceae	1
Ficus elastic Roxb.exHornem.	Rubber Tree	Moraceae	5
Ficus racemosa Roxb.	Umber/Audumber	Moraceae	5
Gaillardia pulchella Foug.	Galanda	Asteraceae	30
Hamelia patens Jacq.	Hamelia/ Firebrush	Rubiaceae	5
Hibiscus rosa-sinensus L.	Jaswand	Malvaceae	5
Ipomoea purpurea(L.) Roth	Morning glory	Convolvulaceae	5
Ixora coccania	Lokhandi	Rubiaceae	10
Jacaranda mimosaefolia D. Don	Neelgulmohar	Bignonaceae	2

	Jasminum sambac(L.) Aiton	Mogra	Oleaceae	20
	Jatropha curcus L	Moglierand	Euphorbiaceae	5
	Justicia adhatoda L.	Adusa	Acanthaceae	1
	Kalanchoe pinnata(Lam.) Pers	Panphuti	Crassulaceae	1
	Lantana camara L.	Tantani/ HaladiKunku	Verbenaceae	5
	Livistona rotundifloia	Table-Palm	Aracaceae	2
	Mallingtonia hortensis	Akashneel	Bignoniaceae	9
	Michelia champaca	Chafa	Magnoliaceae	5
	Mimosa pudica L.	Touch Me Not/Lajalu	Mimosaceae	10
	Moringa oleifera Lam	Shevga	Fabaceae	3
	Morus albaL.	Tuti	Moraceae	1
	Murraya koenigii(L.) Spreng	Curry Leaf	Rutaceae	3
	Nephrolepis exaltata(L.) Schott	Fern/ Neche	Nephrolepaceae	2
	Nerium indicumMILL.	Kanher	Apocynaceae	30
	Nyctanthes arbor-tristis L.	Parijatak	Oleaceae	3
	Ocimum tenuiflorum L	Ram Tulsi	Lamiaceae	5
	Ocimum sanctum L	Tulsi	Lamiaceae	5
	Pandanous odorifer	Kewda	Pandanaceae	10

SOLID WASTE MANAGEMENT

Activity / Observation:

Solid waste is separated as **dry** and **wet**. Dry waste includes plastic, glass, paper, metals, wood and related product. Wet waste typically refers to organic waste usually generated as canteen waste, plant debris.

Dry waste is separated and it is given for its reuse and recycling to the recycler agency to avoid the pollution.

Wet waste is also known as **organic** waste. It is obtain from canteen , fallen Leaves , litter, ort, trash etc. produce in this campus if it is not disposed properly it creates air pollution, to avoid this we have implemented solid organic waste management activity ,we run it at two level **one** is decomposition of solid waste through the composting in pit, vermi-compost form solid organic waste and **second** is training to the students, farmers about production of organic manure like vermicompost, production of mushroom from the solid organic agricultural waste which ultimately convertion of Best from Waste, further the best biofertilizer is used for plants of college campus which enhances greenery leads environment clean and fresh.

Canteen waste is also disposed by the Shreedling processing Machine produce good organic fertilizer use for the plants in the campus garden.

Vermicompost Units

The solid waste comes from Botanical garden and campus mess produce a wide range of organic wastes, such as straw, leaves, stalks, weeds, vegetable wastes, processed food and paper.

Zoology department has constructed two permanent chambers for vermicomposting under a shady tree in Botanical garden.

Unit 1: It is of 12 ft. length, 4 ft. width, and 2 ft. deep, which is about 2 ft above ground to avoid entry of rainwater into the chambers, used for vermicomposting.

Unit 2: It is it is of 12 ft. length, 4 ft. width and 1 ft. deep. It is used for decomposing the organic waste. Both the units are covered.

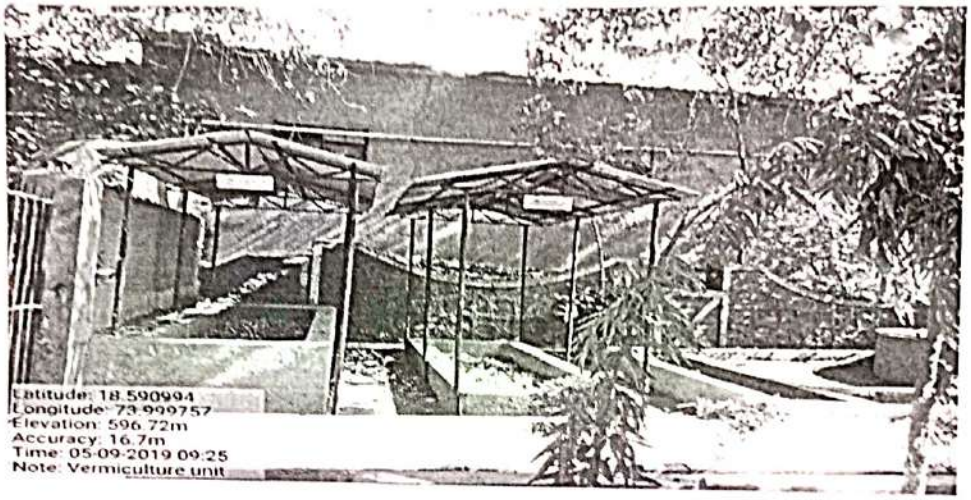
We are using Eisenia foetida species of the earthworms for vermicomposting as this species has high conversion ratio.

Earthworms are used to manage all these agricultural wastes, earthworms convert this waste into humus or manure or 'Vermicompost' or worm castings, which is a nutrient-rich and biologically beneficial soil product. Vermicompost enhances plant growth, suppresses disease in plants, increases porosity and microbial activity in soil, and improves water retention and aeration.

Vermicompost also benefits the environment by reducing the need for chemical fertilizers and decreasing the amount of waste going to landfills. Vermicompost contains 2 times more magnesium, 15 times more nitrogen, and 7 times more potassium compared with the surrounding soil.

Recommendations:-

- Reduce the absolute amount of waste that it produces from college staff Offices.



VERMICOMPOST PRODUCTION UNIT –I AND II

WATER/SEWAGE WASTE MANAGEMENT

Activity / Observation: - WERC campus includes hostel, school, senior college, staff quarter, ladies hostel, administrative building about 7,169 Population includes students, staff, and stake holders live in this campus, requires about

41,74,854 liters of fresh water daily, due to lack of drainage system of the corporation disposal of water was challenge for us ,but through the establishment of the two waste water treatment plant, it became possible to reuse this water for campus green spaces, it avoid the air , water pollution.

Daily about 20,00,000 lits. Of domestic waste water is collected and supplied for treatment in "**Sewage water treatment plant**"(STP), after the treatment it is circulated through pipe in garden for growing of plants in the campus which are the natural fan keeps environment clean and eco- friendly.

INTRODUCTION

Executive Summery

Bharatiya Jain Sanghatana's Wagholi Educational and Rehabilitation Center (WERC), Pune, established in 1997 leads 10 acres of campus, where with senior college there is administrative building, hostel, canteen , Secondary and higher secondary school, staff quarters, Ladies hostel. About 7,169 population provided with facility of water, canteen, toilet, electricity.

Before establishment of this campus it was bare land, after construction of various building we develop greenery in surrounding area of the building, with keeping view to creates eco-friendly environment in this campus we are aware about green audit of this campus , We undertake activities like landscaping and plantation, processing and reuse of Solid Waste of the plant debris and canteen, Recycling of the waste water, Rainwater harvesting, , Energy conservation, e-waste management to keep the environment of the campus clean and fresh enhance educational environment.

We are making green audit of campus and facilities to keep environment of college campus eco-friendly, we conduct following activities.

E-WASTE MANAGEMENT

E- waste electronic waste comprises of waste generated from used electronic devices and house hold appliances which are not fit for their original intended use.

Aim and objective:

E-waste is the future coming environmental problem will create hazards to our environment, it is non-degradable waste can pollute water, soil and air.

With keeping this view we are aware about destructive material mainly metal, insulating materials present in the e-waste like CD, scrap, mobile like devices, computer waste like wiring, metals, and unused pen drive.

ITEMS AND THEIR TOXIC COMPOINETS :

SR. NO	ITEM	COMPONETS
1	REFRIGERATOR	CFC/HC/RUBBER
2	PC AND LAPTOPS	CRT, FLUORESCENT LAMP, COPPER
3	TELEVISION	METAL, CRT, PLASTC, BRF
4	WASHING MACHINE	RUBBER, ELETRIC WIRE, METAL AND MOTAR
5	COMPUTER BATTERIES	CADMIUM
6	CAPACITOR AND TRANSFORMER	PBC
7	PRINTED CIRCUIT BOARD	LEAD AND CADMIUM
8	CATHOD RAY TUBES	LEAD OXIDE AND Cd
9	CABLE INSULATION / COATING	PVC
10	SWITCHES AND FLAT SCREEN MONITOR	MERCURY

Activity / Observations:-

With keeping view to minimize the pollution created through the e-waste, we have carried out the scientific disposal of e-waste by two ways

1) Collection of e- waste in e- waste box –e- Waste collection Drive
2) Reuse of the component of unused electronic devices.

COLLECTION OF E- WASTE

We have installed e- waste box at the corner of the computer laboratory, and our students, staff put unused electronic devices and component like CD, PD, memory card, sim card,

etc.it also collected and few of reuse and remaining e- waste is given to e waste scrap purchaser for proper reuse and disposal of such e-waste.

This activity runs throughout the year, is collected in e- waste box, On 10 December 2018 in Campaign of e- waste collection, total 10 kg e- waste was collected and out of this some was reused to for preparation of best from waste activity. And some items was repaired.

For the scientific disposal of the e-waste, we had MOU with the "**Kuldeep E- Waste Disposals"** approved e-waste disposal agency.

ENERGY CONSERVATION

Aim :

1) To minimize the use of natural resources
2) Conservation of energy

Objective:

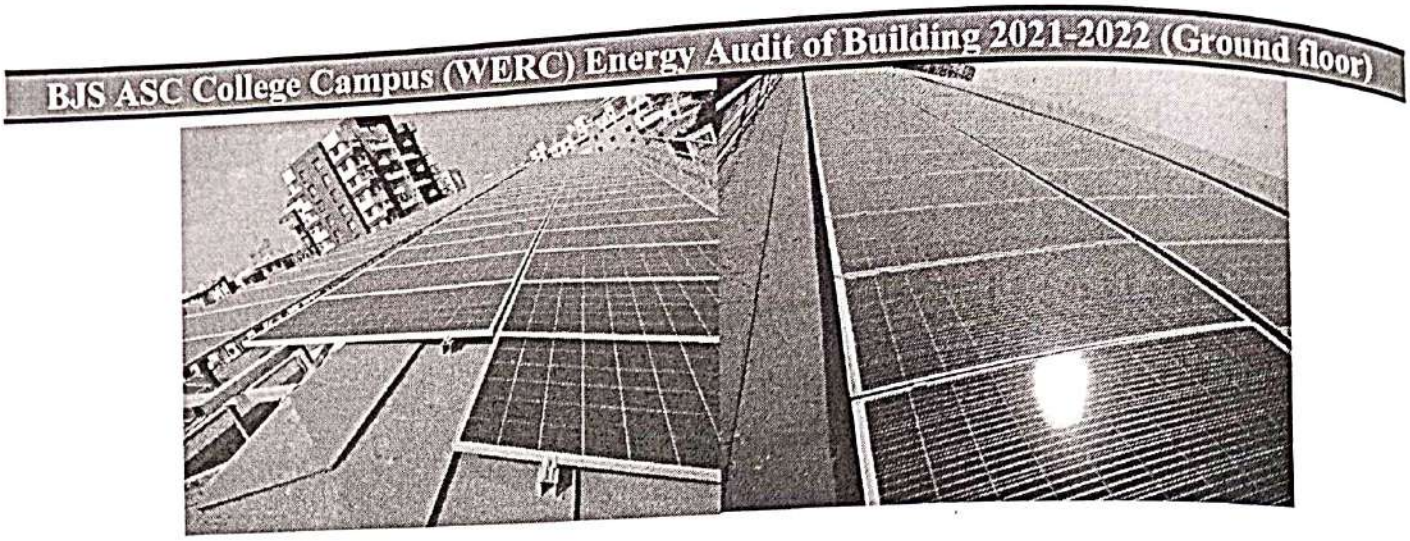
1) To save non-conventionally produce electric energy
2) Use of conventional source of energy
3) Minimization of electric expenses

Activity/ Observations:

Energy conservation is the burning problem of the country, there is
Pressure due to great demand for electricity and shortage of this non-conventional source of energy.

We have implemented energy conservation programmes with three ways

1) Use of LED tube in the college building
2) Use of solar water heater
3) Solar power plant for electricity production



of Use Of LED Bulb- Energy Audit Chart

Conclusion:

LED tubes saves the enery 40% than normal tuibes .this ennegy is get conserved.

Recommendations:-

Support renewable and carbon-neutral electricity options on any energy purchasing.

Action Taken: Separate Energy Audit is Prepared

Paperless Technology

Aim : 1) Forest conservation

2) Use of e- media for the communication as green initiative practice

Objectives: 1) To minimse the use of papers

2) To conserve plant natural resorses

Activity / Observations :-Paper is a cellulosic, made from plants. Due to its use there is pressure created on the forest. To avoid this pressure, paperless technology such as & mail, SMS, Whats app various educational apps, softwares and internet services are used by the institute for communication. To send of document to the stakeholder, student, teachers, parents, Princpal,

management, institutes and internet is used and this paperless technology ultimately reflects our green initiatives.

We use of Digital Notice board for various notices for students.

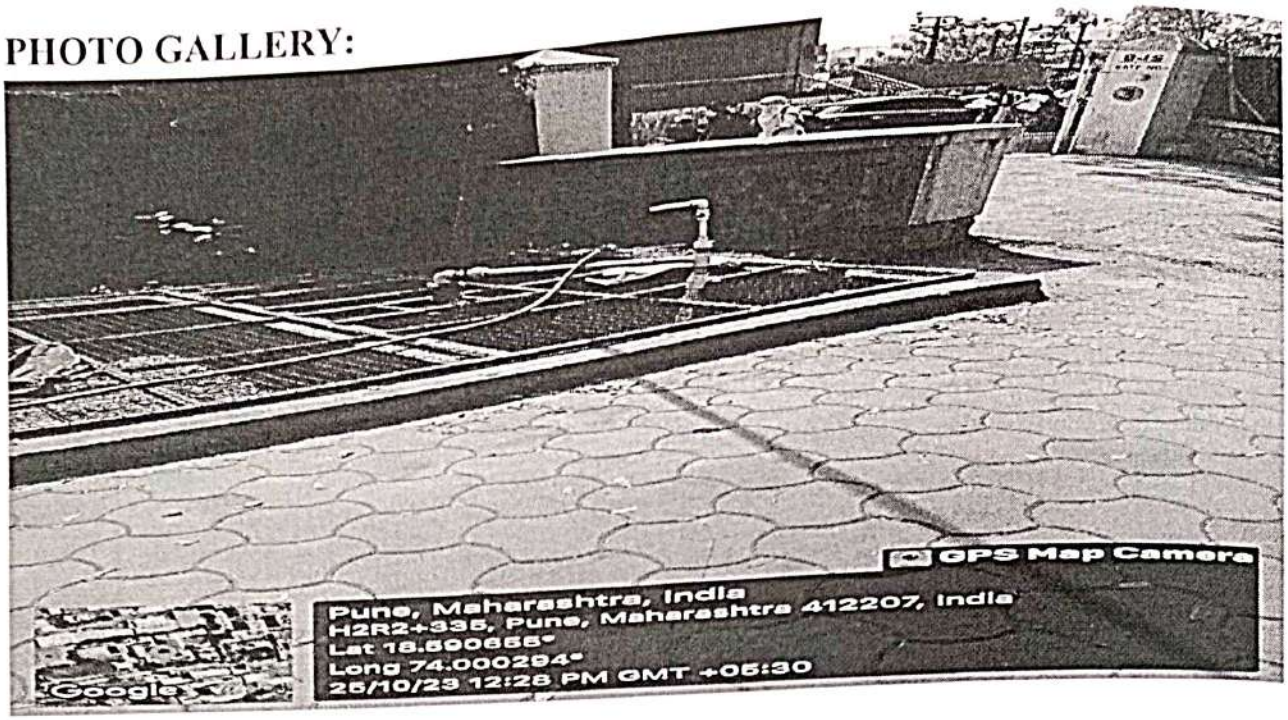
Recommendations:-

Minimise the use of paper.

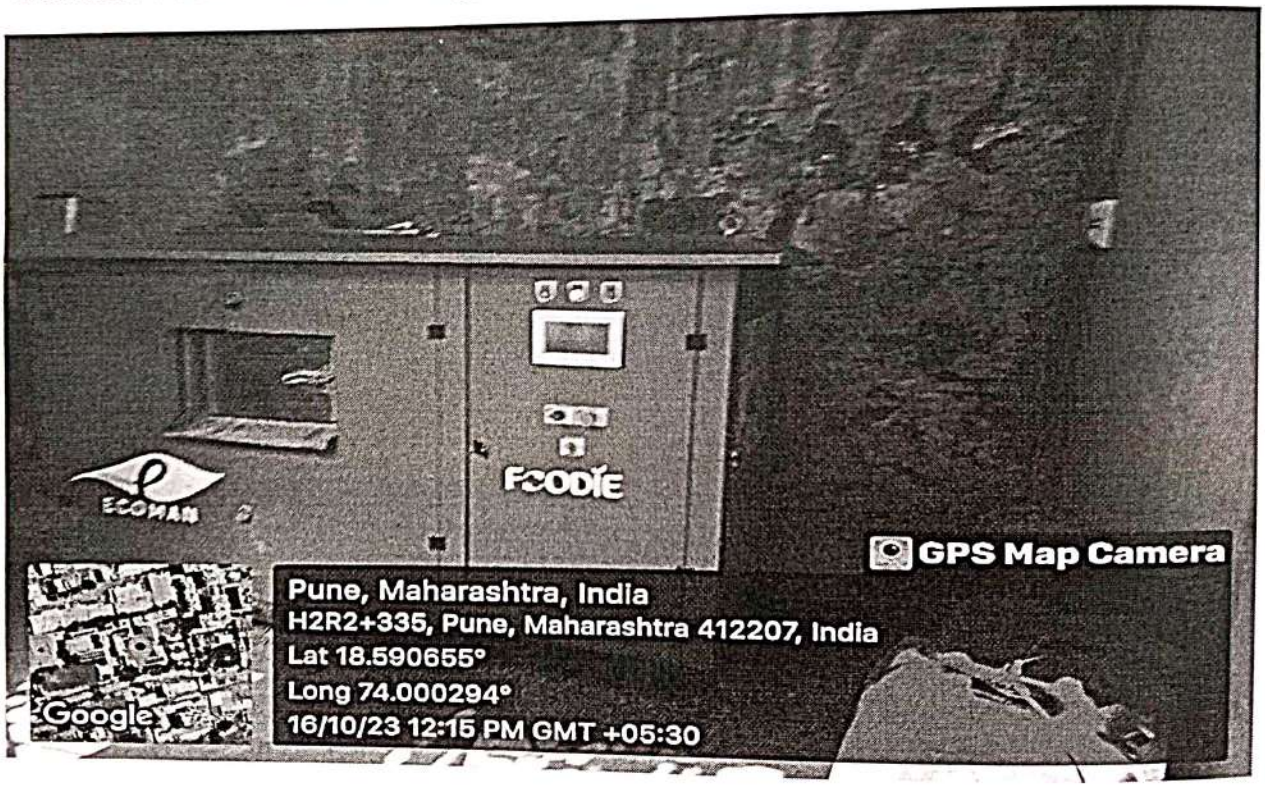
Nature Club Committee Activities- 2022-23

Sr.No.	Title of Activity	Duration/Date	Beneficiary				Remark if any
			Male	Female	Faculty	Total	
1	Intercollegiate Healthy Cactus Sapling Competition Day and Date:	**19 Nov 2022, 11.00am, Room no-36**	**22**	**51**	**05**	**78**	**Three Prices given to Best three**
2	Celebration of International Day for Biological Diversity on 22 May 2022 by organization of "E-Waste collection Drive"	21-23 May 2022	**26**	**31**	------	57	About 10 kg e- Waste is collected
3	Participation of students in National Quiz organized by Apollo Tyres on Environment and Nature-2022	13 December 2022	---	02	01	03	**Remain Second Runner-up**
4	Celebration of World Environment Day -5 June-2022 by organization of online "National level Quiz on Environment Awareness	**5 June 2022**	**61**	**157**	-------	**218**	**Online**
5	Maintenance of college campus greenery.	**Throughout the year every day cleaning of Botanical Garden, Watering to 50 Pots, 30 Hanging, Botanical Garden, College inner Poarch and front greenery of college Building.**					

PHOTO GALLERY:

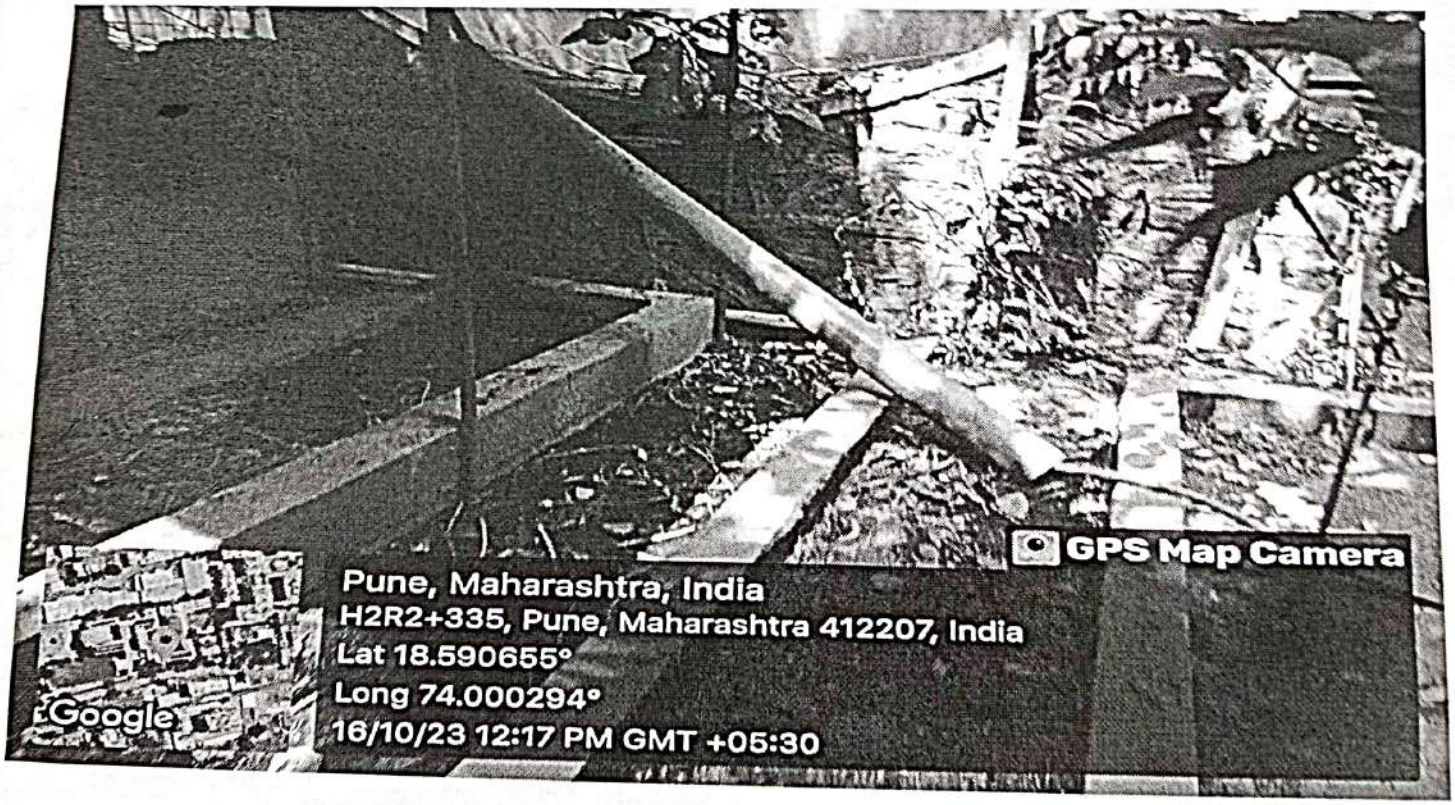


1.Rain Water Harvesting



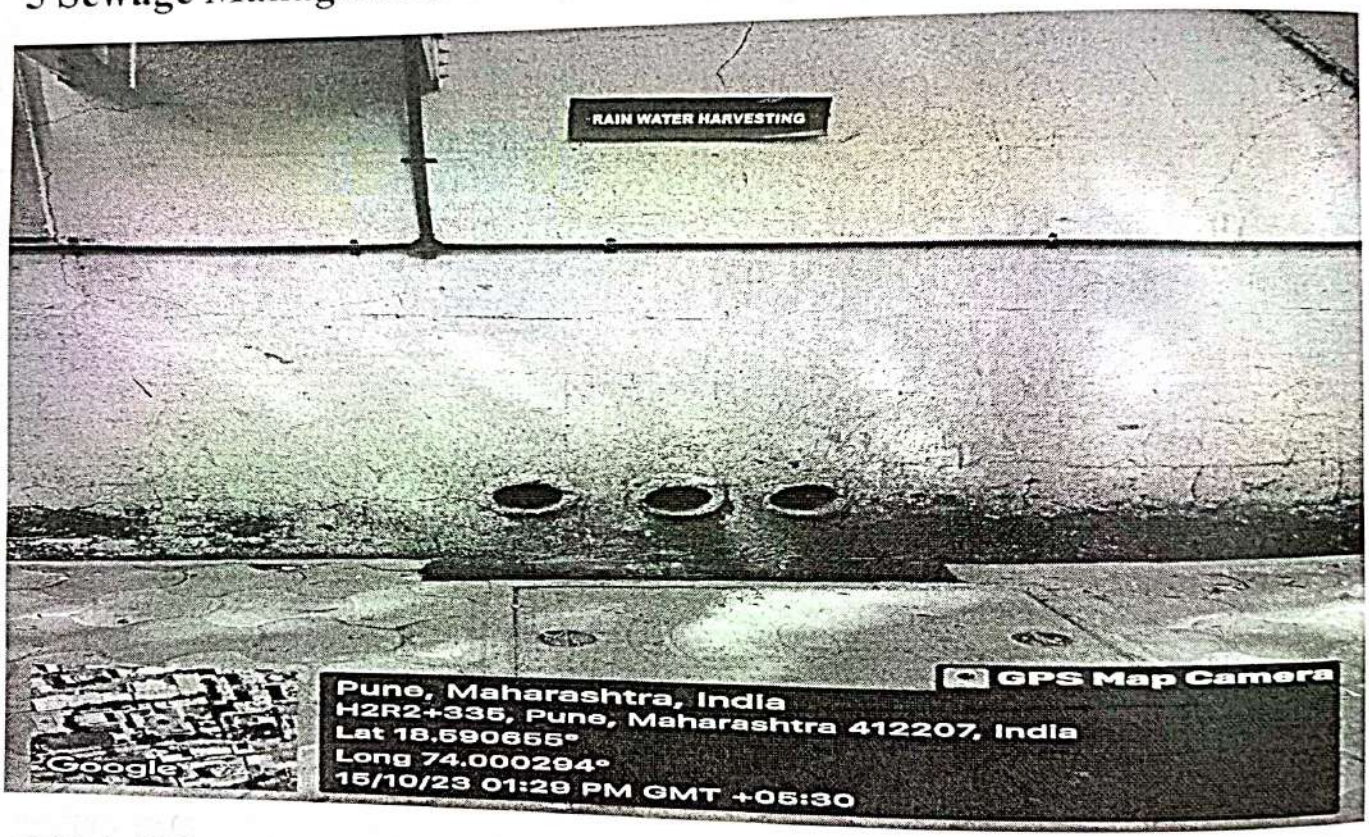
2-Foodee Machine for Solid Waste Management

3-Soild Waste Management-Dustbin



4-Solid Waste Management- Vermicomposting

5 Sewage Management-STP Unit



6-Rain Water Harvesting Pipes

"GORW GREEN LIVE GREEN"