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GREEN LIBRARIES: TRANSFORMING LIBRARIES INTO SUSTAINABLE AND ENVIRONMENTALLY RESPONSIBLE INSTITUTIONS FOR A SUSTAINABLE FUTURE

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Abstract:

A relatively new idea that gained popularity among library professionals is the green library, commonly referred to as a sustainable library. A "green library" is one designed with environmental principles in mind. Green libraries show how libraries have changed in response to current environmental issues. They combine a dedication to preserving natural resources and promoting sustainable communities with their customary goal of imparting knowledge. Librarians' main role is to promote and encourage the concept of green libraries. This paper aims to define the term "green library," list its benefits, and examine the elements of a green library, the critical role of librarians in promoting the concept of green libraries and promoting sustainable literacy, and some suggestions that every library and librarian should follow to take one step ahead in converting their traditional library to a green library. This paper discusses the concept of green libraries, the elements of green libraries, IFLA guidelines for green libraries, and the role of libraries and librarians in transforming libraries into sustainable and environmentally responsible institutions.

Keywords: *Green Library, Sustainable Library, Elements of green library, Environmental Initiative*

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Introduction:

Our lifestyles are evolving more quickly due to scientific and technological advancements. Demand for everything is rising quickly, and we use it to meet our endless needs. In this situation, people have neglected something crucial that must be recognised before discussing sustainable development on our rapidly evolving planet. It is simply the term "green," which is crucial to a healthy existence. We have noticed that interest in the green revolution has grown over the past few years in nearly every sector of society, including libraries. Today, libraries serve as gateways to knowledge and are responsible not only for disseminating the idea of sustainability but also for leading by example. Today's libraries should incorporate green elements into their operations. These libraries incorporate sustainable practices into their operations, physical spaces, and community programs, demonstrating how institutions can evolve to meet modern social needs. Green libraries not only reduce their environmental footprints by adopting environmentally friendly infrastructure, reducing waste, and promoting digital resources, but also serve as catalysts for community change. To reduce environmental impact while fostering sustainability literacy and action among users, green libraries implement environmentally friendly practices in library operations, design, and community engagement. A green library is developed and maintained with the community's welfare and well-being in mind, utilising resources sustainably.

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Concept of Green Library:

1. Definitions:

Although there isn't a single definition of the term "green library," we use it to refer to both the library's overall operation and its physical design. A green library, also known as a sustainable library, is a library designed with environmental concerns in mind. Green libraries are part of the larger green building movement.

As a result, this idea is considered more comprehensive. In a nutshell, an environmentally sound library or "green library", is anything sustainable or environmentally friendly.

The Oxford English Dictionary (2008) defines the word "green" as "relating to or advocating environmentalism". The term "sustainable" refers to "human economic activities and forms of culture that do not degrade the environment, i.e. avoid the long-term depletion of natural resources".[1]

Online Dictionary of Library and Information Science: Libraries are designed to minimise negative impacts on the natural environment and maximise the indoor environment by using natural, quality building materials and biodegradable products, conserving resources (water, energy, paper) through careful site selection, and practising responsible waste disposal, recycling, etc.

2. Green Library: Concept

This concept, a "green library," refers to an environmentally friendly library, or eco-library. A building that has been built, refurbished, used again, or repurposed in an ecologically and resource-efficient manner is known as a "green" or "sustainable" library.

A green library, also known as a sustainable library, is described by the Online Dictionary of Library and Information Science (ODLIS) as "a library designed to minimise negative impacts on the natural terrain and enhance the quality of the inner terrain through careful point selection;14 use of natural structure accoutrements and biodegradable products; water, energy, conservation of funds like paper, and use of responsible waste disposal and recycling."

A green library incorporates sustainable principles into its building, services, collections, technology, and daily operations. The goal is not simply to reduce energy consumption but to create an institution that contributes positively to the environment and encourages users to adopt sustainable habits.

Green libraries may use renewable energy, energy-efficient lighting, natural ventilation, water-saving systems, sustainable construction materials, and effective waste-management practices. They can also support environmental education by providing books, digital resources, exhibitions, workshops, and community programs focused on climate change and conservation.

Review of Literature:

Information on green libraries and green library practices remains limited but is expanding. For this study, the researcher reviewed certain resources on "green libraries," "sustainable libraries," and "green library movements." The pertinent and significant works the researcher located and examined are listed below.

This study cites literature on the concept of green libraries and its growing acceptance. GreenLibrary presents a few articles. In their essay, LeRue, James, and Suzanne LeRue (1991) described how to be environmentally conscious both at home and in the library. Smith (1991) highlighted the space limitations of both nature and libraries, as well as the role libraries must play in preserving both. According to Brown (2003), green libraries are at the forefront of green design and are a developing trend. Bangar (2017) concludes that librarians should stay up to date on sustainable trends in librarianship. They should also

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raise awareness and set aside space in libraries to demonstrate green practices. This includes the idea of green libraries in India, including its standards, requirements, traits, growth, and activities. Vasanthi (2019) highlights initiatives in India and abroad, the librarian's role, Green India, green libraries, standards created for improvement, and the efforts of prominent institutions toward an environmentally friendly planet.

Objectives:

The following objectives of this research paper are to:

- To describe the concept of a green library.
- To explain the elements of the green library.
- To determine how a green library affects the environment
- To investigate India's green library efforts.
- To learn how to encourage green libraries.
- To raise awareness of libraries' leadership in environmental sustainability and social responsibility.

Methodology:

Using a factual basis and narrative approach, the growth of the green library structure in librarianship has significantly increased in India and abroad. The study examined literature on "Green Library" from India and other countries and evaluated the collected data against the objectives. To provide recommendations, the study compared samples of green libraries.

IFLA Guidelines for Green Libraries:

The IFLA Guidelines for Green Libraries result from a global collaboration. Ms Petra Hauke (Humboldt-Universität zu Berlin, Germany) and Ms Antonia Mocatta (University of Sydney, Australia) led the Guidelines team, with contributions from IFLA's Environment, Sustainability and Libraries Section (ENSULIB) Standing Committee members. This document provides a tool for planning, implementing, and evaluating green libraries. The document also serves as a framework for developing national guidelines for green libraries. The Guidelines apply to all libraries seeking to implement sustainable practices, regardless of size, focus, or location, and can be tailored to local needs. They reflect a range of library services that dedicated library staff in most countries can deliver.

Sustainability as a fundamental principle has led us to reconsider our way of life. It is driven not only by the impending climate catastrophe, but also by the broader definition of sustainability laid out in the 17 United Nations Sustainable Development Goals (SDGs) (United Nations 2015a). Implementing the goals requires democratic processes in which citizens should actively participate.

Aligned with these values, libraries increasingly see their role as sustainability models and educational partners. Libraries are closely connected to their communities and reach people across all levels of society. This gives them a unique opportunity and responsibility to raise awareness and serve as platforms for civic engagement and sustainable development.

Libraries and librarians can serve as role models for green practices. Many library buildings are now designed with green construction and energy principles. Libraries also adopt sustainable operational practices, such as sustainable sourcing, recycling, and reducing resource consumption. They use a variety of methods to educate their communities about sustainability and reach diverse audiences.

Green library development efforts are most successful when they address all aspects of sustainability holistically. Figure 1 below shows the seven green library principles described within the Guidelines, centred around the three core areas of environmental sustainability, social sustainability, and economic sustainability. For a library to be truly green, it should implement at least some aspects of each of the seven principles, taking an integrative approach that reflects

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the scope of libraries' roles in responding to the UN SDGs.

Fig. 1: Components of a Green Library. © Benjamin Meunier, Priscilla Nga Ian Pun and Ana Zdravje.

Elements of Green Libraries:

1. **Selection of Site:**

The library is a vital component of every institution, college, organisation, or university. It should be situated in a way that would motivate people to stay focused on their studies or reading. When choosing a location, accessibility—or accessibility via public transportation—is a crucial consideration. The Indian Green Building Council (IGBC), USGBC, LEED, and other organisations have offered suggestions for creating green libraries that should be considered.

Careful site selection, resource conservation and waste disposal using natural-grade building materials and biodegradable products are designed to minimise negative impacts on green libraries and maximise indoor environments. Libraries should be friendly. Libraries should be located in densely populated areas, close to other service-related buildings, and within reach by public transport.

2. **Construction material:**

When we think of a green library, the building is the first thing that comes to mind. When developing green buildings with recyclable and eco-friendly materials, many guidelines and practices are available in India and other countries. A division of the Confederation of Indian Industry (CII), the Indian Green Building Council (IGBC) offers services like certification, training, and green building rating systems. LEED is internationally recognised.

According to the International Federation of Library Associations (IFLA), a green library is "designed to reduce negative impacts on the natural environment and enhance indoor environmental quality through careful site selection, use of natural building materials and biodegradable products, resource conservation, and responsible indoor environmental quality." "If solid materials for construction are used, we expect that even the greatest libraries will last throughout time.

3. **Water conservation:**

Monitor changes in your water bill to calculate savings as you make changes. Plant rain gardens to absorb rainwater from rooftops, driveways, sidewalks, and compacted lawn areas. If you don't have an automatic sprinkler, use soaker hoses and drip irrigation to water landscape plants efficiently. We are using native plants in your landscaping.

It is an essential material for offices and households. Handle it carefully, since it is valuable and uncommon. To keep a library hygienic, clean, and ecologically friendly, proper water management practices are necessary. As you make these modifications, monitor your water bill to assess savings.

To collect rainwater from driveways, sidewalks, rooftops, and small grass areas, establish rain gardens. Water-saving urinals, low-flow plumbing,

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and rainwater collection systems are a few ways libraries can maximise water conservation. Furthermore, the library can reuse wastewater and rainwater for irrigation and gardening, as well as toilet flushing. Use drip irrigation and soaker hoses to effectively irrigate landscaping plants if you don't have an automatic sprinkler. In your landscaping, we use native plants.

4. **Air and Ventilation:**

Fresh, healthy, breathable air is vital to a healthy home. In the library building, a good air supply is particularly essential. The campus needs to be well planted to supply clean, fresh air and keep the library cool. In essence, trees cool the air and control how well air conditioners work in the summer. Green Library ventilation and air conditioning require proper ventilation. In a mountainous region, a building should be located in a sunny spot to warm up a little and save energy on room heaters and blowers during winter. Proper ventilation and air circulation are necessary. It is recommended that a green building be designed to recycle air rather than let it become stagnant.

Green Library ventilation and air conditioning require a properly ventilated area. To properly care for older library collections and use longer-lasting construction materials, large libraries need clean rooms or spaces with proper air-conditioning and ventilation in both reading rooms, where many visitors read, study, or use computers, and library halls. It is necessary to maintain the temperature and humidity levels carefully.

5. **Energy consumption and saving:**

Energy usage should be reduced even though it cannot be eliminated. There are several ways to reduce energy use in a library. A library can use sufficient windows, glass windows, natural lighting, energy-efficient bulbs and lights, and more. By installing solar panels on the library's roof, the library can generate the electricity it needs from direct sunlight. It can also store excess energy and use it when more is needed.

The LEED Platinum Austin Central Library, created by Lake Flato and Shepley Bulfinch, similarly places a strong emphasis on daylighting. Over 80% of the library's routinely used areas receive daylight from the six-story atrium at the centre of the 198,000-square-foot building. People are happier and more productive with daylight.

Role of Libraries and Librarians in Green Library:

Libraries are increasingly mindful of their role as educational resources and environmentally friendly role models. Libraries serve people from every aspect of society and have strong connections to the people they serve. Because of this, they have a unique opportunity and responsibility to promote knowledge and act as platforms for sustainable development and civic responsibility.

Green practices can have librarians and libraries as role models. Green building and energy principles are currently used in the design of many library facilities. Additionally, libraries implement sustainable methods in their operations, including resource reduction, recycling, and sustainable sourcing. They reach a range of people by using a variety of techniques to teach their communities about sustainability.

Suggestions:

i) Libraries can educate their users about the particular characteristics of green buildings and promote the "green concept" via a few different tactics. These include "going green"-related literature, library exhibits, and initiatives.

ii) Librarians must always promote green library initiatives by utilising various online and electronic communication platforms.

iii) Working under the Eco-library system and identifying people who are willing to work for

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promoting the concept of Green Library for a sustainable environment

iv) The librarian can inspire others by promoting eco-friendly library resources and methods.

v) Librarians can promote green libraries to other librarians through conferences, seminars, workshops, and discussions.

vi) Libraries must use wooden furniture and materials because these are biodegradable materials in the libraries.

vii) Creating a rooftop garden for the library can be a good idea.

viii) The librarian should start taking the appropriate steps to conserve water, electricity, paper, etc

Conclusion:

It is the right time for librarians to support the green library movement and keep expanding it. They should actively participate in sustainable development and green library projects to show their dedication to community and environmental welfare. Their initiatives support a more sustainable future and align with broader national and regional objectives for sustainable library development. Green libraries are a good example of how libraries have changed in response to contemporary environmental issues. They combine a commitment to preserving natural resources and promoting sustainable communities with their conventional goal of imparting knowledge. Therefore, an actual green library is not simply a structure with solar panels and energy-saving lighting. It is a site that exhibits environmental leadership, promotes sustainable behaviour, educates the public, and uses resources wisely. Green libraries may play a significant role as communities strive for a more sustainable future by demonstrating the interdependence of knowledge, technology, and environmental responsibility. Libraries today are especially responsible for setting an example and promoting sustainability as gateways to knowledge. Never forget that small steps toward going green can eventually lead to big benefits.

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