



Environmental Education and Sacred Groves in Indigenous Communities in Nigeria

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Abstract

Environmental education has become a central strategy for addressing global environmental challenges, particularly in contexts where biodiversity loss, climate change, and unsustainable resource use intersect with socio-cultural transformation. In Nigeria, indigenous communities have historically maintained complex systems of environmental stewardship rooted in cultural beliefs, spiritual values, and customary institutions. Among the most enduring of these institutions are sacred groves, which are forested areas, protected through religious taboos, ancestral reverence, and communal governance. This paper examined the role of sacred groves in indigenous Nigerian communities as culturally grounded spaces of environmental education. Drawing on interdisciplinary scholarship in environmental education, indigenous knowledge systems, and sacred ecology, the paper explored how sacred groves function as informal learning environments that transmit ecological knowledge, ethical values, and conservation practices across generations. The paper further analyzed the ecological, social, and pedagogical significance of sacred groves, as well as the challenges they face in the context of modernization, religious change, land-use pressure, and policy neglect. It argues that integrating indigenous environmental knowledge and sacred grove practices into formal and non-formal environmental education frameworks can enhance sustainability outcomes while respecting cultural autonomy. The paper concluded by offering policy-relevant recommendations for strengthening culturally responsive environmental education in Nigeria.

Keywords: environmental education, sacred groves, indigenous knowledge, Nigeria, sustainability, cultural conservation.

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INTRODUCTION

Environmental degradation poses a significant threat to sustainable development globally, with developing countries experiencing particularly severe consequences due to rapid population growth, weak governance structures, and intensive resource exploitation. Nigeria faces acute environmental challenges, including deforestation, biodiversity loss, soil erosion, desertification,

and pollution. While environmental education has been widely promoted as a tool for fostering environmental awareness and responsible behavior, dominant approaches in Nigeria have largely emphasized formal schooling and externally designed conservation programs, often detached from local cultural contexts (Ebere, 2022).

Indigenous communities in Nigeria possess long-standing environmental knowledge systems developed through sustained interaction with their local ecosystems. These systems are embedded in cultural norms, spiritual beliefs, oral traditions, and customary laws that regulate human-environment relationships (Ijatuyi, 2025). Sacred groves represent one of the most visible and enduring expressions of indigenous environmental governance. Traditionally protected as abodes of deities, ancestral spirits, or ritual centers, sacred groves function as conserved landscapes where exploitation is restricted or prohibited.

According to Ijatuyi (2025), beyond ecological importance, sacred groves serve as informal institutions of environmental education. Through rituals, taboos, storytelling and communal participation, ecological knowledge and conservation ethics are transmitted from one generation to the next. However, the educational significance of sacred groves has received limited attention in mainstream environmental education scholarship and policy in Nigeria, where Western scientific paradigms often dominate discourse and practice.

This paper sought to address this gap by examining sacred groves as culturally embedded mechanisms of environmental education in indigenous Nigerian communities. It situates sacred groves within contemporary theoretical debates on indigenous knowledge, environmental education, and sacred ecology, and critically analyzes their relevance for sustainability education in Nigeria. Through indigenous perspectives, this study challenges the marginalization of traditional conservation institutions and advocates for a pluralistic approach to environmental education that recognizes cultural diversity and local knowledge systems.

CONCEPTUAL AND THEORETICAL FRAMEWORK

Indigenous Knowledge Theory

Indigenous knowledge refers to locally developed bodies of understanding, skills, and beliefs that evolve through long-term interaction with specific environments. Such knowledge systems are holistic, context-specific, and transmitted primarily through oral traditions and cultural practices. Indigenous knowledge theory emphasizes that these systems are dynamic and adaptive rather than static or archaic (Berkes, 2018).

In Nigeria, indigenous knowledge has historically guided land use, forest management, water conservation, and biodiversity protection. Sacred groves exemplify this knowledge in practice, as their protection is enforced through culturally legitimate norms rather than formal legislation. Learning within indigenous knowledge systems is experiential and value-laden, emphasizing moral responsibility, communal accountability, and intergenerational stewardship.

Environmental Education Theory

Environmental education theory has evolved from early conservation-focused models toward broader frameworks emphasizing sustainability, citizenship, and social transformation. Contemporary approaches recognize that environmental education must engage cognitive, affective, and behavioral domains to foster lasting change (UNESCO, 2022). Experiential and

place-based learning are particularly emphasized for their ability to connect learners with local environments and issues.

Sacred groves align closely with experiential and place-based education models. They provide real-world contexts where learners engage directly with ecosystems, observe conservation outcomes, and internalize environmental values. From a critical environmental education perspective, sacred groves also challenge dominant Western epistemologies by foregrounding indigenous ways of knowing and learning.

Sacred Ecology

Sacred ecology explores the interconnections between spiritual beliefs, cultural practices, and ecological management. In many indigenous societies, nature is perceived as sacred, and environmental protection is achieved through spiritual reverence rather than coercive enforcement (UNEP, 2021; Verschuuren et al., 2021). Sacred groves represent socio-spiritual landscapes where cultural identity, moral order, and ecological integrity converge.

Through sacred ecology, environmental education is not separated from ethics or spirituality. Instead, learning is embedded within belief systems that assign moral significance to environmental protection. This framework helps explain the resilience of sacred groves and their effectiveness as conservation and educational institutions.

REVIEW OF RELATED LITERATURE

Indigenous Knowledge and Environmental Sustainability

A growing body of literature highlights the contribution of indigenous knowledge to environmental sustainability. Studies across Africa demonstrate that traditional practices such as sacred forest protection, seasonal resource regulation, and ritualized land use have historically promoted ecological resilience (Pretty, 2018). In Nigeria, indigenous knowledge has been shown to support soil conservation, forest regeneration, and biodiversity preservation, particularly in rural communities (Ogunfolakan & Adebisi, 2020).

In spite of this evidence, indigenous knowledge systems have often been marginalized by colonial and postcolonial development models that prioritize Western scientific approaches. This marginalization has weakened traditional environmental institutions and reduced their influence on contemporary environmental governance.

Sacred Groves and Biodiversity Conservation

Sacred groves have attracted scholarly attention for their role in conserving biodiversity. Research indicates that these groves often contain higher species diversity than surrounding landscapes subjected to intensive land use (Berkes et al., 2021). In Nigeria, sacred groves have been documented across ecological zones, serving as refuges for endemic plant species, medicinal herbs, and wildlife.

The conservation effectiveness of sacred groves is closely linked to cultural enforcement mechanisms. Taboos and spiritual sanctions create strong incentives for compliance, often surpassing the effectiveness of externally imposed regulations. This highlights the potential of culturally embedded conservation systems for sustainability.

Environmental Education in Indigenous Contexts

Environmental education literature increasingly emphasizes culturally responsive approaches that integrate local knowledge and community participation. Indigenous education systems are characterized by experiential learning, moral instruction, and intergenerational transmission, contrasting with formal schooling models that prioritize abstract knowledge (Gruenewald & Smith, 2019).

Sacred groves function as informal learning spaces where environmental education is contextualized within cultural narratives and lived experience. However, formal education systems in Nigeria rarely incorporate these indigenous pedagogies, resulting in a disconnect between school-based environmental education and community practices.

Sacred Groves in Indigenous Nigerian Communities

Sacred groves are found among numerous ethnic groups in Nigeria, including Yoruba, Igbo, Edo, communities in the Niger Delta Region where sacred groves are mostly regarded as protected areas and reserved only for the elders and traditional priests who explore mostly to harvest herbs, roots and other means of traditional medicines; and communities in the Middle Belt. Although their specific meanings vary, they share common characteristics as spiritually protected forest areas governed by customary law.

Ecologically, sacred groves serve as biodiversity reservoirs and providers of ecosystem services such as microclimate regulation and watershed protection. Socially, they reinforce communal identity and moral order. Educationally, they function as spaces where environmental knowledge and values are transmitted through participation in rituals, storytelling, and communal activities.

Governance of sacred groves is typically community-based, relying on traditional authorities such as elders and priests. These structures ensure compliance through social and spiritual sanctions, although they are increasingly challenged by modernization and land-use pressure.

Sacred Groves as Mechanisms of Environmental Education

Sacred groves operate as culturally embedded systems of environmental education in indigenous Nigerian communities by combining experiential learning, moral instruction, and social regulation. Unlike formal education systems that rely on standardized curricula and classroom instruction, sacred groves transmit environmental knowledge through participation in everyday cultural and spiritual practices. Learning in this context is inseparable from social life, belief systems, and community identity.

Environmental learning within sacred groves is largely experiential. Community members, particularly children and youth, acquire ecological knowledge by observing elders, participating in rituals, and engaging with the natural environment directly. This process aligns with experiential learning theory, which emphasizes learning through direct engagement with real-world contexts (Kolb, 2015). Through repeated exposure to sacred groves, learners develop familiarity with plant species, wildlife behavior, seasonal cycles, and ecological relationships. Such knowledge is reinforced through oral narratives that explain the origins, functions, and sacred significance of the groves.

Sacred groves also function as sites of values-based environmental education. Taboos governing activities such as tree felling, hunting, and farming within groves communicate ethical principles of restraint, respect for nature and intergenerational responsibility (UNEP, 2021). These taboos are internalized as moral obligations rather than external rules, fostering intrinsic motivation for environmental stewardship. Scholars of environmental education emphasize that values and ethics are critical for translating environmental knowledge into responsible behavior (Tilbury, 2020). Sacred groves demonstrate how moral frameworks rooted in culture and spirituality can effectively support conservation-oriented behavior.

Intergenerational knowledge transmission is another defining feature of environmental education within sacred groves. Elders, priests, and custodians serve as educators who transmit ecological knowledge, cultural history, and ethical norms through storytelling, instruction, and example. Learning occurs continuously across the lifespan, reinforcing both environmental literacy and cultural continuity. This communal and intergenerational model contrasts with age-segregated formal education systems and highlights the social dimensions of learning emphasized in indigenous education scholarship (Battiste, 2019).

From a pedagogical perspective, sacred groves can be conceptualized as living classrooms. They provide place-based learning environments where ecological concepts are grounded in local landscapes and cultural meanings. Place-based environmental education has been shown to enhance relevance, learner engagement, and community participation by connecting education to lived experience (Gruenewald & Smith, 2019). Sacred groves embody this approach by linking environmental learning to culturally significant spaces that command respect and emotional attachment.

CHALLENGES AND THREATS TO SACRED GROVES AND INDIGENOUS ENVIRONMENTAL EDUCATION

Notwithstanding their ecological and educational significance, sacred groves in Nigeria face mounting challenges that threaten both their physical integrity and their role as institutions of environmental education. These challenges stem from socio-cultural transformation, religious change, economic pressures, and policy neglect.

Modernization and urbanization have altered community structures and value systems, particularly among younger generations. Formal education and urban lifestyles often distance youth from indigenous cultural practices, weakening participation in rituals and communal activities associated with sacred groves. As a result, traditional pathways of environmental knowledge transmission are disrupted, and the educational role of sacred groves is diminished.

Religious transformation represents another major challenge. The spread of Christianity and Islam has, in some communities, delegitimized indigenous spiritual beliefs associated with sacred groves. Sacred sites are sometimes regarded as incompatible with new religious identities, leading to neglect or destruction. As belief in spiritual sanctions declines, compliance with traditional conservation rules weakens, exposing sacred groves to exploitation (Verschuuren et al., 2021).

Economic pressures also pose significant threats. Population growth, agricultural expansion, infrastructure development, and commercial land use increase competition for land resources. Sacred groves, often lacking formal legal protection, are vulnerable to encroachment and conversion. When economic survival becomes a priority, cultural and ecological

considerations may be sidelined, undermining both conservation outcomes and environmental education processes.

Policy neglect further exacerbates these challenges. Sacred groves are largely absent from national environmental conservation strategies and education curricula in Nigeria. Conservation policy tends to prioritize state-managed protected areas, while education policy emphasizes formal schooling with limited engagement with indigenous knowledge systems. This institutional marginalization reduces opportunities for support, collaboration, and integration of sacred groves into broader sustainability initiatives.

The decline of traditional custodianship compounds these issues. As elders and custodians age without successors, valuable ecological knowledge risks being lost. The predominantly oral nature of indigenous knowledge transmission makes it particularly vulnerable to erosion when cultural continuity is disrupted.

CONCLUSION

This article has demonstrated that sacred groves in indigenous Nigerian communities are not merely relics of cultural tradition but dynamic institutions that integrate environmental conservation, education, and cultural identity. Through experiential learning, moral instruction, and intergenerational transmission, sacred groves function as informal yet effective systems of environmental education. They foster ecological literacy, ethical responsibility, and community-based stewardship in ways that complement and, in some cases, surpass formal education approaches.

The analysis also highlights the vulnerability of sacred groves in the face of modernization, religious change, land-use pressure, and policy neglect. These challenges threaten both the physical survival of sacred groves and the indigenous environmental education systems they sustain. Addressing these threats requires a shift toward culturally responsive environmental education and conservation strategies that recognize the legitimacy and value of indigenous institutions.

Recommendations

The following recommendations are proffered:

- First, environmental education policy in Nigeria should formally acknowledge indigenous knowledge systems and sacred groves as legitimate educational resources. Curriculum frameworks at primary, secondary, and tertiary levels can incorporate indigenous conservation practices, case studies of sacred groves, and place-based learning approaches that enhance cultural relevance and learner engagement.
- Second, legal and institutional recognition of sacred groves is essential. Government agencies should collaborate with indigenous communities to provide protective frameworks that respect customary land tenure and governance systems. Community-based conservation models can strengthen protection while preserving cultural autonomy.
- Third, non-formal environmental education initiatives should support community-led programs that draw on sacred grove traditions. Youth engagement programs, intergenerational learning forums, and culturally grounded environmental campaigns can revitalize indigenous environmental education while fostering community ownership.

- Fourth, ethical documentation of indigenous environmental knowledge associated with sacred groves should be encouraged, with full community consent. Documentation can support knowledge preservation without undermining oral traditions or cultural sovereignty.
- Finally, interdisciplinary research and collaboration among educators, anthropologists, ecologists, and policymakers are needed to deepen understanding of sacred groves as educational institutions and to inform evidence-based policy and practice.

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