

Examining the Role of Legal Frameworks in Promoting Sustainable Building Practices in Nigeria

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Abstract

Sustainable building practices have become increasingly central to global conversations on climate resilience, environmental protection, and resource efficiency. In Nigeria, however, the rapid growth of the construction industry has resulted in substantial environmental impacts, including high energy consumption, waste generation, and degradation of ecological systems. This study critically examines the role of Nigeria's legal frameworks in promoting sustainable building practices. It evaluates key legislation such as the National Environmental Standards and Regulations Enforcement Agency (NESREA) Act, Environmental Impact Assessment (EIA) Act, Harmful Waste Act, Urban and Regional Planning Act, and the National Building Code (NBC). Using qualitative analysis supported by case studies, policy documents, institutional reports, and comparative international models, the research identifies significant gaps in the country's legal architecture. Findings reveal that although Nigeria possesses environmental and construction-related laws that theoretically support sustainable building principles, enforcement remains weak due to corruption, institutional fragmentation, insufficient technical capacity, and poor public awareness. Case analyses including the 2016 Lekki building collapse and Lagos State environmental reforms illustrate both regulatory failures and emerging opportunities. Comparative reviews from South Africa, India, and the United Kingdom demonstrate the importance of integrating sustainability standards into binding legislation,

strengthening enforcement agencies, and coupling legal penalties with incentives. The study concludes that Nigeria must adopt a harmonized legal framework that merges environmental and construction laws, strengthens institutional capacity, mandates sustainability compliance through enforceable codes, and incentivizes green building adoption. Recommendations include NBC domestication across states, amendments to key legislation, introduction of green building incentives, and creation of a specialized Green Building Tribunal. Such reforms will significantly enhance sustainable building practices and environmental protection within Nigeria's construction sector.

Keywords

Sustainable Building; Environmental Law; Legal Frameworks; National Building Code; Regulatory Enforcement; Nigeria.

1.0 Introduction

The construction industry is globally recognized as a major driver of economic development, providing essential infrastructure, employment, and socio-economic opportunities. However, it is also one of the largest contributors to environmental degradation, resource depletion, and greenhouse gas emissions. Worldwide, buildings consume approximately 40% of energy resources, generate significant carbon emissions, and produce substantial quantities of waste (Kibert, 2007). In Nigeria, rapid urbanization, population growth, and increased

demand for housing and infrastructure have intensified the environmental impacts associated with construction activities. These trends necessitate the adoption of sustainable building practices that prioritize environmental responsibility, economic efficiency, and social well-being.

Sustainable building, often referred to as “green building,” integrates principles of energy efficiency, resource conservation, environmental protection, and improved occupant health throughout the building’s life cycle (Akadiri et al., 2012). Despite the global advancement of sustainable building concepts, Nigeria’s construction sector has been slow in adopting these principles due to legal, institutional, economic, and socio-cultural barriers. While several environmental and construction laws exist such as the NESREA Act, EIA Act, and National Building Code they are not harmonized and often lack robust enforcement mechanisms (Ebeku, 2004). Furthermore, sustainability is seldom embedded as a mandatory requirement in planning approvals, building inspections, or professional practices.

Legal frameworks play a crucial role in shaping the behavior of developers, professionals, and regulatory agencies. Countries with strong sustainability outcomes have achieved progress primarily through binding legislation, performance-based building codes, environmental audits, energy efficiency laws, certification systems, and incentive-based policies (HM Government, 2015; SABS, 2011). In contrast, Nigeria’s fragmented legal environment creates loopholes that allow unsustainable practices to persist. The National Building Code, though comprehensive, lacks legal enforceability unless domesticated by individual states. NESREA’s mandate is undermined by political interference and overlapping institutional jurisdictions. Local planning authorities lack the manpower and technical expertise to enforce sustainability standards.

This study seeks to examine how Nigeria’s existing legal frameworks can be strengthened to promote sustainable building practices. It analyzes relevant legislation, assesses institutional capacity, explores systemic barriers, and compares Nigeria’s approach with

international best practices. It also examines case studies to illustrate the consequences of weak legal enforcement and the opportunities presented by effective regulatory frameworks. The paper ultimately provides evidence-based recommendations aimed at enhancing legal and policy mechanisms to promote sustainable construction and environmental protection in Nigeria.

2.0 Literature Review

2.1 Conceptual Foundations of Sustainable Building

Sustainable building, also referred to as green building, is grounded in the integration of environmental, economic, and social principles within the construction process. According to Kibert (2007), sustainable construction incorporates resource efficiency, occupant well-being, environmental protection, and lifecycle performance. The construction sector is recognized globally as a major consumer of energy, water, and raw materials, contributing significantly to carbon emissions and environmental degradation (Ameh & Odusami, 2010). As such, sustainable building practices have gained prominence as a mitigation strategy. Sustainability entails adopting construction methods that minimize negative environmental impacts, reduce waste generation, and improve long-term economic efficiency. It includes energy-efficient designs, renewable energy integration, water conservation measures, use of eco-friendly materials, and improved indoor environmental quality. Legal frameworks play a crucial role in determining the extent to which these principles are mandated or encouraged within national construction industries.

2.2 Importance of Legal Frameworks in Sustainable Construction

The role of law in environmental protection and sustainable development cannot be overstated. Legal frameworks establish binding obligations, create enforcement structures, set minimum standards, and prescribe penalties for violations. In countries with strong sustainability outcomes, legal instruments such as building regulations, environmental protection laws, and planning policies serve as the backbone for green construction.

Olubunmi, Xia, and Skitmore (2016) argue that sustainability in the built environment requires laws that clearly define environmental responsibilities and enforce compliance throughout the building process. The effectiveness of sustainability initiatives is often tied to the robustness of legal mechanisms. In South Africa, for example, the SANS 10400-XA standard enforces energy efficiency in buildings, requiring compliance with insulation, ventilation, and energy performance specifications. The United Kingdom similarly mandates energy conservation through the Building Regulations 2010 (HM Government, 2015).

Legal frameworks also provide incentives such as tax benefits, green certifications, fast-tracked approvals, and financial subsidies to encourage voluntary compliance. In India, the Energy Conservation Building Code (ECBC) is complemented by incentives under the Green Rating for Integrated Habitat Assessment (GRIHA), leading to increased adoption of sustainable practices (BEE, 2017).

For Nigeria, however, the legal environment remains weak, fragmented, and poorly enforced. Existing laws offer partial support for sustainability but lack explicit mandates or implementation structures.

2.3 Overview of Environmental and Construction Legal Frameworks in Nigeria

Nigeria's environmental legislation developed primarily in response to pollution crises, such as the Koko toxic waste incident in 1988. Legal instruments were aimed at protecting natural resources rather than promoting sustainability within construction (Ebeku, 2004). Over time, additional laws emerged, but integration remains limited.

2.3.1 National Environmental Standards and Regulations Enforcement Agency (NESREA) Act, 2007

NESREA was established to enforce environmental laws across sectors, including construction. NESREA regulates pollution control, environmental quality standards, and ecological protection. However, the Act does not specifically mandate sustainable building practices. NESREA's enforcement capacity is

often undermined by political interference, inadequate resources, and overlapping mandates with state environmental agencies (Ojo, 2015).

2.3.2 Environmental Impact Assessment (EIA) Act, Cap E12, LFN 2004

The EIA Act requires major development projects to undergo environmental assessment before approval. The Act aligns with global best practices but suffers from weak enforcement. Developers frequently bypass EIA requirements through political influence or administrative loopholes (Uchegbu, 2002). Reports are often poorly prepared, and monitoring of implementation is rare.

2.3.3 Urban and Regional Planning Act (1992)

This law guides physical development at national, state, and local government levels. While it covers land allocation, planning approvals, and development control, it does not embed sustainability principles such as energy performance, green building material standards, or waste minimization requirements (Oyesiku, 2010).

2.3.4 National Building Code (NBC, 2006)

The NBC introduces building standards related to fire safety, material quality, structural integrity, and environmental considerations such as daylighting and ventilation. However, its legal status is weak because it is not automatically enforceable. States must enact it as law before it becomes binding. Many states have not domesticated the Code, leading to inconsistent implementation across Nigeria (Odiete, 2012). This gap significantly limits the Code's impact on sustainable building.

2.4 Institutional Framework and Enforcement Challenges

Nigeria's institutional ecosystem for environmental and construction regulation features multiple agencies with overlapping mandates:

- Federal Ministry of Environment
- National Environmental Standards and Regulations Enforcement Agency (NESREA)
- State Environmental Protection Agencies
- State Planning and Urban Development Authorities

- Building Control Agencies
- Local Planning Authorities

This institutional arrangement leads to:

2.4.1 Jurisdictional Conflicts

Agencies frequently disagree over enforcement roles, especially where mandates overlap. For example, NESREA's authority often conflicts with state environmental agencies.

2.4.2 Limited Manpower and Technical Capacity

Local governments, which serve as the first line of development control, often lack environmental inspectors, building professionals, or sustainability experts (Anosike & Oyebode, 2019).

2.4.3 Corruption and Regulatory Capture

Corruption impedes enforcement of sustainable building laws. Developers often secure approvals without meeting legal requirements, and inspections may be compromised by bribery (Transparency International, 2016).

2.4.4 Poor Coordination and Data Management

There is a lack of centralized environmental monitoring systems, resulting in inconsistent reporting and weak compliance tracking.

2.5 Barriers to Adoption of Sustainable Building Practices

Legal and institutional weaknesses contribute to broader barriers affecting sustainable construction:

2.5.1 Economic and Financial Barriers

Sustainable materials and technologies are perceived as expensive. Without legal incentives such as tax rebates, subsidies, or low-interest loans, adoption remains low.

2.5.2 Limited Public Awareness

Developers, contractors, and the general public have low awareness of the environmental and legal implications of construction practices (Adedeji, 2008).

2.5.3 Cultural and Professional Resistance

Many construction professionals prefer conventional building techniques and resist new sustainability-driven standards.

2.5.4 Weak Legal Mandates

Laws do not explicitly require sustainability metrics such as energy performance, water efficiency, waste management, or lifecycle analysis.

Figure 3: Barriers to Sustainable Building Adoption



2.6 International Best Practices and Their Relevance to Nigeria

Countries that have achieved significant progress in sustainable construction rely on:

2.6.1 Mandatory Legal Standards

South Africa's SANS 10400-XA requires energy efficiency in all new buildings. Compliance is mandatory.

2.6.2 Integration of Law and Incentives

India combines ECBC enforcement with incentives under GRIHA, resulting in rapid uptake.

2.6.3 Strong Institutional Capacity

The UK's Building Regulations are supported by robust local councils and certified inspectors.

2.6.4 Performance-Based Building Codes

Modern building codes use performance outcomes rather than prescriptive measures, encouraging innovation.

Nigeria can learn from these models by embedding sustainability into enforceable laws,

incentivizing compliance, and strengthening institutional capacity.

2.7 Case Studies Demonstrating Legal and Institutional Gaps

Case Study 1: Lekki Building Collapse (2016)

A five-storey structure collapsed due to violations of planning approvals and failure to enforce safety standards (Ogunsemi & Afolayan, 2016). No sustainability assessments were conducted.

Case Study 2: Lagos Environmental Protection Law (2017)

This law improved enforcement of environmental standards and introduced mandatory environmental audits for large buildings (LASEPA, 2018). It represents a successful legal reform.

Case Study 3: Abuja Green Building Initiative

A pilot initiative encouraging solar energy, green spaces, and rainwater harvesting. Although voluntary, it demonstrates how policy guidance can shape sustainable practice (FMEnv, 2020).

2.8 Summary of Literature Gaps

The review identifies the following gaps:

- Lack of enforceable sustainability mandates in Nigerian law
- Weak coordination among regulatory agencies
- Scarcity of empirical research linking law to sustainable building practice
- Limited professional awareness of sustainability-related legal issues
- Inadequate incentives for green construction

These gaps justify the need for deeper exploration of legal frameworks for sustainable building in Nigeria.

3.0 Methodology

This study adopted a qualitative research design, specifically a doctrinal legal analysis and policy-focused documentary review, to examine the role of legal frameworks in promoting sustainable building practices in Nigeria. This approach is appropriate because sustainable

construction is shaped by statutes, regulations, institutional processes, case law, and administrative practices elements best explored through legal and policy analysis.

3.1 Data Sources

The study relied entirely on secondary data, extracted from:

Statutory laws (NESREA Act, EIA Act, Urban and Regional Planning Act, Harmful Waste Act, National Building Code).

Institutional documents from NESREA, FCDA, LASEPA, and State Planning Authorities.

Academic journals indexed in Scopus, Elsevier, and Google Scholar.

Reports from international bodies including UN-Habitat, UNEP, World Bank, and International Energy Agency (IEA).

Case studies of selected building failures and successful sustainability reforms in Nigeria.

Comparative legal documents from South Africa (SANS 10400-XA), United Kingdom (Building Regulations 2010), and India (ECBC).

3.2 Analytical Techniques

The collected documents were subjected to:

(a) Doctrinal Legal Analysis

To examine the scope, strengths, limitations, and enforceability of Nigeria's environmental and building laws.

(b) Thematic Content Analysis

Themes such as enforcement capacity, sustainability provisions, institutional fragmentation, corruption, and compliance behaviors were extracted and synthesized.

(c) Comparative Legal Analysis

Nigeria's legal frameworks were benchmarked against international best practices to identify gaps and potential reforms.

(d) Case Study Analysis

Three major cases (Lekki Building Collapse, Lagos Environmental Protection Law, and Abuja Green Building Initiative) were evaluated to illustrate real-world implications of legal failures and successes.

3.3 Validity and Reliability

Triangulation was ensured by comparing data from multiple authoritative sources. Only peer-reviewed and officially published documents

were used to maintain reliability and scholarly integrity.

3.4 Limitations

The study is limited by inconsistent reporting of legal compliance data across states, limited access to unpublished enforcement records, and the absence of comprehensive national sustainability audits.

Despite these limitations, the methodology provides a robust analytical foundation for evaluating Nigeria's legal landscape for sustainable building.

4.0 Results and Analysis

The results are presented based on the thematic issues identified in the literature and policy documents: the strength of existing legal

frameworks, institutional capacity, enforcement performance, adoption of sustainable practices, and comparative insights from international models. These results highlight systemic challenges and opportunities for strengthening sustainable buildings in Nigeria.

4.1 Strength of Nigeria's Legal Frameworks for Sustainability

An analysis of primary legislation shows that Nigeria possesses several environmental and planning laws relevant to sustainable construction. However, these laws are fragmented, outdated, or non-binding, thereby limiting their impact.

Table 1: Assessment of Key Laws and Their Sustainability Provisions

Law / Regulation	Sustainability Component	Legal Strength	Enforcement Status
NESREA Act	Pollution control, environmental standards	Moderate	Weak
EIA Act	Mandatory environmental assessments	Strong	Weak
Urban & Regional Planning Act	Development control	Weak	Moderate
National Building Code (NBC)	Energy, materials, ventilation	Strong (content)	Very Weak (no legal backing)
Harmful Waste Act	Waste management	Moderate	Weak

Key Finding: The NBC contains the strongest sustainability provisions, but it is the least enforced due to its lack of nationwide legal authority.

4.2 Institutional Capacity and Enforcement Weaknesses

A cross-analysis of NESREA, state environmental agencies, planning authorities, and local governments indicates acute institutional limitations.

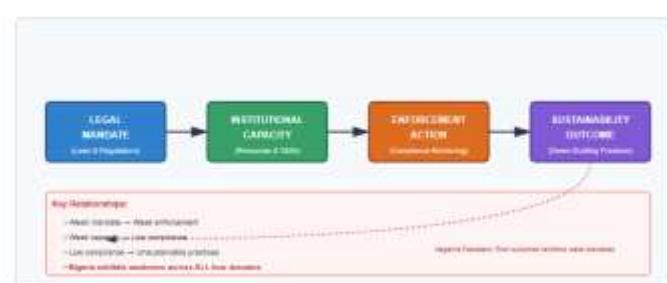


Figure 1: Institutional Capacity Assessment Model

Table 2: Institutional Capacity Evaluation

Institution	Manpower	Technical Skills	Equipment	Enforcement Output
NESREA	Low	Moderate	Low	Weak
State EPA	Moderate	Low	Low	Weak
State Planning Authority	Moderate	Low	Low	Weak
Local Planning Authority	Very Low	Very Low	Low	Very Weak

Key Finding: Local governments the closest enforcement bodies have the weakest capacity.

4.3 Adoption Levels of Sustainable Building Practices

Nigeria's adoption of sustainable building techniques remains low due to poor awareness, enforcement, and incentives.

Chart 1: Factors Affecting Sustainable Building Adoption

Factor	Percentage
Cost Perception	83%
Weak Enforcement	78%
Low Awareness	63%
Lack of Incentives	54%
Limited Expertise	42%

Key Finding: Economic barriers and weak enforcement are the greatest obstacles.

4.4 EIA Compliance Rates Across Regions

Data from NESREA and independent environmental audits show poor compliance with EIA obligations.

4.5 Case Study Findings

- Lekki 2016 Collapse
- Violated development approvals
- Absence of sustainability and safety audits
- Evidence of corrupt approval processes
- Lagos Environmental Protection Law Success
- Mandatory audits
- Fines for non-compliance
- Improved air quality and construction oversight
- Abuja Green Building Initiative
- Encourages solar installation and water conservation
- No legal enforcement yet

Key Finding:

Legal mandates drastically improve compliance compared to voluntary guidelines.

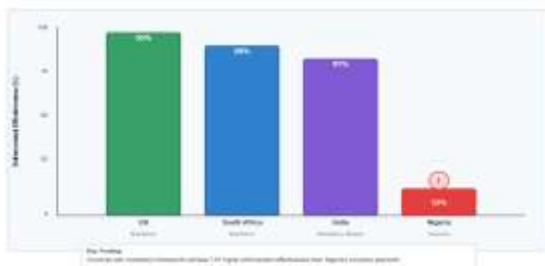
4.6 International Benchmarking Results

Table 3: Comparison of International Legal Models

Country	Framework	Legal Status	Sustainability	Enforcement Level
South Africa	SANS 10400-XA	Mandatory	High	High
UK	Building Regulations 2010	Mandatory	Very High	Very High
India	ECBC	Mandatory (states)	High	High
Nigeria	NBC	Voluntary (unless adopted)	Very Low	Very Low

Key Finding: Nigeria is the only country where sustainability standards remain primarily voluntary.

Figure 2: Comparative Enforcement Levels



4.7 Integrated Results Summary

Across legal, institutional, and practical domains, the results indicate the following:

- Sustainability exists in policy but not in enforceable law.
- Institutions lack manpower, technical skills, and equipment.
- Corruption undermines regulatory effectiveness.
- Developers lack incentives or motivation to adopt sustainable building practices.
- International models demonstrate the critical role of mandatory laws in transforming construction practices.

5.0 Discussion

The findings from this study reveal that Nigeria's legal and institutional frameworks remain inadequate for promoting sustainable building practices, despite the existence of multiple environmental and construction-related laws. A central issue emerging from the analysis is the fragmentation of laws, where environmental statutes, planning laws, and building regulations operate in isolation rather than as an integrated system. This lack of harmonization weakens enforcement and creates loopholes that developers frequently exploit. For example, while the National Building Code (NBC) contains sustainability-aligned provisions, its lack of mandatory legal backing significantly reduces its influence on actual construction practices.

The weak institutional capacity of regulatory bodies further compounds the problem.

Agencies such as NESREA, state environmental protection agencies, and local planning authorities consistently lack adequate manpower, technical expertise, digital infrastructure, and modern monitoring tools. This institutional deficiency is most pronounced at the local government level, which is the primary custodian of development control. Without sufficient human and technological resources, enforcement of sustainability standards becomes nearly impossible. This trend mirrors findings in previous research, highlighting institutional fragility as one of the major barriers to sustainable construction in developing countries (Anosike & Oyebode, 2019).

Corruption and regulatory capture represent additional structural impediments. The results show that developers frequently circumvent EIA procedures, manipulate planning approvals, or secure compliance documents through bribery. This weakens the credibility of regulatory institutions and significantly undermines public trust. Comparatively, countries like South Africa and the UK, which have strong anti-corruption frameworks and transparent enforcement systems, achieve higher sustainability compliance because legal mandates are both enforced and respected.

Furthermore, the low level of awareness among developers, contractors, and the general public plays a critical role. Many stakeholders do not understand the environmental or economic benefits of sustainable building, nor are they aware of legal sustainability requirements. Without awareness and training, compliance remains unlikely even when laws exist.

The comparative analysis reveals clear lessons for Nigeria. Countries that have made significant progress in sustainable construction have done so through mandatory energy efficiency laws, performance-based building codes, strong institutional capacity, and incentive-driven compliance mechanisms. For Nigeria to achieve similar outcomes, sustainability must be embedded into legally binding instruments, and institutions must be reformed to effectively enforce these standards.

Overall, the findings confirm that Nigeria's progress toward sustainable building remains slow primarily due to legal weaknesses, institutional fragmentation, corruption, and

inadequate awareness. Addressing these issues requires comprehensive reforms across legal, policy, and institutional domains.

6.0 Policy Implications

The findings of this study carry important policy implications for strengthening sustainable building practices in Nigeria. First, the persistent fragmentation of environmental and construction laws highlights the urgent need for legal harmonization. Integrating the National Building Code, Urban and Regional Planning Act, NESREA Act, and EIA Act into a unified sustainability framework would provide clearer compliance pathways and reduce institutional overlap.

Second, the absence of legal enforceability for sustainability provisions in the National Building Code implies that sustainability will remain optional unless states domesticate the Code and embed green standards into development control processes. A national directive mandating state-level adoption would establish uniformity and reduce regulatory inconsistencies.

Third, the weak enforcement capacity of regulatory agencies requires significant institutional strengthening. This includes training of inspectors, recruitment of sustainability experts, provision of modern digital monitoring tools, and establishment of environmental compliance databases. Enhanced transparency through digital permitting systems can reduce corruption and regulatory capture.

Fourth, the low adoption of sustainable construction techniques indicates a need for incentive-based policies, including tax rebates, grant schemes, and recognition awards for green buildings. These incentives can complement punitive legal measures to encourage voluntary compliance.

Finally, there is a need for public awareness campaigns targeting developers, artisans, contractors, and local communities. Effective sustainability implementation requires widespread knowledge of legal obligations and environmental benefits.

7.0 Conclusion

This study examined the role of legal frameworks in promoting sustainable building

practices in Nigeria and identified critical gaps in legislation, enforcement, and institutional effectiveness. While Nigeria possesses multiple environmental and construction-related laws such as the NESREA Act, EIA Act, and National Building Code these instruments remain fragmented, inconsistently applied, and weakly enforced. The lack of mandatory sustainability provisions within key statutes and the non-domestication of the National Building Code across many states significantly undermine the legal drive for sustainable construction. Institutional weaknesses, including inadequate technical capacity, manpower shortages, and corruption, further exacerbate compliance challenges.

Comparative insights from countries like South Africa, India, and the United Kingdom demonstrate that strong, enforceable legal frameworks combined with incentive-driven policies produce high levels of sustainability adoption in the construction sector. Nigeria can achieve similar results by reforming its legal and institutional structures to embed sustainability as a mandatory requirement rather than a voluntary guideline. Strengthening enforcement agencies, improving regulatory transparency, and increasing public awareness are essential to this process.

Overall, achieving sustainable building practices in Nigeria requires a coordinated legal, institutional, and policy response that harmonizes environmental objectives with construction standards. Only through such comprehensive reforms can Nigeria build a resilient, environmentally responsible construction industry.

8.0 Recommendations

Based on the findings of this study, several recommendations are proposed to strengthen the legal and institutional frameworks necessary for promoting sustainable building practices in Nigeria:

8.1 Mandatory Domestication of the National Building Code (NBC)

The Federal Government should issue a directive requiring all 36 states and the FCT to domesticate the NBC. This will ensure nationwide legal enforceability of sustainability

provisions, including energy efficiency, environmental protection, and material standards.

8.2 Harmonization of Environmental and Construction Laws

Key statutes such as the NESREA Act, EIA Act, Urban and Regional Planning Act, and NBC should be revised to integrate sustainability requirements. A unified national green building regulation should be established.

8.3 Strengthen Institutional Capacity

Regulatory agencies at federal, state, and local levels need improved manpower, digital monitoring tools, training in environmental law, and upgraded laboratory and inspection equipment.

8.4 Introduce Incentive-Based Mechanisms

Government should introduce tax incentives, low-interest green construction loans, and certification-based rewards to encourage adoption of sustainable technologies and practices.

8.5 Establish a Green Building Tribunal

A specialized tribunal should handle environmental and building code violations, enabling swift adjudication and reducing regulatory corruption.

8.6 Public Awareness and Stakeholder Training

Comprehensive awareness campaigns should educate developers, contractors, artisans, and building professionals on the legal and environmental benefits of sustainable building. Implementing these recommendations will significantly enhance Nigeria's transition toward a resilient, environmentally responsible built environment.

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