



Mahatma Phule Shikshan Sanstha's
KARMAVEER BHAURAO PATIL COLLEGE URUN-ISLAMPUR

Bahe Road, Urun-Islampur, Tal. Walwa, Dist. Sangli, Maharashtra, India,

•Established in 1961• 415409. Ph. 02342-221778, 226778, Fax-221776 I/C Principal
•Website: www.kbpislampur.com• Reaccredited A With CGPA 3.17 at the 3rd Cycle Dr. Nitin Shinde



GREEN INITIATIVE REPORT

2022-23



Prepared By

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Environmental Consultancy & Eco-Businesses
ISO 14001:2015(EMS) & ISO 9001:2015(QMS) Certified Organization
Kolhapur, Maharashtra, India

Ms. Pooja S. Sarolkar
Proprieter & Lead Auditor

Ref. No.-Ecolife/05/2024

Date:

Environment Audit Certificate

Is awarded for **the year 2022-2023** to the Esteemed Institution

Mahatma Phule Shikshan Sanstha's
KARMAVEER BHURAO PATIL COLLEGE URAN-ISLAMPUR
Bahe Road, Uran-Islampur, Tal- Walwa, Dist-Sangli, Maharashtra, India

As part of Institutions initiatives for a Healthy and Sustainable Institute the audit was conducted.

We appreciate the immense efforts taken by staff and students towards the Green Initiatives and Efficient Management of Premise. The report has been prepared by us based on the document submitted by college.

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GREEN INITIATIVE REPORT

1.0: PREAMBLE:

The survival of human race depends upon the surrounding environment. Various environmental factors play critical role in well-being of all living organisms on earth. But in this era of industrialization, we are mainly focusing upon development and economic prosperity and very less attention is provided towards environment. We are continuously over-exploiting the natural resources to raise our standard of living, which in turn leads to environmental degradation. Human activities have led to various kinds of pollution such as air pollution, water pollution, soil pollution etc. This polluted environment leads to the adverse impacts on health of animals, plants and human beings. Along with different kinds of pollution which are faced at local or regional level, we are also facing global issues such as ozone layer depletion and global warming. Now all these things have resulted into increasing world-wide concern about environmental issues.

India is a developing country, which is facing the problem of population explosion. So, there is a burden on available natural resources. This population explosion has resulted in conversion of forest lands for agricultural or residential purpose. It has helped in improving the lifestyle but on the other side it is exploiting the environment. Deforestation has lead to destruction of natural habitats of animals. It has caused extinction of many plants as well as animals.

Along with this, we are also facing the issue of solid waste management. It has lead to soil pollution and groundwater pollution. Areas near cities are often used as solid waste dumping site. People living nearby these areas are facing various health problems and the waste dumping sites can also catch fire sometimes. Industries, commercial areas and residential areas are contributing to the noise pollution as well.

All these anthropogenic activities have caused profound impact on rural areas, urban areas, oceans and forest lands. This indiscriminate development is against principle of sustainable development. After 1970, impacts of these activities were taken into consideration and various conferences were held at international level and many conventions were signed. But still, the problem of environmental degradation is continuously increasing. Therefore, now there is a need of focusing on environment friendly technology. At the same time, we have to reduce the waste generation and switch to reuse and recycling. We should try for

sustainable development which will foster the socio-economic prosperity and will secure the life of future generations. For this, efforts should be taken at individual, institutional, national and international level.

GENERAL INTRODUCTION:

The green initiative was first conducted in the United State of America in 1970s.

By 1992, approximately half of the local authorities of UK undertook the green audit completely or partially. The United Nations Conference on Environment and Development (UNCED), which was held at Rio de Janeiro, motivated all the countries to act cautiously to save the earth with sustainable approach. Most of the countries have accepted their national strategy for sustainable development which includes the policy and programmes aimed to promote geo-biodiversity and protect environment. This Rio spirit shows significant progress in most of the countries and they have changed and upgraded the environmental situation to the possible extent. Some of the Asian countries were also motivated from the summit and played same role within their limits. India is the first country in the world to make environmental audit compulsory. According to gazette notification, all Industries were communicated to submit the reports of the environmental audit to their concerned State Pollution Board, giving details of water, raw materials and energy resources used and products and waste generated by them in their operations from 1992.

Green initiative is a tool to protect the environment by adopting concept of conservation of natural resources.

Sustainable use can be ensured by auditing the use of ecological components. The initiative is known as regular and systematic review and appraisal of the factors and forces that contributes to realization of objectives.

University has conducted a green audit with specific goals as:

1. Identification and documentation of green practices followed by university.
2. Identify strength and weakness in green 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.

Objectives:

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 green practices in campus.
4. Establish and implement Environment Management in various departments.
5. Continuous assessment for betterment in performance in green

BENEFITS OF GREEN INITIATIVE TO EDUCATIONAL INSTITUTIONS

There are many advantages of green audit to an Educational Institute:

1. It would help to protect the environment in and around the campus.
2. Recognize the cost saving methods through waste minimization and energy conservation.
3. Empower the organization to frame a better environmental performance.
4. It portrays good image of institution through its clean and green campus.

OBJECTIVE AND SCOPE

The broad aims/benefits of the eco-auditing system would be:

- Environmental education through systematic environmental management approach
- Improving environmental standards
- Benchmarking for environmental protection initiatives
- Sustainable use of natural resource in the campus.
- Financial savings through a reduction in resource use
- Curriculum enrichment through practical experience
- Development of ownership, personal and social responsibility for the College campus and its environment
- Enhancement of College profile
- Developing an environmental ethic and value systems in young people

2.0 COLLEGE PROFILE:

Mahatma Phule Shikshan Sanstha.

Mahatma Phule Shikshan Sanstha, Uran-Islampur was established by the group of Teachers who were much impressed by social reformers like Mahatma Phule, Rajashi Shahu Maharaj, Maharshi Vithal Shinde, Karmaveer Bhaurao Patil and Dr. Babasaheb Ambedkar. They decided to open the channels of education from primary to higher education to the common masses under the vibrant and studies leadership of late Dr. N.D. Patil.

Late Dr. N.D. Patil

He is an eminent thinker and prominent leader in educational, social, economic and political fields in Maharashtra. He has been working last sixty years in various movements which aim at enlightenment of the weaker sections of the society. He has also been working for Rayat Shikshan Sanstha, Satara. Which is 'Mother Institution' and put this name at par excellence after Karmaveer Bhaurao Patil? Considering his overall contribution, Swami Ramanand thirth University, Dr. Babsaheb Ambedkar Marathwada University and Shivaji University conferred him D.Lit. Today the institution is one of the leading institutions in south Maharashtra, for 55 years, the institution has been showing quality performance in its academic progress.

NAME AND ADDRESS OF COLLEGE:

Sr. No.	Particular	Content
1	Name	Karmaveer Bhaurao Patil college Islampur.
2	Address	Bahe Road, Urun-Islampur, Tahsil-Walwa Dist. - Sangli Pin-415409
3	Telephone	02342-221778
4	Email ID	kbpislampur@gmail.com
5	Name	Natural Solution Environmental Services
6	Address	Islampur Dist. :- Sangli
7	Registration No.	MH29D0037743
8	GSTIN	27ABYPI4809G1Z8
9	Mobile	09860437123
10	Email ID	naturalsolution3@gmail.com

3.0 THE SCOPE OF THE GREEN INITIATIVE IS DEFINED IN TERMS OF:

3.1. Geographical Location of the College Campus

3.2. Its Environmental Aspects.

3.1. Geographical Location:

Karmaveer Bhaurao Patil College, Islampur is situated in Maharashtra at $17^{\circ}03'25.67''N$ $74^{\circ}16'81.98''E$, in the Sangli District and it is at altitude of 498 fts above mean sea level.

Fig .1: Location of the college area is shown on Google Earth map



- | | |
|---------------------------------|------------------------|
| A) Entrance | F) Girls Hostel |
| B) College Main Building | G) Academy |
| C) Parking | H) Office |
| D) Library | I) Department |
| E) Play Ground | |

3.2 SCOPE OF GREEN INITIATIVE IN TERMS OF ENVIRONMENTAL ASPECTS:

- **Energy Conservation:** Energy conservation is the effort made to reduce the consumption of energy by using less of an energy service. This can be achieved either by using energy more efficiently (using less energy for a constant service) or by reducing the amount of service used
- **Use of Renewable Energy:** Renewable energy is useful energy that is collected from renewable resources, which are naturally replenished on a human timescale, including carbon neutral sources like sunlight, wind, rain, tides, waves, and geothermal heat.
- **Efforts for Carbon Neutrality:** carbon-neutral (or carbon neutrality) is the balance between emitting carbon and absorbing carbon emissions from carbon sinks.
- **Plantation:** It is usually large group of plants and especially trees under cultivation
- **Water Management:** Water management is the control and movement of water resources to minimize damage to life and property and to maximize efficient beneficial use.
- **Hazardous Waste management:** Hazardous waste management involves reducing the number of hazardous substances produced, treating hazardous wastes to reduce their toxicity, and applying sound engineering controls to reduce or eliminate exposures to these wastes.
- **E-Waste Management:** E-waste or Waste Electrical and Electronic Equipment are loosely discarded, surplus, obsolete, broken, electrical or electronic devices
- **Quality of water, air and noise:** Water quality describes the condition of the water, including chemical, physical, and biological characteristics, usually with respect to its suitability for a particular purpose such as drinking or swimming.

3.3: Energy Audit

Introduction

Energy audit is an inspection, survey and analysis of energy flows for energy conservation in building or a system to reduce the amount of energy input into the system without adding a negative impact on the output. Energy audits are means to understand the flow of energy starting from the source to its final use.

As per the Energy Conservation Act, 2001, Energy auditing is 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.

Green audits are assigned to criteria 7 of the National Assessment and Accreditation Council, which is a self-governing organization that provides various institutions with grades based on their criteria for accreditation.

Essentially requirement for an Energy Audit is a part of the criteria 7 and is vital to the accreditation process. This accreditation provides a college with an opportunity to present itself as an esteemed institution without impeccable values, infrastructural advantage and endless opportunities it could provide its students.

Need for Energy Audits:

Energy audits help analyse and determine good institutional practices; whether they are eco-friendly or sustainable. With the world constantly changing, development, unfortunately, results in large-scale utilization of natural resources. Now natural resources are not just used for the supply of products. Energy, water are all basic commodities that are used generously by all. With the threat of depleting resources looming over our heads, it is imperative to determine how much we use and where we waste resources to ensure efficient usage. Energy audits provide opportunities to determine the same and help the organization to reflect, improve and expand their processes and shift to clean green resource utilization. Apart from this, it helps instill consciousness among people as part of the institution towards the ~~convincing~~ and sustainable resource utilization.

Goals of Energy Auditing:

- Identification of strengths and weaknesses in green practices.
- Analyze and suggest solutions for problems identified.
- Identify and assess environmental risk.
- Motivate staff for optimal sustainable use of available resources.
- Increase environmental awareness throughout the campus.

Objectives of Energy Audit:

- Analyze current practices and determine their impact on the environment.
- Identify and analyze significant environmental issues.
- Continuous assessment for better environmental performance.
- Establish and implement a green energy strategy in the campus and sensitize the faculty and students.

Benefits to Educational Institutions:

- Improve the energy utilization within and outside the campus premises.
- Help recognize cost-effective green strategies that enable conservation of energy.
- Empower people linked to the organization to move towards conscious environmental thinking and practice.
- It helps improve the image and builds a positive impression of the institution for its green and clean resource use.

3.3.1 ENERGY POLICY:

A key component of the College Sustainability Program is energy conservation. Listed below are several guidelines that are intended to manage and reduce energy consumption on all college campus. These guidelines should be followed by all faculty, staff, administration, and students. The Energy usage Policy of college is to manage energy in such a systematic way to minimize its impact on the environment. It will help us to embed efficiency and environmental awareness into our everyday activities, thus helping us to realize our responsibilities and commitment to conservation of natural resources and to limit its usage.

Policies:

- To assess source energy usage and measure its impact on the environment.
- To install photovoltaic solar panels for the generation of alternate energy.
- To install LED bulbs in the whole campus to save energy.

- To monitor and respond to emerging environmental and energy issues. To strengthen our employees' and students' environmental knowledge and skills to improve our own environmental performance.

Energy conservation measures taken up by the College:

College has adopted following measures to minimize the energy consumption.

1. Switching over to the use of LED bulbs as a replacement to conventional high energy consumption bulbs
2. College has encouraged use of e-mail instead of sending notices and faxing documents.
3. Most of the fans carry three stars rating of electrical appliances.
4. Awareness amongst students was carried out and accordingly sign boards are displayed at strategic locations for conservation of energy and students positively responding.

3.3.2: USE OF RENEWABLE ENERGY:

Use of solar system:

Considering the growing energy demand from various sectors our college has decided to go for use of nonconventional energy resources for all its internal consumptions by installing roof top solar panels.

College has installed solar water heater in the boy's hostel and in college campus.

Solar Energy: Percentage of annual power requirement of the Institution met by the renewable energy sources (current year data):

Annual power requirement met by renewable energy sources (in KWH): Presently college has installed solar heater in the hostel.

Plate No.1 Renewable energy source

The solar heater is installed on Hostel building



Solar Panels installation in college building

3.4 PLANTATION:

The beginning of the 21st century brought growing concern about global warming, climate change, food security, poverty, and population growth. CO₂ is a principal component causing global warming. Atmospheric carbon dioxide levels have increased to 40% from preindustrial levels to more than 390 parts per million CO₂. On this background it is a need of time to cover the educational campuses with green cover interrelated with climate change.

Total Green cover area	
Total Area	15043
Total Green cover area	4500
% Area Covered	29.91424583

- **Total number of trees enumerated on Karmaveer Bhaurao Patil College campus:**

All the collected data was tabulated and analyzed with the help of MS- Excel spreadsheets and objected findings were extracted by using various factors given by Inter governmental Panel on Climate Change (IPCC).

- **Total number of trees enumerated on Karmaveer Bhaurao Patil college campus:**

Total 271 numbers of trees with more than 10 cm girth and height more than 4 ft have been enumerated. Girth and height of every tree has been measured.

DETAILS OF PLANTATION IN COLLEGE:

Table no. 1: List of Plants in campus area

Tree species			
Sr. No.	Name	Family	No. of individuals
1	Terminalia catappa	Combretaceae	12
2	Delonix regia	Fabaceae	26
3	Ficus glomerata	Moraceae	1
4	Mimusops elengi	sapotaceae	7
5	Mangifera indica	Anacardiaceae	30
6	Polyalthia longifolia	Annonaceae	31
7	Lagerstroemia speciosa	Lythraceae	14
8	Thespesia populnea	Malvaceae	22
9	Tamarindus indica	Fabaceae	6
10	Aegle marmelos	Rutaceae	2
11	Peltophorum pterocarpum	Fabaceae	7
12	Phyllanthus emblica	Euphorbiaceae	1
13	Pongamia pinnata	Fabaceae	1
14	Ficus religiosa	Moraceae	4

15	<i>Eugenia jambolana</i>	myrtaceae	8
16	<i>Terminalia bellirica</i>	Combretaceae	3
17	<i>Bauhinia racemosa</i>	Fabaceae	7
18	<i>Butea monosperma</i>	Fabaceae	3
19	<i>Azadirachta indica</i>	Meliaceae	4
20	<i>Leucaena leucocephala</i>	Fabaceae	11
21	<i>Melia azadirachta</i>	Meliaceae	15
22	<i>Grevillea robusta</i>	Proteaceae	7
23	<i>Samanea saman</i>	Fabaceae	14
24	<i>Ficus benghalensis</i>	Moraceae	8
25	<i>Artocarpus heterophyllus</i>	Moraceae	2
26	<i>Terminalia chebula</i>	Combretaceae	1
27	<i>Ficus carica</i>	Moraceae	1
28	<i>Cassia fistula</i>	Fabaceae	1
29	<i>Magnolia champaka</i>	Magnoliaceae	6
30	<i>Psidium guajava</i>	myrtaceae	2
31	<i>Moringa oleifera</i>	Moringaceae	1
32	<i>Santalum album</i>	Santalaceae	1
33	<i>Cocos nucifera</i>	Arecaceae	2
34	<i>Tectona grandis</i>	Verbenaceae	6
35	<i>Citrus medica</i>	Rutaceae	1
36	<i>Acacia auriculiformis</i>	Fabaceae	2
37	<i>Neolamarckia cadamba</i>	Rubiaceae	1
Total			271

Garden plants			
Sr. No.	Name	Family	No. of individuals
1	<i>Araucaria</i>	Araucariaceae	1
2	<i>Thuja</i>	Cupressaceae	12
3	<i>Livistona chinensis</i>	Arecaceae	3
4	<i>Tabernaemontana divaricata</i>	Apocynaceae	5
5	<i>Punica granatum</i>	Lythraceae	1
6	<i>Hibiscus rosa-sinensis</i>	Malvaceae	13
7	<i>Jasminum sambac</i>	Oleaceae	1
8	<i>Duranta errecta</i>	Verbenaceae	40
9	<i>Phyllostachys aurea</i>	Poaceae	15
10	<i>Ficus species</i>	Moraceae	14
11	<i>Garden Palm</i>	Arecaceae	90
12	<i>Ixora species</i>	Rubiaceae	2
13	<i>Phoenix sylvestris</i>	Arecaceae	3
14	<i>Rosa indica</i>	Rosaceae	25

15	Nyctanthes arbor-tristis	Oleaceae	3
Total			233

Table no. 2: List of Planted Medicinal Plants

Medicinal plants		
Serial No.	Name	Number
1	Phyllanthus emblica	1
2	Adhatoda vasica	1
3	Aloe vera	1
4	Oscimum spp	1
5	Santalum album	1
6	Garcinia spp	1
7	Achyranthes aspera	1
8	Achorus calamus	1
9	Butea monosperma	1
10	Asparagus racemosus	1
11	Cassia fistula	1
12	Curcuma longa	1
13	Zingiber officinarum	1
14	Gloriosa superba	1
15	Lawsonia inermis	1
16	Tinospora cordifolia	1
17	Withania somnifera	1
18	Tridax procumbans	1
19	Eugenia jambolana	2
20	Eclipta alba	1
	Total	21

Plate No. 2 Plant Species in college campus



❖ **Bird's diversity:**

The diversity among birds is striking. Birds live in a variety of different habitats. Birds that live in different habitats will encounter different foods and different predators. Birds can be carnivores (feeding on other animals), herbivores (feeding on plants), or generalists (feeding on a variety of foods).

Sparrow, crow, bulbuls, Pigeon, Cuckoo, Bat, Butterfly, etc. these species are seen regularly around the campus.

3.5 WATER AUDIT:

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 Institute 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 built structures and roads, the rainwater does not percolate into the ground. Hence water conservation measures should be adopted.

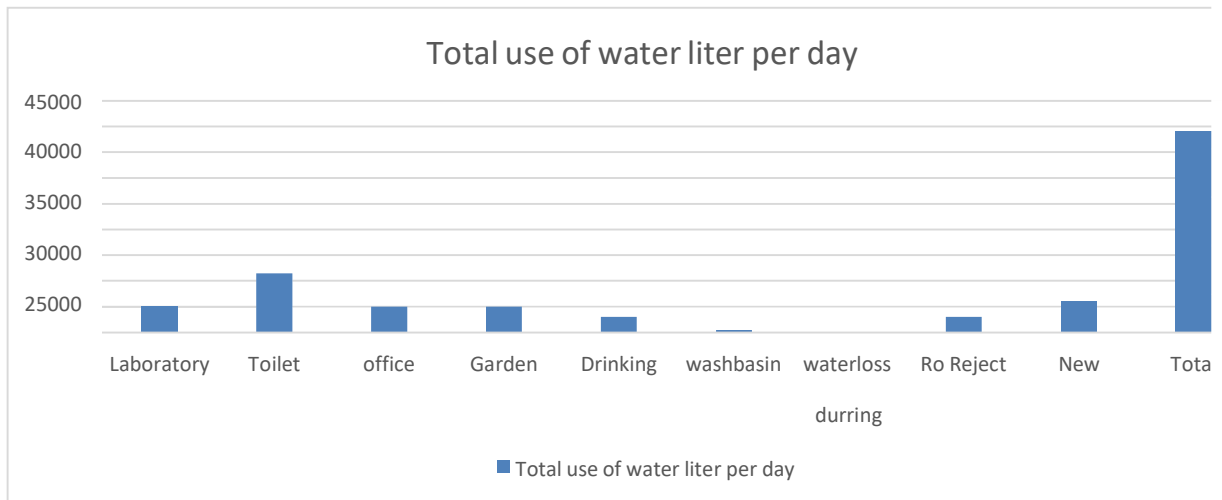
3.5.1 WATER CONSUMPTION:

The institute has one water connection of local body. The water is used for domestic consumption and for drinking purpose after filtration.

From the data collected for water audit of Karmaveer Bhaurao Patil College, Islampur, the water distribution and water consumption pattern is noticed as follows. The college is having main building for administrative work as well for teaching work. For the water audit purpose we categorized the college campus area into three buildings namely as wing 1 (Main Building and office), Hostel, Academy, Garden.

Table No 3: Water consumption

Daily water consumption by College Campus										
Site	Laboratory	Toilet	office	Garden	Drinking	water loss during filling	RO Reject	Washbasin	New Building	Total
Total use of water	5000	11500	5000	5000	3000	50	3000	500	7000	40050
Percentage	12.804097	29.449	12.8041	12.8041	7.68245839	0.128041	7.682	1.2804	16.36492	100



The total water consumption per day for all buildings is found to be 93050 lit/day.

Daily water consumption by All Buildings

Daily water consumption by All Campus					
Site	College	Hostel	Mess	Academy	Total
Total use of water	39050	38000	6000	10000	93050
Percentage	41.96668	40.83826	6.448146	10.74691	100

WATER CONSERVATION:

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.

EFFICIENT USE OF WATER:

Enormous amounts of water is 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 Institute 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.

Drinking water facility (RO)



Rain water harvesting:

Type of System: -Roof top water harvesting

Type of roof : Flat roof

Considering the average annual rainfall of about 400mm, it is quite possible to harvest about 4,000 lit of water per day during the effective rainfall days of the rainy season.



3.6 WASTE MANAGEMENT:

3.6.1 HAZARDOUS WASTE MANAGEMENT:

Hazardous waste is a waste that make it potentially dangerous or harmful human health or environment. The universe of hazardous waste is large and diverse. Hazardous waste can be liquid, solids or contained gases. There is no such hazardous waste on the campus. Some of the action taken for cleaning campus is given below:

- The campus has been declared as plastic free zone
- The College aims to make the campus plastic-free by avoiding non-biodegradable products such as plastic glasses, cups, plates and straws in the Institute canteen and instructing students to avoid bringing plastic materials.
- Bins are placed in different parts of the campus for the segregation of plastic, paper and food waste.
- The college aims for an ecofriendly campus and to make this a reality, the use of ecofriendly bags and files are encouraged.
- The staff and students have taken the initiative to take up campus cleaning programme through extension activities.
- Students are trained to use paper bags and a promotion of the same is held.
- The campus is also declared tobacco free and smoking free zone.

3.6.2 SOLID WASTE MANAGEMENT:

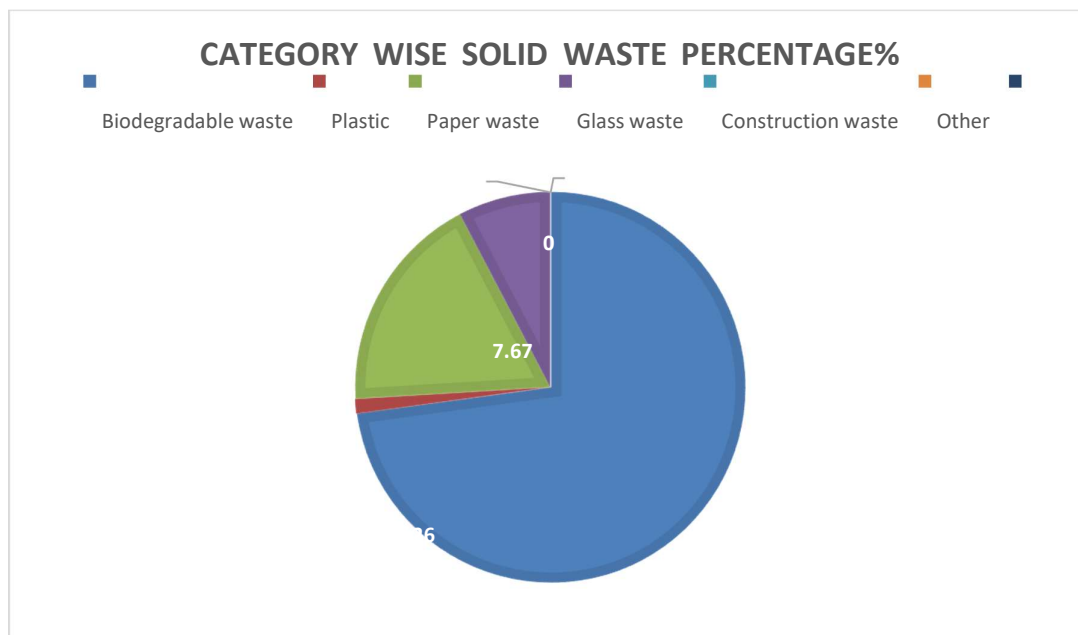
As a policy matter College has banned usage plastic bags on the campus. College has taken precautions to collect solid waste through dust bins. The dustbins are helpful to maintain clean atmosphere sanitate ion of college campus. Dustbins are placed on various places. Each classroom carries one recycled dustbin. The main aim of using dustbins is to clean the campus, to collect waste material and to create awareness of cleanliness among the students.

Solid waste collected is segregated into degradable and non-degradable.

Table No. 4 Category wise solid waste generation at College (kg/month)

Category wise solid waste generation at Karmaveer Bhaurao Patil Collge, Islampur (Kg/month)							
Category of Waste	Paper Waste	Glass Waste	Biodegradable Waste	Contraction Waste	Other	Plastic	Total
Quantity Kg/Month	75.3	5.25	300	0	31.65	0	412.2
Percentage	18.267831	1.273654	72.78020378	0	7.678311	0	100

The average amount of solid waste generated per month in Karmaveer Bhaurao Patil College was 412.2 kg/month. On the basis of observations, the highest quantity of solid waste generated is Biodegradable waste which is about 300 kg/month and Paper waste is about 75.3 kg/month respectively. The examination department generated paper waste in large quantity in the college. The plastic waste is produced in minimum quantity i.e. 5.25 kg/month. Besides, the above-mentioned wastes, glass waste are generated in the form of broken beakers, pipette, and other Lab glass materials.



Plastic waste generation and its distribution in college campus

Category	Plastic kg/ month				Total
	Hard	Soft	Carry bags	Other	
Quantity	200	50	---	----	250Gm
Percentage	80	20	----	----	100

3.6.3 PAPER WASTE MANAGEMENT:

Major part of the solid waste generated at the college campus is a paper. Though paper is biodegradable material, it is having good potential of recycling thus will help in conserving the resources and trees indirectly. Institute follows the green practice like use of one-sided paper, paperless activities like e-mailing all notices instead of printing it of 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, 3 R principles of solid waste management are followed in the Institute for waste management.



Waste segregation bins



Compost pit

3.6.4 e-Waste Management:

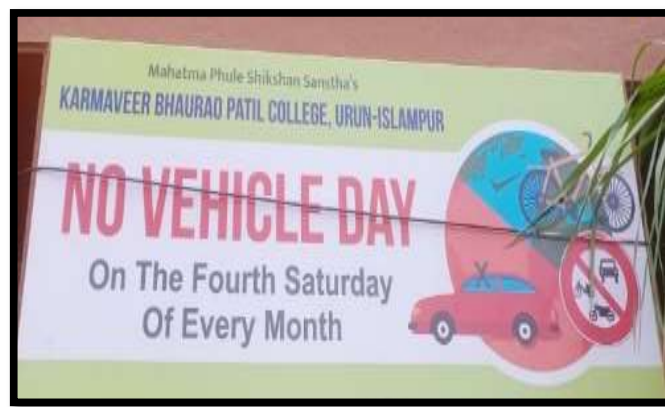
Generation of e-waste is found on every educational institute. It is observed that the E-waste generated at Karmaveer Bhaurao Patil college is of Schedule II category. Computers, Printers, Laptops, Scanners, Internet Routers and Xerox machines are used for administrative work. The wire required for the connectivity also gets included in the e waste. The college has its own computer 149 computers. The library uses some electronic scanners which after its use can become e-waste. Presently, the college is dispatching the e waste to Mahatma Phule Shikashan Sanstha where the waste is collected centrally and it is given to authorized e waste collector.

3.7 ENVIRONMENT AWARENESS TAGS:

Environmental awareness is having an understanding of the environment, the impact of human behaviour on it and the importance of its protection. Hence, college has taken some Environmental awareness measures. College has prepared following tags related to environment:

1. Save the Environment
2. Save Fuel
3. Plastic Ban Zone
4. Save the Trees
5. Do Not Waste the Water
6. No Smoking

Plate No. 8 Environment Awareness Tags



3.9 FINDINGS AND SUGGESTIONS:

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

FINDINGS:

- The college campus 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 and landscaping in the premises.
- Solid waste segregation and management is followed in the premises.
- Rain water harvesting has been done in the campus.
- Large windows provided for natural ventilation reducing power consumption.
- College has installed Solar system for energy conservation.
- Bio-degradable waste like plant residue is collectively used for generation of compost.
- Observing Celebration of No Vehicle Day on 4th Saturday of every month.
-

SUGGESTIONS FOR IMPROVEMENT:

College has taken good number of green initiatives for the protection of environment. However, for getting better results following suggestions may be considered by the college in phased manner.

1. As there is sufficient place for storage water and roof top area more efforts be made harvest rainwater so that water consumption can be reduced to save electrical energy.
2. Representative plant species be appropriately labeled with botanical name/English name/local name.
3. Drinking water quality should be maintained as per the standards by frequent water quality analysis at Environment laboratory.

Overall, the performance of Institute is good in green initiative front and can take some more green initiatives for sustainable future.