



**International
Federation of
Library
Associations and Institutions**

IFLA Guidelines for Green Libraries

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With contributions and support from the IFLA Guidelines for Green Libraries Working Group of the IFLA Environment, Sustainability and Libraries (ENSULIB) Section

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Preface

Acknowledgments

The IFLA Guidelines for Green Libraries results from a global collaboration. The Guidelines team was led by Ms Petra Hauke (Humboldt-Universität zu Berlin, Germany), Ms Antonia Mocatta (University of Sydney, Australia), and Ms Priscilla Nga Ian Pun (University of Macau, Macao SAR, China), with contributions from IFLA's Environment, Sustainability and Libraries Section (ENSULIB) Standing Committee members Ms Amanda Delali Fie (Ghana), Ms Eva Hackenberg (Germany), Ms Rossana Morriello (Italy), Mr Arnold Mwanzu (Kenya), Ms Vivian Puerta (Colombia), and Ms Ana Zdravje (Slovenia).

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Background

The checklist for “Sustainable Buildings, Equipment, and Management” by Klaus Ulrich Werner can be seen as a precursor to the Guidelines (Werner 2013). The checklist has been translated into more than 30 languages and made available in open access on ENSULIB's “Green Library Website” (IFLA/ENSULIB n.d.e). Also, ENSULIB's book publications (IFLA/ENSULIB n.d.b) *Going Green: Implementing Sustainable Strategies in Libraries Around the World. Buildings, Management, Programmes and Services* (Hauke, Charney, and Sahavirta 2018), *New Libraries in Old Buildings: Creative Reuse* (Hauke, Latimer, and Niess 2021), and *Libraries Driving Education for Sustainable Development* (Hauke, Mocatta, and Pun 2025) informed the Guidelines, as did *Tools for Green Libraries* (IFLA/ENSULIB 2025).

The development of these Guidelines has been a priority for ENSULIB since its founding as a Special Interest Group in 2009. With the elevation of ENSULIB to IFLA section status, the project was identified as a priority.

The formation of a project group for the Guidelines was initiated in September 2023, and work started in December 2023. The project proposal was submitted to the IFLA Advisory Committee on Standards in January 2024 and approved in April 2024 with revisions requested by IFLA's Standards Review Team. The project was widely publicised across various IFLA channels, including *IFLA News*, the *ENSULIB Newsletter*, and the project website, all inviting collaboration and support. The final draft was submitted to IFLA's Standards Review Team for final approval in **September** 2025 and published in **January** 2026.

Purpose of the Guidelines

This document's objective is to provide a tool for planning, implementing, and evaluating green libraries. The document is also intended to serve as a framework for the development of national guidelines for green libraries. The Guidelines apply to all libraries seeking to implement sustainable practices, regardless of size, focus, or location, and can be tailored to local needs. They reflect a range of library services that can be selected for delivery in most countries by dedicated library staff. The Guidelines aim to support government policies aligned with the United Nations 2030 Agenda's 17 Sustainable Development Goals (SDGs) (United Nations 2015a, [2024]). Recognising that not every country will be able to meet these broader SDGs, it is hoped that at least some opportunities presented in the Guidelines can be achieved in most contexts, and that the document provides a starting point for environments where green libraries are not widely evident or well supported.

The Guidelines provide a framework for the establishment, operationalisation, and evaluation of new and existing green libraries. They aim to help promote the achievement of the 17 SDGs in various communities or organisations, including local municipal, school and university, and special library settings. The Guidelines are aimed at librarians, library administrators, legislative and administrative bodies, designers and architects, facility managers, and other stakeholders responsible for the creation, management, and funding of libraries of all types. Using the Guidelines, planners should determine the priorities for their library and consider what is feasible within its context. Some aspects are easy and inexpensive to implement, whereas others are more complex and costly and may not be achievable in some settings. Planners may either aim for minimum standards, to improve existing provisions, or to achieve best practice. The Guidelines have been designed as a categorised series of recommendations, allowing for relevant and achievable elements to be selected and applied to different library contexts.

The publication of the Guidelines will be followed by a promotional campaign to raise awareness, and to communicate their intent and flexible application. The campaign will be designed to have a broad reach via the IFLA web site, newsletters, webinars, and social media, and to leverage existing campaigns such as the ENSULIB Green Library Poster and IFLA Green Library Award. Supplementary materials to support libraries' implementation of the Guidelines will also be developed including toolkits, checklists, and self-assessments.

Role of Green Libraries

Sustainability concepts have prompted a fundamental shift in how we live, especially considering the impending climate crisis. With the publication of the United Nations 2030 Agenda and the 17 SDGs, sustainability has been defined as a priority in all forms of public action. Implementing the Goals requires active democratic processes in which everyone, including governments, corporations, organisations, institutions, and individuals, should participate.

Libraries' role in environmental education and achieving the broader SDGs has been extensively discussed in academic literature (Cyr and Connaway 2020; Hauke, Mocatta, and Pun 2025). Libraries are increasingly regarded as socially relevant educational institutions, educational partners, and role model contributors to the SDGs. Libraries are closely connected to their communities and reach all segments of the population. They impart knowledge in a variety of ways, including through their collections, exhibitions, lectures, events, makerspaces, and shared resources, such as sewing machines, toolkits, musical instruments and more, and by addressing topics such as urban gardening, seed libraries, STEM, STEAM, or citizen science, and repair cafés. These activities provide libraries with excellent opportunities to influence public awareness and offer a platform for civic engagement and sustainable development.

An increasing number of libraries worldwide are positioning themselves as “sustainable” or “green”, as evidenced by the annual applications for the IFLA Green Library Award. Their audience is becoming ever more responsive, with library authorities in communities and municipalities firmly committed to the role of libraries as educational institutions serving the common good. The growing number of green library networks (A.1) and grants and awards (A.2) further support this trend.

One of the first projects ENSULIB undertook after its establishment as an IFLA section was to define “What is a Green Library?”. It was recognised that this official definition was urgently needed prior to other work being progressed. Evidence of the definition’s value is seen in its translation by librarians from 40 countries or language communities by September 2025.

The definition follows (IFLA/ENSULIB 2022):

What is a Green Library?

Environment means the surroundings or conditions in which human beings, organisations, animals, or plants live and operate. Environments can be natural, social, or cultural.

Sustainable development is development that “meets the needs of the present without compromising the ability of future generations to meet their own needs” (Our Common Future/Brundtland Report, 1987, UN).

Present environments are endangered by climate change and other threats, including social inequalities. All organisations, institutions, etc. should strive to protect the environment through sustainable development. This includes all kinds of libraries, which can play an active and significant role in sustainable development.

A *green and sustainable library* is a 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 which includes:

- *Green buildings and equipment*: The emissions, or carbon footprint, of the building and equipment are actively decreased.
- *Green office principles*: Operational routines and processes are environmentally sustainable.
- *Sustainable economy*: Consumption is restrained; circular and sharing economy practices are advanced and are made accessible to the community.
- *Sustainable library services*: Relevant and up-to-date information is easy to access for users, shared spaces, devices, and environmental education is offered, and operations are efficient. The library has a positive carbon handprint.
- *Social sustainability*: Good education, literacy, community engagement, cross cultural diversity, social inclusion, and overall participation are considered. The library works actively to reduce inequality.
- *Environmental management*: Environmental goals are SMART (Specific, Measurable, Achievable, Realistic, and Timebound), and the library works to decrease its own negative impact on the environment. The library's environmental policy, its implementation, and the results of environmental work are communicated to a broader audience.
- *Commitment to general environmental goals and programmes*: Commitment is guided by the UN Sustainable Development Goals, the Paris Climate Agreement and related environmental certificates and programmes.

The decision to turn a public, academic, school, prison, corporate or other special library into a green library may arise from the personal interest of individual library staff, or from the institution in which the library exists. It is based on a commitment to general environmental goals and programmes, as described in the definition quoted above, and aligned with the 17 United Nations Sustainable Development Goals (United Nations 2015a), the Paris Climate Agreement (United Nations 2015b) and, importantly for libraries, the UNESCO Education for Sustainable Development programme (UNESCO 2020).

We hope that the Guidelines will provide inspiration and encouragement for libraries to take up the challenge and join the “green library movement” (Antonelli 2008). Libraries are encouraged to seize the opportunity to fulfill their important role in tackling the SDGs, and as key players in the education sector.

Introduction

Sustainability as a fundamental principle has led us to reconsider our way of life. This is not only driven by the impending climate catastrophe, but the broader definition of sustainability as laid out in the 17 United Nations Sustainable Development Goals (SDGs) (United Nations 2015a). Implementing the goals requires democratic processes in which citizens should actively participate.

The ethical values of libraries are essential for supporting democracy and freedom of speech in their communities. Each library plays a vital educational role by providing reliable information, promoting equality, and contributing to a sustainable society. Libraries support multiculturalism and language diversity, ensuring access to both printed and digital materials for all, regardless of socioeconomic status. In smaller communities, libraries help publish literature with low commercial value, ensuring non-commercial works are not left unpublished. Libraries are key to realising SDG 4, “Quality Education,” a foundational goal for achieving all other SDGs (United Nations n.d.b).

Aligned with these values, libraries increasingly see their role as sustainability models and educational partners. Libraries are closely connected to their communities, reaching people from all levels of society. This gives them a unique opportunity and responsibility to raise awareness and serve as platforms for civic engagement and sustainable development.

Libraries and librarians can serve as role models for green practices. Many library buildings are now designed with green construction and energy principles. Libraries also adopt sustainable practices in operations, such as sustainable sourcing, recycling, and reducing resource consumption. They use a variety of methods to educate their communities about sustainability, reaching diverse audiences

Wider audiences are becoming receptive to sustainability as libraries around the world position themselves as green. While it is self-evident that the intended audience of the Guidelines includes librarians, others are encouraged to engage with them, including community stakeholders, local government agencies, policymakers at national and regional levels, and both formal and informal educational institutions. The Guidelines will help library funders, city councils, and other decision-makers understand what a green library is, what it does for its parent organisation or community, and the vital social benefits it provides as a common good and educational institution. They demonstrate how libraries can actively support and accelerate efforts to achieve the 2030 Agenda goals, and show their importance in helping organisations, municipalities, or universities achieve their green strategies.

These Guidelines offer concrete recommendations, best practices, and various opportunities for libraries of any type to position themselves as green libraries. By implementing them, libraries can show their commitment to environmental responsibility, raise awareness of sustainability issues, inspire change in their communities, and support DEI (diversity, equity, and inclusion) to create a more sustainable and socially responsible future. The examples included vary in scale and scope, with many being simple and free to implement, even for libraries with limited staff

and resources. The Guidelines aim to encourage libraries of all sizes to contribute to building sustainable cities and communities.

The scope of the Guidelines for developing green libraries includes recommendations to achieve global consistency and accountability, share best practices, and enhance the impact of sustainability goals and DEI through policies and practices. These principles can be adapted for local contexts. Libraries in high-income regions may have access to advanced resources, technologies, and funding that support more ambitious sustainability initiatives. In contrast, libraries in developing areas may face greater challenges, such as limited budgets and infrastructure, requiring a more resourceful and community-driven approach. The Guidelines emphasise how libraries, regardless of their economic context, can play a vital role as community leaders in sustainability. Any library can adapt the broad principles in the Guidelines to address local challenges and opportunities, and to foster sustainable practices tailored to their unique circumstances. For example, a small, rural library in a developing country may choose to focus on the aspects of the Guidelines that cost little or nothing to implement, such as social sustainability, community engagement, partnerships, and local heritage preservation. A large city library in a developed country may additionally place an emphasis on green library buildings, energy efficiency, green computing technology, and infrastructure.

Efforts in green library development are most successful when all aspects of sustainability are holistically addressed. Figure 1 below shows the seven green library principles described within the Guidelines, centred around the three core areas of environmental sustainability, social sustainability, and economic sustainability. For a library truly to be green, it should seek to implement at least some aspects of each of the seven principles, thereby taking an integrative approach that comprehensively reflects the scope of libraries' roles in responding to the UN SDGs.



Fig. 1: Components of a Green Library. © Benjamin Meunier, Priscilla Nga Ian Pun and Ana Zdravje.

Chapter 1: Green Library Principles – A Brief Overview

This chapter explores key principles for creating green libraries. It emphasises practices that can be adapted to local contexts, regardless of income level. The chapter outlines strategies in community engagement, accessibility, resource efficiency, information technology, and sustainable building design. These aim to foster environmentally responsible, inclusive, and resource-efficient library spaces. By integrating these principles, libraries can make a significant contribution to sustainability and meet the evolving needs of their communities.

1.1 Community Engagement

1. Education and awareness: Encourage environmental awareness and sustainable practices among library users and the broader community.
2. Partnerships: Partner with local organisations to address environmental challenges.
3. Community outreach: Educate users about sustainability and encourage eco-friendly practices.

1.2 Accessibility and Inclusion

1. Universal design: Make the library accessible to all users, including those with disabilities.
2. Inclusive programming: Offer programmes and services that meet diverse needs and interests.
3. Accessibility of the collection: Make the collection accessible to the widest audience, free of charge, through open access, open educational resources (OER), and delivery services for people with reduced mobility or learning disabilities. This includes the provision of accessible formats of works – such as audio, braille, large print, and digital formats optimized for screen readers – ensuring equitable access to content in addition to physical spaces. The collection should also be made available in multiple languages and designed to be navigable by a variety of assistive technologies, enhancing inclusivity for all users.

1.3 Resource Efficiency

1. Reduce, reuse, recycle: Minimise waste and conserve resources.
2. Green collection development: Select and acquire materials that are environmentally sustainable, such as open access resources and recycled materials.
3. Minimise the carbon footprint of the collection: Consider whether print or digital presents the most sustainable solution given the specific context of the library. Where possible, implement a digitisation strategy in line with the objectives of the SDGs.
4. Sustainable long-term preservation: Consider and adopt the most suitable strategy to guarantee perpetual access to the collection. Prioritise sustainable physical storage using natural temperature and humidity regulation, or digitisation using a long-term shared library or archival storage.
5. Sustainable procurement: Prioritise sourcing environmentally friendly products and services for the library.

1.4 Information and Communications Technology (ICT)

1. Energy-efficient hardware: Use energy-efficient computers, servers, and network equipment.
2. Optimise hardware deployment: Extend the life cycle of computers, monitors, tablets, and mobile phones. Choose devices that meet the needs of the library, but avoid over-specifying them, as larger, more powerful devices consume more resources and have a higher environmental impact during production, transportation, and usage. Where possible, seek to reuse or recycle hardware that is end-of-life for its original purpose.
3. Cloud-based services: Use regional / local cloud computing to reduce on-premises infrastructure and avoid long-distance data transfers.
4. Sustainable data centres: Support data centres that prioritise energy efficiency and environmental sustainability.
5. Artificial Intelligence usage: Due to its resource-intensive nature, limit AI use to situations where it is the only practical solution.

1.5 Buildings and Equipment

1. Green building design: Integrate sustainable design elements into new library construction or renovations.
2. Ergonomic design: Create ergonomically designed, accessible spaces for staff and users.
3. Indoor air quality: Ensure proper ventilation and air quality to support health and well-being.
4. Noise reduction: Minimise noise pollution to create a learning-friendly environment.
5. Biophilic design: Incorporate natural light, water features, and plants or windows with views of natural settings.
6. Energy efficiency: Optimise energy use with efficient lighting, HVAC (heating, ventilation, and air conditioning) systems, and renewable energy sources.
7. Natural ventilation: In dry climates with moderate weather, natural ventilation can be the most energy-efficient option for cooling and ventilation.
8. Efficient HVAC: In extreme climates, HVAC systems may be necessary but can be highly efficient if designed sustainably.
9. Water conservation: Implement water-saving measures, such as rainwater harvesting and efficient plumbing systems.

1.6 Useful Resources

- Bibliosuisse. 2023. *La durabilité dans les bibliothèques. Un guide avec des exemples de bonnes pratiques*. [Aarau, Switzerland]. Available also in German: *Nachhaltigkeit in Bibliotheken. Ein Ratgeber mit Best-Practice-Beispielen*. <https://www.bibliosuisse.ch/angebote/downloads/ratgeber-nachhaltigkeit-in-bibliotheken-1#content>
- Hauke, Petra, Andrea Kaufmann, Tim Schumann, and Janet Wagner. 2023. *Grüne Bibliothek: Ökologische, wirtschaftliche und soziale Nachhaltigkeit in der Praxis*. Unterstützt von: Netzwerk Grüne Bibliothek; IFLA Environment, Sustainability and Libraries Section (ENSULIB). (Checkliste, 46). https://www.bib-info.de/fileadmin/public/Dokumente_und_Bilder/Komm_OPL/Checklisten/check46.pdf. Also available in Ukrainian: https://www.goethe.de/resources/files/pdf338/check46_uk.pdf

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- Oulu City Library [Finland]. 2020. *Sustainable Library 2030 Roadmap. Summary*. <https://www.ifla.org/wp-content/uploads/Sustainable-Library-2030-Roadmap-Summary.pdf>
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- Sustainable Libraries Initiative. 2022. *Road Map to Sustainability*. <https://www.sustainablelibrariesinitiative.org/resources/professional-development/roadmap> (licensed)

Chapter 2: Staff Training and Development

When establishing a green library, it is essential to develop staff understanding of sustainability and environmental stewardship. This can be achieved through tailored training and access to learning resources. This chapter discusses how libraries can use customisable training modules and free or low-cost online resources to empower staff and communities in sustainable practices.

2.1 Tailored Training for Library Staff

1. Tailored modules: Effective training is key to transforming libraries into green hubs. Tailored modules, based on library size, budget, and sustainability goals, help staff adopt eco-friendly practices.
2. Sustainability promotion focus: Training should focus on promoting sustainability, including curating green collections, managing energy-efficient resources, and raising awareness of environmental issues like climate change.
3. Sustainable training resources: Training programmes should be sustainable, leveraging reusable materials, encouraging collaboration between libraries, and integrating sustainability into library school curricula for long-term impact.

2.2 Online Resources for Cost-Effective Training

In addition to in-house training, libraries can use numerous free or low-cost online resources. These offer easy access to valuable sustainability education, making training available to libraries of all sizes and budgets.

1. Climate Fresk workshops: Libraries can promote workshops to help staff understand climate change through interactive, collaborative learning.
2. Erasmus+ and EU programmes: Erasmus+ supports sustainability education projects in libraries. It offers funding and a platform to share green practices across the EU.
3. Open educational resources (OER): OER offers free, customisable materials like courses, articles, and videos to enhance library staff knowledge on sustainable practices. Libraries should explore OER platforms for relevant sustainability content where learners can follow courses at their own pace.
 - <http://www.oerplatform.org/>
 - <https://oercommons.org/>
 - <https://www.unesco.org/en/open-educational-resources>
 - <https://epale.ec.europa.eu/it/content/oer>
 - <https://sdgs.un.org/partnerships/sustainable-development-open-education-resource-oer-platform>
4. The Secret to Talking about Climate Change: The TED Talk helps library staff communicate effectively about sustainability with patrons.
5. Earth Charter Center for Education for Sustainable Development: Located at the UN Mandated University for Peace in Costa Rica, the Center offers online and on-site education programmes to support the Earth Charter's implementation in decision-making and education processes.

2.3 Useful Resources

Blue Marble Librarians. <https://www.youtube.com/@bluemarblelibrarians/videos>

Climate Fresk: Workshop Registration. <https://climatefresk.org/world/registration-workshop/>

Earth Charter Center for Education for Sustainable Development.

<https://earthcharter.org/education-sustainable-development/>

Erasmus+. EU programme for education, training, youth and sport. [https://erasmus-](https://erasmus-plus.ec.europa.eu/)

[plus.ec.europa.eu/](https://erasmus-plus.ec.europa.eu/)

European Commission. Joint Research Centre. n.d. *GreenComp: the European sustainability*

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[european-sustainability-competence-framework_en](https://joint-research-centre.ec.europa.eu/greencomp-european-sustainability-competence-framework_en)

“The Secret to Talking about Climate Change.” n.d. Posted by Action for the Climate Emergency. YouTube, 3 min., 56 sec.

<https://youtu.be/UHPZw0zbHNE?si=qZJU57Q0PFGHQyEq>

Chapter 3: Operations and Maintenance

This chapter focuses on the operations and maintenance of sustainable libraries. From strategy and management to daily office routines by all staff, and the marketing and visibility of sustainability efforts, this chapter outlines actionable steps to ensure libraries operate efficiently and responsibly and reinforce their sustainability commitments.

3.1 Strategic Goals

1. Sustainability mission statement: Publish a mission statement on the library's website outlining its overall sustainability strategy and goals. These should align with the United Nations SDGs.
2. Published targets: Establish clear targets for energy savings and implement effective control measures to reduce consumption.
3. Incentivised sustainability practices: Develop reward and incentive schemes to encourage sustainable practices within the organisation.
4. Sustainable partnerships: Develop strategic partnerships with publishers, booksellers, suppliers, and other business partners to advance sustainability goals and broaden the library's impact.

3.2 Exemplarity

1. Sustainability leadership: Lead by example with proactive and exemplary sustainability practices.
2. Stakeholder involvement: Involve library users and stakeholder groups, such as funding agencies and Friends of the Library, in sustainability efforts.
3. Sustainability for library users: Use educational signage to promote energy and water conservation and to guide visitors toward environmentally friendly habits within library spaces.
4. Consumption data transparency: Make energy cost data transparent to encourage responsible usage and improve cost control.

3.3 Marketing, Partnerships, Visibility

1. Visible commitment: Visibly promote the library's sustainability commitment using tools like the ENSULIB Green Library Poster and resources from ENSULIB.
2. Power through collaboration: Sign up for the Green Libraries Manifesto and join green library networks or create one to collaborate on sustainability initiatives. Collaborate with local governments, NGOs, and businesses to secure funding and resources. Work with schools to integrate climate change topics into their curriculum.
3. Progress reporting: Include environmental achievements in the library's annual report. Consider applying for the IFLA Green Library Award.

3.4 Library Management

1. Sustainable purchasing: Implement green office principles by prioritising sustainable procurement practices, supporting local businesses, and choosing environmentally responsible suppliers and financial institutions.
2. Green IT practices: Implement Green IT practices including choosing environmentally responsible technology solutions, improving energy efficiency of equipment, and reducing paper usage.
3. Sustainable commuting: Encourage sustainable commuting including promoting public transport, cycling, and carpooling for staff. For essential air travel, opt for CO₂ offsetting schemes.
4. Sustainable facilities management: Manage facilities sustainably by using energy-efficient appliances, non-toxic cleaning products, and promoting recycling, composting, and careful use of energy and water.

3.5 Useful Resources

- American Library Association (ALA). Sustainable Libraries Initiative. [2023.] *The National Climate Action Strategy for Libraries Implementation Guide*. Chicago, IL; Bellport, NY. <https://www.sustainablelibrariesinitiative.org/media/document/614>
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Chapter 4: Library Collections

This chapter explores sustainable practices in managing library collections, emphasising the environmental and social impacts of both print and digital materials. It highlights the need for careful consideration of storage, preservation, and access methods to minimise energy consumption and carbon emissions. It also covers the importance of creating collections that are diverse, inclusive, and aligned with sustainability objectives. These collections should support long-term cultural heritage preservation, ensuring equitable access to knowledge for all communities. Additionally, it promotes digital inclusion and the responsible use of resources.

4.1 Environmental and Social Impact

1. Long-term collections impacts: Consider the long-term environmental impact and costs of physical and digital collections. This includes factors like storage, infrastructure, and power consumption. Make responsible decisions to optimise the size of the collection and reduce its carbon footprint, while ensuring ethical decision-making when deselecting print materials.
2. Digital collections and power consumption: Digital collections are often more sustainable but still require significant infrastructure and power. The environmental impact should be weighed against the benefits of providing digital inclusion and access for all.
3. Resources that address sustainability: Prioritise collections that support science, sustainability, SDGs, diversity, equity, inclusion, and green initiatives, especially for children and young adults.
4. Inclusive collections: Develop collections that reflect diverse cultures and languages. Ensure they are accessible and inclusive, ensuring no one is left behind.

4.2 Preservation of Cultural Heritage Materials

1. Cultural diversity: Develop acquisition and preservation policies that support minority cultures, language diversity, and the documentation of social movements.
2. Cultural heritage preservation: Create digital duplicates of valuable cultural heritage materials to prevent damage and facilitate access to high-demand collections. For physical resources, prioritise long-term preservation by using quality, acid-free materials and storing them in a temperature and humidity-stable environment. Follow appropriate metadata standards to promote long-term discovery and access.
3. Optimised digitisation: Standardise high-quality digitisation practices (e.g., high-resolution scans, OCR). Collaborating with other institutions about what to digitise can minimise redundant digitisation and help reduce the environmental impact. Ensure compliance with copyright laws during the digitisation process.
4. Renewable resources: Use renewable energy-powered data storage services for digital preservation.

4.3 Useful Resources

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Chapter 5: Services and Programmes

This chapter focuses on the development and delivery of sustainable library services and programmes that address both user needs and environmental goals. It highlights the importance of assessing community demographics and the need to create inclusive, long-term services. It emphasises the need to align these services with global sustainability frameworks, such as the SDGs. The chapter also emphasises the library's role in promoting social sustainability, fostering educational and social engagement, and building partnerships to advance green initiatives. By adopting these strategies, libraries can provide valuable resources, promote community well-being, and raise environmental awareness.

5.1 User Needs Assessment

1. **Alignment with the community:** Green libraries should offer services grounded in an analysis of their scope, purpose and strategic goals, local community demographics, and the information needs of the local community.
2. **Sustainable services:** In planning library services, clear priorities should be set, with a strategy for medium-to long-term service provision.
3. **Equitable access:** Educational programmes should be accessible to all, including underserved communities. Programmes can be enhanced and amplified through inter-library collaborations to share green resources and knowledge.
4. **Neutral spaces:** Ensure that library services are not influenced by ideological, political, religious, or commercial pressures.
5. **Diverse communication approaches:** Services should consider both traditional cultures and new technologies, such as supporting oral communication methods alongside modern ICT tools.

5.2 Sustainable Library Services

1. **Education for sustainable development:** Place SDG 4, target 7 at the centre of engagement: “Ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles.” (United Nations n.d.b) This target also covers human rights, gender equality, global citizenship, and a culture of peace and non-violence.
2. **Sustainability education:** Offer sessions and workshops to educate users about the United Nations 2030 Agenda and its sustainability goals. This can include information sessions, discussion groups, workshops, and educational events.
3. **Access to information:** Relevant and current information should be easily accessible for users – especially on subjects related to sustainability.
4. **Communal resources:** The sharing of library spaces and equipment (computers, printers, scanners) supports the efficient and sustainable use of resources.

5.3 Social Sustainability

1. **Socially healthy communities:** Social sustainability initiatives led by libraries are integral to fostering a healthy and inclusive community.

2. Accessibility of services and resources: The library must provide access to information and services for all community members, regardless of their background.
3. Service diversity: Embrace diversity in both internal operations and the services offered to reflect all segments of the community served.

5.4 Partnerships

1. Impact through collaboration: Collaborate with local government agencies and with non-government (NGOs) public agencies to leverage the impact of climate or sustainability campaigns.
2. Value traditional knowledge: Work with Indigenous communities to share traditional environmental sustainability knowledge.
3. Sustainability education in context: Arrange visits to eco-friendly businesses and parks to educate the community on sustainable practices.

5.5 Useful Resources

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- International Federation of Library Associations and Institutions (IFLA). 2022. *GET INTO... Education for Sustainable Development*.
<https://repository.ifla.org/handle/20.500.14598/2054>
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- Library of Things. n.d. "Borrow Useful Things for Your Home, Projects and Adventures. Library of Things." <https://www.libraryofthings.co.uk/>
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<https://www.un.org/en/observances/international-days-and-weeks>
- United Nations. n.d.b. "Goals: 4: Ensure Inclusive and Equitable Quality Education and Promote Lifelong Learning Opportunities for All." <https://sdgs.un.org/goals/goal4>

Chapter 6: Law, Ethics and Traditions

This chapter addresses the legal and ethical issues involved in creating green and sustainable libraries. It provides a foundation for ensuring libraries function responsibly, promote inclusivity, and maintain sustainability. It also covers ways to mitigate risks and promote long-term environmental and societal benefits.

6.1 Legal Considerations

1. Environmental laws and building codes: Ensure familiarity with local, national, and international environmental laws and building codes to remain compliant
2. Procurement laws: Research local procurement laws to ensure library purchasing practices remain compliant.
3. Ethical sourcing: Consider ethical sourcing standards and ensure library purchasing practices are transparent and represent best practices.
4. Information privacy: When collecting any user information, to ensure privacy legislation is adhered to; the data is appropriately secured and protected and only retains what is necessary and legal.
5. Recycling and disposal: When recycling or disposing of library materials, ensure that the library properly adheres to best practice and meets any local legal requirements.
6. IP and Copyright: Be aware of intellectual property or copyright laws and ensure services are not in breach – particularly when copying, digitising and lending collection materials.
7. Workplace safety: Worker and visitor safety are critical. Ensure workplace safety standards are met in all aspects of library operations, including in green building projects in which safety regulations should be strictly observed during construction or renovation.

6.2 Ethical Considerations

1. Community inclusion: Ensure inclusivity and accessibility for all including community members from all socio-economic backgrounds, local cultural and language groups, age groups, gender identities, and people with disabilities.
2. Accessibility: Consider the accessibility needs of the community in relation to collections and avoid over-reliance on either print or digital-only resources to ensure equity and inclusivity.
3. Ethical conduct: Embed policy and procedures to promote and safeguard transparency and accountability and promote ethical conduct at work.
4. Community consultation: Integrate community involvement and decision making in the sharing of Indigenous knowledge, including Indigenous green knowledge systems. Give credit where cultural information is shared and ensure it is done with community consent.
5. Protecting user privacy: Adhere to best-practice policy and procedure and the ethical use of user data. Do not collect or retain user data that is not legal to keep, or not needed, and ensure that any user information is kept securely and within the legally required authority.
6. Sustainable collections: Incorporate FAIR principles to ensure sustainable collection resources are findable, accessible, interoperable, and reusable.
7. Socially ethical collections: Embed CARE principles to promote collective benefit, respect for authority to control, responsibility, and ethical considerations. This is of particular

importance in respect of cultural heritage collections relating to Indigenous knowledge, sensitive personal information and information shared by minority groups.

6.3 Indigenous Traditional Knowledge

1. The importance of Indigenous Traditional Knowledge: Indigenous Traditional Knowledge (ITK) and practices are a rich source of information about the natural world, developed over many millennia. ITK offers sustainable solutions to many global issues, including climate change. Indigenous peoples' understanding of nature contributes to greater sustainability.
2. Preservation of and sharing ITK: Libraries' care and curation of ITK, alongside Indigenous-led solutions, is a key component of sustainability (also see section 4.2 Preservation of Cultural Heritage Materials).

6.4 Useful Resources

- Düwell, Marcus, Gerhard Bos, and Naomi van Steenberg (eds.). 2018. *Towards the Ethics of a Green Future*. London: Routledge. <https://doi.org/10.4324/9781315115788>
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- International Federation of Library Associations and Institutions (IFLA). 2023. "Library Ethics and Access." <https://www.ifla.org/news/library-ethics-and-access/>
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Chapter 7: Library Buildings and Equipment

Whether designing a new building or conserving an existing one, any library can be a green library. This chapter provides a framework for sustainable design solutions, with both high-tech and low-tech approaches. It emphasises the use of locally sourced and sustainable materials. It provides practical guidelines for planners, designers, and architects, highlighting that sustainability can be achieved without a new building, as noted by former AIA (American Institute of Architects) President Carl Elefante: “The greenest building is the one that is already built.” (Elefante, 2025).

It is crucial for library building and equipment projects to be led by green building and technology experts, with libraries advocating for the use of construction materials and techniques that have a lower environmental impact, and the use of renewable energy if fossil fuels are still in use.

7.1 Project Planning, Finance

1. **Setting goals:** Define the green library’s goals as eco-efficient, resource-conserving, and environmentally friendly. Include all stakeholders in the planning process.
2. **Leverage frameworks:** Use frameworks like LEED or BREEAM for sustainable design guidance.
3. **Locally appropriate design:** Focus on location-appropriate architecture, site greening opportunities, and public transport access.

7.2 Organisation of Spaces

1. **Sustainable design:** Achieve sustainability with compact design, designated spaces, and the use of rooftops for green roofs, gardens, and solar energy.
2. **Green spaces:** Incorporate outdoor elements, such as courtyards, green areas, balconies, and terraces, to enhance library spaces. Explore indoor greening options like plants and vertical gardens to bring the natural environment indoors.

7.3 Building Climate, Lighting, Water Management

1. **Lighting:** Maximise the availability of natural light in user spaces. Use low-energy lighting with sensors to minimise energy wastage.
2. **Climate control:** Leverage natural ventilation in moderate, dry climate settings. Optimise climate control with passive building design, using insulation and solar protection.
3. **Renewable energy sources:** Prioritise renewable energy sources such as solar panels and battery storage for the library building or connecting to a renewable energy provider.
4. **Water capture and re-use:** Use rainwater capture and greywater reuse to manage water sustainably and minimise environmental impact.

7.4 Construction and Indoor Materials

1. Material selection: Prioritise maintenance-friendly methods and use locally sourced, ecologically friendly materials from renewable sources that suit the local climate.
2. Recycling and repairability: Ensure infrastructure meet the repairability criteria when purchasing, use a significant proportion of recycled materials in the library building, and facilitate recycling.
3. Minimising construction impact: Assess and minimise noise and environmental impacts during construction, ensure adequate space for material handling, and minimise waste by considering deconstruction, reducing packaging, and using prefabricated components where possible.

7.5 Building Design that Supports Preservation and Conservation

A stable storage environment is key to preserving large collections across all formats.

1. Temperature and humidity: Maintain stable internal climates with controlled temperatures between 18–22°C and relative humidity (RH) between 40–55% to preserve paper-based materials.
2. Insulation: Ensure well-insulated stacks to prevent water ingress, while balancing energy efficiency with preservation requirements.
3. Protection from environmental factors: Use shading, glazing, and air filtration systems to protect collections from light, pollutants, and moisture.
4. Materials selection and safety systems: Use low-emission materials, install fire suppression systems, and create efficient storage systems to ensure safety and preserve materials.

7.6 Certificates

Regardless of the building condition or budget, there are opportunities to improve environmental sustainability of buildings incrementally.

1. Sustainability standards: Refer to national or international sustainability standards for construction or refurbishment.
2. Standards addressing aspects of building design: Use protocols and standards for site selection, energy efficiency, water consumption, material and resources, and indoor environmental quality, e.g.:
 - LEED rating system: Leadership in Energy and Environmental Design (US standard). <https://www.usgbc.org/leed>
 - BREEAM: Building Research Establishment Environmental Assessment Method (UK standard). <https://breeam.com/>
 - SKArating (UK assessment system for interior fit-out). <https://skarating.org/>
 - DGNB: Deutsche Gesellschaft für Nachhaltiges Bauen (German Certificate for Sustainable Building). <https://www.dgnb.de/de/zertifizierung/das-wichtigste-zur-dgnb-zertifizierung>
 - Green Star Rating System (Australian standard). <https://new.gbca.org.au/green-star/exploring-green-star/>

7.7 Useful Resources

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<https://acrl.libguides.com/buildingresources/green>
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https://designinglibraries.org.uk/resources/resources-for-library-design/green-libraries_-sustainable-library-buildings/
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<https://doi.org/10.1515/9783110679663>
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- PressReader Team. 2024. "Constructing Green Libraries: Sustainable Architecture for a Greener Future." *PressReader* (Blog). August 26. <https://blog.pressreader.com/libraries-institutions/constructing-green-libraries-sustainable-architecture-for-a-greener-future>
- University of Illinois Urbana-Champaign. University Library. 2024. "Green Libraries: Green Building/Facility Management: Resources to help libraries go green." *LibGuides*.
<https://guides.library.illinois.edu/green-libraries/facilities>
- Werner, Klaus Ulrich. 2013. "Sustainable Buildings, Equipment, and Management. A Checklist." Available in 32 languages. <https://www.ifla.org/the-green-library-checklists-project/>

Chapter 8: Monitoring and Evaluation

This chapter offers actionable steps and a framework for libraries to measure sustainability progress, considering their unique contexts and resources. The chapter outlines flexible metrics and incremental goals that foster long-term improvement and adaptability.

8.1 Monitoring Framework

1. SMART goals: Establish clear sustainability metrics in environmental, social, and economic areas, using adaptable SMART goals. Track energy consumption, carbon footprint, and resource efficiency.
2. Resource consumption monitoring: Regularly measure water usage, waste management, and material consumption. Use digital solutions and waste audits to guide reduction strategies.
3. Environmental monitoring: Assess indoor environmental quality, including air quality, lighting, and energy-efficient systems in library spaces.
4. Engagement monitoring: Track community engagement, evaluate collection sustainability, and monitor the environmental certifications of library suppliers.

8.2 Incremental Goals and Continuous Improvement

1. Progress monitoring goals: Set both short-term and long-term sustainability goals. Reassess progress regularly and adjust strategies based on available resources and outcomes.
2. Benchmarking: Benchmark performance against similar libraries or industry standards and share insights to encourage collaboration and continuous improvement.

8.3 Reporting and Communication

1. Communicate sustainability progress: Create regular, transparent sustainability performance reports. Make them publicly available to stakeholders and use digital tools to visualise data accessibly.
2. Celebrate success and share lessons: Share success stories and lessons learned from sustainability initiatives to inspire further improvements within the library community and beyond.

8.4 Useful Resources

Association of Research Libraries. n.d. "LibQUAL: Charting Library Service Quality."
<https://www.libqual.org/home>

Bezerra Cardoso, Nathalice. 2021. "How is your library contributing to sustainable development?" Available in English plus 9 other languages.

Calculator. <https://libraryscience.de/calculator/>

Checklist. <https://libraryscience.de/publication/>

CILIPS, Chartered Institute of Library and Information Professionals in Scotland. 2024.

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Danmarks Biblioteksforening/Danish Library Association. n.d. "Certificering/Certification."
<https://db2030.dk/certificering/>

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- ELSA (European Libraries and Sustainable Assessment) Working Group. 2020. *Towards the Implementation of SDG Indicators in European Libraries*. The Hague, Netherlands: EBLIDA. <https://www.eblida.org/Documents/ELSA-WG-implementation-SDG-Indicators-in-EU-Libraries.pdf>
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Chapter 9: Case Studies and Best Practices

The wealth of examples, provided as “SDG Stories” on IFLA’s Library Map of the World, or awarded with the IFLA Green Library Award, showcases a sample from the wide spectrum of possibilities. While only a small selection of awarded libraries, projects, and initiatives can be showcased below, more examples, especially from developing countries, can be found on the “SDG Stories” on IFLA’s Library Map of the World (IFLA n.d.), or ENSULIB’s IFLA Green Library Award webpage (IFLA/ENSULIB n.d.).

It is by no means expected that a green library will offer the entire programme of options detailed in these Guidelines. Smaller libraries will typically choose a focal point with which they can justifiably position themselves as a “green library”, e.g., “climate protection”, “health”, “nature and garden” or “sustainable consumption”; in each case with a designated focus on the goals of the United Nations' Agenda 2030.

9.1 Green Library/Large Scale Projects

1. Biology Library of the University of Salamanca, Spain: “Small, but Working Together it Works!” (2024). <https://www.ifla.org/news/9th-ifla-green-library-award-2024-results/>

“The Biology Library of the University of Salamanca features interdisciplinary collections in natural sciences and new media, engaging both academic and local communities. It fosters connections between university research and the broader community through activities like guided walks, conferences, and film series. Resources are shared with both the academic and local community, including equipment loans. The digital magazine “Bionoticias” shares global research on science and the environment. The Library is committed to a programme of public engagement about sustainability, partnering with environmental groups to help raise environmental awareness.”

2. Biblioteca EPM, Medellín, Colombia: Biblioteca EPM – Education for Sustainable Development (2023). <https://www.ifla.org/news/8th-ifla-green-library-award-2023-results/>

“This project truly deserves the IFLA Green Library Award, demonstrating that sustainability is at the heart of their strategy and embedded in all their activities: storytime programmes, lectures, robotics/new technology, and business development. Through their sustainability education, they demonstrate that the goal of continuous improvement over time is what they value. A great initiative in a low-middle-income country.”

3. Stadtbibliothek/City Library Paderborn, Germany: Eden – a Sustainable Library (2024). <https://www.ifla.org/news/9th-ifla-green-library-award-2024-results/>

“The Stadtbibliothek/City Library Paderborn renovated a 460-year-old building and upcycled scrap byproducts for furniture. It emphasises the sharing economy with items like a seed library, food sharing programme, clothing exchange, and tool library. The Library listens to community needs, aiming to incorporate their wishes into design and programming. With 80 partners, it used participatory design methods for the renovation. Programmes address food insecurity and waste, promoting sustainability across environmental, social, and economic aspects, fostering a connected, trust-based community.”

9.2 Green Library Projects

1. Biblioteca Civica/City Library Villa Valle, Italy: The Seed Library (2023). <https://www.ifla.org/news/8th-ifla-green-library-award-2023-results/>

“This project truly deserves to be awarded as the idea of the seed library takes on a new dimension. It influenced the city’s decision to become more bee and butterfly friendly. By involving customers in decision-making processes, long-term effects on sustainable community engagement have been achieved. The programme can serve as a role model for other libraries around the world, no matter whether they are large or small.”

2. Library at Priorka for Children, Kyiv, Ukraine: Ecological Space “Green Library”: In Search of Eco-heroes and a Way out of the Ecological Crisis (2024). <https://www.ifla.org/news/9th-ifla-green-library-award-2024-results/>

“The project excels in promoting environmental awareness among children and positions the Library as a key player in addressing the ecological crisis. It combines education, aesthetics, and practical action, creating an eco-friendly library space, based on environmentally conscious design and the use of recycled materials, and providing a diverse collection of ecological literature. Supported by charitable donations, it demonstrates grassroots commitment to sustainability. The initiative’s expansion to other Ukrainian libraries highlights its broader impact. It educates, reduces environmental impact, and serves as a model for sustainable living and library management.”

3. The USIU-Africa Library, Nairobi, Kenya – a Garden in the Library (2018). <https://www.ifla.org/news/ifla-green-library-award-2018-winners-announced/>

“The USIU-Africa (United States International University-Africa) library is an enormously large green building with a library garden with trees, plants and everything for a green environment that also provides a good air for users and staff. The flat roof gives the harvest of rainwater to water the garden with. The gardens give the library an outdoor effect. The plants give the library an ambience and homely feeling. The paper gives a more practical approach to building and practices within tough economic realities. It shows libraries in Africa have also embraced the green movement, it is applicable in new buildings and can be used as a good benchmark, the methodology is very sound. The concept is original and shows innovativeness in the library practice in Africa.”

9.3 Special Recognition – Minimal Resources but a Big Impact

1. Colombia, Cali, Comuna 1 Cultural Center Public Library—“The Neighborhood Path” (2022). <https://www.ifla.org/news/7th-ifla-green-library-award-2022-results/>

“The Cultural Center Public Library is a fabulous project where community is the key for everything. The project includes many activities that connect people from different ages and takes care of the environment, making sure that no harm will be done. Good spirit and true storytelling elements can be seen from the submission. It is great to see how well people have adapted and applied the environmental aspects of this library’s work. The library’s commitment to offering classes to promote food security and providing alternative means of income is impressive. It has a clear mission to empower women and promote gender equality with solid connections to UN SDGs.”

2. Asociación Cubana de Bibliotecarios, Villa Clara Branch, Cuba, Santa Clara, V.C.: “BiblioVerde, un espacio para compartir y aprender en armonía con la

naturaleza/BiblioVerde, a space for sharing and learning in harmony with nature” (2021). <https://www.ifla.org/news/6th-ifla-green-library-award-2021-results/>

“This report presents the BiblioVerde project’s characterisation, a space developed by the Cuban Association of Librarians, Villa Clara Branch, where the population, in a general sense, can acquire information, skills, and knowledge about horticulture and sustainable gardening through talks, workshops, and conversations. This project was carried out with minimal resources but has a big impact.”

9.4 Useful Resources

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Bangar, Machhindra. 2018. “Green Libraries in India: An Overview.” *Knowledge Librarian* Special issue, January: 222–230. <https://www.klibjllis.com/sp2018jan37.pdf>

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Chapter 10: Conclusion

The IFLA Guidelines for Green Libraries present a roadmap for libraries around the world to adopt sustainable practices that support both environmental and social responsibility. Through the exploration of key principles, from planning and design to staff development and sustainability monitoring, the Guidelines offer libraries practical steps to reduce their ecological footprint and enhance their contribution to the global sustainability movement.

It is essential to recognise that no library is too small, too large, or too resource constrained to become a green and sustainable library. The process begins with intentional decision-making and prioritisation, acknowledging that even minor changes can lead to great environmental benefits over time. Libraries of all types and sizes can make a difference, whether by embracing energy-efficient technologies, implementing eco-friendly operational practices, or fostering sustainable behaviors among their stakeholders.

As the global call to action for sustainability intensifies, libraries have an important role to play. They are uniquely positioned to model sustainable practices within their communities and act as advocates for environmental stewardship. By participating in international networks and forums, libraries can share knowledge, collaborate on solutions, and build a supportive global community dedicated to green initiatives.

Ultimately, the IFLA Guidelines for Green Libraries are not just a set of recommendations; they are a call to action for libraries worldwide to take responsibility and contribute to a greener, more sustainable future. By integrating these Guidelines into their operations, libraries will not only benefit from reduced environmental impact but also inspire future generations to continue the work of building a more sustainable world.

Through commitment, collaboration, and continuous improvement, libraries can lead by example and make meaningful strides towards encouraging a more sustainable, eco-conscious society. The journey toward becoming a green library is not about reaching an end-state but about continuous improvement—one decision, one action, and one library at a time.

Appendix

A.1 Green Library Networks and Initiatives

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- PROJECT.ARCC. "Archivists Responding to Climate Change." <https://projectarcc.org/>
- "Seed Library Network." <https://www.seedlibrarynetwork.org/>

2. Asia-Oceania

- Australia
 - ALIA Green. Australian Library and Information Association. <https://green.alia.org.au/>
 - LIANZA (Library and Information Association of New Zealand) Standing Committee on Climate Action. <https://www.lianza.org.nz/climate-action/>
 - Public Libraries Victoria. Sustainability Special Interest Group. <https://www.plv.org.au/sustainability-home/>

3. Europe

- Croatia
 - Hrvatsko knjižničarsko društvo/Croatian Library Association. Komisija za zelene knjižnice/Commission for Green Libraries <https://www.hkdrustvo.hr/strucna-tijela/sekcija-za-upravljanje-i-tehnologiju/komisija-za-zelene-knjiznice/>
- Finland
 - Libraries.fi. "Green Library." https://www.libraries.fi/greenlibrary?language_content_entity=en
- France
 - L'Association des bibliothécaires de France/Association of Librarians of France. Commission Bibliothèques vertes/Green Libraires Committee. <https://abf.asso.fr/4/210/981/ABF/bibliotheques-vertes>, <https://bib.vert.es.abf.asso.fr>
- Germany
 - Netzwerk Grüne Bibliothek/Green Library Network. <https://www.netzwerk-gruene-bibliothek.de/>
- Italy
 - Istituto Superiore per la Protezione e la Ricerca Ambientale (ISPRA)/National Institute for Environmental Protection and Research. Biblioteche e centri di documentazione della Rete SI Documenta/Libraries and Documentation Centers of the SI Documenta Network. <https://www.isprambiente.gov.it/it/attivita/biblioteca/servizi/biblioteche-di-interesse-ambientale-1>
 - Osservatorio biblioteche e sviluppo sostenibile (OBISS)/Observatory on Libraries and Sustainable Development. <https://www.aib.it/struttura/obiss/>

- Spain
 - Red de Centros de Información y Documentación Ambiental (RECIDA)/Network of Environmental Information and Documentation Centers. <https://recida.net/>
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- United Kingdom
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4. Latin America and the Caribbean

- TBA

5. Middle East and North Africa, Sub-Saharan Africa

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<https://www.facebook.com/groups/1513163202706919/>
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<https://www.librarycat.org/lib/AfrelibTrust24>
- Afrelib. Action Guide for Sustainable Libraries Network Africa: Course <https://lnkd.in/gWaGUUD7>
- Goethe-Institut South Africa. Green Libraries: Renewing the Future. <https://www.goethe.de/ins/za/en/bib/green-libraries.html>

6. North America

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 - Canadian Association of Professional Academic Librarians (CAPAL). Climate Action Committee. <https://capalibrarians.org/communities-of-practice/climate-action/>
 - Environment and Climate Change Canada Library Services. <https://science-libraries.canada.ca/eng/environment/>
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 - American Library Association. Sustainability Round Table (SustainRT). <https://www.ala.org/sustainrt>
 - Blue Marble Librarians in Massachusetts USA. <https://guides.masslibsystem.org/ClimatePrepWeek/BlueMarbleLibrarians>
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A.2 Funding Opportunities, Grants, Awards

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A.4 Glossary of Terms

Acidic papers: Papers that contain high levels of acid, which can cause them to deteriorate and yellow over time.

AI: Artificial Intelligence means the simulation of human intelligence in machines programmed to learn and perform tasks like problem-solving, decision-making, and language processing.

Biophilic design: Architecture and interior design that incorporates natural elements, such as plants, light, and natural materials, to enhance well-being and connect people with nature.

Carbon footprint: A negative carbon footprint of a library refers to the net reduction of greenhouse gas emissions, achieved through sustainable practices such as energy efficiency, renewable energy use, and carbon offset initiatives that exceed the library's own emissions.

Carbon handprint: A positive carbon handprint of a library refers to the measurable environmental benefits the library creates, such as reducing carbon emissions through sustainable practices, promoting green initiatives, and educating the community on sustainability.

CARE principles: Focus on ensuring data is Collective, Accessible, Respectful, and Equitable. These principles are designed to guide the ethical and responsible management of data,

particularly in Indigenous and marginalised communities, emphasising collaboration, respect for cultural values, and fairness in data use and sharing.

Citizen science: A programme that engages community members in scientific research and data collection, often focusing on environmental monitoring, biodiversity, and sustainability projects to promote hands-on learning and collective action.

Cloud computing: Delivery of computing services—such as storage, processing, and software—over the internet, allowing on-demand access to data and applications without the need for local infrastructure.

CO₂ compensation: Options for traveling librarians refer to methods, such as purchasing carbon offsets or supporting environmental projects, to neutralise the carbon emissions generated by their travel activities.

DEI (diversity, equity, and inclusivity): DEI in libraries means promoting diversity, ensuring equitable access to resources, and fostering an inclusive environment. It supports a sustainable future by empowering all communities and encouraging fair representation and equal opportunities.

Digital rights management: DRM refers to technology used to protect digital content from unauthorised use, copying, or distribution.

Education for sustainable development: ESD in a library context involves offering programmes, resources, and services that promote environmental awareness, social responsibility, and sustainable practices to empower individuals and communities.

FAIR principles: Refer to a set of guidelines designed to make data Findable, Accessible, Interoperable, and Reusable. These principles aim to improve the management and sharing of data to enhance scientific research by ensuring that data is easy to locate, retrieve, and use across different systems and disciplines.

Fair trade: System that ensures producers in developing countries receive fair wages, work under safe conditions, and practice sustainable methods, promoting economic equity and ethical consumption.

Fat building: Sustainable architectural design that emphasises energy efficiency, resource conservation, and adaptability, often featuring thick insulation, passive solar design, and minimal environmental impact.

Friends of the library: A group of volunteers or supporters who raise funds, advocate, and assist in promoting library services and programmes.

Global action days: Specific days designated to raise awareness and encourage collective action on global issues, such as environmental or social causes.

Green wall: Garden or plant installation that improves air quality, aesthetics, and provides natural insulation.

Hot desking: Flexible workspace arrangement where employees or users do not have assigned desks, but instead choose available workstations as needed.

HVAC: Heating, ventilation, and air conditioning, referring to systems that control the temperature, airflow, and air quality in a building.

Indigenous Traditional Knowledge: ITK is the wisdom and practices passed down through generations within Indigenous communities, rooted in their connection to the land, environment, and culture. It includes ecological, spiritual, and cultural insights.

Intelligent design: Thoughtful, data-driven approach to architecture that optimises functionality, user experience, and sustainability through advanced technology and efficient use of space.

Library of things: A collection in a library where people can borrow items beyond books, such as tools, equipment, or electronics, promoting resource sharing and sustainability.

Life Cycle Assessment: LCA is a systematic method for evaluating the environmental impacts of a product or service throughout its entire life cycle, from raw material extraction to disposal.

Makerspace: A makerspace in libraries is a creative, hands-on environment where individuals can access tools and resources to design, build, and experiment. It fosters innovation, collaboration, and learning, empowering people to develop new skills and ideas.

OCR: Optical Character Recognition is a technology that converts printed or handwritten text into machine-readable digital data.

OER: Open Educational Resources are freely accessible, openly licensed materials, such as textbooks, videos, and lesson plans, that can be used, adapted, and shared to support teaching and learning.

Participatory design: Involves engaging the community and end-users in the design process, ensuring the space meets their needs while incorporating sustainable practices and fostering a sense of ownership.

Repair café: Community-driven event where people can bring broken items to be repaired, promoting sustainability, reducing waste, and fostering resourcefulness.

Seed exchange: Event in the library where participants trade or share seeds to promote gardening, sustainability, and biodiversity.

Seed library: Collection of seeds available for borrowing and sharing, promoting sustainability, biodiversity, and local food security as part of the library's environmental and educational mission.

Sharing economy: Communal exchange of resources like books, tools, and seeds, promoting sustainability, reducing consumption, and fostering a culture of collaborative, eco-friendly living.

Sick building syndrome: A situation where poor indoor air quality, inadequate ventilation, or harmful building materials cause discomfort or health issues for occupants, such as headaches, fatigue, or respiratory problems.

STEAM: An educational approach to learning that uses Science, Technology, Engineering, the Arts, and Mathematics as access points for guiding student inquiry

STEM: Programme that focuses on science, technology, engineering, and mathematics education, with an emphasis on sustainability, environmental stewardship, and innovative solutions to green challenges.

Sustainable Development Goals: SDGs refer to the global objectives the library supports, such as promoting environmental sustainability, education, and social equity through programmes and resources that align with the UN's 17 goals.

Thermal paper: Type of paper coated with a heat-sensitive material that changes color when exposed to heat, used in printers like receipt or label printers.

Thin clients: Lightweight computers that rely on a central server for processing and storage, with minimal local resources.

Universal design: Creating spaces that are accessible and usable by people of all abilities, promoting inclusivity while also incorporating environmentally sustainable features.

Urban gardening: Using limited city space to grow plants, vegetables, or herbs, supporting sustainability, food security, and environmental education within the community.

Zoning areas: Strategic division of space based on energy efficiency and functional needs, such as separating areas for natural light, heating, cooling, or specific activities to minimise energy use and enhance sustainability.