



THE AGA KHAN UNIVERSITY



Session : Challenges of digital transformation in libraries

Green Libraries in East Africa

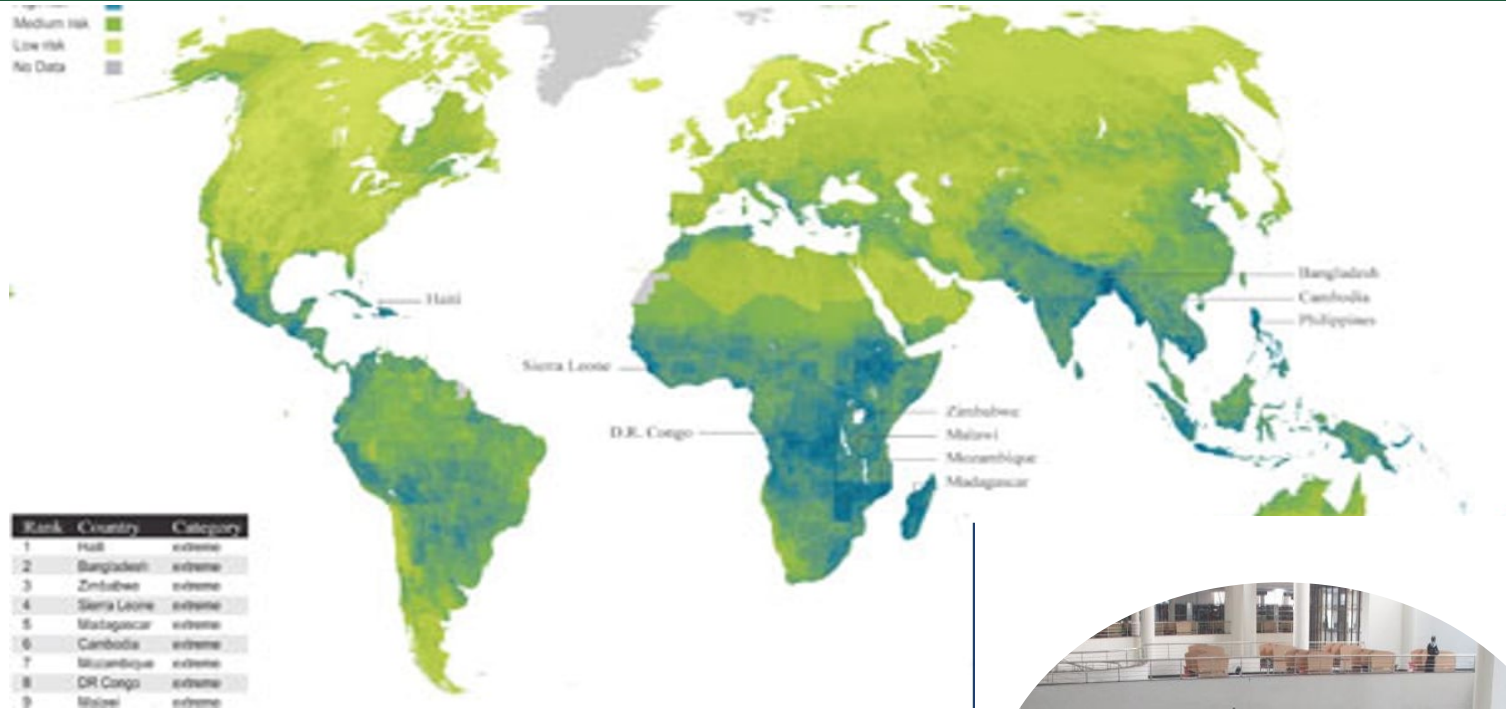


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INTRODUCTION

- Environmental protection is an increasingly pressing issue all over the world.
- Ozone depletion, the greenhouse effect, global climate changes or global warming, etc., are the main issues in the environment (Abbey, 2012).
- More go green campaigns and a go green movement along with solutions.
- Libraries are community organizations, and this gives them a social responsibility of reducing harmful effects to the environment.

BACKGROUND



Actions that should be taken in containing the effects of environmental changes.



Libraries should serve as an example to environmental sustainability, they should be first in line in incorporating values of sustainable construction (Chowdhury, 2012).



Background

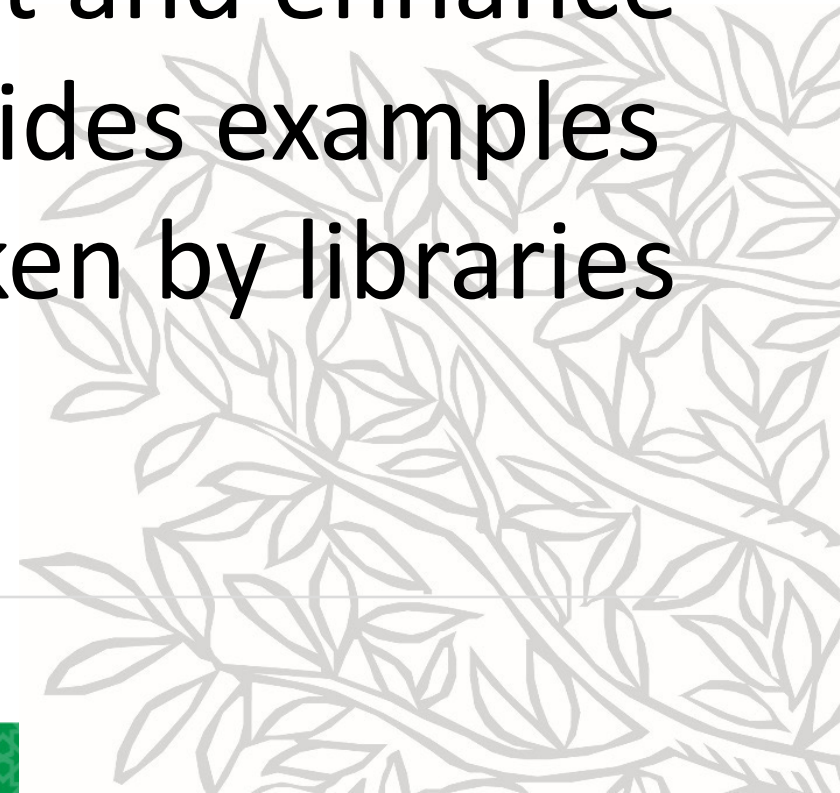
The Emissions Gap Report (EGR) (2019) projected that by 2030 emissions will get to 56 Gt CO₂e, which is double what they should be.

The update was reviewed at the climate change conference known as COP 26 in Glasgow, the UK, in November 2021, resulting in the Glasgow climate pact:

-Mitigation- **reducing emissions;**



Green libraries in East Africa are embracing sustainable practices and digital transformation to reduce their environmental impact and enhance their services. This summary provides examples and insights into the initiatives taken by libraries in the region.



A close-up photograph of a person's hands holding a large, round, colorful beaded basket. The basket is made of many small, multi-colored beads (red, orange, yellow, green, blue) arranged in concentric bands. The person holding the basket is wearing a patterned garment with geometric shapes in red, yellow, and black. The background is a soft-focus green, suggesting an outdoor setting.

Community Engagement:
Green libraries actively engage with their communities to promote sustainable practices and environmental awareness.

Insights:

- **The Daraja Children's Library in Kenya organizes eco-themed events and workshops to inspire children to take care of the environment.**
- **The Green Africa Foundation collaborates with public libraries in Tanzania to conduct tree planting campaigns and environmental education programs**



Sustainable Infrastructure:

Several libraries in East Africa have adopted sustainable infrastructure practices to minimize their energy consumption and carbon footprint.

For example:

- The Aga Khan University Library in Kenya utilizes solar panels to generate renewable energy.
- The Kenya National Library Service (KNLS) and Catholic University of Eastern Africa in Nairobi have implemented rainwater harvesting systems to conserve water resources.



Digital Transformation:

Libraries in East Africa are embracing digital transformation to provide enhanced services and access to information. Key insights include:

- Library consortia in E.A like KLISC, CUUL, COTUL offer e-books and online databases for libraries to access information remotely.
- The National Library of Uganda has digitized historical archives, making them accessible to a wider audience while preserving the original documents.





CASA ÁFRICA

Sustainable Collection Development:

Libraries are adopting sustainable collection development practices, focusing on digital resources and environmentally friendly materials.

Notable examples include:

- The Makerere University Main Library in Uganda promotes open access and open educational resources (OER), reducing the need for physical copies.
- The Alliance Française Library in Rwanda favors e-books and digital subscriptions to reduce paper usage.



The image features a stack of books on a wooden surface, with the top book open. The background is a blurred library setting. Overlaid on the background are various white, hand-drawn style icons including a plus sign, a question mark, a magnifying glass, a gear, a lightbulb, a computer monitor, and various letters and symbols. The text is centered over the upper portion of the image.

Green libraries in East Africa are at the forefront of sustainable practices and digital transformation.

Through sustainable infrastructure, digital resources, community engagement, and responsible collection development, these libraries are shaping a greener and more accessible future.

How have Kenyan Libraries responded to the call for sustainability?

Green buildings?

Green services?

Green practices?

Awareness by librarians?

User involvement?

Strategic plan & policies on sustainability?

Librarians' comprehension and perception of the concept of green libraries



The green library movement in the local libraries is still taking shape

"I can say that our library is green because the library building is made with enough lighting to minimise electricity use. We also encourage our users and even the staff during the day to put off lights and only switch on when it is dark."

Most librarians considered their library green to some extent.



"Our library is green as we make use of the available resources, for example, the saving of energy by using the sun, harvesting rainwater, and taking care of ventilation because we don't have air conditioning in this building."

Use of Natural Lighting in Libraries

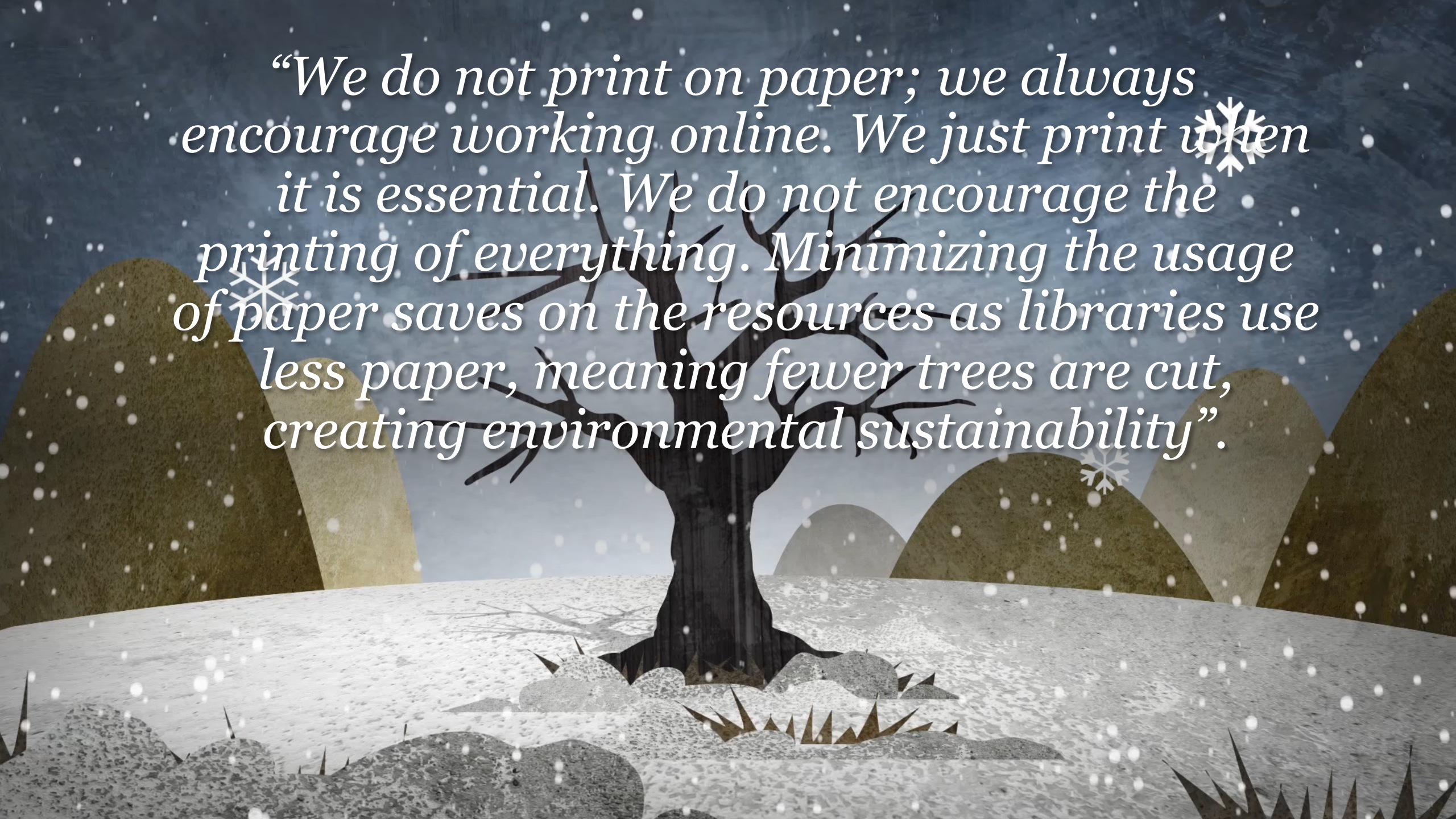




CASA ÁFRICA

Tree Planting Inside the Library



A stylized winter landscape with a dark tree, snow-covered ground, and falling snowflakes. The background is a dark blue sky with white snowflakes falling. The ground is covered in white snow, with several dark, pointed shapes representing rocks or small trees. In the center, a large, dark, leafless tree stands on a small patch of ground. The overall scene is a soft, wintry environment.

“We do not print on paper; we always encourage working online. We just print when it is essential. We do not encourage the printing of everything. Minimizing the usage of paper saves on the resources as libraries use less paper, meaning fewer trees are cut, creating environmental sustainability”.



Natural light

- Energy saving bulbs
- Solar energy
- Reduced electricity consumption



Green library design – MPESA Foundation Academy

Water Harvesting

“We have water harvesting whereby we have huge water tanks surrounding the library to tap rainwater and irrigate plants. We have put gutters that collect water into our underground tanks.”



Community awareness on Environmental sustainability

- KNLS Nakuru participating in annual greening events such as tree planting, cleaning nearest towns and marketplaces aimed at environmental sustainability contributed to their going green initiatives.



USE OF NATURAL LIGHTING IN LIRARIES



Greening Practices/Methods Used

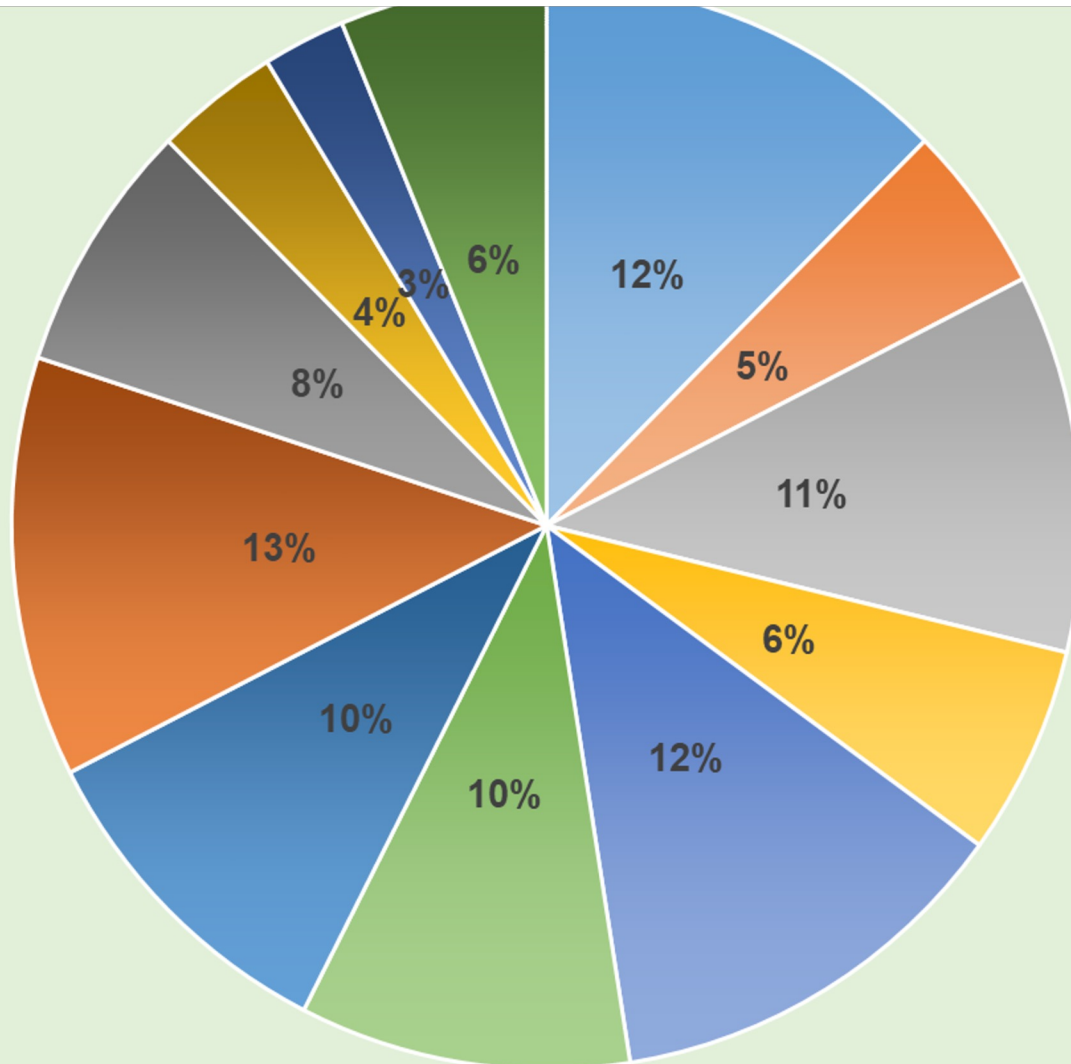
- Environmental aspects: The concern over the environment was mainly linked to natural lighting, tree planting and the proper use of available resources. These environmental factors were considered an integral part of the library model, and there have been many strategies to incorporate greening in all the activities of the libraries.
- Harvesting water: - harvesting water, taking care of running taps and other aspects. One respondent reported that they try to put notices urging users to turn off the taps after using water;
- Planting trees: - The other aspect reported was planting plants. Interviewees mentioned that libraries planted trees as an aspect of greening
- They have fixtures that automatically produce water using sensors
- Use of digital libraries



LIBRARY CONTRIBUTION TO ECOFRIENDLY / ENVIRONMENTAL SUSTAINABILITY

- Re-Using and Recycling Materials
- We have been encouraging people to put the plastic bottles in one place, where slum dwellers collect them and reuse them to make chairs and lampshades and things like that
- Library Involvement in Environmental Sustainability and its Practices
- Architectural Designs – Atriums
- Green Roofing
- Maintenance-friendly Construction
- Redesigning using intelligent arrangement to utilize space maximally.
- Zoning of Lights According to Requirements
- Bicycle Parking Spaces
- Green services

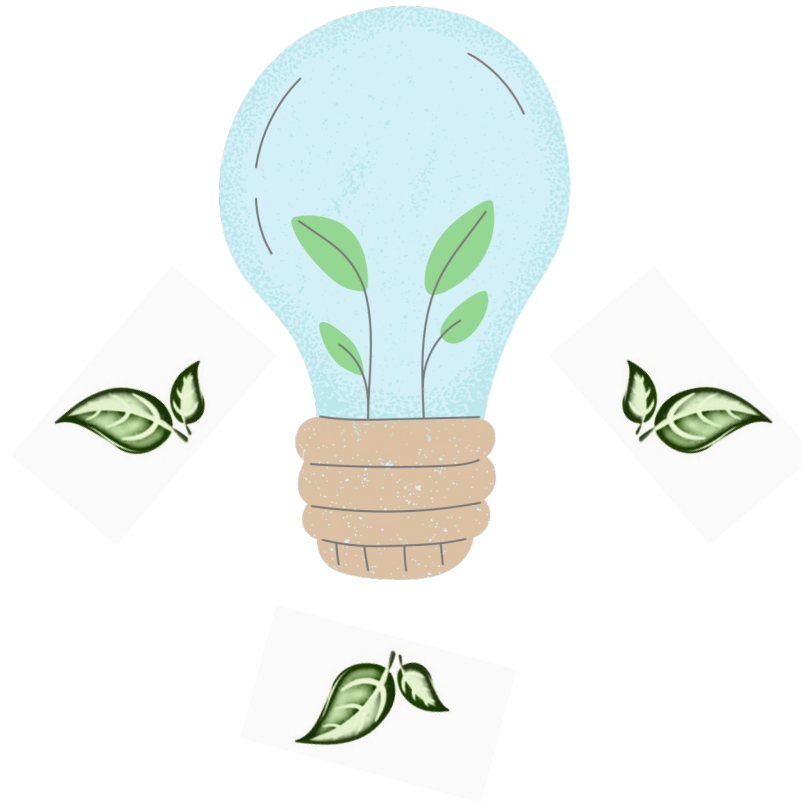
PERCENTAGE OF ADOPTION OF GREEN INITIATIVES IN LIBRARIES IN KENYA:



- Greening of site and surrounding area
- Places for personal transport (bicycles)
- Environmental impact on the immediate surrounding
- Sustainability through compactness ('fat buildings')
- Economic exteriors / building skin
- The atrium as a typical feature of libraries
- Using a pleasing sense of space
- Minimizing the space consumption of building techn
- Minimization of energy use through zoning
- Green roofs and solar energy
- Extensive resource saving compact storage
- Maintenance-friendly construction

FACTORS DRIVING LIBRARIES EMBRACEMENT AND IMPLEMENTATION OF GREEN CONCEPT

Desire to be environmentally friendly



Policy implications

Participation in greening initiatives
“Yes, we have participated. The most recent is the tree planting project which the university did.”

FACTORS IMPEDING LIBRARIES EMBRACEMENT AND IMPLEMENTATION OF THE GREEN CONCEPT



Organizational Culture
and the lack of Interest
from the Library Users

Lack of clear
understanding of the
Green library Concept

•Inadequate Facilitation,
Lengthy Processes

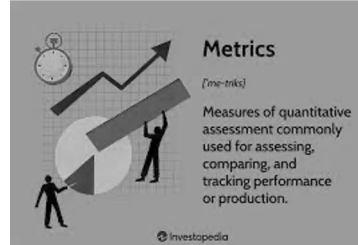
STRATEGIES THAT GUIDE LIBRARIANS IN TRANSFORMING TO GREEN LIBRARIES

- ♣ Architectural Innovations and Renovations
- ♣ Gardens- Green Spaces
- ♣ Lighting
- ♣ Put in Place Measures to Cut on Electronic Waste
- ♣ Using Communication Technology as a Greening Strategy
- ♣ Use of the Internet
- ♣ Attendance to Special Greening Events
- ♣ Networks and Partners in Environmental Sustainability and their Contributions

PROPOSED STRATEGIES TO GUIDE LIBRARIES IN TRANSFORMING INTO GREEN LIBRARIES ---



Networks and Partners in Environmental Sustainability and their Contributions



Improve performance and Growth Measuring Metrics



Attendance to Special Greening Events



User Involvement



Maintain Green Library standards as guided by the IFLA ENSULUB Green Library Checklist

IFLA GREEN LIBRARY CHECKLIST-SWAHILI VERSION

The Green Library Checklist, “Sustainable buildings, equipment, and management. A checklist” was originally published in German/English and translated to Swahili by Arnold Mwanzu in: The Green Library = Die grüne Bibliothek. The challenge of environmental sustainability / ed. on behalf of IFLA by Petra Hauke, Karen Latimer and Klaus Ulrich Werner. München/Boston: De Gruyter Saur, 2013. VIII, 433 pp., ill. (IFLA Publications, 161) ISBN 978-3-11-030972-0. [Available online, as open access/under an open access license](https://www.ibi.hu-berlin.de/de/studium/studprojekte/buchidee/bi12)

Arnold Mwanzu

Majengo endelevu, Sustainable buildings, equipment, vifaa endelevu na and management, Usimamizi wake and management.

Orodha

A checklist¹

Originally published in: The Green Library = Die grüne Bibliothek. The challenge of environmental sustainability / ed. on behalf of IFLA by Petra Hauke, Karen Latimer and Klaus Ulrich Werner. München/Boston: De Gruyter Saur, 2013. VIII, 433 pp., ill. (IFLA Publications, 161) ISBN 978-3-11-030972-0. Available with Open Access at <https://www.ibi.hu-berlin.de/de/studium/studprojekte/buchidee/bi12>

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Kwa ajili ya mradi wowote wa ujenzi, kama vile kazi yoyote ngumu kwa jumla, orodha hutoa njia muhimu ya kuthibitisha kwamba kila kitu kimezingatiwa. Ingawa haiwezi kudai kuwa kamili, orodha ifuatayo ya maswala ya mipango, ujenzi, na pia uendeshaji kazi wa maktaba, imeundwa ili kusaidia kuhakikisha kuwa kila kitu kimezingatiwa.

For any construction project, just as for any complex undertaking in general, a checklist provides a useful means of confirming that everything has been considered. Although it cannot claim to be exhaustive, the following list of aspects of planning, construction, and also library operation, is designed to help ensure that everything has been considered.

1 Mpango wa mradi, fedha	1 Project planning, finance
<ul style="list-style-type: none">• Majadiliano ya mapema ya malengo ya kudumu kufanywa pamoja na mteja na kuanzishwa kwa vigezo• Mwelekeo juu ya ufafanuzi wa 'jengo la kijani': kiuchumi, mazingira ya kirafiki, uhifadhi wa rasilimali. Ngazi ya juu ya faraja kwa watumiaji, mazingira mazuri na ushirikiano bora katika jamii zao za kitamaduni kwa mifano mazingira ya jirani• Uanzishaji wa malengo ya mazingira ya wafadhili au wateja	<ul style="list-style-type: none">• Early discussion of sustainability goals with the client and the establishment of criteria• A sense of direction on the definition of a 'green building': economical, environmentally friendly, resource saving. High level of comfort for users, a healthy environment with optimal integration into their socio-cultural i. e. neighbourhood surroundings.• Establishment of the environmental goals of the sponsors or clients

[IFLA Publications \(hu-berlin.de\)](https://www.ibi.hu-berlin.de)

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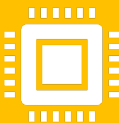
Going green



The libraries were more intentional in finding ways to cut electronic waste.



Using technology to reduce electronic waste, which has become the hardest to dispose of. This was characterized by more internet usage for communication purposes and the use of refurbished computers.



Partnering with companies that refurbish disposed or outdated computers and machines.

Challenges



Inadequate financial facilitation,



Lack of awareness and understanding of the green concept,



Lack of clear policies and strategic plans to guide implementation,



Organizational culture



Lack of interest from the library users and the management.



Summary of Milestones

