

Green Libraries: The Need of the Day

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Abstract: - *In recent decades many academic libraries strive to go green by designing a “Green library”, with a new buildings or by renovation of an existing building. 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, etc. The green library or sustainable library is a new concept and it is gaining popularity among library professionals. Green or sustainable libraries are structures that are designed, built, renovated, operated, or reused in an ecological and resource efficient manner. This paper highlights Elements for designing Green libraries, the criteria for greening the libraries, Standards for Green library in India and abroad and some of Green library initiatives in India. The paper also explains the role of Green librarian.*

Keywords: Green Library, Sustainable Library, Green librarian, LEED (Leadership in Energy and Environmental Design), IGBC (Indian Green Building Council), Green Library Standards

1. Introduction

The Green Library Movement emerged in the early 1990s and gained popularity in the library profession around 2003. This innovation is happening by building green library buildings, by greening existing library facilities, providing green library services, and embracing environmentally supportive and sustainable practices within the library. That is, the libraries can manage the use of resources and save money

and time and they can keep a favourable relationship between living things and their environment and can make an eco-friendly environment. It is a collective effort of all mankind to make a green planet by reducing global warming.

Over the past several years, libraries have become one of the most common categories of new construction to embrace sustainable design. Green library management emphasizes a new

mindset of taking responsibility for the stability of nature, health of library users and staff and catering for the needs and interest of future generations of users. Libraries as non-commercial and service oriented public buildings are particularly suited to give examples to illustrate the idea of sustainability, to distribute and to disseminate this idea to the people.

2. Definition:

- The Online Dictionary of Library and Information Science (ODLIS) defines green/sustainable library as “a 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 materials and biodegradable products, conservation of resources like water, energy, paper, and responsible waste disposal recycling, etc.”

3. Elements for designing Green Libraries:

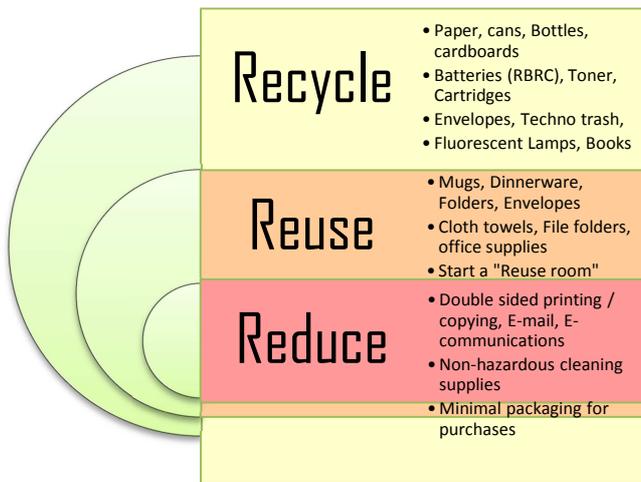
Green libraries combine the needs of a library, sustainable design, and real cost savings in energy consumption (Brown, 2003). The main goal of green buildings is to develop and use sustainable energy-efficient resources in construction, maintenance, and overall life of the structure. Libraries considering green design will often look at the Leadership in Energy and Environmental Design (LEED) rating system. Brown (2003) identifies the following green

design elements, which can be incorporated into libraries:

- **Community collaboration** – makes sure that community assets are efficiently used and helps to maintain public support
- **Daylight** – pair daylight with artificial lighting to reduce energy costs, using of low energy consuming bulbs and lights in non-reading areas
- **Water consumption**- reuse of waste water and rainwater in plantation, harvesting and flushing in toilets.
- **Green materials** – use renewable materials like wood, linoleum, bamboo, and cork
- **Green roofs**- use greenery on the roofs of library terrace, it minimizes the heat
- **Raised floor systems**
- **Energy efficiency**- Electricity can be generated using direct sunlight by planting solar system on the roof top of the library building.
- **Natural ventilation**- plantation is needed in the surrounding campus
- **Green power and renewable energy**
- **Indoor environmental quality**

4. Greening Your Library:

4.1 Recycle, Reuse, Reduce



4.2 Conserve Water, Energy & Resources

4.2.1 Water:

- Low flow fixtures
- No flow fixtures
- Sensor and spring loaded fixtures
- Stop leaks
- Check your cooling tower (air conditioning)
- Rainwater reuse for landscaping

4.2.2 Energy:

- Energy Star appliances
- Window films – Mylar
- Fans to even out temperatures
- Seal windows, doors, leaks
- Task lighting
- Occupancy sensors
- Turn off and power down electronics
- Programmable thermostats
- Monitor electric + other energy usage

4.2.3 Resources:

- Improve worker & patron environment

- Educate staff and public
- Include staff from a variety of departments.
- Include building manager & maintenance staff
- Meet regularly.
- Communicate activities & successes to everyone

4.3 Purchase Environmentally Friendly Products

- Learn to read labels; know the warning signs
- Choose products with less harmful ingredients
- Green Seal and Ecology
- Look for recycled content
- Carpet and flooring – look for low VOC emissions from adhesives, carpet and cushion
- Anti-Idling Campaign
- Integrated Pest Management
- Encourage Public Transportation, carpooling, biking and walking
- Xeriscaping to minimize irrigation, fertilizer and pesticide needs
- Integrated Pest Management (mild; insects; etc.)
- Safety Team/safety inspections
- Green cleaning practices

5. Standards and Prospects for Green Libraries:

5.1 Leadership in Energy and Environmental Design (LEED)

Leadership in Energy and Environmental Design (LEED) is one of the most popular green building certification programs used worldwide. Developed by the non-profit U.S. Green Building Council U.S. Green Building Council (USGBC) it includes a set of rating systems for the design, construction, operation, and maintenance of green buildings, homes, and neighbourhoods that aims to help building owners and operators be environmentally responsible and use resources efficiently. Under LEED 2009, there are 100 possible base points distributed across six credit categories. LEED uses six different categories to judge a building's sustainability; 1) site location, 2) water conservation, 3) energy efficiency, 4) materials, 5) indoor air quality, and a bonus category for 6) innovation and design.

However, LEED-India stimulates a whole building approach to sustainability by acclaiming the performance in the following key areas:

- **Site location-** The libraries can select eco-friendly design before building the Green Libraries
- **Water conservation-** It cools the atmosphere of the libraries
- **Energy efficiency-** The libraries can save energy when not using the electricity
- **Materials-** The libraries can also use quickly renewable materials in the libraries
- **Indoor air quality-** Open windows can cool the environment and save energy

- **Vegetated Green Roof-** It makes convention cooling in the libraries and save electricity
- **Conserves the energy-** Natural daylight conserves the energy and electricity in the libraries

LEED rate on 100 points and certify the buildings on the following criteria:

- 25-40 points as Certified
- 41-50 points as Silver
- 51-60 points as Gold
- 61-80 points as Platinum

5.2 Indian Green building council (IGBC):

The Indian Green Building Council (IGBC) part of the Confederation of Indian Industry (CII) was formed in the year 2001 to promote and rate green buildings in India. The council offers a wide array of services which include developing new green building rating programmes, certification services and green building training programmes. USGBC has also established a LEED hub in India to further accelerate the adoption of LEED in India. The Indian Green Building Council (IGBC) has been instrumental in mobilizing the green building movement in India. USGBC and IGBC continue their collaboration in advancing the uptake of green buildings in India. LEED India projects registered with IGBC till June 2014 would be certified by IGBC. LEED projects in India registered after June 2014 would be certified by the Green building certification Institute (GBCI)

6. Green Library Initiatives in India:

- Anna-Centenary Library, Chennai
- Perma Karpo Library, Ladakh
- National Library of India, Kolkata
- Karnataka University Library
- NIT Library Silchar, Assam, India
- NIT Trichy Library
- Delhi University Library
- Kolkata University Library
- Madras University Library
- Mumbai University Library

7. The Role of Green Librarian:

- ✓ Librarian should always make efforts to promote green library movement by using different online tools like social media.
- ✓ The librarian should constantly will to work under the eco-library system and identify those people who are willing to work in this environment.
- ✓ The librarian 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 an 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.
- ✓ Book shelves should not be exceeds 110 cm in height.
- ✓ Arrangements of library should be made by considering physically handicapped patrons.
- ✓ There must be a parking lot for the patrons and staff to smoothly run the library
- ✓ Librarians should provide awareness and create the space in the libraries to exemplify the green practices.
- ✓ Library professionals should move beyond environmental sustainability exemplified by various practices of "greening libraries"

Conclusion:

The green library or sustainable library is a modern library where electricity consumption is minimized and maximum use is made of renewable sources like air, sunlight, woods. Now-a-days it is much more needed for a library to green the library environment. The librarians should take some decisions to make green library and also take part in green library movement. Libraries can use a variety of tools to popularize the 'green concept' and educate their patrons about the features of their green buildings. These

include in-library displays, publications, and library programs relevant on 'going green'. Many national and international bodies are helping to make green library. Government should encourage the green library and guide to the all the libraries for making green libraries. Some of the Indian libraries have been trying to make a successful green and Librarians should take initiatives and participate in green library movement. The conceptions like Environment Literacy, Nature Preservation & Energy Conservation stand in need to be foregrounded. Libraries can portray their skilfully and pleasing executed role in becoming the planet green thus helping the libraries in becoming a leader in eco-education. Furthermore, library professionals and patrons can propose their opinions and suggestions for building green libraries for sustainable development.

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