

# GREEN LIBRARIES

*: PARTNERING THE JOURNEY OF SUSTAINABLE DEVELOPMENT*

By

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## **Abstract**

Climatic change is the cause of concern for all the nations globally that challenges the very existence of human life on earth. Therefore, there is an urgent need to spell out the strategic ways for sustainable development. Globally, there has been momentous rise in thinking among the public in general, about the significance of the protection and preservation of natural resources. All the sectors need to contribute equally to reduce the carbon footprints in their own ways. Green and sustainable practices are being implemented throughout society in every field and libraries are not exempt from these broader trends. Being an important component of community, libraries have to play a vital role as the partner in the journey of sustainable development. There has been a growing need for libraries to be an important partner of this green movement, which is not only limited to green buildings. It also includes alternative energy resources, conservation, green library services and practices, operations, and outreach activities that highlight the importance of environment and contribute to the promotion and raising of public awareness in relation to issues surrounding the preservation of the environment and sustainable development. Here comes the concept of Green libraries.

This conceptual article talks about this emerging concept and attempts to provide an overview of green initiatives adopted by libraries to really go green and work in eco-friendly manner. The practical examples of green libraries in India and overseas throws light on the current scenario and shows how libraries are contributing to the sustainable development goals of the community. The paper concludes with the specified ways including the use of green material for the building and the maximum utilization of digital resources, solar power, e-books etc. that can be adopted by the various libraries in order to ensure sustainable development.

**Keywords:** Green Libraries, Sustainable Development, Green Practices, Environment

## **Introduction**

Mankind is witnessing the constant changes in the climate leading to frequent malicious situations like uneven rainfall, crop failure, and outburst of deadly diseases, increase in temperature and many other geological accidents that poses a challenge to the sustainability of life on earth. All the nations throughout the globe has shown their concerns through various platforms and have made various declarations and protocols to be followed by developed and developing countries in order to ensure the long term availability of various components of environment. Among various other nations, India is undoubtedly playing an important role in reducing carbon footprints through the participation of its various sectors including industries, agriculture, healthcare, infrastructure, education etc.

As far as education sector is concerned, the higher education institutes undertake various steps to create awareness about the conservation of various resources. Libraries being an important part of educational institutes are also partnering this journey of sustainable development. Along with the green campus and eco-friendly atmosphere, these centers of knowledge and information adopt various strategies coined in the word Green Libraries to ensure their active role in preservation of nature.

### **Definition of Green Libraries**

A Green Library also known as a sustainable library, is a library built with environmental concerns in mind. The online Dictionary of Library and Information Science defines Green Libraries as: A Library designed to minimize negative impact on the natural environment and maximize indoor environment quality by means of careful site selection, use of natural construction materials and biodegradable products, conservation of resources (water, energy, paper, responsible waste disposal, Recycling etc).

### **Methods to go green**

The modern world libraries are renovated as per the norms of environmental design issued by LEED (Leadership in Energy and Environment Design). LEED is a certification agency following a rating system that is developed and administered by the U.S. in the year 2000 by Green Building Council (USGBC). The agency has a point based rating system with a total of 100 base points possible and for buildings, there are four types of certified ratings as Platinum(80+), gold (60), silver (50) and certified (40 points). These ratings are provided on the basis of following five categories

1. Site location
2. Water conservation
3. Energy efficiency
4. Materials
5. Indoor air quality and bonus category for innovation and design.

The above five categories are explained as under in order to make it clear what all is required for the green declaration.

#### **1. Site location:-**

Before proceeding for the actual construction of the building, choice of a suitable site is crucial.

The selection of a suitable site has a great impact on the working of library in consensus with the environment. So the modern libraries must be located at the central places with dense population so that a large number of other services are easily available along with availability of public transport so as to reduce vehicle pollution.

#### **2. Water conservation: -**

The time has come where we feel the heat of water scarcity. So the libraries have to find various ways to conserve water. Rainwater harvesting and use of recycled water for watering the plants is the best method along with using modern plumbing fixtures and sensors to save more and more water.

### 3. Energy Efficiency: -

This is considered as the most important quality to become green. Among the other categories this category has the highest weight age. It is related with the energy efficient design where there is open ventilation and sunlight and the use of air conditioners are reduced. The architects have become aware that since the cost of fossil fuels is increasing use of modern gadgets is a bad idea. Therefore designer building to work along with the outside environment is necessary.

### 4. Building Materials:

Libraries must use that building material which generates very less waste. Recycled material can be used for building only after proper verification. Also a care should be taken to see that the material used is able to be recycled after using it for 50-100 years. Thus an expertise approach is required while choosing color and the material used for the library building.

### 5. Indoor air quality:

Only talking about energy efficient building material is not enough. The main requirement is to ensure the indoor air quality. Maximum hours users are sitting in the library for their reading purpose, so the internal air quality matters a lot to avoid any respiratory diseases. Therefore the green buildings should be designed in such a way that the environment is taken care of properly.

### Strategies for Green Libraries

Various strategies that can be adopted for the libraries as a part of green movement are:

1. Community collaborating- makes sure that community assets are efficiently used
2. Daylight- pair daylight with artificial lighting and reduce energy costs.
3. Green materials- use renewable materials like wood, bamboo.
4. Green roofs
5. Raised floor systems
6. Energy efficiency
7. Natural Ventilation
8. Green power and renewable energy including use of solar panels
9. Indoor environment quality
10. E books
11. Use of digital resources
12. Indoor plants for beautification and boosting mental capacities
13. Arranging guest speakers to talk on green practices and environment conservation.
14. Using signage in the staffing areas as well as students section (for example 'please turn off when leaving room')
15. Green IT solutions, for example energy efficient servers, printers, photocopiers, computers, screens and programs
16. Recycle e-waste including Toners, paper, cardboard, flyers, books, CD/DVD cases, etc.
17. Waste bins in every area of the library
18. Implement a waste audit for measuring the library's waste making people careful to make possible reductions.
19. Resource sharing with other libraries in the vicinity
20. Creation of a Green Team to investigate, implement and monitor sustainability measures

## Examples of Green Libraries in India:

Anna centenary library located in Kotturpuram is the largest library in Asia is one of the best examples of green library. The cavernous space can accommodate well over a thousand readers at a time and 1.5 million books. The design makes it more open and ventilated with the windows to the north-east, skylight and an outdoor amphitheater on the roof. LED lights are fit inside to illuminate a huge indoor auditorium, cafeteria and many reading and research area. For the construction, suitable material that is more than 60% local and recyclable is used. There is a shade and vegetation on the south to create heat buffer zone. Reuse of waste water and availability of educational material to raise the awareness are the added qualities.

## Challenges of Green Libraries

Emerging libraries of 21<sup>st</sup> century all over the world are build on the principles of library 2.0 green design. In 2008, certain libraries were studied regarding the adoption of the green practices. It was found that they followed various energy conservation methods and also worked as per their plan for optimum utilization of space designed for the users. Along with this, the modular system was followed for the bookshelves in order to cope up with the ever expanding books collection. But sorry to say, the wants and needs of the modern users were ignored.

A small research was conducted in the Thane District regarding the awareness about green libraries. Overall 15 libraries were surveyed and it was found that 14 libraries are insisting their management to renovate their libraries as per green design, but still except increasing number of books other facilities in the library are still not considered important by the management. Therefore, reluctance in the investment for such sustainable ideas make it difficult for the librarians to address such issues.

## Conclusion

Thus, the concept of Green Libraries is at the infant stage as far as Indian scenario is concerned. But it is the demand of nature that will surely lead the way to adopt these strategies for the libraries in the educational institutions. The staff must be made ready by providing incentives and making them eco-sensitive through lectures and training. They should be properly skilled and reskilled in order to serve the users in the green way. The traditional services being converted into digital services and working in flexible timings with novel methods must be accepted by them open-heartedly. Management must come ahead for all these initiatives. Using green and recycled material for building construction will surely reduce the heat waves making the use of air-conditioners less necessary to a great extent. Proper lighting, interior decoration, beautiful indoor plants as the mind boosters, use of digital books etc. can really prove to a great advantage by conserving environment and ensuring sustainability of the life on the earth.

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