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GREEN LIBRARIES IN ACADEMIC INSTITUTIONS: NEED OF THE HOUR

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ABSTRACT

Explains term “Green” and special challenges met by libraries to be Green. Points out steps involved such as site selection, water and energy conservation, building material and indoor air quality. Briefly narrates few green libraries initiatives such as Fayetteville Public Library, Minneapolis (2004), Seattle Central Library (2004), National Library, Singapore (2005), Minneapolis Public Library (2006), and University of California (2005). Also discusses steps taken by TERI in developing GRIHA. Suggests for proper planning of buildings with solar energy system and roof water harvesting, etc.

Keywords:

Green Libraries, Academic Institutions.

INTRODUCTION

Now days the word GREEN has become buzz word in all fields. The word is very much concerned over global warming and its abuses so we want everything to be GREEN to save the planet. Minimum negative impacts in the natural environment and maximize indoor environment quality by means of careful site selection, use of natural construction material and conservation of resources and responsible waste disposal is termed as “Green”. Green Simstha is new word in this series in Ujjain which is going to be organized in just app 220 days from now (April –May 2016). It appeared in library profession in early this century. Green design is an emerging trend for library building too. The paper has discussed on various aspects of green libraries and some international initiative.

REVIEW OF LITERATURE

There have been many articles on green libraries. A few selected one are reported in this part LeRue and LeRue (1991) (1) explain environmentally supportive library. Brown (2003) (2) gave emerging trends of green libraries. Schaper (2003) (3) discussed Fayetteville Public Library, Arkansas as first registered LEED building. Pinkovski (2007) (4) reviewed green libraries websites. Neale (2008) (5) described eco-friendly libraries. Trotter (2008) (6) discussed few green libraries and provided tips for green libraries. Loder (2010) (7) has discussed need for variety of reader’s space. Papers of Sahavirta (2012) (8), Divya and Vijay Kumar (2013) (9), Aulisio (2013) (10), Suresh Kumar and Antoo (2014) (11) are also worth mentioning on the subject. Wikipedia (12) has also elaborated this topic.

GREEN LIBRARIES

Libraries are not far behind in green environment movement. The libraries have specific challenges to overall green building movement. Books need special care from extreme temperature, moisture, sunlight, termites, fungus, and rodent's and of course few dishonest readers too. Weight of books and stacks and movement of many readers on the floor make it more complicated. Expandability for future growth in terms of books and readers and technology further complicate building structure and design.

It involves following steps for a good green library:

Site Selection:-

Besides population, reach ability location, parking and local conditions like storms, erosion, moisture and dust, etc. are also to be considered before finalizing site. India has geographically varied conditions from vast deserts to high hill tops, planes and very vast coastal areas so one norm cannot fit throughout the country. A proper site selection is very necessary for a green library as compared to other types of buildings.

Water Conservations: -

Use of roof water harvesting, green toilets, water recycling, etc. can save lot of water for proper landscaping and greenery in and outside the library building.

Energy Conservation:-

It is most important aspect in green revolution. Use of wind and sun can manage temperature and light in place of electricity. It saves lot of natural resources like coal and emission of harmful gases like Co₂ which will be helpful in reducing global warming. It is economic to the institution in electricity bills.

Building Material:-

Use or recycle of waste products will reduce damage to natural environment. Less use of wood will save many trees. Use of locally available material will save transport cost and fuel. It also includes use of biodegradable materials, non use of plastics and other such products. Many modern building technologies have emerged which are more eco friendly and should be used in new library buildings.

Indoor Air Quality:-

Lack of ventilation at public places can cause many harmful effects such as bacterial infections, etc. The air should be recycled and should not be stagnant. Least use of air conditioners will reduce emission of harmful gases responsible for holes in ozone layer and intern global warming. .

Brown (13) has identified following green design elements which can be incorporated into libraries:-

- a. Community Collaboration;
- b. Green materials;
- c. Green roof;
- d. Raised floor system;
- e. Energy efficiency;
- f. Natural ventilation;
- g. Green power and renewable energy;
- h. Indoor environmental quality;

USA the USGBC (US Green Building Council) has developed LEED (Leadership in Energy and Environmental Design) rating system in 2000 on in 5 categories (14). These can be followed to get Gold rating for Library buildings. (14).

GREEN LIBRARY INITIATIVES

There are few green library initiatives already working in the world. This list is not exhaustive but exemplary.(15)

Fayetteville Public Library, Minneapolis (2004): It has earned many certificates. It has green roofing and reduced air temperature by 20 degree celsius, saving Rs. 2,40,000/- per annum energy cost. Roof water is harvested for landscaping and irrigation further reducing energy cost by 75%. Natural lights have been used for public areas. Trees were re harvested.

Seattle Central Library (2004): It is located in dense public area to reduce cost of transportation 40,000 gallon (151600 lit.) tank from roof water harvesting irrigate the landscape. Use of triple gazed glasses reduces heat saving energy.

National Library, Singapore (2005):- It is known as greenest building on the planet. It uses light shelves allowing light to filter into the library. Sensors dim or brighten the lights for maximum comforts.

Minneapolis Public Library (2006): - It has 18560 sq fit green roofs in the downtown city reducing rainwater runoff .heating and cooling load.

University of California (2005): - It has 1, 80,000 sq fit. glass and concrete building. It saves 42% water and 50% energy due to its green library initiatives.

In India TERI has taken many initiatives in this direction and has developed, GRIHA, an indigenous tool for rating green buildings in the country in different climatic zones. Besides Centre of Science and Technology for Rural Development (COSTFORD) (Kerala) and Habital Technology Group are few other organizations working on this project. Anna Centnary Library Chennai has used solar central thermal insulation glasses, green roof, etc. as GGL initiative. Similarly Karnataka University Library, Dharwad has also taken some initiatives.

CONCLUSION

Green buildings are not only saving money in terms of energy but also in terms of health, productivity and morale of employees. Library is a long term institution. A green library design is less expensive because of reduced upfront costs energy and water conservation and increased efficiency. Green library initiative is a new concept in India and is in infant stage. Madhya Pradesh is far behind. Library buildings are most neglected part, especially in colleges, at most places Librarians has no say on this matter. He has no choice but to work in an allotted space, even when new buildings are being proposed or are under construction. We don't think that architects too even bother for green library buildings. Libraries are area where most of the students of an academic institution visit for most of the days in a year so they are responsible for more heat and gases emission in this part and need more energy conservation than elsewhere in the campus. We request the system as a whole to be more conscious about library buildings to support Green Library initiatives but with caution and proper care because excess greening and moistures can damage books.

Now a day software are available which can estimate library's energy performance and provide strategies for energy savings and cost of building. Solar 5-5 is one such program which builds 3D model of the library and calculates all that. All of us need for a change in mind set to improve health of heart of an institution – 'The Library'.

India has taken initiative in green movement in the world to save the earth. Before the UN Framework Convention on climate change (UNFCCC) to be held in Paris in Dec.2015. India intend to submit Intended Nationally Determined Contributions (INDC) which will have, apart

from technology and capacity building, adoption and mitigation, US, China, European Union and other 50 countries have already submitted INDC (15). Let us hope a green future in the world in India.

SUGGESTIONS

Following suggestions are made for green Libraries in India:-

1. Library buildings should be properly planned using Green Building Standards;
2. Old Library building should be reconstruct as for as possible on the times of Green Libraries standards;
3. Library building should have a good land scape;
4. Use of solar energy should be promoted at roof tops;
5. Roof water harvesting and roof top gardens, etc. should be encouraged;
6. Proper reader spaces should be made available with the use of natural resources;
7. Libraries should take initiatives to publicize green library impacts to its readers;
8. Librarians should be part of planning of buildings for institutions;
9. Librarians should be aware of new in green library initiatives and.
10. Govt. of M.P. and UGC should take steps to improve library buildings in academic institutions and convert them green libraries by providing grants.

REFERENCES

1. LeRue, James and Suzanne LeRue (1991). *The green librarian*, *Wilson Library Bulletin*: 65, 27-33.
2. Brown, Bill (.2003). *The new green standard*, *Library Journal*, 128,61-64.
3. Schaper, Louise Levy (2003). *Public input yields greener library design*. *Library Journal*, 128 , 62.
4. Pinkowski, Jnnifer (2007). *Keeping track of green libraries*. *Library Journal*. 132,27.
5. Neale, Jane (2008). *Go green*, *Library Journal*, 133,46.
6. Trotter, Dorthy Waterfill (2008). *Going for the green*. *American Libraries*, 39, 40-43.
7. Loder, Michael Wescott(2010). *Libraries with a future :how are academic library usage and green demands changing building designs?*, *College and Research Libraries*,71,4,348-360.
8. Sahavirta, Harri(2012). *Showing the green way: advocating green values and image in a Finnish public library*, *IFLA Journal*, 38,3, 239-242.
9. Divya, P.I and Vijaykumar. K. P.(2013). *Green libraries for sustainable development. New information technology interfaces in libraries and information centres*. *KLA National Seminar Souvenir*.67.
10. Aulisio, George J.(2013). *Green libraries are more than just buildings*. *Electronic Green Journal*, 1,35,1-8.
11. Kumar, P K Suresh and Antoo, K D (2014) *Greening libraries for sustainable development International Conference on Library Space- Content Management for Networked Society , Banglore*. www.liscom.org/.../S%203%20Greening%20.....access on 23.8.2015.
12. http://en.wikipedia.org/wiki/Green_library.
13. Brown, B. (2003) *The new green standard: With the LEED rating system in place it is easier to make sure your new library saves money as it treads lightly on natural resources [Electron Version]*. *Library Journal*, 128, 20, 61-4.

14. *LEED. (2005) Reference Guide, Version 2.2. US Green Building Council. Retrieved from <http://www.usgbc.org/DisplayPage.aspx?CategoryID=19>.*
15. *<http://en.wikipedia.org/wiki/Green-Library> accessed on 23-8-2015*
16. *Hindustan Times. 25.8.2015.5-6*