

Assessing the Malthusian Perspective to Natural Resources Use in Nigeria via Sustainability Lens: A Literature Review Approach

Isaac A Agber^{1*}, Paul T Ihuman², Rachel M Iorkumba³

¹ Department of Business Management, Godfrey Okoye University, Enugu State, Nigeria

² Department of Business Management, Benue State University, Makurdi, Nigeria

³ Department of Administration and Management, Federal Polytechnic Wannune, Benue State, Nigeria

* Corresponding Author: Isaac A Agber

Article Info

ISSN (online): 2582-7138 Volume: 06 Issue: 03 May-June 2025 Received: 15-04-2025 Accepted: 09-05-2025 Page No: 1003-1009

Abstract

The sustainable use of natural resources in Nigeria has yet to be realized. Using a literature review approach, this study examines how the Malthusian theory of natural resource usage might be applied to Nigeria in order to improve sustainability, with a particular emphasis on the problems brought on by the country's fast population expansion and resource exploitation. Nigeria's natural resource use trends are analyzed in conjunction with Malthus' theory, which postulates that population increase would eventually surpass resource availability. Along with discussing the theory's central claims, the paper evaluates the theory's applicability in the current environment and contrasts Nigeria with other developing African countries. Even while Malthus' theory has some merit, particularly in light of the depletion of the environment and the overuse of resources like water, oil, and agriculture, technical advancements and legislative changes offer chances for sustainable use of natural resources, highlighting the importance of public education, economic diversification, long-term planning, and better governance systems, among other things.

DOI: https://doi.org/10.54660/.IJMRGE.2025.6.3.1003-1009

Keywords: Malthusian theory, natural resources, sustainable development, population growth, Nigeria, environmental degradation, economic diversification, renewable energy, governance, resource management

1. Introduction

Classical population and resource dynamic theories, particularly the Malthusian Theory, have attracted increased scholarly attention as a result of the growing global concern over environmental degradation, resource depletion, and food insecurity (Adeniyi *et al.*, 2021; Joseph *et al.*, 2015) ^[7, 31]. Thomas Robert Malthus made the case in his 1798 book "An Essay on the Principle of Population" that the supply of natural resources, particularly food, and population growth were linearly correlated (Malthus, 2005; Shobande & Enemona, 2021) ^[33, 50]. Food rises solely arithmetically while population grows geometrically, which makes famine, shortages, and population controls via man-made or natural disasters inevitable (Adama *et al.*, 2019) ^[3]. His claim has continued to be fundamental to discussions about the sustainability of the supply of natural resources, particularly in emerging countries like Nigeria where environmental degradation and resource mismanagement coexist with population increase (Obiagwu *et al.*, 2020) ^[38].

Nigeria, the most populous country in Africa, with an estimated 237 million people (Channels Television, 2024; Demographic Statistics Bulletin, 2023 ^[13, 17]. It is rich in various natural resources, including coal, natural gas, crude oil, arable land, water, and forests. However, overexploitation, poor management, and environmental deterioration brought on by population demands and lax implementation of policies are seriously endangering the resources (Ahmed *et al.*, 2021; Olowu, 2025; Adebayo & Iweka, 2020) ^[9, 44, 5]. The core of the Malthusian theory is this contradiction of affluence in the face of scarcity: Can natural resources sustain an unchecked population growth without causing crises?

To guarantee sustainability, the researchers seek to critically assess Malthusian theory from the standpoint of Nigeria's population dynamics and natural resource development. In order to ascertain whether Malthusian arguments are sound, it assesses the theory's underlying presumptions, looks at how well it applies to literature and data, and considers the Nigerian situation. To situate the discussion within a broader framework for development, the report also compares Nigeria to other emerging countries. Most significantly, the study intends to evaluate the applicability of Malthusian theory in resource economics and demography today and offer workable solutions to guarantee the sustainable use of Nigeria's natural resources. It is a critical analysis of Nigeria's growth trajectory during a period of ecological insecurity and economic instability, rather than an academic exercise.

2. The Malthusian Theory of Natural Resources Use

The Malthusian theory, created by Thomas Robert Malthus in 1798, continues to be one of the more important and contested theories accounting for population growth and resource availability (Thomas Malthus, 1798; Unat, 2020)^[18, 55]. As an English priest and researcher, Malthus was especially interested in the prospective effects of unfettered population expansion. In accordance with this, he postulated that whereas population expands geometrically (or exponentially), both food production and availability of natural resources increase only arithmetically. According to Malthus, there will eventually come a time when the population could no longer be sustained by the means of sustenance, leading to either natural or man-made "checks" like hunger, sickness, and war (Dunn, 1998)^[18].

Malthus's argument revolves around the idea of the "Malthusian Trap". According to this economic theory, a rise in income or resources first leads to population growth, which negates the advantages by placing a burden on finite resources (Dunn, 1998; Hoàng & Vân, 2021; Ojo *et al.*, 2020; Olusegun *et al.*, 2013) ^[19, 41, 28]. When population growth eventually outpaces resource growth, living circumstances start to deteriorate, and hardship stabilizes the population (Adama *et al.*, 2019; Saidu *et al.*, 2019) ^[3, 49].

Crucially, Malthus distinguished between two types of population checks-moral restraints, such as postponing marriage and reducing birth rates, are examples of preventive checks (Dunn, 1998; Saidu et al., 2019)^[18, 49]. Such actions are taken voluntarily to reduce the population. Positive checks, which lower population levels by causing mortality, are involuntary and typically catastrophic events like starvation, disease, and war (Dunn, 1998; Joseph et al., 2015) ^[19, 31]. However, there are still others who disagree with Malthus's idea (Fischer-Kowalski et al., 2014; Ishmael et al., 2016) ^[26, 29]. His assumptions have been criticized by a number of academics and economists (Adama et al., 2019) ^[3], as being overly deterministic and failing to adequately account for technology advancement and human ingenuity. For instance, critics within the Cornucopian tradition contend that technological advancement and human creativity have overcome and will continue to overcome the Malthusian trap (Effiong, 2019; Obiagwu et al., 2020; Unat, 2020) [38, 21, 55]. These critics point to improvements in healthcare and agricultural productivity (such as the Green Revolution) along with more efficient resource-using systems to show that resource availability can actually keep up with or surpass population growth (Okanya & Nwakoby, 2019; Unat, 2020) [42, 55]

The Neo-Malthusians argued that technology will not eliminate the looming disaster that Malthus foresaw, but merely slow it down (Ahmed et al., 2021; Ishmael et al., 2016; Ngene et al., 2021)^[9, 29]. As modern manifestations of the Malthusian trap, they cite the environmental damage brought on by population growth, including deforestation, soil erosion, water scarcity, and climate change. This warning is reaffirmed by experts such as Paul Ehrlich in the "Population Bomb (1968)^[22]", who contends that ecological degradation is still mostly fuelled by population expansion Mellos & Mellos, 1988; Kelley James, 1986) [34, 32]. The social and cultural elements that Malthus neglected to mention are also the subject of further discussion. According to the demographic transition theory, for example, birth rates will decline as economies grow, reducing population pressures (Ishmael et al., 2016; Saidu et al., 2019)^[49,29]. This theory contends that institutional, educational, and regulatory interventions can mitigate the threat posed by population growth, which runs opposed to the idea that every society needs Malthusian checks.

Furthermore, post-colonial and feminist researchers highlight how Malthusianism has historically been used to justify population policies in the Global South without attempting to address the root causes of difficulties with inequality, poverty, and governance (Godwin & Ojo, 2021; Umukoro & Umukoro-Esekhile, 2024) ^[27, 41]. According to these academics, focusing on a specific demographic diverts attention from deeper systemic problems that affect resource availability and distribution.

Notwithstanding these criticisms, the Malthusian tradition still offers a wealth of conceptual frameworks for examining the relationship between population growth and the use of natural resources, especially when considering resource richness and unstable economies like Nigeria (Olaniyi, 2019; Daniel, 2025; Falade & Babatunde, 2018; Hoàng & Vân, 2021; Ogunwusi, 2019; Tavershima et al., 2022) [24, 28, 43, 53]. It poses a relevant query: can a densely populated country manage its natural resources in a sustainable manner without effective governance, technology transfer, and socioeconomic transformation? Even though the Malthusian theory is unable to account for every modern factor, its core assumptions remain true as societies run the risk of collapsing into times of scarcity and crisis if deliberate and careful steps are not taken to balance population growth with prudent resource use (Agbonifo, 2024; Dunn, 1998; Emeje & Ogu, 2024) [8, 18]. Given Nigeria's rapid population increase and ongoing resource governance issues, the country provides an ideal setting for testing this theory in action.

3. Relevance of the Malthusian Theory: A Review of Literature

Scholars continue to question the Malthusian theory's applicability in contemporary discourse (Ishmael *et al.*, 2016; Olusegun *et al.*, 2013; 2018; Saidu *et al.*, 2019) ^[29, 49]. Even though the theory was developed in the late 1700s, its fundamental ideas still have an impact on debates about sustainability, environmental protection, and economic growth, particularly in nations with rapidly expanding populations and limited resources. In reading the literature, it is obvious that the discussion centered not on whether Malthus's concerns were accurate, but on whether his projected results are still unavoidable in light of technical, institutional, and demographic shifts (Adama *et al.*, 2019; Effiong, 2019; Joseph *et al.*, 2015) ^[3, 21, 31].

The Malthusian argument revolves around the persistent problems of resource depletion and environmental degradation in the majority of developing countries (Hoàng & Vân, 2021; Mgbomene, 2024; Ojo et al., 2020) ^[28, 41, 35]. Malthus' predictions are reiterated in the study by Ehrlich (1968) ^[22] which concentrates on the ecological boundaries of expansion. These authors contend that despite technological advancements, the Earth's carrying capacity is finite and that the strain of the global population continues to place an unsustainable amount of demand on natural systems. Examples such as deforestation, desertification, loss of biodiversity, and climate change are all viewed as byproducts of the over-use of resources fuelled by the expansion of population, fundamental to Malthusian thinking (Mgbomene, 2024; Ogunwusi, 2019; Tavershima et al., 2022) [35, 53].

Furthermore, empirical data from sub-Saharan Africa supports Malthus' theory of positive checks. Food shortages, water scarcity, and health crises are frequent occurrences in northern Nigeria, Niger, and Chad (Agbonifo, 2024; Dzedzemoon & Ferro, 2024; Emeje & Ogu, 2024; Ogunwusi, 2019) ^[20, 8]. These issues are caused by high fertility and a lack of access to contemporary farming methods. Over 70% of rural Nigeria is dependent on climate-sensitive industries, including agriculture and fisheries, according to FAO (2020). However, because of overfishing, soil erosion, and erratic rainfall, the two occupations' output is declining (Agbonifo, 2024; Ogunwusi, 2019) ^[8]. These factors are consistent with Malthusian concerns about the diminishing returns of natural resources.

However, there are arguments in the literature that refute the universality of Malthusian claims (Fischer-Kowalski *et al.*, 2014) ^[26]. Boserup's (1965) theory of agricultural intensification, which proposed that population pressure might spur innovation, is a prime example of this kind of criticism. Boserup maintained that in order to increase production, human society adapts to population pressure by creating new inventions (Fischer-Kowalski *et al.*, 2014) ^[26]. This is similar to what happened during the Green Revolution in Asia and Latin America, where investments in high-yield crop varieties, fertilizer, and irrigation increased food production despite population growth.

Furthermore, according to Cornucopian academics and Simon (1993)^[52], human capability defines limitations rather than them being natural. According to Simon, population growth can be advantageous because it increases the pool of workers, inventors, and intellectuals. Simon (1993)^[52] criticized Malthus for failing to foresee the computer revolution and industrialization, which have drastically changed resource usage and production (Adama *et al.*, 2019; Joseph *et al.*, 2015; Simon, 1993)^[3, 31]. Examples of modern techniques that continue to challenge the static productivity assumptions that are central to Malthus's thesis include oil discovery technologies, renewable energy, and intelligent farming.

Malthus's linear progression from growth to crisis is also in conflict with the demographic transition theory. Birth rates naturally fall as economies grow because of increased access to reproductive healthcare, urbanization, and better education (Obiagwu *et al.*, 2020) ^[38]. Nigeria is still in the early stages of this transition, but it shows a shift in fertility patterns among the more educated and urbanized segments of the population. This suggests that governmental measures in the areas of gender equity, family planning, and education can

control population growth without relying on Malthus' "natural checks."

Nevertheless, it is also critical to keep in mind that Malthusian logic disregards governance and institutional concerns. Scholars such as Amartya Sen (1981) have argued that scarcity and starvation are less about resource availability and more about entitlement and access (Ngene et al., 2021; Unat, 2020) [55]. Effective markets, free media, and democratic administration are more crucial in averting resource crises than the actual availability or scarcity of food. as his groundbreaking study of the Bengal Famine showed. Applying this approach to Nigeria, one may contend that corruption, infrastructure, and inconsistent policies, rather than just the country's population, are the primary causes of its resource difficulties (Abe, 2014; Ahmed et al., 2021; Okanya & Nwakoby, 2019)^[9, 42]. In the literature, a more nuanced middle road is becoming more popular, though. Many scholars agree that Malthusian determinism has flaws, but the core of the theory that population increase must be balanced with sustainable resource use, remains crucial (Adama et al., 2019; Effiong, 2019; Joseph et al., 2015; Tavershima et al., 2022) ^[3, 21, 31, 53]. It is maintained that catastrophic consequences are unavoidable if human activities, such as population increase, exceed certain thresholds (such as freshwater use or changes in the land system). This method underlines Malthusian concerns while bringing them into line with modern ecological science and systems theory.

This literature review demonstrates the continued relevance of Malthusian theory in highlighting population pressures that put a strain on finite resources. However, observations of human adaptability, technological progress, governmental action, and governance limit its deterministic implications. But this is not the case in Nigeria, where human actions, ineffective government policies, and poor technological adoption prove the applicability of Malthus theory. The theory's significance as a signal, rather than its precise predictions, is what makes it helpful, particularly in Nigeria. It serves as a warning to policymakers that population expansion will truly strain the nation's natural resources if planning, institutional reform, and investment in sustainable technology are not implemented.

4. Natural Resource Utilization in Nigeria: An Appraisal through the Malthusian Lens

Nigeria is a unique example of a resource-rich nation that is constantly plagued by widespread poverty, resource depletion, and underdevelopment (Akpoghelie et al., 2021; Onuigbo & Eme, 2015) ^[11, 15]. The paradox provides an intriguing framework for assessing the applicability of the Malthusian theory. Given that Nigeria's population is over 220 million and is growing at a pace of about 2.5 percent annually, the country's natural resources are under increasing strain, and growing concerns align with Malthusian predictions of an overpopulation danger to resource availability (Ogunleye, J. O., & OkunolaJoseph et al., 2015; Obiagwu et al., 2020) [31, 38]. Crude oil, Nigeria's most valuable export, is a prime example. Oil spills, gas flaring, and illicit refineries have caused serious environmental damage in the petroleum-rich Niger Delta (Ahmed et al., 2021; Dzedzemoon & Ferro, 2024; Ngene et al., 2021; Umukoro & Umukoro-Esekhile, 2024) ^[20, 9]. Inequality, corruption, and underdevelopment in host communities have increased along with the resource's wealth. The Malthusian dread of diminishing profits and finite exploitation is reaffirmed when an excessive reliance on a depletable resource is made without sufficient investment in renewable alternatives or infrastructure.

The conflict between population growth and resource limitations is especially evident in the agricultural sector, which employs a sizable portion of the workforce (Tavershima *et al.*, 2022) ^[53]. Overcultivation of Nigerian farmland without adequate soil replenishment procedures is leading to a decline in fertility, a fall in production, and the loss of woods. Due to excessive grazing and unsustainable farming practices, desertification is particularly severe in northern Nigeria (Hoàng & Vân, 2021; Mgbomene, 2024; Tavershima *et al.*, 2022) ^[28, 35, 53]. These regions have population expansion concurrent with a loss in agricultural output, a condition that evokes the Malthusian 'trap' whereby population growth directly undermines people's ability to exist.

There is also pressure on water resources (Dahiru, 2025)^[19]. Although Nigeria is home to numerous sizable rivers, including the Niger and Benue, its citizens lack equitable and effective access to water. Rapid urbanization and inadequate waste management have exacerbated surface water supply pollution (Adangor, 2018; Godwin & Ojo, 2021; Umukoro & Umukoro-Esekhile, 2024) [27, 41]. Underfunding of water infrastructure in rural areas has left residents vulnerable to disease outbreaks and droughts. Again, the Malthusian theory of natural resource restrictions is supported by the fact that pressure on such water systems grows with population density. Additionally, wildlife and forests are disappearing at an alarming rate. Nigeria's annual forest loss rate is among the greatest in the world (Olanivi, 2019)^[43]. The causes include agricultural growth, logging, and wood harvesting, all of which are exacerbated by poverty and population pressure (Abe, 2014; Jack, 2017). In addition to reducing Nigeria's ability to store carbon, this deforestation also reduces ecosystems' vital services, supporting Malthus's theory that population pressure will cause natural systems of support to collapse.

However, not every signal fits well into the Malthusian proposition. Underdeveloped natural gas deposits have the potential to be a cleaner energy source than biomass, but policy and infrastructure are lacking to make this happen (Chukwuemeka et al., 2017; Okanya & Nwakoby, 2019)^[42]. There are also commercial resources of minerals like as gold, tin, and limestone, but the illegal and informal workings that extract these results in both waste and damage to the ecosystem. It is not easy to make excess translate to sustainable wealth with the lack of strategic structures of governance (Adekova, n.d.; Onuigbo & Eme, 2015). But there are occasions where population growth has also spurred innovation. In places such as Lagos and Abuja, there has been greater garbage recycling, better collecting of rainfall, and digital agriculture platforms based on necessity and entrepreneurial initiative. Even if they are currently limited in scope, these localized developments show that, in the right circumstances, demographic pressure may result in adaptive responses, a scenario more akin to Boserup than Malthus (Falade & Babatunde, 2018; Fischer-Kowalski et al., 2014; Okanya & Nwakoby, 2019)^[24, 42, 26].

Fundamentally, Nigeria's experience supports the Malthusian theory in part, which holds that population growth is linked to resource stress and environmental degradation. However, the problems facing the country are more fundamentally related to inequality, governance, corruption and institutional failure, which are not covered by Malthus's theory. Malthus would have foreseen the symptoms but not the actual root cause in Nigeria.

5. Comparative Analysis between Nigeria and Other Developing African Countries

In the larger African context, Nigeria is similar to other developing countries that are battling the strains of fast population increase and resource depletion (Olusegun et al., 2013). Nigeria's experience can be seen via a regional and Malthusian lens by examining the notable similarities and significant disparities with nations like Ethiopia, the Democratic Republic of the Congo (DRC), Kenya, and Ghana (Daniel, 2025; Ishmael et al., 2016; Olusegun et al., 2013; Shobande & Enemona, 2021) ^[29, 50]. First, much of Africa continues to have some of the greatest rates of population increase in the world. Nigeria's projected 2.5% annual growth rate is comparable to that of Ethiopia (2.4%) and the Democratic Republic of the Congo (3.2%) (Oteng-Abayie et al., 2022; Demographic Statistics Bulletin, 2023; Shobande & Enemona, 2021; Unat, 2020) ^[50, 17, 55]. Ecological and economic systems are already under a lot of strain due to these demographic trends. For example, Ethiopia's fast growing rural population has overused arable land, causing agricultural land degradation to become a national concern. This is also the case in northern Nigeria, where excessive grazing and farming have sped up the encroachment of the desert.

In a similar vein, the DRC is home to abundant natural riches and one of the biggest rainforests in the world. However, in spite of this richness, the nation faces challenges like food insecurity, poverty, and environmental degradation, which are made worse by a rapidly expanding population and inadequate political systems (Ahmed et al., 2021; Dahiru, 2025)^[19, 9]. The wealth of resources in both Nigeria and the DRC has not resulted in widespread development because of institutional inefficiency, inadequate infrastructure, and pervasive corruption. This supports the Malthusian claim that unbridled population expansion can result in resource depletion and socioeconomic instability when combined with inadequate institutions (Adekoya, n.d.; Adama et al., 2019) ^[3]. Kenya offers a somewhat different story. Although population increase is another issue, its investments in education, agricultural technology, and community-based natural resource management initiatives present a more promising picture (Ahmed et al., 2021) ^[9]. Kenya's implementation of water conservation techniques and sustainable land use practices in semi-arid regions demonstrates how proactive governance can lessen the hazards identified by Malthus. Despite experiencing similar environmental stresses, Nigeria has been slower to enact national environmental and resource sustainability measures. Another viewpoint is provided by Ghana, a neighbour in West Africa. Ghana has made small but noticeable strides toward more sustainable resource management because of its comparatively stable democratic government and intentional investments in reforestation and environmental education initiatives (Ahmed et al., 2021)^[9]. Ghana's strategy implies that political will and civic involvement are important barriers against Malthusian results, even though the country is not impervious to the problems posed by resource extraction and fast urbanization. On the other hand, long-term planning and resource management are frequently

jeopardized by Nigeria's political unpredictability and shifting policy objectives (Godwin & Ojo, 2021; Jack, 2017) [27, 41].

There are also helpful parallels in water resource management. Access to clean water is a national priority in Ethiopia and Kenya, and supply systems have been improved through international partnerships, particularly in areas that are vulnerable to drought. Nigeria still faces water challenges as a result of poor infrastructure, pollution, and neglect, even with its diverse rainfall and river systems (Dahiru, 2025; Daniel, 2025; Falade & Babatunde, 2018) [19, 24]. A simple Malthusian interpretation is complicated by the inability to effectively utilize and fairly distribute water resources, which speaks more to shortcomings in governance than to population pressure alone. This comparative lens shows that although resource pressures and population growth in Nigeria are not unique to Africa, governance quality, institutional frameworks, and policy responses have a significant impact on the results. The severe outcomes Malthus foresaw are typically avoided by nations with comparable demographics but more unified approaches to resource and environmental management.

Therefore, in the Nigerian and larger African setting, the Malthusian notion has some truth. It is true that environmental degradation and resource shortages can be made worse by rapid population increase. But as demonstrated by the experiences of nations like Ghana and Kenya, these difficulties may be controlled or even overcome with the help of innovative policies, inclusive policies, and institutional accountability. Therefore, Nigeria's future must go beyond rhetoric about population limitation and concentrate on creating robust structures that convert resource plenty into sustainable and inclusive growth. Essentially, Malthus's major lesson, warning about the balance between population and resources remains relevant today. The problem now is not whether Malthus was correct or wrong, but whether societies can move fast enough to match population patterns with sustainable development goals.

6. Conclusion

The Malthusian theory of natural resource usage is still applicable today, especially in emerging nations like Nigeria where resource pressures and fast population expansion frequently result in environmental damage and economic difficulties. Modern technical developments, strategic governance, and international collaboration offer ways to lessen the adverse effects of population growth, even though Malthus's predictions on the limits of natural resources have been partially confirmed. Nigeria must implement comprehensive policies centered on sustainable management, economic diversification, and institutional reforms in order to prevent resource depletion, given its abundance of natural resources. The experiences of other African countries, such as Ghana and Kenya, show that with creativity and good governance, population increase and resource sustainability can coexist. Nigeria must ultimately strike a balance in order to achieve sustainable development, its demographic growth with responsible resource use, ensuring a prosperous future for generations to come.

7. Recommendations for Enhancing the Sustainable Use of Natural Resources in Nigeria

Improving the sustainable use of Nigeria's natural resources

has become essential for the country's development as it continues to struggle with the twin issues of environmental degradation and fast population increase. Given the Malthusian cautions about resource scarcity, a route toward sustainability requires a combination of technological innovation, institutional reforms, strategic policies, and public awareness. The authors recommend the following;

- a) Integration of Policies and Long-Term Planning -Establishing logical, long-term policies that combine social, economic, and environmental objectives is one of most important stages toward improving the sustainability in Nigeria. Nigeria's policy environment is currently disjointed, with conflicting agendas that frequently disregard environmental concerns. The Niger Delta, for example, has seen environmental degradation as a result of its over reliance on oil, but the economy has not yet diversified into other sustainable sectors like forestry, agriculture, and renewable energy. Nigeria must implement comprehensive natural resource management policies that prioritize biodiversity conservation, soil fertility, water management, and the sustainable use of fossil fuels in order to promote sustainability. It is crucial to have a multi-stakeholder approach that involves local communities, commercial businesses, NGOs, and government agencies. To ensure that policy and action are in line with international sustainability standards, the Nigerian government's commitment to the Sustainable Development Goals (SDGs) should be included in the national framework.
- b) Diversification of the Economy Without enough reinvestment in renewable industries, Nigeria's overreliance on crude oil for economic growth has led to the depletion of non-renewable resources. Long-term sustainability requires diversification into technology, renewable energy, tourism, and agriculture. The agricultural industry in particular has the capacity to employ a sizable workforce and support the country's food security. But in order for this to occur, funding for climate-smart agriculture, agro-ecological methods, soil restoration, and sustainable farming methods needs to be given top priority.
- c) Innovation in Technology and Renewable Energy -Innovation in technology is essential to improving the sustainability of resources. To encourage cleaner, more effective uses of natural resources, Nigeria must make use of current technologies and make research and development (R&D) investments. Nigeria's dependence on fossil fuels might be lessened, and the environmental effects of energy use could be lessened, thanks to the renewable energy sector, especially solar and wind energy. Nigeria's enormous solar potential presents a chance to address climate change and energy availability. Decentralized solar power systems for rural electrification can raise living standards and lessen the demand on biomass as the main cooking fuel.
- d) **Boosting Governance and Institutions -** Strengthening the organizations in charge of resource control and environmental protection is essential to advancing sustainable resource management in Nigeria. Lack of political will, poor governance, and corruption frequently make it more difficult to enforce environmental regulations effectively. Nigeria must strengthen environmental agencies such as the National Environmental Standards and Regulations Enforcement

Agency (NESREA), create transparent regulatory frameworks, and make sure that laws are implemented at the local, state, and federal levels in order to address this. Delegating environmental duties to state and municipal governments can improve accountability and increase the flexibility of policies to suit local conditions.

e) **Public Awareness and Education** - Last but not least, promoting the sustainable use of natural resources requires strong public awareness and education campaigns. People must be made aware of the value of conservation, the drawbacks of excessive consumption, and the advantages of sustainable behaviours. A culture of environmental stewardship can be fostered across generations by incorporating environmental education into the national curriculum, which can increase awareness from a young age. Public awareness initiatives on topics like recycling, waste management, water conservation, and sustainable consumerism will also give people the information they need to make decisions that are good for the environment.

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