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GREEN LIBRARY: CERTIFICATION AGENCIES AND STANDARDS FOR GREEN LIBRARY BUILDING

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Abstract:

In this research researchers are taking an overview of the concept of green library and green library building. Library perspective there are many ways to live with nature and green library building are one of them. Basic aim of the green library is to save nature through minimizing the negative impact on the natural environment and maximize indoor environmental quality at the library. Libraries are a platform for connecting all ages users for lifelong learning. In India last some decades had many pandemic situations and all situations prove that only natural things are the base of human life, COVID-19 pandemic situations are also one of them. Generally libraries have different types like Public, Academic, Children, Special and Digital… etc. but the purpose and its usage are the same. For providing different kinds of services library building is the core part of the library profession. Library building is the center point of this research.

Keywords: *Green Library Building, Go-Green, Green Library Standard, Eco-Friendly Library, Sustainability, Eco-Friendly Building.*

Introduction:

Whenever people talk about green libraries what usually comes to mind? The answers are green library buildings. There are many institutes that authentically work for rating and constructing green buildings. Some of them are government and some of them are private. There are nearly the same criteria for new green library building construction: sustainable sites, water efficiency, energy, atmosphere, materials, resources, indoor environmental quality, and innovation. (Water, energy, Paper, responsible waste disposal, Recycling…etc.) Affordable budgets are the reasons to build green features into their library buildings.

Not only constructing green buildings means green libraries but also a simple green step towards nature protection is also a green Practice or library. like quit using toxic chemical cleaners and switch to environment friendly cleaning products, use of automatic waste paper cutting machine, use of LED bulb, use of Natural light, …etc.

Last few years the word ‘green’ has become very popular because of many environmental issues. Sustainable, eco-friendly and environment friendly are similar terms for green practices and over the green revolution has grown in practically every sector, including the library. It is really important for a healthy survival. We all are very much aware that man is an animal and animals are dependent on nature for his survival. COVID-19

pandemic situation proves that only natural things are the base of human life. In day to day life if we take care of nature then nature also takes care of ours.

Indian higher education assessment body National Assessment and Accreditation Council (NAAC) is continuously updating their evaluation criteria's. Last few decades they have had some evaluation metrics on green audits, and need to focus on the library and its green practices. "Library is the place where each and every student gets connected for resources. NAAC also gives emphasis on library best services. Management needs to provide adequate manpower, infrastructure and other facilities to libraries at a time. Library usage increases the educational performance of the students and staff of the college." (Salunke, 2018). Education system is the only way to increase awareness of going green. International Federation of Library Associations (IFLA) expects "a green and sustainable library which takes into account environmental, economic and social sustainability. Green and sustainable libraries may be of any size, but they should have a clear sustainability agenda". So a clear sustainability agenda is the base of going green.

Definition:

According to the Indian Green Building Council (IGBC) "A green building is one which uses less water, optimizes energy efficiency, conserves natural resources, generates less waste and provides healthier spaces for occupants, as compared to a conventional building."

According to Varatharajan & Chandrashekara, (2007) "The consideration of humanity role in climate change and the sustainable development nation are core concerns of society, and consequently of libraries."

According to New World Encyclopedia 'Green Library' "a library built with environmental concerns in mind. Green libraries are a part of the larger green building movement."

According to the International Federation of Library Associations (IFLA), green libraries are "The consideration of the role of humanity in climate change and the notion of sustainable development are core concerns of society, and consequently of libraries."

According to the Online Dictionary of Library and Information Science (ODLIS) define green library with Synonymous sustainable libraries "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 (water, energy, paper), and responsible waste disposal (recycling, etc.)."

According to the Oxford English Dictionary (2008), the term "green" is defined as "pertaining to, or supporting environmentalism."

Objectives of the Paper:

1. To understand the Concept of green library and green building.
2. To list the councils (national and international) for sustainability and green library standards.
3. To list the parameters for go-green.

Research Methodology:

This is a theoretical research paper. The methodological framework used in this article is based on previous research and websites of worldwide accepted different organizations, their grading systems and standards of green library buildings or sustainable building. Literature review includes green building, green library techniques, systems of innovation. This is an exploratory approach to research. The research is based on secondary and tertiary literature sources. The Literature survey was done using online computerized search through google.

Review of Literature:

The researchers have referred to literature related to Green Library, Sustainable Building, Green Library Movement and Green building certification systems…etc. Antonelli, M. (2008) in her article titled, "The Green Library Movement: An overview of green library literature and actions from 1979 to the future of green libraries' 'observed some websites to explain green library concepts, given conceptual framework. Provided detailed information about green library movement and courses. Suggest sustainable standards should be followed by society. Tseng, S. (2008). "Green Library Design and Evaluation: The Taipei Public Library, Taiwan". Researcher has conducted a survey and an aliased data of 511 valid returned patron questionnaires by the general public. Mension green library 'innovative design and unique architecture and furniture has created a trend for new design concepts in Taiwan; it increases the number of library visits; it increases the visibility of the library and changes the stereotype of the library in the public's mind. Shah, Leena., Kumar, Sudhir., & Shah, Mukesh Kumar (2015). Green Libraries in Academic Institutions: need of the hour in this research they explain the term Green and special challenges met by libraries to be Green. Aulisio, George J.(2013). Green libraries are more than just buildings. Researchers have argued that a green library is more than what the architecture entails. He recommends that "a green library does not necessarily entail a green building, but it does involve a green mission". Bangar, M. S. (2018). Green Libraries in India: an overview in this research author has mentioned Standards for Green Libraries, definitions, changing role of the librarian…etc., "librarians have to be keen on updating themselves on sustainability trends in the field of librarianship and should provide awareness and create the space in the libraries to exemplify the Green practices".

International Standards to construct Green Library buildings:

Nearly all countries have their green building policies, authorized bodies working on sustainability and provide certification. These valid certificates show the green efficiency of green buildings.

1. (USGBC) U.S. Green Building Council and LEED (Leadership in Energy and Environmental Design):

The leading organization that promotes sustainability in building design, construction, and operation. USGBC launched their LEED (Leadership in Energy and Environmental Design) project. It is the most widely used green building rating system in the world. LEED provides a framework for healthy, efficient, carbon and cost-saving green buildings. LEED certification is a globally recognized symbol of sustainability achievement and leadership. By promoting a whole-building approach to sustainability, LEED recognizes achievements in location and planning, sustainable site development, water savings, energy efficiency,

materials selection, waste reduction, indoor environmental quality, innovative strategies and attention to priority regional issues. LEED has four types of certification in it: Certified, Silver, Gold, and Platinum. It is a point-based system in which projects earn LEED points for meeting green building criteria. Qualifying for the USGBC's LEED certification is a complex process, one that involves extremely detailed standards and guidelines that involve mathematical calculations and detailed documentation. Its simple checklist for certification of green building design and construction using a point system that is categorized in five areas

1. Sustainable sites
2. Water efficiency
3. Energy and atmosphere
4. Materials and resources
5. Indoor environmental quality

2. BREEAM (Building Research Establishment Environmental Assessment Method):

It is a voluntary green building sustainability rating system established in the UK for assessing the environmental performance of buildings. It assesses the performances of buildings over a wide range of environmental issues to produce a rating of either PASS, GOOD, VERY GOOD, EXCELLENT or OUTSTANDING. They have different schemes i.g BREEAM New Construction, BREEAM International New Construction, BREEAM Communities, BREEAM Infrastructure, BREEAM In-Use, BREEAM Refurbishment & Fit-Out…etc. BREEAM has all over world offices for sustainable constructions of the buildings.
BREEAM SUSTAINABILITY RATING CRITERIA INCLUDE?

1. Energy and water use
2. Internal environment (health and well-being)
3. Pollution
4. Transport
5. Materials
6. Waste
7. Ecology
8. Management processes

3. UNDP (United Nations Development Programme):

UNDP works in about 170 countries and territories, helping to eradicate poverty, reduce inequalities and exclusion, and build resilience so countries can sustain progress. Its work concentrated in three focus areas; sustainable development, democratic governance and peace building, and climate and disaster resilience. UNDP has a great role at the international level for sustainable development.

4. Furthermore some major initiatives (International):

Different organizations have taken major initiatives at the international level, like Adobe, Coca-Cola, Google, HPE (Hewlett Packard Enterprise), Microsoft, Nestle, NIKE, Philips…etc.

Indian Standards to assess Green Libraries:

India also has some green building certification agencies that are working abroad also. These agencies process criteria's and provide certificates to applied organizations. The Indian government and their ministries like ministry of environment, forest and climate change has started many programs for sustainability.

1. GRIHA (Green Rating for Integrated Habitat Assessment):

GRIHA is a Sanskrit word meaning – 'Abode'. GRIHA is a rating tool for building, it attempts to minimize a building's resource consumption, waste generation, and overall ecological impact to within certain nationally acceptable limits / benchmarks. GRIHA attempts to quantify aspects such as energy consumption, waste generation, renewable energy adoption, etc. so as to manage, control and reduce the same to the best possible extent. This system has qualitative and quantitative assessment criteria, and is able to 'rate' a building on the degree of its 'greenness'. GRIHA strengthening the aspects of sustainability in the project to a greater level. All new constructions with built up area more than 2500 m2 are eligible for GRIHA rating process. GRIHA has a four stage rating process 1. Online registration, 2. Submission of documents, 3. Preliminary evaluation, 4. Final evaluation

GRIHA has 11 sections and 29+1 Criterion for green building rating system. Total rating points are 100 but innovation is an additional part and it has 5 points to total evaluation points are 100+5. Sections as follows (each section has more sections)..

1. **Sustainable Site Planning:**

(Sub sections like: Green Infrastructure, Low Impact Design, Design to Mitigate UHIE).

2. Construction Management
3. Energy Efficiency
4. Occupant Comfort
5. Water Management
6. Solid Waste Management
7. Sustainable Building Materials
8. Life Cycle Costing
9. Socio-Economic Strategies
10. Performance Metering and Monitoring
11. Innovation

2. Indian Green building Council (IGBC):

India has IGBC as an oldest and premier body for green or sustainable building certification. It has a vision of enabling a 'Sustainable built environment for all', Indian Green building Council (IGBC) formed by the Confederation of Indian Industry (CII) in 2001. The council is based out of the CII Green Business Center, Hyderabad which has the unique distinction of being India's 1st Platinum-rated green building and a Net Zero Energy building. IGBC has complete many projects from various parts of India and abroad. Residential, commercial, industrial, healthcare, educational, campus, data center, etc. are the areas of IGBC certification. It also offers new green building rating programmes, certification services and green building training programmes. IGBC rates green building under following levels: Certified, Silver, Gold and Platinum.

3. Furthermore some major initiatives (National):

Different organizations have taken major initiatives at the national and international level, like Indian Ministry of environment, forest and climate change, the Tata Energy Research Institute (TERI), Infosys, IKEA, Tata Motors…etc.

Challenges for Indian Green Library:

1. Sunlight plays a major role in green practices, because it can reduce artificial lighting saving, energy saving, and helps in humidity control, but in India three main seasons

(summer, winter, and the rainy), in all these different seasons managing libraries with the same environmental quality is the challenge.

2. Green library has its limited and specific needs but that raises some extra challenges for serving best green practices.

Suggestion for increase Green Library Environment:

1. Need a compulsory credit course in LIS education on sustainable green Practices.
2. NAAC needs to include green characteristics of the libraries in their assessment structure.
3. LIS professionals should have a compulsory green practices course with swayam platform.
4. Government should take steps to promote green libraries through awards and financial aid at academic level.
5. Government should make efforts to transform libraries into sustainable libraries.
6. Green library practices should be accountable for not just promoting the view of sustainability.

Conclusion:

Green Libraries that means not just buildings, there are many phenomena to meet the green library expectation. Green academic libraries are the only place which helps in fast public awareness. Green library has many challenges at the beginning stage but once we create a clear sustainability agenda it helps to be complete. Green library concerns librarians also need to be upgraded with changing environment and environment friendly technology. Government has started to start some courses for going-green. Natural things are the base of human life. So we need to update our libraries with green initiatives for better library services, activities and events.

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