GREEN AUDIT REPORT

Jagan Nath University

Campus-I : NH-12, Chaksu Bypass, Tonk Road, Jaipur (Rajasthan), PIN-303901

Campus-II : IP-2&3 Sitapura Industrial Area, Jaipur (Rajasthan), PIN-302022

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Our special thanks are due to:

- Prof. H.L. Verma, (President) Vice-Chancellor of Jagan Nath University
- Sh. Tanmay Pattanayak, Registrar of the university
- Green Audit Co-ordinator –Mr. Jitendra Singh Rajawat, Estate Officer
- University Green Audit Team
  - Dr. Vaishali Sharma, Pro President (Pro Vice-Chancellor)
  - Dr. Anil Sharma, Dean Academics
  - Dr. Ranjeeta Soni, Professor Environment Sciences
  - Dr. Amit Kumar Saraf, Associate Professor E&T
  - Mr. Ghanshyam Vyas, Farm Manager

For giving us necessary inputs to carry out this very vital exercise of Green Audit. We are also thankful to other staff members who were actively involved while collecting the data and conducting field measurements.

DISCLAIMER

Supreme Enviro Engineers & Consultants Green Audit Team has prepared this report for **Jagan Nath University** based on input data submitted by the representatives of university complemented with the best judgment capacity of the expert team.

While all reasonable care has been taken in its preparation, details contained in this report have been compiled in good faith based on information gathered.

It is further informed that the conclusions are arrived following best estimates and no representation, warranty or undertaking, express or implied is made and no responsibility is accepted by Audit Team in this report or for any direct or consequential loss arising from any use of the information, statements or forecasts in the report.

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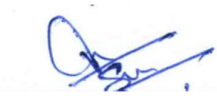


Report by: Vijay Singh (Lead Auditor)
CEA (EA -13778)

CONTEXT

Green auditing is systematic assessment of day to day activity with reference to resource utilization and waste management. It will assist to find out the ecofriendly and non ecofriendly practices on the campus.

The main objective of green audit varies with the operational activities of the organization. In case of higher educational institutes like universities; green audit is an internal requirement. It is a path for management of environment to make the alterations in ongoing practices. It also promotes a good environmental management system and raises the awareness about the environmental conservation and its long term benefits.

Higher Educational Institutions as a part of their Corporate Social Responsibility should ensure that they contribute towards the reduction of global warming through Carbon Footprint reduction measures.

In the light of same, the University Management decided to conduct an external Green Evaluation by a competent Green Auditor along with a Green Audit Assessment Team headed by Prof. Vaishali Sharma, Pro President (Pro Vice Chancellor), Jagan Nath University.

Green Audit focuses on the Green Campus, Waste Management, Water Management, Air Pollution, Animal Welfare, Energy Management, Carbon Footprint, Environmental Compliances etc. being implemented by the University Management.

The concept, structure, objectives, methodology, tools of analysis, objectives of the audit are mentioned below in the report.

CONCEPT

The term 'Environmental audit' or 'Green audit' means differently to different people. Terms like 'assessment', 'survey' and 'review' are also used to describe similar activities. Furthermore, some organizations believe that an 'environmental audit' addresses only environmental matters, whereas others use the term to mean an audit of health, safety and environment-related matters. Although there is no universal definition of Green Audit, many leading companies/institutions follow the basic philosophy and approach summarized by the broad definition adopted by the International Chambers of Commerce (ICC) in its publication of Environmental Auditing (1989).

The ICC defines Environmental Auditing as:
"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."

The European Commission, in its proposed regulation on environmental auditing, has also adopted the ICC definition of Environmental Audit. However, the outcome of Green Audit should be established with concrete evidence that the measures undertaken and facilities in the institution under green auditing.

INTRODUCTION

A Nation's growth starts from its educational institutions, where the ecology is thought as a prime factor of development associated with environment. Educational institutions now a day are becoming more sensitive to environmental factors and more concepts are being introduced to make them eco-friendly. To preserve the environment within the campus, various viewpoints are applied by the several educational institutes to solve their environmental problems such as promotion of the energy savings, recycle of waste, water reduction, water harvesting etc. The activities pursued by colleges can also create a variety of adverse environmental impacts.

Green auditing is a process whereby an organization's environmental performance is tested against its environmental policies and objectives. Green audit is defined as an official examination of the effects a college has on the environment. As a part of such practice, internal environmental audit (Green Audit) is conducted to evaluate the actual scenario at the campus.

Green audit can be a useful tool for a college to determine how and where they are using the most energy or water or resources; the college can then consider how to implement changes and make savings. It can also be used to determine the type and volume of waste, which can be used for a recycling project or to improve waste minimization plan. Green auditing and the implementation of mitigation measures is a win-win situation for all the college, the learners and the planet. It can also create health consciousness and promote environmental awareness, values and ethics. It provides staff and students better understanding of Green impact on campus.

Green auditing promote financial savings through reduction of resource use. It gives an opportunity for the development of ownership, personal and social responsibility for the students and teachers. Thus it is imperative that the college evaluate its own contributions toward a sustainable future. As environmental sustainability is becoming an
increasingly important issue for the nation, the role of higher educational institutions in relation to environmental sustainability is more prevalent.

A clean and healthy environment aids effective learning and provides a conducive learning environment. There are various efforts around the world to address environmental education issues.

Environmental Management Systems (EMS) is very popular in the industrial sector, but the general belief is that EMS is something pertaining to industries only. Other parts of the world have started adopting compatible environmental management systems either voluntarily or for promoting standards by external certification. International environmental standards do not suit the existing Indian educational system. Hence EHS Alliance has developed a compatible system by developing locally-applicable techniques.

A very simple indigenized system has been devised to monitor the environmental performance of educational institutions. It comes with a series of questions to be answered on a regular basis. Environmental conditions may be monitored from angles that are relevant to Indian requirements, without stress on legal issues or compliance.

This innovative scheme is user-friendly and totally voluntary. The environmental monitoring system helps the institution to set environmental examples for the community and to educate young learners. It can be adapted to urban and / or rural situations.

OVERVIEW OF UNIVERSITY

Jagan Nath University has been established in the year 2008, by an Act (Act No. 19 of 2008) of the Rajasthan State Legislature and is approved under section 2(f) of UGC Act 1956, vested with the authority to award Degrees, Diplomas and Certificates. The University has been established to cater to the growing needs of higher education in the country. One of the primary objectives of this University is to develop and make available trained manpower to accelerate sustainable economic growth in the current highly competitive global environment.

In order to face the challenges of globalization and liberalization in the field of higher education, the University has endowed its faculty and students with modern technologies, facilities and resources so as to enhance their competencies and quality of teaching so that they are able to contribute towards growth of the Nation. It is true that conducive environment with updated technological inputs and latest information helps not only providing quality education but also provide human touch and ensures fervent dedication to the cause of the nation and the society.

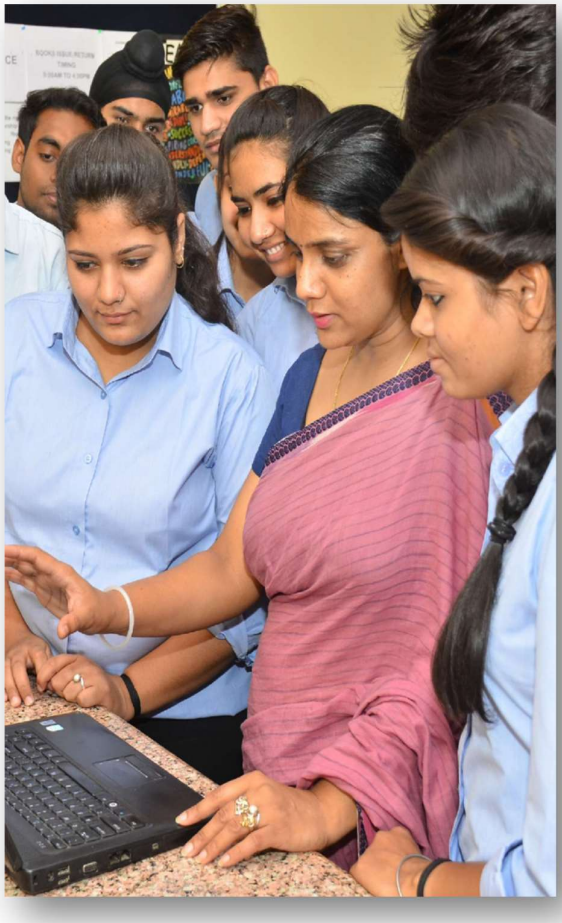
The main campus of the University is, strategically situated on National Highway 12, Chaksu bypass, Tonk Road, Jaipur, The campus aptly called 'Chaksu Campus', is spread over a sprawling area of about 42 acres of land comprising magnificent buildings, lush green lawns and 33.4 acres vibrant Farmland with over 3000 people, dedicated to make the University a Magnum Opus in the education world.

The second campus of the University is situated on Sitapura Industrial Area, within Jaipur city. This campus aptly called 'Sitapura Campus' and spread over 10.5 acres. During its journey of 12 years the University has developed robust infrastructure in the form of teaching blocks, administrative block, central library, fully equipped labs, IT infrastructure, incubation centre, hostels, staff quarters, auditorium, canteen, play grounds, gymnasium, farm research center, poly house, medical facility and others.

The University is offering UG and PG programs in the area of Engineering & Technology, Architecture, Management, Law, Agriculture, Physical Sciences, Pharmacy, Physiotherapy and Education. The outcome based curriculum for the programs are regularly updated and new innovative programs introduced as per the market trends. Adequate number of well qualified faculty is available to implement the academic programs and faculty retention ratio is quite high. During its short journey, the University has emerged as a premier institution to inspire, motivate and nurture professional excellence among students and faculty.

The University has been awarded with the following prestigious awards in 2019-20:

- Awarded as a Recognized Social Entrepreneurship, Swachhta and Rural Engagement Cell by Department of Higher Education, Government of India.
- Awarded as “Best Private University with Academic Excellence in Rajasthan” in Iconic Education Summit & Award-2019.
- Awarded as “Excellence in Academics & Best Private University” by Myfm-94.3
- The Institute Innovation Council (IIC) has been awarded 3 star rating by MHRD, Govt. of India
- Awarded Atal Achievement Award-2020 for achieving “Best Private University in Rajasthan with Excellence in Innovative Education”



The University has created a proper framework and action plan for improving facilities at campus in the areas of sanitation and hygiene, waste management, vermicompost plant, water management, energy conservation, plantation for green and sustainable environment and conservation of natural resources. A solar Plant of 200 kw capacity has been installed, Sewerage Treatment and Rain Water Harvesting plants are in place.

Effective teaching-learning process, adequate industry exposure, integration of skill education in curriculum design, holistic education, research and project-based learning, outcome based assessments, etc. are the main pillars of academic system of this University. The research journal of the University has received approval from the National Science Library in July 2020, bearing ISSN No 2582-6263.

The academic system of the University is comprehensive, dynamic and vibrant incorporating the latest policy framework of the UGC and Ministry of Education, supported by modern infrastructure and extensive use of technologies for promoting quality education, employability, creativity and innovations and human values among students to produce good citizenship and relevant skills. The University aspires to be a centre of excellence in modern context in the days to come.

FACULTY/ DEPARTMENTS OF THE UNIVERSITY

- **Faculty of Management Studies**
- **Faculty of Engineering & Technology**
- **Faculty of Sciences**
- **Faculty of Education**
- **Faculty of Law**
- **Faculty of Medical, Paramedical & Allied Health Sciences**

Vision

To develop the University as a Centre of Excellence for higher education and research committed towards quality education, skill development, industry integration and holistic eco-system for global competencies among youth and sustainable development of the Nation.

Mission

The University aspires to achieve its vision by:

1. Innovative, job-oriented and professional academic programs for capacity building in view of the emerging trends of the economy.
2. Enable students equipped with knowledge and competences to perform successfully in modern organizations in India and abroad.
3. Training students in generic and life skills in addition to core discipline subjects to enhance employability in job market and for entrepreneurship.
4. Engaging students and faculty in research, extension services, consultancy, community development projects, curricular and extra-curricular activities for holistic education.
5. Promoting use of digital technologies and self-learning resources like MOOCs, Coursera, Virtual Labs, Online Resources, Self-Learning, etc. for enriching information and knowledge.
6. Inculcating a culture of excellence among students and faculty.
7. Developing a sense of ownership and pride among employees to achieve organizational targets as well as their personal goals.
8. Developing curriculum, training and internship programs to enhance global competencies of absolvents.
9. Blending skill, entrepreneurship and capacity building for sustainable development coherent with environmental and economic sustainability.

OBJECTIVES

The purpose and focus of the audit was mainly to review all environmental aspects in university which included following:

1. Review of all environment related applicable legal requirements and other requirements to which organization subscribes. These include regulatory compliance documents like statutory permissions / NOCs from statutory authorities, Pollution control board related norms, Emergency Preparedness Plan, and Spill Prevention Plan etc.
2. All environmental monitoring reports pertaining to air pollution, water pollution, noise pollution and status of results against applicable standards.
3. Examination of existing environmental management practices and procedures, including those associated with procurement and contracting activities.
4. Monitoring and review of all preventive maintenance of equipments connected with direct or indirect pollution.
5. Chemical management like storage, handling and use of chemicals, special arrangement for flammable chemical, and consumption tracking etc.
6. Waste management at site that includes storage and disposal, use of PPEs, hygiene conditions, any means of recycling through vendors. Hazardous waste and e-waste management and disposal in compliance with applicable norms.
7. Review of all critical areas and production processes in premise that has connection with environmental aspects and impacts.
8. Review of all the systems and processes in relation with environment that is part of environmental management system.
9. Review of environmental aspects including those associated with normal operating conditions, abnormal conditions including start-up and shut down, and emergency situations and accidents.
10. Review of overall environmental performance and practices of contractors and suppliers.
11. Review of extraction and distribution of raw material and natural resources. Distribution will include use and end life of product.
12. Evaluation of organization performance against the management objectives and targets in relation with environment.
13. Analyzing the awareness level in premise for environmental policy and objectives which includes competency, awareness and understanding of roles and responsibility.

14. Operational control of all those operations that are associated with its identified environmental aspects and to check that control is effective in reducing the adverse impact associated with them.
15. Evaluation of previous emergency situations and accidents and review of emergency preparedness and response plan.

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
- Reduction in natural resource use and Economic savings through a reduction in resource use
- Curriculum enrichment through practical experience
- Development of ownership, personal and social responsibility for the university campus and its environment
- Enhancement of university profile towards Green thinking and sustainability
- Developing an environmental ethic and value systems in young people

To accomplish these objectives, we analyzed resource use and the campuses environmental impact through a series of environmental or sustainability lenses. It is hoped that the results presented in this audit will serve as a guide for educating people on the current practices and resource use at Campus as well as spawn innovation and new initiatives.

AUDIT PARTICIPANTS

On behalf of University:

Name	Position/Department
Prof. H.L. Verma	President (Vice-Chancellor), Jagan Nath University
Dr. Vaishali Sharma	Pro President (Pro Vice-Chancellor), Jagan Nath University
Mr. Tanmay Pattanayak	Registrar, Jagan Nath University
Mr. Jitendra Singh Rajawat	Estate Officer

Audit was conducted on behalf of Supreme Enviro Engineers & Consultants:

Name	Position	Qualification
Vijay Singh	Lead Auditor	M.Sc. Environmental Science & M.Tech (Environment Science & Engineering), Certified Energy Auditor (Bureau of Energy Efficiency), PDIS (RLI, Ministry of Labour & Employment), Lead Auditor ISO 14001:2015, OHSAS 18001:2007, ISO 50000
Azad Mitter	Co- Auditor	M.Sc. Environmental Science & M.Tech (Environment Science & Engineering),, Life Cycle Assessment, PGC – Climate Change

EXECUTIVE SUMMARY

An environmental audit is a snapshot in time, in which one assesses campus performance in complying with applicable environmental laws and regulations. Though a helpful benchmark, the audit almost immediately becomes outdated unless there is some mechanism in place to continue the effort of monitoring environmental compliance.

Jagan Nath University already did internal green assessment. For continual improvements; various programs doing their bid towards environmental protection and environmental awareness at local and global front. Audit criterion is environmental cognizance, waste minimization and management, biodiversity conservation, water conservation, energy conservation and environmental legislative compliance by the campus. A questionnaire is used during audit. This audit report contains observations and recommendations for improvement of environmental consciousness.

AREA OF IMPROVEMENTS

- Metering and analysis of Energy Consumption at different uses should be done.
- Water Meter should be installed at different sources & uses and maintain the inventory of water resource.
- Regular Internal inspection system should be developed extensively for various equipment available in campus.
- Domestic Waste Management plan should be prepared for the campus.
- Environmental drills for response against spillage and leakage of chemicals in the campus
- Plastic usage should be reduced in university campus.
- The monthly inventory of e-waste and hazardous is required to be maintained in formats on regular basis.
- Fire Safety System should be strengthened.
- Storage of chemicals like; paints, gums resins, oils, lubricants, acids etc. in designated place and safety/warning signs should be displayed.
- Water Quality Monitoring Frequency should be increased.
- Auto switch off system should be installed at street light.

ENVIRONMENTAL AUDIT -QUESTIONARE

The areas of eco/environmental/green auditing to be followed/practiced by participating institutions:

i. Waste Minimization and Recycling
ii. Greening
iii. Energy Conservation
iv. Water Conservation
v. Clean Air
vi. Animal Welfare
vii. Environmental Legislative
viii. General Practices

Dose any Environmental Audit conducted earlier?

The campus has conducted the internal Green assessment under the Green Committee of JNU. The Annual reports records reviewed during the audit, Main focus of this is to bring awareness of environmental values in students and society. Now, the external audit for environmental aspects and impacts under Green Audit is awarded to Supreme Enviro Engineers & Consultants for a more systematic way of monitoring the environmental eminence initiative, taken by university for environment protection.

What is the total permanent population of the Institute?

	Male	Female	Total
Students	1304	425	**1729**
Teachers	81	46	**127**
Non Teaching Staff	102	15	**117**
Sub Total	1487	486	**1973**
Approximate Number of Visitors (Per day)			**70**
What is the total number of working days of your campus in a year?			**About 300 Days**

Where is the campus located?

The university is having two campuses in Jaipur, Rajasthan. The main campus is Located in Chaksu, NH-12, Chaksu Bypass, Tonk Road, Jaipur (Rajasthan), Pin Code-303901. Another campus is situated in Sitapura Industrial Area, Jaipur (Rajasthan), Pin Code-302022.

Which of the following are available in your institute?

1	Garden area	Available
2	Play ground	Available
3	Kitchen	Available
4	Toilets	Available
5	Garbage Or Waste Store Yard	Available
6	Laboratory	Available
7	Canteen	Available
8	Hostel Facility (numbers)	Available (7)
9	Guest House	Available
10	Plant Nursery	Available

Which of the following are found near your institute?

1	Municipal dump yard	Not in vicinity of institute
2	Garbage heap	No Garbage heaps
3	Public convenience	Available
4	Sewer line	Not in vicinity of institute
5	Stagnant water	A seasonal Storage Facility for Rain Water
6	Open drainage	No, all covered and underground
7	Industry – (Mention the type)	Yes, Near Sitapura Campus
8	Bus / Railway station	Within 5 KM radius of campus
9	Market / Shopping complex / Public halls	In Jaipur City

I – WASTE MINIMIZATION AND RECYCLING

1.	**Does your institute/campus generate any waste? If so, what are they?**	**Yes, Solid waste, Canteen waste, paper and plastic, Horticulture Waste, Bio-medical waste, e-waste etc.**
2.	What is the approximate amount of waste generated per day? (in Kilograms/month) (approx.)	Bio Degradable: 3450 kg; Non-Biodegradable: 600 kg; Hazardous: <1kg; others: <40kg
3.	How is the waste generated in the institute managed? By 1 Composting 2 Recycling 3 Reusing 4 Others (specify)	Reuse of one side printed Paper for internal communication. Sewage water is treated in-house STP and water is reused in campus for various purpose. Domestic Waste from Sitapura Campus is given to Municipal Corporation. Two types of Waste bins are provided at campus for biodegradable and non biodegradable waste. Vermicomposting is initiated by campus for organic compost. Electronic gadgets are exchanged for new under buyback system.
4.	Do you use recycled paper in institute/campus?	Yes, Notice to offices for reuse of one side blank paper for rough work. Further the waste paper is channelized only to actual paper recyclers and an undertaking is taken from recycler.
5.	Do you use reused paper in institute/campus?	Yes
6.	How would you spread the message of recycling to others in the community? Have you taken any initiatives? If yes, please specify.	Yes, Green Committee carried out numerous activities. Recycling campaigns, e waste management, Anti-plastic campaigns, Varsha Vriksharopan, sustainable goal awareness programme, Zero Car Day, World Environment Day, Painting Competitions, Environment Quiz and Group Discussions etc.
7.	Can you achieve zero garbage in your institute? If yes, how?	Not yet achieved. A waste management plan is implemented for phase wise reduction in waste generation.

II – GREENING THE CAMPUS

8.	Is there a garden in your institute?	Yes, about 45% areas of the university campus is developed as Gardens.	
9.	Do students spend time in the garden?	2-4 Hours during winters	
10.	Total number of Plants in Campus	Plant type	Approx. number
		Trees	2500
		Ornamentals	5500
		Grass Cover	8 Acres
		Others	33.4 Acre Agriculture crops as per season
11.	Suggest plants for your campus. (Trees, vegetables, herbs, etc.)	Ashoka, Ficus Religeosa, Boganvellia, Alovera, Eucalyptus, Azadirachta and many more as per geographical regime. Medicinal Plants nursery also maintained by Horticulture Department in the premises.	
12.	Is the university campus have any Horticulture Department	Yes	
	Number of Staff working in Horticulture Department	Tree Gardeners, One Horticulture Manager and Services of External Experts are also taken. (16 Staff in department)	
13.	Number of Tree Plantation Drives organized by campus per annum. (If Any)	Yes, Seven Tree Plantation Drives are Organized Annually. Approx 600 trees and 1000 shrubs planted in this financial year. *(photographs attached)*	
14.	Number of Trees Planted in Last FY.	350	
	Survival Rate	70%	
15.	Plant Distribution Program for Students and Community	YES, Under UBA scheme of Government of India. University adopted 5 villages & among all other activities tree plantation is also an activity. *(photographs attached)*	
16	Plant Ownership Program	Various Trees are Planted under ownership Program. Further plots are allotted to students by Department of Agriculture for practice. Students are evaluated for plant – ownership program.	

III – ENERGY

17.	Ways that you use energy in your Campus.	Area of Uses	
	Electricity	Academic Blocks, Classrooms & Labs, Administrative Block, Hostels and Road Lights	
	LPG/Propane	Mess/ Canteen	
	Fuel Oil	Vehicles/ DG Set	
	Any Other	Solar Water Geyser and Solar Electric Plant	
18.	Reduction in Energy Uses	Last Year(2019-20)	Current Year(2020-21)
	Electricity	100695 Unit	40189 Unit*
	LPG/Propane	1825	578*
	Fuel Oil	35.5 Lac	24.5 Lac*
	Any Other	No	No
	The high reduction in Energy Uses during FY 2020-21 is due to Pandemic Covid -19		
19.	How many LED bulbs has your institute/campus installed?	100 % of Total Conventional bulbs are replaced by LED Lights.	
20.	Are any alternative energy sources employed / installed in your institute? (photovoltaic cells for solar energy, windmill, energy efficient stoves, etc.,) Specify.	Yes, 200 KW photovoltaic cells for solar energy and 8000 Ltr capacity Solar heater is installed.	
21.	Do you run "switch off" drills at institute/campus?	Yes, "Switch off" drill is carried out on half yearly basis.	
22.	Are your computers and other equipment's put on power-saving mode?	Yes, In Practice	
23.	Does your machinery (TV, AC, Computer, weighing balance, printers, etc.) run on standby modes most of the time? If yes, how many hours?	No, Clear instructions from administrations to all academic departments for sustainable use of electronic equipment	

IV – WATER CONSERVATION

24.	List four uses of water in your institute	Basic usage of water in campus are; Drinking, Gardening, Kitchen & Toilets, and Others. And total consumption is 1500 KL/month
24.	How does your institute store water? Are there any water saving techniques followed in your institute?	23 Overhead Water Tanks, 52 Plastic Tanks and 03 Underground Water tank installed for storage of water. Avoid overflow of water controlled valves are provided in water supply system. Close supervision for water supply system.
26.	If there is water wastage, specify why and How can the wastage be prevented / stopped?	Not any wastage, preventative maintenance of water supply system is being done by administration of campus. In case of emergency like spillage, leakage the 24 hour availability of civil team equipped with skilled technicians and machinery.
27.	Locate the point of entry of water and point of exit of waste water in your institute. Entry- Exit-	Entry- Water comes from the open Well through Submersible Pumps at campus Exit- From Water Drainage System to STP and then used for irrigation and gardening.
28.	Write down four ways that could reduce the amount of water used in your institute	Basic Four ways: 1. Close the taps after usage 2. Maintenance and monitoring of valves in supply system to avoid overflow, leakage and spillage 3. Water Conservation awareness for new Students
29.	Record water use from the institute water meter for six months (record at the same time of each day). At the end of the period, compile a table to show how many litres of water have been used.	Water Meters are available only at main well supply line for calculation of usage of total quantity only.
30.	Does your institute/campus harvest rain water?	3 Nos of Modern rain water harvesting system are available.
31.	Is there any water recycling System.	Yes, Full functioning STP in the both premises to adopt Zero Discharge .

V – CLEAN AIR

32.	Are the Rooms in Campus are Well Ventilated?	Yes, Mechanical ventilation system is also provided in the buildings of campus				
33.	Window Floor ratio of the Rooms	Excellent, as per NBC codes				
34.	What is the ownership of the vehicles used by your school? (Please Tick ✓ only one)		Yes			
			Operator-owned vehicles			
		✓	University-owned vehicles			
			A combination of campus-owned and operator-owned vehicles			
35.	Provide details of school-owned motorised vehicles?	Buses	Cars	Vans	Other	Total
	No. of vehicles	07	02	02	02	13
	No. of vehicles more than five years old	07	02	02	---	11
	No. of Air conditioned vehicles	---	02	---	---	02
	PUC done	07	02	02	02	13
36.	Specify the type of fuel used by your school's vehicles:	Total				
	Diesel	11				
	Petrol	02				
	CNG	--				
	LPG	--				
	Electric	--				
37.	Air Quality Monitoring Program (If Any)	Yes, A in-house Meteorological Laboratory is situated within the plant for Wind Velocity & Wind direction monitoring.				
38.	Students suffer from respiratory ailments? (If Any)	No				
39.	Details of Genset	Yes,4 Kirlosker Silent DG Set of 125, 125,82.5 & 82.5 KVA				

VI– ANIMAL WELFARE

40.	List the animals (wild and domestic) found on the campus (dogs, cats, squirrels, birds, insects, etc.)	Hundreds of Birds and Squirrels are commonly found in campus. Besides this some Dogs and Cats are also present in the campus.
41.	Which is the animal welfare organization nearest to your Campus?	Kamdhenu Gaushala Chaksu is the nearest Gaushala
42.	Is there any incidence of animals getting wounded /affected due to unfavorable conditions existing in your Campus or nearby (like a dog getting wounded, poisoning of animals, improper caging of animals, hunting of animals, etc.)	Not Available
	What did you /your Campus/neighbor do?	The Pick up vans available are used in such situations.

VII– ENVIRONMENTAL LEGISLATIVE COMPLIANCE

43.	Are you aware of any environmental Laws pertaining to different aspects of environmental management?	Yes,
44.	Does your institute have any rules to protect the environment? List possible rules you could include.	Yes, No open burning of waste or residue in the premises, Less Generation of Paper waste, a fine system for the misuse of paper printing inside the campus.
45.	Dose Environmental Ambient Air Quality Monitoring conducted by the Institute/campus?	Yes, A in-house Meteorological Laboratory is situated within the plant for Wind Velocity & Wind direction monitoring.
46.	Dose Environmental Water and Wastewater Quality monitoring conducted by the Institute?	Yes, Drinking water test reports and STP inlet and Outlet reports available.
47.	Dose stack monitoring of DG sets conducted by the Institute?	No
48.	Is any warning notice, letter issued by state government bodies?	No
49.	Dose any Hazardous waste generated by the Institute? If yes explain its category and disposal method	Yes, Hazardous Waste generated and disposed though the authorized external agency.
50.	Dose any Bio medical waste generated by the Institute? If yes explain its category and disposal method	Yes, It is being disposed by BMWT facility.
51.	Dose any E waste generated by the Institute? If yes explain its category and disposal method.	Yes, E waste is disposed off through buy back system.
52.	Do you have any GHG & ODS Inventorization System?	No

VIII– GENERAL

53.	Does your institute have any rules to protect the environment? List possible rules you could include.	Yes, Environment Policy is in place.
54.	Does housekeeping schedule in your campus?	Yes, Swatch Bharat movement
55.	Are students and faculties aware of environmental cleanliness ways? If Yes Explain	Yes, Periodically pollution reduction, plantation, energy conservation awareness campaigns carried out by institute
56.	Dose Important Days Like World Environment Day, Earth Day, and Ozone Day etc. eminent in Campus?	Yes, World Environment Day i.e. 5th June & Earth Day is celebrated by the campus. Various Essay writing, Painting Competition conducted along with plantation. Nukkar-Natak by students in locality for spreading awareness.
57.	Dose Institute participated in National and Local Environmental Protection Movement?	Yes, Swatch Bharat Abhiyan by students at Campus and nearby villages.
58.	Dose Institute/Campus using renewable energy?	Yes, as practically applicable
59.	Dose Institution/Campus conducts a green/environmental audit of its campus?	Yes Internally and this is first external Green audit carried out by institution.
60.	Has the institution been audited / accredited by any other agency such as NABL, NABET, TQPM, NAAC etc.?	Yes, NAAC in 2015

BEST PRACTICES/ INITIATIVES FOR ENVIRONMENT

A	**Renewable Energy**	Solar water Heater (8000 liter) at JNU campus A clean source of energy is utilized at campus. Efforts towards Carbon Neutrality, The capacity of 200 KW Solar plant on building roofs is operational since last two years.
B	**Biodiversity Conservation** Flora and fauna conservation	It is in schedule plan of Campus Environment committee
C	**Tree Plantation Drives**	Seven Drives Annually for campus as well as nearby village.
d	**Ground Water Recharge**	Yes, 2 units of Rain Water Harvesting System.
E	**Pollution Reduction**	Personal Vehicles (Students) not allowed at campus , Reduction in Air Pollution through vehicular emission.
F	**E Waste Management**	Old Electronics are disposed off through buy back system.
G	**Solid Waste Management**	Lifting of garbage from JNU, Sitapura campus on alternate day by Municipal Corporation and Vermi Composting System at Chaksu Campus.
H	**Adoption of Village**	YES, Under UBA scheme of Government of India. University adopted 5 villages & among all other activities tree plantation is also an activity.
I	**Water Conservation**	Yes, The STP treated water used for Gardening in campus.
J	**Environment Awareness**	Various Essay writing, Painting Competition, Nukkar-Natak conducted by students in locality for spreading awareness.
K	**Housekeeping Derives**	Swatch Bharat Movement adopted by campus
L	**Avoid Plastic Uses**	Painting competition on Harms of Plastic

RECOMENDATIONS

- Internal inspection system should be developed extensively for various equipment available in campus.
- Domestic Waste Management plan should be prepared for the campus.
- Environmental drills for response against spillage and leakage of chemicals in the campus.
- Plastic usage can be reduced in university campus.
- The monthly inventory of e-waste and hazardous waste is required to be maintained in formats on regular basis.
- Fire Safety System should be strengthened.
- Storage of chemicals like; paints, gums resins, oils, lubricants, acids etc. in designated place and safety/warning signs should be displayed.
- Environment and Water Quality Monitoring Frequency should be increased.
- Auto switch off system should be adopted in street lights.
- Uses of E-vehicles in campus area should be promoted.
- ISO14001:2015Certificationforthecampusshouldbeadopted.
- E-waste monthly inventory be maintained at campus as per E-waste rules 2016.
- Increase in Environmental promotional activities for spreading awareness at campus.
- As practically, feasible avoid use of personal vehicles inside the campus.
- Involve lower hierarchy staff in environmental awareness program and campaigns.

CONCLUSION

This audit involved extensive consultation with all the campus team, interactions with key personnel on wide range of issues related to Environmental aspects. The Jagan Nath University has Environmental Committee for sustainable use of resources. Overall, more than 66% of university campus is for landscaping. The University has established systems for waste minimization and recycling, greening the campus, use of solar energy, water conservation and recycling, compliance to environmental legislations, and overall maintenance of the campus. The quality of air is very good and pollution free environment exists on the campus. However, for further strengthening the green campus initiatives, the Audit Committee has identified some area of improvement for making the campus premise more environmental friendly. The recommendations are also mentioned with observations for university campus team to initiate actions.

The audit team opines that the overall site is maintained well from environmental perspective. There is no major observations but few things are important to initiate urgently are waste management records by monthly inventory of hazardous waste, rainwater harvesting recharge; water balance cycle and periodic inspection of buildings; environment policy and initiation of composting at campus.

REFERENCE

- The Environment [Protection] Act – 1986 (Amended 1991) & Rules-1986 (Amended 2010)
- The Petroleum Act: 1934 – The Petroleum Rules: 2002
- The Central Motor Vehicle Act: 1988 (Amended 2011) and The Central Motor Vehicle
- Rules:1989 (Amended in 2005)
- Energy Conservation Act 2010.
- The Water [Prevention & Control Of Pollution] Act – 1974 (Amended 1988) & the Water (Prevention & Control of Pollution) Rules – 1975
- The Air [Prevention & Control Of Pollution] Act – 1981 (Amended 1987) The Air (Prevention & Control of Pollution) Rules – 1982
- The Gas Cylinders Rules – 2016 (Replaces the Gas Cylinder Rules – 1981
- E-waste management rules 2016
- Electrical Act 2003 (Amended 2001) / Rules 1956 (Amended 2006)
- The Hazardous Waste (Management and Handling and Trans-boundary Movement) Rules, 2008 (Amended 2016)
- The Noise Pollution Regulation & Control rules, 2000 (Amended 2010)
- The Batteries (Management and Handling) rules, 2001 (Amended 2010)
- Relevant Indian Standard Code practices

ANNEXURE

PHOTOGRAPHS OF ENVIRONMENT CONSIOUSNESS

'Tree Plantation' program is a regular practice at the Jagnnath University, with the objective of Environment Protection. These programs were held under the supervision of University's Environment Department.

ECO - INNOVATION

Students of Jagan Nath University's Engineering department created a battery-powered e-rickshaw. The use of petrol and diesel vehicles will be reduced by battery operated e-rickshaws and there will be cooperation in preventing pollution.

Jagan Nath University has set up " Nursery and Garden" within the Chaksu premises with the efforts of Farm Manager, of the University for the purpose of environmental protection. The Drip Irrigation System is adopted for optimum Water uses.

University has adopted a state of art Vermi composting System for conversion of biodegradable & horticulture waste to blackgold i.e. Compost.

Crop cafeteria is the demonstration of identified efficient crops in an agro-metrological region offering an opportunity to the students to observe a suitable crop.

The NO Plastic campaign was organized to create awareness among the public about the adverse effect of plastic usage and to make think them about stopping of its uses.

Swachh Bharat Campaign was organized throughout length and breadth of the country as a national movement. The campaign aims to achieve the vision of a 'Clean India'. The Jagan Nath University actively participated in the Swachh Bharat Campaign and regularly organized many program within campus as well as nearby villages.

University is blessed with abundant Solar Energy which comes to us free of cost. The solar radiation in form of heat that falls on the surface of the earth and used for water heating, and Solar Power Generation. A solar Heater of 8000 Ltr capacity and Solar Photovoltaic System of 200 KW is installed as a source of Green Energy.

TRANSPARENCY OF GREEN AUDIT REPORT

Green audit report is one of the useful means of demonstrating an organization/Institution's commitment to openness and transparency. If an Institute believes it has nothing to hide from its stakeholders, then it should feel confident enough to make its green audit reports freely available to those who request them. As a basic rule, green audit reports should be made available to all stakeholders.

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