

# GREENAUDIT REPORT

2021-2022


MNR College of Pharmacy



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Accepted By: Chairman, Green Audit Committee, MNR Education Trust

  
**PRINCIPAL**  
**MNR COLLEGE OF PHARMACY**



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## **INTRODUCTION:**

Green Audit is a process of systematic identification, quantification, recording, reporting and analysis of components of environmental diversity of institute. It aims to analyse environmental practices within and outside of the concerned place, which will have an impact on the eco-friendly atmosphere. Green audit is a valuable means for a college to determine how and where they are using the most energy or water or other resources; the college can then consider how to implement changes and make savings. It can create health consciousness and promote environmental awareness, values and ethics. It provides staff and students better understanding of Green impact on campus. If self-enquiry is a natural and necessary outgrowth of a quality education, it could also be stated that institutional self-enquiry is a natural and necessary outgrowth of a quality educational institution. 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.

The rapid urbanization and economic development at local, regional and global level has led to several environmental and ecological crises. On this background it becomes essential to adopt the system of the Green Campus for the institutes which will lead for sustainable development and at the same time reduce a sizable amount of atmospheric CO<sub>2</sub> from the environment. The National Assessment and Accreditation Council, New Delhi (NAAC) has made it mandatory that all Higher Educational Institutions should submit an annual Green Audit Report. Moreover, it is part of Corporate Social Responsibility of the Higher Educational Institutions to ensure that they contribute towards the reduction of global warming through carbon footprint reduction measures.

## **OBJECTIVES:**

In recent time, the Green Audit of an institution has been becoming a paramount important for self-assessment of the institution which reflects the role of the institution in mitigating the present environmental problems. The college has been putting efforts to keep our environment clean since its inception. Therefore, the purpose of the present green audit is to identify, quantify, describe and prioritize framework of Environment Sustainability in compliance with the applicable regulations, policies and standards. The main objectives of carrying out Green Audit are:

- To map the Geographical Location of the college
- To document the floral and faunal diversity of the college
- To record the meteorological parameter of MNR where college is situated
- To document the ambient environmental condition of weather, air, water and noise of the college
- To document the waste disposal system
- To estimate the Energy requirements of the college
- To report the expenditure on green initiatives during the last five years



## **METHODOLOGY:**

The purpose of the green audit of MNR is to ensure that the practices followed in the campus are in accordance with the Green Policy of the country. The methodology includes: collection of data, physical inspection of the campus, observation and review of the documentation and data analysis.

## **ABOUT THE COLLEGE:**

MNR College of Pharmacy (MNR COP) is located at MNR Higher Education and Research Academy (MNR-HERA) Campus, Sangareddy, Telangana State. MNR-HERA campus is spread across 110 acres of lush green grass, marked by huge trees, and greenery all around. It was established under the aegis of the MNR Educational Trust in 2004, and since then it has been nurturing the pharmaceutical profession. MNR College of Pharmacy is approved by Pharmacy Council of India (PCI) a statutory body of government of India established to regulate pharmacy education in the country for the purpose of registration as a pharmacist under the pharmacy act and the profession and practice of pharmacy.

MNR College of Pharmacy is an All India Council of Technical Education (AICTE) approved pharmacy institute. MNR College of Pharmacy is permanently affiliated to the Osmania University for the B. Pharm, M. Pharm, Pharm D and Post Baccalaureate. MNR College of Pharmacy is approved by Committee for the Purpose of Control and Supervision of Experiments on Animals (CPCSEA). MNR COP has grown from its inception in 2004 from 60 intakes to 200 intakes, ranging from B.Pharm, Pharm D, M.Pharm (Pharmaceutical Chemistry, Pharmaceutics and Pharmacology) and Pharm D (Post Baccalaureate) with first-class teaching facilities. We are immensely satisfied with this steady growth and are very proud to declare that MNR COP is now synonymous with quality education.

MNR COP provides the best-in-class facilities to its students, so that they can have a superior and remarkable experience that leaves lasting impressions. We offer an academic program which includes industrial training with clinical exposure and visiting R&D labs and performing live projects in pharmaceutical industry. We are fortunate to have qualified, talented, highly committed faculty members which makes the learning environment of our students, the best in industry. MNR COP is committed to become a 'Center of Excellence in Pharmaceutical Education and Research' by delivering quality education and also by pursuing biomedical and pharmaceutical research through its faculty. Students go through intensive training programs to meet the quality standards of the industry.

The growth of this college is propelled by the duo effect, i.e. provision of state-of-the-art laboratories with cutting edge technology and dedicated faculty. The college always puts a sustained continuous effort to upgrade the quality of its education and involves in research activities. Being located close to the pharmaceutical hub of India, the college has forged useful linkages with various renowned pharmaceutical companies and research centers to help the



students to gain expertise in Research & Development and also in emerging technologies, apart from enabling them to stay abreast with emerging trends. The faculty of Health Sciences conducts lectures by eminent guest speakers to enrich the quality of learning. The students are also provided clinical information of the patients during their visits to the teaching hospital.

## **VISION & MISSION STATEMENT:**

### **OUR MISSION**

To inspire students to acquire Pharmacy education of international standards

Offering a challenging academic atmosphere in the institution

Creating a safe and disciplined college environment conducive to learning

Motivating and challenging the students to set high educational and research standards and to get through high expectations

Continuously maintaining ethical standards

### **THE VISION**

MNR College of Pharmacy visualizes in becoming world class centre to impart the technical knowledge and research in pharmacy, aiming to contribute considerably in wisdom and humanity for the development of the apprentices to become highly disciplined and globally competent with ethical value.

### **QUALITY POLICY**

We are dedicated to offer quality education and motivated learning to refine the students with potentially academic, distinctive practice and moral codes for professional competence. We ensure the excellence in education by sculpturing our students in all possible ways.



## **GREEN AUDITING:**

The college has adopted the 'Green Campus' system for environmental conservation and sustainability. There are three main pillars i.e. zero environmental foot print, positive impact on occupant health and performance and 100% graduates demonstrating environmental literacy. The goal is to reduce CO2 emission, energy and water use, while creating atmosphere where students can learn and be healthy.

## **LAND USE ANALYSIS:**

### **GENERAL OVERVIEW OF THE CONCEPT OF LANDUSE**

Land use refers to man's activities and the various uses which are carried on and derived from land. Viewing the earth from space, it is now very crucial in man's activities on natural resource. In situations of rapid changes in land use, observations of the Earth from space give the information of human activities and utilization of the landscape.

Remote sensing and GIS techniques are now providing new tools for advanced land use mapping and planning. The collection of remotely sensed data facilitates the synoptic analyses of earth system, functions, patterning, and change in the local, regional as well as at global scales over time. Satellite imagery particularly is a valuable tool for generating land use map.

### **METHODOLOGY ADOPTED FOR LAND USE MAPPING**

Three types of data that are GPS points, field survey data and Google earth data for Geo referencing have been used in this study. Land use map of the study area have been prepared using the above three types of data with the help of ArcGis Prosoftware.

### **DATA PROCESSING AND ANALYSIS**

Land use map preparation is executed through the following steps:

Acquisition of data, Geo-coding and Geo referencing of satellite imageries by extracting the ground control points. Supervised classification was carried out with the aid of ground truth data collected during field survey. Scanning and digitization of maps and editing of all the Georeferenced maps were done using GIS. Data manipulation and analysis and linking the spatial data with the attribute data for creation of topology was carried out using GIS software. Creation of GIS output in the form of land use map showing various land use have been



prepared.

Therefore, attempt has been made in this study to map land use for MNR with a view to detect the land consumption in the built-up land area using both remote sensing and GIS techniques.

### GEOGRAPHICAL LOCATION WITH CAMPUS MAP IN SCALE

The college has a sprawling pollution-free campus spread over 100 acres of integrated campus located at MNR Nagar, Fasalwadi, Narsapur Road, Sangareddy, Telangana State, India. It has an ideal geographical location with the proximity to the important cities of the region i.e. Karnataka, Telangana, Maharashtra.



Photo 1: Google Map of Campus



## Green Audit Report, MNR College of Pharmacy

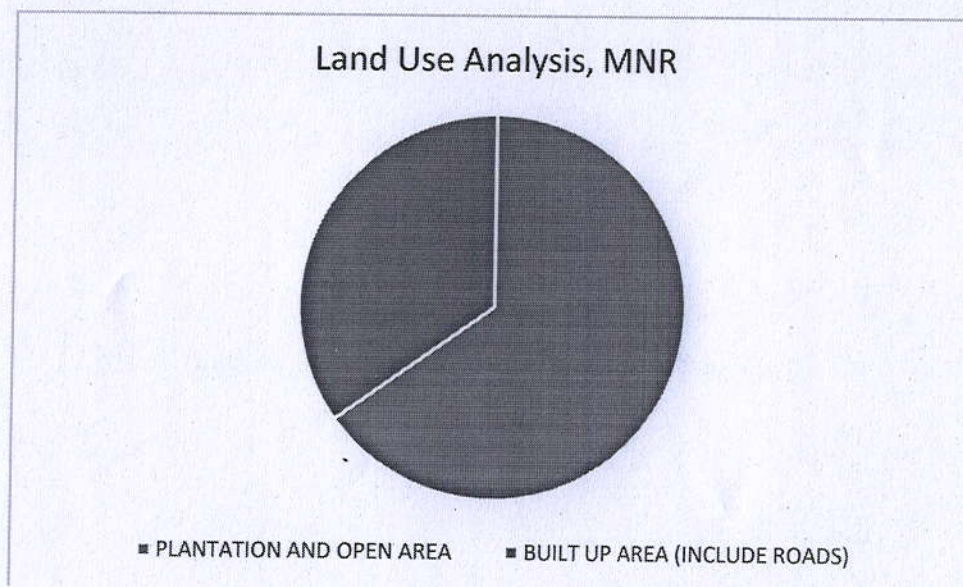


Photo 2: Aerial View of College Campus Part 2 (Source GoogleEarth)

### LAND USE DATA OF MNR, SANGAREDDY

<i>CATEGORIES OF LAND USE</i>	<i>AREA (m<sup>2</sup>)</i>
PLANTATION AND OPEN AREA	26299
BUILT UP AREA (INCLUDE ROADS)	14161
TOTAL AREA	40460





The total area of MNR is 40,460m<sup>2</sup> out of which the built up area (include Roads) is 35% (i.e.14161m<sup>2</sup>) and plantation and open area is 65% (i.e.26299 m<sup>2</sup>).

#### **LAND USE (BUILT UP AREA) ANALYSIS:**

The built up area of 35% (i.e.14161m<sup>2</sup>) consists of the following regions as stated below for land consumption in built up area of MNR:

The Southern region of MNR Campus is densely built up having academic block, Knowledge Resource Centre,. The Eastern region consists of Cricket ground, Gymnasium and sports complex. The Northern region consists of Canteen and Workshops. The central region consists of Major auditorium. Girls and boys hostels are in the extreme eastern region.

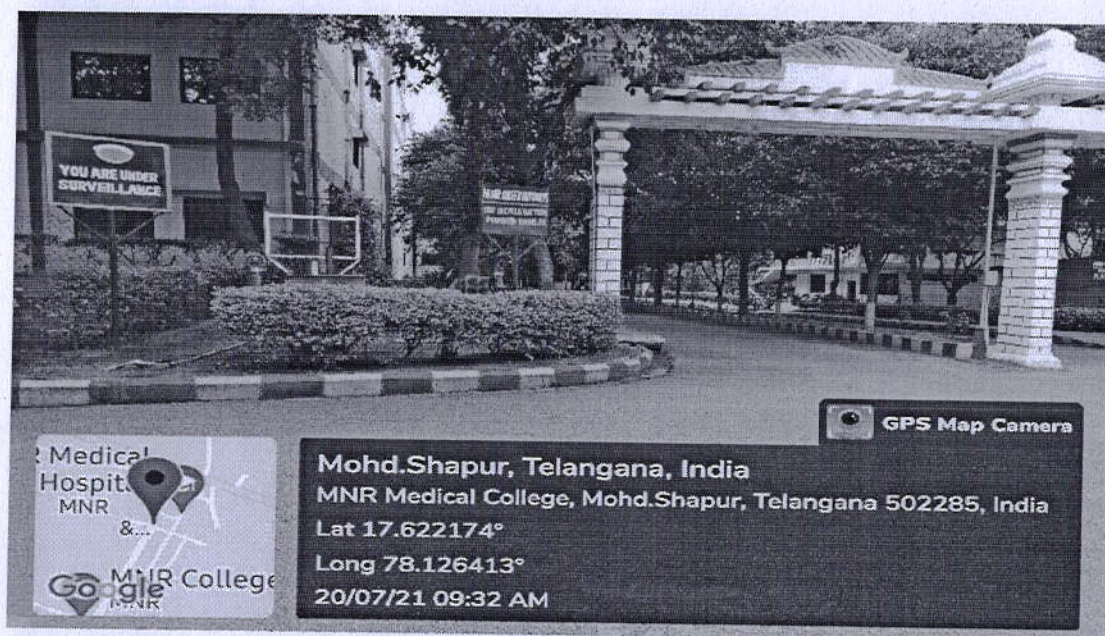
#### **FINDINGS:**

MNR Campus has an eco-friendly environment. It has a long legacy of healthy environmental practices including periodic plantation, their preservation and maintenance. Its land use is such that about 65% of the total area is occupied by open land and plantation that generates a better and sustainable campus environment.



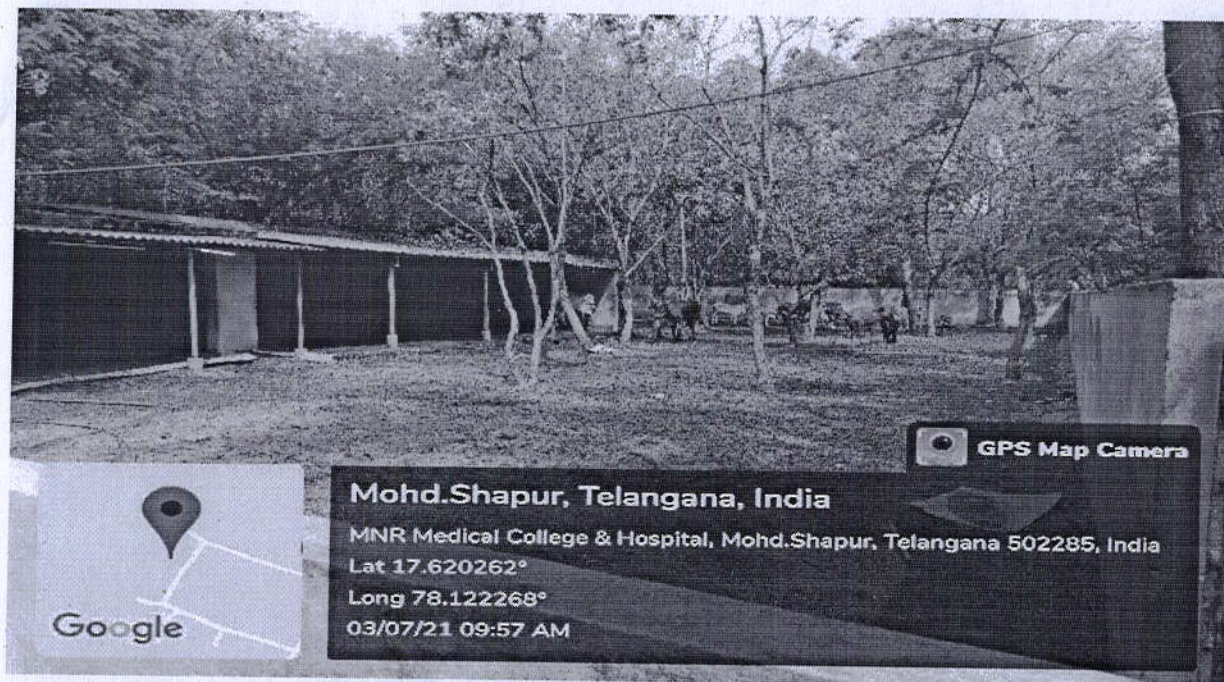
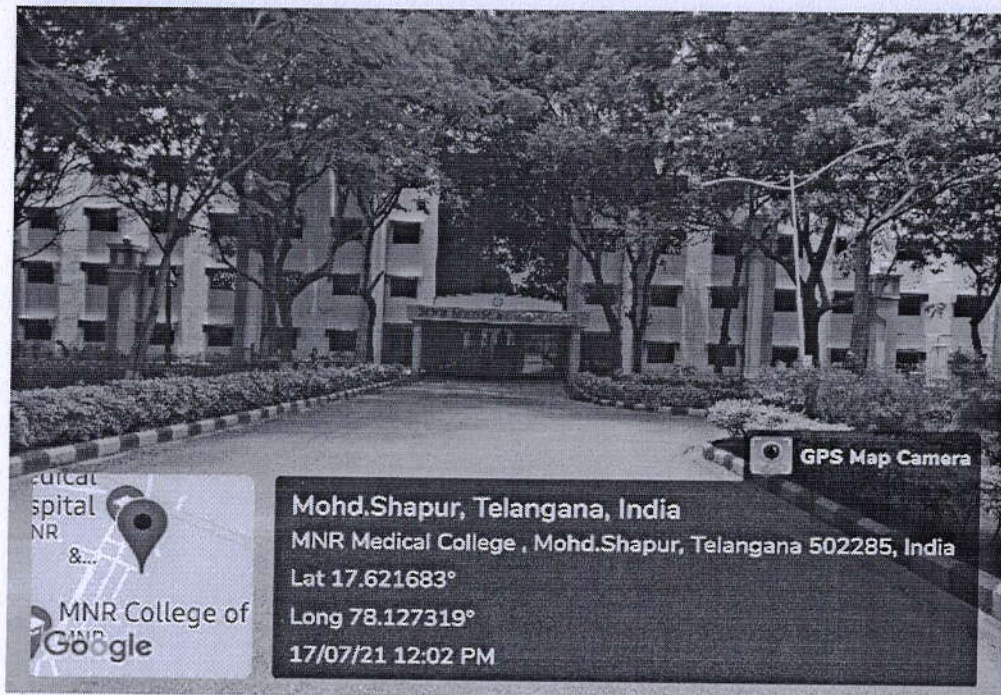
### **TREE DIVERSITY OF MNR, Sangareddy:**

MNR is within the geo-position between latitude 17037'21" N and longitude 78007'35" E near, hyderabad, Sanga reddy, India. It encompasses an area of about 66Acres. The area is immensely diverse with a variety of tree species performing a variety of functions. Most of these tree species are planted in different periods of time through various plantation programmesorganised by the authority and have become an integral part of the campus. The trees of the campus have increased the quality of life, not only the campus fraternity but also the people around of the campus in terms of contributing to our environment by providing oxygen, improving air quality, climate amelioration, conservation of water, preserving soil, and supporting wildlife, controlling climate by moderating the effects of the sun, rain and wind. Leaves absorb and filter the sun's radiant energy, keeping things cool in summer. Many spices of birds are dependent on these trees mainly for food and shelter. Nectar of flowers and plants is a favourite of birds and many insects. Leaf – covered branches keep many animals, such as birds and squirrels, out of reach of predators. Different species display a seemingly endless variety of shapes, forms, texture and vibrant colours. Even individual trees vary their appearance throughout the course of the year as the seasons change. The strength, long lifespan and regal stature of trees give them a monument – like quality. They also remind us the glorious history of MNR and our institution in particular. We often make an emotional connection with these trees and sometime become personally attached to the ones that we see every day. A thick belt of large shady trees in the periphery of the campus have found to be bringing down noise and cut down dust and storms. The following are the tree species with whom we are being attached-





**Green Audit Report, MNR College of Pharmacy**





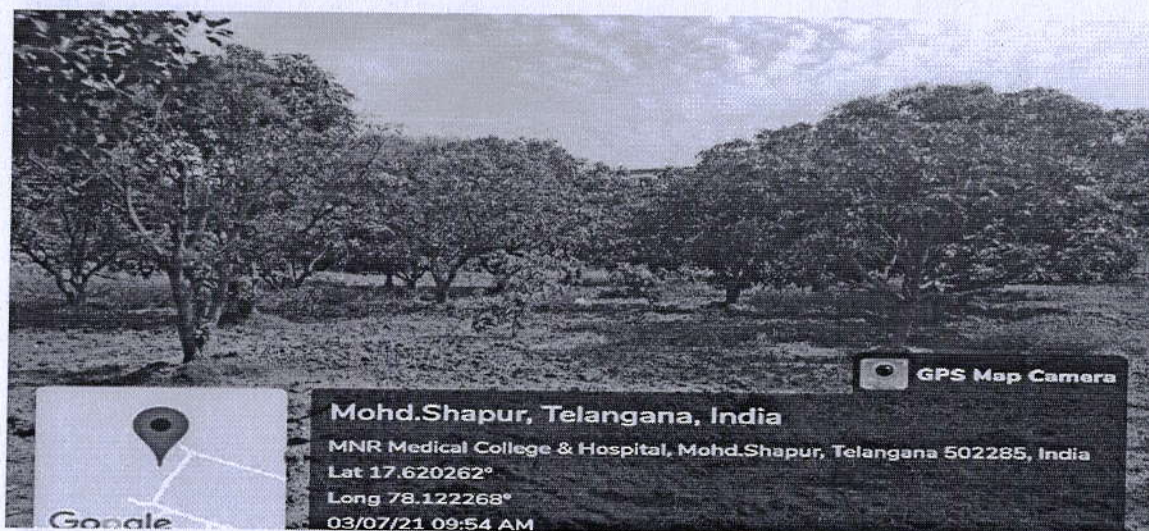




Table: List of tree species of MNR, Sangareddy

S.No.	Botanical Name	Family	Common Name
1	Mangifera indica	Anacardiaceae	Mango
2	Alstonia Scholaris	Apocynaceae	Alstonia
3	Tabernaemontana divaricata	Apocynaceae	Crape jasmine
4	Araucaria heterophylla	Araucariaceae	Christmas Tree
5	Hyophorba belagani	Arecaceae	Bottle Palm
6	Roystonea regia	Arecaceae	Cuban royal palm
7	Phoenix sylvestris	Arecaceae	Badela Palm
8	Platycladus orientalis	Cupressaceae	Oriental thuja
9	Saraca asoca	Fabaceae	Ashoka
10	Dalbergia sissoo	Fabaceae	Sissu / Tali
11	Vachellia nilotica	Fabaceae	Kikar
12	Cassia fistula	Fabaceae	Golden shower tree
13	Delonix regia	Fabaceae	Royal Poinciana
14	Tamarindus indica	Fabaceae	Tamarind
15	Tectona grandis	Lamiaceae	Sagwan
16	Punica granatum	Lythraceae	Pomegranate
17	Chukrasia velutina	Meliaceae	Chukrasia tabularis
18	Azadirachta indica	Meliaceae	Neem
19	Melia azedarach	Meliaceae	umbrella tree
20	Toona ciliata	Meliaceae	Tun
21	Ficus religiosa	Moraceae	Peepal
22	Syzygium cumini	Myrtaceae	Jamun
23	Psidium	Myrtaceae	Gauva
24	Eucalypts	Myrtaceae	Safeda
25	Phyllanthus emblica	Phyllanthaceae	Gooseberry
26	Bambusoideae	Poaceae	Bamboo
27	Grevillea robusta	Proteaceae	Silver Oak
28	Ziziphus mauritiana	Rhamnaceae	Ber
29	Rosa	Rosaceae	Rose
30	Citrus limetta	Rutaceae	Mausambi
31	Aegle marmelos	Rutaceae	wood apple
32	Populus	Salicaceae	Poplar
33	Mimusops elengi	Sapotaceae	Maulsari
34	Ficus benjamina	Fig family	Faux



**Green Audit Report, MNR College of Pharmacy**

35	Bugal Bael	.....	Bugal Bael
36	Ficus Benghalensis	Moraceae	Barota
37	Nemesia	.....	Nemesia
38	Rakh Manjan	.....	Rakh Manjan
39	Red Faux	.....	Red Faux
40	Mimusops	Sapotaceae	Sari
41	Flower Faux	.....	Flower Faux
42	Gul Lakkar	.....	Gul Lakkar



**FAUNAL DIVERSITY IN MNR CAMPUS:**

MNR is located in District of Sangareddy, Near Hyderabad. Indian State of Telangana. The highest temperature is recorded 420 C just prior to the onset of monsoon (around May- early June). Summer rain is normal, and is principally caused from late June to August by the moisture-laden South-West Monsoon, on striking the Himalayan foothills of the north. The climatic condition of the Sangareddy district as a whole and MNR in particular is very suitable for a wide variety of flora and fauna to support its rich biodiversity. The faunal Diversity of MNR campus has been studied and documented as below:

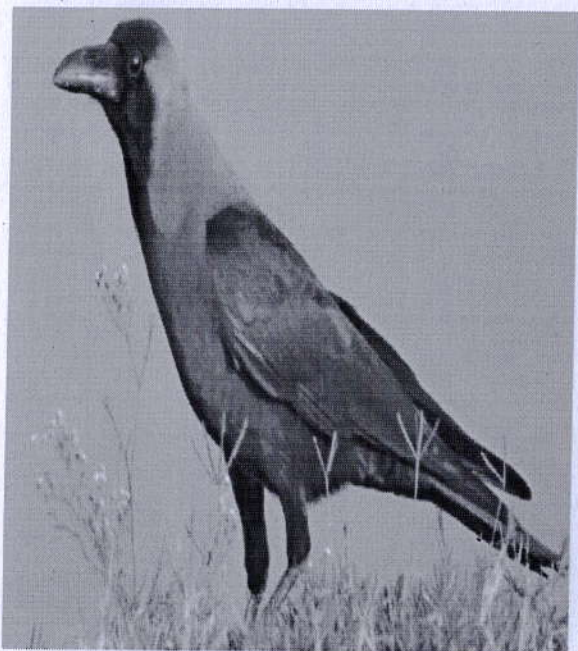
**Table: Common and Scientific names of birds and animals**

S.No	Common Name	Scientific Name
1.	Common Myna	Acridotheres Tristis
2.	Bank Myna	Acridotheres Ginginianus
3.	House Sparrow	Passer Domesticus
4.	House Crow	Corvus Splendens
5.	Cuckoo	Cuculidae
6.	Snake	Naja Naja
7.	Yellow Wasp	Ropalidia Marginata
8.	Butter Fly	Danaus Genutia
9.	Common Woodshrike	Tephrodornis Pondicerianus
10.	Pied Myna	Gracupica Contra
11.	Red-Vented Bulbul	Pycnonotus Cafer
12.	Skylark	Aluda Gulgula
13.	Garden Tiger Moth	Arctia Caja
14.	Little Owl	Athene Brama
15.	Oleander Moth	Syntomeida Epilais
16.	Slender Skimmer	Orthetrum Sabina

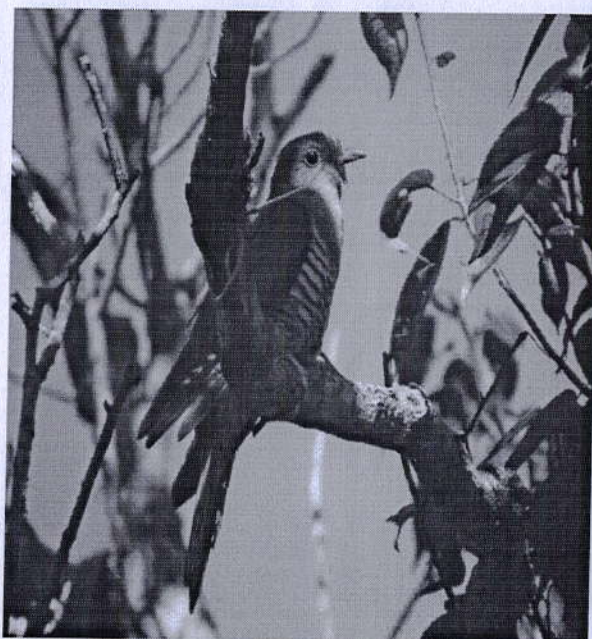




Common Myna(AcridotheresTristis) House Sparrow (PasserDomesticus)



House Crow(Corvus Splendens)

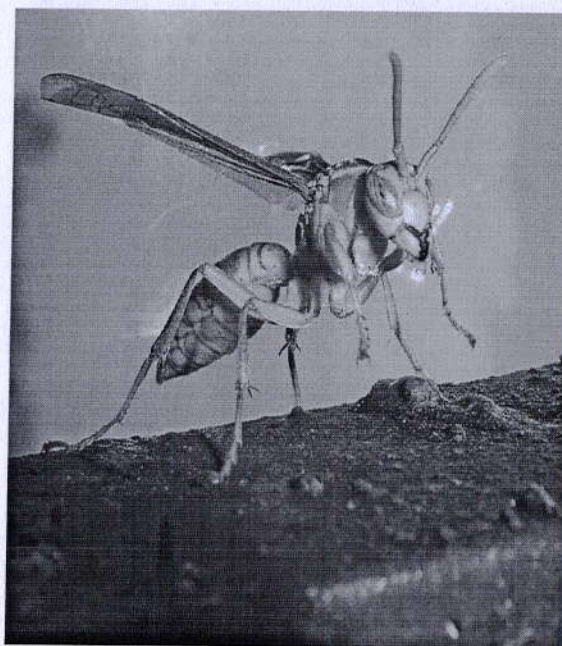


Cuckoo(Cuculidae)





Snake(Naja Naja)



Yellow Wasp (RopalidiaMarginata)



Butter Fly(Danaus Genutia)



Beetle insect on a hibiscusflower

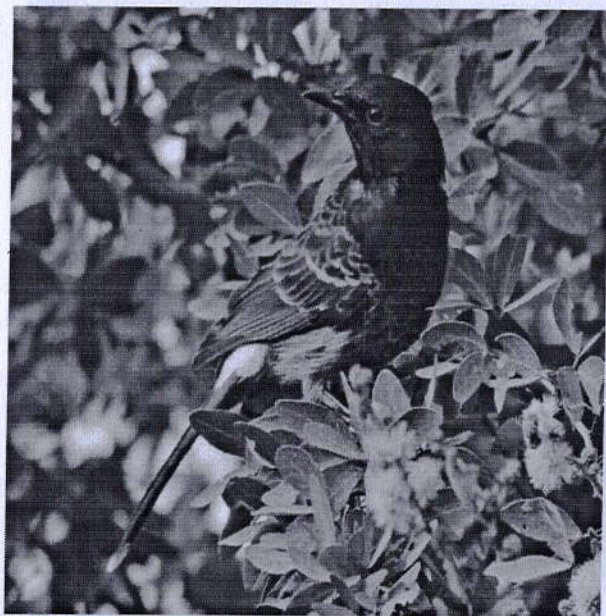




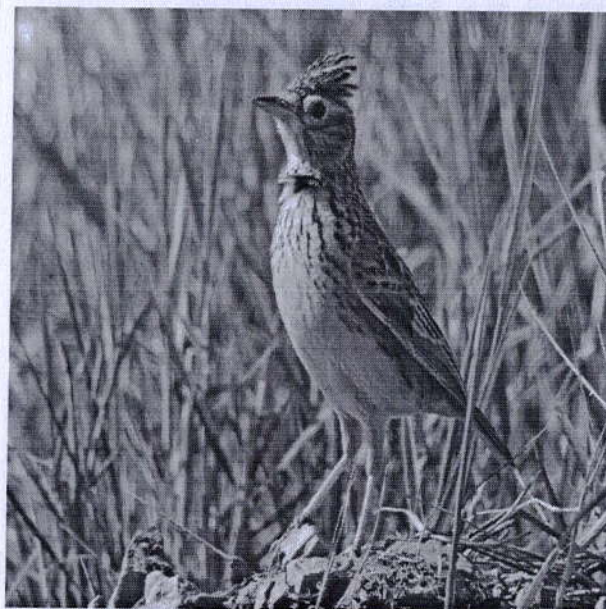
Common Woodshrike  
(Tephrodornis Pondicerianus)



Pied Myna (Gracupica Contra)

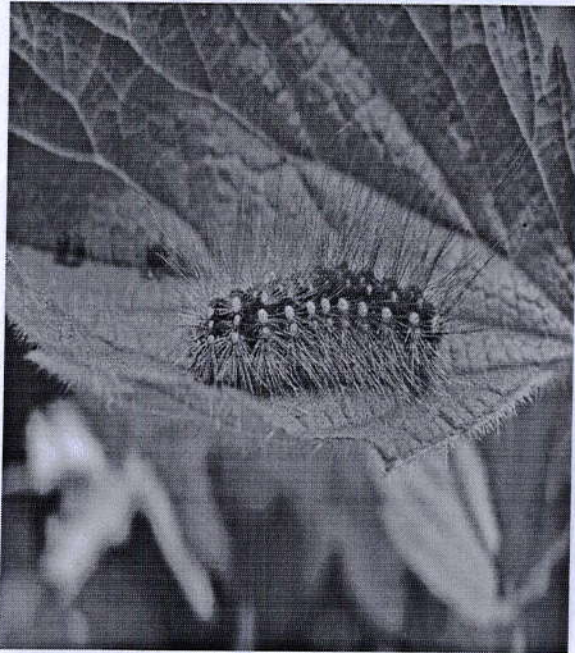


Red-Vented Bulbul (Pycnonotus Cafer)

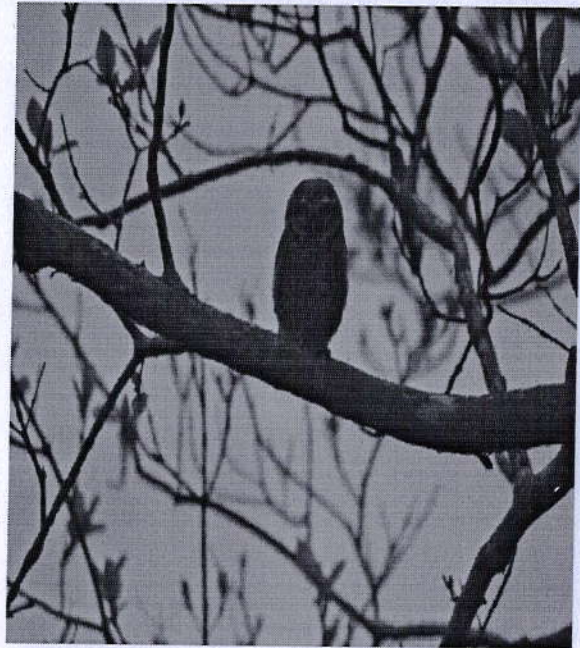


Skylark (Aluda Gulgula)





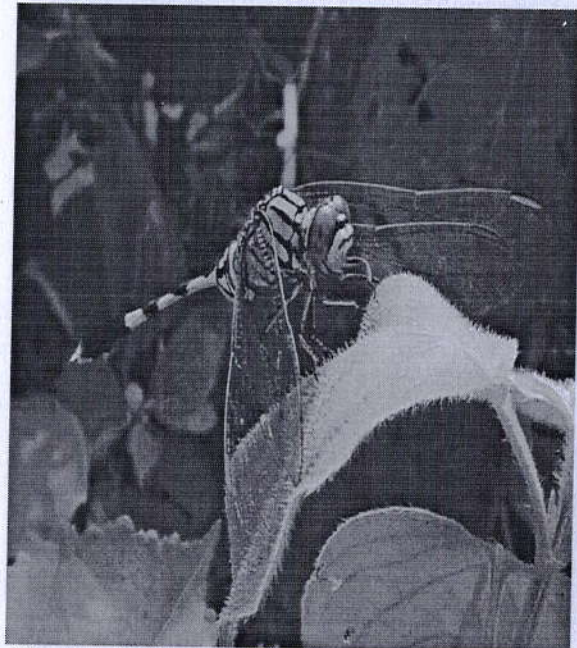
Garden Tiger Moth(ArctiaCaja)



Little Owl (AtheneBrama)



Oleander Moth(SyntomeidaEpilais)



Slender Skimmer (OrthetrumSabina)



## Green Audit Report, MNR College of Pharmacy

### WEATHER DATA IN MNR:

MNR Campus, Sangareddy (India Location: latitude 17037'21" N and longitude 78007'35" E)

In MNR Campus, the climate is warm and temperate. The summers are much rainier than the winters in MNR. The average annual temperature in MNR is 24.3 °C. and precipitation level is about 760 mm.

The driest month is generally November. There is 4 mm of precipitation in November. The greatest amount of precipitation occurs in July, with an average of 256 mm. With an average of °C, June is the warmest month. The lowest average temperatures in the year occur in January, when it is around 12.3 °C. The precipitation varies 252 mm between the driest month and the wettest month. The variation in temperatures throughout the year is 20.3°C.

### WEATHER DATA MONTH WISE MNR Campus

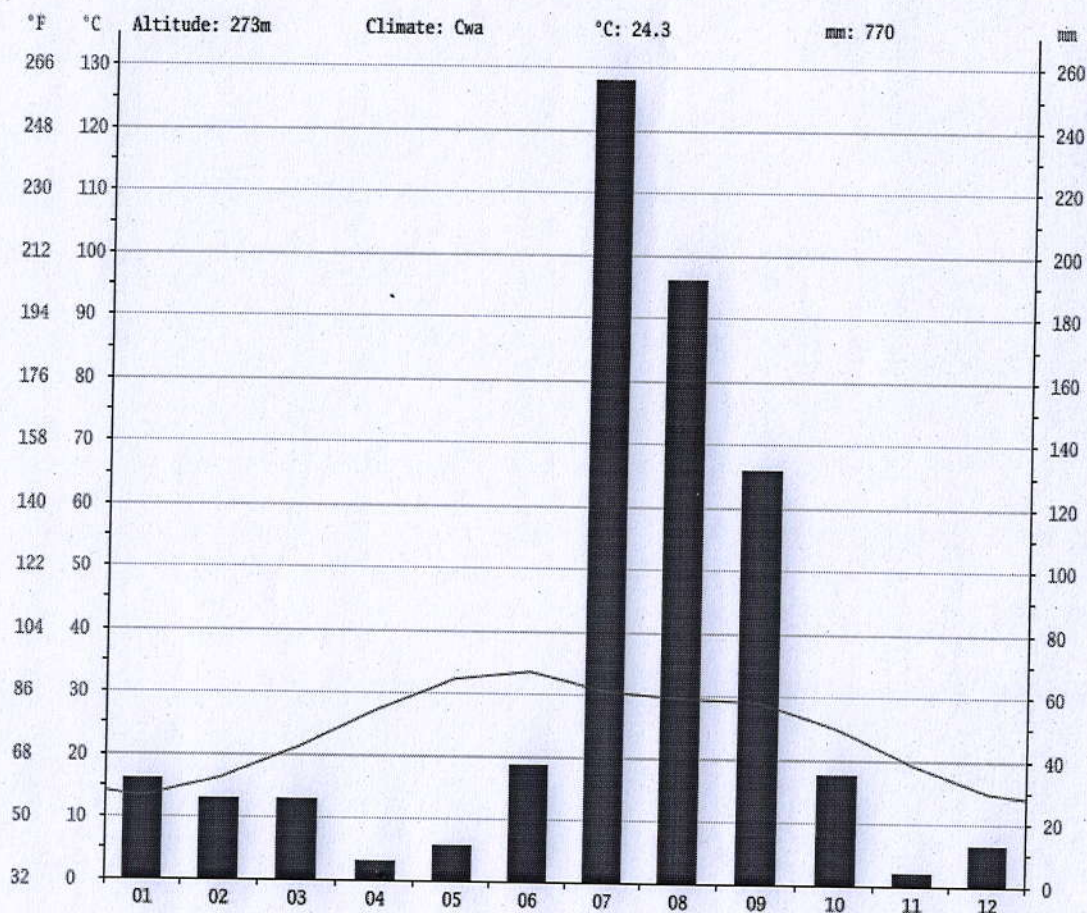
Temperature\ Month	January	February	March	April	May	June	July	August	September	October	November	December
Avg. Temp. (°C)	13.3	16.2	21.2	27.3	32.3	33.6	30.6	29.5	29	24.9	19.2	14.8
Min. Temp (°C)	6.6	8.9	13.5	19	24.2	26.9	26.2	25.5	23.6	17.2	10.3	6.9
Max. Temp (°C)	20.1	23.6	29	35.7	40.4	40.4	35.1	33.6	34.5	32.7	28.2	22.8
Avg. Temp (°F)	55.9	61.2	70.2	81.1	90.1	92.5	87.1	85.1	84.2	76.8	66.6	58.6
Min. Temp (°F)	43.9	48.0	56.3	66.2	75.6	80.4	79.2	77.9	74.5	63.0	50.5	44.4
Max. Temp (°F)	68.2	74.5	84.2	96.3	104.7	104.7	95.2	92.5	94.1	90.9	82.8	73.0
Precipitation / Rainfall (mm)	32	26	26	6	11	37	256	192	132	35	4	13

The geographical co-ordinates of MNR are latitude 17037'21" N and longitude 78007'35" E. The campus has an average altitude of 1758.5 feet or 536 meters from the average sea level. The erstwhile land of MNR was very much feasible for flowers cultivation.

The climatic conditions bear a strong resemblance with the other cities in the southern part of India. The summers are usually hot and the winters are very cold. The summers are prevalent during the months of March to September with April and May being the hottest months. The winter is prevalent from the month of November till the month of March. There is onset of Monsoon in June and from mid of June till September one experiences the transitional weather.



## CLIMATE GRAPH MONTH WISE IN MNR:



## AIR QUALITY IN MNR:

The ambient air quality data for MNR for the last one year shows that there are very less polluted particles in ambient air; AQI for SO<sub>2</sub> & NO<sub>x</sub> parameters are within the range of Indian living standards, there are a number of factors responsible for this cleanliness, calmness and serenity in this area. Firstly, population which is most responsible for all the problems and hurdles in smooth living is lowest here of all the districts of TS. Secondly, in this area more trees have been planted as compared to other cities. Furthermore, no air polluting industry is established here not even in a radius of 5 Km of MNR area. The NH is also approximately 5 kilometres away from MNR, which might be responsible for heavy density traffic throughout the year and thus might be causing lot of vehicular emissions as well as a lot of dust emissions due to the movement of vehicular traffic. Therefore, the ambient air quality of MNR Area falls in between moderate to rich quality state. The TS Pollution Control Board is pondering over the various possibilities to



reduce the air pollution for the improvement of ambient air quality with respect to AQI is concerned. However, the annual average value of PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> in the ambient air quality of campus falls in the range of 50-62 µg/m<sup>3</sup>, 3-5 µg/m<sup>3</sup>, 10-12 µg/m<sup>3</sup> for most of the months, as such, the graded response action plan to eradicate the problem

### **AIR QUALITY DETERMINATION**

Satisfactory air quality index in MNR, Sangareddy, India during January is as follows:

Parameter	Result (Range)
NO <sub>2</sub>	25.4 µg/m <sup>3</sup> , AQI 26 Very Good
NO	10.09 µg/m <sup>3</sup> , AQI 10 Good
O <sub>3</sub>	31.49 µg/m <sup>3</sup> , AQI 31 Good
PM <sub>2.5</sub>	28.13 µg/m <sup>3</sup> , AQI 28 Good
PM <sub>10</sub>	77.2 µg/m <sup>3</sup> , AQI 79 Satisfactory
CO	35.0 µg/m <sup>3</sup> , AQI 18
Humidity	56.0 %
Barometric Pressure	1013 millibar or hPa
Wind Speed	10-15 m/s
Wind Direction	28.0013 degrees
Sun Rise	06:28 AM
Sun Set	05:56 PM
Moonrise	07:05 PM
Moonset	07:31 AM



## **WATER ANALYSIS REPORT OF MNR:**

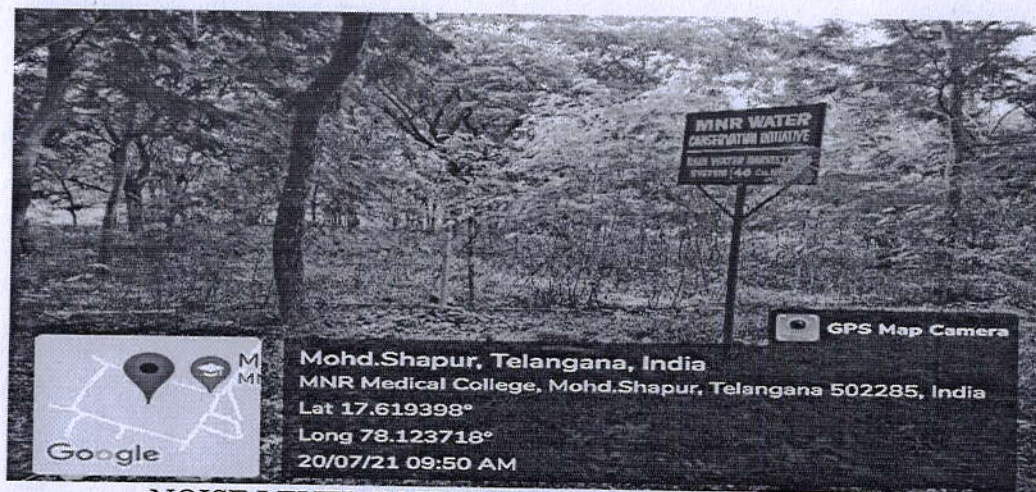
Water quality testing is important because it identifies contaminants and prevents water- borne diseases. Drinking or using contaminated water can result in severe illness or death. That is why it is important to ensure that drinking water is safe, clean and free from bacteria and disease.

The parameters for water quality are determined by the intended use. Work in the area of water quality tends to be focused on water that is treated for human consumption, or in the environment.

### **Drinking water indicators:**

The following is a list of indicators often measured by situational category:

- Alkalinity
- Color of water
- pHvalue
- Taste and odor (geosmin, 2-Methylisoborneol (MIB),etc.)
- Dissolved metals and salts (sodium, chloride, potassium, calcium, manganese, magnesium)
- Microorganisms such as fecal coliform bacteria (*Escherichia coli*), *Cryptosporidium*, and *Giardia lamblia*; see Bacteriological wateranalysis
- Dissolved metals and metalloids (lead, mercury, arsenic,etc.)
- Dissolved organics: colored dissolved organic matter (CDOM), dissolved organic carbon(DOC)
- Heavymetals



**NOISE LEVEL IN THE SURROUNDING OF MNR:**



The human ear is constantly being assailed by man-made sounds from all sides, and there remain few places in populous areas where relative quiet prevails. There are two basic properties of sound:

- Loudness and
- Frequency.

Loudness is the strength of sensation of sound perceived by the individual. It is measured in terms of Decibels. Just audible sound is about 10 dB, a whisper about 20 dB, library place 30 dB, normal conversation about 35-60 dB, heavy street traffic 60-80 dB, boiler factories 120 dB, jet planes during take-off is about 150 dB, rocket engine about 180 dB. The loudest sound a person can stand without much discomfort is about 80 dB. Sounds beyond 80 dB can be safely regarded as Pollutant as it harms hearing system. The WHO has fixed 45 dB as the safe noise level for a city. For international standards a noise level up to 65 dB is considered tolerable. Loudness is also expressed in sones. One sone equals the loudness of 40 dB sound pressure at 1000 Hz. Frequency is defined as the number of vibration per second. It is denoted as Hertz(Hz).

#### MATERIALS, STUDY AREA & METHODS

Noise level meter or noise measuring app, Noise test pro (version: 1.0.2), was used to measure the noise level. Noise test pro detect of any noise, music or sound in your surroundings. It will tell you maximum, minimum and average decibel

#### Noise Test

### Noise Test

54

The highest dB: 61 dB

The average dB: 52 dB

The lowest dB: 27 dB

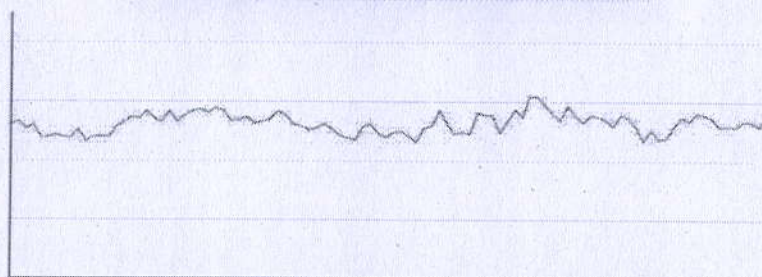


Figure: Noise Measurement by Noise Test Pro App



## MEASUREMENT PROCEDURE

The noise level was recorded at the different Important Locations of MNR. At each spot, the measurements were taken for 60 seconds during day time (6 AM- 6 PM) and noted down the measurements. Screen shots of the measurements of noise were taken immediately on the app at the time of 60th second of each measurement.

## RESULTS

The results of the experiments at different places have been tabulated in the following table:

Table 1: Measurements of Noise in and around MNR:

<i>PLACE</i>	<i>MEASUREMENTS (Duration in Sec.)</i>	<i>MINIMUM (dBA)</i>	<i>Maximum (dBA)</i>	<i>AVERAGE (dBA)</i>
Canteen	60	74	90	85
Library	60	51	85	65
Hospital Area	60	57	84	78
Hostels Lab	60	45	89	72
Admin Block Area	60	50	81	73
Principal Office	60	35	77	68
Auditorium	60	53	75	71
Ground 2	60	56	90	68
Generator Room	60	53	89	75
Gymnasium	60	68	82	76
College Front Gate	60	50.7	78.0	71.0
College Back Gate	60	54	75.9	73.5

Source: Data collected by Third Party Lab in the presence of GMCSPL Auditors. After the study, the measurements of noise have been recorded in and outside of MNR area:

Inside the Campus: 35-90 dBA,  
Outside the Campus: 54-93 dBA

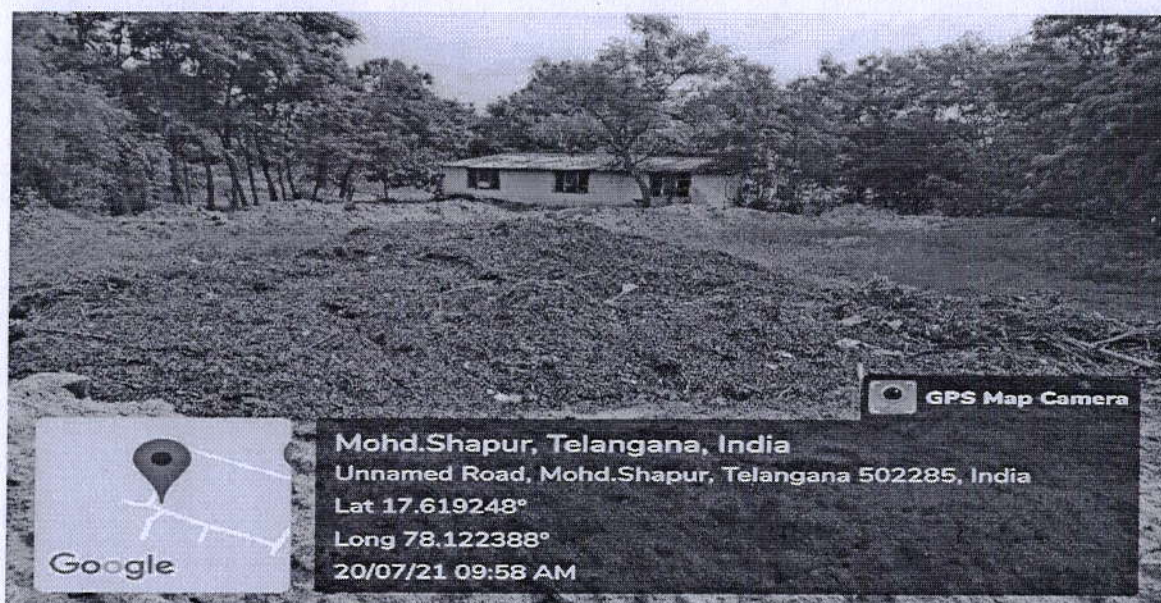


## **WASTE DISPOSAL OF MNR:**

Waste disposal are the activities and actions required to manage waste from its inception to its final disposal. This includes the collection, transport, treatment and disposal of waste, together with monitoring and regulation of the waste management process.

The waste from all around the college is separated daily as wet and dry waste in different bags which are disposed separately. Dry waste includes paper, cardboard, glass tin cans etc. on the other hand; wet waste refers to organic waste such as vegetable peels, left-over food etc. Separation of waste is essential as the amount of waste being generated today causes immense problem. The material was composted and evaluated as a fertilizing material. Disposal of these waste results in the production of good quality organic manure that can be used as soil amendments and source of plant nutrients.

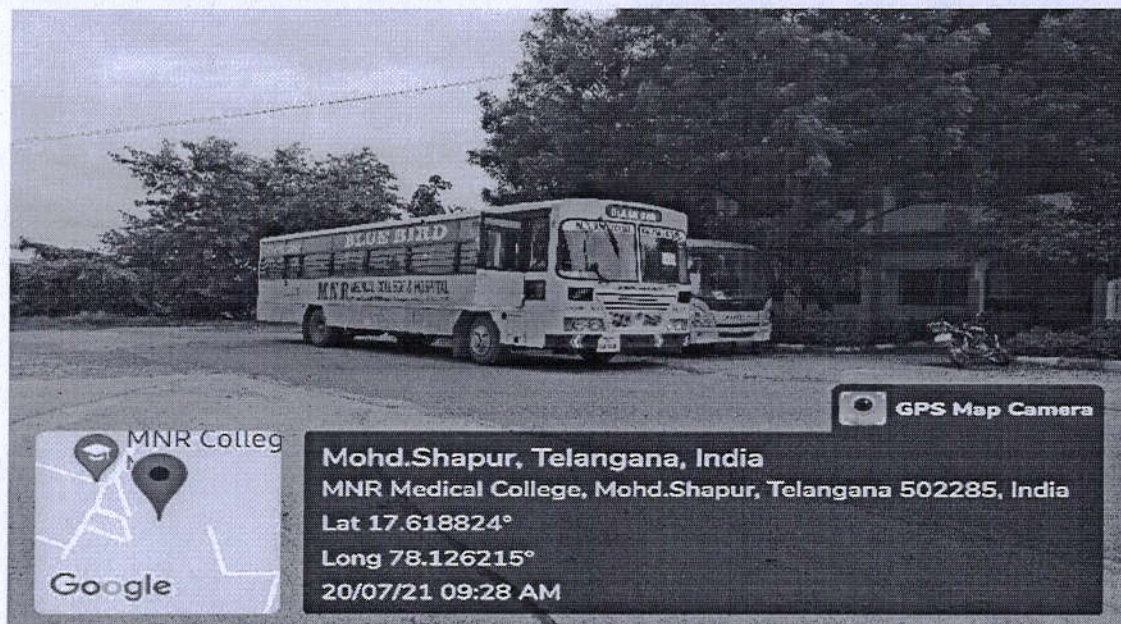
With smart initiatives like "Think Green Campus Model", waste management is helping colleges and universities to achieve a higher level of environmental performance. By reusing or recycling we are contributing to the conservation of natural resources, saving energy, helping to protect the environment, reducing landfill. We will also reduce our impact on the environment by minimizing the carbon emissions associated with both disposing of old products and obtaining new ones. MNR adopts environment friendly practices and takes necessary actions such as – energy conservation, waste recycling, carbon neutral etc. The biological reusable wastes are processed as organic manure for the plants available in the college campus and the other solid waste generated in the college campus is taken to the community bin of MNR municipality for recycling and disposal.



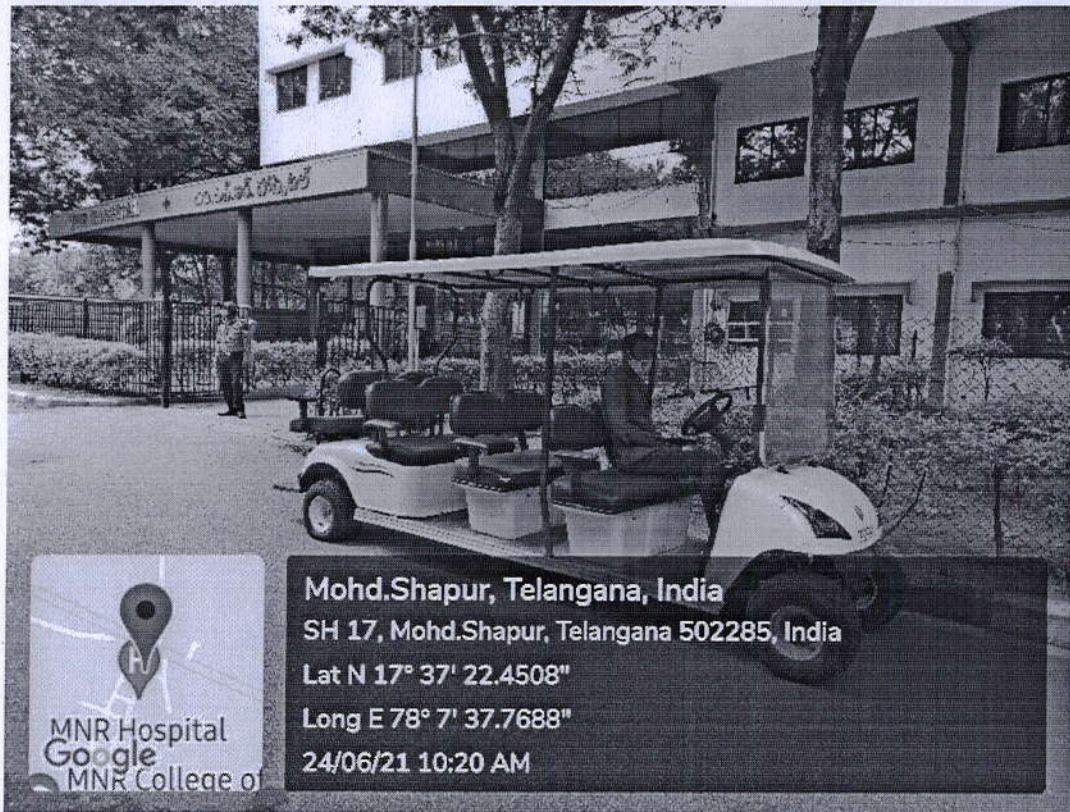


### **TRANSPORTATION AT MNR:**

Being a largest campus in the region, MNR uses a fleet of buses for transportation of the students & staff from the around locations of Hyderabad. The college is dedicated to provide its students and staff all the comfort and convenience to help them to achieve their targets. There are the clear and certifiable environmental benefits to higher bus ridership. By utilizing bus transportation, we reduce our automobile use and thereby help to promote clean air. It can convey many more people in much less space than individual automobiles, which helps to keep traffic congestion lower, which in turn reduces air pollution from idling vehicles, and helps riders avoid the stress that comes from daily driving in highly congested areas. By moving people more efficiently, bus transit produces significantly less air pollution per passenger mile than a standard car carrying a single driver. Buses emit approximate 20% less carbon monoxide, 10% as much hydrocarbons, and 75% as much nitrogen oxides per passenger mile as an automobile with a single occupant. Also with in campus no diesel 4 wheeler vehicles are allowed. MNR organized battery operated 2 and 4 wheelers vehicles with in the Camp





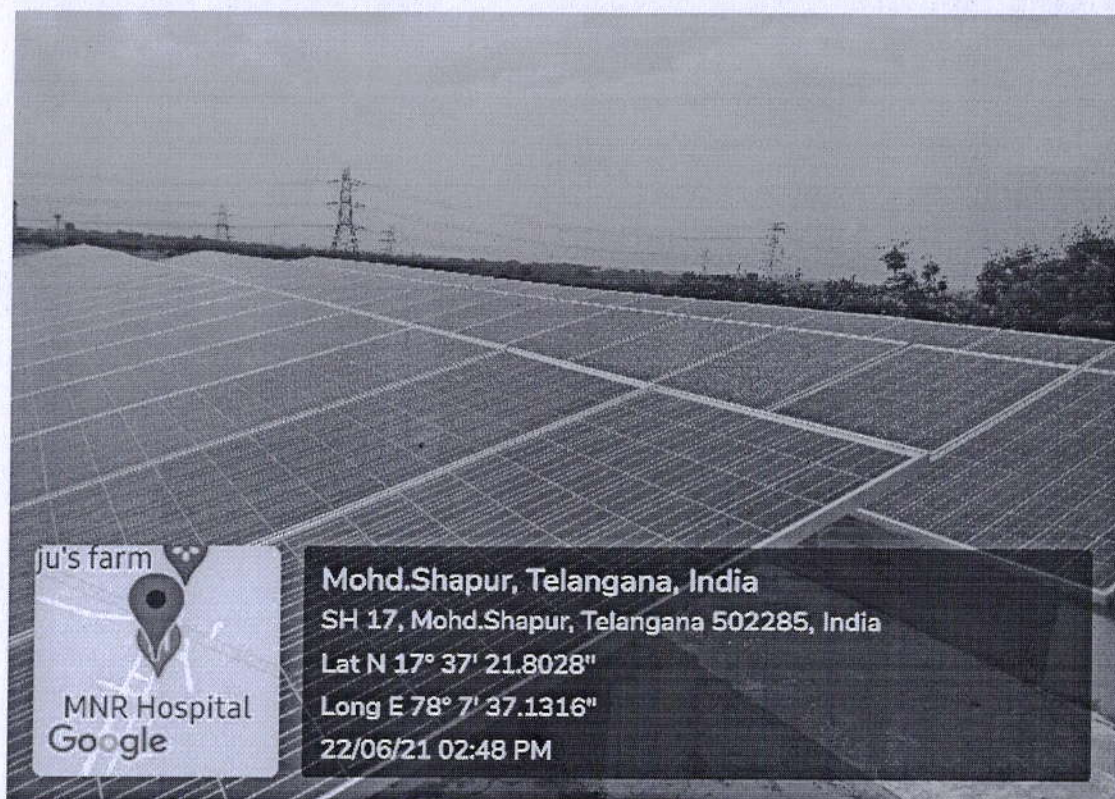




### **ELECTRICAL POWER CONSUMPTION AT MNR:**

MNR, being one of the largest campus of Hyderabad, consumes on an average 25000 (units) per month of electricity. The authority keeps on replacing the old filament bulbs, CFL bulbs and tube lights by low energy consuming LED bulbs and LED tubes and bulky high-power consuming fans by energy efficient fans in order to keep the electricity consumption of the college as low as possible.

In addition to making Environmental Studies a very vital subject in our syllabus, MNR has gone a step further by putting that theory into practice. The college has installed three sets of solar panels, on the roof of block. MNR with the installation of 20 KW solar rooftop plant in collaboration with External agency was able to offset 20% of its energy usage from the state grid thus moving towards a more reliable and greener option and reducing its carbon footprint.





**Green Audit Report, MNR College of Pharmacy**

**EXPENDITURE ON GREEN INITIATIVES DURING THE LAST THREE YEARS:**

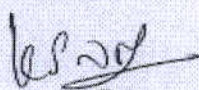
Financial Year	Tree plantation (Amount in Rs)	Gardening & lawn Work (Tractor running & Maintenance) Rs.	Sewerage Treatment Plant Rs.	Purchase of LEDs Rs.	Total Rs.
2021- 22(R)	31236	101245	20824		153305
2020 - 21	67478	137482	20645	712628.6	938233.62
2019 - 20	58424	131547	20349	847871.4	1058191.4

Audit Team	Team Leader	K S N Prasad
	Auditor[s]	Ch. Rama Rao, P.Yadgiri&K.V.Murthy
Audit Dates	20.01.2022 and 21.01.2022	


**Name of the Lead Auditors and Sign**

**Name: Mr.K.S.N.Prasad**

**Signature:**



**Date: 21.01.22**

  
**PRINCIPAL**  
**MNR COLLEGE OF PHARMACY**





# GLOBAL MANAGEMENT CERTIFICATION SERVICES PRIVATE LIMITED

## Certification Audit Report

ISO 14001:2015 and ISO 50001:2018

For

**MNR College of Pharmacy**


**MNR Nagar, Fasalwadi, Sangareddy-502294, Telangana State, India**

Audit Ref No. GMCSPL/E & EN MS -133

**Disclaimer:** - The Auditing is based on a sampling process of the available information and consequently there is an element of uncertainty which may be reflected in the Audit findings. Those relying or acting upon the Audit results and conclusions to be aware of this uncertainty. The Audit recommendations are subject to an independent review, prior to decision.

This report was presented to and accepted by:

Name:	Dr. V. Alagarsamy
Job title:	Principal

  
**PRINCIPAL**  
**MNR COLLEGE OF PHARMACY**



## 1. Audit details:

Management Member(s)	Sri. M. Ravi Varma – Vice Chairman, Dr. V. Alagarsamy – Principal  Sri A. Narayana Raju - Asst. Director (Admin)		
Audit Criteria [Standard]	ISO 14001:2015 & ISO 50001:2018	Exclusion	NIL
Audit Objectives	To Verify if the organization's compliance and effective maintenance of E&OHS and EnMS in accordance with ISO 14001:2015 and ISO 50001:2018 and to make decision on Certification.		
Audit Scope [confirmed]	Provision of Educational Services.		
Functional Units/Processes Audited	Pharmacy Departments, Administration, Examination, Hospital and Hostels		
Audit Site[s]	MNR Nagar, Fasalwadi, Sangareddy, Telangana, India.		
Audit Team	Team Leader	K S N Prasad	
	Auditor[s]	Ch. Rama Rao, P.Yadgiri & K.V.Murthy	
Audit Dates	19.01.2022 and 20.01.2022		

## 2. Audit Trials

Description	Objective Evidence
Brief Profile of the organization Including main products/ services and customers	<p>MNR College of Pharmacy (MNR COP) is located at MNR Higher Education and Research Academy (MNR-HERA) Campus, Sangareddy, Telangana State. MNR-HERA campus is spread across 110 acres of lush green grass, marked by huge trees, and greenery all around. It was established under the aegis of the MNR Educational Trust in 2004, and since then it has been nurturing the pharmaceutical profession. MNR College of Pharmacy is approved by Pharmacy Council of India (PCI) a statutory body of government of India established to regulate pharmacy education in the country for the purpose of registration as a pharmacist under the pharmacy Act and the profession and practice of pharmacy.</p> <p>MNR College of Pharmacy is affiliated to the Osmania University for the B. Pharm, M. Pharm, Pharm D and Post Baccalaureate. MNR College of Pharmacy is approved for experimentation on animals by Committee for the Purpose of Control and Supervision of Experiments on Animals (CPCSEA), New Delhi. MNR COP has grown from its inception in 2004 from 60 intakes to 185 intake, ranging from B. Pharm, Pharm D, M. Pharm (Pharmaceutical Chemistry, Pharmaceutics and Pharmacology) and Pharm D (Post Baccalaureate) with the dedicated teaching facility. Prompted by the achievements in research and developmental activities, Osmania University have recognised MNR COP as a "Research centre". Principal of the college, Prof. V. Alagarsamy, has been named among top 2% scientists in the world in the field of Pharmacy by the Stanford University, USA. We are immensely satisfied with this steady growth and are very proud to declare that MNR COP is now synonymous with quality education.</p> <p>MNR COP provides the best-in-class facilities to its students, so that they can have a superior and remarkable experience that leaves lasting impressions. We offer an academic program which includes industrial training with clinical exposure and visiting R&amp;D labs and performing</p>



	<p>live projects in pharmaceutical industry. We are fortunate to have qualified, talented, highly committed faculty members which makes the learning environment of our students, the best in industry. MNR COP is committed to become a 'Centre of Excellence in Pharmaceutical Education and Research' by delivering quality education and also by pursuing biomedical and pharmaceutical research through its faculty. Students go through intensive training programs to meet the quality standards of the industry.</p> <p>The growth of this college is propelled by the duo effect, i.e. provision of state-of-the-art laboratories with cutting edge technology and dedicated faculty. The college always puts a sustained continuous effort to upgrade the quality of its education and involves in research activities. Being located close to the pharmaceutical hub of India, the college has forged useful linkages with various renowned pharmaceutical companies and research centres to help the students to gain expertise in Research &amp; Development and also in emerging technologies, apart from enabling them to stay abreast with emerging trends. The faculty of Health Sciences conducts lectures by eminent guest speakers to enrich the quality of learning. The students are also provided clinical information of the patients during their visits to the teaching hospital.</p>
<b>Organizational context</b>	<p>External issues related to E &amp; EN MS &amp; EnMS identified are: Competition, Technology, Culture, Legal, society, hospitals etc.</p> <p>Internal Issues identified are: Knowledge, Employee Base, performance of the students, performance of Faculty, strategic direction etc.</p>
<b>Interested parties needs and expectations</b>	<p>Interested parties include:</p> <p>Society/Neighbors/NGOs/Media/Employees/workers/Trade unions</p> <p>Govt.: Legal compliance to all applicable statutory requirements.</p> <p>Management: Improving Environmental Performances.</p>
<b>E &amp; EnMS Management Scope and Boundaries</b>	Provision of Educational Services.
<b>E &amp; En MS Management System establishment</b>	<p>MNR has established, implemented and maintained E &amp; EN MS in accordance with the requirements of International Standard.</p> <p>Documentation consists of Manuals, Procedures, policies, and Formats Verified and found in order</p>
<b>Leadership and commitment</b>	Vision, Mission, objectives are set for each department and institute is monitoring same through Internal quality audit process.
<b>Risks and Opportunities</b>	Risks and Opportunities are defined for each functional areas, same were verified and found in order
<b>Environmental Aspect &amp; Impact Assessment</b>	Environmental Impact Assessment was documented for all the processes. Some of the areas like canteen and solid waste handling at hostels were not captured.
<b>Actions to address risks and opportunities</b>	The Risks and Opportunities Identified are inputs for planning actions and for establishing the E&OHS Objectives and the same is described in Aspect impact assessment.
<b>E &amp; En MS Objectives and action plans</b>	<p>E &amp; En MS objectives for the present year</p> <ul style="list-style-type: none"> <li>- Reduce water consumption by 6% over last year.</li> <li>- Reduction in power consumption by 15 % over last year.</li> <li>- Reduction in paper consumption by 15% over last year.</li> <li>- Recycle and reuse the water</li> </ul>
<b>Legal and other requirements and Evaluation of compliance</b>	<p>Pollution Control Acts, Rules and Notification issued by TSPCB.</p> <p>Liaison with Regional Office of PCB and MoEF, as applicable.</p> <p>Reference to Environmental Legislation Updates published by various bodies</p> <p>Medical Council guidelines</p>

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MNR COLLEGE OF PHARMACY Page# 3



<b>Resources</b>	All the resources needed for the implementation, maintenance of E & En MS is provided. - Annual financial budget for the year 2021: 2.5 Lacks
<b>Competency</b>	Competence of each and every role in the organization is determined by their Education, training, Qualification and Experience. - Verified competency matrix for all the Designations
<b>Awareness</b>	Awareness among the campus towards reuse, recycle of natural resources was found good among faculty and students.
<b>Operational planning and control</b>	MNR developed procedures for various activities. Handling of Hazardous Waste it E & En MS Handling of Non-Hazardous Waste it E & En MS Operational Controls on E & En MS like: Management of Safety Committee / Management of First Aids /Management of PPE . General Operational Controls includes: Emergency Procedure Work Instructions/ OCP Display at Various Operations, Process, Machines Earth Pit testing & Identification Environment Related Slogans & posters Display at various place for better Performance & Awareness. Reduction in water, Air, Noise & Energy consumption, reduction in number of incidents & ensuring safe Environment.
<b>Emergency Preparedness and Response</b>	MNR adopts procedure for Emergency preparedness and response for all environmental emergency situations and a rescue team is available. Emergency preparedness plan includes natural, technical, and man-made events that occur inside and outside normal working hours. <b>Few of the Emergency situations are:</b> Emergency control center includes: On Site Emergency Plan, Site Map, List of Site Areas, Fire Extinguishers, first aid boxes, and emergency power supply to the main switchboard, alarm systems, and exit signs/ lights, Important Telephone Numbers, Communication Facility ,an evacuation route map and a safe assembly point. 2 Scenarios were taken for Mock Drill one was Electrical Fire and one was contamination of Drinking water. Plans for responding to that particular emergency situation that is contamination of drinking water was not clear.
<b>Performance evaluation &amp; Evaluation of Compliance</b>	MNR established a process for monitoring and measuring of E & En MS performance. All the legal requirements documented information kept up to date, verified and found ok. Department level documents are made available for the demonstration of performance
<b>Internal Audits</b>	MNR has planned, established, implemented and maintained an audit program. Audit criteria and scope for each audit is defined. Internal audits are being conducted once in semester. Auditors are selected such that there is no impartiality in the audit process. Number of nonconformities identified during internal audit system were well taken with both correction and corrective action.
<b>Management Review</b>	MRM is planned once in 6 months. Regular reviews at department and college level are organizing by VC/Director/HOD and minutes of same were verified and found in order.
<b>Incident , Nonconformity and corrective action</b>	Incident register maintained, with correction and corrective actions taken. No environmental incidents happened till now in the campus
<b>Continual improvement</b>	Continual Improvement is done by promoting the participation of students and employees in implementing E & En MS Management system

### Overall Recommendations and conclusion:

#### Recommendations:

Environmental awareness among staff may be improved,  
Awareness on the ISO 14001 and ISO 50001 standard with supporting staff to be planned.  
Air Quality Monitoring records to be maintained for each season wise



**Conclusions:** System is compliance with the requirements of ISO 14001:2015 and ISO 50001:2018. The team leader in association with team members recommended for issuance of Certification in accordance with ISO 14001:2015 & ISO 50001:2018.


**Name of the Lead Auditors and Sign**

**Name:** Mr.K.S.N.Prasad

**Signature:**

**Date:** 20.01.22



  
**PRINCIPAL**  
**MNR COLLEGE OF PHARMACY**



# Certificate of Registration

GMCSPL hereby certify that the organization

## MNR COLLEGE OF PHARMACY

MNR Nagar, Fasalwadi,  
Sangareddy-502294,  
Telangana State, India.

Has established and applies a Environmental Management System in accordance with

### ISO 14001:2015

For the scope of activities :

Provision of Educational Services

220105-E

Certificate Number

20 January 2022

Date of Last Issue

20 January 2022

Date of Initial Registration

19 January 2023

Date of Expiry



Certificate is Valid for 3 Years (20.01.2022 to 19.01.2025) From the Date of Initial Registration. Upon Successful Completion of Surveillance Audit New Certificate With an Extended Validity will be issued.

Signed on behalf of GMCSPL

Global Management Certification Services Pvt.Ltd.

#402, Plot No.410, Matrusri Nagar, Miyapur, Serilingampally, Hyderabad - 500 049, India.  
www.mcsglobal.in, E.mail:info@mcsglobal.in

Accredited by: Quality Accreditation Council, Accreditation No.:16102, www.qac.in.org  
This certificate is the property of GMCSPL, and shall be returned upon request by GMCSPL  
The Registration does not assure the quality of yields under the firm's production.

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MNR COLLEGE OF PHARMACY