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## Green Library: A rousing call to Library Community

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### ABSTRACT:

This paper is to provide an overview of the green building technologies and its practices in the libraries in order to use them as an instrument towards fostering ecological sustainability and development. The concept of green library movement among the Indian library community is still in the grassroots level whereas in International scenario it has already gained popularity. Therefore the main motto of this paper is to raise awareness about the green library movement and also to promote the idea among the library professionals to take a clear stand and create a visible green image for the library as an important part of their academic and social responsibility. The next as well as present generation of LIS profession should be encouraged to spread the "Green library movement" in their libraries.

**Key Words:** Green Building Technology, Green Library, Green Library Movement.

### INTRODUCTION:

Go Green and think green is the most popular slogan to save our environment. The whole world is fighting against the environmental problems like global warming, flood, water crisis etc. Technological revolution gives us the materialistic peace but on the otherhand it has been effecting the world environment too. As a result of these problems, an initiatives called as Green movement started worldwide.

So many conferences, meetings are going on among the countries. As a social institution library is also not lacking behind. Library has started a movement known as green library movement which is emerged in early 1990s and gradually gained popularity among the library professions and became one of the most current trends in library field.

### OBJECTIVES OF THE STUDY:

The main objective of this paper is to promote the idea of Green library technology. The other objectives are given below:

To provide an overview of green building technologies and its practices in the libraries.

To provide the basic information about green library

To analyze the importance of green libraries

To discuss the various techniques and methods of greening library.

### LITERATURE REVIEW:

The amount of information available on green libraries and green library practices is limited but continues to grow. The evolution of green and sustainable libraries is now over a decade old with literature available from all stakeholders. In between 1970-80s Wilfred Lancaster set the tone for paperless societies from the perspective of libraries and information services (LIS). The earliest articles on green libraries appeared in the year 1990s. And the Wilson Library Bulletin's February 1991 issue featured a special section on "Libraries and the Environment." James and Suzanne LeRue wrote the lead article entitled "The Green Librarian" (1991) where LeRue explained in detail how to be environmentally supportive at home and in the library. Jane C. Neale (2008) in her paper "Go Green", described how libraries can be more eco-friendly. Another research scholar Dorothy Waterfall Trotte (2008) in a paper entitled "Going for Green", discussed three environmentally friendly libraries and offered tips on how librarians could make their libraries



greener. In a paper Divya and Vijayakumar (2013) have rightly pointed out that this is the right time for librarians to support green library movement. Aulisio (2013) in a paper argued that a green library is more than what the architecture entails by using example initiatives and providing recommendations for green library operations.

#### GREEN LIBRARY:

According to Wikipedia, "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.)..." Green library is a new approach in the library profession which extends to include efficient use of energy, water and other resources as well as reduction of waste, pollution and environmental degradation. Generally when we talk about green libraries it usually comes to our mind as green library buildings. The California Integrated Waste Management Board defines a green or sustainable building as "a structure that is designed, built, renovated, operated, or reused in an ecological and resource efficient manner" (California Integrated, 2008).

#### WHY GREEN LIBRARY? :

To save our environment a worldwide movement known as Green movement started and as a social institution library is not lacking behind. In a result of this library has started a new movement known as Green Library movement. Although the concept of green library movement has gained popularity in the international scenario but in the Indian context it is still in its grassroots level. So the main purpose of this paper is to draw the attention of the LIS professionals towards the concept of the green libraries. A need has arisen to put emphasis on the importance and its applicability of greening the libraries for rendering a pleasant

learning ecological atmospheric environment.

#### METHODS & TECHNIQUES:

1) **Site Location:** A proper site selection is very necessary for a green library as compared to other types of buildings.

2) **Water Conservations:** Harvest enough rain water to meet 100% of the buildings water demand. Green roofs or living roof could act as a better option to absorb rainwater and heat temperature to a great extent. The use of automatic or sensor taps and dual flush toilets will dramatically reduce water consumption in buildings.

3) **Energy efficiency:** The library can save energy when not using the electricity. Use light bulbs which are eco friendly in nature at same time it saves energy. The library can use Energy Star products for saving energy and also can use alternative energy sources such as solar energy. Motion and light sensors, timers and energy saving dimmers can be easily and inexpensively retrofit to existing buildings.

4) **Building Materials:** Libraries can use renewable materials in the libraries. Library can place large size window planes instead of installing air conditions.

5) **Indoor Air Quality:** Use of air conditioners will increase emission of harmful gases which are responsible for the holes in ozone layer and intern global warming. Place Window planes that allows sufficient natural lights as well as provides fresh air inside the library. Green roofs or living roof could act as a better option to absorb rainwater and heat temperature to a great extent.

**STANDARDS FOR GREEN LIBRARIES IN INDIA:**  
**Indian Green building Council (IGBC):** The IGBC was established in the year 2000. It was meant to form in order to promote and developed as well as measure the rating scale of green buildings in India.

**Leadership in Energy and Environmental Design (LEED-India):** LEED is a specifically designed rating system to evaluate and

measured new and renovated buildings. The LEED measures the rating scale based on the basis of the performance of the following five areas i.e. sustainable site selection and development; water efficiency; energy atmosphere; materials and resources and indoor environment quality. It also lays emphasis on newly developed designs. On the basis of this achievements. It certifies four levels as Certified, Silver, Gold and Platinum depending on the gained credits.

#### INITIATIVES IN INDIA:

Green library initiative is a new concept in India and is in infant stage. The green building movement in India is first initiated by TERI (The Energy and Research Institute). TERI has worked on several green building projects and envisioned the need for development of an indigenous tool for rating of green buildings. TERI has taken the step towards sustainable development by advocating the concept of green building and to minimize the impact of technology on the environment. It also constructed green buildings in different places in India. COSTFORD (Centre of Science and Technology for Rural Development) is a nonprofit organization which has also focused on green movement in India.

The largest public library in India, Anna centenary library building is also one of the most sustainable. This Library is known for excellence in learning, innovative research, and community engagement that contributes to the economic vitality, environmental sustainability. The library building complex consists of Library building (G+8) and an auditorium (G+1) to accommodate 1200 persons. To improve the thermal comfort of the occupants, the building has been provided with adequate air conditioning. The project achieved the prestigious LEED Gold rating given by Indian Green Building Council under New Construction rating.

In Indian context a very few attempts have been made to develop sustainable library

buildings. A survey made of four university libraries (Calcutta University Library, Mumbai University Library, Madras University Library, Delhi University Library) by Chakraborty (2013) reveals that although measures were taken care off a long time ago at their establishment time but some suggestions also need to be adopted to solve the problems in current environment. Though the awareness in India about Green Library is least but still efforts are made by PremaKarpoo Library, Ladakh, National Library of India, Kolkata, NIT Silchar Library, IIT Roorkee Library, Karnataka University Library, Dharward etc. These are some of the libraries in India which has tried to take some of the major initiatives in their concerned work environment towards sustainability measures.

#### INTERNATIONAL INITIATIVES:

Countries like USA, Canada, England, Japan, Australia etc. have awareness about greening the libraries is quite remarkable. They have very active nationwide initiatives, round tables or library association sub groups. Some major green library initiatives are listed below:

1) **Chicago Public Library:** Officially opened as a green library in 2003 and incorporates a 16kw photovoltaic system which provides seven percent of the buildings energy. Also incorporated improved wall and roof insulation, lighting controls, and windows that keep heat out but let in light, which enable it to need twenty percent less energy than required by the Chicago Energy Code. Received LEED certification.

2) **Fayetteville Public Library, Minneapolis:** It has earned many certificates. It has green roofing and reduced air temperature by 20 degree Celsius, saving a huge amount of energy cost. Roof water is harvested for landscaping and irrigation. Natural lights have been used for public areas. Trees were re harvested.

3) **Council Tree Library, Fort Collins:** The first LEED commercial interior library in the U.S. to receive platinum status and the second library

in the nation to receive platinum, in all LEED programs. The Library's comprehensive green cleaning plan won a LEED innovation credit. Construction and building achievements include: 55% water savings; 92% construction waste recycled; 85% certified sustainable wood products; and 97% Energy Star equipment. Received LEED Platinum certification.

**4) Mill Place (Cooroy Library), Australia:** Cooroy Library have host an impressive array of green building features. The building has been cut into the ground, providing thermal mass on the eastern and southern sides which helps to warm and cool the building. Solar chimneys have also been integrated within the roof structure. High levels of diffused natural lighting have been provided to the building through glass walls and high windows. Natural ventilation is also a feature of the building operations. A 20,000 liter (5283 gallon) below ground rainwater harvesting tank used for both the irrigation of the landscape as well as for toilet and urinal flushing within the library.

**5) Calgary Public Library, Canada:** The major feature of this library is it incorporates energy and daylight harvesting, exterior sunshades, and a white 'Energy Star' compliant roof. It also includes on-demand water heating with low-flow plumbing fixtures to reduce the use of water and conserve energy.

**6) National Library, Singapore (2005):** It is known as greenest building on the planet. It uses light shelves allowing light to filter into the library. They use rain sensors as a part of the automatic irrigation system for rooftop gardens. Water efficient taps and cisterns are also used to conserve water. Energy efficient features include daylight sensors that are used together with automatic blinds at the building facades, public toilets installed with motion sensors. It is also the first green library for kids.

**7) Brighton's Jubilee Library (UK):** This library has won multiple building awards. Main green features of this library are: Use of setting,

sunshine and wind; south facing, heat stored in walls and floors, use of louvers to deflect heat in summer; heat recovery from lights, building occupants, equipment and reused in building systems etc.

**8) Kanazawa Umimirai Library, Japan:** A spacious and natural light filled environment supported by 6,000 small circular windows.

**9) The Bangkok Eco Library:** This library is also an example of green library. It was established with the aim of implanting the importance of environmental conservation among all users, including its staff. Different activities to recycle offcuts will be held every month. The staff in the library is required to demonstrate a green service mind. Together, they help separate the garbage every day. An energy-saving competition has been organized to motivate staff to save energy. Energy-saving light bulbs are used.

**10) Thomas Golisano Library at Roberts Wesleyan College (USA):** This is the first academic library building to achieve a LEED Silver certification and uses various methods to make it 40 percent more energy efficient than the New York State Energy Code recommendations. Library shelves limit daylight from side windows, so the design compensated by using a large atrium to provide natural daylight to both levels of the building. Use of white paint and solar shades reflect the direct rays of the sun and bounce light to specific areas. The internal lights respond to outside conditions

#### ROLE OF LIBRARY PROESSIONALS:

Library professional has played a vital role to popularize the green movement in the society in terms of Green Library Movement. Librarians should act as role models for sustainability by providing suitable and relevant information related to green issues and concerns. We library professionals should encourage and promote this new concept. We 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'. Library professionals can organize workshop, conferences in the library and educate the people about the environment from eco-friendly lifestyle choices to organizations that promote green causes. With the help of web 2.0 tools such as social media, social networking sites library professionals can spread awareness about the library's green activities. There are some things which can be done by library professionals to be more energy efficient without spending any money, such as turn off the lights when leaving a room, Turn off electronics such as monitors, printers, and speakers when they are not in use etc.

#### CONCLUSION:

Libraries play an important role in the society and therefore also in the environmental world. Librarians should act as role models for sustainability by providing suitable and relevant information related to green issues and concerns. Libraries should take initiatives to publicize green library impacts to its readers. Green library movement has provided a path towards maintaining a sustainable library which would not only encompass in the institutional aspects rather it will enhance for the information needs of the student community. To remain relevant to the community, and assure organizational sustainability, we must understand, listen to, and develop services that create a better life for our users.

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