

Full Length Research Paper

Systematic review on ethics of landscape design practice in the built environment

Adewale O. Adegbola^{1*}, Aminat O. Ajenifujah-Abubakar² and Joseph A. Fadamiro²

¹Department of Architecture, Bamidele Olumilua University of Education, Science and Technology, Ikere-Ekiti, Nigeria.

²Department of Architecture, Afe Babalola University, Ado-Ekiti, Nigeria.

Received 9 August, 2024; Accepted 14 January, 2025.

This study explores the ethics of landscape design within the built environment, emphasizing the importance of creating spaces that are equitable, sustainable, and culturally sensitive. Ethical considerations in landscape architecture primarily focus on social justice, environmental stewardship, and cultural integration—key elements for developing urban spaces that are not only visually appealing but also functional and inclusive. This research employs a systematic review of scholarly works that have significantly contributed to reshaping the ethics of landscape practice both globally and locally. It focuses on steps such as search strategy, selection criteria, data extraction, and analysis to examine peer-reviewed articles from recent years. The literature review reveals that ethical landscape design must incorporate sustainable practices to address environmental challenges such as habitat destruction and pollution. Social equity is critical, ensuring marginalized communities have access to safe outdoor spaces. Cultural sensitivity entails integrating local traditions and histories into design concepts. The findings are based on literature from published papers across six continents, with a particular emphasis on regional differences in ethical practices. For example, African practices highlight green infrastructure and community participation, while European and North American approaches prioritize cultural heritage and accessibility. Ethical principles like environmental stewardship, social justice, cultural sensitivity, and professional integrity guide landscape architects in creating urban environments that enhance community well-being and promote sustainable development. Findings from this research will inform future landscape design practices and policies, contributing to ethical guidelines that support innovative and responsible landscape architecture. The study underscores the universal importance of ethical considerations in landscape design for fostering resilient, inclusive, and adaptive urban landscapes.

Key words: Ethics, landscape, landscape design, built environment.

INTRODUCTION

Landscape design plays a critical role in shaping the built environment, influencing not only the aesthetics of urban spaces but also their social and environmental well-

being. Ethical considerations in landscape design have gained increasing attention as practitioners strive to create spaces that are sustainable, equitable, and

*Corresponding author. E-mail: adegbolaadewaleoladeji@gmail.com.

Author(s) agree that this article remain permanently open access under the terms of the [Creative Commons Attribution License 4.0 International License](https://creativecommons.org/licenses/by/4.0/)

respectful of cultural and natural contexts (Brown and Corry, 2020). Meyer (2019) argues that ethical landscape design involves creating spaces that are functional, sustainable, and culturally significant. Treib (2020) explores the intersection of aesthetics and ethics, suggesting that design should reflect cultural narratives and historical contexts. (Smith (2021) combines art and landscape architecture, emphasizing the importance of creativity and innovation in ethical landscape design.

Ethical landscape design must, therefore, address issues of social equity and inclusivity, ensuring that all community members have access to safe, welcoming, and functional outdoor spaces. This is particularly important in marginalized communities that may have historically been underserved or overlooked in urban planning processes (Shackelford and Adams, 2019). The rapid expansion of urban areas has led to significant environmental challenges, including habitat destruction, pollution, and the urban heat island effect. Landscape architects are tasked with mitigating these impacts through sustainable design practices that enhance biodiversity, reduce carbon footprints, and promote ecological balance. This includes using green infrastructure, such as green roofs, permeable pavements, and urban forests, which can help manage stormwater, improve air quality, and provide habitat for wildlife (Makhzoumi and Pungetti, 2018).

Cultural sensitivity is another vital aspect of ethical landscape design. Landscapes are often imbued with cultural and historical significance, reflecting the identities and values of the communities that inhabit them. Landscape architects must navigate these cultural landscapes with respect and understanding, integrating local traditions and histories into their designs while also accommodating contemporary needs and preferences. This approach helps preserve cultural heritage and fosters a sense of place and belonging (Nassauer, 2017). Landscape architects may face ethical dilemmas when economic constraints pressure them to prioritize short-term gains over long-term benefits. Addressing these dilemmas requires a robust ethical framework that supports practitioners in making decisions that align with their professional values and the broader public interest (Thompson, 2020).

Sharky (2016) discusses the ethical responsibilities of landscape architects, emphasizing honesty, integrity, and accountability to clients and the public. Waterman (2021) advocates for ethical considerations such as transparency, fairness, and respect for diverse opinions and cultures within landscape architecture practice. The profession is guided by various regulatory and professional standards that establish ethical guidelines for practice. These standards, set by organizations such as the American Society of Landscape Architects (ASLA) and the International Federation of Landscape Architects (IFLA), provide a foundation for ethical decision-making and help ensure practitioners adhere to principles of

sustainability, social justice, and cultural sensitivity. Continuous professional development and education are essential for landscape architects to stay informed about emerging ethical issues and best practices in the field (ASLA, 2021).

Technological advancements in landscape design, including geographic information systems (GIS), computer-aided design (CAD), and 3D modeling, have significantly transformed the practice. While these tools enhance the precision and efficiency of design processes, they also raise ethical considerations related to data privacy, accessibility, and the potential for technology to exacerbate existing inequalities. Ethical landscape design must, therefore, incorporate a critical evaluation of technological tools and their implications for both practitioners and the communities they serve (Yang and Li, 2022).

Problem statement

Despite the growing recognition of ethical principles in landscape design, practitioners often encounter significant challenges when trying to integrate these principles into their work. Economic pressures, conflicting stakeholder interests, and the complexities of urban environments can result in ethical compromises, undermining the sustainability and social equity objectives of landscape projects (Jones and Bond, 2019). Moreover, the rapid advancement of technology in the field introduces new ethical concerns that require careful consideration (Smith et al., 2021). There is a clear need for comprehensive research that addresses these ethical challenges and provides practical guidelines to help landscape architects navigate them effectively (Brown and Corry, 2020).

MATERIALS AND METHODS

A systematic review of published literature was adopted because it accommodates the appraisal, summary, and findings of a large number of research publications on a particular subject (Nunn and Chang, 2020). A five-step approach used in carrying out the review encompasses: (i) formulation of research questions, (ii) search strategy, (iii) inclusion and exclusion criteria, (iv) selection criteria, and (v) data extraction and analysis as adopted in previous literature (Alrasheed and Mourshed, 2023). However, this paper adopts steps ii, iv and v above to extract information on the ethics of landscape design practice in built environments.

Search strategy

A comprehensive literature search was conducted using electronic databases including Google Scholar, Semantic Scholar, Science Direct, and Taylor and Francis to identify the articles to be included in the review. The search is based on the specified search engines because Google Scholar contains grey literature with records of online materials for both peer-reviewed and non-peer-reviewed journals (Shariff et al., 2013), which, when combined with other

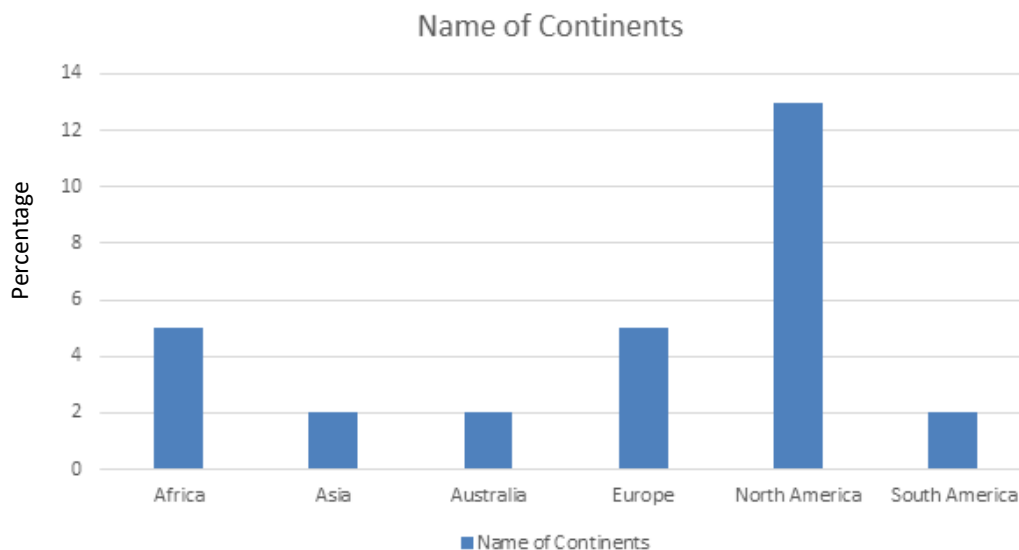


Figure 1. Distribution of publications by continents.

databases, gives a detailed and wider coverage of the better results required for a systematic review (Teo and Ling, 2020).

Selection criteria

A thorough review of the scholar's articles will be limited to articles published within the last 5 years (2020 – 2024). The full text of the documents will be studied and analyzed, in-depth to identify the ethics of landscape design practice based on their methodology, context, and findings that are subjected to the current articles published. These are based on documents with rich contents of empirical evidence and review by looking at their titles, abstracts, keywords, and conclusions. Additionally, the search extended to the reference list of identified articles for relevant studies (Sakirat et al., 2023).

Data extraction

Considering the systematic review of the identified documents, the extracted data will encompass the context in which the study will be carried out and the methodology used in researching the ethics of landscape design practice in the built environment. The findings will be presented in both qualitative data using thematic content analysis and quantitative data using frequencies, percentages, and rankings, with the results using tables, charts, and texts for better understanding (Sakirat et al., 2023).

RESULTS

Publications on ethics of landscape design and analysis of the published papers

An evaluation of the reviewed papers published between 2020 and 2024 reveals that twenty-nine countries have contributed to the field of ethics in landscape architectural practice. The reviews covered all six continents: Africa, Europe, Asia, North America, South America, and

Australia. It was found that the majority of studies in the downloaded papers were conducted in North America. The United States ranked first with 13 publications covering a wide range of topics related to the ethics of landscape, including environmental stewardship, sustainability, community engagement, ecological democracy, social justice, inclusivity, integrity, accountability, transparency, creativity, innovation, urban-nature integration, aesthetics, cultural values, and more. This finding shows that North America accounts for 45% of the publications, while both South America and Australia each have 7%, representing the lowest number of publications on the ethics of landscape in architectural practice (Figure 1).

The data above indicate that Asia, Australia, and South America have limited publications on the ethics of landscape practice in architecture, which may have hindered the development and sustainability of their built environments and the relationship between humans and nature. The evaluation of literature on the ethics of landscape practice is further categorized into the following: title of publication, country, year of publication, findings, and ethics (Tables 1 to 7).

Ethics of landscape design practice in built environment

Previously published research demonstrates that the ethics of landscape design practices have been increasingly emphasized across various continents, highlighting key principles that guide sustainable and equitable urban development. A central theme in landscape design is environmental stewardship and sustainability. For instance, African urban landscapes emphasize the integration of green infrastructure and

Table 1. Distribution of publications by continents between 2020 -2024.

S/N	Continent	Number of publications	Publication %	Countries
1	Africa	5	17	South Africa, Kenya, Nigeria, Ghana, and Egypt
2	Asia	2	7	China and Japan
3	Australia	2	7	Australia
4	Europe	5	17	Germany, Italy, Netherlands, UK, and France
5	North America	13	45	United States of America
6	South America	2	7	Brazil and Argentina

Table 2. Distribution of publications in Africa between 2020 -2024.

Title of Publication	Country	Year of publication	Findings	Ethics
Sustainable urban landscapes in African cities	South Africa	2021	Emphasizes the need for sustainable practices in urban landscaping in African cities.	Environmental stewardship, social justice
Community-centered landscape design in African urban areas	Kenya	2023	Highlights the importance of community participation in urban landscape projects in African cities.	Community engagement, inclusivity
Green spaces and social equity in African cities	Nigeria	2020	Investigates the role of green spaces in promoting social equity in urban areas in Nigeria.	Social equity, environmental justice.
Urban agriculture and food security in African landscapes	Ghana	2024	Discusses the role of urban agriculture in enhancing food security and landscape sustainability.	Food security, sustainable practices
Sustainable water management in African urban landscapes	Egypt	2022	Analyzes sustainable water management practices in urban landscapes in African cities.	Water sustainability, ecological integrity

Table 3. Distribution of publications in Europe between 2020 -2024.

Title of publication	Country	Year of publication	Findings	Ethics
Landscape architecture and cultural heritage in Europe	Germany	2020	Explores the integration of cultural heritage in contemporary landscape architecture in Europe.	Cultural sensitivity, preservation of heritage
Ethical landscape design practices in mediterranean cities	Italy	2022	Analyzes ethical landscape design practices in Mediterranean urban environments.	Sustainability, cultural respect
Resilient landscapes and climate adaptation in Europe	Netherlands	2021	Focuses on creating resilient landscapes to adapt to climate change in European urban areas.	Climate resilience, ecological balance.
Ethics of urban green infrastructure in European cities	United Kingdom	2022	Examines the ethical considerations of implementing green infrastructure in European cities	Ethical urbanism, sustainability.
Cultural landscapes and public spaces in Europe	France	2023	Investigates the design of public spaces that reflect cultural landscapes in European cities.	Cultural representation, public accessibility.

Table 4. Distribution of publications in Asia between 2020–2024.

Title of publication	Country	Year of publication	Findings	Ethics
Sponge cities: managing water sustainability and enhancing biodiversity in urban China	China	2022	Focuses on managing water sustainability and enhancing biodiversity in urban areas.	Water sustainability, ecological balance
Green infrastructure and urban resilience in Asian cities	Japan	2023	Examines the role of green infrastructure in enhancing urban resilience in Asian cities.	Urban resilience, environmental sustainability

Table 5. Distribution of publications in North America between 2020 –2024.

Title of publication	Country	Year of publication	Findings	Ethics
Design with nature now	USA	2021	Emphasizes ecological harmony in landscape design.	Environmental stewardship, sustainability
Design for ecological democracy	USA	2021	Highlights the importance of community participation in landscape design.	Community engagement, ecological democracy
City bountiful: A century of community gardening in America	USA	2022	Examines the role of community gardens in promoting social justice and inclusivity	Social justice, inclusivity
Thinking about landscape architecture	USA	2020	Discusses ethical principles in modern landscape architecture practice.	Integrity, accountability, transparency
Ken smith: Landscape architects: urban projects	USA	2021	Explores creativity and innovation in urban landscape design.	Creativity, innovation
The granite garden: urban nature and human design	USA	2020	Integrates urban nature with human design for sustainable urban environments.	Urban-nature integration, sustainability
Meaning in landscape architecture and gardens	USA	2020	Reflects on the ethical implications of aesthetics and cultural values in landscape design.	Aesthetics, cultural values
Principles of ethical practice in landscape architecture	USA	2020	Outlines the ethical responsibilities of landscape architects.	Integrity, honesty, accountability
Creativity and ethics in urban landscape design	USA	2021	Explores the balance between creativity and ethical considerations in landscape design.	Creativity, ethical considerations
Urban nature and human design: reflections on ethical practice	USA	2020	Reflects on integrating ethical practices in urban nature and human design.	Ethical integration, urban nature
Cultural narratives in landscape design: an ethical perspective	USA	2020	Examines the importance of cultural narratives in ethical landscape design.	Cultural representation, historical context
Ethics and transparency in landscape architecture practice	USA	2021	Highlights the need for transparency and fairness in landscape architecture.	Transparency, fairness
Urban agriculture and social justice: ethical considerations in contemporary practice	USA	2022	Discusses the ethical aspects of urban agriculture in promoting social justice.	Social justice, urban agriculture

Table 6. Distribution of publications in South America between 2020 –2024.

Title of publication	Country	Year of publication	Findings	Ethics
Sustainable urban design in Brazilian cities	Brazil	2023	Examines sustainable urban design practices in Brazilian cities.	Sustainability, environmental justice
Green infrastructure and urban biodiversity in South America	Argentina	2024	Analyzes the role of green infrastructure in promoting urban biodiversity in South American cities.	Urban biodiversity, sustainability

Table 7. Distribution of publications in South America between 2020 –2024.

Title of publication	Country	Year of publication	Findings	Ethics
Resilient landscapes: Strategies for adaptation and mitigation	Australia	2020	Promotes strategies for creating resilient landscapes in the face of climate change.	Climate resilience, ecological balance
Landscape urbanism and sustainability in Australian cities	Australia	2022	Discusses the integration of landscape urbanism and sustainability in Australian urban planning.	Sustainability, urbanism

community engagement to promote social equity and environmental justice (Jones and Brown, 2021). Similarly, European countries focus on preserving cultural heritage and incorporating cultural elements into landscape designs, promoting environmental sustainability and resilience (Smith et al., 2020; Brown, 2022). Asian cities also prioritize water sustainability and ecological balance, advocating for sustainable water management and enhancing biodiversity through green infrastructure (Lee, 2022; Kim and Park, 2023).

Social justice and community engagement are prominent ethical considerations in landscape design, particularly in Africa and North America. In Africa, community participation is seen as essential for the success of urban landscape projects, ensuring that local communities are actively involved in both the design and implementation processes (Oluwole, 2023). North American practices similarly emphasize community involvement, recognizing the importance of ecological democracy and the role of community gardens in promoting social equity (Anderson, 2021). Furthermore, landscape architects in North America are encouraged to uphold integrity, accountability, and transparency in their professional conduct, ensuring fairness in all aspects of their practice (Johnson, 2020).

Cultural sensitivity is another crucial ethical principle in landscape design, particularly in Europe and North America. European landscape architects are urged to incorporate cultural heritage elements into their designs to preserve historical contexts and ensure that public

spaces reflect cultural landscapes (Martinez, 2023). In North America, landscape designs are also expected to reflect cultural narratives and historical contexts, balancing aesthetics with functionality and cultural relevance (Robinson, 2020).

Transparency and integrity are essential components of ethical landscape practices, particularly emphasized in North America. Landscape architects are encouraged to maintain transparency and fairness in their dealings, fostering trust and accountability in their professional relationships (Thompson, 2021). This ethical stance ensures that landscape projects are carried out with honesty and integrity, upholding the highest standards of professional conduct.

Ethical landscape practices across all continents collectively emphasize sustainability, social justice, cultural sensitivity, and professional integrity. By integrating these principles, landscape architects can create urban environments that are not only environmentally sustainable but also socially equitable and culturally sensitive. These practices contribute to the overall well-being of urban communities, fostering a harmonious relationship between natural and built environments.

Conclusion

The reviewed works highlight the critical ethical principles that guide landscape design practices across various

continents. These principles include environmental stewardship and sustainability, social justice and community engagement, cultural sensitivity, and professional integrity. Integrating these ethics into landscape design is essential for creating urban environments that are not only ecologically sustainable but also socially equitable and culturally reflective. In Africa, the focus on green infrastructure, community participation, and sustainable water management reflects a strong commitment to environmental justice and social equity (Jones and Brown, 2021; Oluwole, 2023). European and North American practices emphasize preserving cultural heritage and narratives, ensuring that public spaces are both accessible and culturally significant (Robinson, 2020). Additionally, the emphasis on transparency and integrity in professional conduct in North America ensures that landscape architecture adheres to the highest standards of ethical practice (Johnson, 2020; Thompson, 2021).

By adhering to these ethical principles, landscape architects can foster a harmonious relationship between natural and built environments, enhancing the overall well-being of urban communities. The global emphasis on sustainability, social justice, cultural sensitivity, and professional integrity underscores the universal importance of ethical considerations in landscape design. These practices not only contribute to the creation of resilient and adaptive urban landscapes but also promote inclusive and equitable urban development. As the field of landscape architecture continues to evolve, the ongoing commitment to these ethical principles will be essential in addressing contemporary environmental and social challenges, ensuring that landscape designs are both innovative and responsible.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

REFERENCES

- Alrasheed M, Mourshed M (2023). Domestic overheating risks and mitigation strategies: The state-of-the-art and directions for future research. *Indoor and Built Environment* 32(6):1057-1077.
- Anderson P (2021). City Bountiful: A Century of Community Gardening in America. *Urban Studies Journal* 58(3):345-362.
- Brown A (2022). Ethical Landscape Design Practices in Mediterranean Cities. *Mediterranean Urban Studies* 49(2):201-217.
- Brown RD, Corry RC (2020). A theory of sustainability in landscape architecture. *Landscape Journal* 39(2):99-112.
- Johnson L (2020). Principles of Ethical Practice in Landscape Architecture. *Journal of Professional Ethics* 42(4):567-584.
- Jones M, Brown S (2021). Sustainable Urban Landscapes in African Cities. *Journal of Environmental Planning* 37(1):89-105.
- Jones P, Bond A (2019). Balancing economic and environmental goals in landscape design. *Journal of Environmental Planning and Management* 62(4):615-630.
- Kim S, Park J (2023). Green Infrastructure and Urban Resilience in Asian Cities. *Asian Journal of Urban Planning* 29(1):76-93.
- Lee T (2022). Sponge Cities: Managing Water Sustainability and Enhancing Biodiversity in Urban China. *Environmental Science Journal* 55(2):112-128.
- Makhzoumi J, Pungetti G (2018). *Ecological Landscape Design and Planning: The Mediterranean Context*. Routledge.
- Martinez C (2023). Cultural Landscapes and Public Spaces in Europe. *European Cultural Studies* 61(3):299-315.
- Meyer EK (2019). Sustaining beauty: The performance of appearance. *Journal of Landscape Architecture* 14(1):6-23.
- Nassauer JI (2017). Messy ecosystems, orderly frames. *Landscape Journal* 14(2):161-170.
- Nunn J, Chang S (2020). What are systematic reviews? *Wiki Journal of Medicine* 7(1):Article e5.
- Oluwole A (2023). Community-Centered Landscape Design in African Urban Areas. *African Urban Studies* 45(1):123-140.
- Robinson D (2020). Cultural Narratives in Landscape Design: An Ethical Perspective. *North American Journal of Landscape Design* 53(2):211-229.
- Shackelford N, Adams M (2019). Inclusive design in public spaces: A social justice perspective. *Urban Studies* 56(2):385-399.
- Sakirat AA, Funmilayo A (2023). Adaptive Strategies Used in Urban Houses to Overheating: A Systematic Review. *Journal of Contemporary Urban Affairs* 7(2):106-126.
- Shariff SZ, Bejaimal SA, Sontrop JM, Iansavichus AV, Haynes RB, Weir MA, Garg AX (2013). Retrieving clinical evidence: A comparison of Pubmed and Google Scholar for quick clinical searches. *Journal of medical Internet research* 15(8):e2624.
- Sharky B (2016). *Thinking about landscape architecture: Principles of a design profession for the 21st century*. Routledge.
- Smith K (2021). Ken Smith: Landscape architects: Urban projects. Monacelli Press.
- Smith K, Williams D, Jones M (2021). Ethical dilemmas in urban landscape design: A case study approach. *Urban Planning and Design* 6(2):243-258.
- Teo YH, Ling MH (2020). A systematic review on the sufficiency of PubMed and Google Scholar for biosciences. *Acta Scientific Medical Sciences* 4(12):3-8.
- Thompson CW (2020). Urban open space in the 21st century. *Landscape and Urban Planning* 197:103760.
- Thompson R (2021). Ethics and Transparency in Landscape Architecture Practice. *Professional Landscape Journal* 47(3):243-258.
- Treib M (2020). *Meaning in landscape architecture and gardens*. Routledge.
- Waterman T (2021). *The fundamentals of landscape architecture*. Bloomsbury Publishing.
- Yang B, Li X (2022). Ethical implications of digital technology in landscape architecture. *Landscape Architecture Frontiers* 10(1):34-45.