



## Environmental Sustainability in Library through Web Technology based Academic Library Services and its Implementation in Chetana's Mansukhlal Chaganlal Library

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### Abstract:

*The places of green practices/ services which are incorporated within libraries towards environmental sustainability have surfaced in recent history. With nonstop use and easy vacuity of new technologies like computer printers, faxes, and photo copiers etc., guarding the terrain has come a major concern as all the machines have an impact on the terrain through the use of paper, essay, and electricity. This paper explains environmental sustainability, web technology and the paperless library services among others. Further, it demonstrates the colorful sustainable strategies for the libraries. And highlights the strategies for prostrating the impact of paper use, essay use and electricity. The adverse impact of new technologies on the terrain also increases the demand of green practices/ services within libraries and reducing the carbon footmark, which will automatically enhance the environmentally sustainable practices, a precious step for enhancing the life of society. This paper provides an indispensable approach for librarians to achieve green practices/services.*

**Keywords:** Sustainability, Environmental sustainability, Libraries, Green printing, Green copying, Library Portal, Web Technology

### Introduction:

The sustainable development to mortal society has been significantly challenged by worldwide ecological destruction and resource dearths. As a result, it has become an important and common social issue to address environmental problems and promote environmental education worldwide. In recent times, the disastrous goods of climate change have come apparent. Sustainability as an end, driven by anxiety about climate change, has truly come a global miracle. Accordingly, environinternal mindfulness and sustainability have entered at the center of discussion in the library world. Sustainability is generally so defined that it

includes frugality, terrain and equivalency. Sustainable development should thus take account of profitable considerations (saving resources), and as well be environmentally conscious.

There are several conduct that can be applied in the day-to-day operations of a library to reduce mortal impact on nature and promote sustainable development and these include construction of sustainable structures. In other words, the library structures need to be so designed that they bear minimum of electricity and include measures like rain water harvesting and so on. It's extremely important that similar conduct come part of the diurnal life of any librarian, performing as a starting point for

environmental mindfulness and generating behavioral changes throughout the community.

### **Environmental Sustainability:**

The term itself was presumably first coined by scientists at the World Bank. Firstly, the term “environmentally responsible development” was used (World Bank, 1992). Later, “environmentally sustainable development” was employed (Serageldin and Streeter, 1993). Eventually, the conception of environmental sustainability was developed (Goodland, 1995). According to Goodland, environmental sustainability “seeks to improve human well-being by guarding the sources of raw materials used for human requirements and ensuring that the cesspools for human wastes aren't exceeded in order to prevent detriment to humans”. Goodland's conceptualization of environmental sustainability fits into the resource limited ecological framework of “limits to growth”. Environmental sustainability is defined as a responsible commerce with the terrain to avoid depletion or decline of natural resources and allow for long term environmental quality. The practice of environmental sustainability helps to ensure that the needs of the current population are met without risking the ability of unborn generations to meet their requirements. Herman Daly, one of the early settlers of ecological sustainability, looked at the problem from a conservation of natural capital standpoint. In 1990 he proposed that

- For renewable resources, the rate of crop shouldn't exceed the rate of rejuvenescence (sustainable yield);
- For pollution, the rates of waste generation from systems shouldn't exceed the assimilative capacity of

the terrain (sustainable waste disposal); and

- For non-renewable resources, the reduction of the non-renewable resources should bear the similar development of renewable resources for that resource.

An important contribution to the conception of environmental sustainability was made by the OECD Environmental Strategy for the First Decade of the 21st Century (OECD, 2001). The Strategy defines four specific criteria for environmental sustainability: resource efficiency (renewable resources shall be used efficiently and their use shall not be permitted to exceed their long term rates of natural resource efficiency), substitutability (nonrenewable resources shall be used efficiently and their use limited to situations which can be neutralized by negotiation with renewable resources or other forms of capital), assimilation ( releases of dangerous or contaminating substances into the terrain shall not exceed their assimilative capacity) and avoiding irreversibility ( avoiding endless damage to terrain and ecosystems). It identifies five interlinked objects for enhancing cost effective and functional environmental programs in the environment of sustainable development

- Maintaining the integrity of ecosystems through the effective operation of natural resources
- Decoupling environmental pressures from profitable growth
- Perfecting information for decision making measuring progress through pointers
- The social and environmental interface enhancing quality of life
- Global environmental interdependence improving governance and cooperation.

**Shri Mansukhlal Chhaganlal Library**

The Library of CHETANA 'S Hazarimal Somani College of Commerce & Economics, Smt. Kusumtai Chaudhari College of Trades, was established in 1970 by former Education Minister of Maharashtra, Shri Madhukarrao Chaudhari. The end of the council is to provide education to lower strata of the society. The library is positioned on the ground bottom of the council structure. At present it has a rich collection of 110242 books, 346 set volumes and 539 CDs/ Videotape. Having established a stoner friendly terrain in the library the librarian along with other professionals and semiprofessionals are managing the library with proficiency and furnishing effective library services. Library is completely motorized with SLIM21 Library Software. All the work of the library is done with help of this software.

It also provides Internet installation to Preceptors and Scholars and has a book bank installation for the indigent and meritorious scholars. During the last time book bank service was extended to inferior council scholars as well. In addition to this, the library provides services like references, circulars, bibliographies; inter library loan installation, current mindfulness etc. The Library staff conduct the library orientation program for fresher's to make them apprehensive of library installations and services. This enables the scholars to make the stylish use of available library coffers. It also arranges special books' exhibitions on different occasions. Our library also provides open access to all our Students.

**Best Practices of Chetana's Mansukhlal Chhaganlal Library towards environmental sustainability:**

Green library is a library designed to minimize negative impact on the natural environment. We need to take some measures to attain the sustainable library or green library. Some of the characteristics of green library are:

- Natural products may be used for preservation of books.
- Laptops which use less electricity than desk top versions
- Providing scanning service instead of xerox which reduce use of paper.
- Avoid readers ticket as it is made of plastic.
- Membership through online and supporting documents in soft copy only.
- Card catalogue may be removed and OPAC may be provided.
- E receipts may be given instead of paper receipts.
- Use of resources
- Electronic equipment of latest star rating for reducing the consumption of electricity
- Lighting of the library through the natural light during day time
- Use of LED bulbs and tubes for lighting purposes.
- Provide online services by making use of web 2.0 and web 3.0 technologies.
- Solar panel may be placed on library building for creating solar energy.
- Library building may be in modular structure so that solar energy and also roof top vegetation can be made by team work of the library staffs.

- Indoor air quality may be increased by growing indoor plants.

### **Academic library services through Library Portal:**

A library can offer various types of library services to the users. With the help of technological development and the increasingly use of smart phones with internet, it is now very much important for an academic library to provide services via mobile library portal interface.

**Web OPAC/Mobile OPAC Service** – Our library has successfully converted old card catalogue method into paperless environment friendly Web OPAC method. it is very much important to providing access to library catalog search, portable exhibit information, subject guides, e journals and other library document search to a user who is studying on different subject or doing research.

**New Arrival Notification Services** – It gives user ‘library instant access facility’. The users of the library may be notified by library portal. Library OPAC system is now mobile facility of text message to check the availability and the details of books. Bringing new books in the library, users for suggestions, informing availability of reserved documents etc. are also notified to the user through this service.

**CAS & SDI** Current Awareness Service is a form of service which provides news about current ejournal articles mainly for researchers. It can be made available to the users through wide range of mobile devices. Selective Dissemination of Information (SDI) service is a type of CAS mainly for selected users.

**Instruction service**— library can provide directions of using materials like how to access edocuments, videos of different workshops, seminars, conferences etc.

**Circulation service** circulation of documents can be done through mobile devices by giving necessary information related to circulation like, the name of person who has loaned the material, due date i.e., the date of return of a specific material, particular fine policy for those who will not return the material within desired time period through library automation software.

**Database Browsing**—library facilitates domain wise database searching such as NList, NDL, OCLC’s World cat etc.

**Online resource services**—library can provide ebooks, ejournals, web databases, dissertations, images and article databases that can be used via mobile interface

**QR codes on mobiles** – QR (Quick Response) code may be used to take a piece of information from a transitory media. Users can scan that code and decode the information with any mobile camera phone that has a QR reader, which is freely available online.

**Audiovisual services (LibriVox, etc.)**— libraries can provide video conferencing service, live broadcast service, web streaming; educational programmes offered by televisions (films, slide tape presentations, etc.) can also be implemented through.

**Document delivery services via smart phones:** The uses of internet through mobile phones and smart phones increase rapidly day by day. So, libraries have to make an effort to provide their services through mobile phones also. It will help libraries in the direction of building good

relationship and providing better services to their existing remote users.

**Ask the Librarian Service**—this service provides several efforts that meet user reference needs on smart phones and other mobile devices.

### **Library Committee:**

Chetana's College Library formed library committee to formulate policies and guidelines for the smooth functioning of library activities. Library committee agenda is digitizing the library items and services, which indirectly help to paperless and environment friendly library.

### **Library Help Desk:**

The Library has developed library help desk where all the library related document such as library Information Brochure, Membership form, Demand slip, Feedback form, Book Requisition form, Suggestion form are made available in electronic form to save the time of staff and library users.

### **Orientation Programme:**

The fresh students at the beginning of each academic year we are given orientation about the library rules, collection and services. It helps them to know the library, its information sources, searching tools and facilities thoroughly. In orientation programme we always increase to use eco-friendly library services.

### **Library Automation:**

College Library is fully automated with SLIM21 library software. All the work of the library done with the help of software. The books are bar coded and students and teacher having bar code library card. Library having one Barcode machine and 6 barcode scanner for the book circulation.

**Reducing the burden of other resources like Printers, Copiers, and Faxes:** We can reduce the burden of other resources as printers, copiers, and faxes with the help of following measures o When buy printers, copiers, or faxes, look for a model with the lowest available power level in "sleep "mode.

- When buying fax machines that can scan double sided pages and Copiers/Printers that have duplex (two-sided printing) capabilities
- Strategies applied for reducing Paper Consumption
- Always make double sided copies when possible
- Recycle and reuse envelopes and file folders
- Reformatting option for articles and announcements to use space more efficiently
- Try to make scratch pads from used paper
- Always set our printer in the duplex mode so that it automatically prints documents on both sides
- Use central files for hardcopies
- Proof documents on a screen when possible and use print preview and spell check before printing
- Get off unwanted mailing lists
- Strategic planning for purchasing to eliminate unnecessary purchases

### **Conclusion:**

This planet is moving far apart from Green because of several human activities. Sustainable development is a big challenge nowadays. The future generation as well as this planet is to be survived by adopting ecofriendly habits. Environmental



sustainability in library is the demand of this era. Environment friendly library is aims to construct energy efficient, ecofriendly and heal thier Green Library is the part of environment friendly Library. Environment friendly Library are needed to give more and more importance compared to traditional library. It is of utmost importance by the Librarians to keep their libraries clean and green. Modern librarian should think about this blooming concept so that users can spend hours together within library building without being exposed to any sort of health hazard.

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