

## Green Library & Today's Environment

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### Abstract:

*21<sup>st</sup> century's era will be full of advanced technology, modern lifestyles of human beings towards rapid development of living of standard. According to the changing lifestyles demands are changed. Everyone wants sustainable things in their life.*

*The Green library is a new concept and it is gaining popularity among the librarians. It is also known as sustainable library. Great libraries are fruits and roots of great civilizations. From times immemorial, a library is a temple of learning where light of knowledge burns brightly. These are rich springs from which knowledge flows to irrigate the wide sector of education. Awareness in the field of environment is becoming a global talk.*

*This paper highlights on the environment and its impact. It also discusses the building sustainability and need for green library towards the society.*

**Keywords:** Green library, environment, sustainability

### Introduction

The word green has a great importance here for healthy services. We know that last few years there are increasing interest towards green revolution in every sector and library is one of them. Nowadays we have must need to make our environment sustainable for sustainable development.

The green library or sustainable is a modern library where minimize electricity consumption and maximum use of renewable sources like air, sunlight, woods etc. Now a days it is much more needed for library to greening the library environment. People worldwide are realizing its importance. So careful handling of today's environment would only serve as a legacy for tomorrow's generation. The libraries have a function to impart knowledge not only to its users but it has also an important role to preserve our rich library heritage.

Libraries are not merely store house of reading material collected for preservation but it functions as a dynamic device of environment education so as to protect our mother earth. One of the essential qualities of a well designed library is to create an atmosphere of pleasantness, comfort, suitability and appropriateness.

### Definition:

A **green library** is designed to minimize negative impact on the natural environment and maximize

indoor environmental quality by means of careful site selection, use of natural construction materials and biodegradable products, conservation of resources (water, energy, paper), and responsible waste disposal (recycling).

### Green Library:

Great libraries are fruits and roots of great civilizations. From times immemorial, a library is a temple of learning where light of knowledge burns brightly. The concept of Green emerged in the early 1990's "Green Library" which is also known as a sustainable library is built keeping in view the environmental ethics in mind. Public libraries can create environmental awareness to the common man which will result in improvement of overall environment. It is gaining popularity in the field of library and information science profession. The librarian also trying to develop such kind of library that will be minimize the electricity consumption, energy efficient and environment friendly.

Green Library designed to minimize negative impact on the natural environment and maximize indoor environmental quality by means of careful site selection, use of natural construction material and biodegradable products, conservation of resources like water, energy, paper and responsible waste disposal recycling etc.

**The Role of Green Librarian:**

- Librarian should always make efforts to promote green library movements by using different online tools like social media.
- The Librarian constantly willing to work under the Eco-library system and identify those people who are willing to work in this environment.
- He can promote green library tools, techniques to encourage others.
- A Librarian can encourage other librarians towards green library by discussion, seminar, and conferences.
- The green librarian's role is most dynamic he is also called as eco librarian because he has to handle the budgets to support the organizations.
- Use wooden furniture and material because these are bio degradable materials
- Library can use wool brick instead of burnt brick.
- Solar tiles or panel can be used for roof.
- Paper Insulation is also an ultimate trick to make environment friendly building.
- It is made from newspaper and cardboard which are recyclable. Also it protects wall from fire and insects.
- More and more use of bamboo by replacing steel.
- Rooftop planting can be a good idea.

**Building Sustainability**

The following five different categories to Judge a building sustainability

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

**1. Site location:** Before building can start, a site must be chosen. The selection of the site has a larger impact on how ecologically friendly the library will be. The library should be located in a densely populated area, near a number of other services related buildings. People should be able to reach the building by public transportation and the parking lots

should give priority parking to those driving energy efficient vehicle.

**2. Water conservation:** There are many different ways for libraries to conserve water. A number of them rely on proper site selection. If a site is selected properly strategies can be used to capture rainwater runoff be used in irrigating. Another strategy is to use low flow fixtures and waterless urinals.

**3. Energy efficiency:** Energy efficiency is considered by many to be the most important category in becoming sustainable. In the LEED rating system it is the heaviest weighted of all the categories. Energy efficient design is in many ways a return to passive design principles that evolved over thousands of years, until the advent of air conditioning and cheap energy made those strategies appear to be unnecessary. As environmental awareness increases, as well as the cost of fossil fuels needed to operate giant heating, air conditioning, and ventilation ([HVAC]) systems, building designers are beginning to recognize that the outside environment cannot be ignored, and should be taken advantage of. What 21st-century designers are beginning to do is implement ancient passive design principles, while taking advantage of the most advanced technology available.

**4. Building Materials:** It is believed that up to 40% of landfill space is filled with construction waste material. The primary responsibility in selecting materials for the library is to contribute as little waste as possible. Another responsibility is to choose materials that can be produced without causing too much damage to the natural environment. In order to fulfill the first responsibility, post-industrial and post-consumer recycled materials are being used. When purchasing materials claiming to be made from recycled goods it is important to investigate what their claims mean. It is a common marketing practice to exaggerate how green a product is by using misleading statements. Also, materials should be chosen that are going to be able to be reused or recycled 50–100 years down the road when the library building has reached the end of its useful life. As non-renewable resources decrease, reusing and recycling are going to become increasingly necessary in the future.

**5. Indoor air Quality:** Along with energy inefficiency poor air quality has been another side



design, because most modern buildings are temperature controlled, they are designed to be airtight. The lack of ventilation can not only make building expensive to cool, it also traps harmful toxins that can do serious damage to peoples respiratory systems on average people spend about 90% of their time indoors, therefore green building need to be designed in a way in which the air gets recycled and does not stay stagnant . A green library is not just taking care of the environment, it is about taking care of the health and well being of those who work in it and patronized it.

### Green design elements for Libraries

The main goal of green building is to develop and use sustainable energy efficient resources in construction, maintenance and overall life of the structure. Libraries considering green design will often look at the leadership in energy and environment design (LEED) rating system.

Brown identified the following green design elements, which can be incorporated into libraries.

1. Community collaborating- makes sure that community assets are efficiently used and helps to maintain public support.
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
9. Indoor environment quality.

### Need for Green Libraries

Environmental factors are responsible for decay and deterioration of all kinds of library materials, whatever may be the physical constituents of a particular material. These environmental conditions can be fungus, temperature, light and darkness, humidity and moisture, water, smoke, dust, dirt, air pollution etc. Some of the environmental factors that cause deterioration under extreme conditions are as follows:-

**1. Pollution:** Atmospheric contamination is a major cause of chemical degradation in paper .The impurities of air are sulphur dioxide, hydrogen sulphide, ammonia, nitrogen-di-oxide, ozone, aerosols, carbon-di-oxide, carbon monoxide and

other chemical compounds. Dirt, smoke, dust and solid particles such as sand and oil soot are the most common solid materials to cause damage. In order to control the pollution and green house gases in environment green libraries are required. There is dire necessity that excessive noise pollution should be controlled as much as it is possible so that readers and staff members are not disturbed in their work.

**2. Fungus:**-Fungus destroys the paper and the leather leaves white scars on the books. Humidity helps to grow more and more. It grows much more when humidity is above 70% and most when it reaches 90% and temperature is between 250 C and 380C. To keep these away proper ventilation is required.

**3. Light:** – Light may be natural or artificial. Natural light is the sunlight and artificial light is the light of electric bulbs and fluorescent. The ultra-violet rays coming direct from sun are harmful to library material. Therefore library material should never be exposed to direct sun rays. Light plays a greater role in becoming the planet green.

### Conclusion:

The Library always facing problems like space and budget in the same way the books has been facing problems from dust , moisture, fungus and it needs special care the green Library or Sustainable is a Modern Library minimize electricity consumption and maximum use of renewable sources like air, sunlight, woods. Libraries need to be build flexibly, in order to make room for expansions in size and in wiring capabilities. Now days it is much more needed for a library to greening the library environment. The librarian take a part in green library movement and they should take some decision to make green library as early as possible & save environment.

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