

A
Green Audit Report
of



**MGSMs Smt. Sharadchandrika Suresh Patil college of
Pharmacy, Chopda**

For the year

2022-23

Submitted by

**School of Environmental and Earth Sciences
KBC North Maharashtra University, Jalgaon**

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॥ अंतरी पेटवू ज्ञानज्योत ॥

कवयित्री बहिणाबाई चौधरी उत्तर महाराष्ट्र विद्यापीठ, जळगाव
Kavayitri Bahinabai Chaudhari North Maharashtra University, Jalgaon



(पूर्वीचे उत्तर महाराष्ट्र विद्यापीठ, जळगाव)

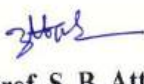
CERTIFICATE

Green Audit

This is to certify that MGSM's Smt. Sharadchandrika Suresh Patil college of Pharmacy, Chopda, Dist. Jalgaon (Maharashtra) has satisfactorily handled the Environmental (Green) Audit for the college covering all the details in accordance with the required norms for the academic year 2022-23.

The audit shall assist them to develop measures to save the environment and its individual units.


Dr. K. P. Dandge
Member


Prof. S. B. Attarde
HOD


Prof. S. R. Thorat
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Preamble

The rapid environmental degradation at local, regional and global level is leading us to global “Environmental Poverty”. Stabilization of human population, adoption of environmental friendly and sustainable technologies, reforestation, and ecological restoration are crucial elements in creating an equitable and sustainable future for all humankind in harmony with the nature. Thus, academic leaders must initiate and support mobilization of internal and external resources and knowledge so that their institute responds to environmental challenges.

MGSMs Smt. Sharadchandrika Suresh Patil college of Pharmacy ,ChopdaDist. Jalgaon (Maharashtra) is deeply concerned and unconditionally believes that there is an urgent need to address these fundamental problems reserves the trends. We deeply subscribe to the fact that humans should be steward of Mother Nature and that we all have a profound responsibility to protect the earth’s resources in perpetuity. Being a premier institute of higher learning, MGSM’S Smt. SSPCOP Chopda has resolved to play a major role in the education, research, policy formulation, and information exchange necessary for a sustained environmental campaign.

The current environmental audit represents the first stage in our efforts to build environmental sustainability in the campus. The audit was conducted by a team of faculty lead by Prof S. R. Throat with the help of Prof. S. B. Attarde and K. P. Dandge, a teaching faculty of School of Environmental and Earth Sciences. We have conducted this audit not only for the institution itself, but just as importantly to be role model for other institutions to emulate and bring the environmental concerns and related mitigating measures. This audit will act as guidelines to the other colleges/Institutions affiliated to KBC North Maharashtra University towards environmental consciousness.

The overall objectives of the audit were:

- To introduce students to real concern of environment and its sustainability using the MGSMs Smt. S. S. Patil college of Pharmacy, Chopda Campus as a study site.
- To analyse the pattern and extent of resources use on the campus.
- To make the college a more environmentally sustainable institution of higher learning
- To bring out a status report on environmental compliance and ensure compliance with present legislations of the State and other legal requirements.
- To identify opportunities to save energy.
- To implement 'Go green' - Making the campus green.

❖ **About the Mahatma Gandhi Shikshan Mandal, Chopda:**

Mahatma Gandhi Shikshan Mandal is an eminent educational organization in North Maharashtra region occupying 35 acres of land and with excellent infrastructure. Way back in 1969, visionaries from Khandesh Viz Hon. Dadasaheb Dr. Suresh G. Patil, with educational foresight and deep concern for the educational welfare of the students, had decided to establish Mahatma Gandhi Shikshan Mandal (MGSM). Today, MGSM, is an amalgam of '10'branches of various discipline. As the leading educational institution in Chopda Tahsil & Tribal region, it combines a responsibility for the advancement and dissemination of knowledge. It offers an extensive range of academic programs at primary, secondary & higher education levels in many disciplines. Apart from variety of courses in higher education which encompass Arts, Commerce, Science, Pharmacy and Engineering the Mandal has introduced many vocational and nursing courses in their various Institutes. The study centre of national importance personality like father nation M. K. Gandhi, Pandit J. Nehru and Bharatratna Dr. B. R. Ambedkar etc has opened to doors of education to the local rural and tribal communities.

The establishment and nurturing of various institutions were possible only with zealous and continuous efforts of Late Hon. Akkasaheb Sharadchandrika Suresh Patil, ex-Education Minister, Gov. of Maharashtra, Founder President Hon. Dadasaheb Dr. Suresh. G. Patil, an eminent Surgeon, Hon. Adv. Sandip Suresh Patil, President of M.G.S.Ms, & Hon. Taisaheb Dr. Sau. Smita Sandip Patil, well-known Dermatologist & Secretary of MGSMs of this region. It was their commitment that has made Mahatma Gandhi Shikshan Mandal as a brand name in educational field. Due to unparalleled vision of founder president Hon'ble Dadasaheb Dr. Suresh. G. Patil has made next generation was evolved as a capable and competent academic leader.

❖ **About MGSMs Smt. Sharadchandrika Suresh Patil college of Pharmacy, Chopda Dist. Jalgaon (Maharashtra):**

Mahatma Gandhi Shikshan Mandal's Arts, Science and Commerce College Chopda was established in 1969 by Hon'ble Dadasaheb Dr. Suresh G. Patil (Ex MLA) and former Education Minister Late Sau. Sharachchandrika Suresh Patil, to disseminate value-based education and uplift the vocational skills of rural masses for their holistic development. The college was established in response to the dire needs of the young generation of marginalized farmers and workers, and poor and downtrodden inhabitants of the region. The college fulfils its mission of creating an educational environment for the spiralling development of such people under the scholarly guidance of the pioneers, President and Management, Principal, Teaching and Nonteaching faculty with proper representation of students in various committees and activities.

The college is permanently affiliated to the Kavayitri Bahinabai Chaudhari North Maharashtra University, Jalgaon. The College is a premier academic institution in this region, located in 36 acres sprawling campus. The serene campus of the college provides students with conducive environment for study and such an environment automatically turns students to learning with full concentration and devoid of diversions. The campus beautification is maintained through lawns and

planting various trees on the campus. Large number of trees has been planted to conserve the natural beauty and environment of the campus. The college was conferred with the “**Vanashree Award**” in the year 2011 by Government of Maharashtra for its contribution in maintaining the greenery on the campus.

The college provides under-graduate and post-graduate programs. The college began with few students. Today almost 700 students are admitted. The college is recognized as Research Centre by the university in various science subjects. The Institution has learned and highly qualified faculty members who are expertise in their respective discipline and honesty discharging their duties with a sense of dedication and devotion.

The college is one of the premier academic institutions, having diploma, Degree, master and Ph.D. courses. The institution is committed to achieve the highest academic standards and provides an opportunity to the students to choose and enrol in programmes that are best suited to them. It is well known for its educational, cultural, social and spiritual enterprises.

We believe that in the present competitive environment, only the fittest will survive. With the help of carrier katta, we provide training for MPSC, UPSC and other competitive examinations. Our mission is to impart quality education to our students with a global vision and holistic perspective.

The college offers education with 75 subjects at the degree and diploma level and 10 subjects at the master level in Pharmaceutics and Pharmacology branches. The overall development of the institution over the period of five decades is multidimensional. Introduction of relevant courses/subjects at apt time, provision of optimum academic and other support facilities, development of healthy environment, organisation of conferences, seminars, workshops, competitions, tournaments and such other activities have helped the institution in gaining strength and thereby reputation. Keeping pace with time and changes in the field of academics, the Institution has always given thrust on making the suitable modifications in all elements of the academic system viz. providing state-of-art facilities, most modern laboratories, equipment’s and converting the teaching, learning process and administrative function into more IT oriented manner.

Democratic functioning method of governing body coupled with the policy of functioning autonomy to the Principal and his colleagues has always been a unique feature of this Institution. The organisation is not committed to any '-ism' or political ideology. Diversity and differences have always been recognised as well as honoured at all levels. This has resulted into development of emotional institutional bondage among the staff. Formal hierarchical relations and functions have always become secondary and the sense of 'oneness' always has gained over it.

Being an old Institution, the adopted methods, systems and procedures have always been governed by conventions and practices developed by the learned senior teachers over the period of time. The ethos and values established by the first generation of dedicated faculty members have been transformed to newcomers in a subtle and informal manner. It is said that the inheriting ethos, values and conventions are rigid. However, we consider that the heritage of such ethos and values has always been a source of inspiration to gain strength and maturity to the Institution.

Over the period, the access to higher education in North Maharashtra has become comparatively easy. However, the thrust has shifted to relevant quality education with intent to develop the students to face the complex challenges in the world.

Layout of MGSMs Smt.S.S.Patil college of Pharmacy,
Chopda



Mission and Vision of the College:

Mission: To nurture excellence in pharmacy profession and mould the Institution into a centre of deft pharmacy professionals.

Vision: To nurture excellence in pharmacy profession and mould the Institution into a centre of deft pharmacy professionals.

With this mission the college aspires "To be a distinguished Institution which provides high quality education". It wants to provide such courses which will be uniquely valued by industry and provide a firm basis for its students to build challenging careers in their professional life.

To meet these aspirations, the members of management, CDC, IQAC and teaching/non-teaching staff had rounds of discussions and brain-storming sessions at different levels and formulated the following policies:

- To identify the prospective strong departments for their specialized development.
- To support substantially for progress of the weaker departments.
- To motivate research and consultancy activities in specific areas.
- To establish special wings / divisions of the College for meeting pre-determined specialized objectives in the field of sports, women education and development and multidisciplinary research with local social relevance.
- To establish international linkages with researchers and Institutions for
Multi-disciplinary basic / applied research
- Giving exposure to young, energetic and dynamic faculty members and post-graduate students

To give special thrust on the development of other necessary soft-skills like proficient communication ability, pro-active attitude for teamwork, computer etc.

The college has full-fledged degree college with two divisions of degree 60 in each class. Besides, the College provides research facilities in different disciplines. Smt. SSPCOP, Chopda College began with just 160 students and today it has grown to the student strength of more than 700 students registered for various courses in the faculties of diploma, degree, masters and PhD courses. Many past students of the college are holding respectable positions in different walks of life at State/National/International level.

Audit Team

Sr. No.	Name of Auditors	Designation
1	Prof. S. R. Thorat Director	Professor, School of Environment & Earth Sciences, KBC North Maharashtra University, Jalgaon
2	Dr. S. B. Attarde HOD	Professor, School of Environment & Earth Sciences, KBC North Maharashtra University, Jalgaon
3	Dr. K. P. Dandge Member	Assistant Professor, School of Environment & Earth Sciences, KBC North Maharashtra University, Jalgaon

External Audit (Expert) Team Members

Sr. No.	Name of Auditors	Designation
1	Dr. G. P. Vadnere	Principal
2	Dr. M. D. Rageeb Co-coordinator	Associate Professor & Head,
3	Dr. S.S.Mahajan	IQAC Co-coordinator
4	Mr. T.P.Patil	Associate Professor
5	Mrs. Rupali Patil	Assistant Professor
6	Mr. Yogesh Chaudhary	Assistant Professor

Internal Audit Team Members

Preliminary Meeting	Date:16/01/2023
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Time Schedule

1. Design of Questionnaire 2. Nomination of Audit Team 3. Data Requirement of Audit	
Audit Team Meeting	Date: 17/03/2023
1. Discussion on Questionnaire 2. Resolution of doubts 3. Planning for data collection	
Visit of Audit Team	Date: 06/07/2023
1. Verification of Records 2. Discussion with HOD's and staff of various departments	
Preparation of Draft Audit Report	Date: 07/07/2023
Submission of Report - Review & Suggestion	Date: 08/07/2023
Finalization of Audit Report	Date: 10/07/2023

Executive Summary

The rapid urbanization and economic development at local, regional and global level has led to several environmental and ecological crises. On this background it becomes essential to adopt the system of the Green Campus for the

Institute which will lead for sustainable development.

MGSMs Smt. SSPCOP, Chopda is intensely concerned and totally believes that there is an urgent need to address these basic problems and reverse the trends. Being a leading institution of higher learning, the college has initiated 'The Green Campus' program two years back that actively promote the various projects for the environment protection and sustainability. The purpose of the audit was to ensure that the practices followed in the campus are in accordance with the Green Policy adopted by the institution. With this in mind, the specific objectives of the audit were to evaluate the adequacy of the management control framework of Environment Sustainability as well as the degree to which the Departments are in compliance with the applicable regulations, policies and standards.

MGSMs Smt. SSPCOP, Chopda established "Environment Committee" to perform various activities in the field of Green Campus. College is adopting zero waste discharge facility to manage the solid, liquid and e-waste.

Solid waste management: Around 15 kg/ day food and other waste is generated in the form of biodegradable solid waste from the hostel mess and canteen. It is daily dispatched to solid waste collection vehicle of Municipal Corporation. With regard to green waste generated on campus, which includes grass clippings, leaf litter, and other landscaping related refuse is being treated for composts.

Liquid waste management: The College has designed the outflow of the liquid waste in such a way as to prevent contamination in the campus. A properly constructed leakage proof sewer system is used for drainage.

E-waste management: All electronic gadgets are periodically repaired for efficient utilization and replaced under buy back scheme of supplier. Hence, minimum e-waste is generated in the campus. The remaining non-working computers, monitors and printers are discarded and scrapped on a systematic basis. If some parts are useful, in other systems they are kept aside for future use.

Rainwater harvesting: College is committed about water conservation; College has efficient rain water harvesting system to help recharge the already depleting ground water level of the region. This system ensures to save the runoff rainwater from the terrace of the buildings constructed in the college campus and poured into bore

wells in the campus. Rooftop of old B. Pharmacy building is used to collect the rainwater which is used as distilled water by department of chemistry for regular practical sessions, this is the best practice of the college since 10 years and this practice saves a lot of energy and cost. Rainwater collected from rooftop of ladies' hostel is drained into the open well as a part of ground water recharging. The runoff from the unpaved area is intercepted at certain locations by collection trenches into footstep well. This runoff eventually facilitates groundwater recharge.

No vehicle day: College willingly accepted the green practices and strictly follow them. The college conducts campaign for students and faculty to understand the importance of environmental protection and be mindful about saving energy. The Institution observes every Saturday as "NO VEHICLE DAY" and it is the best practice of the college that being enthusiastically observed by Staff and Students of the college. Authority frequently appeals to the students and faculty to maintain the tradition of no vehicle day on Saturday.

Plant biodiversity: To understand the plant biodiversity of the campus, the MGSM has been conducting census of trees, herbs and shrubs every five years since 2005. As per recent survey (2019), the college campus has rich plant biodiversity including '210' species in general & '78' tree species with a dominance of family *Caesalpinaceae*. With regard to shrubs dominance of *Durantavariegata* & *Bougainwalia spectabilis* and herbs with dominance of *Psida cordifolia*, *Tridax procumbence* & *Cassia uniflora* are recorded. Due to recent green campus activities in the college campus, number of trees was found to be decreased; hence tree plantation efforts were made in association with NSS, and Sport units. Recently, about 50 trees including *Pongamia pinnata* and *Azadirachta indica* were planted to keep the campus green.

List of plants in Botanical Garden

Sr.No	Plant Name	Quantity
1)	Lawsoniainermis (Golden Mehndi)	5
2)	Murrayakoenigii(Kadipatta)	4
3)	Saracaindica Linn (Ashoka)	3

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4)	<i>Canna indica</i> (Kardali)	2
5)	<i>Lepidium meyenii</i> (Maca)	1
6)	<i>Azadirachata indica</i> (Neem)	5
7)	<i>Asparagus racemosus</i> (Shatavari)	1
8)	<i>Hibiscus rosa –Sinensis</i> (Jaswand)	8
9)	<i>Samanea saman</i> (Raintree)	5
10)	<i>Tribulus terresteria</i> (Gokhru)	2
11)	<i>Ficus benghalensis</i> (Vad)	1
12)	<i>Catharanthus Roseus</i> (Sadaphuli)	1
13)	<i>Tinosporacardifolia</i> (Guduchi)	2
14)	<i>Bauhinia racemosa</i> (Apta)	3
15)	<i>Dalbergia sisso</i> (Sheesham)	1
16)	<i>Hibiscus syriacus</i> (Pandharijaswand)	1
17)	<i>Millerriapinnata</i> (Karanj)	5
18)	<i>Mangifera indica</i> (Mango)	4
19)	<i>Annona reticulate</i> (Sitafal)	2
20)	<i>Annona muricata</i> (Ramfal)	2
21)	<i>Manilkara zapota</i> (Chiku)	1
22)	<i>Sapindus mukorossi</i> (Reetha)	1
23)	<i>Terminalia belirica</i> (Behala)	1
24)	<i>Vitex negunda</i> (Nirgundi)	3
25)	<i>Psidium guajava</i> (Peru)	2
26)	<i>Terminalia rjuna</i> (Arjuna)	3
27)	<i>Aegle marmelous</i> (Bael)	7
28)	<i>Jasmin sambac</i> (Mogra)	9
29)	Citrous limon	3
30)	<i>Tabernaemontana divaricate</i> (Tagor / Chandani)	2
31)	<i>Zingiber officinale</i> (Ginger)	1
32)	<i>Vasaka adhatoda</i> (Adulsa)	3
33)	<i>Aloe vera</i> (Korfad)	3
34)	<i>Curcuma longa</i> (Turmeric)	1
35)	<i>Coleus amboinicus</i> (Paan Ova)	1
36)	<i>Plumeria obtuse</i> (Chapha)	3
37)	<i>Delonix regia</i> (Gulmohar)	2
38)	<i>Phyllanthus ambelica</i> (Amla)	1
39)	<i>Nelumbo unciaria</i> (Lotous)	1
40)	<i>Nyctanthes arbor-tristis</i> (Parijat)	1
41)	<i>Boerhavia diffusa</i> (Punarjiv)	1
42)	<i>Lilium candidum</i> (Liliy)	1
43)	<i>Alstonia scholaris</i> (Saptparni)	1
44)	<i>Calotropis gigantea</i> (Mhaua)	1
45)	<i>Ixora coccinea</i> (Ixora)	1
46)	<i>Butea monosperma</i> (Palas)	1
47)	<i>Cuesalpinia bonduca</i> (Sagargota)	1
48)	<i>Erythrina variegata</i> (Panagare)	1
49)	<i>Allium sativum</i> (Jangli Lasun)	1
50)	<i>Pinicagranatum</i> (Dalimb)	1
51)	<i>Syzygium cumini</i> (Jamun)	1

52)	Argemonaemexicana (Braharkakshasa)	1
53)	Platycladusorientalis (Morpankhi)	2
54)	Filusreligisoa (Pimpal)	1
55)	Rosa indica (Rose)	6
56)	Curcuma caesia (Black Turmeric)	2
57)	Termnaliaarjuna (Hataga)	1
58)	Sweet Lime citrus (Orange)	1
59)	Cynbopogenflexuous (Lemmon Grass)	1
60)	Codiaeum variegatum (Raankaner)	2
61)	Rauwolfiaserpentine(Sarpagandha)	1
62)	Ocimumtenuiflorum (Krushna Tulsi)	1
63)	Ova ajwan (Ixora)	1
64)	Prunus Dulcis (Almond)	1
65)	OcimumTenuiflorum (Tulsi)	7

Statement of Assurance

The audit has been conducted in accordance with the standard procedures for the professional practice of internal auditing.

In our professional judgement, sufficient and appropriate audit procedures were completed, and evidence gathered to support the accuracy of the conclusions reached and contained in this report. The conclusions are based on a comparison of the situations as they existed at the time of the audit with the established area.

Methodology of Audit

In order to meet its objectives, this audit combined physical inspection with review of relevant documentation and interactions with departmental staff members and students.

- Review of the Documentation: For the purpose of this audit Green audit frame work was reviewed.
- Interviews: Interviews were conducted with the principal, departmental faculties and students.
- Physical Inspection: The audit team has conducted physical observations in the college campus to inspect the green practices.

Summary of Findings

The main findings of the audit show that, all the department staff and students are conscious and aware about the need for environmental protection at a general level. It was also observed that a number of best practices such as maintaining the collection of waste separately, introduce rainwater harvesting to new building structures, implementing plastic free campus etc. are followed in the college premises.

Audit framework and detailed findings

The following audit framework is used for conducting Green Audit of the institution. The framework lists the finding and also observations for every criterion.

Criteria- 1:

(A) Waste Generation and Management

Objective: Maximize the waste recycled and minimize the quantity of non-recycled refuse.

Activity: Segregation of waste

Audit Observation: Waste Material is segregated as per category like Paper, Cardboard, Scrap Wood, Scrap Metal, Plastic scrap, glass, laboratory rags etc. Each waste is stored at departmental level and periodically sent to central collection facility.

Type of waste	Audit Observation
Paper Waste	<ul style="list-style-type: none">• One side rough paper is used for the printing of Notices, Timetables etc. in each department.• Waste papers are being sent for shredding to prepare thread and card sheet.• Email and Mobile media communication are used for minimizing the use of paper.
Plastic waste	<ul style="list-style-type: none">• Plastic bottles, caps and other waste material are stored separately at departmental level and sell as a scrap material

Glass Waste	<ul style="list-style-type: none">• Empty chemical glass bottles are sent as a scrap material
Construction Waste	<ul style="list-style-type: none">• Construction waste is used for land filling and landscaping at the low laying areas within the college premises.
Electrical Waste	<ul style="list-style-type: none">• Electrical waste like damaged electrical boards, switches, cut wires are collect by electrician and replace this with new one and remaining wastage is sold as scrap.• Electrical waste related to computer, keyboards, and mouse is collected by maintenance department for repairing and replaces the damaged one and remaining wastage is sold as scrap.

(B): Waste Generation and Management

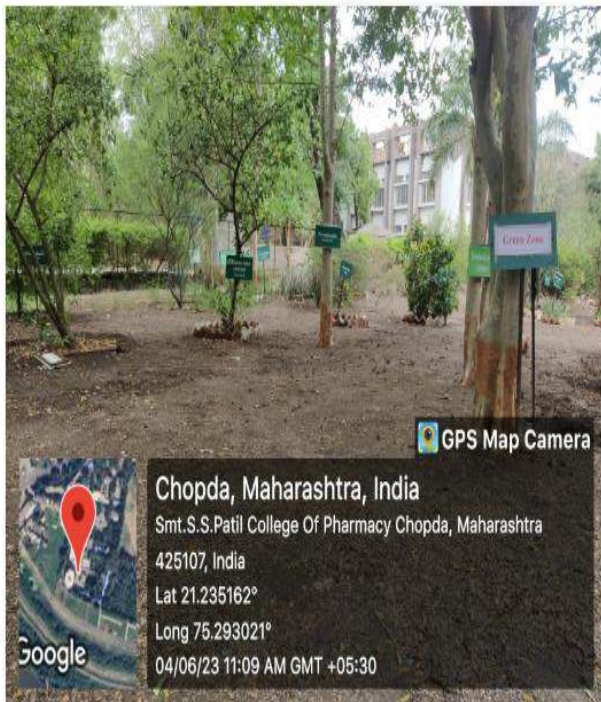
Objective: Collection of waste.

Activity: Students as well as faculties of different department concern about waste collection. They do not throw the paper waste in the surrounding premises of college campus.

Audit Observation: Proper dustbins are provided to each department. Also,sufficiently large (plastic) dustbins are installed at various locations in the college campus for collection of waste including administration office, college canteen, near garden etc. Some dustbins are provided to girl’s hostel and boys hostel (1 dustbin for 2 rooms) for collection of solid waste. The stored waste is collected by Municipal Corporation on daily basis.



Plastic Dustbin



Botanical Garden



New Plantation

Dust Ban at Pharmacy Main building

(C): Waste Generation and Management

Objective: Plastic free Campus.

Activity: Motivate students about harm of plastic carry bags and items to convince them for no use of plastic in college premises.

Audit Observation: To aware all students as well as faculties of different department about “No Use of Plastic” in college campus, awareness boards are display at various location in the college campus.

Posters displayed in campus to increase the awareness about “Plastic Free Campus”.



NO USE OF PLASTICS CAMPAIGN

(D): Waste Generation and Management

Objective: Management of Garden Waste.

Activity: Installation of Vermi-compost bins

Audit Observation: The collected wastes from garden, debris, and leaf litter are collected dumped into vermin composting bins to prepare the compost manure from the waste. Eisenia Foetida species of earthworm is used for the process.



Near Monument Garden

Criteria- 2

(A): Water conservation

Objective: Water conservation.

Activity: Rainwater Harvesting

Audit Observation: Rainwater harvesting facility is provided to B. Pharmacy building and use this water for recharging the open and close well which is used for practical, washing and other departmental purpose through tap water. A soak pit is constructed in open ground where the roof water is lain down for water conservation.



Rainwater Harvesting & Recycling of Distilled Water from Rainwater

(B): Water conservation

Objective: Water Saving.

Activity: Water Audit

Audit Observation:

- The storage (overhead/underground tank) checked periodically for any leakage.
- The departmental Tap was checked periodically to prevent from any leakage.
- The leakage Tap replace by new one.
- The drip irrigation system is provided to lawn instead of direct watering.
- Rainwater harvesting units are set up to each building to harvest rain water & It is processed to pass into bore wells to increase water table of the area

Criteria-3

(A): Energy Consumption (Electrical Energy)

Objective: To save the electrical energy.

Activity: Installation of "Solar Water Heater" at Girl's Hostel.

Audit Observation: Solar water heaters are installed to girls and boys hostel instead of electrical heaters to save the electrical energy using natural resource. Total 77 solar panel having size 4 x 6 feet are installed with 2200 litre/day capacity.

(B): Energy Consumption (Electrical Energy)

Objective: To save the electrical energy.

Activity: Installation of LED light at different Laboratories, office

Audit Observation: LED lights are installed to girl's hostel & in laboratories to conserve the electrical energy instead of tube lights. LED panel also incorporate to parking area and corridor area of girl's & boys' hostel.



LED lights at Dept. of B. Pharm and Pharmacognosy

(C): Energy Consumption (Electrical Energy)

Objective: To save the electrical energy.

Activity: Conservation of Electrical Energy at Departmental Level

Audit Observation:

- All laboratory having panel boards MCB switch to control the electrical supply within the department. The responsibility is given to non-teaching staff to “Switch-off” this switch without any ignorance to avoid the wastage of electrical energy.
- Sign boards like “Switch off the fans / light when not in use” are displayed in the departments.
- The water pumps are regularly maintained for minimum consumption of electricity.
- Solar panel system is in progress for entire college campus.
- Solar water heaters are installed to girl’s and boys’ hostel instead of electrical heaters.
- LED lamps, 5-star rating AC systems, LCD monitors, Branded fans are used to minimize the consumption.



Use of Solar Power System

Criteria- 4:

(A) Energy Consumption (Transportation)

Objective: To save the fuel energy.

Activity: Motivate to students and faculties for reduce the use of vehicles in college campus.

Audit Observation: To minimize the use of personal vehicles with in the college campus. To motivate and aware the students regarding minimum use of vehicles “Cycle Day” programme is arranged by MGSM’S Smt. SSPCOP, Chopda.



Criteria- 5:

Energy Consumption (LPG Cylinder)

Objective: To save the LPG energy.

Activity: Conserve the LPG at departmental Level

Audit Observation:

- The gas burners, tubes are checked periodically to prevent the leakages of gas.
- Slow flame is adjusted during the practical work to minimize the excess use of gas.
- The practical is listed as per use and non-use of LPG.
- The empty cylinders are stored centrally and labelled as "EMPTY".

- The use and requirements of each department about LPG is monitored by controlling sheet and send to office.

Criteria- 6:

Green Campus [Green Campus Healthy campus]

Objective: To increase the Green Cover within the college campus.

Activity: Establishment of Botanical Garden, Green House and Shade Net House

Audit Observation: To understand the plant biodiversity of the campus, the college has been conducting census of tree, herbs and shrubs every five years since 2005. As per recent survey (2017-18), the college campus has rich plant biodiversity including 33 tree species with a dominance of family *Caesalpiniaceae*. With regard to shrubs dominance of *Peltophorum ferrocenium*, *Caesalpinia pulcherrima*, *Delonix regia*, *Cocos nucifera*, *Roystonea* and herbs with dominance of *Sida cordifolia*, *Vernonia cerneria*, *Alternanthera pungens*, *cassia uniflora*, and *crotonia juncea* are recorded. Due to recent construction activities in the college campus, number of trees was found to be decreased, hence tree plantation efforts were made in association with students and teaching and non-teaching staff. Recently, about 50 trees including *Alstonia scholaris*, *Pongamia pinnata* and *Azadirachta indica* & *Eugenia jambolan* were planted to keep the campus green.



Image of Botanical Garden with Identification of every plant species



A Bird's Eye View of the Campus



Eco friendly Pathway

Glimpses of college



Open Space Rain Water Harvesting & Water Recharge System



Laboratories installed with LED Lights & Waste Management



Tree Plantation



Botanical Garden

1. Water Management

SL NO	PARAMETERS	Response	Remarks
1	Source of water	Well& Tube well	working
2	No of Wells	02	Good
3	No of motors used	02	working
	Horsepower-Motor	3 HP	Good
5	Depth of well-Total	75/300	Good
6	Water level	45 to 50 feet	Good
7	Number of water tanks	07	working
8	Capacity of tank	15000 Lit	Good
9	Quantity of water pumped every day	3000/-	working
10	Any water wastage/why?	-	-
11	Water usage for gardening	yes	working
12	Wastewater sources	-	-
13	Use of wastewater	No	-
14	Faith of wastewater from labs	drainage	-
15	Whether wastewater from labs mixed with ground	No	-
16	Any treatment for lab water	No	-
17	Whether any green chemistry method practiced in labs	No	-
18	No of water coolers	02	Good
19	Rainwater harvest available?	Yes	working
20	No of units and amount of water harvested	20 lit	-
21	Any leaky taps	NO	-
22	Amount of water lost per day	20 lit	-
23	Any water management plan used?	yes	working
24	Any water saving techniques followed?	Yes	working
25	Are there any signs reminding peoples to turn off the water?	yes	working

2. Energy audit

Room No./ name	Electrical device/items	Number	Power	Usage time (hr/day)
50 rooms	Instruments, PC, lights, fans, cooler, AC, motors	250	7000 vat	40 unit

Laboratories				
Approx	Biodegradable	Non-biodegradable	Hazardous	Others
<1kg	½ kg	½ kg	-	-

3. Waste management

Approximate quantity of waste generated per day (in kg)

Office				
Approx	Biodegradable	Non-biodegradable	Hazardous	Others
>10Kg	½ kg	½ kg	-	-

Total strength of students, teachers, and non-teaching staffs

No of Students	700
No of Teachers	40
No of Non-teaching staffs	30
Gents	60
Ladies	10
Total	840

How the waste generated in the college is managed?

A) Composting/ Vermi composting	Yes/No	Remark
B) Recycling	yes	
C) Reusing	yes	
D) Other ways	--	

Waste generated in the college?

E-waste	yes	--
Hazardous waste	--	--
Solid waste	5kg	-

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Dry leaves	2kg	-
Canteen waste	10 kg	-
Liquid waste	5 lit	-
Glass	1 or 2 in No.	-
Napkins	5 in No.	-
Others (specify)	-	-

Do you use recycled paper in college?	yes	Working
Any waste management methods used?	yes	Working

Recommendations

Following the audit, following recommendations were made to the college authority by external audit team.

Sr. No.	Criteria	Recommendations
1	Paper Use	Use email communication for Internal/departmental notices to minimize the use of paper
2	Lighting (Energy)	Use LED light instead of regular tube light to conserve the electricity.
3	Vehicles	Monitoring the PUC of every vehicle within the campus at least once in a year to minimize the vehicular pollution load.
4	Energy (Fuel)	1. Maintain the record of Diesel used for DG set. 2. Control the use of DG set as per requirements only. 3. Monitoring the function of DG set by external party regarding consumption of fuel and working efficiency.
5	Energy (Solar)	Increase the number of solar panels and excess power generated may be sent to external grid.

Declaration

I agree with all the recommendation and observation mentioned in this report.

original signed with college seal by,

Dr. G.P. Vadnere
(Principal)


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Declaration

I agree with all the recommendation and observation mentioned in this report.

original signed with college seal by,




Dr. G.P. Vadnere

(Principal)
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Dr. K.P. Dandge - 

Prof. S.B. Attarde - 

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