AMITY UNIVERSITY
MADHYA PRADESH

# ENVIRONMENT REPORT
## (2020-2021)

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## Preface

Concern about environmental degradation and realization of values of environment are logical consequences of scholarly research, teaching and learning process. In its pursuit for improving environmental quality and to maintain a pristine environment for the future generation of students, Amity University Madhya Pradesh, Gwalior has made a self-inquiry on environmental quality of the campus.

It works on the several facets of 'Environmental conservation and sustainability' including Water Conservation, Tree Plantation, Waste Management, Paperless Work, Alternative Energy and Mapping of Biodiversity. With this in mind, the specific objectives of the audit was to evaluate the adequacy of the management control framework of environment sustainability as well as the degree to which the Institutions/Departments are in compliance with the applicable regulations, policies and standards. It can make a tremendous impact on student health, learning outcome, operational costs and the environment. The criteria, methods and recommendations used in the audit were based on the identified risks.

### Introduction

Environmental report can be defined as systematic identification, quantification, recording, reporting and analysis of components of environmental diversity. The report aims to analyse environmental practices within and outside the university campus, which will have an impact on the eco-friendly ambience. It was initiated with the motive of inspecting the work conducted within the organizations whose exercises can cause risk to the health of inhabitants and the environment. Through the report, one gets a direction as how to improve the condition of environment and there are various factors that have determined the growth of carrying out such report.

### Objectives of the Study

The main objective of the report is to promote the Environment Management and Conservation in the University Campus. The purpose of the report is to identify, quantify, describe and prioritize framework of Environment Sustainability in compliance with the applicable regulations, policies and standards.

The main purpose of Environment Report:

- To inculcate awareness among the students to real concerns of environment and its sustainability.

- To promote the concept of environmental conservation so as to minimize the extent of exploitation of resource use inside the campus.
- To ensure that the development of the campus foster to the concept of environmental sustainability.
- To assess whether investments made in increasing awareness among students regarding judicious use of electricity, biodiversity conservation, plastic free campus and environment have helped the Institution
- To establish a baseline data to assess future sustainability by avoiding the interruptions in environment that are more difficult to handle and their corrections requiring high cost.
- To bring out a status report on environmental compliance.

The study covered the following areas to summarize the present status of environment management in the campus:

- Biodiversity conservation
- Water management
- Solid Waste management
- Green area management
- Campus facility and ambience

**Biodiversity conservation:**

This indicator addresses the extent of flora and fauna inside the campus and initiatives adopted by the University for maintenance and conservation. The different types of species of plants growing naturally and planted to provide sustainability to the man-made ecosystem.

The university campus is lush green with plantations of ornamental plants, trees, shrubs and herbaceous species. It has has a well maintained gardens and lawns.

Regular plantation of different types of plants is undertaken on important occasions like "World Environment Day, Raising day with the participation of staff and students.

Compulsory ENVS paper of 100 marks in the University Syllabus for all the students of all

streams to develop Environmental Awareness.

The lush green campus of the environment is attracting the migratory bird particularly during the winter seasons. Adequate arrangements have been made to provide water and feed to the birds.

A botanical garden with about 50 species of medicinal plants has been set and will be upgraded.

**Water Management**

This indicator addresses water consumption, water sources, and fixtures. A water audit is an on-site survey and assessment to determine the water use and hence improving the efficiency of its use.

The University is presently dependent on Borewells which are presently 10 in numbers. The water is hard with average prevailing TDS 1800 .However, soft water plant with capacity of 30 KL of ION EXCHANGE is installed in the Campus to improve the quality of water.

In addition for drinking water 24 Nos of 50 litre capacity RO are fitted in the entire campus. They are regularly maintained under AMC. In addition to above application for water supply has been forwarded to Nagar Nigam, Gwalior for supply of water with overall cost for laying dedicated pipe lines amounting to Rs 67 lakh has been deposited by the University. The work is yet to be completed.

Water is used for drinking purpose, toilets and gardening. During the survey, no loss of water is observed, neither by any leakages, nor by overflow of water from overhead tanks. The data collected from all the departments is examined and verified. Water quality is enhanced by using soft water plant of ION exchange of capacity 30 KL and ROs of 50 liter in 24 Nos are installed in the Campus to provide potable water.

**Waste Management**

This indicator addresses waste production and disposal of different wastes like paper, food, plastic, biodegradable, construction, glass, dust etc. and recycling. Furthermore, solid waste often includes wasted material resources that could otherwise be processed through recycling, repair, and reuse. Solid waste generation and management is a burning issue. Unscientific

handling of solid waste can create threats to everyone. The survey focused on volume, type and current management practice of solid waste generated in the campus.

Waste generated from tree droppings and lawn management is a major solid waste generated in the campus. The waste is segregated at source by providing separate dustbins for Bio-degradable and Plastic waste. Single sided used papers are recommended for use for writing and printing in all departments.

Most of the official correspondence is through emails which has drastically reduced the use of papers.

Metal waste and wooden waste is stored and given to authorized scrap agents for further processing. The solid waste is collected by the municipal corporation and disposed by their methods.

**Green Area Management**

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 programmes.

The University has maintained the existing and added to the land scape environment of the Campus. The layout of the land has not been disturbed and existing hill features have been used for layout of the entire Campus. This has made the campus layout beautiful and has been appreciated by all dignities and visitors visiting the campus. Campus is located in the vicinity of many trees (species) to maintain the bio-diversity. Various tree plantation programs are being organized at university campus and surrounding villages through NSS (National Service Scheme) unit, ECO Club etc. This program helps in encouraging eco-friendly environment which provides pure oxygen within the institute and awareness among villagers. The plantation program includes various types of indigenous species of ornamental, medicinal and multipurpose tree species (MPTS).

The University has installed Solar Power Plant 307 K.watt capacity. So as to save energy. This likely to be enhanced further

**Rain water harvesting in the campus**

Amity University Madhya Pradesh was established in the year 2011 in 102 Acre of land. The requirement of water for the campus is being met by digging 10 Nos of Borewells as no water from Nagar Nigam is being supplied.

The borewells dug in the campus have not enough ground water to yield water continuously. Half numbers of the borewells dry up during continuous pumping. To recharge these existing borewells and to restrict the out-flow of rainwater. Amity University arranged to construct 10 Nos of Water Harvesting Pits of capacity 30,000 ltrs at various location (Water Catchment Area) to conserve rainwater. These pits have been provided enough filter media to restrict the mud/silt during rains.

This has also been applauded by Hon'ble High Court Gwalior MP. Local Newspaper cuttings are attached for ref.

**Conclusions**

The environmental awareness initiatives undertaken by the university in the ten years of its existence are substantial. The installation of solar panels as renewable/alternative source of energy and two units of STPs for waste management is noteworthy. Besides, environmental awareness programmes initiated by the administration/departments shows how the campus is going green.

## Particulars of flora inside the campus

### DETAILS OF TREE GROWN NATURALLY

| Name of Plant | Neem | Dakhsni | Gulmohar | Peepal | Sheesham | Raimaza | Khair | Heesh | Babul Desi | Ber | Anar | Churail | Hingota | Ghot | Kareel | Shesho | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Location** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | |
| **Foresty** | | | | | | | | | | | | | | | | | |
| Block-A to Pump House No-1 | 164 | 115 | 78 | 4 | 5 | 140 | 377 | 54 | 8 | 6 | 2 | 5 | | | | | 958 |
| Main Gate To Block-B(Back side) | 222 | 412 | 16 | 2 | 17 | 291 | 553 | 65 | 9 | 10 | 1 | 11 | 254 | | | | 1863 |
| Block-C to Pump House No-2 | 99 | 885 | 18 | | 3 | 267 | 99 | 26 | 30 | 11 | | | 25 | 2 | 52 | | 1517 |
| Pump House No-2 to Security Post | 27 | 124 | | | | 91 | 162 | 32 | 4 | 4 | | | 17 | 9 | 3 | | 473 |
| STP No-1 Area | 20 | 31 | | | 3 | 3 | | | 1 | 4 | | | | | | | 62 |
| Security Post to New Hostel | 120 | 188 | 11 | | 3 | 402 | 471 | 535 | 5 | 5 | | 5 | 58 | 198 | 6 | | 2007 |
| New Hostel to Partition Zali | 320 | 284 | 60 | | 9 | 87 | 1285 | 473 | 18 | 5 | | 4 | 274 | 37 | 11 | 18 | 2885 |
| **Total** | **972** | **2039** | **183** | **6** | **40** | **1281** | **2947** | **1185** | **75** | **45** | **3** | **25** | **628** | **246** | **72** | **18** | **9765** |

# AMITY UNIVERSITY MADHYA PRADESH, GWALIOR

## DETAILS OF TREE PLANTED

| Name of Plant | Amaltas | Gulmohar | Kushum | Boganbolia | Kanair | Neem | Sheesham | Kanji | Maulshree | Arjun | Champa | Cycus | Alustinia | Tikoma | Bottle Brush | Bargad | Peepal | Kadam | Kalendera | Dhak | Dalmoth | Oomar | Palm | Alustonia | Bustoniya | Ambla | Shahtoot | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | |
| Main gate to Block-A Jn trench side | 10 | 9 | 9 | 161 | 2 | 44 | 8 | 10 | 1 | | | | | | | | | | | | | | | | | | | 254 |
| Main gate to Block-A Jn bundry side | 10 | 8 | 6 | 144 | 6 | 20 | 4 | 3 | | | | | | | | | | | | | | | | | | | | 201 |
| Black-A to Hostel gate sport Gd side | 45 | 1 | | | 70 | 26 | 6 | | | 23 | 82 | 32 | 2 | 6 | 1 | 1 | 3 | 1 | | | | | | | | | | 299 |
| Black-A to Hostel gate Boundry side | 1 | | | 122 | 11 | 84 | 13 | | | 3 | 43 | | 24 | 4 | | | 3 | | | | | | | | | | | 308 |
| Behind Block-A | | 5 | | 2 | 18 | 40 | | | 1 | | | | | | | | | | | 10 | 2 | | | | | | | 78 |
| BK-B/C Jn to BK-A Turning Hill side | | | | 90 | 33 | 3 | 3 | | 10 | 17 | 88 | | | 19 | | | | | 22 | | | 1 | | | | | | 286 |
| BK-B/C Jn to BK-A Turning BK-B side | | | | 55 | 60 | 10 | | | 1 | 6 | 47 | | | 28 | | | | | 12 | | | | | | | | | 219 |
| Behind Block-B | | | | | | | | | | | | | | | | | | | | | | | 13 | | | | | 13 |
| BK-C Front side | | 4 | | 68 | 105 | 30 | 4 | | | | | 12 | | 10 | | | | | 4 | | | | 8 | | | | | 245 |
| Behind BK-C | | 6 | | | | 28 | 7 | | | | | | | | | | | | | | | | | | | | | 41 |
| Chiller Plant to Bk-C Jn Chiller side | | | 3 | 33 | 63 | 10 | | | | 7 | 19 | | | 2 | | | | | 4 | | | | | | | | | 141 |
| Chiller Plant to Bk-C Jn Ahuja side | 7 | | | 15 | 43 | 6 | 2 | 2 | | 37 | 21 | | 22 | 15 | | | | 14 | 4 | | | | | | | | | 188 |
| Generator side | | | | | 3 | | | | | 8 | | 1 | | | | | | | | | | | | | | | | 4 |

| | | | | | 8 | | | | | | | | | | | | | | | | | | | | | | 7 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Name of Plant** | **Amaltas** | **Gulmohar** | **Kushum** | **Boganbolia** | **Kanair** | **Neem** | **Sheesham** | **Kanji** | **Maulshree** | **Arjun** | **Champa** | **Cycus** | **Alustinia** | **Tikoma** | **Bottle Brush** | **Bargad** | **Peepal** | **Kadam** | **Kalendera** | **Dhak** | **Dalmoth** | **Oomar** | **Palm** | **Alustonia** | **Bustoniya** | **Ambla** | **Shahtoot** | **Total** |
| Alustonia Park | 3 | | | 30 | | | 3 | 1 | | 2 | | | | | | | | | | | | | 14 | | | | 53 |
| Hostel JN to H1 Reception Hostel side | 12 | 6 | | 1 | 74 | 6 | 1 | 12 | 1 | | 12 | | | 9 | | | | | | 9 | | | | | 21 | | | 164 |
| Hostel JN to H1 Reception STP side | 14 | 4 | | | 10 | 21 | | | | 3 | | | | 7 | | | | | | | | | 12 | | | | 71 |
| AIS Gate to H1 Reception Fencing side | | | | | 5 | 14 | | | | 19 | | | | | | | 2 | | | | | | | | | | 40 |
| Hostel Plaza Area H1 side | | 2 | | | 19 | | | 2 | | | 104 | | | | | | | | | | 2 | | | | 27 | | | 156 |
| Hostel Plaza Area H2 side | | | | | 2 | | | | | | 77 | | | | | | | | | | | | | | 29 | | | 108 |
| New Hostel H3 Area | 1 | | | | 9 | 11 | | | | | | 19 | | 2 | | | | | | | | | 7 | | | | | 49 |
| H2 Hostel Park side | 11 | 11 | | 3 | 146 | | | 14 | | | 28 | | | 9 | | | | | 1 | 5 | 8 | | | 1 | 22 | | | 259 |
| H2 Hostel Sport Complex side | 8 | 10 | | | 9 | | | | | | | | | 2 | | | | | 2 | | | | | | | | | 31 |
| Main Gate to Pump House No-2 | 36 | | 4 | 123 | | 17 | 5 | | | 51 | | | | | | 1 | 1 | | | 8 | | | | | | | | 246 |
| STP-II to Pump House No-2 | | 1 | | 214 | 4 | 49 | 37 | | | | | | | | | | 4 | | | 55 | | | | | 1 | 1 | 366 |
| Pump No-2 to security Post 10 | | | | 141 | | 73 | 20 | | | | | | | | | | | | | 2 | | | | | | | | 236 |
| Security Post 10 to Partition Zali | | | | 276 | | 86 | 80 | | | | | | | | | | | | | | | | | | | | | 442 |
| By UGC Team | | | | | | | | | | | | | | | | | 5 | | | | | | | | | | | 5 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| On 16 Jul 19 by Order of Ho'ble Governer at various locations | | | | | | | | | | | | | | | | | | 20 | | | | | | | | | | | 20 |
| **Name of Plant** | **Amaltas** | **Gulmohar** | **Kushum** | **Boganbolia** | **Kanair** | **Neem** | **Sheesham** | **Kanji** | **Maulshree** | **Arjun** | **Champa** | **Cycus** | **Alustinia** | **Tikoma** | **Bottle Brush** | **Bargad** | **Peepal** | **Kadam** | **Kalendera** | **Dhak** | **Dalmoth** | **Oomar** | **Palm** | **Alustonia** | **Bustoniya** | **Ambla** | **Shahtoot** | **Total** |
| By Hon'ble Guest ( Ex Dubai) | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | 1 |
| Sep-19 | | | | | | 25 | | | | | | | | | | | | | | | | | | | | | | | 25 |
| **Total** | **158** | **67** | **22** | **1478** | **727** | **603** | **193** | **44** | **14** | **176** | **521** | **64** | **48** | **113** | **1** | **2** | **37** | **17** | **49** | **89** | **12** | **1** | **28** | **27** | **99** | **1** | **1** | **4592** |

**Rain Water Harvesting pits at different locations in the campus**


**Tree Plantation on World Environment Day**

**Tree Plantation at the Campus**

**Sewage Treatment Plants (STP) at the campus**