



**BASELINE GREEN &
ENVIRONMENTAL ASSESSMENT
(2020-21) OF
NSSR'S VASANTDADA PATIL
ARTS, COMMERCE, & SCIENCE
COLLEGE, PATODA, DIST-BEED,
MAHARASHTRA.**

(Affiliated to Dr. Babasaheb Ambedkar Marathwada University, Aurangabad (M.S.))

1. Introduction

COLLEGE INTRODUCTION:

Vasantdada Patil Arts, Commerce, & Science College, Patoda

Navgan Shikshan Sanstha of Rajuri Navagan is a reputed institution in education field in Beed district. It is proved to be an institution providing quality education in rural area. It was established in 1963 by Late Mrs. Kesharbai Kshirsagar alias 'Kaku', former Member of Parliament. Her vision and insight made the small seed grow into a huge tree encompassing thousands of students of rural and remote area of Beed district seeking primary to higher education.

Navgan Shikshan Sanstha started Padmabhushan Vasantdada Patil college (Newly known as Vasantdada Patil Arts, Commerce & Science College) at Patoda in July 1989 to create awareness of educational, social, political and economic development amongst labours, farmers, and deprived people of Patoda region, which is an interior and drought prone area.

We have completed a successful track record of thirty years. Vasantdada Patil College Patoda, Dist. Beed is a grant-in-aid college. The college is co-education type. The college was granted permanent affiliation by the University in 2002-2003. The college is recognized under 2(f) and 12(B) of UGC in November 2007. National Assessment and Accreditation Council of Bangalore first reaccredited our college in January 2012 with grade "B". In September 2017, we went through Third Cycle Reaccreditation. We received 'B++' grade with CGPA 2.76. The campus area of the college is 5 acres. The college is located in rural and hilly area.

The college provides B.A., B.Sc., B. Com, B.C.S. Under graduation courses. B.A., B.Sc., and B.Com. Degree programmes are run on grant-in-aid basis. M.A. in English, Hindi, Marathi, History, Political Science, Economics, Public Administration, Geography, Sociology, and M. Sc. Chemistry, M. Sc. Microbiology, M. Com. are the post-graduation courses. B.C.S., and all Post-graduation courses are on non-grant basis. We have also started B. Voc. Degree course in 'Rural Health and Sanitation'

in 2018-2019. All UG and PG programmes provide 06 departments of Science, 11 departments of Arts, 01 department of Commerce. All departments have computer facility with Internet. All departments are connected by PBX (Intercom). The college has Biometric Attendance System for staff.

New methodologies are adopted in Teaching-Learning Process. The teachers make use of ICT based teaching aids. We have separate computer laboratories for teachers and students. Crash Course in Spoken English, Course in Prayojanmoolak Hindi and English Language Laboratory help to develop communication skills of students. In near future we plan to open facility of virtual classrooms. Apart from teaching, the teachers also conduct co-curricular activities and extension activities for the benefit of students and society. The teachers regularly counsel with students regarding their academic or personal problems. All teachers are involved in students' mentoring process. The Parent-Teacher panel of our college watch and analyze progress of each student. Our students participate in workshops, students' seminars, quiz, short projects, assignments etc. The students have also won prizes in Central Youth Festival, University, State, National sports meets. Our students actively participate in AVHAN, AVISHKAAR competitions. The departments organize best handwriting, slogan, essay writing, poetry reading, rangoli, henna, drawing, debate, elocution etc. competitions to shape overall personalities of our students. All departments organize visits, study tours, industrial visits every year.

We provide the best infrastructure facilities in rural area. We have auditorium, seminar/recreation hall, media hall, indoor sports complex, outdoor sports facilities, women's hostel, library with separate reading rooms for boys and girls having seating capacity of 50. We have general garden, botanical garden. The campus is embellished with 550+ plants. Our eco-friendly campus comprises Solid Waste Management, Rain Water Harvesting projects.

1. COLLEGE VISION & MISSION:

QUALITY POLICY

Our Institution strives for national recognition through systematic and meticulous transformation of our students into highly motivated graduates enriched with higher knowledge, profound wisdom, professional skills, built-in dynamism and humanism.

MOTTO

"EDUCATION FOR ENLIGHTENMENT"

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1.2 CORE VALUES

- Pursuit of Excellence
- Integrity and honesty
- Diversity and Mutual Respect
- Expand horizons of knowledge
- Transparency in Governance
- Societal Commitment
- Lifelong Learning
- Ethical Behavior
- Service to mankind
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- Education with love and humanity
- Skill based education

1.3 Perspective Plan

- To organize seminars, conference, workshop by various dept
- To promote the faculty members for more research work
- To recognize more laboratories as research center for Ph.D. Students
- To introduce more P.G. Courses in various subjects
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- To Organize various training programme for teaching & non-teaching staff regarding software operating.
- Infrastructure facilities will be improved by increasing number teaching halls & laboratories
- Library facility will be enhanced by new books & E-sources
- To organize campus interview for placement of students frequently in the college campus
- by industries, companies & Banks etc.
- To motivate the faculty for minor & major research projects & to provide more infrastructural facilities.
- Sport facilities & Equipment's to be made available in the auditorium for indoor games.
- To develop entrepreneurship skills among students.

Vasantdada Patil Arts, Commerce, & Science College, Patoda demonstrates its commitment to implement sustainable solutions in different ways. It has taken a number of positive steps to reduce possible environmental impact. The management is keen on accepting new ideas of resource management.

The environmental assessment of an educational institute being carried out in different phases.

- To establish a baseline of existing environmental scenario
- To provide basis for improved sustainability
- To promote environmental awareness through the assessment process
- To create an educational document for future use

In view of making green and eco-friendly campus the organization has taken an important step to understand the environmental parameters within the campus. This report serves to highlight, the efforts towards greener campus. The first step taken in this direction is establishing a baseline of existing condition.

The different environmental criteria's with their current status, action being taken by an institution and effective ways to improve the actionable points being highlighted in this report. Sensitization of all the stakeholders of an institution towards eco-friendly campus is very crucial at this juncture.

2. Environmental criteria's

2.1. Know green and think green is promoted on the campus

Governance and Leadership

The college has Clear policies, principles or goals that provide direction for staff, administrators, and other members of the campus community. Clear decision-making power and reporting mechanisms with responsibilities to monitor, report, give advice about, and promote action and awareness around environmental sustainability.

Action:

The College currently has an Environmental Advisory Committee (EAC), which is composed of members each from different stake holders of the college. It is co-chaired by a student and by the head of facilities. The EAC has been very active in discussing and advising the College on campus sustainability issues.

Environmental Advisory Committee (EAC) – (2020- 2021)

SN	Name of the Committee Member	Designation
1	Dr. B. V. Rakh	Chairman, (Principal)
2	Dr. G. L. Pachkore	Coordinator
3	Dr. J. J. Kshirsagar	Member
4	Dr. B. J. rathod	Member

5	Dr. L. S. Gadekar	Member
6	Dr. Pradeep ghumbre	Member
7	Dr. Chandrashekhar Bansode	Member
8	Mr. Ashok Pawar	Non-Teaching representative
9	Mr. Shivaji Gharat	Parent representative
10	Mas. Misal Tukaram	Boys representative
11	Miss. Pooja Sangle	Girls representative

Since commencement, the committee has discussed such topics as campus energy use, recycling, reduce use of plastic, composting of dining hall waste, saving water and sustainable use of resources.

2.2 Dining

The college campus accommodates 1256 members including students and staff. The college authorities have appointed a food supply vender within the campus area. Due to Covid-19 pandemic the entire function of the college was through online platform, so there was no physical utilization of the campus.

Action: The waste dumping site has been created and then it being collected by Nagarpanchayat system of garbage collection to collect this organic waste from dining facilities on daily basis. Only few staff members were present in the campus due to Covid-19 pandemic.

Preparation for Reformation of vermicomposting pit was started.

2.3 Water conservation and prevention of water wastage

The source of water for the college is Nagarpanchayat water supply for drinking and ground water (Bore well) for other uses. The college has water filters with 250lit/hour

capacity and filter water supplied through 2 water coolers within the premises for drinking purposes. The water quality monitoring is being done regularly. The water consumption within the campus is controlled by campus authority. The storage tanks are as follows

Underground tanks: 1: capacity –15,000 lits

Overhead tank 8: Capacity - 1000 lits each

So total water storage capacity 23,000 Litters

The approximate water uses on any working day during work hours can be summarized as follows.

Due to Covid-19 pandemic the entire function of the college through online platform, so there was no physical utilization of the campus.

S.No	Activity	Utilization (Student + staff)	Total lits(Approx.)
1	Drinking	x approximately 2lit	200
2	Toilet	x approximately 3lit	600
3	Laboratories	5 labs x 20 students x approximately 5lits x 2 batches	500
4	Watering plants		1000
5	Spraying on play ground		
6	Canteen area		500

Action:

- 1) Maintenance activities being carried out in this period.

2.4 Solid waste management

Due to Covid-19 pandemic the entire function of the college was through online platform, so there was no physical utilization of the campus.

S.No	Activity	Utilization (Student + staff)	Total kg.
1	Classroom 25 + Seminar Hall 1 + Staffroom 3 + Girls & Boys common room 2 + Exam section 1 + Reception area 1 + Sport complex Auditorium)1	Dustbin x 300gms	3 kg approximately
2	Laboratories 8 + Chemical store 1	Labs x 250 gms	1 kg approximately
3	Canteen	Students & staff used for snacks or meal	4 kg approximately
4	Sweeping and cleaning	Campus	5 kg approximately
5	Admin block	All offices	1 kg approximately

Action:

1) Maintenance activities were carried out in this period.

Hazardous waste management

Due to Covid-19 pandemic the entire function of the college was through online platform, so there was no physical utilization of the campus.

Action:

Maintenance and cleaning carried out during this period.

E-waste management

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2.5 Carbon dioxide neutrality

Carbon dioxide neutrality has been maintained on the campus by developing greenery with available plants. The 30 to 40 % area is occupied by greenery by different type of plants. The list attached with its significance.

This includes the plants, greenery and sustainability of the campus to ensure that the buildings conform to green standards. This also helps in ensuring that the Environmental Policy is enacted, enforced and reviewed using various environmental awareness programme.

Campus is located in the vicinity of various (species) trees.

Action:

1) The campus is situated in such an area that there is no any other type of disturbance.

2) An indoor atmosphere is designed to be well ventilated that airflow mixing of fresh/outdoor air is continuous.

3) Specific strategies and plans in place in order to reduce transportation impacts.

a) The layout of the campus is relatively open with much green space, thus Keeping the amount of impermeable surface area below 50%

b) The college has a canopy of trees and plants that make the environment healthy.

c) Plants were selected with low maintenance requirements and that otherwise fit the local ecosystem (i.e., provide habitat for native species of insects and birds).

d) At present the indigenous trees are dominant all over the campus. The medicinal plants planted and maintained in the campus. Some plants mentioned in list of medicinal plants are really important. The college has developed and maintained

“Environment Interpretation Centre” which is being utilized for educational and research purpose.

2.6 Campus Culture and Environmental Awareness

The college has aim to educate all students in the area of environmental studies in an interdisciplinary framework, and provide adequate training for those students who wish to pursue environmental research in accordance with engineering or environmentally-related career choices.

Action:

- 1) College has developed a clear assessment of the environmental studies curriculum for faculty, students, and administration.
- 2) Due to Covid-19 pandemic the entire function of the college was through online platform, so there was no physical activity in the campus.
- 3) College has developed its own environmental policy for the campus and displayed it everywhere.

Environment Policy

We are committed to protect Environment, Occupational Health and Safety of all through our work and activities. We Endeavour to...

Vasantdada Patil college is committed to reduce its impact on the environment. We will strive to improve our environmental performance over time and to initiate additional projects and activities that will further reduce our impacts on the environment.

Our commitment to the environment extends to our students, our staff, and the community in which we operate. We are committed to:

- 1) Comply with all applicable environmental regulations.
- 2) Prevent pollution whenever possible.
- 3) Minimizing waste by reviewing purchasing practices and segregating

wastes for reuse and recycling.

- 4) Purchase and use environmentally responsible (recyclable, refurbished, etc.) products from environmentally responsible suppliers (i.e. suppliers who emphasize the need for renewable energy supplies).
- 5) Train all of our staff on our environmental program and empower them to contribute and participate.
- 6) Continually improve over time by striving to measure our environmental impacts and by setting goals to reduce these impacts each year.

As per the policy guidelines the institution is implementing

- 1) College is implementing Environmental Module as prescribed by the Dr. Babasaheb Ambedkar, Marathwada University, Aurangabad (M.S.). **(Online mode)**
- 2) Organization of various seminars & workshops on regular basis

3. General Recommendations:

- The College can develop mechanism for monitoring and reporting of energy, water and other resource usage.
- College should continue to work towards composting post-consumer food waste generated by the dining areas. In order to help reduce the large amount of post-consumer food waste, the College should provide better labeling and more self-service options and work to educate students about food waste.
- The college should continue to stay with current chemical products that may have a minimal environmental impact and make this an explicit formal goal.
- Any future increases in servers should be consolidated in one “machine room,” rather than building another on campus with the same high maintenance

requirements. Additionally, when the College's phone system is replaced, the central system could also be consolidated in this space.

- The EAC should continue making decisions with respect to continuous input, interests and commitments of the students, participating faculty, and administration.
- Display health, hygiene, general maintenance and safety should be maintained
- Chemistry department should encourage "Green Chemistry" program.
- Environment Awareness programmes and Environmental field visits should be arranged on more frequent basis for Hands on Experience.

4. Conclusions

The findings of this report show that the college performs fairly well on sustainability issues. The college does consider the environmental impacts of most of its actions and makes a concerted effort to act in an environmentally responsible manner. In conversations with faculty, staff, and administration at the college, a major theme has been the improvements made over the last many years in how the college performs environmentally.

Even though the college does perform fairly well, the recommendations in this report highlights many ways in which the college can work to improve its actions and become a more sustainable institution.

In this section, the recommendations are ranked in terms of priority.

4.1 The high priority recommendations are:

- Continue working towards composting the post-consumer food waste generated by the dining halls.

- Adopt the proposed Environmentally Responsible Purchasing Policy, and work towards creating and implementing a strategy to reduce the environmental impact.
- With regards to the concerns mentioned in this report, the College should consider adopting specific goals and targets in its pursuit of sustainability.

4.2 The medium priority recommendations are:

- Look towards meeting different environmental standards.
- Develop explicit policies concerning the impact of new construction on impervious surface area and runoff.
- Continue to support the work of the EAC and should ensure that its recommendations are considered carefully and in a timely manner through the appropriate chain of command.

4.3 The minor and future concerns are:

- Encourage student project on environmental footprint for College.
- Continue expanding research program to better educate students about natural history and college role in preserving biodiversity and optimum utilization of natural resources.
- Increase price for parking charges and implement it across all types of employees, faculty, and students in order to encourage use of public transport.

Annexure No1.



Work on final campus layout during lockdown period (Covid – 19)

Annexure 2

Commitment towards ecofriendly actions

Vasantdada Patil Arts, Commerce, & Science College, Patoda



Maintenance work for greener campus during lockdown (Covid-19)



Maintenance work in laboratories for effective implementations of more eco-friendly actions



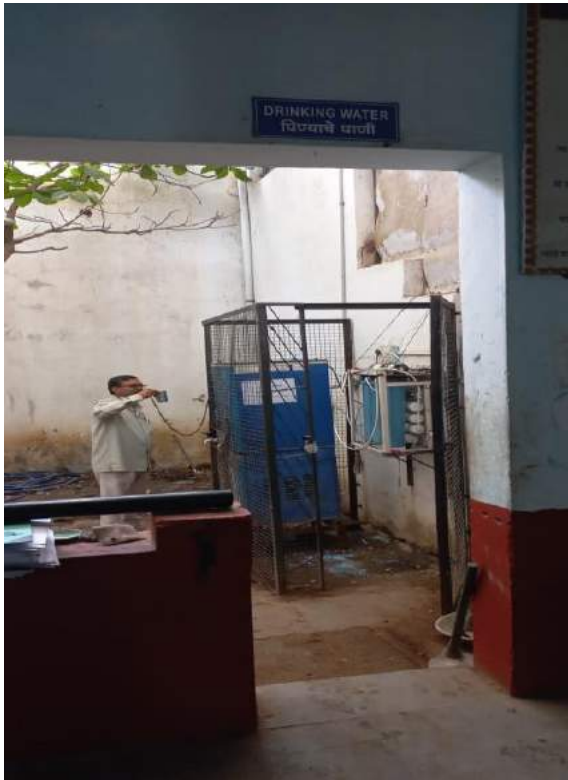
Well maintained and ventilated Classrooms, Computer Lab, Admin Room

Annexure 3

Commitment towards sustainable use of resources



Completion of Rain water Harvesting System



Maintenance of Water supply and quality systems during lockdown





Underground water tank



Completion of Scientific Composing pit during lock down period (Covid)



Vermicomposting plant



Installation of Sanitary pad vending machine for girls



Work on Interactive walls in the college premises, during lock down period (Covid)



E-waste management facility created during lock down period(Covid)



Dustbind kept for Solid waste Management



**Tree plantation In campus and other places.
200+ more plants are planted in the
college campus. The campus is polythene
free**



Environment Study tour



Visit to vermicompost plant



Study Tour at Athwad Biodiversity Park. (Student And Faculty Members)

List of plants in the Campus

Sr.no	Local name	Botanical Name	Family	Total no of Plants
1.	Aawala	Eblica officinalis L.	Euphorbiaceae	06
2.	Adulsa	Adhatoda vasika Nees.	Acanthaceae	01
3.	Amba	Mangifera indica L.	Anacardiaceae.	15
4.	Arjun	Terminalia cuneata Rotz.	Combretaceae	03
5.	Ashok	Polyalthia longifolia (Sonner)	Annonaceae.	57
6.	Badam	Teminalia catappa L.Syst.	Combretaceae	24
7.	Bamboo	Bambusa vulgaris schrad.	Poaceae	03
8.	Bel	Agle marmelons(L)	Rutaceae	04
9.	Booch	Millingtonia hotensis	Bignoniaceae	07
10.	Bor	Ziziphus mauritiana Lark	Rhamnaceae	02
11.	Kashid	Cassia simea L.	Cesalpinaceae	28
12.	Cherry	Prunus avium van.	Rosaceae	06

13.	Chikoo	Manilkara zapota L.	Sapotaceae	04
14.	Chinch	Tamarindus indica L.	Fabaceae	06
15.	Dalimb	Punica granatum L.	Punicaceae	04
16.	Gulab	Rosa indica L.	Rosaceae	06
17.	Gulabi kaneher	Nerium indicum Mill	Appocyanaceae.	06
18.	Gulmohar	Delonix regia Ref.	Legumnosaeae	12
19.	Jai	Jasminum officinale .L.	Oleaceae	01
20.	Jamphul	Syzygium cumini (L).	Myrtaceae.	09
21.	Kadamb	Neolamarckia cadamba (Roxb).	Rubiaceae	05
22.	Kadhipatta	Murraya koenigii L.	Rutaceae.	03
23.	Kadunimb	Azadirachta indiac.Juss.	Meliaceae	46
24.	Kagadi phul	Bougainvillea spectabilis L.	Nyctaginaceae	01
25.	Kajurina	Casuarina equisetifolis L.	Casuarinaceae	02
26.	Karanji	Holoptelea interifolia	Ulmaceae	17
27.	Korphad	Aloe vera .L.	Liliaceae.	09
28.	Limbo	Citrus aurantifolia (christm &panz)	Rutaceae.	02
29.	Mogra	Jasminum sambacL.	Oleaceae.	02
30.	Mohaguni	Swietenia macrophylla	Meliaceae	07
31.	Nilgiri	Ecalyptus globulus Labill.Rel.	Myrtaceae	11
32.	Padhara kaneher	Nerium .oderum .Mill.	Appocyanaceae	10
33.	Pandhara chapha	Plumeria alba .L.	Appocyanaceae.	06
34.	Parijatak	Nyctanthes arbor-tristis	Oleaceae	02
35.	Peru	Psidium guajava .L.	Myrtaceae	03
36.	Pimpal	Ficus religiose L.	Moraceae	09
37.	Raber tree	Ficus elastic roxb.	Moraceae	02
38.	Ramphal	Annona reticulate L.	Annonaceae	05
39.	Sadaphuli	Hibiscus rosa-sinensis	Malvaceae	17
40.	Sag	Tectona grandis L.	Verbenaceae L.	06
42 .	Saptiparni	Alstonia scholaris	Apocyanaceae	20

43.	Satavari	Asparagus gonoclads	Liliaceae	01
47.	Seetaphal	Annona squamosa L.	Annonaceae	02
45.	Shriphal	Cocus nucifera L.	Aeracaceae	02
46.	Silver oak	Grevillea robusta	Proteaceae	05
44.	Sisoo	Dalbargia sisoo L.	Fabaceae	28
48.	Sonchapha Lalachapha	Plumeria rubra L.	Apocyanaceae	02
49.	Thuja	Thuja occidentalid	Cupresaceae s	07
50.	Ticoma	Ticoma stans L.	Bigninaceae	17
51.	Tulas	Ocimum toniforum L.	Lamiaceae.	04
52.	Umber	Ficus racemosa L.	Moraceae	03
53.	Wad	Ficus benghalensis L.	Moraceae	04
54.	Phycas	<i>Ficus benjaminia</i>	Moraceae	02
55.	Rat rani	<i>Cestrum nocturnum</i>	Solanaceae	01
	Total			468



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ENERGY MANAGEMENT ASSESSMENT (2020-2021)



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This report can be a management tool comprising a systematic, documented, periodic and objective evaluation of how well environmental organization, management and equipment are performing with the aim of safeguarding the environment and natural resources in its operations/projects." In view of making green and eco-friendly campus the organization has taken an important step to understand the environmental parameters within the campus. This report serves to highlight, the efforts towards greener campus. The first step taken in this direction is establishing a baseline of existing condition.

An energy audit is an inspection and analysis of energy flows in a building with the objective of understanding the energy efficiency of building being audited. Typically, an energy audit is conducted to seek opportunities to reduce the amount of energy used by the facility without negatively affecting the comfort of the facility or the

production/output in case of a business. This includes identifying the systems and areas of opportunity that will have the greatest impact in improving comfort, indoor air quality, durability & reliability.

2.1 Campus planning and construction

Energy Conservation

The college campus has planned in 10119.19 Sqm. quite significantly that, there is enough open space, greenery, playground total and 14 ventilated spacious classrooms, 1 sport auditorium and 1 seminar hall to accommodate students. The build-up area is 3259.76 Sqm. The energy utilization pattern of college on any working day is as follows.

Instructional Area:

SN	Room Type (Mention Class Room/ Lab/Toilet, etc.)	Completion of Flooring	Completion of Walls and Painting	Completion of Electrification and Lighting
1	Classrooms	Yes	Yes	Yes
2	Seminar Hall	Yes	Yes	Yes
3	Laboratory Physics	Yes	Yes	Yes
4	Laboratory Chemistry	Yes	Yes	Yes
5	Laboratory Botany	Yes	Yes	Yes
6	Laboratory Math's	Yes	Yes	Yes
7	Laboratory Computer	Yes	Yes	Yes
8	Laboratory Zoology	Yes	Yes	Yes
9	Laboratory Home science	Yes	Yes	Yes
10	Sport Department	Yes	Yes	Yes
10	Examination department	Yes	Yes	Yes

Administrative area:

SN	Room Type (Mention Class Room/ Lab/Toilet, etc.)	Completion of Flooring	Completion of Walls and Painting	Completion of Electrification & Lighting
1	Central Store	Yes	Yes	Yes
2	Faculty Room	Yes	Yes	Yes
3	Security	Yes	Yes	Yes
4	Cabin for Head of Dept	Yes	Yes	Yes
5	Office All Inclusive	Yes	Yes	Yes

Amenities area:

SN	Room Type (Mention Class Room/Lab/Toilet, etc.)	Completion of Flooring	Completion of Walls and Painting	Completion of Electrification & Lighting
1	Canteen	Yes	Yes	Yes
2	Girls Common Room	Yes	Yes	Yes
	Boys Common Room	Yes	Yes	Yes
3	Toilet	Yes	Yes	Yes
4	First aid cum Sick Room	Yes	Yes	Yes
5	Sport Auditorium	Yes	Yes	Yes
6	Seminar hall	Yes	Yes	Yes

Circulation Area:

SN	Room Type (Mention Class Room/Lab/Toilet, etc.)	Completion of Flooring	Completion of Walls and Painting	Completion of Electrification & Lighting
1	Corridors	Yes	Yes	Yes
2	Staircases	Yes	Yes	Yes

Electricity utilization pattern

Activity	Utilization
Classroom - 25, Departments – 22, Laboratories – 5, Computer lab & all Departments, Admin block, Principal office etc., Auditorium, Exam Section, Boys & Girls common room, Sick room, Library etc.	AC - 1, Fan-104, Wall fan -0, LED Tube light – 68, LED bulb – 131, Corridors & Common area lights -10, Computers - 94, Printers - 5, Server – 1, Xerox machine - 4, Scanner - , Projector - 8, Refrigerator- 5, Auto clave-, Microwave-, water Purifier - 1, Water Cooler - 2, Water Pumps - 1, CCTV – ,

S.No	Activity	Utilization	Total units.
1	Classroom 25	1 Tubes, 1 Fans, /class	1 unit approximately
2	Departments - 22	1 Tubes, 1 Fans, 1 computer/department + printer, Xerox machine	2 units approximately
3	Laboratories - 5	Laboratory instruments: Hot air oven-, Centrifuge-1, Incubator- , Hot plate- 1,	2 units approximately

		Exhaust fan-1 , Fridge- 1 printer	
4	Computer lab	Computers-65, server-1, UPS, Printer-6, Projector- 1, Inverter Batteries- etc.	3 units approximately
5	Admin block	Tubes, Fans, /section + computer-2, printer-2, Inverter- 4, Xerox machine-1, Inverter Batteries- 4	2 units approximately
6	Water supply pumps, water cooler, bore-well water filter, CCTV-8, Common lights	Pumping and circulation water in the campus	2 units approximately
			12 units approximately

Action:

- 1) As per the structure of the building the chemistry laboratories are placed in such a way that hazardous fume discharges outside the building.
- 2) Height and size of the windows in classrooms and laboratories provide adequate ventilation. There is no heat trapping mechanism and glare due to excessive use of glass in the campus.
- 3) There is less construction cost due to well-designed structure. Interaction space for the students is maintained, thus utilizing the optimum space.
- 4) There is consideration for disaster management.
- 5) Strictly turning off monitors, fan, tube lights, and laboratory instruments after the work.
- 6) Organizing lectures on energy conservation in order to give awareness to the students.
- 7) Perhaps the most significant improvement has been the general switch from CRT (cathode ray tube) monitors to LED (Light Emitting Diode display)/flat panel display monitors. This change occurred in response as an initiative for meeting Kyoto Protocol

standards. Although over twice as expensive up front, LCD monitors are estimated to use 40-60% less energy overall than CRTs.

- 1) All computers purchased by the college have an Energy Star rating, which is beginning to be a standard requirement for computers.

Retired computers and other equipment are sent to e-storage room and then it is collected by vendor.

- 2) During practice session for computer course the printouts being taken on one sided used paper.
- 3) All tubes and bulbs being used of LED types
- 4) Due to ample cross ventilation and windows, there is very less electricity consumption during day time.
- 5) Newly installed street solar lamp on experimental basis.

Conclusion:

The findings of this report show that the college performs fairly well on sustainability issues. The college does consider the environmental impacts of most of its actions and makes a concerted effort to act in an environmentally responsible manner. In conversations with faculty, staff, and administration at the college, a major theme has been the improvements made over the last many years in how the college performs environmentally.

Energy efficiency is the need of future. The organization shows a potential to become energy efficient institution, which can be collective step toward the direction of renewable energy, environmental protection, and sustainable living. Having such an organization helps management reduce their bills and provides an excellent investment.

Suggestion:

Routine energy auditing will help organization to

- (i) Map energy usage within the organization
- (ii) Conserve energy,
- (iii) Improve energy efficiency and thereby
- (iv) Maximize their institutional energy and cost savings.

Annexure**Energy Policy**

NSSR's Vasantdada Patil Arts, Commerce, & Science College, Patoda is dedicated to the responsible and sustainable consumption of energy. We dedicated ourselves for

- Reduction of energy costs in the premises.
- Reduction of dependability on exterior energy sources.
- Reduction of environmental damage and pollution.
- Reduction of damage to the environment associated with the exploitation of resources
- Reduction of energy bills.
- Increase the life span of the equipment in college premises.
- Increase in cost-effectiveness through optimization of energy expenditure

