



Chh. Shahu Institute of Business Education & Research Trust's
V. P. Institute of Management Studies and Research, Sangli.

GREEN AUDIT REPORT (2016-2021)



Prepared and Certified By

Department of Environment Management

**CHHATRAPATI SHAHU INSTITUTE OF BUSINESS
EDUCATION AND RESEARCH (CSIBER),**

[AN AUTONOMOUS INSTITUTE]

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2021

GREEN INITIATIVE REPORT

(ENVIRONMENT AUDIT, ENERGY AUDIT AND GREEN AUDIT)

**VASANTRAODADA PATIL INSTITUTE OF MANAGEMENT STUDIES AND
RESEARCH (VPIMSR), SANGLI**

(AUTONOMOUS)

(Affiliated to Shivaji University, Kolhapur)

NAAC Accredited with 'A' Grade, with CGPA 2.34,

College With Potential For Excellence (CPE), ISO 9001: 2015



**DEPARTMENT OF ENVIRONMENT MANAGEMENT
CHHATRAPATI SHAHU INSTITUTE OF
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2021

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CSIBER Trust's
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AND RESEARCH (CSIBER), KOLHAPUR**

An Autonomous Institute under UGC, New Delhi and Shivaji University, Kolhapur
College with Potential for Excellence (CPE) IIIrd Phase
Reaccredited by NAAC with 'A+' Grade (CGPA: 3.55)



DEPARTMENT OF ENVIRONMENT MANAGEMENT

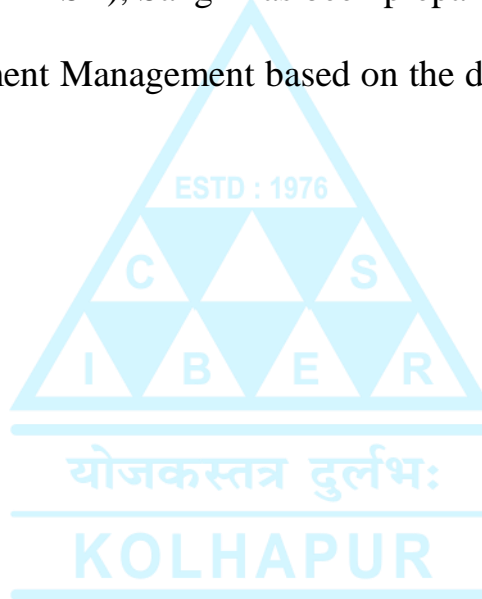
Dr. C. S. Dalvi
Director

Late Dr. A. D. Shinde
Founder, CSIBER Trust

Dr. R. A. Shinde
Secretary & Managing Trustee

CERTIFICATE

This is to certify that, the Green Initiative Report (Green Audit, Energy Audit and Environment Audit) of Vasantodada Patil Institute of Management Studies and Research, (VPIMSR), Sangli has been prepared and certified by the Department of Environment Management based on the documents produced by the Institute.



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Date: 29/12/2021

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CHAPTER-1 : INTRODUCTION**1.1 About College:**

Vasandraodada Patil Institute of Management Studies and Research (VPIMSR), Sangli named after then Chief-Minister of Maharashtra State Shri. Vasandraodada Patil was established in 1984 by the well-known Management Visionary, Consultant and Chartered Accountant Late Prof. Dr. A.D. Shinde whose vision, mission was to impart professional management and computer education to the students from rural area and towns.

The Institute is situated at the border of South Maharashtra and North Karnataka that has an influx of students who need improvement in their communication, professional, developmental skills. In compliance with its vision and mission the Institute has strived to meet these needs in its dedicated and disciplined journey of 30 years.

The Institute had started functioning in June, 1984 with MBA as single program having strength of 80 students, 10 teachers and run in 03 hired classrooms. Today VPIMSR cater to nearly 750 students with the support of 09 courses, 02 distance management education programs viz. IGNOU and Shivaji University, Kolhapur, 28 enthusiastic teaching staff, 14 non-teaching staff all housed under built-up area of 7000 sq. mt. spread across 13.5 acres of land owned by us at Sangli-Miraj road.

VPIMSR committed to excel in the field of Commerce, Management and computer education by moulding these students representing cross sections of the society and enhancing their skills to meet the challenges of the dynamic economic and business environment with the state of the art infrastructure, competent faculty.

Table No.1: UG & PG Programs Offered by VPIMSR

Commerce	
M.Com.	Master of Commerce
D.I.T.	Diploma in Taxation
Computer	
M.C.A.	Master of Computer Applications
B.C.A.	Bachelor of Computer Applications
P.G.D.C.A.	Post Graduate Diploma in Computer Applications
Management	
M.B.A.	Master of Business Administration
B.B.A.	Bachelor of Business Administration
D.B.M.	Diploma in Business Administration

Table No.2: Students Enrollment for the Academic Year-2020-21

Number of Students Enrolled for Senior College	
Diploma in Taxation	?
Bachelor of Computer Applications	?
Bachelor of Business Administration	?
Diploma in Business Administration	?
Post Graduate Diploma in Computer Applications	?
Number of Students Enrolled for P. G. Programs	
Master of Computer Applications	?
Master of Business Administration	?
Master of Commerce	?
Total No. of Students Number of Students Enrolled	
For Senior College+ P. G. Programs	846

Table No.3: Teaching/Non-teaching Staff

Teaching	Non Teaching	Total
20	23	43

1.2 Vision of the College:

- To foster ideas, courage determinations and to promote equal opportunities in higher education to the student community.
- To educate and prepare student community for professional excellence in an ever-changing complex business globe.

1.3 Mission of the College:

- By adopting variety of modern pedagogies to facilitate the students in understanding, developing, interaction and applying core and specialized concepts and practices and to prepare students academically up-dated and professionally capable to accept and face the future challenges of market needs in the field of information technology, industrial automation and various functional areas of management.

1.4 Goals and Objectives of the College:

- To prepare the executives and managers for top level and middle level management in public cooperative and private sector organizations. Also to prepare students for taking startups and self-employment. The emphasis will therefore, be on developing a role perception of managerial level personnel in the Indian context by exposing them to a wide range of relevant areas, sufficiently in depth so that they may gain the confidence to interact with people at all levels and develop managerial skills for translating policies into action effectively.
- To develop different software development skills in the students with current trends in IT Industry as well as Business Management and to take up student at various positions such as System Analyst, System Manager, Software Engineers, Web Design Programmers, EDP Managers, Database Administrators, Academician in different areas of computer applications, Management and Information Technology Industry. Keeping above mottoes, curriculum includes extensive study of problem solving and system development, project design, development areas. The extensive practical areas of different programming environment are covered in various operating environments. It also includes versatile subjects on Entrepreneurship and Business Management.
- To enable students to acquire sound knowledge of concepts, methods and techniques of management accounting and to make the students develop competence with their usage in managerial decision making and control. To create awareness among students about the modern trends in the management and impact of globalization. To acquaint the students with accounting standards and accounts, organizational culture and corporate social responsibility.
- The vision and mission statements of the college are clearly indicative of the objectives of the National Policy on Education demanding that centers of higher education should perform multiple roles like creating new knowledge, acquiring new capabilities and producing an intelligent human resource pool, through teaching, research and extension activities. The college plans and executes its curricular, co-curricular and extracurricular activities to translate the vision and mission statements into reality.

1.5 Environmental Policy: “CLEAN CAMPUS AND GREEN CAMPUS”

Vasantaodada Patil Institute of Management Studies and Research (VPIMSR), Sangli is committed to achieve a sustainable development goals set forth by directive principles of Indian Constitution for improving social, economic and environmental wellbeing of the society with the conservation of biodiversity, encouraging students for keeping clean and green campus through sustainable approach in Environment Management. VPIMSR is dedicated to environmental developments that foster a sustainable future.

ENVIRONMENTAL MISSION

Creating Awareness amongst students, teachers and all other stakeholders in terms of :

- i) Plastic free campus
- ii) Energy conservation
- iii) Rain water Harvesting
- iv) Environmental and Social Outreach programmes

1.6 Logo of the VPIMSR :



Table No. 4 Name and Address of the Institution:

Name	CSIBER Trust Kolhapur VasantaodadaPatil Institute of Management Studies and Research, (VPIMSR)Sangli
Address	Near Bharati Hospital, Sangli-Miraj Road, Wanlesswadi, Sangli,Pin 416414
City	Sangli
E. Mail	admin@vpimsr.edu.in
Website	www.vpimsr.edu.in
Telephone No.	0233 2211467, 2212427

Location:

Location	Sangli-Miraj Road, Wanlesswadi, Sangli, Pin 416414
Campus area	13.5 acres
Built up area in sq. mts.	7000 Sq. meter

Coordinates: The Institute area is bounded between the coordinates
16°84'033 N ,74.61949 E

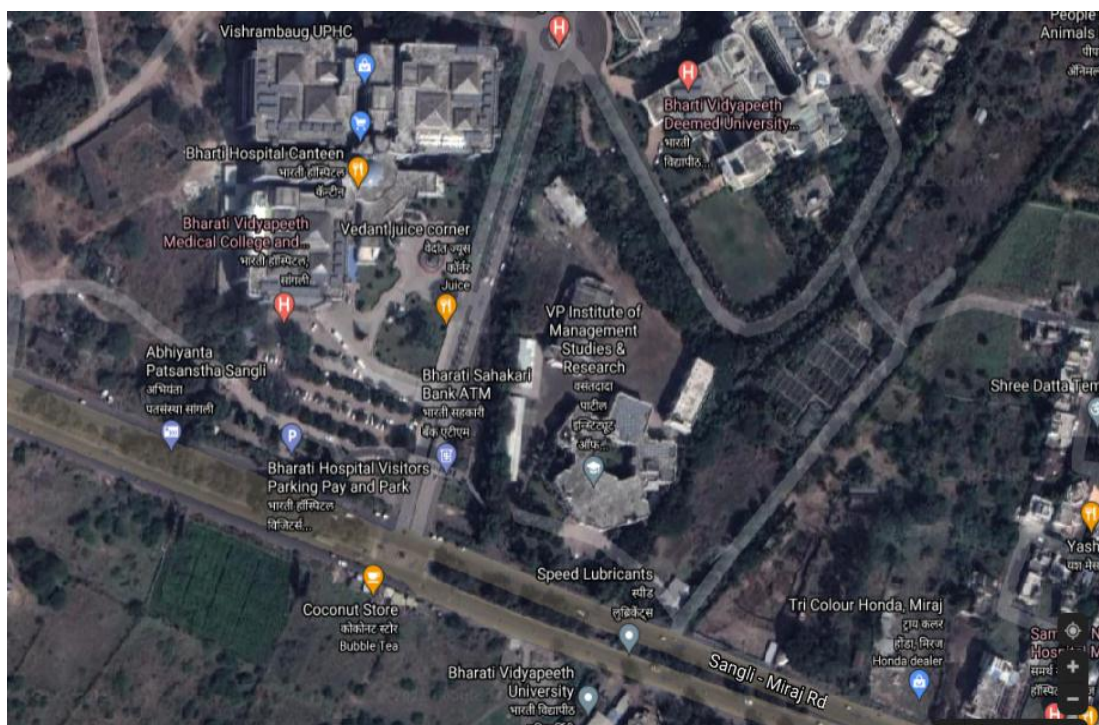


Plate No.01: The Google Earth Image of the VPIMSR

1.7 Scope of Green Audit in terms of Environmental Aspects:

1. Energy Conservation
2. Use of Renewable Energy
3. Efforts for Carbon Neutrality/Plantation
4. Water Conservation and Water Harvesting
5. Hazardous Waste Management
6. E-waste management
7. Air, Water, and Noise Pollution

1.8 Infrastructure :

A. Classrooms :18

B. Library : building : 480.46 Sq.mtrs

C. Auditorium : 18846 Sq. mtrs

D) No. of Books - 22215

Periodicals -47

Internet Facility for students

E) Drinking Water Facility: 04 water coolers with aqua guard

F) Separate washrooms for girls and boys : 04

G) Playground

Area - Playground : 1348.50 Sq. meter

Indoor Facility - Table Tennis, Badminton, Carom, Chess, Wrestling, Judo, Yoga

Outdoor Facility - Volley Ball, Basketball, Kabaddi, Kho-Kho ground

H) Separate Gymnasium hall for boys and girls : 01

I) 04 Computer Labs having 200 computers

J) Separate Ladies room :02

K) Separate Canteen :01

Table No. 05 : Library Details

S. No	Particulars	Details
1.	Library Advisory Committee	Formed
2.	1. Reference Books	22215
	2. Magazines	9
	3. Journals	47
	4. News Papers[Marathi, English]	8
	5. Book Bank Scheme	563
3.	Computers in Library	7
4.	Library Software	In house Development (Dr. A. A. Sattikar)
5.	Wi-Fi Enabled	155 MBPS, Airtel
6.	Reference & Periodical Section	Available 8 Hrs Daily
7.	New Arrivals	Available
8.	Total Area	480.46 Sq.mt
Journals & Magazines		
9.	Commerce & Management	24
10.	Computer Application	20
11.	Others	03

CHAPTER-2: GREEN AUDIT**2.1 Conceptual Framework:**

Green Audit is the process of assessing the environmental impact of an organization, process, project, product, etc. Green means eco-friendly environment. Schools and Colleges are playing a key role in development of human resources worldwide. Higher education institutes run various activities with aim to percolate the knowledge along with practical dimension among the society. Likewise, higher education institutes/colleges are also try to give different technological solution for issues related to environment. Types of evolutionary methods used to assess the problem concerning environment, includes Environmental Impact Assessment (EIA), Social Impact Assessment (SIA), Carbon Footprint Mapping, Green Audit, Energy Audit, Water Audit etc.

Green audit is a tool to assess general practices implemented by organization in term of its impact on surrounding environment. Green audit shows strength and weakness of organization towards conservation of environment. It also pinpoints the adverse practices of natural resources utilization. It shows the path to build, implement and test new innovative systems for better utilization of natural resources and minimization of waste generation through the principles of waste management like Reduce, Reuse and Recycle etc. It helps to achieve the goal of college to become a role model in higher education for sustainable campus in environmental views. Green audits are useful to ensure that their environmental performance is in compliance with applicable laws and regulations, to identify potential liabilities, to align with environmental performance with their stated goals and strategy, to identify opportunities to reduce costs or increase revenue, to improve process and materials efficiency, and in response to stakeholder's requests for increased disclosure.

Environmental audits are the tools that organizations use to identify their full range of environmental aspects and impacts. It also serves as a means to identify opportunities to save money, enhance work quality, improve employee health and safety, reduce liabilities, and achieve other forms of business value.

Recently, increased attention has been paid towards environmental auditing by companies, government agencies and academic organizations. The recent growth of environmental auditing fits with a variety of business and social trends.

In keeping with the need of the National interest of Swachta and Swastha Bharat, VPIMSR, Sangli is well aware about environmental issues and has gone through its environmental audit for better understanding of environmental aspects and impacts of the activities carried out at the Institute campus on the environment.

2.2 Objectives of Green Audit:

- To do Environment Management with implementation of *Go green* policy in the campus.
- To identify opportunities to save and conserve energy.
- To prevent adverse effects of Air, Water, Noise and Solid Waste pollution on environment taking proper steps to maintain sustainability.
- To reduce, recycle, reuse waste and dispose waste scientifically under 5 R principles of Solid Waste Management.
- To see that proper steps have been taken for maintaining health and welfare of the students and staff of the VPIMSR, Sangli.

2.3 Implementation of the Environmental Policy:

VPIMSR is aimed at balancing environmental protection and the conservation of natural resources with other policy goals, such as affordable energy, air and drinking water quality monitoring, rainwater harvesting. Green Campus Committee of the Institute has established clean and green campus with awareness and protection and in fulfilling environmental goals and sustainable development goals set forth to implement environmental policies given by government from time to time. NSS students are frontiers and other students and staff members are supporting the implementation of the environmental policy.

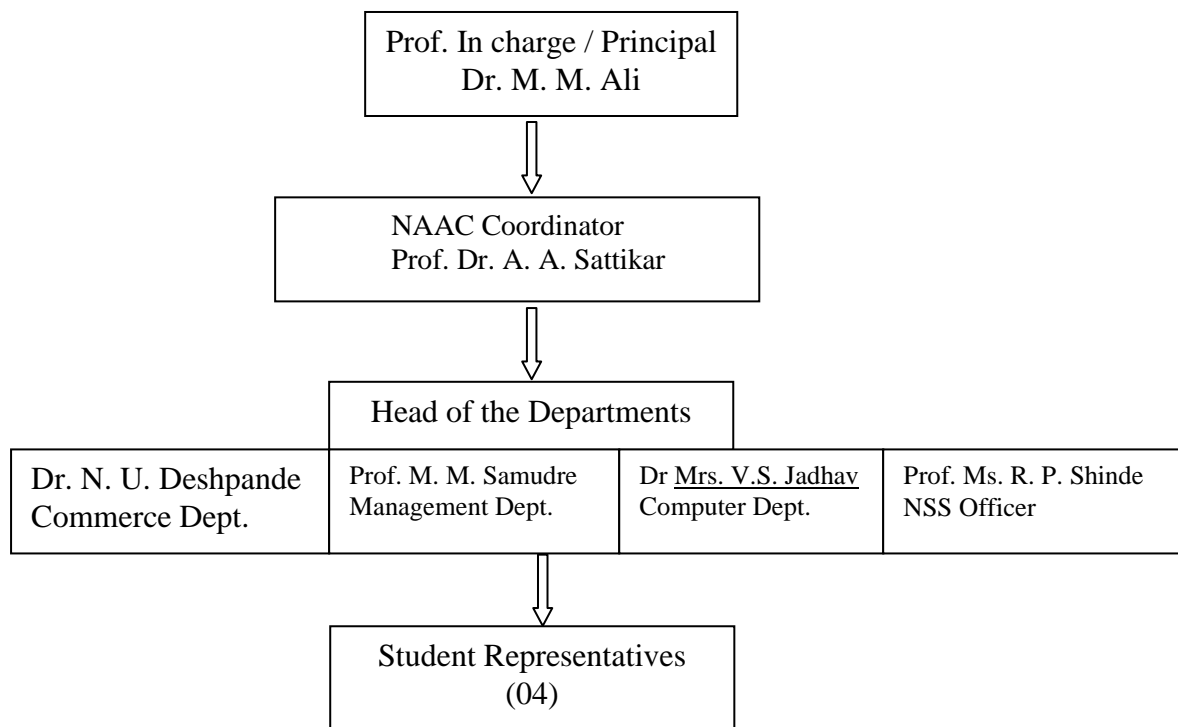


Fig. No. 1 : Environmental Management Cell of VPIMSR

For effective implementation of the Environmental Policy, VPIMSR has constituted Environmental Management Cell (fig. 1) under the Chairmanship of Vice Principal.

2.4 Environment Awareness Activities:

2.4.1. Tree Plantation through N S S:

Trees give us clean air to breathe, shade and food to humans, animals and plants. They provide habitats for numerous species of fauna and flora, firewood for cooking and heat, materials for buildings and places of spiritual, cultural and recreational importance. They increase aesthetic value and scenery of an area. To make people aware about importance of tree in the economy of the nature and human lives, students and staff of VPIMSR, Sangli takes efforts for plantation of trees through N.S.S .Cell.

Thus trees gives us host of their productive functions, protective functions and regulatory functions. As green plants are autotrophs and primary producers, they helps to maintain biodiversity in terms of number and distributin of floral and faunal resources of a perticular area.They have great place in the economy of nature.



**Plate No.02: NSS volunteers digging for tree plantation during special camp - Primary School No. 21 of SMK, corporation at Manik Nagar, Miraj
Tree Plantation at VPIMSR Campus in 2016**



Plate No. 03: Tree Plantation By Honorable Principal Dr. R.A. Shinde Sir at Special Activity Camp, Kasabe Digrajon 20/02/2016



Plate No. 04: Tree- Plantation at Local Community Ground, Kasabe Digraj by students of VPIMSR, Sangli on 20/02/2016

2.4.2 Campus Cleanliness Activity:

Cleanliness means that there is no dirt, no dust, no stains and no bad smells. The goals of cleanliness are health, beauty, absence of offensive odour and to avoid the spreading of contaminants. With the help of cleanliness, we can keep our physical and mental health clean, which will make us feel good. Cleanliness gives rise to a good character by keeping body, mind, and soul clean and peaceful. Maintaining cleanliness is the essential part of healthy living because it is the cleanliness only which helps to improve our personality by keeping clean externally and internally. With these objectives one day seminar on cleanliness was organized by VPIMSR.



Plate No.05: Campus Cleaning at VPIMSR, 2016

Sanitation and neatness play an important role in our day to day routine. It is important as it prevents dangerous diseases like dengue, typhoid, hepatitis, and other diseases caused by mosquito bite, etc. Diseases like Jaundice, Cholera, Leptospirosis, Ringworm, Scabies, etc. can be spread due to eating contaminated food, drinking contaminated water or living in an unhygienic conditions. Trash also spread bad odour which is difficult to tolerate. There will also be an accumulation of trash and dirt if clean measures are not taken. So campus cleanliness drive is play an important role.



Plate No.06: Campus Cleaning of Jotirlinga Temple, 2016



Plate No.07: Guest Lecture Organized on Swachh Bharat by Dr. Tate, Health Officer Sangli Miraj Kupwad Mahanagar Palika.

2.4.3 'Clean India' Plogging Run Activity Conducted by National Service Scheme (NSS) & NYKS on 16th October 2021

Government of India is taking Initiatives to celebrate **Azadika Amrit Mahotsava** through Department of Youth Affairs, Ministry of Youth Affairs & Sports, Government of India. Nehru Yuva Kendra Sangathan and Government of India started venture of Clean India from 01 October 2021 to 31 October 2021. The program is aimed at creating awareness, mobilization of people & ensuring their involvement in Clean India initiative which is a unique in terms of scale and participation.

National Service Scheme (NSS) Unit of Vasantodada Patil Institute of Management Studies & Research, Sangli and Nehru Yuva Kendra Sanghata (NYKS) jointly started clean India drive on 01 October as a Plogging run activity. Under the Directional support and Encouragement given by Dr. R. A. Shinde Sir Principal of our Institute, initiated the Clean India Drive Program. Professor In charge Dr. M M Ali sir inaugurated the Functional Activity of Clean India and Divisional Head of Nehru Yuva Kendra Sanghata (NYKS) Ms. Aruna Kochure madam explored the functions and role of program in detail. Prof. R. P. Shinde madam and Mr. Balasaheb Shrimandilkar sir also explained more about significance of Cleaning India and how much it is important for our nation and health.



Plate No.8: Swachhta Abhiyan Organized at VPIMSR, Sangli Campus, 21/10/2021



Plate No.8A: Swachhta Abhiyan Organized at VPIMSR, Sangli Campus, 21/10/2021



Plate No.09: Swachhta Abhiyan Organized at Vishrambag Police Station, Sangli

Plastics are synthetic polymers of carbon and other elements with high molecular mass. Polymers are long chains of monomers. Plastics are malleable and can be converted into solid objects also. It is used in boxes, packaging, carry bags, switches, utensils, electrical wires, fire resistant fabric etc. Numerous advantages and uses of plastic is responsible for spread of plastic waste everywhere. It is everybody's responsibility and one should keep themselves and their surroundings clean and hygienic. It also brings good and positive thoughts in the mind which slows down the occurrence of diseases. In relation to this plastic eradication and cleanliness drives are frequently organized by college.

Swachhta Abhiyan Organized by VPIMSR through N. S. S at Various Locations



Swachhata Abhiyan by VPIMSR through NSS



Plate No.10: NSS volunteers cleaning campus of Primary school at Manik Nagar-Wanlesswadi



Plate No.11: Cleaning of Local Community Ground under “ Swaccha-Bharat Abhiyan” at Kasabe Digraj

2.4.4 Eco Friendly Ganapati Workshop:

A workshop was organized by the Rotaract Club of Krishna Valley, Sangli. on Monday 29.07.19 at VPIMSR. The theme of workshop was 'How to Celebrate Ganesh Utsav as Environmentally Friendly in Our Home'. All the students, teaching and nonteaching staff were participated in the workshop. On this occasion an essay competition was organized by MDC Department on the theme 'Environmentally Friendly Ganesh Utsav'.

During the celebration Gouri- Ganesh festival Idols and Nirmalya is immersed in nearby water resources like well, river and lake as a tradition. This result in the deterioration of water quality. Material used for idols other decoration include colours containing harmful chemicals. They are composed of complex organic materials and inorganic elements which remain in the ecosystem and become a part of food chain. There are chances of entry of these persistent chemicals in the ecosystem. To avoid these threats VPIMSR has taken a lead in the creation of awareness and workshop was organized.



Plate No.12: Workshop organized on “Eco Friendly Ganapati Utsav” on 23 July, 2019

2.4.5 Environmental Awareness: 17-09-2018

Sustainable management of our life supporting natural resources is a need of time. Degradation of natural resources has serious environmental consequences. It may result in the upset of ecological cycles and ecosystem interactions. To avoid this damage to the environment VPIMSR is continuously creating the awareness among the students and public through NSS and conducting other various related activities.

2.4.6 Awareness programme on Women Empowerment - Nirbhaya Pathak Group, Sangli and VPIMSR, Sangli.



Plate No.13: Hon. Ms. Pragdnya Deshmukh, Inspector of Police, Sangli addressing girl students regarding NirbhayaPathak for safety.on 26/09/2019

Awareness program was organized to create awareness about safety among girl students . Nirbhaya pathak



Plate No. 14: Article in Daily Pudhari 30.9.2019

2.4.7 One Day Covid -19 Vaccination Camp Conducted on 16th October 2021

Government of India is taking all necessary steps and actions to ensure the preparedness to face the challenge and threat posed by the pandemic COVID-19. The most important factor in preventing the spread of the Virus locally is to empower the citizens with the right information and taking precautions as per the advisories being issued by Ministry of Health & Family Welfare. Now that COVID-19 vaccines have reached billions of people worldwide, the evidence is overwhelming that no matter which one you take, the vaccines offer life-saving protection against a disease that has killed millions. The pandemic is far from over, and they are our best bet of staying safe.

So in that way National Service Scheme (NSS) Unit of Vasantodada Patil Institute of Management Studies & Research, Sangli has conducted one day Covid 19 Vaccination Camp in Association with Sangli, Miraj & Kupwad Municipal Corporation Samatanagar UPHC Unit on 16th October 2021.



Plate No.15: View of Vaccination at VPIMSR, Sangli on 16/10/ 2021

2.4.8 Yoga Camp by Yoga-Visharad Mr. Balkrishna Chitnis during “ Swastha-Bharat Abhiyan” at Kasaba Digraj for students on 19/02/2021



Plate No.16: View of Yoga camp at Kasaba Digraj on 19/02/2021 during “ Swastha-Bharat Abhiyan”

To create awareness regarding benefits of yoga in the maintenance of good health, yoga camp was conducted at the Kasabe Digraj for the students during “ Swastha-Bharat Abhiyan” of 19/02/2021. All the students actively participated in the camp conducted by Yoga-Visharad Mr. Balkrishna Chitnis.

CHAPTER-3: ENVIRONMENTAL ASPECTS

3.1 Energy Audit:

Energy management includes planning and operation of energy production and energy consumption units as well as energy distribution and storage. Objectives of energy audit are resource conservation, climate protection and cost savings, while the users have permanent access to the energy they need. Energy management is the process of tracking and optimizing energy consumption to conserve usage in a building. The process of energy management include, collecting and analyzing continuous data, identifying optimizations in equipment schedules, set ting points and flow rates to improve energy efficiency, calculating return on investment. Units of energy saved can be metered and calculated just like units of energy delivered. Execute energy optimization as a solutions, to continue energy efficiency.

Energy management is the means to controlling and reducing a building's energy consumption, which enables owners and operators to,

- i) Reduce costs – energy represents 25% of all operating costs in an office building.
- ii) Reduce carbon emissions in order to meet internal sustainability goals and regulatory requirements.
- iii) Reduce risk – the more energy you consume.

the greater the risk that energy price increases or supply shortages could seriously affect your profitability. With energy management solutions can be minimized this risk by reducing your demand for energy and by controlling it so as to make it more predictable.

Energy is an important parameter which needs to study while going through green audit. Different forms of energy such as electricity, LPG, petrol, diesel, wood etc. are used to carry out day to day activities. On the background of climate change and Paris Agreement, India has intended to reduce its carbon emission by various ways. Reject, Reduce and Replace are the three R's for efficient use of energy.

As per the Energy Conservation Act, 2001, Energy Audit is defined as “ the verification , monitoring and analysis of use of energy including submission of technical report containing recommendations for improving energy efficiency with cost benefit analysis and an action plan to reduce energy consumption. Electricity and LPG are the forms of energy majorly used in higher education institutes. Use of LED lights instead of incandescent lamp and tube lights is one of the important green practices followed by VPIMSR. Along with use of LED lamps use of natural

ventilation, natural light are useful practices to carry out in the college to reduce the use of electricity.

At VPIMSR, energy conservation measures are taken up by means of replacing conventional bulbs by low energy consuming bulbs in a phase manner and the target is to replace all conventional bulbs within a couple of years. Following are few energy conservation measures adopted by VPIMSR-.

- i) Use of Compact fluorescent lamp (CFL)
- ii) Use of Light Emitting Diode (LED) lamps
- iii) Encouragement to use e-mail instead of sending notices and faxing documents
- iv) Use of electrical appliances carrying three to five stars rating
- v) Use of flat-screen LCD monitors rather than CRT monitors
- vi) Creating awareness amongst students through sign boards displayed at strategic locations for conservation of energy.

3.1.1 Energy Consumption (in Units) :

Table No. 06: Energy utilized in five year at VPIMSR, Sangli

Month	2016	2017	2018	2019	2020	2021
Jan	0	2800	3429	720	401	474
Feb	0	3727	2977	803	412	485
March	0	3260	4405	660	924	577
April	5057	4985	3242	321	0	454
May	3547	3214	2602	366	0	408
June	2639	2526	2635	496	292	80
July	3236	2380	2657	527	367	80
August	3580	3515	175	443	357	971
September	3693	3429	72	1684	410	80
October	2846	3448	3521	348	442	473
November	2539	5455	1142	348	449	-
December	2509	3069	546	353	482	-

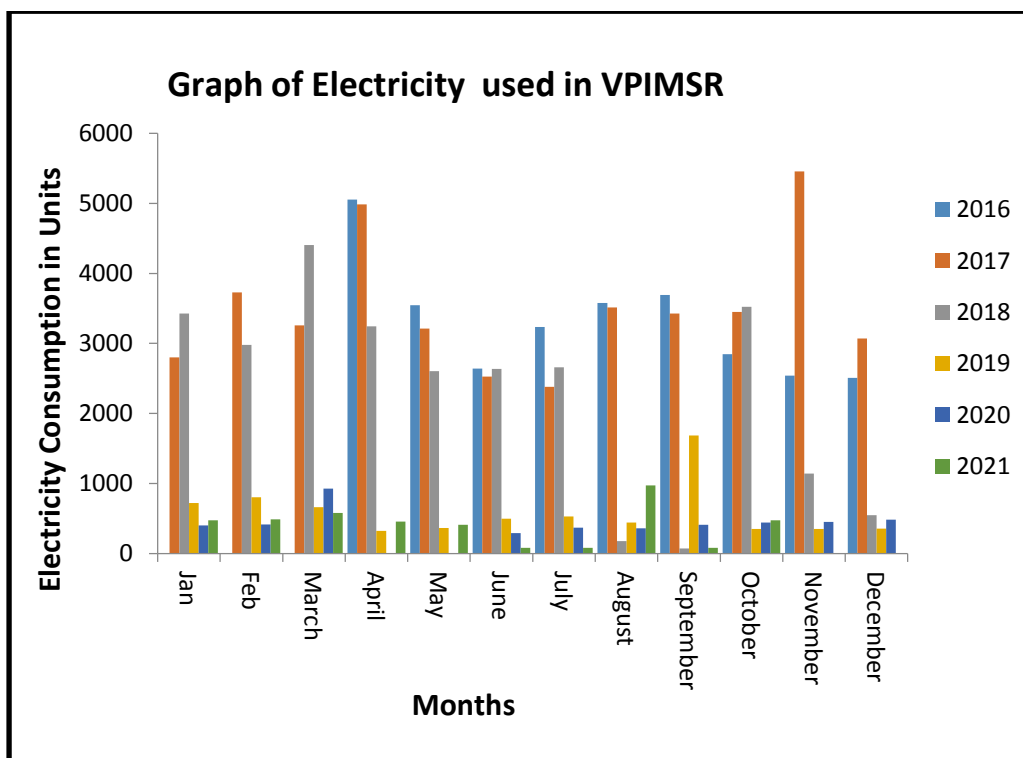


Fig. No.02 : Graph of Electricity used in VPIMSR, Sangli

Electricity is supplied from the Maharashtra State Electricity Board (Mahavitaran) is the main source of energy for the activities on the campus like illuminating rooms, operating fans computers, instruments, motor and for water coolers. It is depicted from above table and graph that electricity consumption is decreased from year December 2018 because of adopting the solar system in Institute campus. Diesel operated Green Power Kirloskar Generator having efficient energy conversion is also used as an alternating source of Energy during emergency conditions. VPIMSR also have power Exide batteries backup having capacity 1.5 hour.



Plate No.17 :Green Power Generator operated on Diesel at VPIMSR.



Plate No.18 :Set of Batteries used for Power backup at VPIMSR.

3.1.2 Energy Conservation and Efforts for Carbon neutrality

3.1.2.1 Use of LED bulbs:

Thinking about carbon footprints is a simple way to think about ways to reduce environmental pollution. By reducing our carbon footprints, each one of us can contribute to making the earth a safer, better place to live. It is found that almost half of our carbon footprint is due to electricity and 17% is due to lighting alone.

Carbon footprint is the amount of Green house gases like carbon dioxide, methane, nitrous oxide emissions emitted by a building, organization etc. It relates to the amount of greenhouse gases we are producing in our day-to-day lives through burning fossil fuels for electricity, heating, transportation etc.

At VPIMSR carbon footprint for indoor lighting in office building is considered. The performance of the building has been increased by using LED lights which reduces the building carbon foot print. The carbon foot print is for –

1. Incandescent Light
2. Compact Fluorescent Light
3. LED Lights

Incandescent Lamp :

Incandescent lamp is a source of light that produces light when the tungsten filament is being heated. It is a device which can convert less than 20% electrical energy consumed into light energy. This results in 80% loss of electrical Energy in the form of heat energy. One can calculate the amount of CO₂ emitted by 40 watt incandescent bulb. It shows that a single 40 watts incandescent bulb will generate 90.3 kilograms of CO₂ for every year.

Compact Fluorescent Lamp :

CFL produce less heat and more visible light as compared to incandescent lamp. Literature shows that a single 14 watts CFL lamp will generate 31.6 kilograms of CO₂ for every year. CFL contains harmful mercury which creates environmental consequences of mercury contamination if not properly disposed off.

LED Lamp :

LED lights have less electrical power consumption and more efficiency over other lamps. Not even a single point we can't compare led lights with other lighting. We can calculate the CO₂ emitted and reduction in carbon footprints by 8 watt LED lamp.

Table No. 07: Comparison of Lamps used in VPIMSR, Sangli

Criteria	Incandescent Bulb	CFL	LED light
Power Consumption(watt)	40	14	8
Electricity(kwh)	0.04	0.014	8.008
Hours of Operation Per Day	10	10	10
Carbon Emissions (tons) per year/lamp	0.903	0.316	0.18
Reduction in Carbon Footprint (tons) / y /lamp	--	--	0.12

LED lamp can reduce carbon footprint by 0.12 tons per year, and does not contain mercury; it is a big benefit for this lamp.

Based on above comparisons, LED emerges as the BEST option to reduce carbon footprint. A building's carbon footprints can be reduced by reduced by 68%.when LED lamps are used.

Considering the need of the time and cost, the conventional lamps from five rooms of administrative wing are totally replaced LED bulbs.

Effective energy conservation measures are taken up by VPIMSR, Sangli and these are.

1. Increased use of LED bulbs which consume less electrical energy against incandescent lamps.
2. Use of renewable energy like solar energy through Solar Photovoltaic Systems which converts light energy into electricity, solar street lamps.
3. Creating awareness among students and staffs regarding power saving (Avoiding unnecessary use by displaying sign boards at convenient location)

In VPIMSR Carbon footprints for indoor lighting in office building and in other rooms is taken into account. Use of LED and LCD lights reduces carbon footprints. Energy conversion efficiency of normal incandescent lamp is very low. LED lamps consume low power and are more efficient in conversion of electrical energy into light energy.

LED lamps does not contain like mercury chemicals and hazardous gases. They does not generate any hazardous waste. Thus an LED lamp emerges as the best option to reduce carbon footprints.

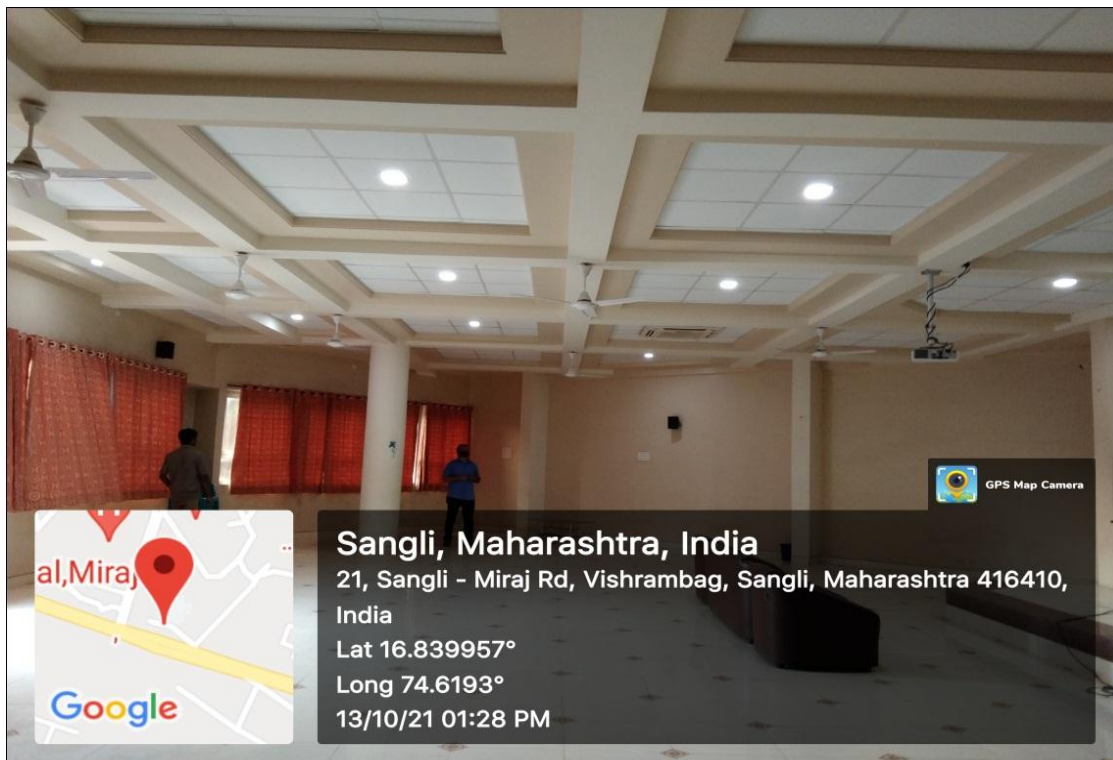


Plate No.19: Replacement of incandescent bulbs by LED bulbs.

- Replacement of old incandescent bulb and tube lights by LED lamps has been followed and will be continued in the phase manner by VPIMSR as a response towards green practices of energy conservation.



Plate No.20: Display of Sign Boards at convenient points for creating awareness among staff and students regarding Energy Conservation.

3.1.2.2 Harnessing Solar Energy through Solar Photovoltaic Applications (PVC)

VPIMSR, Sangli has installed Roof Top Solar Photovoltaic Panel for harnessing solar energy. Electricity generated by solar panels is used in Institute premises.



Plate No.21: Solar Photovoltaic Application at VPIMSR, Sangli

Photovoltaic (PV) is the conversion of light into electricity using the photovoltaic effect and is commercially utilized for electricity generation.

Fixed PV installations rooftop-mounted systems are employed at VPIMSR, with the capacity 30 KW. These solar panels are working in full capacity. It is depicted from Mahavitaran electricity bills of VPIMSR that the bill is reduced bills by 70%. Thus solar photovoltaic panels installed on rooftop of library building are efficient in harnessing solar energy throughout the year.

Such kind of installations for harnessing renewable energy resources has a potential to mitigate the global warming by CO2 reduction. Solar PV has specific advantages as an energy source- once installed, its operation generates no pollution and no greenhouse gas emissions. It shows simple scalability in respect of power needs and silicon has large availability in the Earth's crust, although other materials required in PV system manufacture such as silver will eventually constrain further growth in the technology. The use of PV as a main source requires energy storage systems or distribution.

Solar power is pollution-free during use, which enables it to cut down on pollution when it is substituted for other energy sources. PV installations could ideally operate for 100 years or even more, with little maintenance or intervention after their initial set-up, so after the initial capital cost of building any solar power plant, operating costs are extremely low compared to existing power technologies. Grid-connected solar electricity can be used locally thus reducing transmission/distribution losses.

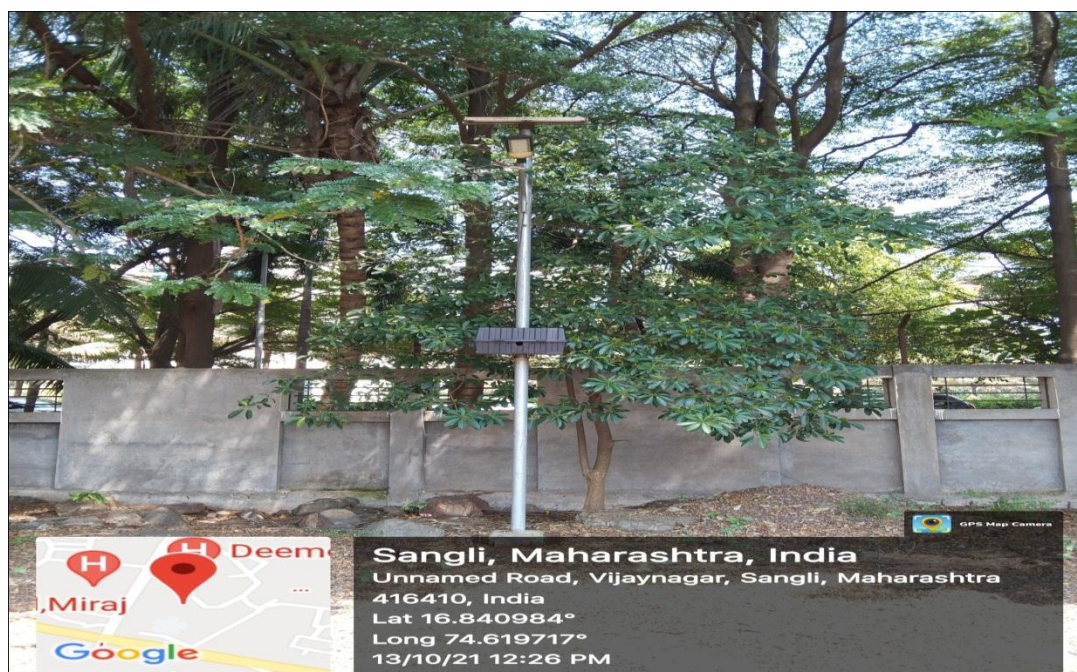


Plate No.22 : Solar Photovoltaic street lamps at VPIMSR, Sangli

Use of Renewable Energy Through Solar Photovoltaic Street Lamps :

Solar Photovoltaic street lamps are also installed at VPIMSR, Sangli, which are efficiently working.

Institute has used six solar street lights with 9W LED outdoor luminary solar photovoltaic panel in open spaces. This is considerably reduced energy consumption. Nevertheless, experimental high efficiency solar cells are already have efficiencies of over 40% in case of concentrating photovoltaic cells and efficiencies are rapidly rising while mass-production costs are rapidly falling.

3.2 Water Audit:**3.2.1 Water Consumption:**

Water plays a key role in every environmental system. Water is an amazing material with unique properties that affect life on earth. The earth holds the same water in the same quantity as it did when it was formed. The earth's water continuously circulates from the ocean to the atmosphere, then to the land and back. The atmospheric water cycle helps us to get a regular supply of fresh water every year. Thus fortunately the world's freshwater supply is continually collected, purified, recycled and distributed in the earth's hydrological cycle.

Water is so integral to life that we frequently take it for granted. Freshwater is an irreplaceable resource that we are managing poorly. Despite its importance, water is one of our most poorly managed resources. Even if the VPIMSR gets assured good amount of rainfall, the water is not retained in the ground due to the limitations like topographical features and seasonal rains. Hence regulation of water cycle by nature is proper. In the area covered by build structures and roads, the rainwater does not percolate into the ground. Hence water conservation measures should be adopted. Water requirement per person is assumed to be 3 lit / per person during their stay on the campus. Hence, water requirement for per day would be $820 \times 3 \text{ lit} = 2400 \text{ lit}$. Water requirement is met through the supply made by the Miraj- Kupwad Corporation. Water billing is done at the rate of Rs. 12 per 1000 lit of water. Total billed amount for a period of six months is Rs. 2520 /. Total quantity of water used over a period of six months is 25,20,000 lit. and per month is 4,20,000 lit and per day is around 15,000 lit. Out of this about 2400 to 3000 lit is used for internal consumption and balance of 11000 to 12600 lit for gardening purpose.

In addition to the Corporation water supply bore well water is used for gardening purpose as and when required. Source of water supply for VPIMSR is from Corporation and through borewell and rain water harvesting.

VPIMSR campus has huge potential for roof top rainwater harvesting. Institute has utilized this opportunity and water collected is used for recharging bore well water and storing water during rainy season in the underground tanks.

Total roof top area used for rainwater harvesting is 1981.19 sq. m. Sangli has almost 1000m average annual rainfall. Considering 20% as evaporation loss, actual water available for harvesting would be 800mm or 0.8m. Volume of water that is available for harvesting is $1981.19m \times 0.8m = 1584.952 m^3$. Converting into liters, rainwater available is $1584.952 m^3 \times 1000 = 15,84,952 lit$. Almost 63 % of total water requirement is made through rainwater harvesting.

The Institute's irrigation system includes a variety of measures to ensure that campus is irrigated appropriately. Sprinkler irrigation has been systematically installed, reducing the wastage of water in campus.

The Institute has significantly reduced the watering schedule down to a base for two times per week. Watering occurs more than twice a week when weather or other conditions require it.

3.2.2 Water Quality:

In Institute water is used for domestic and drinking purpose. The students which utilize water for drinking purpose must be monitored frequently to avoid the spread of waterborne diseases like Dysentery, Typhoid, Gastro etc. In the VPIMSR. Institute the treated water is supplied by corporation is provided to water filters and then filled in the water coolers for drinking purpose.

Water quality of drinking water from cooler and borewell is periodically monitored by staffs and



Plate No. 23 : Water filter and Cooler at VPIMSR, Sangli.

routine water analysis is done from laboratory for necessary parameters. It is evident from the reports of water analysis for portability study that the required parameters are within the limits of BIS standards. (**Annexure-I**)

3.2.3 Water Conservation Practices at Premises followed by VPIMSR:

Clean, fresh water is a limited resource. With all the severe droughts happening in the world, the limited supply of fresh water is becoming one of our most precious resources. Every person on earth needs water to survive. Without it, many of us would get sick and even result in death.

While almost 70% of the Earth is made up of water, many parts of the world suffer from clean water shortage. Conserving water is important because it keeps water pure and clean while protecting the environment.

Conserving water means using our water supply wisely and be responsible. As every individual depends on water for livelihood, we must learn how to keep our limited supply of water pure and away from pollution. Keeping our water supply safe and pure will protect the water for the generations to come.

Many believe that our water supply infinite. However, our supply is quite the opposite. It is important that we must not pollute your water as many do not realize just how important and scarce water is.

Humans are not the only species on Earth that requires water for survival. In fact, every species on this planet needs water to live and survive. Without water, the aquatic life will stand no chance of survival. It is highly important that we save water that is essential to our sustainability.

3.2.3.1 Efficient use of water:

Enormous amounts of water are wasted, without reason, through leaking taps and open taps waste. In many cities, more than half the available supply is lost through these leakages and rotting of pipelines. In VPIMSR campus instruction boards are displayed at every washroom to avoid wastage of water. Students are instructed to close the taps when they are not in use. Taps and pipelines are regularly checked for leakages and repaired if needed. Leaking taps are immediately replaced by new handy taps.

3.2.3.2 Rain Water Harvesting:

Rain water harvesting is done by collecting and storing rain water. This is very effective method for collection of pure water for many cities. The rain water that falls on the roof can be collected, filtered and stored. As Sangli is getting assured rainfall surprisingly large amount of water can be collected in this way. Rain Water harvesting is also done at VPIMSR, Sangli.

Harvested rooftop rainwater is also used is used in washrooms and for recharging of ground water in the campus.

Table No.08: Water storage tanks for harvested rain water.

Sr. No	Tank Type	Number of Tanks	Capacity (Lit)
1	Sintex tank	2 +2	2000
2	Sintex tank	1	1000
3	Sintex tank	1	500
4	Cement Tank	1	5000



Plate No.24 : Rain water collection and storage at VPIMSR, Sangli



Plate No.25 : Rain water collection and Ground water recharge at VPIMSR, Sangli

3.3 Air and Noise Quality

Air and noise quality plays an important role in student's concentration and ability to learn. In noisy environment it is difficult to focus on the subject for students and also it is difficult to teaching faculty. Furthermore, noise pollution it can cause an increase in blood pressure, hypertension, and other stress-related health issues. In many cases, noise pollution can cause a disturbance in a person's state of mind, which further causes disturbance in sleep pattern, stress, aggressiveness, and other related issues. In very noisy environment some times teacher has to talk very loudly that he or she may suffer from occupational hazards like pain in throat. As the location of college is in the in the city so there is such sources to create pollution of air and noise. VPIMSR is committed to for good working environment on the campus by means of providing good quality of water , quality of air and sound. Periodically the samples are collected and analyzed for pollution parameters. The values of air, water and noise parameters are observed within the prescribed limits. **(Annex-II & III)** These parameters are slightly elevated in the campus but are under the prescribed limit of CPCB. Noise level inside the college is below the limit and in suitable range. The college has planted some trees and planning to plant some more to screen the noise and to filter the suspended particulate matters.



Plate No.26: Air sample collection at College campus

3.4 Green Cover:

The college has planted many trees in the campus through NSS, other students and faculty members. Though the college has limitation of open space, the planting is done inside the pots and in available open space. Properly maintained lawn improves aesthetic value of area. Following is the list of plants with year of plantation. Total 40 plant species are planted in college, hostel campus. Many ornamental and medicinal plants are planted in campus.

Common Birds :

Greater Coucal (Pan Kombada), Rose ringed Parakeet (Popat), House Crow (Kavala), White Throated Kingfisher (Heron), Common Mina (Salonki), Red Vented (Bul Bul), Baya Weaver, Asian Green Beater.

Common Animal:

Common Garden Lizard, Wall Lizards, Common Mongoose, Three Striped Palm Squirrel etc.

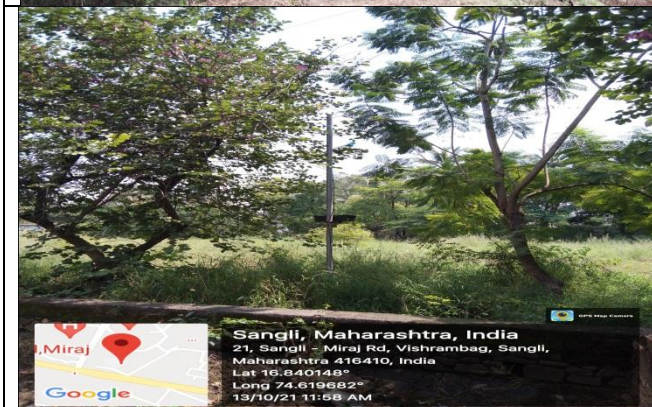
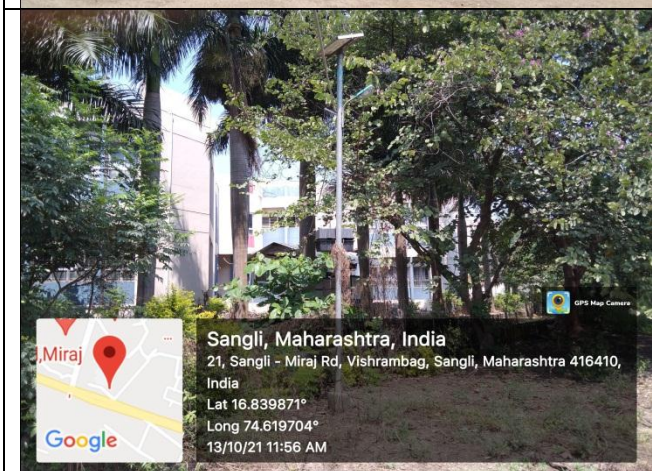
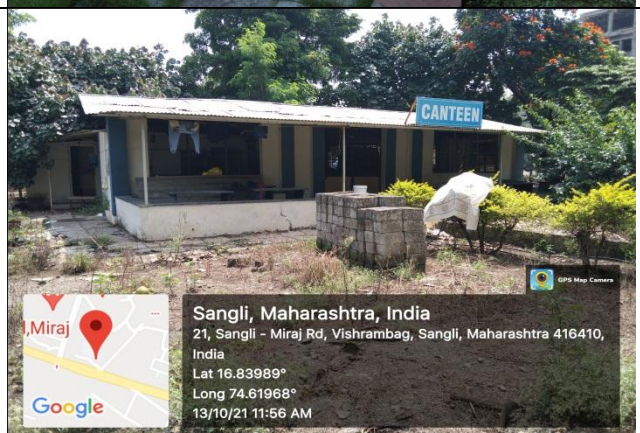
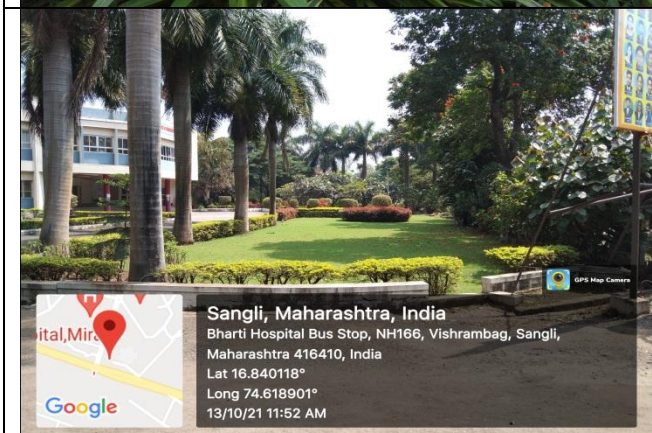
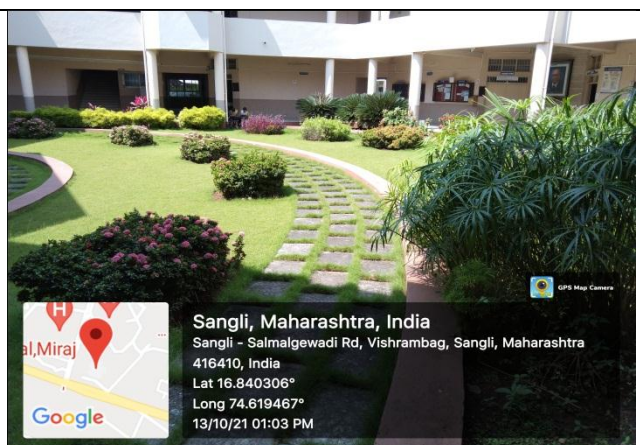


Plate No. 27: View of Green cover at VPIMSR, Sangli

Table No.09: List of Plant Diversity at VPIMR Sangli

Sr. No.	Vernacular name	Botanical Name	Family
1	Spider lily	<i>Hymenocallis littoralis</i>	<u>Amaryllidaceae</u>
	Nagadamani	<i>Crinum asiaticum var. pedunculatum</i>	<u>Liliaceae</u>
	Giant Lily Turf	<i>Ophiopogon jaburan 'Variegata'</i>	<u>Liliaceae</u>
2	<u>Sadafuli</u>	<i>Catharanthus roseus</i>	<u>Apocynaceae</u>
3	Rain tree	<i>Albizia saman</i>	-
4	udal	<i>Albizia chinensis</i>	<u>Mimosaceae</u>
5	Dhuranta	<i>Dhuranta</i>	<u>Verbenaceae</u>
6	Areca palm	<i>Areca palm</i>	<u>Arecaceae</u>
7	Boganvel	<i>Bougainvillea glabra</i>	<u>Nyctaginaceae</u>
8	X-mas Tree	<i>Araucaria columnaris</i>	<u>Araucariaceae</u>
9	Purple Allamanda	<i>Allamanda blanchetii</i>	<u>Apocynaceae</u>
10	Ixora	<i>Ixora coccinea</i>	<u>Rubiaceae</u>
11	Allamanda Vine	<i>Allamanda cathartica</i>	<u>Apocynaceae</u>
12	Pichkari	<i>Spathodia spp.</i>	<u>Bignoniaceae</u>
13	Kaner	<i>Nerium oleander</i>	<u>Apocynaceae</u>
14	Raatrani	<i>Cestrum nocturnum</i>	<u>Solanaceae</u>
15	Pink Ravenia	<i>Ravenia spectabilis</i>	<u>Rutaceae</u>
16	Acalypha	<i>Acalypha spp.</i>	<u>Euphorbiaceae</u>
	Acalypha	<i>Acalypha amentacea</i>	<u>Euphorbiaceae</u>
	Acalypha	<i>Acalypha wilkesiana</i>	<u>Euphorbiaceae</u>
17	Ficus	<i>Ficus Benjaminia</i>	<u>Moraceae</u>
18	Lal-Chapha	<i>Plumeria rubra</i>	<u>Apocynaceae</u>
19	Pandhara Chapha	<i>Plumeria obtusa</i>	<u>Apocynaceae</u>
	Pandhara Chapha	<i>Plumeria filifolia</i>	<u>Apocynaceae</u>
	Pandhara Chapha	<i>Plumeria putica</i>	<u>Apocynaceae</u>
20	Fishtail Palm	<i>Caryota urens</i>	<u>Arecaceae</u>
21	Jaswand <u>जासवंद</u>	<i>Hibiscus rosa-sinensis</i>	<u>Malvaceae</u>
22	Gulmohar	<i>Delonix regia</i>	<u>Caesalpiniaceae</u>
23	Bottle/ Royal palm	<i>Roystonea regia</i>	<u>Arecaceae</u>
24	Shankasur	<i>Caesalpinia pulcherrima</i>	<u>Caesalpiniaceae</u>
25	Kamini	<i>Murraya paniculata</i>	<u>Rutaceae</u>
26	Kanchan	<i>Bauhinia variegata</i>	<u>Caesalpiniaceae</u>
27	Beach Cordia	<i>Cordia subcordata</i>	<u>Boraginaceae</u>
28	Satvin	<i>Alstonia scholaris</i>	<u>Apocynaceae</u>

29	crown of thorns	<i>Euphorbia milii</i>	<u>Euphorbiaceae</u>
30	cycus	<i>Cycasrevoluta</i>	<u>Cycadaceae</u>
31	braccia	<i>Brassiaaactinophylla</i>	<u>Araliaceae</u>
32	Cape Honeysuckle	<i>Tecomacapensis</i>	<u>Bignoniaceae</u>
33	Tantani	<i>Lantana spp.</i>	<u>Verbenaceae</u>
34	Naral ,coconut	<i>Cocosnucifera</i>	<u>Arecaceae</u>
35	Neem	<i>Azadirachtaindica</i>	<u>Meliaceae</u>
36	Lollipop plant	<i>Pachystachyslutea</i>	<u>Acanthaceae</u>
37	Ribbon grass	<i>Phalarisarundinacea</i>	<u>Poaceae</u>
38	Joy weed	<i>Alternantherabrasiliana</i>	<u>Amaranthaceae</u>
39	Kashmir Daphne	<i>Daphne mucronata</i>	<u>Thymelaeaceae</u>
40	Moses-in-a-boat	<i>Tradescantiaspathacea</i>	<u>Commelinaceae</u>

3.5 Solid Waste Management:

Proper solid waste management is an essential part of society's public and environmental health. Solid waste generation and its management is a burning issue in current days. The rate of generation of solid waste is very high and yet we do not have adequate system to manage the generated waste. Unscientific handling of solid waste can create threats to public health, unintended environmental safety issues. So, it is necessary to manage solid waste properly to reduce the load on waste management system. The purpose of this audit is to find out the quantity, volume, type and current management practices of solid waste generated in the VPIMSR campus. The Institute follows the practice of segregation of waste at source by putting different coloured collection bins in the Institute campus. Plastic waste, Paper waste, food waste this will help for further solid waste management and to go for green campus development.

3.5.1 Biodegradable Waste:

The main source of biodegradable waste in educational institute is generally from student's tiffin and eatables. Another source is garden waste generated from pruning of trees, fallen leaves, etc. is also important source of biodegradable waste at VPIMSR Campus. The VPIMSR has taken good initiatives to treat biodegradable waste by implementing vermicomposting facility for the treatment of biodegradable waste. The garden waste is collected and kept for prefabricated vermicomposting site. The transformed waste after completion of process is utilized as a manure for gardening purpose.

Vermicomposting reduces waste sent to our dump sites, reduces environmental pollution. When organic wastes decomposes at dump sites in the absence of oxygen, a hazardous liquid known as leachate (the liquid that runs from a dump) and odour are produced. Vermicompost helps to improve soils physical properties like soil structure, texture, porosity, water holding capacity, drainage, and aeration and reduce erosion in addition to plant nutrient supply. It improves soil nutrient availability by providing buffering and improving nutrient retention capacity. It improves overall plant growth by enhancing the growth of new shoots and leaves, thereby increasing productivity. It also helps to buffer the pH and temperature of the soil

3.5.2 Paper Waste:

Major part of the solid waste generated at the VPIMSR is a paper waste. Though paper is biodegradable material, it is having good potential for recycling thus will help in conserving the

resources and trees indirectly. The VPIMSR follows the green practice by giving the paper waste to recycling purpose. The waste paper is sold to specific vender. Other green practices like use of one sided paper, paperless activities like e-mailing all notices instead of printing it on paper, putting the information on what's app groups are also practiced in the college to reduce the use of paper. Thus, Reduce, Reuse and Recycle these three - R principles of solid waste management are followed in the VPIMSR Kolhapur for waste management.

3.5.3 : Hazardous Waste management :

VPIMSR is being a management institute, very less amount of hazardous waste is generated on the campus. Some of the action taken for cleaning campus is given below :

- i) The campus has been declared as plastic free zone.
- ii) The VPIMSR aims to make the campus plastic free by avoiding non-biodegradable persistent products such as plastic cups, plates, straws in the Institute canteen and instructing students to avoid bringing plastic material.
- iii) Bins are placed in different parts of the campus for the segregation of plastic paper & food waste.
- iv) The Institute aims for an ecofriendly campus and to make this reality, the use of ecofriendly bags and files are encouraged.
- v) The campus is also declared tobacco free and smoking free zone.
- vi) Students are trained to use paper bags and a promotion of the same is held.

3.5.4 : Other Waste: Damaged computers and their parts are the only source of electronic waste on the campus. As on date there are about 200 computers under use for practical and office work. Every effort is made to repair and use electronic and electrical devices. Piling up of e-waste is discouraged in the campus. Institute follows the principle Reuse of old computers by donating them to others schools under the trust and other needy schools and orphanages.

Other kinds of waste like plastic waste, metal waste generated in the campus may lead to serious unintended environmental consequences, if not properly handled. In VPIMSR it is collected, stored and properly disposed off periodically to vendors. Plastic and metal waste is sent for the recycling and recovery practices.

CHAPTER 4.0: BEST ENVIRONMENTAL PRACTICES

VPIMSR follows all possible green practices to conserve the nature and reduce its ecological footprints. Some of the green practices are discussed below.

4.1. No Vehicle Day:

The college practices No Vehicle Day on last Saturday of every month to reduce carbon footprints. On this day the faculty and students try to come by walk, by bicycle or by public transport and keep the college campus clean and free from air and noise pollution.

4.2. Ganesh Moorti and Nirmalya Daanduring Ganapati Visarjan:

During Gauri Ganesh festival, due to visarjan/emersion of Ganesh Moorti and Nirmalya in nearby water reservoirs is done by local people. This will add in the deterioration of water reservoirs. To avoid this the student and faculty are encouraged for the Ganesh Moorti and Nirmalya Daan. Collected Moortican be recycled for the material and Nirmalya for the composting.

4.3 : Plantation :

CHAPTER- 5:FINDINGS AND SUGGESTIONS

After a thorough analysis of green practices and environmental aspects of, VPIMSR Sangli the audit team has come with following findings and suggestions.

5.1 Findings :

- VPIMSR Sangli strictly follows green practices. All students, staff and faculty members participate actively in keeping campus clean and Green.
- Though the campus is small the college has tried to keep it green by planting trees in the premises.
- Solar photovoltaic systems installed in college campus are efficiently working in harnessing renewable solar energy into electric energy. They are reducing the carbon footprints.
- Solid waste segregation and management is followed in the premises. Vermicomposting is done for biodegradable waste.
- Drinking water quality, air quality is monitored and maintained as per the standards by frequent water quality analysis and suggested improvements.
- Rain water harvesting has been done in the college campus, harvested rain water is used in the gardens and for the recharging of groundwater through soak pits.

5.2 Suggestions :

- More frequent testing of drinking water is required to maintain drinking water quality.
- More paperless activities like E.mail/ whatsapp should be followed which are ecofriendly.
- Additional efforts should be taken for harvesting of rain water in the campus and recharging of ground water should be done to avoid runoff and wastage of rain water.
- Recycling of water should be and may be used for irrigation of gardens in college campus.
- Display of names of newly planted trees/ plants with their common name, scientific name and importance should be done.
- Construct Sewage Treatment Plant in college premises.

**Overall the performance of College is good on Green Initiative Front
and can take some more green initiatives for sustainable future**



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DEPARTMENT OF ENVIRONMENT MANAGEMENT

Dr. C. S. Dalvi Late Dr. A. D. Shinde Dr. R. A. Shinde
Director Founder, CSIBER Trust Secretary & Managing Trustee

Annexure - I

WATER ANALYSIS REPORT

Name of the party : Vasanttraodada Patil Institute of Management Studies and
Research, Sangli-Miraj Road, Walnesswadi, Sangli-416414

Sample collected by : Our Staff

Nature of sample : Cooler-I (Ground Floor)

Sample collected on : 13/10/2021

Sample received on : 13/10/2021

Sr. No.	Parameter	Value	Indian Standards For Drinking Water (IS:10500:2012)	
			Requirement (Acceptable Limits)	Permissible Limits (in the absence of Alternative Sources)
1	pH	7.51	6.5-8.5	No relaxation
2	Total Hardness	130.00	200.00	600.00
3	Calcium	28.86	75.00	200.00
4	Magnesium	14.13	30.00	100.00
5	Chlorides	56.80	250.00	1000.00
6	MPN/100ml	00	00	00

NOTE: All values unless otherwise stated are in mg/l ; except pH

MPN: Most Probable Number of Coliform Bacteria

Analyzed by

(Mr. V. B. Kadam)
(Lab. Assistant)

Checked by

(Mr. S. S. Gaddi)
(Lab. Assistant)



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DEPARTMENT OF ENVIRONMENT MANAGEMENT

Dr. C. S. Dalvi
Director

Late Dr. A. D. Shinde
Founder, CSIBER Trust

Dr. R. A. Shinde
Secretary & Managing Trustee

WATER ANALYSIS REPORT

Name of the party : Vasantrodada Patil Institute of Management Studies and
Research, Sangli-Miraj Road, Walnesswadi, Sangli-416414

Sample collected by : Our Staff

Nature of sample : Cooler-II (First Floor)

Sample collected on : 13/10/2021

Sample received on : 13/10/2021

Sr. No.	Parameter	Value	Indian Standards For Drinking Water (IS:10500:2012)	
			Requirement (Acceptable Limits)	Permissible Limits (in the absence of Alternative Sources)
1	pH	7.40	6.5-8.5	No relaxation
2	Total Hardness	122.00	200.00	600.00
3	Calcium	27.25	75.00	200.00
4	Magnesium	13.15	30.00	100.00
5	Chlorides	49.70	250.00	1000.00
6	MPN/100ml	00	00	00

NOTE: All values unless otherwise stated are in mg/l ; except pH

MPN: Most Probable Number of Coliform Bacteria.

Analyzed by

Checked by

(Mr. V. B. Kadam)

(Mr. S. S. Gaddi)

(Lab. Assistant)

(Lab. Assistant)



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DEPARTMENT OF ENVIRONMENT MANAGEMENT

Dr. C. S. Dalvi **Late Dr. A. D. Shinde** **Dr. R. A. Shinde**
Director Founder, CSIBER Trust Secretary & Managing Trustee

WATER ANALYSIS REPORT

Name of the party : Vasantrodada Patil Institute of Management Studies and
Research, Sangli-Miraj Road, Walnesswadi, Sangli-416414

Sample collected by : Our Staff

Nature of sample : Borewell Water

Sample collected on : 13/10/2021

Sample received on : 13/10/2021

Sr. No.	Parameter	Value	Indian Standards For Drinking Water (IS:10500:2012)	
			Requirement (Acceptable Limits)	Permissible Limits (in the absence of Alternative Sources)
1	pH	7.38	6.5-8.5	No relaxation
2	Total Hardness	280.00	200.00	600.00
3	Calcium	56.11	75.00	200.00
4	Magnesium	34.11	30.00	100.00
5	Chlorides	168.98	250.00	1000.00

NOTE: All values unless otherwise stated are in mg/l ; except pH

Analyzed by

Checked by

(Mr. V. B. Kadam)

(Mr. S. S. Gaddi)

(Lab. Assistant)

(Lab. Assistant)



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Annexure - II

NOISE MONITORING REPORT

Name of the party : Vasanttraodada Patil Institute of Management Studies and
Research, Sangli-Miraj Road, Walnesswadi, Sangli-416414

Monitoring Station : VPIMS, College Campus

Instrument Used : Sound Level Meter (SL 4010)

Monitoring Type : Ambient Noise Monitoring

Monitoring Date : 13 /10/2021

Sr. No.	Location	(Leq) Values in dB(A)
1	Principal Cabin	44.60
2	Staff Room	52.50
3	Administrative Office	54.40
4	Board Room	46.60
5	Meeting Hall	44.20
6	Seminar Hall	48.80
7	Corridors	54.20
8	Class Room (out side)	48.40
9	Class Room (in side)	56.40
10	Library	41.10
11	Reading Room	40.00
12	IQAC Cell	50.20
13	Computer Lab	58.60
14	Language Lab	42.60
15	Management Lab - 1	42.90
16	Multipurpose Hall	47.90
17	Ladies Common Room	48.30
18	Near Main Gate	61.80

Monitoring Carried out by

Checked by

(Mr. V. B. Kadam)

(Mr. S. S. Gaddi)

(Lab. Assistant)

(Lab. Assistant)



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Annexure -III

AIR MONITORING REPORT

Name of the party : Vasanttraodada Patil Institute of Management Studies and
Research, Sangli-Miraj Road, Walnesswadi, Sangli-416414

Monitoring Station : VPIMS, Campus

Monitoring Period : 10.00am to 6.00pm (08 hrs)

Instrument Used : Netal NPM-HVS

Monitoring Type : Ambient Air Monitoring

Monitoring Date : 13 /10/2021

Sr. No.	Parameter	Values	CPCB Standards (24 hrs)
1	Suspended Particulate Matter (SPM)	39.46	100
2	Respirable Particulate Matter (RSPM)	18.67	50
3	Oxides of Nitrogen (NO _x)	10.36	30
4	Sulphur Dioxide (SO ₂)	3.76	30

NOTE: All values are in ug/m³

Monitoring Carried out by

(Mr. V.B. Kadam)
(Lab. Assistant)

Checked by

(Mr. S. S. Gaddi)
(Lab. Assistant)