

**ENVIRONMENT AUDIT REPORT  
FOR  
ACHARYA NARENDRA DEVA UNIVERSITY OF  
AGRICULTURE & TECHNOLOGY  
Kumarganj, Ayodhya-224229, Uttar Pradesh**



**Carried For  
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Carried Out By**



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## **ACKNOWLEDGEMENT**

Elion Technologies and Consulting Pvt Ltd thanks the management of Acharya Narendra Dev University of Agriculture & Technology, Kumarganj for assigning this important work of Environmental Audit. We appreciate the co-operation to our team for completion of study.

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





## **CONCEPT**

The term 'Environmental 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 Environmental 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.





## **INTRODUCTION**

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.

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 INSTITUTE**

Acharya Narendra Deva University of Agriculture and Technology (ANDUAT), formerly Narendra Deva University of Agriculture and Technology (NDUAT), is a university located in Kumarganj, Uttar Pradesh, India, established in 1975. It is named after the politician and educator Narendra Deva, who served as vice chancellor of the University of Lucknow and Banaras Hindu University. It has constituent colleges in Ambedkar Nagar district and Azamgarh district.

The foundation stone of was laid on 15 January 1974, by Prime Minister Indira Gandhi at Mashodha near Faizabad. Laxmi Narain Rai was the first officer on special duty, succeeded by A.S. Srivastava in October 1974 and by the first vice-chancellor, A.D. Pandey in October 1975. In the same year the government of Uttar Pradesh decided that the main campus of the university would be established at Kumarganj, (Faizabad) Ayodhya instead of Mashodha. The university started functioning in a borrowed building of Gram Swalabi Vidyalaya Acharya Nagar, Naka, Faizabad.

Elion Technologies and Consulting Pvt Ltd (Elion) team carried out the audit of premises. During the audit Elion team carried out visit of entire campus i.e. classrooms, library, washrooms, staff rooms, administration department, accounts department and hostels.

### **Campus Information**

University constitutes various colleges which offers graduation, post-graduation and research program in field of agriculture, horticulture & forestry, veterinary science, community science, agri business, fisheries and bio technology.

Total cover area ground- 193 Hectares

Total Green area- 135.1 Hectares

### **List of Buildings and Blocks in the University**

<b>Sr. No.</b>	<b>Name of Block</b>
1	Administrative building
2	College of agriculture
3	College of veterinary science
4	College of fisheries
5	College of horticulture & Forestry



6	College of community science
7	Boys hostels (12 Buildings)
8	Girls hostels (4 Buildings)
9	Residential Quarters (613 No's)
10	Vice chancellor residence
11	Guest House (Two Buildings)
12	Kisaan Bhawan
13	Institute of Bio - technology
14	Two Auditoriums
15	College of Agri - Business
16	Stadium
17	NDDAV School
18	Nehru Library



## **AUDIT OBJECTIVES**

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 resource use
- Financial 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
- Developing an environmental ethic and value systems in young people





## **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.

This environmental audit of institute is for NACC affiliation; QS Program and 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**

- Environment Policy shall be adopted by the institute.
- Electrical/Electronic Equipments when not in use should be switched off and should not be on standby modes.
- Use of recycle paper should be encouraged in the campus.
- Stack monitoring of DG sets should be carried out.
- Replace the remaining CFL with LED's.



## **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?**

No, Environment Audit is not conducted earlier.

**What is the total permanent population of the Institute?**

	Male	Female	Total
Students	1700	300	2000
Teachers	140	60	200
Non-Teaching Staff	260	40	300
Sub Total	2100	400	2500
Approximate Number of Visitors (Per day)			20
What is the total number of working days of your campus in a year?			295

**Where is the campus located?**

The campus is Located in village area near Kumarganj (outskirts of ayodhya city). The campus is situated at a distance of 5km from Bus Stand and 45Km Ayodhya Cantt railway station.



**Which of the following are available in your institute?**

1 Garden area	Yes
2 Playground	Yes
3 Kitchen	Yes
4 Toilets	Yes
5 Garbage Or Waste Store Yard	Yes
6 Laboratory	Yes
7 Canteen	Yes
8 Hostel Facility(numbers)	Yes
9 Guest House	Yes

**Which of the following are found near your institute?**

1 Municipal dump yard	No
2 Garbage heap	No
3 Public convenience	Yes
4 Sewer line	No
5 Stagnant water	No
6 Open drainage	Yes
7 Industry – (Mention the type)	No
8 Bus / Railway station	Yes
9 Market / Shopping complex / Public halls	Yes (Market at 1.5Km)





## I WASTE MINIMIZATION AND RECYCLING

1.	Does your institute generate any waste? If so, what are they?	Yes Paper waste, E-waste, Waste water, and Paper waste
2.	What is the approximate amount of waste generated per day? (in Kilograms/month) (approx.)	1. Paper Waste – 200Kg/ month 2. Waste Food – 100Kg/month
3.	How is the waste generated in the institute managed? By 1 Composting 2 Recycling 3 Reusing 4 Others(specify)	Biodegradable solid waste (dropping of trees, foliage etc goes to composting pit in the campus. Composite pit are present within the campus. Waste food is stored and is fed to cattle, pigs and fishes.
4.	Do you use recycled paper in institute?	No
5.	Do you use reused paper in institute?	Yes
6.	How would you spread the message of recycling to others in the community? Have you taken any initiatives? If yes, Please specify.	No
7.	Can you achieve zero garbage in your institute? If yes, how?	No



**II GREENING THE CAMPUS**

1.	Is there a garden in your institute?	Yes
2.	Do students spend time in the garden?	Yes
3.	Total number of Plants in Campus	1.5 lakh to 2 lakh approx.
4.	Suggest plants for your campus. (Trees, vegetables, herbs, etc.)	The campus is having a lush green area with native trees. Apart from the native trees many ornamental trees are planted in the landscape and garden area.
5.	Is the university campus have any Horticulture Department	Yes
	Number of Staff working in Horticulture Department	50
6.	Number of Tree Plantation Drives organized by Campus per annum.(If Any)	Twice per annum and tree plantation are also done by visiting dignitaries.
7.	Number of Trees Planted in Last FY.	1000
	Survival Rate	50%
8.	Plant Distribution Program for Students and Community	Yes
9.	Plant Ownership Program	No





### III ENERGY CONSERVATION

1.	List ten ways that you use energy in your institute. (Electricity, LPG, firewood, others). Using this list, try to think of ways that you could use less energy every day.	<ul style="list-style-type: none"> <li>1. MVVN power supply.</li> <li>2. DG sets.</li> <li>3. Roof top solar power from 750 KW solar power plant.</li> <li>4. LPG (for hostel and guest house kitchen)</li> </ul>
2.	Are there any energy saving methods employed in your institute? If yes, please specify. If no, suggest some	<ul style="list-style-type: none"> <li>1. Use of LED for hostel, auditorium class rooms and street lights.</li> <li>2. Solar power from roof top solar power plant.</li> </ul>
3.	How many CFL/LED bulbs has your institute Installed?	<p>LED TUBE LIGHT- 10,000 Nos.</p> <p>CFL – 15 to 20 Nos.</p> <p>Street lights- 500 Nos.</p>
4.	Are any alternative energy sources employed / installed in your institute? (photovoltaic cells for solar energy, windmill, energy efficient stoves, etc.,) Specify.	<p>Photovoltaic cell for solar energy</p> <p>750 KW roof top solar power plant.</p>
5.	Do you run “switch off” drills at institute?	No
6.	Are your computers and other equipment's put on power-saving mode?	Yes
7.	Does your machinery (TV, AC, Computer, weighing balance, printers, etc.) run on standby modes most of the time? If yes, how many hours?	No



**IV WATER CONSERVATION**

1.	List four uses of water in your institute	<ol style="list-style-type: none"><li>1. Drinking</li><li>2. Cleaning and Washroom</li><li>3. Cooking (Canteen)</li><li>4. Gardening</li><li>5. Agriculture</li></ol>
2.	How does your institute store water? Are there any water saving techniques followed in your institute?	<ol style="list-style-type: none"><li>1. Overhead tanks of total capacity of 14 lakh litres approx.</li><li>2. Rain water harvesting tanks to utilize rain water.</li><li>3. Surface drain water is used for pisciculture.</li></ol>
3.	If there is water wastage, specify why and How  Can the wastage be prevented / stopped?	There is no apparent wastage of water.
4.	Locate the point of entry of water and point of exit of waste water in your institute. Entry-  Exit-	There is no apparent wastage of water.
5.	Write down four ways that could reduce the amount of water used in your institute	<ol style="list-style-type: none"><li>1. Rain water harvesting tanks to utilize rain water.</li><li>2. Sprinkler system and drip irrigation system in agricultural activities.</li><li>3. Underground Channels to reduce water losses during agricultural activities.</li></ol>





6.	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 meter is not installed.
7.	Does your institute harvest rain water?	Yes. Approximately 58 – 60 numbers of rain water harvesting tanks are present in the campus to efficiently utilize rain water.
8.	Is there any water recycling System.	No

## V CLEAN AIR

1.	Are the Rooms in Campus are Well Ventilated?	Yes				
2.	Window Floor ratio of the Rooms	1:5 approx.				
3.	What is the ownership of the vehicles used by your campus? (Please Tick ☐ only one)		Yes			
		✓	Operator-owned vehicles			
			Campus-owned vehicles			
			A combination of campus-owned and operator-owned vehicles			
4.	Provide details of campus-owned motorized vehicles?	Buses	Cars	Vans	Other	Total
	No. of vehicles	-	7	-	-	7
	No. of vehicles more than five years old	-	-	-	-	-
	No. of Air conditioned vehicles	-	5	-	-	5
	PUC done	-	Yes	-	-	
5.	Specify the type of fuel used by your	Buses	Cars	Vans	Othe	





	Campus's vehicles:				r
	Diesel		✓	-	-
	Petrol	-	✓		-
	CNG	-	-	-	-
	LPG	-	-	-	-
	Electric	-	-	-	-
6.	Air Quality Monitoring Program (If Any)	No			
7.	Students suffer from respiratory ailments? (If Any)	No			
8.	Details of Genset	<ol style="list-style-type: none"> <li>1. Administrative Building - 125KVA</li> <li>2. ABM College – 160KVA</li> <li>3. College of horticulture – 100KVA</li> <li>4. Vice Chancellor residency – 30KVA</li> <li>5. International Guest House – 62KVA</li> <li>6. VIP Guest House – 40KVA</li> <li>7. Girls Hostel – 100KVA</li> <li>8. Near water tank – 62KVA &amp; 160KVA</li> <li>9. College of agriculture – 100KVA &amp; 63KVA</li> <li>10. Brahmaputra, Rohini and hiranavati hostel – 100KVA</li> </ol>			





	11. Kalindi & Varuna hostel – 100KVA 12.NDAV school – 62KVA
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## VI ANIMAL WELFARE

1.	List the animals (wild and domestic) found on the campus (dogs, cats, squirrels, birds, insects, etc.)	1. Birds 2. Snakes 3. Insects 4. Cattle
2.	How many dogs in your area have undergone Animal Birth Control - Anti Rabies (ABC - AR)?	No dogs allowed inside the campus.
3.	Does your institute have a Biodiversity Programme or a KARUNA CLUB?	No

## VII ENVIRONMENTAL LEGISLATIVE COMPLIANCE

1.	Are you aware of any environmental Laws pertaining to different aspects of environmental management?	Yes
2.	Does your institute have any rules to protect the environment? List possible rules you could include.	Yes. 1. No Smoking and Tobacco 2. No Plastic 3. Save Water 4. Save Energy 5. No spitting 6. No Honking 7. Birds & Animal Conservation
3.	Dose Environmental Ambient Air Quality Monitoring conducted by the Institute?	No





4.	Dose Environmental Water and Wastewater Quality monitoring conducted by the Institute?	Yes. Drinking water quality is checked.
5.	Dose stack monitoring of DG sets conducted by the Institute?	No
6.	Is any warning notice, letter issued by state government bodies?	No
7.	Dose any Hazardous waste generated by the Institute? If yes explain its category and disposal method	No
8.	Dose any Bio medical waste generated by the Institute? If yes explain its category and disposal method	Yes. (Veterinary College) Disposal methods: 1. Incinerate 2. Direct Burial

### VIII GENERAL PRACTICES

1.	Are you aware of any environmental Laws pertaining to different aspects of Environmental management?	Yes
2.	Does your institute have any rules to protect the environment? List possible rules you could Include.	1. No Smoking and Tobacco 2. No Plastic 3. Save Water 4. Save Energy 5. No spitting 6. No Honking 7. Birds & Animal Conservation
3.	Does housekeeping schedule in your campus?	Yes. (Every day)
4.	Are students and faculties aware of environmental cleanliness ways? If Yes Explain	Yes. Campus has Civil department where the students already learn about the environmental guidelines and





		standards.
5.	Dose Important Days Like World Environment Day, Earth Day, and Ozone Day etc. eminent in Campus?	Yes.
6.	Dose Institute participated in National and Local Environmental Protection Movement?	Yes.
7.	Dose Institute has any Recognition/certification for environment friendliness?	No. But this is the greenest campus in the district. It is an area of 193 hectares with major parts covered by greenery.
8.	Dose Institute using renewable energy?	Yes. Solar energy is used.
9.	Dose Institution conducts a Green/environmental audit of its campus?	No
10.	Has the institution been audited / accredited by any other agency such as NABL, NABET, TQPM, NAAC etc.?	Institute is accredited by NAEAB (National agriculture education accreditation board).



## **RECOMMENDATIONS**

- Environment Policy shall be adopted by the institute.
- Electrical/Electronic Equipments when not in use should be switched off and should not be on standby modes.
- Use of recycle paper should be encouraged in the campus.
- Stack monitoring of DG sets should be carried out.
- Replace the remaining CFL with LED's.



## **CONCLUSION**

This audit involved extensive consultation with all the campus team, interactions with key personnel on wide range of issues related to Environmental aspects. Overall, majority of university campus is for landscaping and greenery. The audit has identified several observations for making the campus premise more environmentally friendly. The recommendations are also mentioned with observations for college team to initiate actions.

The audit team opines that the overall site is maintained well from environmental perspective. There are no major observations but few things are important which if implemented would further strengthen the environment setting in the 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 Water [Prevention & Control of Pollution] Cess Act-1977 (Amended 2003) and Rules- 1978
- 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



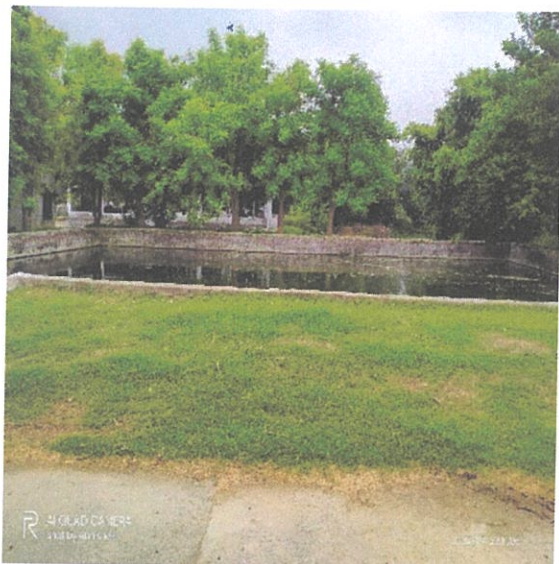


## **ANNEXURE –** **PHOTOGRAPHS OF ENVIRONMENT CONSIOUSNESS**



**Tree Plantation**





### Green Campus



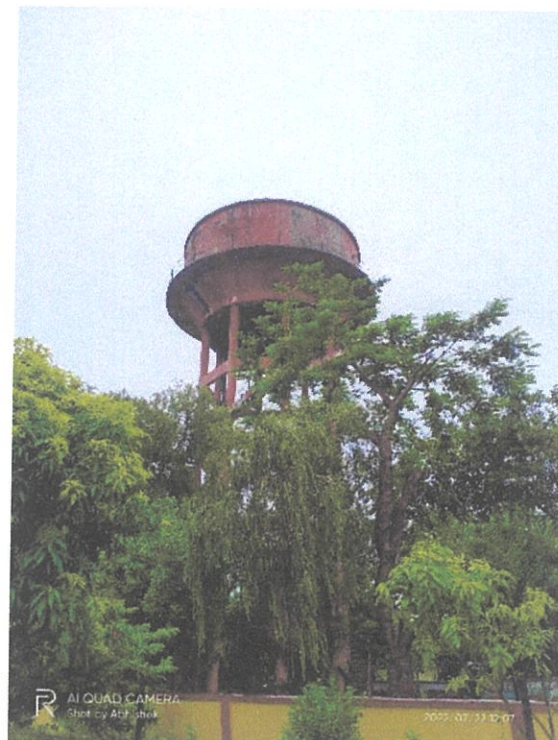


**Solar Panels**



**Rain Water Harvesting**





**Overhead Water Tank**



### Water Conservation

