

# ENVIRONMENT AUDIT REPORT 2021

Report of assessment and appraisal of  
practices adopted for preservation of  
natural resources in and around campus of  
INDIRA GANDHI DELHI TECHNICAL  
UNIVERSITY FOR WOMEN, DELHI, (INDIA)

**COMPLIANCE & AUDITING TEAM  
INNOVATION SOCIETY - INDIA**



# **CERTIFICATE OF APPRECIATION**

Awarded to

**INDIRA GANDHI DELHI TECHNICAL  
UNIVERSITY FOR WOMEN**

for its

**Environment Preservation Practices and Commitment**  
adopted in its Campus situated at

**Madrasa Road,  
Kashmere Gate,  
Delhi-110006, INDIA**

Dated: November 20, 2021





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# **FUNCTIONAL ENVIRONMENT AUDIT REPORT 2021**

## **1 PREAMBLE**

### **1.1 Introduction**

Earth is a cohabitate for millions of living beings and its natural resources are the source of life on earth. Natural resources encompass ecosystems, wildlife and habitat preservation, environmental protection, biodiversity and conservation of forests, water and energy resources. The living beings and natural resources on earth exist with a natural balance of co-existence and this balance needs to be maintained for long time peaceful existence of life on earth.

To ensure the peaceful coexistence of all living beings and natural resources on earth, this is important to minimize the adverse effects of consumption of natural resources by human in its environment and this is why the 'Preservation of Natural Resources' or 'Preservation of Natural Environment' becomes utmost important for any organization.

#### **1.1.1 The Environment Audit**

The Environment Audit, being a systemic approach of appraising the practices of preservation, maintenance, and enhancement of natural environment with its living beings and natural resources in a balanced manner.

The Environment Audit aims to appraise the efforts of the organizations to maintain a balance between its existence, consumption of natural resources around it, and preservation of the environment in its natural form.

#### **1.1.2 About the Appraiser**

Innovation Society is registered as an All India Level Operational Society under Society Registration Act XXI of 1860 (Registration No. District Shahdara/ Society/ 631/2015-16). Innovation Society is strongly believed and liked to work in coordination with Govt. agencies and corporate. We would like to shape talent and research agencies of state, universities, corporate and individuals for concerning and execution of original research work and nurturing innovation in country, specially the youth.



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**Vision & Mission:** Innovation Society works with the mission “To support and promote constructive innovations for sustainable developments to conquer social and economic disabilities”.

Innovation Society has a strong belief that research and development are parts and parcels for any innovative country so here we would like to share hands-on experience, ‘Make in India’ drive in the divergent background for global importance.

### **1.1.3 About the Appraisee**

Indira Gandhi Delhi Technical University for Women (IGDTUW), is a women's university located in New Delhi, India on the heritage campus at Kashmere Gate, Delhi (India).

It was founded as the Indira Gandhi Institute of Technology in 1998. In May 2013 it gained autonomy and became the first women's technical university in India established by Govt. of Delhi

IGDTUW is a non-affiliating University to facilitate and promote studies, research, technology, innovation, incubation and extension work in emerging areas of professional education among women, with focus on engineering, technology, applied sciences, architecture and its allied areas with the objective to achieve excellence in these and related fields.

## **1.2 Audit Plan**

### **1.2.1 Objective(s)**

The current audit is focused towards analysis and appraisal of institutional practices adopted by the Appraisee to maintain the Natural Environment in and around its campus in scope. Major Objectives of the exercise include:

1. Identification of practices to encourage preservation of natural resources (Air, Water, Soil, etc.) and Identification of practices to maintain peaceful coexistence with other living beings in the environment around.
2. Identification of practices for management of wastes (solid, liquid, electronic and other) and stay sensitive to Climate Changes and Environment Sustainability Challenges.





3. Identification of practices to spread awareness about Importance of Natural Environment.
4. Identification of shortcomings in maintenance of Natural Environment in and around the Campus.
5. Identification of challenges in maintenance of Natural Environment in and around the Campus.
6. Analysis and Planning about improvement actions to address the identified challenges and shortcomings and ensuring continuous improvement.

### 1.2.2 Scope

The scope of the Audit includes the below mentioned campus(es) of the Appraisee:

- INDIRA GANDHI DELHI TECHNICAL UNIVERSITY FOR WOMEN main campus situated at Madrasa Road, Opposite St. James Church, Kashmere Gate, Delhi-110006, INDIA

### 1.2.3 Schedule & Efforts

The Audit has been planned and executed for the duration from 21-November-2021 to 25-November-2021 on the campus, followed by offsite report creation.

Approximate total efforts of the exercise have been estimated to be around 200~240 Man Hours.

### 1.2.4 The team

The below mentioned team participated in the Audit in the respective capacity/roles:

S. No.	Name	Representation	Role/Capacity
1.	Prof. (Dr.) D. Jain	Innovation Society	Lead Auditor
2.	Ms. Deepa Jain	Innovation Society	Auditor
3.	Ms. G. Sachdeva	Innovation Society	Auditor
4.	Dr. Sneha	IGDTUW, New Delhi	IQAC Member
5.	Dr. Arun Sharma	IGDTUW, New Delhi	Director-IQAC
6.	Ms. Sarika Reddy	IGDTUW, New Delhi	Horticulture Incharge
7.	Mr. Rajesh Kumar	IGDTUW, New Delhi	Consultant (Civil & Electrical)
8.	Ar. Preeti Chauhan	IGDTUW, New Delhi	Additional Registrar GA & Maintenance



## 2 THE ASSESSMENT

### 2.1 Team-NIC Continuum Assessment

#	Parameter	Effectively Practiced	Score (0/1)
1.	Overall Natural Greenery	YES	1
2.	Solid Waste Management	YES	1
3.	Liquid Waste Management	NO	0
4.	E-Waste Management	NO	0
5.	Biomedical/Radioactive/Hazardous Waste Management	NO	0
6.	Pollution Control	YES	1
7.	Energy Conservation Practices	YES	1
8.	Maintenance of Water Resources	YES	1
9.	Health & Hygiene	YES	1
10.	Awareness and Sensitivity	YES	1
<b>Total Score</b>			<b>07/10</b>

### 2.2 Participation

Following individuals participated in the current Audit Procedure:

S. No.	Name	Attended	Remarks (if any)
1.	Prof. (Dr.) D. Jain	YES	
2.	Ms. Deepa Jain	YES	
3.	Ms. G. Sachdeva	YES	
4.	Dr. Sneha	YES	
5.	Dr. Arun Sharma	YES	
6.	Ms. Sarika Reddy	YES	
7.	Mr. Rajesh Kumar	YES	
8.	Ar. Preeti Chauhan	YES	

### 2.3 Summary of Findings

#### 2.3.1 The Campus in Scope

The campus covered under this exercise covered the main campus of Indira Gandhi Delhi Technical University for Women situated at Madrasa Road, Opposite St. James Church, Kashmere Gate, Delhi-110006, INDIA.

This is an URBAN campus having an auditorium, a Library, sporting facilities, academic laboratories, a dispensary, Computer Centre, a bank and a guest house inside it. The



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campus offers a common room for students which is equipped with fitness equipments, yoga facility and indoor games. The University campus has two hostel wings - Krishna Hostel and Kaveri Hostel, to accommodate approximately 340 students.

### **2.3.2 Inclusion & Exclusions**

Inclusion: Campus Area as defined in scope section.

Exclusion: Designated part of the campus under control of external bodies.

### **2.3.3 The Management Commitment**

Under the efficient leadership and guidance of the Management of the University, an aim of making the university a 'ZERO WASTE UNIVERSITY' by 2025. A plan through Reduce, Reuse, and Recreate has been established for the same.

### **2.3.4 Policy and Procedures**

While the university has established a Quality Management System under the guidelines of ISO9000 standard and is committed towards maintaining defined quality measures in its working, a documented Environment Preservation Policy (or equivalent) and respective procedural definitions/documentations is not found at the time of assessment.

A guided movement names as 'ANTARGAT' has been incorporated as a dedicated in-house society to encourage Natural Environment Preservation Culture in the university. The society maintain its newsletter that covers glimpse of some draft states of policies/procedures for encouraging Natural Environment Preservation Practices.

### **2.3.5 Planning Natural Environment Preservation**

#### **Risk Management:**

- No formal risk management pertaining to Natural Environment Preservation has been implemented at University/Campus level.
- City level Sustainability Studies have been carried out and respective risks have been highlighted.
- Risks from UN SDG-13 report have been considered as a basis of actions.



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**Controls:**

- Open and green Area has been identified in the Campus and appropriate landscaping has been ensured in applicable regions.
- Being a heritage campus, most of the controls have been in place by rules and regulations of respective regulatory bodies.
- Automobile Entry has been restricted away from academic and administrative buildings. This has also helped ensuring Pedestrian Friendly Pathways across the campus.
- Use of pollution free means of commutation has been promoted inside and outside the campus by providing Bicycles for Staff and Students.
- Campus has been declared as SUP Free Zone. Use of Single-Use-Plastic has been banned for any academic/administrative purpose in the campus.
- Appropriate MoU has been placed with respective regulatory and service providers for waste management and maintenance services.
- Energy Conservation Best Practices have been adopted in most of the part of campus.

**2.3.6 Support****Resources:**

- Dedicated Horticulture In-charge, maintenance service providers, and support staff has been identified.
- Appropriate budget has been allocated for Horticulture, Waste Management, Health & Hygiene activities, Pollution Control, and natural resource management activities.

**Competence:**

- Professional gardeners, contractors, and service providers have been hired for maintenance of natural environment, resources, and cohabitate in and around the campus.
- Expert Supervisors have been identified and respective roles and responsibilities have been assigned.





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### **Awareness**

- Assigned staff has been provided with professional training and certifications.
- Periodic awareness and training sessions have been conducted by group (Club/Society) identified by the management of the university.

### **Communications**

- Periodic newsletter of the club/society is evident to cover the activities, achievements, and recognitions about Environment Sustainability and its Importance.
- Periodic e-campaigns and communications are evident.

### **2.3.7 Documented Information**

Objectives, Plans, Activities, Achievements, and other information has been documented in the form of newsletter only. No formal policies/procedures/guidelines pertaining to Environment Sustenance Practices could be found at the time of audit.

### **2.3.8 Operations**

Multiple activities for preservation of Natural Environment and its Resources in and around the campus are evident in the newsletter. Participation of renowned people from industry, Government, Ministries, and societies have been ensured and captured.

### **2.3.9 Performance Evaluation**

Following has been considered as the fundamental basis of the performance evaluation for Environment Preservation Practices and Commitment adopted by the organization

- I. Overall Natural Greenery
  - a. Identification of Open and Green Area with Landscaping
  - b. Maintenance of In-Campus Greenery in Open Area
  - c. Maintenance of In-Campus Greenery in built-up Area
  - d. Maintenance of Greenery around campus
- II. Solid Waste Management
  - a. Documentation of Solid Waste Management Procedure
  - b. Allocation of Resources (Staff, Machinery, and Budget)



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- c. Implementation of Procedure
    - d. Implementation of Best Practices
  - III. Liquid Waste Management
    - a. Documentation of Liquid Waste Management Procedure
    - b. Allocation of Resources (Staff, Machinery, and Budget)
    - c. Implementation of Procedure
    - d. Implementation of Best Practices
  - IV. E-Waste Management
    - a. Documentation of Electronic Waste Management Procedure
    - b. Allocation of Resources (Staff, Machinery, and Budget)
    - c. Implementation of Procedure
    - d. Implementation of Best Practices
  - V. Biomedical/Radioactive/Hazardous Waste Management
    - a. Documentation of Biomedical/Radioactive/Hazardous Waste Management Procedure
    - b. Allocation of Resources (Staff, Machinery, and Budget)
    - c. Implementation of Procedure
    - d. Implementation of Best Practices
  - VI. Pollution Control
    - a. Documentation of Pollution Control (Air, Water, Noise, others)
    - b. Allocation of Resources (Staff, Machinery, and Budget)
    - c. Implementation of Procedure
    - d. Implementation of Best Practices
  - VII. Energy Conservation Practices
    - a. Documentation of Energy Conservation Practices and Commitments
    - b. Allocation of Resources (Staff, Machinery, and Budget)
    - c. Implementation of Procedure
    - d. Implementation of Best Practices
  - VIII. Maintenance of Water Resources
    - a. Documentation of Water Resource management
    - b. Allocation of Resources (Staff, Machinery, and Budget)
    - c. Implementation of Procedure
    - d. Implementation of Best Practices
  - IX. Health & Hygiene
    - a. Documentation of Policies and procedures related to Health & Hygiene
    - b. Allocation of Resources (Staff, Machinery, and Budget)
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- c. Implementation of Procedure
  - d. Implementation of Best Practices
- X. Awareness and Sensitivity
- a. Documentation of Policies and Procedures about Awareness and Sensitivity
  - b. Allocation of Resources (Staff, Machinery, and Budget)
  - c. Implementation of Procedure
  - d. Implementation of Best Practices

### 2.3.10 Improvements and Best Practices as observed

- In past few years, special drives have been conducted for increasing in-house plantations.
- Vertical Gardening, Indoor Plantation, and many other modes of greenery has been adopted to utilize the optimum area to accommodate maximum greenery.
- Big trees in the campus have been preserved with elevated supporting soil bases.
- Campus has been safeguarded with iron-nets against monkeys, other mammals, and animals without harming them and sustaining a balanced biodiversity.
- Rich and further improved greenery in the heritage campus attracts beautiful birds and insects and makes the campus feel like true lap of nature.

## 2.4 Findings and Observations

### 2.4.1 Quantitative Findings

Water Bodies at Campus				
#	Type	Counts	Total Capacity	Remarks
1	Water Tanks	More than 50	2000 litres each	-
2	Pools	No pools	-	-
3	Lakes	No Lakes	-	-
4	Ponds	No Ponds	-	-
5	Wells	No wells	-	-
6	Others	-	-	-

Water Consuming Units				
S. No.	Type	Counts	Consumption/ Month	Remarks
1	Bathrooms (with Bath facilities)	Adequate number of bathrooms available.	Not monitored	-
2	Urinals for Males	Adequate number of Urinals for males available.	Not monitored	-
3	Urinals for Females	Adequate number of urinals for females available.	Not monitored	-
4	Toilets	Adequate number of Toilets available.	Not monitored	-
5	Wash Basins	Adequate number of wash basins available.	Not monitored	-
6	Taps	Adequate number of Taps available.	Not monitored	-
7	RO Units	Adequate number of RO units available. RO waste water is reused in their washrooms.	Not monitored	-
8	Leaking Taps/Points	No, they are using water saving push taps fitted in the drinking water zone.	Not monitored	-



9	Nursary & Garden	Yes, they have lush green campus with nursery and Garden.	Not monitored	-
10	Others	-	-	-
<b>TOTAL Consumption</b>			Not monitored	

Preservations Setups				
S. No.	Type	Counts	Capacity	Remarks
1	Waterless Urinals/Toilets	Adequate number of Waterless toilets are available.	Not monitored	-
2	STP	Not Available	Not monitored	-
3	Ground Water Recharging Pits	Recharging pits have been maintained. Rainwater has been directed to recharging pits.	Not monitored	-
4	Rainwater Harvesting Storage	More than 10 units of Rainwater harvesting system have been maintained.	Not monitored	-
5	Chemical Waste Treatment Setup	Lifting of waste from Campus on alternate day by Municipal Corporation as per defined rules about segregation of wastes.	Not monitored	-
6	Other	-		

Environment Preservations Initiatives			
S. No.	Type	Observation	Remarks
1	"One Time Use Plastic" Free Campus?	Yes	
2	Awareness Drives and Special Events?	Yes	
3	Polluting Vehicles Prohibited in Campus?	Yes	
4	Non-Polluting commutation provided?	Yes	
5	Specialized Clubs Identified?	Yes	
6	Biogas Plant Installed?	No	
7	Solar Panels for Electricity Generation Installed?	Yes	
8	Segregation of Waste performed?	Yes	
9	Waste-Bins made available appropriately?	Yes	
10	Incinerators to dispose sanitary napkins Installed?	No	
11	Waste Water Reuse implemented?	Yes	
12	Electronic Waste Management Policy Defined and Implemented?	Yes	
13	Solid Waste Management Policy Defined and Implemented?	Yes	
14	Liquid Waste Management Policy Defined and Implemented?	Yes	
15	Hazardous Waste Management Policy Defined and Implemented?	No	
16	Green Audit Performed?	Yes	
17	Energy Audit Performed?	Yes	
18	Measurable Improvements Reported over past cycles of Audits?	No	
19	Awards & Recognitions?	Yes	
20	Others	None	

#### 2.4.2 Observational Remarks

- The heritage campus of IGDTUW is located at Kashmere Gate in the heart of Delhi. The rich lineage of this campus along with the development of modern facilities provide resources and infrastructure for academic excellence to students. The campus has more than 15,000 Sqm built in area with more than 33 classrooms and 36 labs. The learning infrastructure includes classrooms, laboratories, workshops, computer centre and library. The classrooms are equipped Green board and Dustless usable chalkboard.



- The campus has green landscaping of plants and trees which covers 60% of the area, having varieties of plants and trees which includes Ashok, Gulmohar, Kadam, Maulsary, Neem, Eruka Palm, Snepra, etc. The entire open area has been kept green through heavy foliage of grass, seasonal flowers, trees and are maintained by horticulture department of the university. University has pedestrian friendly roads in all the campuses which benefits from the lush shaded tress.
- The Green Sphere society at IGDTUW came into existence with a vision to protect and conserve the environment by taking the Green route. It aims at spreading environmental awareness and is an initiation by those who comprehend the engineering of ecological balance and the effect of our routine activities on our immediate environment. The activities and events are organized that focus on creating awareness among students and encourage greener practices.
- The university takes efforts for segregation of wastes as per their nature and procedures of disposals. Electronic, Biodegradable, Non-Biodegradable, and Hazardous wastes are collected separately and disposed as per process.
- Appropriate vendors have been engaged for waste management.
- Water resources have been maintained for water preservation. Rain Water is preserved in Ground Water Recharge Pits. RO Waste Water is reused in horticulture.
- Special councils and interest groups have been identified for extended effectiveness of the environment preservation initiatives.

#### **2.4.3 Major Gaps**

- No defined/documentated policies and procedures for environment preservation practices.
- No measurable objectives set for environment preservation practices.

#### **2.4.4 Minor Gaps**

- Periodic audits about environment preservation practices has not been practiced.
- Measured reports about environment preservation practices has not been captured.

#### **2.4.5 Opportunities of Improvement**

- Proportionate to the rich greenery in the campus, number of compost pits may be increased to serve the greenery with organic fertilizers.
- Self-Sustained modes of plantation may be encouraged by better planning of green waste management.



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#### **2.4.6 Positive Observations**

- Vertical gardening across the outer walls of most of the buildings is not only beautiful but also making the campus rich in natural greenery.
- Drip-Irrigation setup in vertical gardening is keeping the plants green even with less soil.
- Dedicated Society “ANTARGAT”, Multiple awareness sessions, Plantation Drives, and other initiatives are good in number and effectiveness.
- ANTARGAT Newsletter is impressive collection of initiatives and activities towards Green Campus Initiative of the University.

#### **2.5 Recommendations**

- Define measurable objectives, respective policies, procedures, and guidelines for Green Campus Sustenance.
- Increase number of Compost Pits and encourage Self-Sustained Horticulture in the campus.

#### **2.6 Conclusion**

Under the limitations of heritage building where constructions and modifications are not freely permissible, the University is maintaining a campus with rich natural greenery and supporting balanced biodiversity between human and non-human living beings in the campus.

-- END OF REPORT --





# Annexure

## Glimpse of Observations during Audit

### Restricted Entry of Automobiles



### Greenery Preservation and Plantation





