

GREEN AUDIT

STUDY PERIOD: TWO YEARS: 2021-2022 & 2022-2023

Sustainability study
AUDIT REPORT

Studied for
Servants of India Society's
**Gokhale Institute of Politics and Economics
(Deemed to be University)**

BMCC Road, Deccan Gymkhana,
Pune – 411004, Maharashtra, India

Studied in the capacity of
**Accredited and Certified
Green Building Professional**



[Handwritten signature]
27 FEB 2024



Studied by

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Valid till July 2024

Background reference: www.greenvisionsolutions.com

Disclaimer

The Audit Team has prepared this report for the **Servants of India Society's Gokhale Institute of Politics and Economics (Deemed to be University)** located at BMCC Road, Deccan Gymkhana, Pune – 411004, Maharashtra, India based on input data submitted by the Institute analysed by the team to the best of their abilities.

The details have been consolidated and thoroughly studied as per the various guidelines for Green Buildings available in National and International Standards; the report has been generated based on comparative analysis of the existing facilities and the prerequisites formulated by various standards. The inputs derived are a result of the inspection and research. These will further enhance and develop a Healthy and Sustainable Institution.

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The Report is prepared by the Team of Greenvio Solutions under their brand and department – Sustainable Academe as Consultancy firm with the Project Head - Ar. Nahida Shaikh who is as an Accredited and Certified Green Building Professional-Architect. Green Building consultancy is her forte and she is one of the most sought after names when it comes to providing excellent quality services within the stipulated time frame.

The Study is conducted in capacity of Accredited & Certified Green Building Professional with extensive experience.

Greenvio Solutions

Developing Healthy and Sustainable Environments

We are an Environmental and Architectural Design Consultancy firm

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Acknowledgement

The Audit Assessment Team extends its appreciation to the **Servants of India Society's Gokhale Institute of Politics and Economics (Deemed to be University), Maharashtra** for assigning this important work of Green Audit. We appreciate the cooperation extended to our team during the entire process.

Our special thanks are extended are due to **Dr Rajiv Kumar**, (Chancellor); **Dr Ajit Ranade**, (Vice Chancellor) and **Col. Kapil Jodh**, (Registrar).

Our heartfelt thanks are extended to the Chairperson of the entire process **Prof. Prabhas Rath**, IQAC Coordinator for the valuable inputs.

We are also thankful to Institute's Task force the faculty members who have played a major role in data collection – **Ms. Madhumita Ghosh**, (*Special mention for the excellent coordination*); **Dr. Amruta Suryavanshi**, **Mr. Deepak Ganbaule**, **Mr. Ramkrishna Govlane**, **Mr. Kuber Gopane** and **Mrs Usha Sathe**.

We highly appreciate the assistance of the **entire Teaching, Non-teaching, and Admin staff** for their support while collecting the data.

Sustainable Academe

Brand of Greenvio Solutions, Palghar District, Maharashtra- 401208




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DETAILED REPORT



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1. Introduction

1.1 About the Institution

The Gokhale Institute of Politics and Economics, Pune, was established by the Servants of India Society. It is the oldest research and training institute in Economics in the country dedicated to research into the socio-economic dimensions of Indian society.

Over the decades, the Institute has established strong credentials in empirical and analytical research. The Institute is registered under the Societies Registration Act, 1860, and the Bombay Public Trusts Act, 1950. In recognition of its contribution to higher learning and research in Economics, the Institute was awarded the status of institution Deemed to be a University, in 1993.

1.2 Assessment of the Institute

1.2.1 Approval

The courses provided by the Institute are approved by the **section 12 (B) of the University Grants Council Act, 1956** Govt. of India, New Delhi.

1.2.2 Certification

The University has received the code under **All India Survey of Higher Education (AISHE)** wherein the code is U-3030.

1.2.3 Accreditation

The following are details of the accreditation awarded by the National Assessment & Accreditation Council (NAAC) to the University.

Cycle	First	Second
CGPA	91.90	3.07
Grade	A+	A
Year	2004	2016

Table 1: NAAC Accreditation details of the Institute

The University is due to enter its third cycle of NAAC.



1.3 Statements of the Institution

1.3.1 Vision

The Institute proposes "To conduct research, education and extension on the foremost social and economic problems at national and international levels to provide viable solutions to decision-makers for the betterment of human life."

1.3.2 Mission

The Institute adheres and focuses "To undertake research and provide education in all fields of economics with the singular purpose of contributing its might to enhance economic betterment and social welfare."

1.3.3 Aim

The aim of the Institute is:

- ⇒ Research Excellence
- ⇒ Education and Training
- ⇒ Dissemination of Knowledge

1.3.4 Motto

The motto of the Institute is "To commit towards the pursuit of knowledge, academic excellence, and the dissemination of research findings for the betterment of society."

1.3.5 Objective

It is the objective of the Institute "To enhance economic betterment and social welfare."

1.4 Facilities

The Institute has an excellent state of the art infrastructure. The team emphasize on latest technological advancement through its educational initiatives. Some of the key facilities are listed below.

- Well-equipped classrooms
- Well stocked library
- Computer laboratory with latest softwares
- Conference hall
- State of the art Seminar hall
- Separate Girls and Boys hostel
- Comfortable guest room for visitors
- Hygienic canteen and mess

DETAILED REPORT

2. Overview

2.1 Summarised Populace analysis for 2022-2023

2.1.1 Students data

The data (shared by the Institute) shows there were a total of **409 male and 540 female students.**

2.1.2 Staff data

S. No.	Type	Male	Female	Total
1	Teaching staff	21	15	36
2	Non-Teaching staff	64	36	100
Total Staff Members		85	51	136

Table 2: Staff data of the Institution for 2022-2023

The staff data shows the Institute premises had a total of **136 Staff Members.**

2.2 Summarised Populace analysis for 2021-2022

2.2.1 Students data

The data (shared by the Institute) shows there were a total of **346 male and 441 female students.**

2.2.2 Staff data

S. No.	Type	Male	Female	Total
1	Teaching staff	17	13	30
2	Non-Teaching staff	25	42	67
Total Staff Members		42	55	97

Table 3: Staff data of the Institution for 2021-2022

The staff data shows the Institute premises had a total of **97 Staff Members.**



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2.3 Site Area & Institute Building Spread Area

The institute has a campus of 5.25 acres, and campus is built on a separate plot of 5.39 acres for an approx. 1,085 nos. of footfalls.

2.4 Institute Infrastructure

2.4.1 Establishment

The Institute was established in 1930.

2.4.2 Spatial Organisation

The Institute is located in a pollution free and healthy environment.

The Building is a Reinforced Cement Concrete (RCC) framework building.

There are provisions for staircase for accessibility on the premises, whereas there are amenities such as CCTV, a first aid room, etc.

2.5 Operation and Maintenance of the premises

The interview session was held with the staff regarding the operation and working hours. The Institution is open from Monday to Friday with the timings being 09:30 am to 18:00 hours.



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3. Information

Survey Results

An online survey was conducted to analyse the student and staff views about the Energy management practices adopted in University, following is the result received.

3.1 Participation

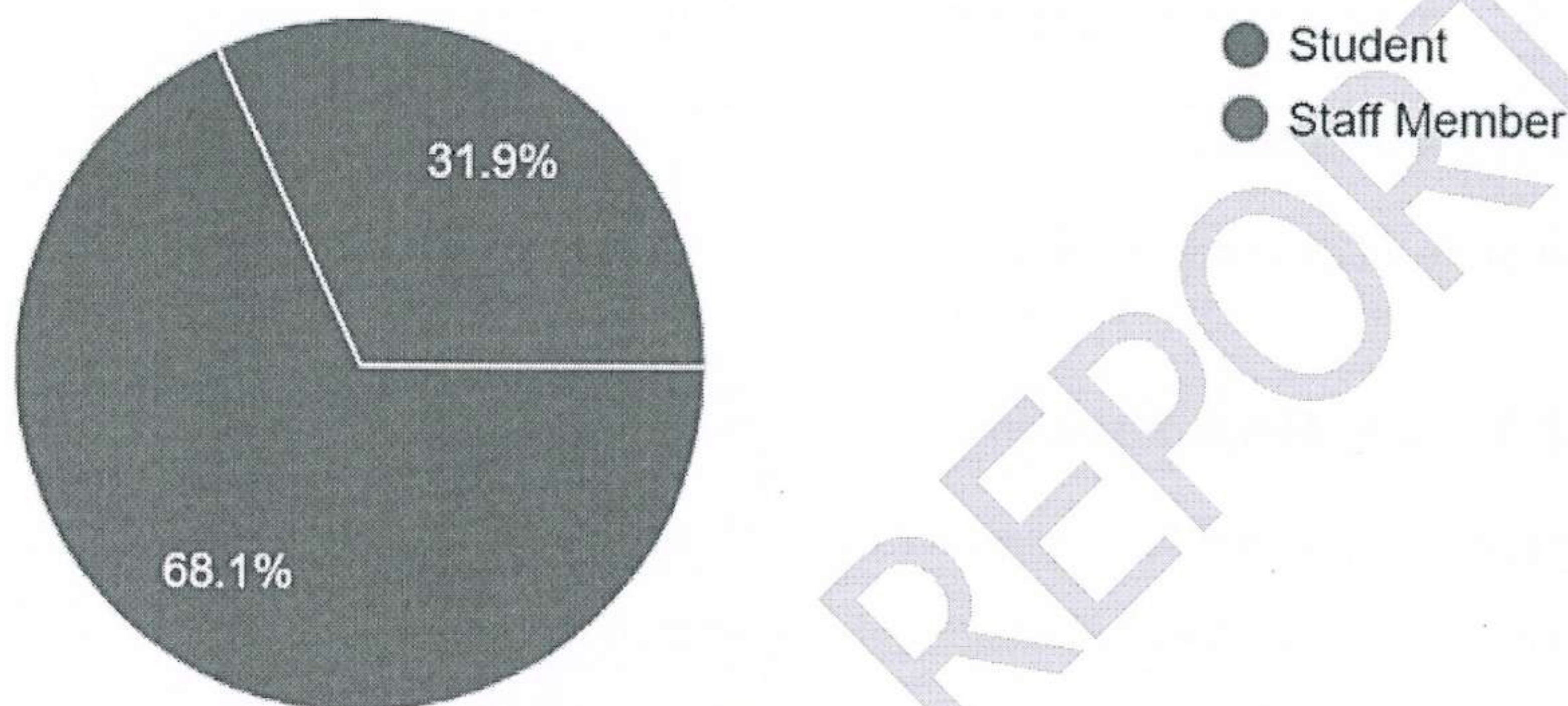


Figure 1: Participation analysis in the survey

A total of **91 responses** were received out of which 68% were students.

Note: The Participants were asked to review the practice on a scale of 1-5 with scale components as follows:

- Scale 1 – Poor
- Scale 2 – Satisfactory
- Scale 3 – Good
- Scale 4 – Very good
- Scale 5 – Excellent

The figures in each of the columns of graph depict the Number of participants responses in numerical (Percentage of the participant response) – For example 101 responses (44.5%)



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4.2 About the Green awareness practices adopted by Institute

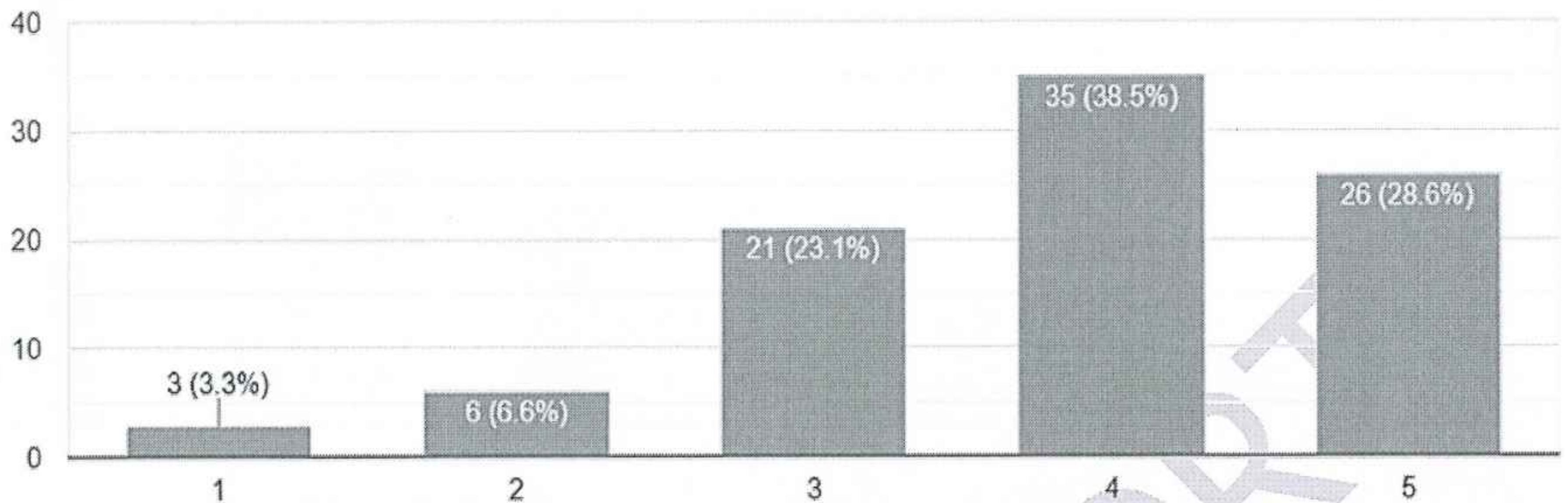


Figure 2: Green awareness practices in the Institute

Observation: The students and staff almost 29% of the respondents found practices to be Excellent (Rating of 5); whereas almost 39% of the respondents found practices to be Very Good (Rating of 4); and 23% of the respondents found practices to be Good (Rating of 3).

Inference: Though the majority responses are for 'Excellent – Rating 5' is less than 50% thus this shows that the said section requires improvement.

4.3 About the Water management practices adopted by Institute

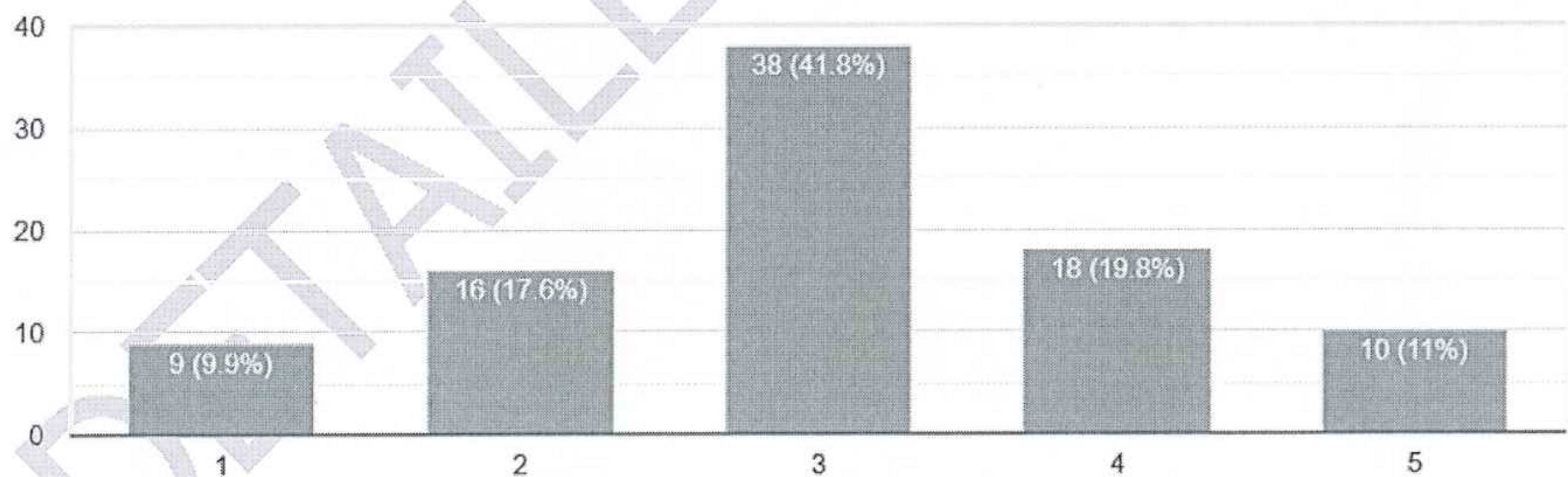


Figure 3: Water management practices in the Institute

Observation: The students and staff almost 11% of the respondents found practices to be Excellent (Rating of 5); whereas almost 20% of the respondents found practices to be Very Good (Rating of 4); and 42% of the respondents found practices to be Good (Rating of 3).

Inference: Though the majority responses are for 'Excellent – Rating 5' is less than 50% thus this shows that the said section requires improvement.



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4.4 About the Waste management practices adopted by Institute

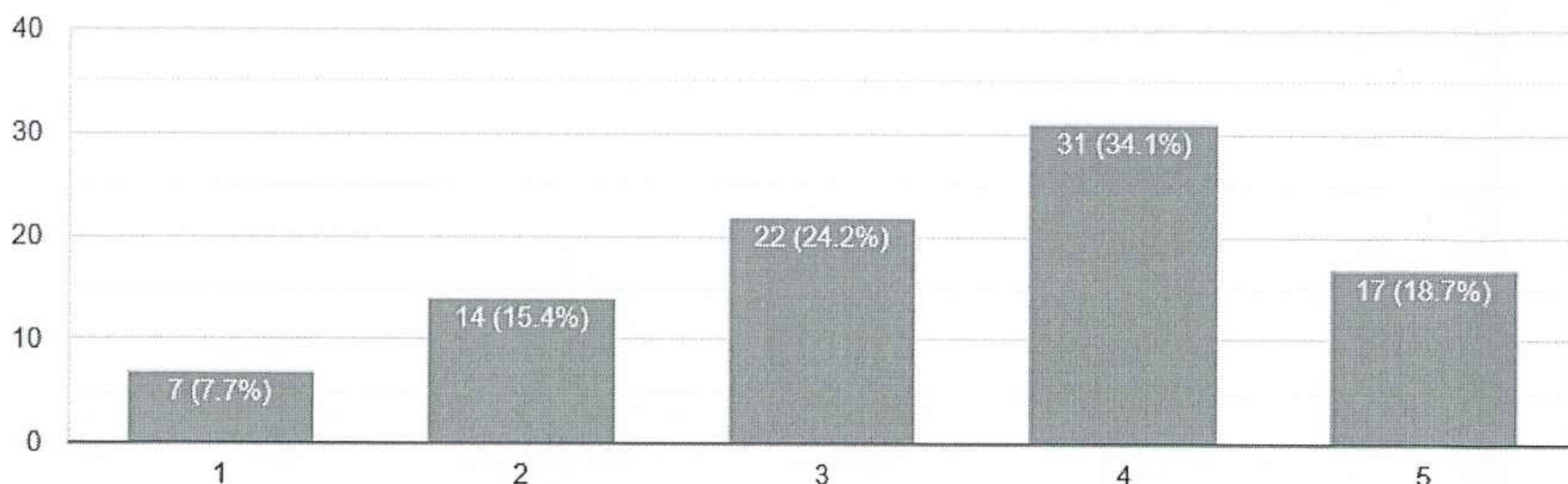


Figure 4: Waste management practices in the Institute

Observation: The students and staff almost 19% of the respondents found practices to be Excellent (Rating of 5); whereas almost 34% of the respondents found practices to be Very Good (Rating of 4); and 24% of the respondents found practices to be Good (Rating of 3).

Inference: Though the majority responses are for 'Excellent – Rating 5' is less than 50% thus this shows that the said section requires improvement.

4.5 About the Hygiene practices adopted by Institute

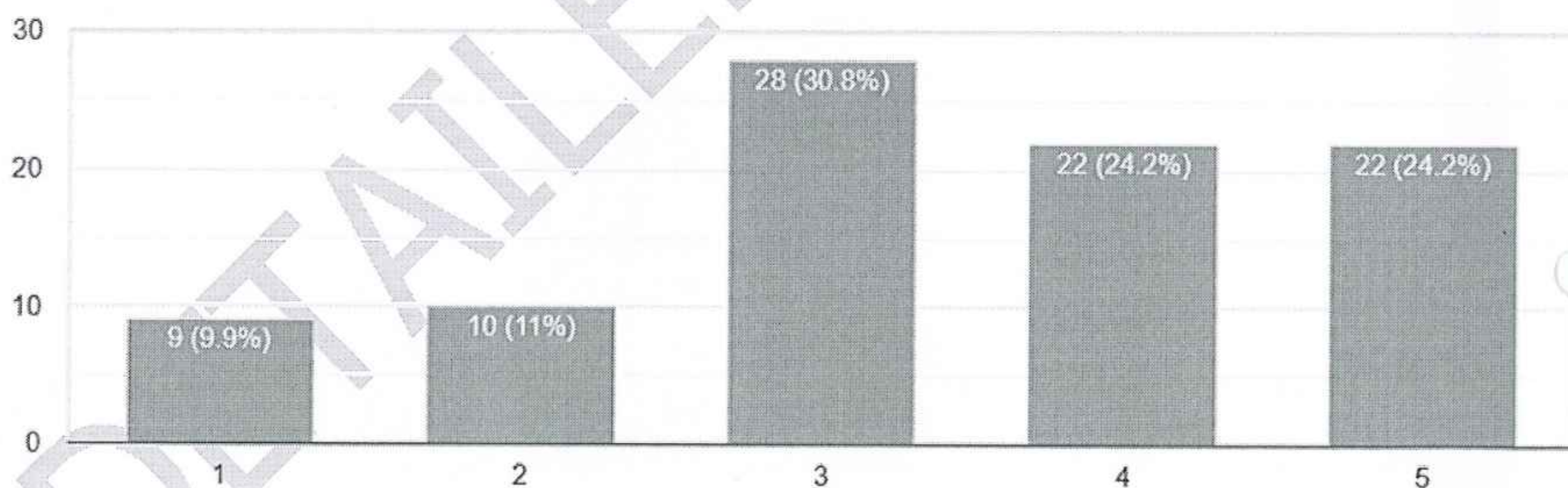


Figure 5: Hygiene practices in the Institute

Observation: The students and staff almost 24% of the respondents found practices to be Excellent (Rating of 5); whereas almost 24% of the respondents found practices to be Very Good (Rating of 4); and 31% of the respondents found practices to be Good (Rating of 3).

Inference: Though the majority responses are for 'Excellent – Rating 5' is less than 50% thus this shows that the said section requires improvement.



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4. Observations

A site visit was conducted at the site and the following observations were noted as part of the physical investigation.

The following points were observed that require an immediate attention.

⇒ Water tanks in all areas

- a. Include the information about size, capacity and usage
- b. Paint the tank in light blue colour
- c. Add signboards about the usage such as 'Drinking' or 'Secondary'
- d. Add signboard and map about the process/ system in practice

⇒ General aspects (Indoors areas)

- a. Zoning of the site w.r.t. space wise analysis
- b. Signboards, signages, information and display boards at relevant locations.

⇒ Library in the Campus

- a. Include silence board at various locations and at entrance.
- b. Install book drop box system at the entrance of the library.
- c. Upgrade smart scanning system for every book
- d. Include a self service station for digitalization.



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5. Documentation

5.1 Green Practices Audit

The increasing global warming and climate change have made us realise that apart from the enormous strategies the individual small efforts need to be taken by individuals and Educational Institutes as the younger generations are the future of the world and once they are taught about these practices only then can we assume a better future.

5.1.1 Green practices

We observed the following points during the process.

- **Fresh environment** – *The University provides an eco-friendly ambience with fresh air and soothing environment which helps to maintain a physical and mental balance. This kind of a space it a must for an educational specially technical institute which is inviting and gives the stakeholders an opportunity to explore indoor and outdoor learning to a great extent.*
- **Team work** – *The best quality of the University which sets it apart is its coordinating, cooperative staff members; for a building the foundation plays the most important role for its future similarly for an educational institute its staff members do.*
- **Unique features** – *The practices of having historic heritage buildings, organic farming and excellently maintained premises are indeed appreciative.*
- **Social awareness** - *The University has taken up awareness drives on various social issues for rural upliftment and regeneration in the University and surrounding villages.*

5.1.2 Community development

The University conducts environmental initiatives documented as follows:

S. No.	Event	Particulars	Type	Date
Academic year 1				
1	Donated Vermicompost to PMC Gandulkhat to Gandulkhat Mahiti yibhag	Swacchata Pakhwada	Physical	Aug-21
2	Donated Vermicompost to PMC Gandulkhat to PMC Sambhaji Garden Dept.	Swacchata Pakhwada	Physical	Aug-21



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3	Swacchata Abhiyan	Mazi Vasundhara	Physical	May-22
Academic year 2				
1	Swachha Wari- Swastha Wari –Nirmal Wari- Harit campaign	To balance activities of Nature	Physical	Jul-22
2	Cleaning Drive -Special Clean Drive - collected 250 kgs plastic	To have clean environment	Physical	Oct-22
3	Students interacted with villagers and collected Soil Samples and Water Samples.)	Environment Evaluation	Physical	Jan-23
4	Cleanliness Drive- Mula Mutha River Cleaning :Bhide Bridge(nadi patra)	Pollution control	Physical	Feb-23

Table 4: Details of the events undertaken by the Institute

5.2 Waste Audit

Waste is an inevitable part of our lives. The audit provides an approximation of the types of waste generated, location of waste collections, disposal techniques used, waste segregation methodologies adopted. The waste management strategies are studied and ways that can be adopted aiming to make the premise clean and sustainable are proposed.

Waste produced

S. No.	Type of waste	Source	Current Disposal method	Can be retreated/ recycled?	Methodology
1	Solid waste	Toilets–Biodegradable waste	Led into the storm water drains	Yes	TREATED – Biogas plant can be initiated
	Liquid waste	Toilets, washbasins		Yes	TREATED - Sewage treatment plant can be initiated
2	Paper waste	Newspaper and other paper	Given to vendor	Yes	TREATED – A recycling plant can be initiated
3	E-waste	Computers - Non-biodegradable waste		Yes	CONTINUE - with the current practice
4	Dry waste in form of leaves	Open space & plantations, papers - Non biodegradable waste	TREATED – Organic composting is undertaken	Not applicable	CONTINUE - with the current practice
5	Organic regular waste	Dust, dirt dust waste from indoor spaces			
6	Sanitary waste	Sanitary waste	TREATED – Systems in place		

Table 5: Details of the waste management practices adopted by the team



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5.3 Water Audit

Water is one of the basic needs. Pure drinking water is a resource that needs to be preserved efficiently. A water audit helps to identify the sources of water consumption, and the water requirement by the premises is met by these sources. The effective usage of water without any wastage should be a mandatory practice. Understanding the techniques as per site context to increase water conservation in terms of awareness and practice can be identified and executed as part of this exercise.

5.3.1.1 Source of Primary water supply

The University uses drinking water for daily consumption. There are facilities at various locations in the premises as documented below:

S. No.	Type	Capacity (litres)	Nos.	Location
1	Underground	2 lakh litres	2	SIS, Near gate no 1 of the residential campus
2	Overhead	1,65,000 ltrs	36	Institute and New Academic Building
3	Fire tank	65,000 ltrs	2	New Academic Building, Ladies Hostel Wing b

Table 6: Details about the water facilities in the premises

5.3.1.2 Source of Secondary water supply

The University uses the secondary sources of water supply for general usages such as watering plants, kitchen, toilets, and wash basins connected to the labs and other spaces. **At present, there are is bore well available as the secondary source.**

5.3.3.3 Source of Tertiary water supply

The tertiary source of water is the additional source of water harvesting. The project is under practice with dedicated pits admeasuring 1m x 1m x 1m with a capacity of 2,000 litres. However, this project requires a major up gradation.



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5.3.3.4 Source of Reusing waste water (Laboratory)

The initiative is not under consideration since the Campus is a research Institute and does not have scientific subjects for practical work.

5.3.2 Areas of water usage

Based on the inventory done and data shared by the staff it was found that the premise has the following facilities:

Particulars	Nos.
General toilet for students	14
General toilet for staff	15
Special Toilet for handicaps 1.5m x 2.5m	2
Urinals	11
Taps in wash basins in toilets	88
Taps in Hostel mess	6
Taps in Canteen	4
Taps in the garden	19

Table 7: Details of the water usages in the premises

5.4 Health and Hygiene Audit

The hygiene is a part and parcel of our daily life. It is extremely essential to keep the surroundings clean in the same manner as we would want our houses to be.

Educational Institutes have a bigger role to play in order to affect the young minds in the positive manner through better hygienic practices.

5.4.1 Facilities available

The Institution has washroom facility, hand wash, drinking water and dustbin facilities.

5.4.2 Hygiene aspects

There was no major hygiene issue observed anywhere in the premises.



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6. Suggestions

Section-wise suggestions related to premises

The following suggestions are to be considered as a ***first priority*** for implementation. The Institute can execute a plan after discussion with Project Head.

6.1 Green practices Audit

- **Plant as a gift** - As a kind gesture, the guests visiting the premise can be asked to plant a small plant on the premise itself and they can be even given plants/bouquets from the flowers of the plants on the premise as a gift.
- **Environmental awareness** - There can be various artworks on the compound wall giving the message of saving the environment through the joint efforts of the students and staff thereby making the student socially and environmentally responsible citizens.

6.2 Waste Audit

- **Signages** - Messages about avoiding wastage should be placed at appropriate locations.
- **Include better plastic/ E-waste management measures** - The Institute can celebrate one day of every month as a 'Plastic/ E-waste awareness day' The stakeholders (Students and staff members) can be asked to bring plastic/ E-waste which can be further given to an NGO for recycling or better purpose.
- **Organic compost pit maintenance methodology** - The Institute can recheck the current methodology as it can yield better results in terms o quantity if it is well maintained with the following strategies:
 - The sanitary pad incineration dust can be sent to the compost pit
 - There should be a balance of brown and green waste material
 - Shred the materials before adding them to pit
 - Add twigs and stir occasionally
 - Add water in less quantity to avoid the smell
 - Keep ample air circulation to avoid the smell
 - Regular monitoring and maintenance.



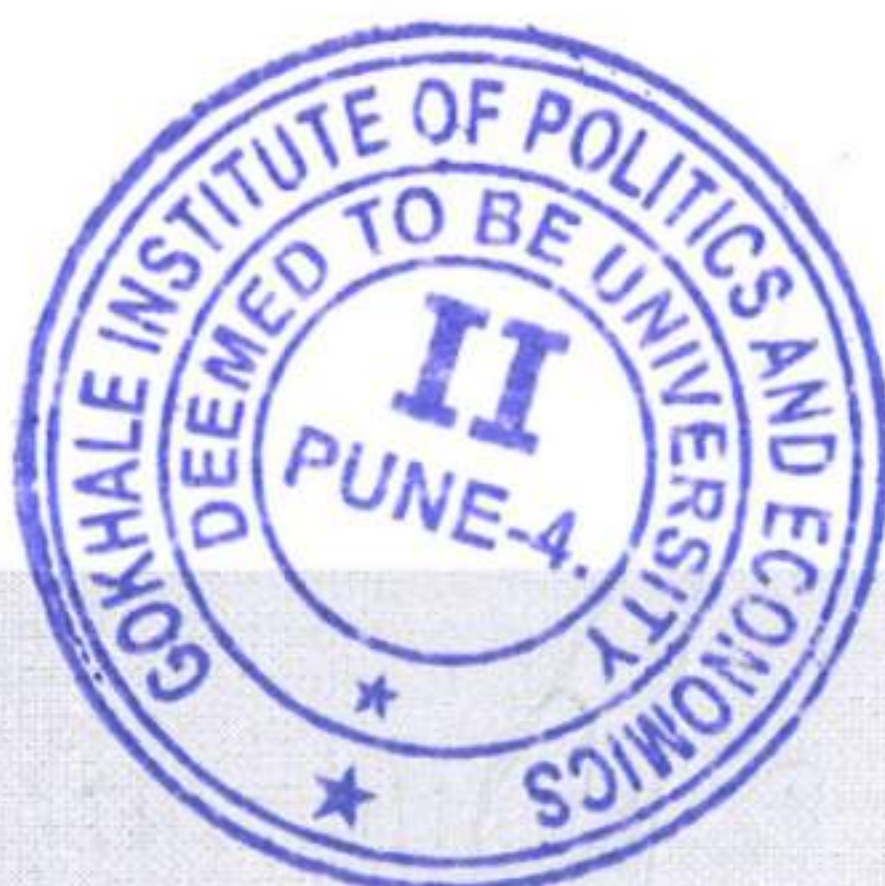
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6.3 Water Audit

- **Waterless urinals** - There can be the provision of waterless urinals as a Green Building initiative in the premise, either the existing ones can be replaced with such a facility or new toilets can be constructed in this manner.
- **Rain water bunds** – There should be landscape beautification project undertaken to appropriate channelize the rain water through bunds and similar facilities.

6.4 Health and Hygiene Audit

- **Signboards** – The Institute should have multiple signboards about 'No smoking' and 'Healthy premises' at every nook and corner of the Institute.
- **Compound wall** – The compound wall should have awareness messages about 'No Smoking' and 'No Tobacco'

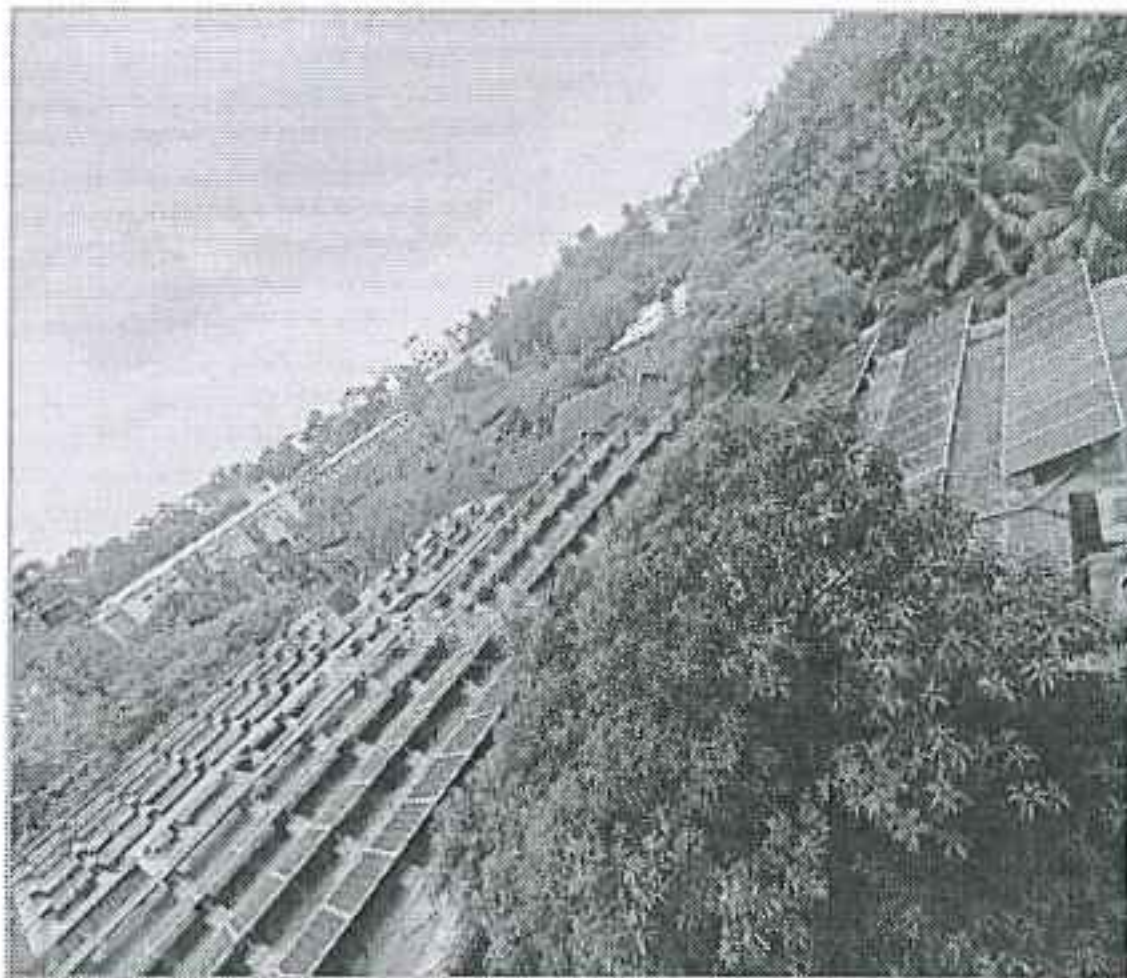


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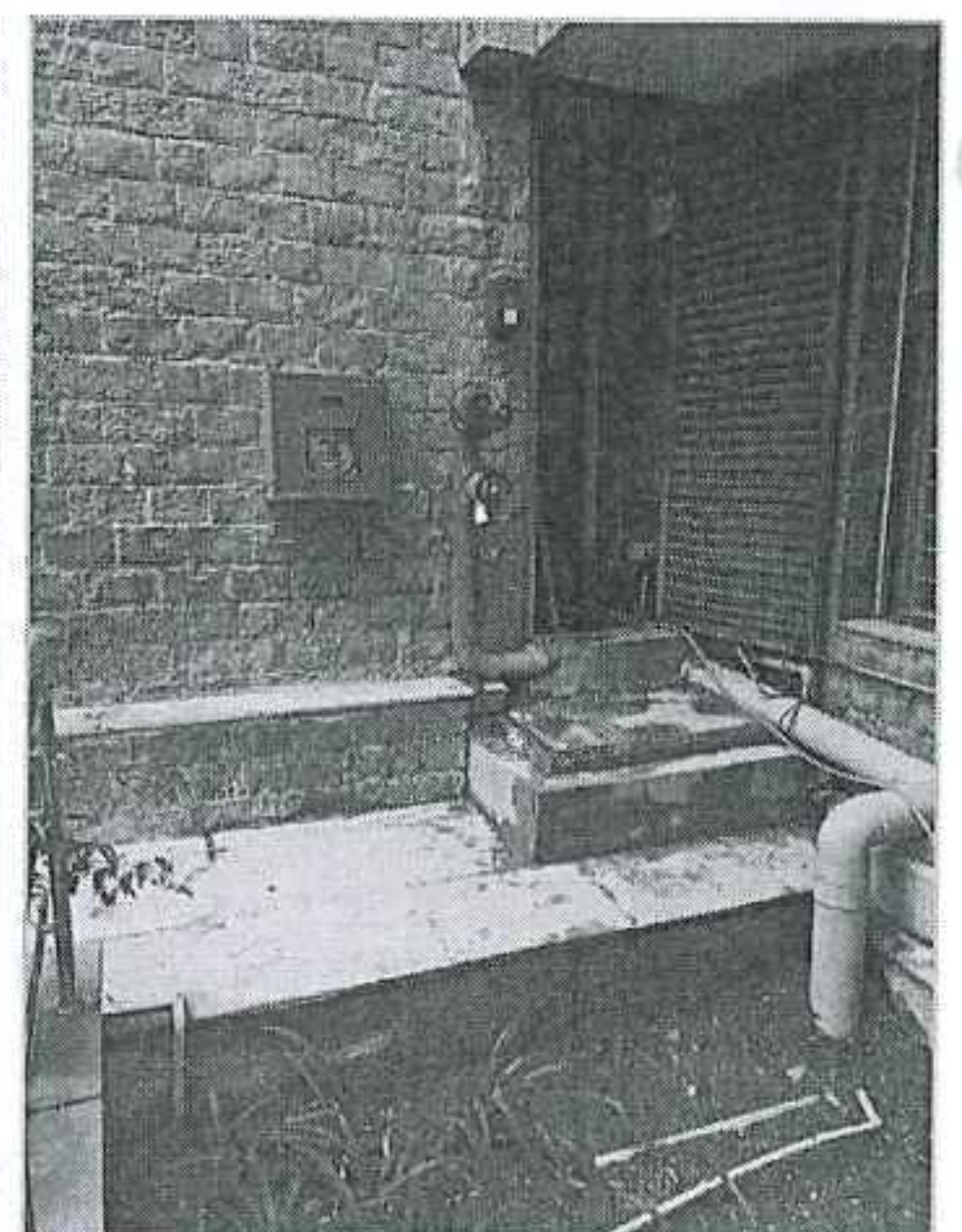
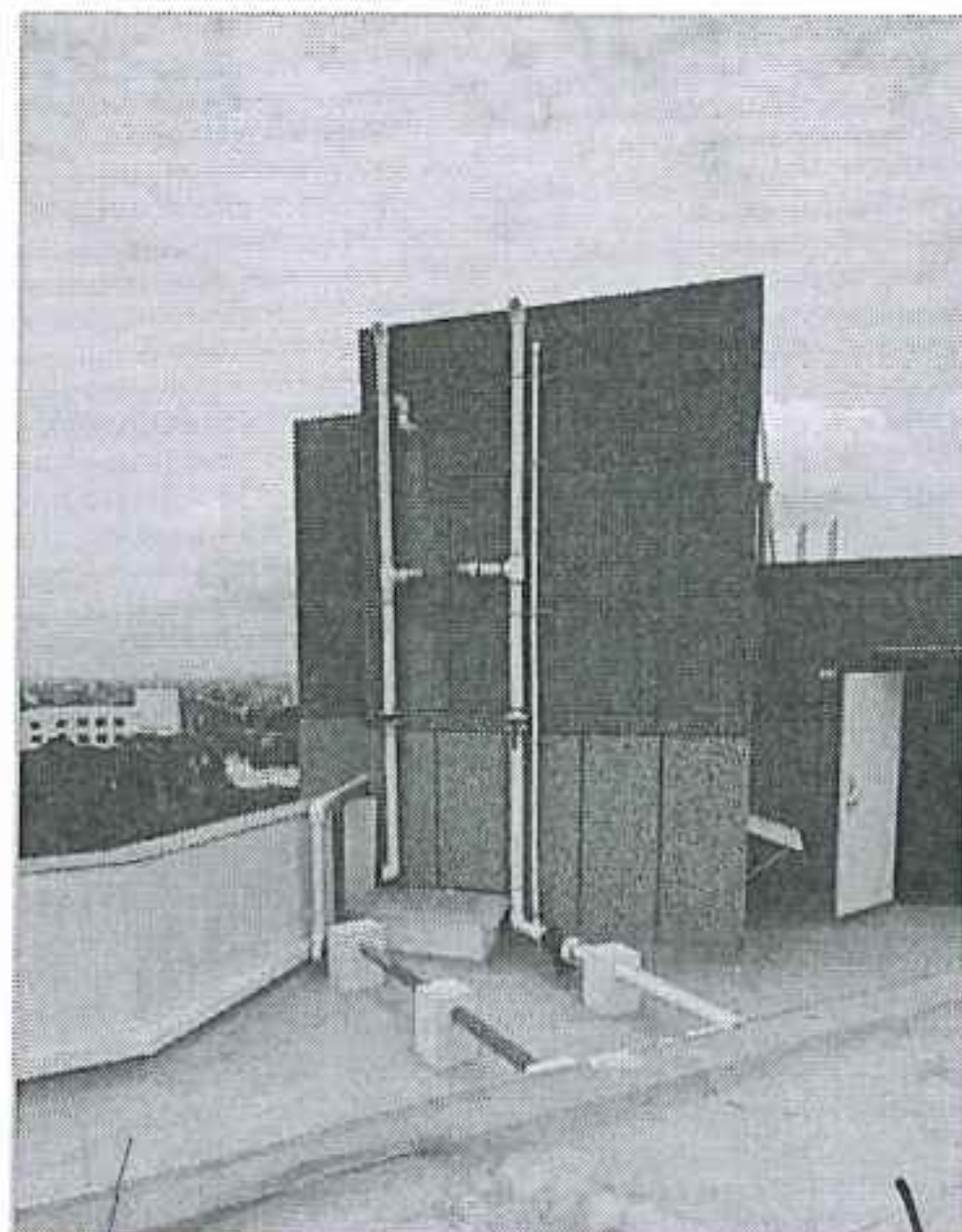
On-site investigation and physical verification
Audit Team during the visit and other photos collected during data documentation



Meeting with the core team sapling plantation activity with the team



Facilities about solar system plantation documentation and universal accessibility



Investigation parameters about the premises



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7. Compilation

The study is based on the data collected, analysed, rechecked, and confirmed through multiple modes. For the quality study, some standards/ notes have been referred to. These are listed and noted below. However, no direct references have been used anywhere. These are used as a base to analyse and study the data collected.

- Uniform Plumbing Code – India, 2008
- IGBC Green Existing Buildings – Operation & Maintenance (O&M) Rating system, Pilot version, Abridged Reference Guide, April 2013
- IGBC Green Landscape Rating system, March 2013
- BOMA Canada Waste Auditing Guide, Best Environmental Standards, BOMA BEST – Canada
- Used only for understanding Universal design - Universal Accessibility Guidelines for Pedestrian, Non-motorized vehicle and Public Transport Infrastructure – Report guidelines by Samarthyam (National center for Accessible Environments) – an initiative supported by Shakti Sustainable Energy Foundation and www.umassd.edu
- The city of Cheyenne, Streetscape/ Urban Design elements - Wyoming Planning Association, Gillette, Wyoming, United States
- Images on site by Coordinators of the both teams
- Icon images used by <https://www.vecteezy.com/free-vector/security-camera-icon> and <https://www.vecteezy.com/free-vector/electric-car-icon>



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