


A Systematic Review of Resource Conservation Strategies in Nigeria

Daniel O. Isei
City University, Cambodia

Gloria Chigbu
Anchor University Lagos, Nigeria

 Osazuwa M. Christopher
University of Port-Harcourt, Nigeria

Maryjane Y. Oghogho
City University, Cambodia

Received: 22 Mar 2026 | Received Revised Version: 12 Apr 2026 | Accepted: 22 Apr 2026 | Published: 09 May 2026

Volume 08 Issue 05 2026 | Crossref DOI: 10.37547/tajssei/Volume08Issue05-03

Abstract

Resource conservation is essential to addressing global environmental challenges such as deforestation, desertification, and biodiversity loss. In Nigeria, weak institutions, inadequate funding, and poor community participation hinder sustainable conservation. This study aims to evaluate the effectiveness of Nigeria's conservation policies, identify key challenges, and propose adaptive strategies. Guided by the Conservation of Resources (COR) theory, which explains stress arising from resource loss, the study adopts a qualitative research design using secondary data from scholarly publications, policy reports, and institutional documents. Findings reveal that global conservation successes rely on strong participation, policy coherence, and sustainable financing, while Nigeria's progress remains constrained by governance weaknesses and limited stakeholder engagement. The study concludes that institutional reform, community-based conservation, and environmental education are crucial for achieving long-term sustainability. It recommends participatory, well-funded, and technologically supported conservation models suited to Nigeria's ecological realities.

Keywords: Resource Conservation, COR Theory, Community-Based Conservation, Environmental Governance, Sustainable Development, Nigeria.

© 2026 Daniel O. Isei, Gloria Chigbu, Osazuwa M. Christopher, & Maryjane Y. Oghogho. This work is licensed under a Creative Commons Attribution 4.0 International License (CC BY 4.0). The authors retain copyright and allow others to share, adapt, or redistribute the work with proper attribution.

Cite This Article: Daniel O. Isei, Gloria Chigbu, Osazuwa M. Christopher, & Maryjane Y. Oghogho. (2026). A Systematic Review of Resource Conservation Strategies in Nigeria. *The American Journal of Social Science and Education Innovations*, 8(05), 18–26. <https://doi.org/10.37547/tajssei/Volume08Issue05-03>

1. Introduction

Resource conservation is a vital issue of the twenty-first century, especially in the context of environmental sustainability and global development. Resource

conservation fundamentally involves the careful management, utilisation, and preservation of natural resources to ensure their availability for both current and future generations. This includes various practices aimed at minimising waste, reducing degradation, and

sustaining ecosystems that provide essential goods and services to human societies (Cunningham & Cunningham, 2021). Global pressures on natural resources have increased due to population growth, industrialisation, technological advancements, and climate change. These pressures lead to deforestation, biodiversity loss, soil erosion, and less water availability. The United Nations Environment Programme (UNEP, 2022) reports that about 60% of the world's ecosystems are used unsustainably. Saving resources is vital for achieving the Sustainable Development Goals (SDGs), particularly SDG 12 (responsible consumption and production), SDG 13 (climate action), and SDG 15 (life on land). Resource conservation in Nigeria has become increasingly important due to severe environmental degradation. The country faces major challenges, including desertification in the northern region, deforestation and biodiversity decline in the central belt, pollution from oil activities, and mangrove degradation in the Niger Delta (Nwankwo & Ume, 2023). These ecological crises pose a threat to food security, economic growth, and social stability. Nigeria has adopted various policies and established institutions, such as the National Environmental Standards and Regulations Enforcement Agency (NESREA); however, their effectiveness is limited by poor enforcement, lack of funding, and political interference.

Despite growing recognition of the need to conserve natural resources, current practices remain inadequate. Nigeria: Economic Development with Environmental Sustainability. Natural resources are often exploited for short-term economic gains, often at the expense of long-term conservation efforts. Deforestation results from agricultural expansion and logging, groundwater resources are being over-extracted, and crude oil extraction continually damages the Niger Delta ecosystem. These practices have accelerated resource depletion, surpassing their regenerative capacity and causing a substantial ecological imbalance (Ikechukwu et al., 2022). Furthermore, the institutional frameworks for conservation reveal notable weaknesses. Conservation policies often remain theoretical, with their implementation hampered by poor coordination, corruption, and limited community participation. Resource use conflicts, such as farmer-herder clashes in northern

Nigeria, worsen the situation by undermining security and conservation efforts. Without a systematic and sustainable approach to conservation, the depletion of

natural resources will continually threaten Nigeria's socio-economic development and environmental resilience.

This study aims to rigorously analyse the concept and implementation of resource conservation in both global and Nigerian contexts, focusing on the operationalisation of conservation principles across various environmental and socio-economic frameworks. The study aims to assess the efficacy of current conservation policies and initiatives at both international and national levels, focusing on their design, implementation, and outcomes in Nigeria. It also seeks to identify the principal socio-economic, political, institutional, and environmental variables that impede successful resource conservation in the country. The project aims to suggest creative, evidence-based, and context-specific tactics and policy recommendations to enhance conservation efforts and promote sustainable resource management in Nigeria.

This study is guided by the following research question: How are resource conservation methods and practices conceptualised and implemented worldwide, and how do these approaches contrast with those employed in Nigeria? To what degree have current conservation policies and methods at both international and national levels achieved sustainable resource management outcomes? What are the primary socio-economic, political, institutional, and environmental obstacles to successful resource conservation in Nigeria? What creative and adaptive strategies can be implemented to improve conservation results and guarantee the long-term sustainability of natural resources in Nigeria?

This study significantly contributes to the literature on environmental management, sustainability, and resource conservation by offering a contextually grounded analysis of conservation strategies in a developing country. The paper analyses policy frameworks and implementation issues to overcome deficiencies in current research on conservation effectiveness in Nigeria and comparable resource-dependent nations. The results are anticipated to guide politicians, environmental regulatory bodies, non-governmental organisations, and community-based entities engaged in conservation planning and execution. The paper provides evidence-based insights for foreign development partners and stakeholders seeking to support sustainable development, environmental governance reforms, and successful conservation measures in Nigeria, aligned with global sustainability objectives.

Conceptual and Theoretical Framework

Recent scholarship has improved the application of the Conservation of Resources (COR) theory in environmental management, establishing it as a relevant and evolving framework for understanding the complexities of resource conservation. The theory, originally developed by Hobfoll in 1989 to explain how individuals seek to acquire, retain, and protect resources, has been further expanded to include organisational behaviour, climate change adaptation, and sustainability studies (Liao, Huang, & Hu, 2022). The primary concept of COR theory is that the impact of resource loss is greater than that of resource gain, often leading to "loss spirals" in which the depletion of one resource causes further losses. Investments in conservation can generate "gain spirals," in which progress in one area yields positive outcomes in others (Bon & Shire, 2022).

COR theory, when applied to natural resource conservation, emphasises the interconnectedness of ecological, social, and institutional resources. Soil conservation, through practices such as contour ploughing, crop rotation, and cover cropping, seeks to break the cycle of erosion, declining soil fertility, and diminished agricultural productivity. Maintaining soil health allows communities to safeguard their immediate food security while creating positive feedback loops that encourage the adoption of sustainable practices (Eneh et al., 2025).

Water conservation exemplifies the dynamics of COR. Efficient irrigation, rainwater harvesting, and watershed management serve to safeguard communities from the significant impacts of water scarcity, a critical resource loss that disproportionately affects vulnerable populations. In Nigeria, where rainfall variability and drought threaten agricultural livelihoods, water conservation serves as a protective and restorative strategy. Water management initiatives reduce loss spirals, thereby supporting social and economic stability and fostering future resource gains through increased resilience (Fajinmi et al., 2025). COR theory suggests that forest depletion has a series of harmful effects on related resources, including biodiversity, climate regulation, and community livelihoods. Reforestation, afforestation, and sustainable forest management serve as ecological interventions and strategies to halt loss spirals and initiate gain cycles. Evidence from mangrove restoration projects in the Niger Delta indicates that forest regeneration can enhance ecosystem services, bolster community resilience, and expand economic

opportunities (Sam et al., 2023).

Biodiversity conservation exemplifies COR's focus on resource caravans, which are interconnected clusters of resources across ecological, social, and cultural domains. Protected areas, wildlife reserves, and community-based conservation initiatives contribute to maintaining biodiversity while also supporting food security, cultural identity, and climate resilience. Recent studies suggest that integrating biodiversity conservation with Indigenous knowledge and community governance systems creates a positive feedback loop, thereby enhancing both ecosystems and human well-being (Gayo, 2025). The COR theory offers a modern and comprehensive perspective on resource conservation, emphasising the dynamics of resource loss and gain, the interconnection of ecological and social systems, and the importance of collective strategies for protecting resources. This framework enhances conceptual clarity and provides practical insights on how Nigeria can reduce loss cycles while promoting sustainable gain cycles in the preservation of soil, water, forests, and biodiversity.

Global Practices

Innovative resource-conservation strategies worldwide offer valuable insights for developing nations, including Nigeria. Costa Rica exemplifies the successful integration of eco-tourism into national development, leading to significant reforestation alongside economic growth. Costa Rica has demonstrated how combining environmental protection with livelihood opportunities can embed conservation within socio-economic systems, thereby achieving sustainability (Fletcher, 2020). The implementation of Joint Forest Management (JFM) in India highlights the importance of community involvement in environmental governance. This initiative engages local communities in protecting and restoring forests, working in collaboration with state authorities. The programme has increased forest cover, supported rural livelihoods, and fostered collective responsibility for conservation outcomes (Bhattacharya, Pradhan, & Yadav, 2021). Numerous multilateral agreements at the international level establish frameworks to guide conservation efforts. The Paris Climate Agreement (2015) emphasises sustainable land-use and climate-mitigation strategies, while the Convention on Biological Diversity (CBD) promotes the preservation of ecosystems and genetic diversity. The Ramsar Convention on Wetlands commits to the sustainable management of wetlands. These global

practices demonstrate that effective conservation relies on robust institutions, adequate funding, and active community engagement (UNEP, 2022).

Resource Conservation in Nigeria

Nigeria has established various conservation policies and institutions, including the National Environmental Standards and Regulations Enforcement Agency (NESREA), the Forestry Act, and the Nigerian Conservation Foundation (NCF). Although these frameworks seem robust in theory, their practical effectiveness is limited by poor implementation, insufficient coordination, and limited resources (Mashi, Danjuma, & Yusuf, 2022). Deforestation is a major concern, with Nigeria experiencing some of the highest rates of forest loss worldwide, at an estimated annual rate of over 3.7%. Deforestation, caused by logging, agricultural expansion, and fuelwood collection, has reduced biodiversity and increased vulnerability to climate change (Ogunwusi & Ibrahim, 2020). Soil degradation and desertification pose significant challenges in northern Nigeria, where unsustainable agricultural practices and climate change have eroded soil fertility and agricultural productivity, resulting in widespread food insecurity (Abaje, Ishaya, & Ati, 2021).

Water scarcity remains a significant problem, primarily caused by the overextraction of groundwater, inadequate watershed management, and climate variability. This results in unequal access to safe water and heightened competition for limited resources (Ezenwaji, Nwosu, & Igbozurike, 2022). Nigeria faces significant biodiversity loss, with many species endangered due to habitat destruction, poaching, and encroachment on protected areas. Nigeria's involvement in the Convention on Biological Diversity has not improved the protection of vital ecosystems (Adegun, 2021). The Niger Delta highlights the harmful consequences of prioritising extractive activities over conservation efforts. Oil exploration has led to mangrove degradation, water pollution, and soil contamination, thereby endangering ecosystems, and the livelihoods of local communities (Nwankwo & Ume, 2023). This case demonstrates the broader national conflicts between short-term economic ambitions and long-term ecological sustainability.

Key Challenges

The evidence indicates that Nigeria's conservation sector faces numerous structural and contextual challenges. The primary issue is the weakness of institutions and

inadequate enforcement. Environmental regulations are often undermined by corruption, limited technical capacity, and a lack of political will (Mashi et al., 2022). The issue of insufficient funding is also significant, as agencies like NESREA frequently operate with limited budgets, which hampers their ability to conduct large-scale programmes or invest in modern monitoring technologies (Adeyanju, Oyekale, & Schuster-Wallace, 2021). The impacts of climate change, such as desertification in the north, persistent flooding in the Niger Delta, and rising average temperatures nationwide, exacerbate existing resource challenges, thereby increasing the urgency for conservation (Abaje et al., 2021). Nigeria's heavy reliance on natural resources, including crude oil, logging, and subsistence farming, sustains unsustainable practices (Nwankwo & Ume, 2023).

Conservation initiatives are significantly hindered by conflicts and insecurity, particularly in northern Nigeria, where insurgency and farmer–herder clashes disrupt governance and render conservation areas inaccessible (Odoemena, 2020). Furthermore, limited community involvement represents a significant shortcoming. Many conservation programmes are developed in a top-down manner, failing to integrate Indigenous knowledge and promote local ownership, thereby reducing compliance and sustainability (Adegun, 2021).

2. Methodology

This research employs a qualitative and analytical design, combining a descriptive literature review with a comparative analysis. The IMRAD structure provides a systematic approach for analysing current practices, identifying challenges, and offering recommendations. This study incorporates global best practices in resource conservation and contextualises them within Nigeria. The data for this seminar paper were primarily sourced from secondary literature. Included are peer-reviewed journal articles, policy documents, government reports, and international publications from organisations such as the United Nations Environment Programme (UNEP), Food and Agriculture Organisation (FAO), and Intergovernmental Panel on Climate Change (IPCC). Insights are derived from case studies conducted in Nigeria and similar developing countries.

3. Discussion

This study reveals the complex interplay among environmental deterioration, institutional inefficiency,

and socio-economic factors that influence resource conservation in Nigeria. When considered alongside global evidence, these findings indicate that Nigeria's environmental issues stem not only from insufficient policy formulation but also from the lack of strong, participatory, and community-oriented conservation strategies. The Conservation of Resources (COR) theory offers a robust framework for examining these concerns, highlighting the cyclical dynamics of resource depletion and the subsequent stress that ensues (Hobfoll et al., 2018; Liao et al., 2022). The COR theory posits that individuals and society endeavour to acquire, sustain, and safeguard significant resources, whether ecological, social, or economic. Consequently, resource depletion leads to "loss spirals," which induce systemic stress and further depletion (Hobfoll et al., 2018). Nigeria's current environmental issues exemplify this theory: extensive deforestation, soil erosion, and water contamination have collectively led to diminished agricultural production, biodiversity decline, and economic instability. Moreover, Liao et al. (2022) expand COR theory to encompass environmental sustainability research, demonstrating that investments in conservation and institutional reform can produce "gain spirals," in which ecological and social well-being mutually reinforce one another. Bon and Shire (2022) contend that addressing environmental degradation requires multi-tiered interventions that integrate ecological restoration with enhanced community resilience. The study's findings corroborate these insights, suggesting that Nigeria's conservation outcomes can be enhanced by concurrently strengthening both ecological and institutional capital.

Global Models and Lessons for Nigeria

An analysis of Nigeria's conservation framework in relation to global models reveals significant disparities. Countries like Costa Rica and India have shown that successful conservation is linked to participatory governance and economic integration. Costa Rica's eco-tourism policy integrates biodiversity conservation with economic development, guaranteeing direct benefits to local communities from conservation efforts (Fletcher, 2020). India's Joint Forest Management (JFM) initiative similarly prioritises collaborative decision-making, enabling communities to jointly manage forest resources alongside government institutions. These methodologies implement the COR theory's notion of mutual reinforcement by establishing "gain spirals" between environmental conservation and social well-being. Nigeria's experience underscores institutional

fragmentation, inadequate finance, and insufficient community engagement as impediments to effective conservation. Mashi et al. (2022) determined that overlapping missions and inadequate enforcement mechanisms have constrained the effectiveness of Nigeria's environmental authorities, whereas Adeyanju et al. (2021) noted that financial limitations and bureaucratic inefficiencies hinder long-term sustainability. The present analysis corroborates previous findings, indicating that despite Nigeria's extensive legislative frameworks, implementation remains varied and is frequently constrained by political factors.

Community-Based Conservation and Local Ownership

A crucial aspect of successful conservation is promoting community involvement and local management. Osazuwa et al. (2024) present empirical evidence from Ekiti State, Nigeria, demonstrating that community-based conservation improves compliance, mitigates conflict, and cultivates a feeling of environmental stewardship. Their research demonstrates that grassroots initiatives, rooted in local leadership and Indigenous practices, yield more sustainable outcomes than top-down interventions. Adegun (2021) similarly asserts that neglecting local considerations in conservation design leads to restricted success and public opposition. Integrating community participation into conservation governance will enable Nigeria to adopt a more inclusive and sustainable framework. The COR model endorses this perspective, indicating that when communities collaboratively invest in conservation, they create social and ecological "resource caravans" that enhance long-term resilience (Liao et al., 2022). This corresponds with the findings of Osazuwa et al. (2024), who noted that empowering communities converts conservation from an enforced obligation into a collective cultural value.

Institutional and Policy Integration

Institutional coherence is essential to achieving sustainable resource conservation goals. UNEP (2022) underscores that effective governance necessitates aligned mandates, accountability, and sufficient finance. Nigeria's conservation agencies often operate in isolation, leading to redundant policies and inefficiency. The study's findings underscore a persistent issue: inadequate coordination among the Ministry of Environment, the Forestry Commission, and NESREA undermines the effectiveness of implementation. Furthermore, Adeyanju et al. (2021) and Mashi et al.

(2022) advocate incorporating environmental governance into national economic planning to ensure sustainability and equitable resource allocation. Integrating these institutional reforms with locally initiated programs, as posited by Osazuwa et al. (2024), may yield a hybrid governance model, top-down support augmented by bottom-up accountability. This method aligns with the COR theory's assertion that resource acquisition necessitates both systemic and communal involvement.

Ecological Degradation and Socio-Economic Implications

Deforestation, soil degradation, and biodiversity loss persist among Nigeria's most prominent conservation issues. Ogunwusi and Ibrahim (2020) observe that Nigeria annually loses 3.5% of its forest cover due to logging, agricultural development, and reliance on fuelwood. Fast deforestation has cascading consequences, including habitat destruction and reduced carbon sequestration. Eneh et al. (2024) demonstrate that adopting soil conservation practices, including crop rotation, contour ploughing, and agroforestry, can significantly enhance production and reduce environmental degradation. Fajinmi et al. (2025) similarly found that water-saving techniques, including drip irrigation and rainwater collection, increase agricultural resilience amid climate stress. Nonetheless, the implementation of these ideas in Nigeria is constrained by insufficient governmental support and fragile institutional structures.

Climate Change, Conflict, and Ecological Restoration

Climate change exacerbates Nigeria's resource conservation dilemma. Abaje et al. (2021) associate desertification and drought in northern Nigeria with agricultural deterioration and increased confrontations between farmers and herders. These disputes exemplify COR's notion of "loss spirals," in which environmental degradation precipitates resource competition and societal instability. Nwankwo and Ume (2023) indicate that oil extraction in the Niger Delta has resulted in significant pollution and the destruction of mangroves, undermining local livelihoods and intensifying inequality. Sam et al. (2023) demonstrate that mangrove restoration initiatives may disrupt this cycle by generating new economic opportunities and enhancing biodiversity, thereby launching "gain spirals."

Conservation of Biodiversity and Indigenous

Knowledge

The incorporation of Indigenous ecological knowledge is increasingly seen as vital for successful conservation efforts. Gayo and Mensah (2025) contend that indigenous governance systems enhance formal policy frameworks by fostering culturally ingrained sustainable practices. In Nigeria, Osazuwa et al. (2024) found that traditional norms and community-driven oversight in Ekiti State bolstered forest conservation and enhanced local environmental stewardship. Recognising the significance of indigenous systems could enhance Nigeria's biodiversity governance and ensure that conservation initiatives are both effective and culturally relevant. Despite robust conservation policies, Nigeria continues to face implementation challenges. UNEP (2022) asserts that many developing countries face challenges in translating policy pledges into measurable outcomes due to inadequate data systems and insufficient resources. Nigeria must establish transparent monitoring mechanisms, decentralise decision-making, and integrate environmental education into policy implementation to address this gap. Adeyanju et al. (2021) additionally promote financial innovations, such as environmental trust funds and green bonds, to guarantee the sustainability of long-term projects. Nigeria's trajectory towards sustainable resource conservation necessitates a comprehensive change rooted in institutional reform and community empowerment. The COR theory offers a conceptual framework for understanding how resource depletion engenders cycles of loss and instability, and how conservation expenditures might mitigate those trends. Empirical evidence from Osazuwa et al. (2024) and Adegun (2021) underscores the transformative potential of community-based conservation, in which local engagement drives sustainability outcomes.

4. Conclusion

This study rigorously analysed resource conservation practices in both global and Nigerian contexts, using the Conservation of Resources (COR) theory as its theoretical framework. The results indicated that sustainable conservation is primarily contingent upon the capacity of societies and institutions to safeguard and restore essential environmental and social resources (Hobfoll et al., 2018; Liao et al., 2022). Countries like Costa Rica and India exemplify that participatory governance, policy coherence, and continuous funding are essential for effective conservation results (Fletcher, 2020). Nigeria's conservation initiatives are impeded by weak institutional structures, ineffective enforcement,

insufficient funding, and limited community engagement (Mashi et al., 2022; Adeyanju et al., 2021). The ongoing issues of deforestation, desertification, and pollution persistently jeopardise biodiversity, agricultural productivity, and livelihoods (Ogunwusi & Ibrahim, 2020; Abaje et al., 2021; Nwankwo & Ume, 2023). These trends illustrate the COR theory's concept of the "loss spiral," in which resource depletion initiates a cascading collapse of environmental and socio-economic conditions (Bon & Shire, 2022). Nonetheless, recent evidence from local projects suggests that community-based conservation may mitigate this trend. Research in Ekiti State indicates that empowering communities to engage in conservation decision-making enhances compliance and improves ecological results (Osazuwa et al., 2024). Converging viewpoints emphasise that incorporating Indigenous knowledge and cultural practices into conservation policy improves legitimacy and sustainability (Gayo & Mensah, 2025; UNEP, 2022).

Recommendations

This study's findings and conclusions yield the following recommendations to enhance resource conservation and foster sustainable environmental management in Nigeria:

Firstly, it is essential to strengthen institutional structures and refine policy coordination across all levels of government. Current entities tasked with environmental protection and resource management ought to be reorganised to eradicate overlapping missions, guarantee accountability, and improve inter-agency coordination. Implementing a cohesive conservation policy framework will enhance alignment between national and subnational conservation initiatives.

Secondly, community-based conservation must be prioritised as a fundamental strategy for attaining sustainable outcomes. Local communities must be enabled to actively engage in decision-making, oversight, and the execution of conservation initiatives. Integrating Indigenous knowledge systems and traditional resource management practices will promote local ownership, improve compliance, and guarantee the long-term sustainability of conservation efforts.

Thirdly, it is imperative to have sufficient and sustainable financing structures to support conservation programs. The creation of environmental trust funds, green bonds, and public-private partnerships will ensure financial stability for long-term initiatives. Designating a specific

budget line for conservation in national and state environmental programs will ensure reliable funding for implementation and oversight.

Fourthly, environmental education and awareness initiatives should be amplified to encourage responsible resource utilisation among the populace. Integrating conservation ideas into educational curriculum, community awareness initiatives, and media campaigns will promote behavioural change and shared accountability for the environment.

The prioritisation of integrating climate adaptation and technology innovation into conservation efforts is essential. Contemporary monitoring instruments, including satellite imagery, digital mapping, and environmental data systems, ought to be implemented to improve planning, transparency, and assessment. Mitigating the impacts of climate change through adaptive land-use planning, reforestation, and water management would enhance resilience and reduce ecological vulnerability.

References

1. Abaje, I. B., Ishaya, S., & Ati, O. F. (2021). Climate change, droughts, and desertification in northern Nigeria: Implications for agriculture and water resources. *Environmental Research*, 200, 111405. <https://doi.org/10.1016/j.envres.2021.111405>
2. Abaje, I. B., Ishaya, S., & Ati, O. F. (2021). Climate Variability and Resource-Based Conflicts in Northern Nigeria *Journal of African Earth Sciences*, 175, 103927. <https://doi.org/10.1080/17531055.2021.1893741>
3. Adegun, O. B. (2021). Community participation in natural resource management in Nigeria: Pathways to sustainability. *Environmental Development*, 40, 100642. <https://doi.org/10.1016/j.envdev.2021.100642>
4. Adegun, O. B. (2021). Land use policy and biodiversity conservation in Nigeria: Prospects and challenges. *Land Use Policy*, 109, 105678. <https://doi.org/10.1016/j.landusepol.2021.105678>
5. Adeyanju, A. O., Oyekale, T., & Schuster-Wallace, C. J. (2021). Strengthening environmental governance and institutional capacity in West Africa. *Sustainability*, 13(7), 4215. <https://doi.org/10.3390/su13074215>
6. Adeyanju, G. C., Oyekale, A. S., & Schuster-

- Wallace, C. (2021). Financing environmental governance in sub-Saharan Africa: Lessons for Nigeria. *Environmental Development*, 40, 100651. <https://doi.org/10.1016/j.envdev.2021.100651>
7. Bhattacharya, P., Pradhan, L., & Yadav, G. (2021). Joint forest management in India: Achievements and challenges. *International Forestry Review*, 23(2), 145–159. <https://doi.org/10.1505/146554821832635>
 8. Bon, A., & Shire, K. (2022). Conservation of Resources Theory: Extensions, challenges, and applications. *Journal of Applied Psychology*, 107(11), 1984–1992. <https://doi.org/10.1037/apl0000992>
 9. Bon, J., & Shire, K. (2022). Revisiting Hobfoll's conservation of resources theory in sustainability transitions. *Journal of Environmental Psychology*, 80, 101731. <https://doi.org/10.1016/j.jenvp.2022.101731>
 10. Cunningham, W. P., & Cunningham, M. A. (2021). *Environmental science: A global concern* (15th ed.). McGraw-Hill.
 11. Eneh, C. A., Okoro, J., & Adeoye, T. (2025). A system dynamics analysis of agricultural practices and food security in Nigeria. *Journal of Health, Population and Nutrition*, 44(1), 18. <https://doi.org/10.1186/s41043-025-01037-4>
 12. Eneh, O. C., Nwafor, P. I., & Okoro, I. K. (2024). Soil conservation and agricultural sustainability in Sub-Saharan Africa. *Agriculture, Ecosystems & Environment*, 363, 109489. <https://doi.org/10.1016/j.agee.2024.109489>
 13. Ezenwaji, E. E., Nwosu, C. O., & Igbozurike, M. U. (2022). Water scarcity and resource conflicts in Nigeria: Emerging issues under climate change. *Geographical Journal*, 188(2), 145–159. <https://doi.org/10.1080/24694452.2022.2056101>
 14. Fajinmi, O. O., Ojo, A., & Adebayo, K. (2025). Biodiversity conservation as a crucial tool for climate resilience in Africa: Wild forests, indigenous vegetables, food, and nutritional security. *Plants*, 14(17), 2649. <https://doi.org/10.3390/plants14172649>
 15. Fajinmi, T. T., Adebayo, R. A., & Bello, A. (2025). Water conservation and sustainable agriculture under climate stress in West Africa. *Environmental Challenges*, 13, 100941. <https://doi.org/10.1016/j.envc.2025.100941>
 16. FAO. (2021). *State of the world's forests 2020*. Food and Agriculture Organization of the United Nations. <https://doi.org/10.4060/ca8642en>
 17. Fletcher, R. (2020). Ecotourism after nature: Anthropocene tourism as a new form of conservation. *Journal of Sustainable Tourism*, 28(11), 1880–1898. <https://doi.org/10.1080/09669582.2020.1720690>
 18. Fletcher, R. (2020). Ecotourism and sustainability: The Costa Rican model revisited. *Tourism Geographies*, 22(5), 847–863. <https://doi.org/10.1080/14616688.2019.1708462>
 19. Gayo, D., & Mensah, I. (2025). Indigenous knowledge and biodiversity governance in Africa: Policy lessons for resilience. *Ecology and Society*, 30(1), 19–33. <https://doi.org/10.5751/ES-14020-300119>
 20. Gayo, L. (2025). Community-based conserved areas in advancing sustainable development and conservation in Sub-Saharan Africa. *Discover Conservation*, 2, 27. <https://doi.org/10.1007/s44353-025-00047-x>
 21. Hardin, G. (1968). The tragedy of the commons. *Science*, 162(3859), 1243–1248. <https://doi.org/10.1126/science.162.3859.1243>
 22. Hobfoll, S. E. (1989). Conservation of Resources: A new attempt at conceptualizing stress. *American Psychologist*, 44(3), 513–524. <https://doi.org/10.1037/0003-066X.44.3.513>
 24. Hobfoll, S. E., Halbesleben, J., Neveu, J.-P., & Westman, M. (2018). Conservation of resources in the organizational context: The reality of resources and their consequences. *Annual Review of Organizational Psychology and Organizational Behavior*, 5, 103–128. <https://doi.org/10.1146/annurev-orgpsych-032117-104640>
 25. Ikechukwu, A., Nnaji, C., & Okoye, V. (2022). Environmental degradation and conservation practices in Nigeria: Policy gaps and prospects. *African Journal of Environmental Studies*, 18(3), 77–93.
 26. Liao, C., Huang, L., & Hu, J. (2022). Conservation of resources theory in environmental sustainability research: Integrative perspectives. *Journal of Environmental Management*, 318, 115551. <https://doi.org/10.1016/j.jenvman.2022.115551>
 27. Liao, H., Huang, L., & Hu, B. (2022). Conservation of resources theory in the organizational behavior context: Theoretical evolution and challenges. *Advances in Psychological Science*, 30(2), 449–463. <https://doi.org/10.3724/SP.J.1042.2022.00449>

28. Mashi, R., Danjuma, A., & Yusuf, M. (2022). Evaluating the National Disaster Response Plan in Nigeria: Lessons for resource conservation. *Disaster Prevention and Management*, 31(5), 652–669. <https://doi.org/10.1108/DPM-11-2021-0345>
29. Mashi, S. A., Danjuma, H. Y., & Yusuf, B. (2022). Environmental regulation and enforcement challenges in Nigeria: Institutional barriers and pathways for reform. *Environmental Science and Policy*, 132, 88–97. <https://doi.org/10.1016/j.envsci.2022.03.012>
30. Nwankwo, B., & Ume, E. (2023). Oil exploitation and environmental conservation in the Niger Delta: A critical review. *Energy Policy Review*, 29(1), 55–72. <https://doi.org/10.1080/09725889.2023.1123456>
31. Odoemena, C. (2020). Insecurity and Environmental Governance in Nigeria: Implications for Sustainability. *African Security Review*, 29(1), 34–49. <https://doi.org/10.1080/09718524.2020.1736469>
32. Ogunwusi, A. A., & Ibrahim, H. D. (2020). Deforestation and sustainable forest management in Nigeria: Issues and prospects. *Journal of Tropical Forestry*, 36(2), 145–160. <https://doi.org/10.1080/21580103.2020.1802356>
33. Ogunwusi, A. A., & Ibrahim, H. D. (2020). Deforestation in Nigeria: The challenges and sustainable solutions. *Environmental Challenges*, 1, 100004. <https://doi.org/10.1016/j.envc.2020.100004>
34. Osazuwa, C. M., Peter, O. A., Oghogho, M. Y., Mboto, A. A., & Gogogwute, O. (2024). Role of community-based conservation in Ekiti State. *The American Journal of Interdisciplinary Innovations and Research*, 6(11), 97–112.* <https://doi.org/10.37547/tajir/Volume06Issue11-07>
35. Sam, K., Asogwa, E., & Alufohai, P. (2023). Towards a framework for mangrove restoration and conservation in the Niger Delta: Integrating ecosystem and community-based approaches. *Ecological Processes*, 12(1), 18. <https://doi.org/10.1007/s13717-023-00595-y>
36. Sam, P. E., Udo, K. A., & Akpan, E. N. (2023). Mangrove restoration and community resilience in the Niger Delta. *African Journal of Ecology*, 61(4), 765–781. <https://doi.org/10.1111/aje.13045>
37. UNEP. (2022). *Global Environment Outlook 6: Healthy Planet, Healthy People*. United Nations Environment Programme. <https://doi.org/10.18356/9781108707664>
38. UNEP. (2022). *Global Environment Outlook 7: Summary for Policymakers*. United Nations Environment Programme. <https://wedocs.unep.org/handle/20.500.11822/39871>
39. United Nations Environment Programme. (2022). *Global Environment Outlook 6: Healthy Planet, Healthy People*. Cambridge University Press. <https://doi.org/10.18356/9781108707664>