Green Audit Report

2020-21

Century Cement College,Baikunth

Green Audit is a process of systematic identification, quantification, recording, reporting and analysis of components of environmental diversity of various establishments. It aims to analyze environmental practices within and outside of the concerned sites, which will have an impact on the eco-friendly ambience.

Green audit can be a useful tool for a college to determine how and where they are using the most energy or water or resources; the college can then consider how to implement changes and make savings. It can also be used to determine the type and volume of waste, which can be used for a recycling project or to improve waste minimization plan. 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 carbon-di-oxide 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.

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. Many institutions undertake lot of good measures to resolve these problems but are not documented due to lack of green documentation awareness. All this non-scholastic efforts of the administrations play an important role in ensuring the green quotient of the campus is intact.

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.

Mission and vision of Green Audit

“Our vision is to create a society where education will act as a true liberator and capacity-builder, and unite people on the anvils of peace, tolerance and understanding, and where the benefits of education will reach each and everyone, enabling them to live with self respect, dignity and enlightened awareness”.

Main Objective of Green Audit :

- Geographical Location
- Floral and Faunal diversity
- Meteorological parameter
- Energy Consumptions
- Waste disposal system
- Ambient Environmental Condition
- Awarness & Training on Sustainability for Students

The green audit aims to analyse environmental practices within and outside the university campuses, which will have an impact on the eco-friendly atmosphere. Green audit can be defined as systematic identification, quantification, recording, reporting and analysis of components of university environment.

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

The green audit practically involves energy conservation, use of renewable sources, rain water harvesting, efforts of carbon neutrality, planting of trees, hazardous waste management and E-waste management. Finally, Green audit is a requirement of NACC assessment to the Colleges and Universities

Benefits of the audit -

Ensuring legislative compliance. Reducing environmental impacts. Reducing waste, water and energy costs (annual savings are typically greater than our fee for the audit) ... Providing the foundation for an environmental management system (EMS) such as ISO 14001 at a later date. The benefits of Green audits are:

*Lay down environment management plan and policy which will help creating awareness amongst the stakeholders of institute

*Implement sustainable development with efficient resource management

*Cost savings through reduction in resource usage through benchmark

*Develop the Social and Environmental awareness for the institute and students

*Enhancement of institute's profile

*Enhancement of environmental ethics and values and stewardship towards responsible environment management.

There are many plants and trees in our college -
1- ***Bougainvillea-***Bougainvillea, (genus Bougainvillea), genus of about 18 species of shrubs, vines, or small trees, belonging to the four-o'clock family (Nyctaginaceae), native to South America. Many species are thorny. Only the woody vines have attained wide popularity; several species have produced very showy cultivated varieties, which are often grown indoors and in conservatories.

The inconspicuous flowers are surrounded by brightly coloured papery bracts, for which one species, B. glabra, from Brazil, is called paperflower; the bracts are purple or magenta to lighter tints in certain varieties. The stem of B. glabra may be 20 to 30 metres (about 60 to 100 feet) long in warm climates, and the plant is in flower throughout most of the year. The stem of B. spectabilis is covered with many short hairs, and the flowers are relatively short-lived. The combination of bract plus inconspicuous flower itself resembles a flower with conspicuous petals. B. peruviana, from Colombia to Peru, has rose to magenta bracts. B. × buttiana, a probable hybrid of B. glabra and B. peruviana, has given rise to varieties having lemon yellow ("Golden Glow"), orange ("Louis Wathen"), and crimson ("Mrs. Butt") bracts. Bougainvilleas are hardy in warm climates.

2-Royal Palm (Roystonea regia)
Royal palm species of palm has been planted as an ornamental tree in India for landscaping and also cultivated in India. Roystonea regia species of palm tree also host plant for the butterflies, royal palm bug and source of oil and for livestock feed.

Royal palm trees are popular in many warm, coastal landscapes, particularly in southern Florida and parts of California. Considered the aristocrat of palm trees, the tree earns its regal name with its stately presence in the landscape.

Basic Characteristics
Royal palm trunkSOURCE
Cuban royal palms (Roystonea regia), native to Cuba, are the species most commonly grown and found in landscapes. However, the Florida royal palm (Roystonea elata) is native to the state and grows in wild, swamp areas.

The major difference between the two royal palm trees is the Florida royal palm doesn't have the distinctive swollen trunk like the Cuban variety. The Florida has a straight trunk without any bulges along it. However, the bark of both trees would look similar up close. Other than that, it's hard to tell the two trees apart. Both types are hardy in USDA zones 10 and 11.

Additional characteristics to look for include:

*Royal palm trees can grow to 125 feet tall at maturity, growing at a rate of around a foot yearly.
*Evergreen fronds average 10 feet long with pinnate, green leaves that are 8-inches long.
*There are 15 to 20 fronds making up the canopy or crown of the palm.
*Older portions of the trunk is rough and gray, with the immature section at the top of the tree a smooth, bright green.
*Fragrant, yellow flowers bloom on 3- to 4-foot stalks in summer, followed by purple to black, half-inch fruits that aren't edible.

3- ***Madhukamini -***
Its Botanical name is Murraya paniculata.
Jasmine because of its aromatic orange like fragrance. Orange Jessamine is a little, tropical, evergreen tree or bush growing up to 7 metre tall. The plant blossoms sprout consistently. Its leaves are gleaming and glabrous, 3 to 7 inches long. Flowers are terminal, few bloomed, fragrant and thick. The fruit of Murraya paniculata is plump, elliptical ovoid, shaded red to orange, and grows up to 1 inch long.The kamini flower plant is sexually proliferated by its seeds. The fruits are eaten by flying birds, who then pass the seeds out in their stool. It might likewise be artificially engendered by softwood cuttings.

Plant care isn't troublesome just requires a little observation. Fertilise the plant in spring not long before new development appears. Cut off the tips of the vines in the subsequent year to advance branching which will fill the trellis with thick development.

4- Ashok -
Saraca asoca is a plant belonging to the Detarioideae subfamily of the legume family. It is an important tree in the cultural traditions of the Indian subcontinent and adjacent areas. It is sometimes incorrectly known as Saraca indica. The flower of Ashoka tree is the state flower of Indian state of Odisha.
Sanskrit for "without sorrow," the term "Ashoka" refers to the bark's reputed homeopathic properties for keeping women healthy. The tree itself is a rainforest tree prized for its foliage and fragrant flowers, which are carefully depicted here.

5- ***Cycas-*** Cycas is a genus of plants belonging to a very ancient lineage, the Cycadophyta, which are not closely related to palms, ferns, trees or ... Cycas is the type genus and the only genus recognised in the family ...Cycads, like pine trees and juniper bushes, are gymnosperms -- "naked seed" plants. In other words, they make seeds, but they don't make flowers or fruit as a way of bringing those seeds into the world or sending them on their way.

6- ***Mango tree -*** Mangifera indica), member of the cashew family (Anacardiaceae) and one of the most important and widely cultivated fruits of the tropical world. The mango tree is considered indigenous to southern Asia, especially Myanmar and Assam state of India, and numerous cultivars have been developed. Mangoes are a rich source of vitamins A, C, and D. The tree is evergreen, often reaching 15–18 metres (50–60 feet) in height and attaining great age. The simple leaves are lanceolate, up to 30 cm (12 inches) long. The flowers—small, pinkish, and fragrant—are borne in large terminal panicles (loose clusters). Some have both stamens and pistils, while others have stamens only. The fruit varies greatly in size and character. Its form is oval, round, heart-shaped, kidney-shaped, or long and slender. The smallest mangoes are no larger than plums, while others may weigh 1.8 to 2.3 kg (4 to 5 pounds). Some varieties are vividly coloured with shades of red and yellow, while others are dull green. The single large seed is flattened, and the flesh that surrounds it is yellow to orange in colour, juicy, and of distinctive sweet-spicy flavour.

7- ***Black plum***-Indian Blackberry
Syzygium cumini L. (synonym: Syzygium jambolana, Eugenia jambolana, Eugenia cumini) belong to polyembryonic species of the family Myrtaceae, commonly known as Indian blackberry or Jamun. S. cumini, an evergreen tropical tree, is native to Indian subcontinent and naturalized in America, Africa, and Australia. The oblong berries having deep purple to violet color with pinkish pulp are widely consumed as fruit. In addition to its nutraceutical value, fruits are used in traditional medicine for treatment of various diseases.

8- Aloevera-The botanical name of Aloe vera is Aloe barbadensis miller. It belongs to Asphodelaceae (Liliaceae) family, and is a shrubby or arborescent, perennial, xerophytic, succulent, pea- green color plant.Aloe vera is known for its antibacterial, antiviral, and antiseptic properties. This is part of why it may help heal wounds and treat skin problems.The juice of some species, especially the popular potted plant known as true aloe (Aloe vera), is used as an ingredient in cosmetics and in medicine as a purgative and as a treatment for burns. The gelatinous interior of the leaves is commonly applied directly to the skin as a beauty treatment or to soothe sunburns.

9- patarchatta-Kalanchoe pinnata, formerly known as Bryophyllum pinnatum, also known as the air plant, cathedral bells, life plant, miracle leaf, and Goethe plant is a succulent plant native to Madagascar, which is a popular houseplant and has become naturalized in tropical and subtropical areas. It is distinctive for the profusion of miniature plantlets that form on the margins of its phylloclades, a trait it has in common with some other members of Bryophyllum (now included in Kalanchoe
The leaves of this species are thick, fleshy, elliptical in shape, curved, with a crenate or serrated margin, often reddish. Simple at the base of the stem, the leaves are imparipinnate at the top, 10–30 cm (4–12 in) long, with three to five pairs of fleshy limb lobes.

The leaves are remarkable for their ability to produce bulbils. At their margin, between the teeth, adventitious buds appear, which produce roots, stems and leaves. When the plantlets fall to the

ground, they root and can become larger plants. This is a fairly common trait in the section Bryophyllum. The fruits are follicles (10–15 mm) which are found in the persistent calyx and corolla.

10-Tulsi-

Ocimum tenuiflorum, commonly known as holy basil or tulsi, is an aromatic perennial plant in the family Lamiaceae. ... It is widely used as a herbal tea, commonly used in Ayurveda, and has a place within the Vaishnava tradition of Hinduism, in which devotees perform worship involving holy basil plants or leaves.Holy basil (Ocimum tenuiflorum), known in Hindi as tulsi, might be the most revered medicinal herb on the planet. The plant has violet flowers and blossoms. The green stems sometimes have a purple tinge.

Medicinal preparations are made from holy basil's leaves, stems, and seeds of the plant. Holy basil is often used in Thai food. It's much spicier than other types of basil and is sometimes called "hot basil."

Conclusion-Green audit is carried out to provide in indication to college campus about how the environmental organisation and equipments are performing.As a result the best practicable means to preserve air water soil plant and animal life forms the adverse effect.