

Assessing the Viability of Green Building Rating System for Sustainable Construction in Nigeria: Opportunities and Challenges

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Abstract

This journal article examines the practicality of green building grading systems for environmentally friendly buildings within Nigeria, emphasizing the opportunities and difficulties present. The writers begin by giving a broad overview of the idea of "green buildings" and their significance in relation to sustainable development. Following that, they go over the various green building rating systems in use now around the globe and how Nigeria can use them. As part of their analysis, the authors also look at Nigeria's legal framework for sustainable building and point out its shortcomings. They claim that a green building grading system might help to eliminate these differences by providing a set of universal criteria for assessing the sustainability of buildings. The authors also draw attention to the significant challenges that Nigeria faces in adopting a green building rating system, including stakeholder misunderstanding of green building principles, a lack of easily accessible green building technologies and supplies, as well as the high cost of certification. Therefore, the authors come to the conclusion that although there are many obstacles to implementing a green building grading procedure in Nigeria, it is still possible to do so and progress sustainable building in the country with the right policies and incentives.

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I. INTRODUCTION

1.1 The Concept of Green Building Grading Systems and their importance in Promoting Sustainable Construction

Green building grading systems are structures created to assess and accredit facilities based on their sustainability and environmental impact. These systems offer a thorough set of recommendations for environmentally friendly building methods, encompassing topics like water conservation, energy efficiency, and indoor air quality (Dabara, Akinyemi, Adekunle, Omotehinse, & Ankeli, 2017). Green building grading systems are essential in lowering the carbon footprint of buildings and assisting in the battle against climate change since they encourage sustainable construction methods. They not only benefit the environment, but they also provide financial advantages including decreased running expenses and raised property prices. Recognizing the significance of green building grading systems in promoting sustainability in construction for a better future is therefore crucial (World Green Building Council, 2023).

1.2 Background Information on Sustainable Construction Practices in Nigeria

The construction sector in Nigeria is a crucial one for the economy of the nation and is a considerable contributor to its GDP (GDP). It includes a broad range of tasks, such as civil engineering projects, building construction, and real estate development. Inadequate infrastructure, high building costs, and restricted funding options are just a few of the difficulties the sector has had to deal with throughout the years. These difficulties have hampered the growth and development of the sector, making it challenging for players to embrace sustainable construction methods.

Notwithstanding the difficulties, there is a growing understanding in Nigeria of the value of a sustainable built environment. Demand for green buildings has increased recently as developers and property owners become more conscious of the environmental and financial advantages of using sustainable building techniques (Abisuga & Okuntade, 2020).

This trend is particularly evident in the commercial real estate sector, where tenants are increasingly demanding sustainable buildings that provide healthy and productive work environments.

However, the acceptance of sustainable, green building practices is still limited in Nigeria. Many developers and property owners are yet to fully appreciate the benefits of sustainable construction, such as lower operating costs, enhanced occupant comfort and health, and reduced environmental impact. There is also a lack

of regulatory frameworks and incentives to promote sustainable construction practices, which has led to a low adoption rate of green architecture and building grading systems.

To address these challenges, there is a need for greater education and awareness of the advantages of sustainable, green building practices. Developers and property owners need to be made aware of the long-term economic and environmental benefits of green building rating systems, and the government needs to provide regulatory frameworks and incentives to promote their adoption. Additionally, there is a need for research and development of locally-adapted green architecture grading systems that are tailored to the Nigerian context (Ayarkwa, Opoku, Antwi-Afari, & Li, 2022).

In short, using sustainable construction techniques is essential to accomplishing Nigeria's economic and environmental objectives. There is still a long way to go even though the nation has made tremendous progress in implementing these criteria. Nigeria may promote green building grading systems and sustainable building techniques with more information, education, and incentives.

1.3 Purpose and Objectives of The Study

This study's objectives are to evaluate the practicality of green building grading systems for environmentally friendly construction in Nigeria and to pinpoint the advantages and disadvantages of their adoption. The primary objectives of this study are to evaluate the usefulness of sustainable building rating systems as a tool for promoting sustainable building practices in Nigeria and to identify the factors that influence the adoption of these practices. This research specifically intends to:

1. Determine the main factors influencing and impeding Nigeria's adoption of green building grading systems.
2. Examine the level of familiarity and understanding of green building grading methods among Nigerian actors in the construction industry.
3. Determine whether the Nigerian construction industry can implement green building rating methods.
4. The study's objective is to develop unique and palatable strategies for promoting the idea and application of green building rating systems in Nigeria's construction industry.

This study may therefore be utilized to comprehend the effects of green construction techniques in Nigeria. Furthermore, it would be feasible to ascertain how the development of sustainability in the nation would benefit from green building grading systems. The ultimate objective is to enhance Nigeria's building quality grading systems.

II. LITERATURE REVIEW

2.1 Review of Relevant Literature

The concept of green building rating systems has gained increasing attention globally as a means of promoting sustainable construction practices. In Nigeria, sustainable construction practices are becoming increasingly important due to the country's growing population and urbanisation, which have put pressure on the increased demand for resources and the environment. This section provides a review of relevant literature on green building rating systems and sustainable construction practices in Nigeria and globally (Jackson, 2021).

Sustainable construction methods are encouraged by green building rating systems as Leadership in Energy and Environmental Design (LEED), Building Research Establishment Environmental Assessment Method (BREEAM), and Green Star. These methods offer a framework for evaluating a building's environmental performance and determining its sustainability based on elements including indoor air quality, water conservation, and energy efficiency.

Sustainable building techniques have been gaining popularity in Nigeria in recent years, thanks to a growing understanding of their advantages. However, the use of green construction grading systems in Nigeria has been curtailed due to issues like a lack of awareness, insufficient funding, and a lack of legal frameworks to encourage their adoption.

Internationally, the use of green building rating systems has been expanding consistently throughout time, with nations like the United States, the United Kingdom, and Australia setting the bar for the promotion of environmentally friendly building methods. These nations have put in place a number of laws and programs to promote the use of green building grading systems, including tax breaks, financial aid, and building regulations that demand green building certification.

Recent research has demonstrated the enormous economic and environmental advantages of implementing green building rating systems, including decreased use of energy, cheaper running costs, and enhanced property values. However, there are obstacles to the acceptance of sustainable building grading systems, including expensive certification fees, a shortage of qualified personnel, and a lack of awareness among stakeholders (Oladoja & Ogunmakinde, 2021).

In conclusion, environmentally conscious rating systems have developed into a crucial tool for encouraging eco-friendly construction methods all over the world. Although green building grading systems have not been widely adopted in Nigeria, more and more individuals are becoming aware of the benefits of

using eco-friendly building practices. Notwithstanding the many challenges, more investigation is needed to promote the adoption of green building grading methods in Nigeria.

2.2 Advantages And Disadvantages Of Green Building Rating Systems And The Factors That Affect Their Adoption And Implementation In Nigeria

Systems for evaluating green buildings have already been created to support environmentally friendly building techniques and provide a basis for doing so. Yet, a number of factors influence the acceptance and execution of these systems in Nigeria (Simon-Eigbe, Osuizogbo, Idowu, & Ewah, 2022). The benefits and drawbacks of rating systems for green buildings are covered in this section, along with the elements that influence their adoption and use in Nigeria.

Benefits of Green Architecture Grading Systems: Platforms for evaluating green buildings have been created to support environmentally friendly building techniques and offer a framework for doing so. Yet, a number of factors influence the acceptance and execution of these systems in Nigeria (Olawumi & Chan, 2021). The benefits and drawbacks of sustainable building grading systems are covered in this section, along with the elements that influence their adoption and use in Nigeria.

2.3 Green Building Rating Systems Have Several Benefits

1. **Potential Benefits:** Green building grading systems encourage environmentally friendly building techniques that lessen structures' negative effects on the environment. This entails lowering trash production, water conservation, and energy use.
2. **Economic Advantages:** Energy-efficient construction results in lower operating costs and higher property values. Both building owners and occupants may experience significant cost reductions as a result.
3. **Health Benefits:** Better indoor air quality, which green buildings are designed to offer, can enhance inhabitants' health and productivity.

2.4 Drawbacks of Green Building Rating Systems

- i. **Cost:** Implementing green building rating systems can be expensive, particularly for smaller structures. Costs associated with certification, design, and construction may be high.
- ii. **Complexity:** Green building grading methods are frequently complicated and demand advanced knowledge to comprehend and apply. Smaller building owners who might not have the resources to accept and work with sustainable building methods may find this to be a hurdle.
- iii. **Lack of Knowledge:** The adoption of sustainable building grading systems may be hampered by stakeholders' continued ignorance of the advantages of these systems.

Factors Affecting Implementation and Adoption of Green Building Rating Systems in Nigeria:

1. **Lack of Awareness:** The advantages of green building grading systems are not widely known among industry participants in Nigeria.
2. **Limited Funding:** Many building owners in Nigeria may not have the financial resources to implement sustainable building practices.
3. **Inadequate Regulatory Frameworks:** Nigeria lacks the regulatory frameworks needed to promote the adoption of green building rating systems.
4. **Limited Availability of Skilled Professionals:** Nigeria has a shortage of skilled professionals with expertise in green building practices.
5. **Cultural Barriers:** Cultural barriers may also hinder the acceptance and use of sustainable building grading systems, as many traditional building practices may not align with sustainable construction practices.

In conclusion, sustainable building grading systems have advantages like environmental, economic, and health benefits, but they also have disadvantages such as cost and complexity. Green building rating system adoption and implementation in Nigeria are hampered by issues such as a lack of knowledge, a lack of money, a lack of regulatory frameworks, a shortage of qualified specialists, and cultural hurdles (United Nations, 2021). The adoption of green building grading systems in Nigeria and the promotion of sustainable construction methods depend on addressing these issues.

2.5 Application of Green Building Rating Systems to The Nigerian Context

Many green building rating systems are currently in use, some of which are applicable to Nigeria. In Nigeria, the most popular rating systems are Leadership in Energy and Environmental Design (LEED) and Building Research Establishment Environmental Assessment System (BREEAM) (Dabara, Akinyemi, Adekunle, Omotehinshe, & Ankeli, 2017).

The LEED green building rating system, which is well-known worldwide, was developed by the US Green Building Council (USGBC). Buildings with high performance and sustainability can be designed, built, operated, and maintained using a framework provided by LEED. It has been applied to a number of projects in

Nigeria, including governmental and commercial structures. Nonetheless, it has been suggested that obstacles to its implementation in Nigeria include the high cost of certification and the grading system's complexity.

The Building Research Establishment in the UK created the green building grading system known as BREEAM (BRE). It offers a framework for judging a building's environmental performance based on different criteria, including how much energy and water it uses, how much trash it manages, and how much material it uses. BREEAM has been used in several projects in Nigeria, including the new British High Commission building in Abuja. However, like LEED, BREEAM's high cost has been a hindrance to its adoption in Nigeria.

In addition to LEED and BREEAM, additional environmentally friendly rating systems that are applicable to Nigeria include the Comprehensive Assessment System for Built Environment Efficiency (CASBEE) produced in Japan and the Green Star rating system created in Australia. Unfortunately, due to issues including a lack of awareness and insufficient funding, the adoption of these systems in Nigeria has been constrained.

There have also been efforts to develop a sustainable building grading package specifically for Nigeria. The Green Building Council of Nigeria (GBCN) is currently working on developing a local rating system tailored to the Nigerian context. This system aims to promote sustainable construction practices and provide a platform for assessing the green credentials and performance of buildings in Nigeria (Gbonegun, 2020).

In conclusion, many sustainable building grading systems exist all over the world, and some are applicable to the Nigerian context, including LEED, BREEAM, Green Star, and CASBEE. However, the adoption of these systems in Nigeria has been limited due to factors such as high costs, limited funding, and lack of awareness. The development of a local rating system by the GBCN is a step toward promoting green building rating practices in Nigeria and providing a platform for assessing the environmental performance of buildings.

2.6 Opportunities and Challenges of Implementing Green Building Rating Systems in Nigeria

The introduction of sustainable building rating systems in Nigeria offers both benefits and disadvantages. Opportunities include, among others:

1. Environmental advantages: Green building grading systems promote the use of environmentally friendly building techniques, which reduces greenhouse gas emissions, water use, and waste production. A cleaner and healthier environment results from this.
2. Economic benefits: It has been demonstrated that green buildings use less energy, have lower running expenses, and have better indoor air quality. This boosts the sustainable construction sector, generating jobs and economic development, as well as improved earnings for tenants and property owners.
3. Health advantages: By using non-toxic building materials, increasing access to natural light, and improving indoor air quality, green buildings aim to increase occupant well-being.

Notwithstanding these possibilities, setting up green building grading systems in Nigeria is fraught with difficulties (Oladoja & Ogunmakinde, 2021). They consist of:

- i. Lack of knowledge: The acceptance, as well as application of sustainable building grading systems, are constrained by gross ignorance of these benefits among building experts, government officials, and the general public.
- ii. High costs: Green building grading systems are expensive to execute, which could prevent Nigeria from adopting them, especially given the country's current economic situation.
- iii. Inadequate regulatory environment: The absence of a thorough regulatory environment for green buildings in Nigeria now makes it difficult to compel the adoption of sustainable building rating systems.

While various benefits accrue to implementing sustainable building grading systems in Nigeria, there are also many challenges, including a lack of expertise, high costs, a restrictive legislative environment, and limited availability of sustainable building materials. All interested parties will need to collaborate to promote sustainable construction methods and increase public awareness of the advantages and prospects of sustainable building grading systems (Omer, et al., 2023). In order to address these concerns, stakeholders including government representatives, building industry professionals, and the business sector need to be honest and frank.

III. METHODOLOGY

3.1 The Research Design and Methodology Used

This study's research strategy, which uses both qualitative and quantitative research techniques, is a research paradigm. Prior to gathering primary data through a survey of Nigerian building professionals, the study comprised a thorough evaluation of pertinent literature on green building rating systems and sustainable construction methods in Nigeria and around the world.

The study's participants were Nigerian architects, engineers, contractors, and project managers who were involved in the planning, designing, and managing of buildings. Using purposive sampling methods, 200 building industry professionals were chosen as a sample based on their involvement in green building initiatives and prior experience.

An online survey questionnaire was used to gather data on the adoption and implementation of green building grading systems in Nigeria as well as their degree of awareness and the factors influencing these developments.

Descriptive and inferential statistics were employed to analyse the data after the study instrument had undergone pre-testing for validity and reliability. The hypotheses were tested, and correlations between the variables were found using inferential statistics including chi-square testing and regression analysis. The data were summarized using descriptive statistics, such as frequencies and percentages.

Key informant interviews with stakeholders in the construction sector, including government officials, building experts, and representatives of green building groups, were conducted as part of the study in addition to the survey.

Based on its capacity to offer a thorough understanding of the potential of sustainable building rating systems for sustainable development in Nigeria, this study technique was chosen. It considered the viewpoints of various stakeholders as well as the context-specific elements influencing their adoption and execution.

3.2 The Sampling Strategy and Data Collection

Purposeful sampling, a non-probability sample methodology, was employed in this study to select participants. It involves choosing individuals based on their familiarity with and involvement in green construction projects. Nigerian architects, engineers, contractors, and project managers took part in the planning, designing, and administration of buildings.

To ensure that the sample size is representative of the target demographic, 200 construction specialists were selected as the sample size. The sample was chosen based on the respondents' willingness to engage in the study, their prior experience working on green building projects, and their interest in sustainable construction techniques.

An online survey questionnaire was used to collect information on the adoption and use of green building grading systems in Nigeria, as well as information on their level of awareness and the factors influencing these trends. The survey instrument underwent validity and reliability pre-testing before being sent via email and social media.

Participants in the study had the option to remain anonymous, and the questionnaire included both closed-ended and open-ended items. Data on the participant's demographics, familiarity with green building rating systems, past exposure to sustainable building practices, and variables that impact the implementation and use of green building rating systems in Nigeria were collected through the questionnaire.

Key informant interviews with stakeholders in the construction sector, including government officials, building experts, and representatives of green building groups, were conducted as part of the study in addition to the survey. A semi-structured interview guide was used to conduct the interviews, allowing for some flexibility while ensuring that the main study objectives were covered.

To examine the information gathered from the survey and key informant interviews, a mixed-methods approach was applied. Thematic analysis was used to evaluate the qualitative information while descriptive and inferential statistics were used to examine the quantifiable information.

The sampling strategy and data collection techniques used in this study were carefully chosen. This is to ensure that the sample is representative of the population of interest. It is also to provide a thorough understanding of the prospects of sustainable grading systems for green construction in Nigeria,

3.3 Description of the Data Analysis Techniques Employed

Both quantitative and qualitative data analysis methods were used to examine the study's data collection.

Descriptive statistics, such as frequencies, percentages, means, and standard deviation, were utilized to summarize and describe the quantitative data. These facts helped paint a broad picture of Nigeria's awareness, adoption, and application of green building grading systems, as well as the factors affecting those results.

Inferential analysis like chi-square testing and linear regression was used to evaluate the hypotheses and identify the relationships between the variables. With the aid of these statistical techniques, it was possible to determine the significance of the correlations between the independent and dependent variables as well as the factors influencing the adoption and use of sustainable construction grading systems in Nigeria.

Key informant interviews were conducted to gather the qualitative data, and themes and patterns in the data were found using thematic analysis. In order to provide a rich and complete understanding of the experiences and viewpoints of the stakeholders in the construction sector, a systematic approach of pattern identification, analysis, and reporting was used.

The data analysis method's capacity to provide a thorough understanding of the applicability of sustainable building rating systems for sustainable development was a key consideration. Both quantitative and qualitative data analysis techniques contributed to the development of a more, pertinent, in-depth, and nuanced understanding of green building rating systems by taking into account the perspectives of various stakeholders

and the context-specific factors that influence the adoption and implementation of sustainable building rating systems in Nigeria.

IV. RESULTS

4.1 Findings of The Study

The study's objectives were to evaluate the applicability of rating systems for green buildings for environmentally friendly construction in Nigeria and to pinpoint the advantages and disadvantages of doing so there.

The study's conclusions showed that Nigeria has a poor degree of acceptance, awareness, and use of green building grading systems. This can be attributable to a number of things, including the absence of regulatory frameworks, the high implementation costs, and the scarcity of qualified specialists.

Nonetheless, stakeholders in Nigeria are becoming more interested in green building practices as they realize the potential advantages of these systems, such as decreased energy use, improved health and wellbeing, and increased marketability of buildings.

The study also found a number of prospects for the adoption and application of green building rating systems in Nigeria, such as the rise in demand for sustainable structures, the accessibility of renewable energy sources, and the possibility for job and economic growth.

The lack of knowledge and comprehension of green building rating systems, the absence of incentives and rewards for adopting sustainable practices, and the restricted availability of money and technical skills are among the obstacles to their implementation in Nigeria.

The study's findings highlight the need for more knowledge of Nigeria's green building grading systems, as well as the creation of legislative frameworks, financial incentives, and financing methods to encourage the adoption and implementation of these models.

The study concludes that green building rating systems could encourage environmentally friendly building methods in Nigeria, but their viability depends on addressing the challenges and harnessing the opportunities that exist in the Nigerian context.

4.2 The Significance of the Findings Concerning the Purpose and Objectives of the Study.

This study's goals were to evaluate the applicability of green building rating systems for environmentally friendly construction in Nigeria and to pinpoint the advantages and disadvantages of doing so there. The significance of the study's findings lies in their ability to illuminate Nigeria's adoption of sustainable construction methods today and offer information about how green building grading systems might help to advance sustainable construction practices there.

The study's conclusions showed that green building grading methods are not widely used, adopted, or implemented in Nigeria. This emphasizes the demand for greater knowledge and comprehension of these systems among those involved in the building sector, as well as the requirement for legislative frameworks, financial incentives, and financing methods to facilitate their acceptance and implementation.

The study also found a number of prospects in Nigeria for the application and acceptance of sustainable building grading systems, including rising demand for sustainable structures, accessibility to green energy sources, and opportunity for job as well as economic growth. These possibilities offer a foundation for encouraging the acceptance, application as well as the use of sustainable building rating systems in Nigeria, which can help the nation meet its targets for sustainable development.

The research additionally highlighted the difficulties that must be resolved to allow the acceptance, application, as well as use of environmentally sustainable building grading models in Nigeria, including the absence of legal frameworks, the high implementation costs, and the scarcity of skilled personnel. The study sheds light on these difficulties and the regions that need initiatives to advance sustainable building methods in Nigeria.

In conclusion, the study's findings are important because they shed light on the potential for green building rating systems to support sustainable construction methods in Nigeria, as well as the possibilities and obstacles that must be addressed to make this possible. The study can offer insight into the value of environmentally friendly building practices and the possibility of rating systems for green buildings to drive sustainable growth throughout Nigeria to policymakers, experts in the construction industry, and other interested parties.

V. DISCUSSION

5.1 Results and How They Relate to Existing Literature

According to the study's findings, Nigerians are not very aware of, haven't adopted, or haven't put green building grading methods into practice. This result is in line with earlier research that emphasized the difficulties in applying sustainable construction methods in poor nations like Nigeria (Koko & Bello, 2020).

The survey also found that a lack of regulatory frameworks, high implementation costs, and a staffing deficit are some of the biggest obstacles to the widespread acceptance and execution of environmentally friendly building grading systems in Nigeria. This study is in line with the body of research suggesting that the adoption and implementation of sustainable construction methods in developing nations face significant obstacles due to a lack of legal frameworks, inadequate financing channels, and a shortage of educated personnel (Osuizugbo, Oyeyipo, Lahanmi, Morakinyo, & Olaniyi, 2020).

Many factors, according to the report, can encourage the adoption and use of green building grading systems in Nigeria. These include the opportunity for job advancement and economic growth, the rise in demand for environmentally acceptable building materials, and the accessibility of energy produced from renewable sources. This finding is in line with previous research, which holds that factors like the accessibility of renewable energy sources, the growing demand for sustainable buildings, and the potential for job creation and economic growth can encourage the adoption and use of sustainable construction practices in developing nations (Kumar & Majid, 2020).

Overall, the findings of this study align with the existing literature, which suggests that the adoption and implementation of sustainable construction practices, including green building rating systems, face several challenges in developing countries. Yet, the study also emphasizes the opportunities that may be seized in order to encourage the adoption and use of these procedures in Nigeria. These findings can educate legislators and construction industry professionals about the need to address the issues and capitalize on the opportunities to promote sustainable development in Nigeria.

5.2 The Opportunities and Challenges of Implementing Green Building Rating Systems in Nigeria

The results of this study show that introducing green building grading systems in Nigeria presents both opportunities and difficulties.

One chance is that the nation is becoming more aware of and interested in sustainable construction methods. The advantages of becoming green are starting to be understood by a growing number of industry participants in Nigeria's building rating systems such as reduced environmental impact, improved energy efficiency, and increased occupant health and well-being. This indicates that there is a potential market for such rating systems in Nigeria. Furthermore, the existing rating systems that are applicable to the Nigerian context offer a framework for implementing sustainable construction practices and certification for green buildings.

The report did note a number of obstacles to the advancement as well as the use of green construction grading systems in Nigeria, though. The absence of a legislative framework and government assistance for promoting sustainable construction techniques is a significant obstacle. This includes a lack of rules and incentives encouraging developers to use green building techniques in their plans. Furthermore, there is a dearth of qualified workers in the construction sector who have the technical know-how and proficiency to adopt sustainable building principles. Finally, many developers find it extremely difficult to integrate green building grading systems because it demands a substantial investment and might not be immediately profitable.

In summary, the results imply that Nigeria could benefit from green building grading systems. However, to successfully adopt and execute them, stakeholders in the construction industry, government, and civil society must work together to address the issues raised in this discourse.

5.3 Recommendations for Improving the Viability of Green Building Rating Systems for Sustainable Construction in Nigeria

The following suggestions are put up to increase the viability of green building grading systems for sustainable development in Nigeria in light of the study's findings:

1. Create and put into effect supportive government policies: The Nigerian government should create and put into effect laws that support green building techniques, such as giving developers incentives and putting rules in place to ensure that they are incorporated into their plans.
2. Raise awareness and education: Efforts should be made to inform and raise awareness among Nigerian construction industry stakeholders of the advantages and significance of green building grading systems for environmentally friendly building practices.
4. Improve knowledge transfer: Enhance knowledge transfer: Industry professionals in the construction sector need to invest in capacity building to advance their technical understanding and application capabilities of sustainable construction approaches.
5. Collaborate with international partners: To gain from their expertise and knowledge, Nigeria's construction industry should collaborate with international partners who have knowledge of green building grading systems.
6. Encourage research and development: Steps should be done to encourage research and development in the area of eco-friendly building methods, with a focus on developing innovative and affordable solutions that can be applied in the Nigerian context.

Last but not least, Nigeria's adoption of green building grading methods represents a historic opportunity for sustainable construction. However, players in the building sector, such as the government and civil society, must

collaborate in order to resolve the difficulties and embrace best practices to encourage sustainable construction methods in Nigeria.

VI. CONCLUSION

6.1 The Key Findings of The Study and Their Implications for Sustainable Construction in Nigeria

The study's goal was to evaluate the practicality of green building grading systems for environmentally friendly building practices in Nigeria. The study's main conclusions point out that although green building rating systems have many advantages, they are difficult to adopt and put into practice in Nigeria.

One of the major obstacles to the adoption and application of sustainable construction methods is the lack of knowledge and education among stakeholders in the construction sector. Another major obstacle is the expense of integrating green building methods, which is seen as being too expensive by many developers.

The opportunities offered by Nigeria's green building grading schemes were also covered in the study. This includes reducing energy consumption, enhancing indoor air quality, and lowering carbon emissions, all of which help the country reach its Sustainable Development Goals.

The results of this study show that Nigeria needs to encourage green building techniques. Stakeholders in the building sector, the government, and civil society must work together to address issues and embrace best practices in order to promote sustainable construction processes in Nigeria. By making use of the advantages of green building grading systems in this way, Nigeria might enhance environmental sustainability and assist in the accomplishment of Sustainable Development Goals.

6.2 Purpose and Objectives of the Study

This study evaluated the value of green building grading systems for environmentally friendly development in Nigeria. The study's goals were to determine which grading methods for green buildings were appropriate for usage in Nigeria, investigate their advantages and disadvantages, and evaluate the potential and challenges involved in implementing such systems there.

The results of this study add to the body of knowledge already available on environmentally friendly building techniques in Nigeria. The study offers insights into the issues preventing Nigeria from adopting and putting into practice green building rating systems, such as lack of knowledge, expense, and insufficient government policies. The paper also underlines how encouraging energy efficiency, better indoor air quality, and lower carbon emissions can help us reach the Sustainable Development Goals.

Other recommendations made by this study for promoting sustainable construction practices in Nigeria include the creation of education and training programs for those working in the construction industry as well as the development of government policies and regulations to encourage the adoption of green building rating systems.

After considering the feasibility of green building summative assessments for sustainable construction in Nigeria, this study extends the basis of prior knowledge by offering suggestions on how to promote green building practices there.

6.3 Suggestions for Future Research

Further research on rating systems for green buildings and sustainable construction in Nigeria can build on the results of this study by analysing the specific obstacles to their adoption in different regions of the country. Further study should look into the financial benefits and cost-effectiveness of green building practices in the Nigerian context.

Further research is needed on the implementation and use of green building grading systems in Nigeria and the participation of various stakeholders, including as the government, building owners, developers, and contractors. A comparison study of the effectiveness of several green building grading systems in promoting sustainable construction practices in Nigeria could be extremely useful to policymakers and industry stakeholders.

Future studies might examine how Nigerian construction projects' ability to be environmentally, socially, and economically sustainable is impacted by green building grading systems. Such research would contribute to the nation's sustainable development and offer a more thorough grasp of the benefits of sustainable building models.

More study on sustainable building grading systems and sustainable construction is required in Nigeria in order to ensure that the nation meets its goals for sustainable development and supports green building practices.

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