

GREEN AND ENVIRONMENTAL AUDIT REPORT 2022-2023

INTRODUCTION

Green Audit is a process of systematic identification, quantification, recording, reporting and analysis of components of environmental diversity of institute. 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 CO₂ from the environment.

The decision to focus on educational institutes for conducting green audit was mainly because an educational institute bears "a profound moral responsibility to increase in the youth the awareness, knowledge, skills and values needed to create a just and sustainable future

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.

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. But the auditing of this non-scholastic effort of the college has not been documented. 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 document the Waste disposal system

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- To document the ambient environmental condition of air, water and noise of the college.
- To introduce and aware students to real concerns of environment and its sustainability.
- To record the meteorological parameter of Ghanpur where college is situated.
- To estimate the Energy requirements of the college

METHODOLOGY:

The purpose of the green audit of Kommuri Pratap Reddy Institute of Management College is to ensure that the practices followed in the campus are in accordance with the Green Policy adopted by the institution. The methodology include: preparation and filling up of questionnaire, physical inspection of the campus, observation and review of the documentation, interviewing key persons and data analysis, measurements and recommendations. Some data have also been taken from the students' research works carried out by department of the college.

ABOUT THE COLLEGE

Kommuri Pratap Reddy Institute of Management is established in the year 2010 by the perseverance and cognizant efforts of our Chairman Shri Kommuri Pratap Reddy Garu to fulfill his motto "To Make Every Man a Success and No Man a Failure". The college was managed by the Kommuri Pratap Reddy Educational Society Governing Council (GC) consisting of members of the Management, eminent Academicians and Industrialists.

It persistently seeks and adopts innovative methods to improve the quality of higher education on a consistent basis. The campus has been set up in calm, quiet and pollution free atmosphere on a sprawling campus next to NTPC power grid near Ghanpur Village, Ghatkesar Mandal, KPRIM is just 9 Kms from Uppal Bus Depot and Just 1 Km from Outer Ring Road leading to International airport. The College is well connected by TSRTC buses. Experienced and learned teachers are strongly encouraged to nurture the students. The global standards set at KPRIM in the field of teaching and research spurs us on in our relentless pursuit of excellence.

GREEN AND ENVIRONMENTAL AUDITING

Kommuri Pratap Reddy Institute of Management, is an educational institution in Telangana region Which provides state of the art technology. The institution provides all facilities for our students to transform students into industry ready and professionally competent graduates, entrepreneurs and socially well cultured individuals. Since its inception in 2008, it has tried to

pursue excellence in educational arena. They have a beautiful green campus. We have prepared a green audit report after visiting the college campus by our team. The team was consisted of

1. Mr. Rajesh
2. Mr. Naveen
3. Mr. Pranay
4. Mr. Ganesh

The ENVIRONMENTAL AND GREEN AUDIT report is based on the major points.

1. Tree diversity in KPRIM
2. Faunal Diversity In KPRIM
3. Water Analysis of KPRIM
4. Noise level surrounding KPRIM

TREE DIVERSITY IN KPRIM

It is the major part of this green audit report or we can rightly argue the it has the lions share of any green audit report. After survey we have divide the college campus in to 5 different blocks including their greenery areas .The following table shows the numbers of trees and its local scientific names.

S. No	Scientific names	Quantity
1	Palm trees	19
2	Betulla Utilus	15
3	Amelanchier Lamachiki	19
4	Liquidambar Styraciflua	10
5	Azadirachta Indica	11
6	Arecaceae	21
7	Citrus X sinensis	45
8	Psidium guava	36
9	Lawsonia inermis	15
10	Rose	30
11	Citrus limon	25
12	Tamarindus indica	7

13	Citrus limetta	5
14	Flower Faux	6
15	Bambusoideae	8
16	Punicagranatum	4
17	Mangifera indica	15
18	Ficus religiosa	15
19	Phyllanthus emblica	4
20	Murrayakoenigii	5

Betula Utilis:

Betula utilis, the Himalayan birch is a deciduous tree native to the Western Himalayas, growing at elevations up to 4,500 m (14,800 ft). The Latin specific epithet utilis means "useful", and refers to the many uses of the different parts of the tree. The white, paper-like bark was used in ancient times for writing Sanskrit scriptures and texts. It is still used as paper for the writing of sacred mantras, with the bark placed in an amulet and worn for protection. Selected varieties are used for landscaping throughout the world, even while some areas of its native habitat are being lost due to overuse of the tree for firewood.



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Amelanchier Lamachiki:

Other common names are "shadberries" (as their blossoming coincides with the shad runs in New England), "Juneberries" (because the berries usually set on in June), and "Service" or "Sarvice" berries because their blooms mean that the muddy back roads into the "coves and hollers" of Appalachia will soon be passable for circuit-riding preachers and the communities will be able to have Sunday services again. (Some say, more morbidly, that it means the ground is soft enough to dig, which means that those who died over winter can be buried and have services said over them.

**Liquidambar Styraciflua:**

his plant's genus name *Liquidambar* was first given by Linnaeus in 1753 from the Latin *liquidus* ('fluid') and the Arabic *ambar* ('amber'), in allusion to the fragrant terebinthine juice or gum which exudes from the tree. Its specific epithet *styraciflua* is an old generic name meaning 'flowing with storax' (a plant resin).^[7] The name "storax" has long been confusingly applied to the aromatic gum or resin of this species, that of *L. orientalis* of Turkey, and to the resin better known as benzoin from various tropical trees in the genus.


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Azadirachta Indica:

Neem is a fast-growing tree that can reach a height of 15–20 metres (49–66 ft), and rarely 35–40 m (115–131 ft). It is deciduous, shedding many of its leaves during the dry winter months. The branches are wide and spreading. The fairly dense crown is roundish and may reach a diameter of 20–25 m (66–82 ft). The neem tree is similar in appearance to its relative, the chinaberry .



Rose:

A rose is a woody perennial flowering plant of the genus *Rosa*, in the family Rosaceae, or the flower it bears. ... They form a group of plants that can be erect shrubs, climbing, or trailing, with stems that are often armed with sharp prickles.

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Bambusoideae:

Bamboos are a diverse group of evergreen perennial flowering plants in the subfamily Bambusoideae of the grass family *Poaceae*. Giant bamboos are the largest members of the grass family. The origin of the word "bamboo" is uncertain, but it probably comes from the Dutch or Portuguese language, which originally borrowed it from Malay or Kannada.



Murrayakoenigii:

The curry tree, *Murraya koenigii* or *Bergera koenigii*, is a tropical to sub-tropical tree in the family Rutaceae (the rue family, which includes rue, citrus, and satinwood), and is native to Asia.^[3] The plant is also sometimes called sweet neem, though *M. koenigii* is in a different family to neem, *Azadirachta indica*, which is in the related family Meliaceae.

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Psidium guava:

Widely cultivated in tropical and subtropical regions around the world, guava fruits can range in size from as small as an apricot to as large as a grapefruit. Various cultivars have white, pink, or red flesh; a few varieties feature red (instead of green or yellow) skin.



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FAUNAL DIVERSITY IN KPRIMCAMPUS

KPRIM is located in Ghanpur, Hyderabad. Summer rain is normal, and is principally caused from late June to August by the moisture-laden South-West Monsoon. The climatic condition of the medchal district as a whole and KPRIM in particular is very suitable for a wide variety of flora and fauna to support its rich biodiversity. The faunal Diversity of KPRIM campus has been studied and documented as below:

Table: Common and Scientific names of birds and animals

S. No	Common Name	Scientific Name
1	House Sparrow	Passer Domesticus
2.	House Crow	CorvusSplendens
3.	Yellow Wasp	Ropalidia Marginata
4.	Butter Fly	DanausGenutia
5.	Common Woodshrike	Tephrodornis Pondicerianus
6.	Garden Tiger Moth	Arctia Caja
7.	Little Owl	Athene Brama
8.	Oleander Moth	Syntomeida Epilais
9.	Slenr Skimmer	Orthetrum Sabina



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House Sparrow:

You can find House Sparrows most places where there are houses (or other buildings), and few places where there aren't. Along with two other introduced species, the European Starling and the Rock Pigeon, these are some of our most common birds. Their constant presence outside our doors makes them easy to overlook, and their tendency to displace native birds from nest boxes causes some people to resent them. But House Sparrows, with their capacity to live so intimately with us, are just beneficiaries of our own success.

Peacock:

Peacock also called **peafowl**, any of three species of resplendent birds of the pheasant family, Phasianidae (order Galliformes). Strictly, the male is a peacock, and the female is a peahen; both are peafowl. The two most-recognizable species of peafowl are the blue, or Indian, peacock, of India and Sri Lanka, and the green, or Javanese, peacock, found from Myanmar (Burma) to Java. The Congo peacock, which inhabits the forested interior of the Democratic Republic of the Congo, was discovered in 1936 after a search that began in 1913 with the finding of a single feather.

House Crow:

The **house crow** (*Corvus splendens*), also known as the **Indian, greynecked, Ceylon or Colombo crow**,^[2] is a common bird of the crow family that is of Asian origin but now found in many parts of the world, where they arrived assisted by shipping. It is between the jackdaw and the carrion crow in size (40 cm (16 in) in length) but is slimmer than either. The forehead, crown, throat and upper breast are a richly glossed black, whilst the neck and breast are a lighter grey-brown in colour. The wings, tail and legs are black. There are regional variations in the thickness of the bill and the depth of colour in areas of the plumage.

Butter Fly:

Butterflies are insects in the macrolepidopteran clade Rhopalocera from the order Lepidoptera, which also includes moths. Adult butterflies have large, often brightly coloured wings, and conspicuous, fluttering flight. The group comprises the large superfamily Papilionoidea, which contains at least one former group, the skippers (formerly the superfamily "Hesperioidea"), and the most recent analyses suggest it also contains the moth-butterflies (formerly the superfamily "Hedyloidea"). Butterfly fossils date to the Paleocene, about 56 million years ago.


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Common Woodshrike:

The common woodshrike (*Tephrodornis pondicerianus*) is a species of bird found in Asia. It is now usually considered a member of the family Vangidae. It is small and ashy brown with a dark cheek patch and a broad white brow. It is found across Asia mainly in thin forest and scrub habitats where they hunt insects, often joining other insectivorous birds. The form found in Sri Lanka which was treated as a subspecies is now usually considered a separate species, the Sri Lanka woodshrike.

Garden Tiger Moth:

The garden tiger moth or great tiger moth (*Arctia caja*) is a moth of the family Erebidae. *Arctia caja* is a northern species found in the US, Canada, and Europe. The moth prefers cold climates with temperate seasonality, as the larvae overwinter, and preferentially chooses host plants that produce pyrrolizidine alkaloids. However, garden tiger moths are generalists, and will pick many different plants to use as larval host plants.

Little Owl:

The little owl (*Athene noctua*), also known as the owl of Athena or owl of Minerva, is a bird that inhabits much of the temperate and warmer parts of Europe, the Palearctic east to Korea, and North Africa. It was introduced into Britain at the end of the 19th century and into the South Island of New Zealand in the early 20th century.

Pigeon:

The domestic pigeon (*Columba livia domestica*) is a pigeon subspecies that was derived from the rock dove (also called the rock pigeon). The rock pigeon is the world's oldest domesticated bird. Mesopotamian cuneiform tablets mention the domestication of pigeons more than 5,000 years ago, as do Egyptian hieroglyphics.^[2] Research suggests that domestication of pigeons occurred as early as 10,000 years ago.

Crows:

A crow is a bird of the genus *Corvus*, or more broadly a synonym for all of *Corvus*. The word "crow" is used as part of the common name of species including: ... *Corvus cornix* – hooded crow (Northern and Eastern Europe and Northern Africa) *Corvus corone* – carrion crow (Europe and eastern Asia)


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WATER ANALYSIS OF KPRIM

Water crisis is very sensitive issue these days all over the world. But in this segment, Kommuri Pratap Reddy Institute of Management, is in less concentrate zone. They have an open area near the hostel buildings, canteen buildings where the rain water gets absorb under the ground and maintain good ground water level.

The system of rain water harvesting is an integral part of institute, this system helps the students to understand the basic concept of rain water harvesting system with their effective use in real life. This system helps to conserve the rain water and also to use during the time of its desirable. In the college they are successfully using the rain water harvesting system.

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:

1. Alkalinity
2. Color of water
3. pH value
4. Taste and odor (geosmin, 2-Methylisoborneol (MIB), etc.)
5. Dissolved metals and salts (sodium, chloride, potassium, calcium, manganese, magnesium)
6. Microorganisms such as fecal coliform bacteria (*Escherichia coli*), *Cryptosporidium*, and *Giardia lamblia*; see Bacteriological water analysis

NOISE LEVEL IN THE SURROUNDING OF KPRIM:

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:

1. Loudness and
2. Frequency.


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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 tolerate. 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 vibrations 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 decibels.

Noise Test

Noise Test 54

The highest dB:61 dB
The average dB:52 dB
The lowest dB:27 dB



CLEAN INDIA MISSION IN KPRIM:

The mission the proper use of dustbins is one of the major priority. For the successful implementation of this mission collective mass effort is necessary. The higher education institution like Kommuri Pratap Reddy Institute of Management, Ghanpur need to play a major role in this regard to keep their campus neat and clean. proper use of dustbins is not only the solution for the collecting garbage in the college campus. The proper treatment should be given

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the major priority. In this regard KPRIM campus have been planning to setup a recreation center in the allocated plot near the canteen. The following table shows the number of dustbins along with their location.


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