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CATALYSTS FOR CHANGE: EXAMINING GLOBAL INNOVATIONS IN GREEN LIBRARY PRACTICES

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Abstract

As environmental concerns intensify globally, libraries are increasingly recognized as pivotal agents in promoting sustainability and ecological awareness. This research paper investigates the innovative practices of four libraries shortlisted for the International Federation of Library Associations and Institutions (IFLA) "Best Green Library Project" award in 2025, spanning Croatia, France, Portugal, and Thailand. Through a comparative analysis, the study explores how each project contextualizes green library concepts—ranging from architectural sustainability and community engagement to educational programming and circular economy initiatives. Notable examples include the "Lire pour Agir" prize in Lyon, which leverages literature to inspire socioecological action; the Manuel Viegas Guerreiro Foundation's "Our Common Home" project in Portugal, which fosters environmental stewardship among youth; and Thammasat University Library's "From Waste to Wealth" initiative in Thailand, which integrates circular economy principles to reduce waste and nurture future environmental leaders.

The findings highlight that effective green library projects are characterized by their adaptability to local contexts, diversity of educational formats, and alignment with the United Nations Sustainable Development Goals (SDGs). These initiatives not only reduce environmental footprints but also cultivate a culture of sustainability within their communities. By analyzing these exemplary projects, the paper underscores the evolving role of libraries as dynamic platforms for ecological education, community participation, and sustainable development, offering valuable insights for library professionals and policymakers seeking to advance green practices in knowledge institutions worldwide.

Key words - Green Libraries, Sustainable Development, Environmental Education, Community Engagement, Circular Economy, Socioecological Transition.

I. Introduction

The global environmental crisis has urged institutions across the globe to adopt sustainable practices, and libraries are no exception. Traditionally viewed as custodians of knowledge and information, libraries are now emerging as dynamic agents of environmental consciousness through the concept of green libraries. The green library movement, which began in the early Bodh (2021) stated that 1990s, reflects a growing commitment within the library and information science (LIS) profession toward environmentally sustainable development. As environmental degradation accelerates due to unsustainable human practices, the role of libraries in promoting ecological awareness, reducing their carbon footprint, and fostering sustainable behaviors has become increasingly crucial.

A green library is more than a building that conserves energy. It is a holistic approach that integrates sustainable architecture, environmentally friendly services, and community engagement to foster ecological responsibility. According to Singh and Mishra (2019), green libraries aim to mitigate the adverse impacts of technological infrastructure and operational practices through eco-friendly strategies, including green printing, energy efficiency, recycling, and water conservation. Similarly, Bodh (2021) observed that the International Federation of Library Associations and Institutions (IFLA) supports green librarianship through initiatives like the Green Library Award and ENSULIB (Environment, Sustainability and Libraries Special Interest Group), encouraging libraries to model sustainability and environmental education.

According to Fresnido and Esposo-Betan (2018); Singh and Mishra (2019), internationally, libraries in countries such as the USA, Singapore, Germany, and the Philippines have implemented various green standards and achieved significant milestones. For example, libraries like the Fayetteville Public Library (USA) and De La Salle University Library (Philippines) have adopted LEED and BERDE certifications, respectively, integrating green building features, waste reduction strategies, and sustainable energy use. These libraries serve as examples of how knowledge institutions can contribute meaningfully to environmental resilience through infrastructure and programming.

Bodh (2021) viewed that in the Indian context green library movement is gradually gaining momentum. Indian libraries, particularly academic and public libraries, are beginning to integrate green practices such as the use of natural lighting, waste management, energy-efficient appliances, and digital services to reduce paper use. Standards like LEED (Leadership in Energy and Environmental Design), GRIHA (Green Rating for Integrated Habitat Assessment), and the Indian Green Building Council (IGBC) framework are being used to assess and guide green building initiatives. Premarathne and Bandara (2019) stated that Institutions like the TERI library and select public libraries in states such as Karnataka have initiated green measures, despite facing challenges such as limited funding, lack of awareness, and infrastructural constraints.

Singh and Mishra (2019) explained that the concept of green libraries encompasses multiple dimensions—architectural sustainability, operational efficiency, educational outreach, and community engagement. From an infrastructural standpoint, it includes site selection, ventilation, lighting, and the use of biodegradable materials. From a service perspective, it involves promoting green information literacy and aligning library policies with the United Nations Sustainable Development Goals (SDGs). Thus, green libraries are not only a structural transformation but a philosophical shift toward ecological stewardship.

Efforts are taken all over the world, from libraries to become green libraries. These efforts and initiatives are recognized by IFLA. Hence, libraries are awarded. IFLA announced the names of the shortlisted libraries for the “Green Library Award” in two categories. The first category was “Best Green Library/Grand-Scale Project”, and the second category was “Best Green Library Project”. This paper focuses only on the study of the shortlisted libraries for the “Best Green Library Project” by IFLA for the year 2025.

II. Literature Review

Warnasooriya (2018) explored the status of green library practices in university libraries located in the Western Province of Sri Lanka. The study adopted a survey method and examined 13 university libraries, both private and public, using structured interviews and observations. The research framework focused on five key areas: library building, operations and practices, programmes and services, information systems, and library collection. Fourteen green practices were identified, with waste segmentation emerging as the most common activity across all libraries. Other initiatives included the use of e-resources, gardening, biogas production, composting, and solar panels. However, the study found that green policies and awareness programmes were mostly absent, indicating that the green library concept is still in its early stages in Sri Lanka. The author recommended that structured policy frameworks and staff awareness efforts are essential for advancing sustainable practices in Sri Lankan libraries.

Shell (1998) highlights how archives and libraries in Southern Africa can adopt energy-efficient, natural building designs to preserve materials without relying heavily on artificial air-conditioning. Drawing on European models like the Cologne or Stehkämper model, the paper emphasizes the use of structural insulation, underground storage, and local materials to maintain stable environmental conditions. The author stresses that such sustainable methods reduce energy costs and improve long-term conservation. Examples from South Africa and other countries demonstrate that thoughtful design can support both ecological goals and archival preservation.

Namdeo, Khare, and Badhe (2023) conducted a study on the green practices adopted by agricultural university libraries in Uttar Pradesh. The findings showed that most libraries implemented eco-friendly measures such as the use of e-resources, LED lighting, natural ventilation, and solar energy. However, none of the libraries were officially certified as green buildings. The study also identified major challenges like financial constraints, lack of administrative support, and limited user awareness, which hinder the full adoption of green initiatives in these institutions.

The concept of green libraries has emerged as a critical response to environmental challenges facing academic institutions worldwide. Saha and Padhan (2019) conducted a comprehensive study examining the implementation and impact of green libraries in US-based academic institutions, highlighting their role in environmental sustainability and resource conservation. The research defines green libraries as facilities "designed to minimize negative impact on the natural environment and maximize indoor environmental quality through careful site selection, use of natural construction materials and biodegradable products, conservation of resources (water, energy, paper), and responsible waste disposal". Through analysis of 19 US academic institutions, including Georgetown University, Oklahoma State University, and Stanford University, the research demonstrates how green libraries serve as educational tools for environmental awareness while providing significant cost savings through renewable energy adoption and resource conservation. The study identifies key structural components essential for green library development, including strategic site location, water conservation systems, energy efficiency measures, sustainable building materials, and indoor air quality management. The authors conclude that library professionals must adopt smart technologies and proactive sustainability measures to ensure long-term environmental stewardship and community education.

The green library movement is gaining momentum in India, with libraries adopting eco-friendly designs and sustainable practices to minimize environmental impact. Meher and Parabhoi (2017) highlight several Indian libraries, such as the Anna Centenary Library in Chennai and the Mumbai University Library, that have implemented features like natural lighting, use of biodegradable materials, and energy-efficient technologies. The authors emphasize the important role of librarians in promoting green initiatives and creating environmentally responsible library spaces.

Dada (2021) conducted a case study of the Federal College of Education Library in Zaria, Nigeria, to explore green library practices aimed at reducing carbon footprints. The study revealed that libraries in Nigeria often lack the infrastructure, tools, and training necessary for sustainable preservation methods. It emphasized the importance of recycling, temperature control, and environmental awareness to minimize ecological damage. The paper recommended integrating sustainability into library policies, facilities, and professional training to align with global green library movements.

Achieng (2015) investigated the preparedness of the University of Nairobi Library to serve as a driver for green transformation and sustainable development by evaluating its existing information resources on environment, sustainable development, and the green economy. The study assessed the library's physical and ICT infrastructure, staffing, material processing, and content relevancy. While the library possesses strong infrastructure and a substantial, historically rich collection, critical knowledge gaps were identified in key environmental issues, largely due to an ineffective book ordering process, understaffing, and a lack of aggressive networking. The findings highlight the need for improved engagement with teaching staff, enhanced training for librarians, and proactive utilization of technology and partnerships to ensure the library remains a relevant information hub for environmental discourse.

The term "Green" has become a buzzword across various sectors—be it marketing, pharmaceuticals, accounting, manufacturing, or education. Regardless of the field, there is a growing awareness and commitment toward environmental sustainability. Each sector is increasingly integrating eco-friendly practices into its operations and strategies. The library sector is no exception. A substantial body of literature has emerged around the concept of "Green Libraries," reflecting a diverse range of perspectives and approaches. These studies explore how libraries can reduce their environmental footprint through sustainable infrastructure, energy-efficient systems, responsible resource management, and environmentally conscious services and programs. The idea of Green Libraries goes beyond just buildings—it encompasses the philosophy of promoting environmental awareness and encouraging sustainable practices among users and the broader community.

Table 1: Geographic Distribution: Shortlisted Libraries and Project

Sr. No	Country	Library Name	Project Name
1	Croatia	Karlovac: Public library "Ivan Goran Kovacic" Karlovac	Green Festival – Karlovac Green Story
2	France	Lyon: Maison de l'Environnement	Lire pour Agir": The Prize of the Socioecological Transition Book
3	Portugal	Loule: Manuel Viegas Guerreiro Foundation	Our Common Home, heart of the Little Naturalists of Querença
4	Thailand	Bangkok: Thammasat University Library	From Waste to Wealth: Green Library Through Circular Economy

Table 1 presents four libraries, along with their respective countries, that were shortlisted by the International Federation of Library Associations and Institutions (IFLA) for the 'Best Green Library Project' category. The four projects represent distinct continental contexts with three European projects from Croatia, France, and Portugal, and one Asian project from Thailand. It demonstrates how environmental sustainability initiatives are evident differently across geographic regions. The short list depicts that green library initiatives must be contextually adapted rather than universally standardized.

III. About the Libraries and Projects:

1. Croatia, Karlovac: Public library "Ivan Goran Kovačić" Karlovac, "Green Festival – Karlovac Green Story"

The "Green Library" is a dedicated department of the City Library "Ivan Goran Kovačić" in Karlovac, situated within the Public Institution Aquatika – Freshwater Aquarium. It primarily serves children, youth, students, scientists, tourists, and the local community, aiming to promote awareness of biodiversity and educate users on the sustainable use of Croatia's natural resources. Through educational activities and literature focused on green topics, the library seeks to strengthen engagement with Aquatika visitors and foster a love for reading. Weekly workshops and discussions are designed to build a new audience. These activities are conducted by librarians, Aquatika staff, and external experts, with book presentations in collaboration with Croatian publishers. (https://gkka.hr/zelena-knjiznica/)

The Ivan Goran Kovačić City Library is recognized as a green library due to its eco-friendly architectural design and sustainable library programs. It was the first purpose-built library in Croatia and underwent an energy-efficient renovation in 2019, contributing to environmental protection and promoting sustainability. On May 5, 2015, the Green Energy Efficiency Library was opened within the library as part of the "Promoting Energy Efficiency" project, aligning its activities with environmental education. In collaboration with schools, associations, and the local community, the library organizes lecture series and programs to raise awareness about environmental protection and the UN's 2030 Sustainable Development Goals. The ongoing project, "Karlovac Green Story," includes lectures on climate change prevention, workshops, book presentations, film screenings, and outdoor events for all age groups. Special activities like "Library on the Beach" and exhibitions also promote green awareness. Additionally, the Croatian Library Association formed a Working Group for Green Libraries in 2014 to support the national expansion of sustainable development initiatives in libraries. For 6th Green Festival – Karlovac Green Story, the topic is "Light Pollution". IFLA specially mentions this project, as implemented with minimal resources but with a high impact. (https://gkka.hr/zelena-knjiznica-festival/)

2. France, Lyon: Maison de l'Environnement Lire pour Agir": The Prize of the Socioecological Transition Book

The "Lire pour Agir: The Prize of the Socioecological Transition Book" this project was project initiated by the Maison de l'Environnement in Lyon, a hub dedicated to raising awareness and fostering citizen engagement around environmental issues. This initiative aims to promote reading as a catalyst for socioecological change by awarding a prize to books that address the challenges of ecological transition. The project actively involves the public in the selection process, encouraging community participation and dialogue around sustainability themes. Through this approach, the Maison de l'Environnement seeks to empower individuals and communities to take concrete action for the environment by providing access to knowledge, fostering debate, and inspiring collective responsibility. By offering a diverse selection of literary formats, the prize appeals to various reading preferences and

broadens its reach. The initiative is further supported by curated exhibitions, author talks, and interactive workshops, all designed to deepen environmental awareness within the Lyon Metropole. Importantly, the project aligns with several Sustainable Development Goals, including those related to quality education, reducing inequalities, promoting responsible consumption, addressing climate change, and encouraging collaborative partnerships. (https://www.lyon.fr/lieu/senbilisation-et-engagement-citoyen/maison-de-lenvironnement)

The project's recognition by the International Federation of Library Associations and Institutions (IFLA) as a shortlisted candidate for the Best Green Library Project award in 2025 highlights its innovative contribution to environmental education and civic engagement. By integrating literary culture with ecological advocacy, "Lire pour Agir" exemplifies how libraries as cultural centers can serve as platforms for social transformation. The Maison de l'Environnement not only provides resources and programming but also cultivates a participatory space where citizens can reflect on and contribute to the socioecological transition. This aligns with the organization's broader mission to support sustainable development and environmental stewardship at the local level. (https://www.maison-environnement.fr/)

3. Portugal Loule: Manuel Viegas Guerreiro Foundation Our Common Home, heart of the Little Naturalists of Querença
The Manuel Viegas Guerreiro Foundation, based in Querença in the municipality of Loulé, Portugal, is dedicated to the cultural, educational, and environmental development of the region. The project "Our Common Home, heart of the Little Naturalists of Querença" reflects the Foundation's commitment to environmental education and community engagement. Rooted in the legacy of Manuel Viegas Guerreiro, a prominent ethnologist, the Foundation organizes activities that connect children and local residents with the Mediterranean landscape, fostering a sense of stewardship and belonging. Through workshops, educational programs, and collaborative events, the initiative aims to cultivate curiosity and respect for nature among younger generations, encouraging them to become active participants in preserving their local environment.

The Foundation's approach is characterized by its integration of scientific knowledge, oral tradition, and rural heritage, creating a holistic learning environment for the community. By partnering with local authorities and stakeholders, the Foundation ensures that the project addresses both contemporary ecological challenges and the preservation of cultural identity. The "Little Naturalists of Querença" are empowered to explore, observe, and document the biodiversity of their surroundings, contributing to a collective understanding of the region's natural resources. This initiative exemplifies how place-based education can inspire environmental responsibility and reinforce the interconnectedness of people and their environment (Fundação Manuel Viegas Guerreiro, 2025). (https://www.fundacao-mvg.pt)

4. Thailand, Bangkok: Thammasat University Library, "From Waste to Wealth: Green Library Through Circular Economy"
The "From Waste to Wealth" project at Thammasat University Library in Bangkok, Thailand, represents a comprehensive approach to promoting sustainability through circular economy principles. The initiative is designed to reduce waste, lower carbon emissions, and encourage environmentally responsible practices both within the library and the broader community. Among its core activities, the "One Day with Green" program encourages sustainable consumption habits among library staff and users, while the TU Library Green Book Club provides a platform for sharing knowledge and fostering discussions about environmental issues.

In addition, the project includes hands-on activities such as the Eco-friendly Workshop & Showcase, which inspires creativity by Thailand, Bangkok: Thammasat University Library, "From Waste to Wealth: Green Library Through Circular Economy"repurposing materials that would otherwise be discarded. The "Learn for Green" program focuses on educating and empowering future environmental leaders, ensuring that sustainability values are passed on to the next generation. The "From Waste to Forest & Green Barrier" initiative creatively transforms waste into trees, supporting ecological restoration and helping to address human-wildlife conflicts. Finally, the project employs Jak Reward Technology for tracking and sharing its impact, ensuring transparency and continuous improvement in its sustainability efforts. (https://www.google.com/search?q=project+at+Thammasat+University+Library+in+Bangkok%2C&oq=project)

IV. Conclusion

The analysis of the shortlisted projects for the IFLA Best Green Library Project Award 2025 demonstrates the evolving and multifaceted role of libraries in advancing environmental sustainability. Each initiative, whether from Croatia, France, Portugal, or Thailand, reflects a unique response to local ecological challenges while sharing a common commitment to fostering environmental awareness, community engagement, and sustainable practices. These projects illustrate that green libraries are no longer limited to sustainable architecture or resource-efficient operations; they are also active platforms for education, innovation, and social transformation.

The "Green Festival – Karlovac Green Story" in Croatia exemplifies how libraries can integrate environmental themes into their core programming, leveraging partnerships with scientific institutions and the local community to promote biodiversity and climate education. Similarly, France's "Lire pour Agir" project demonstrates the power of literature to inspire socioecological action and civic participation, using diverse book formats and public voting to engage a broad audience. Portugal's "Our Common Home, heart of the Little Naturalists of Querença" highlights the importance of place-based education and intergenerational learning, connecting children with their natural heritage and empowering them as environmental stewards. The "From Waste to Wealth" initiative at Thammasat University Library in Thailand showcases how circular economy principles and innovative tracking technologies can be embedded in library operations, turning waste reduction into a community-wide movement and nurturing future leaders in sustainability.

Collectively, these projects reveal that the success of green library initiatives depends on their ability to adapt to local needs, collaborate with diverse stakeholders, and align with global sustainability frameworks such as the United Nations Sustainable Development Goals. They show that libraries, regardless of their size or resources, can serve as catalysts for positive environmental

change by integrating ecological values into their services, collections, and outreach activities. Ultimately, the experiences of these libraries offer valuable lessons for institutions worldwide: embracing sustainability requires creativity, inclusivity, and a willingness to reimagine the library's role as both a guardian of knowledge and an agent of ecological transformation. As the green library movement continues to grow, it is clear that libraries will remain vital partners in building more resilient, informed, and sustainable communities.

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