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An Examination of Indigenous Knowledge in Traditional Tourism on Biodiversity Preservation, and Sustainable Tourism Development, South-western Nigeria

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Abstract

The study examines Indigenous Knowledge (IK) contribution to the conservation of biodiversity and sustainable tourism development in two UNESCO sites in South-western Nigeria: Osun-Osogbo Sacred Grove, Osun State and Idanre Hills, Ondo State. The survey was conducted using a cross-sectional survey design with a sample size of 400 respondents (200 at each site) that was determined through Yamane's formula. The selections were through purposive and convenience sampling technique. Data were presented as frequencies, percentages, and Chi-square tests. Findings reveal that 84% of the respondents in Osun-Osogbo thought spiritual taboos were the most important conservation instrument, while 72% of the respondents at Idanre Hills selected traditional terrace farming and indigenous architecture as the primary conservation instrument. Community-led entrepreneurship was relatively higher in Idanre Hills (65%) compared to Osun-Osogbo Sacred Grove (52%). There was a significant relationship between site and IK practice, $\chi^2 = 112.43$, $p < .001$. The study ends with the recommendation that formal embedding of IK in UNESCO management plans, alongside the active integration of the younger generations, can lead to more cost-effective conservation based on community participation.

Keywords: *Indigenous Knowledge, Traditional Tourism, Biodiversity Preservation, Sustainable Tourism, Intergenerational Knowledge Transfer*

Introduction

Tourism has now become a key factor in sustainable development in particular areas, especially those with abundant cultural heritage and biodiversity (Pai, Zhang, Wang, Li, & Shang 2026; Sharkya and Vagnarelli, 2024; Wasela, 2023). In recent years, the focus has been more on inclusive and sustainable tourism models that involve the integration of local knowledge systems, particularly indigenous knowledge, in the planning and management of tourism sites. This is due to the increased awareness of the destruction of natural resources,

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biodiversity loss, and socio-cultural consequences of tourism at a mass scale. This has been the starting point for considering traditional tourism practices based on indigenous knowledge as potential tools for biodiversity conservation and sustainable tourism development (Kumar, 2025; Hoang, 2021).

Indigenous knowledge is the collection of knowledge, practices and beliefs that are developed by local communities over time as they interact with their natural environment. This information can be passed down through generations, and can include sustainable use and management of resources, conservation and cultural traditions. The importance of indigenous knowledge in the development of ecological balance and biodiversity conservation, especially in developing regions where local populace are heavily relying on natural resources, has been emphasized in recent years.

Indigenous knowledge (IK) is the knowledge and way of life of local communities that is unique and traditional. Passed down through oral history and tradition, song, story and narration, it is a part of their culture. The resource is of immense value, containing the knowledge gleaned by people over many generations who have lived in harmony with the land, and can provide valuable lessons with regard to current environmental and social issues (Dorji,Rinchen, Morrison-Saunders 2024; Eyefia, 2025). According to the United Nations High Commissioner for Refugees (UNHCR) (2020), the transmission of indigenous knowledge has been carried out over a period of over hundreds of years. It offers Nature-based Solutions (NbS) to help with local, national and global adaptation efforts. In addition, there was a strong emphasis on integration, balance and mutual respect between human society and the other elements of nature, particularly in terms of resource use.

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The traditional tourism, which is parallel with indigenous practices, shows a close relationship between culture and nature. It integrates local practices, rituals, festivals, and environmental management that encourage responsible interactions with nature. Indigenous tourism is considered a sustainable system due to its principles of reciprocity, respect for nature and community cohesion, as argued by various scholars. In Nepal, for example, indigenous tourism research showcases the synergy of traditional community approaches towards collaboration, cultural maintenance, and sustainable tourism development.

In addition, indigenous knowledge has been recognized as one of the most important aspects in the process of conserving biodiversity in the world. Embedding the knowledge of local communities into environmental governance will improve environmental outcomes and build resilience to environmental shocks including climate change. Likewise, it has been demonstrated that community-based tourism (CBT) based on indigenous practices can help to conserve the environment while simultaneously enhancing the livelihoods of local communities (Eyefia, 2025; Attoh, Ajayi, & Ludwig2021). It helps in the preservation of tangible and intangible heritage for the development of sustainable tourism. It encourages tourists to adopt the "environment-friendly" style of travel and to take part in the tourism and bringing benefits to the community (Emmanuel, 2025). Research shows that integrating the use of indigenous knowledge in tourism policies improves the effectiveness of destinations in promoting ecological sustainability, cultural preservation and economic development (Singh, 2026).

However, integration of indigenous knowledge into tourism development has its own challenges such as cultural commodification, traditional practices being lost, and lack of indigenous rights recognition. In a few instances, the development of the tourism industry has

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resulted in the exploitation of native cultures and the degradation of natural resources, decreasing the sustainability of the tourism industry itself. This underscores the importance of having a two-sided approach that recognizes indigenous knowledge systems and harnesses their potential for sustainable development.

Ultimately, it is the continuity of IK that relies on younger generations as future custodians and implementers of these practices.

This study focuses on indigenous knowledge contribution to the conservation of biodiversity and sustainable tourism development which is related to traditional tourism. The study aims to gain insights into more sustainable and culturally sensitive approaches to tourism, by exploring how local knowledge systems influence tourism practices. The specific objectives are to:

1. determine the traditional and customary land use practices for the conservation of biodiversity and tourism at Osun-Osogbo, and Idanre Hills.
2. consider oral traditions and ancestral stories as informal conservation rules.
3. analyze the effect of traditional management on sustainable tourism and community entrepreneurial activities.
4. assess the level of continuity of Indigenous Knowledge (IK) among youth.
5. identify obstacles to incorporation of unwritten indigenous law in formal UNESCO management plans.

Some Sustainable Development Goals; SDG 11(Safeguarding World Heritage) and SDG 15 (Biodiversity Preservation) were used as pillars in this study. The study explores the

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implications of the linkages between Indigenous Knowledge and tourism at Osun-Osogbo and Idanre Hills, offering evidence for community-based conservation models that can help meet global sustainability goals.

Literature Review

Introduction and Conceptualizing Indigenous Knowledge in Tourism

In recent years, the need to protect biodiversity and ensure sustainable tourism has sparked academic interest in the potential of Indigenous Knowledge Systems (IKS) as a means to achieve sustainable development (Liambela & Mandume, 2025). IKS is cultural and socio-ecological in nature and is a result of a long-term engagement between humans and nature.

Indigenous Knowledge Systems are cumulative, experiential and adaptive knowledge systems that are embedded in the co-evolutionary relationship between communities and their biophysical environments. These systems are not static, but are passed on between generations through oral traditions, experiential learning, and cultural praxis (Lee & Hartanto, 2025). Indigenous knowledge in today's world is recodifies in double frameworks, which is cultural asset and governance Framework. The Indigenous worldview is one that is based on relational ontology, which views people not as outside users of nature, but as part of a connected web of life (Shrestha et al., 2025). It is a philosophy that emphasizes reciprocal relationships, the good living of all, and the care for the environment between generations as solutions to current ecological crises (Emmanuel, 2025).

Traditional Ecological Knowledge (TEK): Conservation Practice.

Acharya, (2023) highlights how Indigenous Knowledge Systems (IKS) contribute to biodiversity conservation through Traditional Ecological Knowledge (TEK). It was defined

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as operational governance manifested in various customary practices wherein local communities utilize sophisticated, historical insights regarding local flora, fauna, phenological cycles, and ecosystem dynamics to drive adaptive resource management. The term "TEK" manifested in different customary practices such as regulated seasonal harvesting, sacred conservation of sites, customary wildlife protection norms (CWPN) and the sustainable agroforestry techniques include the low impact, polycultural land-use systems that help to ensure soil integrity and maintain habitat heterogeneity (Kumar, 2025).

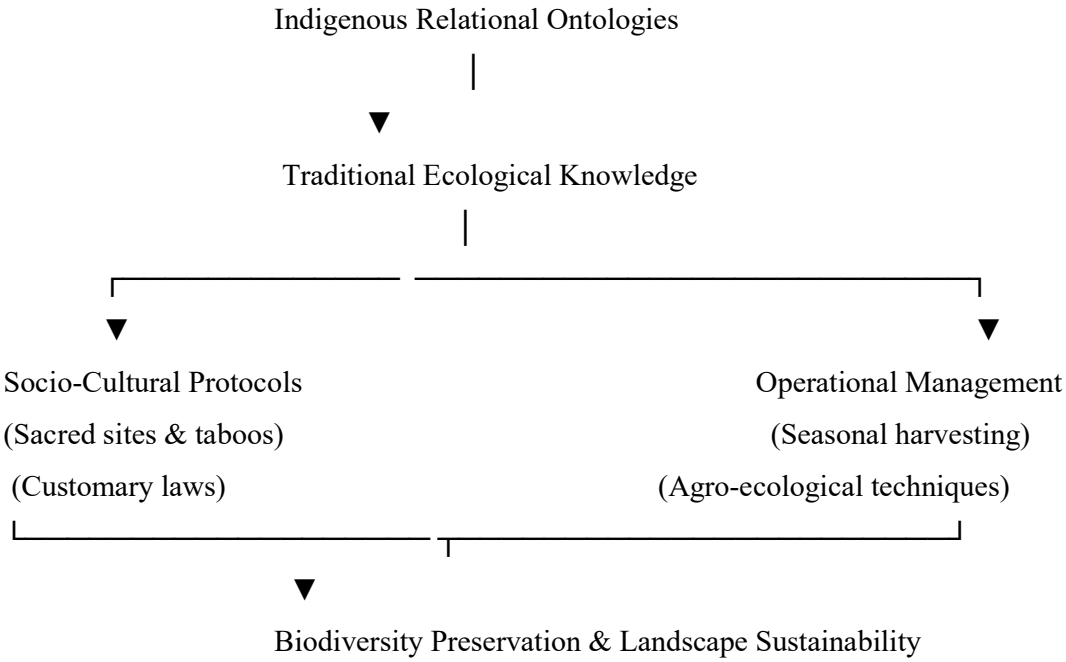


Figure 1 depicts the conceptual model of Biodiversity Preservation & Landscape Sustainability.

Indigenous Knowledge and Sustainable Tourism (Triple Bottom Line)

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With Triple Bottom Line (TBL) framework, IKS translates sustainable development optimization measures from capitalist perspective into a comprehensive socio-ecological health indicator, as follow:

Environmental Sustainability: an approach to manage the carrying capacity and tourist numbers that is proactive instead of reactive. Indigenous oversight is proactive and continuous, using subtle indicators of ecological change, like indicator species, water quality, and soil compaction.

Socio-Cultural Sustainability: emphasizes the active rejuvenation of living intangible heritage such as language, cosmologies, performance arts (music and dance), and customary law, using council of elders to reduce social stratification and commodification that is induced by tourism.

3. Economic Sustainability: transforms cultural and ecological resources into economically viable sustainable macro-economic options other than ecologically harmful industries (commercial poaching or industrial logging). It is connected to CBT and emphasizes on equity and participation of collective gains, thus reducing economic leakage and encourage reinvestment income into local infrastructure.

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The Global Policy Alignment is mapping the IK to the UN Sustainable Development Goals (SDGs).

Indigenous knowledge is crucial for the 2030 Agenda, as roughly 80% of global biodiversity is protected within indigenous territories (UNESCO, 2025; United Nations, 2026). This study is anchored in four Sustainable Development Goals:

SDG 15 (Life on Land): Native land management systems such as rotational farming and sacred fallows demonstrate models for restoration, achieving 30% higher species richness in Sub-Saharan Africa than state-managed areas (Ikhlef, 2025; United Nations, 2026).

SDG 13 (Climate Action): Oral tradition-based early warning systems and resilient crop selection serve as vital adaptation tools to manage tourist influxes and alleviate climate-induced ecological strain (Dorji et al., 2024).

SDG 12 (Responsible Consumption and Production): Traditional tourism acts as "circular heritage" by utilizing local materials and slow tourism, using taboos as informal resource quotas to prevent mass-tourism overexploitation (UNWTO, 2026).

SDG 11 (Sustainable Cities and Communities): Target 11.4 emphasizes Nature-based Solutions (NbS) in urban-indigenous landscapes, securing sacred groves as natural-cultural heritage to bridge spiritual ecology with global urban resilience.

Theoretical Framework and Integrated Model

This study is built upon three pillars: **Social-Ecological Systems (SES) Theory**, **Sustainable Tourism Development**, and **Community-Based Tourism (CBT)**. Together, they form an

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analytical lens for examining the intersection of Indigenous Knowledge Systems (IKS), tourism, and biodiversity conservation in culturally significant landscapes like the Osun-Osogbo Sacred Grove and Idanre Hills.

Social-Ecological Systems (SES) Theory

According to Social-Ecological Systems (SES) theory which views human populations and natural ecosystems as interdependent, co-evolving entities that achieve sustainability through ongoing interactions among actors, institutions, and natural resources (Ostrom, 2009; Folke et al., 2021). Indigenous knowledge systems (IKS) utilize informal governance tools like taboos, seasonal restrictions, and sacred natural sites to regulate resource use and establish biodiversity hotspots such as the Osun-Osogbo and Idanre Hills in southwestern Nigeria (Onyekwelu et al., 2024), where visitor interest and tourism income can drive conservation efforts while commercialization risks ecological and spiritual integrity (Ngongolo&Kyando, 2025), ultimately demonstrating system resilience through the continuous maintenance of indigenous conservation traditions against contemporary urbanization and tourism pressures (Folke, 2021).

Sustainable Tourism Development Theory

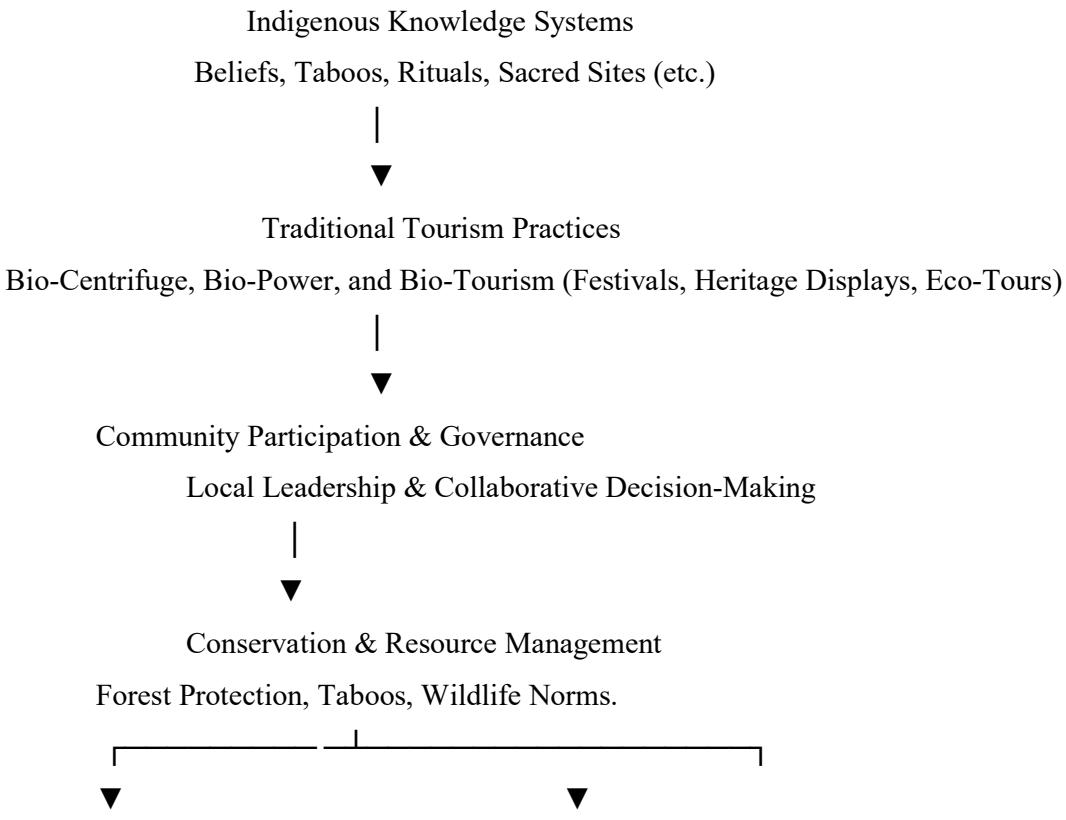
This study is also grounded in sustainable tourism development theory that focuses on balancing environmental preservation, economic viability, and socio-cultural integrity. The integration of traditional landscape practices like festivals, rituals, and conservation taboos enhances ecological health and authentic travelers' experiences while leveraging strong cultural beliefs as preventative measures for long-term resource stewardship over short-term profits(Singh, 2026; Jackson, 2025;Asifat et al, 2025). Thus ensuring that tourism built on

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indigenous knowledge, fosters local benefits and reinforces community conservation incentives.

Framework of Community Based Tourism (CBT)

This study is also anchored on the Community-Based Tourism (CBT) framework. This centers on engagement, empowerment, and local ownership. Traditional tourism activities are shaped by communities rather than external sources to guarantee that native peoples act as decision-makers, planners, and key stakeholders in biodiversity governance (Au Young et al., 2025; Lijun& Ahmed, 2024), while simultaneously using tourism platforms to perpetuate intangible cultural heritage, such as festivals and music, and pass traditional knowledge down across generations.



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Biodiversity Preservation Sustainable Development

Figure 2: Environmental equilibrium & habitats, Socio-economic & cultural well-being

Unwritten, socially enforced indigenous rules govern human-nature interactions by translating internal conservation values into public festivals and heritage sites that enhance tourist respect and nature protection. Then, active community involvement and multi-level governance ensure local empowerment and resource management. This ultimately interconnecting to achieve sustainable, multi-generational tourism development and biodiversity preservation.

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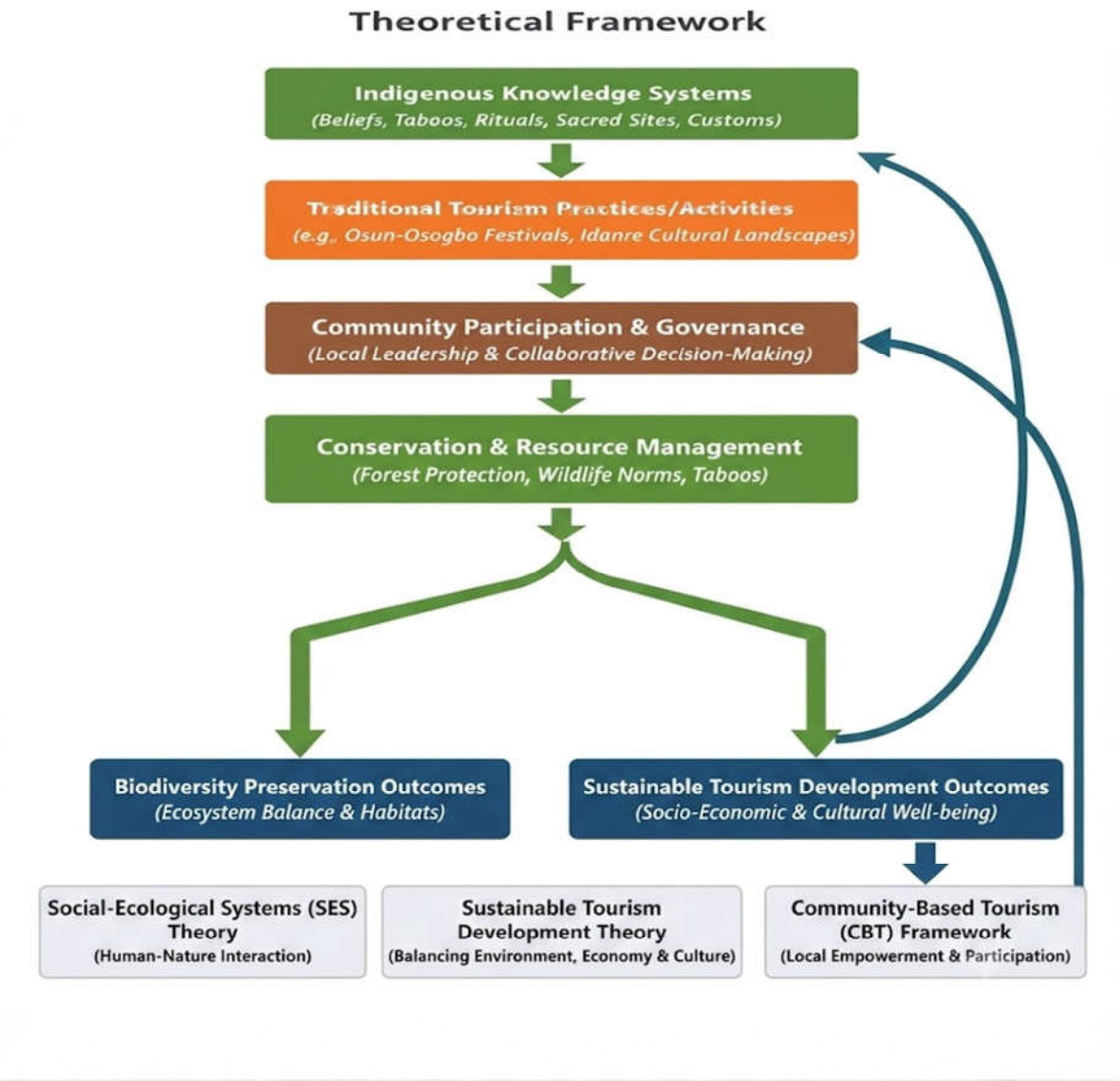


Figure 3: Theoretical framework linking indigenous knowledge systems, traditional tourism practices, community governance, and conservation to achieve biodiversity preservation and sustainable tourism outcomes.

Intergenerational Knowledge Transfer and Youth Attitudes

Youth engagement with Indigenous Knowledge Systems (IKS) often suffers from "appreciation without practice," where cultural pride remains high but real implementation

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lags due to an "epistemological clash" caused by modern education and religious shifts that dismiss traditional taboos as superstition (Eden et al., 2024; Lee & Hartanto, 2024; UNESCO, 2023). Youth attitudes are critically shaped by three factors: economic incentives through tourism entrepreneurship, the disruption of oral transmission by urban migration and digital exposure that threatens TEK loss within a generation (Malapane et al., 2024), and the utilization of modern terminology like "climate adaptation" or "nature-based solutions" to boost engagement (Attoh et al., 2021). This vulnerability underscores UNESCO's finding that while 70% of youth value IKS for cultural identity, its future sustainability remains at risk (UNESCO, 2025).

Study Area

This study compares two ecologically and culturally vital heritage sites in southwestern Nigeria where indigenous knowledge converges with biodiversity conservation and sustainable tourism (Onyekwelu et al., 2024):

Osun-Osogbo Sacred Grove (Osun State): Located at 7°46'N latitude and 4°33'E longitude within a dense urban center exceeding 500,000 residents, this low-lying, gently undulating Precambrian basement remnant features a humid tropical climate (rainfall 1200–1500 mm, temperatures 21°C–34°C) along the Osun River floodplain (Asifat et al., 2026). Its lush vegetation and tropical rainforest species (e.g., *Miliciaexcelsa*, *Triplochitonscleroxylon*, medicinal plants, birds, reptiles, and monkeys) are protected by Yoruba cultural beliefs and strict taboos forbidding hunting, logging, farming, and fishing, alongside historical shrines and sculptures.

Idanre Hills (Ondo State): Situated at latitude 7°05′N and longitude 5°07′E in a town of over 100,000 inhabitants primarily engaged in cocoa farming and tourism, this rugged geo-

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cultural landscape consists of ancient Precambrian igneous and metamorphic rocks (over 500 million years old) rising 300 to 600 meters, with its topography having historically influenced settlement patterns and environmental protection (Oladeji et al., 2022). Featuring a tropical rainforest climate with higher orographic rainfall (1500–2000 mm) and temperatures ranging from 20°C to 33°C, its steep slopes, caves, and inselbergs shelter rock-adapted flora, specialized medicinal plants, and fauna, with biodiversity preserved through traditional sacred restrictions and cultural relics like the ancient palace and shrines.

Together, the Osun-Osogbo Sacred Grove (a religiously protected sacred forest) and Idanre Hills (a topographically shielded geo-cultural landscape) provide an ideal comparative setting to examine how traditional tourism and indigenous knowledge drive ecological sustainability in southwestern Nigeria.

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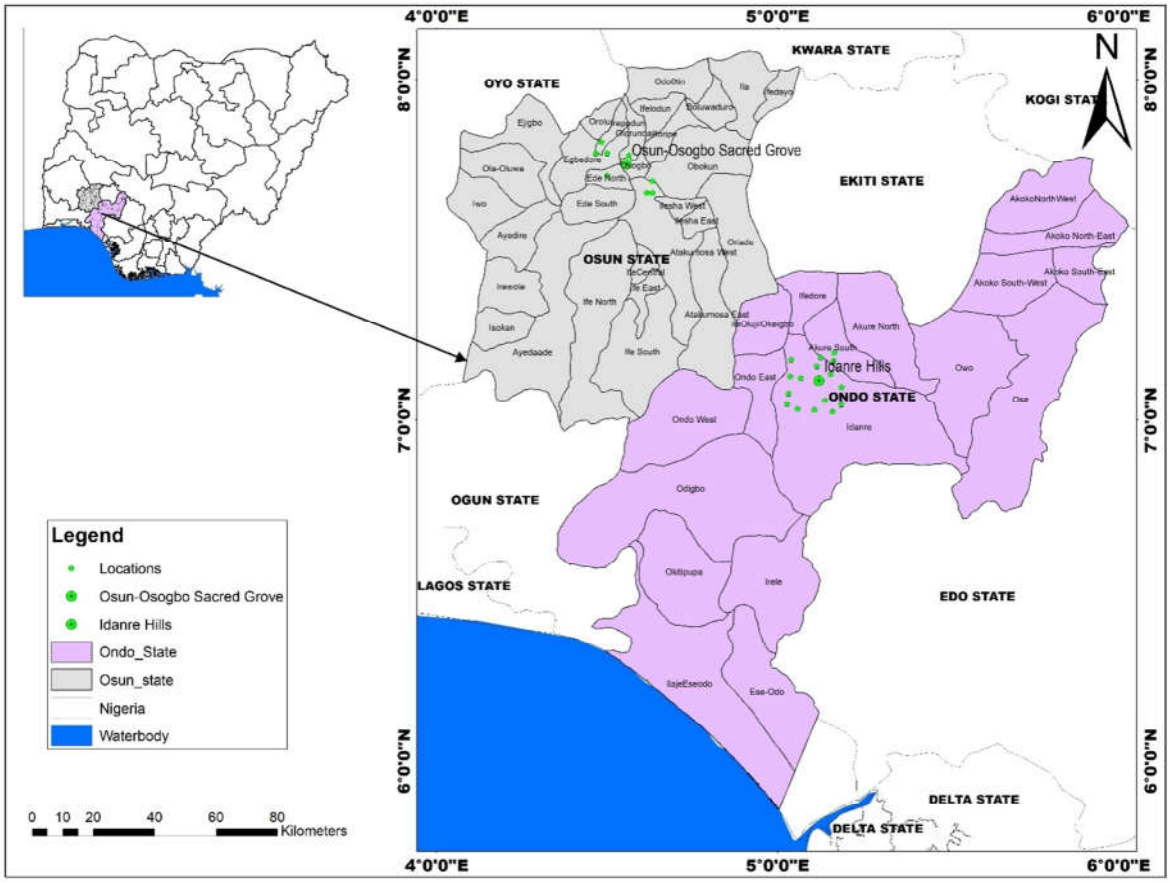


Figure 4: Illustrates the location of OsunOsogbo Sacred Grove and Idanre Hill in the states of Osun and Ondo respectively.

Methodology

The design for this study is quantitative cross sectional; the number of respondents in each study site is 200 respondents respectively using Yamane's formula to get 400 respondents for a comparative analysis. A two-stage sampling technique was used, the first to select the traditional practitioners, site managers, and experienced tour guides who had traditional indigenous knowledge, and the second to sample the visitors and residents at the sites for the survey period through convenience sampling. A structured questionnaire with four sections was used to collect data: demographic characteristics, identifying indigenous knowledge (IK) practices, a 5-point Likert scale analysis of the level of impact indigenous knowledge has in

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conservation and entrepreneurship, and multiple-choice questions on challenge to incorporate indigenous knowledge.

The data was analyzed with SPSS version 26. The data were summarized using descriptive statistics such as frequencies and percentages and associations among the study sites with the types of IK practices were examined using inferential statistics (the Chi-square test) at the significance level of $p < 0.05$.

Results and Discussion

Demographic Characteristics of the Respondents

Of 400 respondents, 52% were male, 48% female. The respondents 61% were in the age group 25 to 44 years. The respondents were tour guides (18%), residents (45%), visitors (27%) and traditional practitioners (10%).

Table 1. Demographic Characteristics of the Respondents

Variable	Frequency	Percentage (%)
Sex		
Male	208	52
Female	192	48
Age (Years)		

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18 - 24	60	15
25 - 44	244	61
45 - 60	72	18
60>	24	6
Respondent Type		
Residents	180	45
Visitors	108	27
Tour Guides	72	18
Traditional practitioners	40	10

Field work, 2026, Author's data

Objective 1: Indigenous Practices and Knowledge Systems that contribute to biodiversity preservation and sustainable tourism at Osun-Osogbo Sacred Grove and Idanre Hills.

Table 2 is an identification of indigenous practices and knowledge systems (IKS). The respondents mentioned spiritual taboos (84%) as one of the indigenous knowledge systems used in preserving the biodiversity in OsunOsogbo Sacred Grove while it was (42%) at Idanre hills. The traditional farming system is represented by Idanre Hills (72%) and OsunOsogbo Sacred Grove has (6%). This is in line with Ajibade&Ajadi, (2025), Indigenous Practices is concepts that include all forms of knowledge, technology, know-how, skills, practices and which enable the community to achieve a stable livelihood in their environment. This indigenous knowledge is still intact among indigenous (or local) communities in many parts of Africa like Nigeria.

The proportion of indigenous knowledge per state, broken down by Sacred Grove and Idanre Hills, is shown in Table 1:

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Table 2: Identification of Indigenous Knowledge Systems (IKS)

Indigenous Knowledge	OsunOsogboSacred Grove		Idanre Hills		Total	%
	Frequency (F)	Percentage (%)	Frequency (F)	Percentage (%)	F	(%)
Spiritual Taboos	168	84.0	84	42	252	63.0
Indigenous Architecture	92	46.0	136	68	228	57.0
Traditional Farming System	12	6.0	144	72	156	39.0
Sacred Landscapes/Caves	162	81.0	196	98	358	89.5
Customary Land Tenure & Boundary Rules	132	66.0	148	74	280	70.0
Indigenous Animal Protection Norms	114	52	96	48	210	52.5
Ritualized Resource Harvesting Calendar	148	74	182	91	330	82.5
Oral Oath	78	39	108	54	186	46.5
Indigenous Craft Material Ethics	86	43	122	61	208	52.0

Field work, 2026, Author's data

Objective 2: Effects of oral history and ancestral narratives as non-formal regulatory mechanisms for conservation of biodiversity and sustainable management of tourism.

Table 3 shows how oral traditions and ancestral narratives can be used as informal regulations for biodiversity conservation and sustainable use of tourism. 47% of the respondents agreed that spiritual sanctions /mythology is an impediment for environmental encroachment. Approximately 23% agreed that the use of 'totemic beliefs' in animal and plant protection helped to maintain specific endangered species. Eden & Adeniyi (2024), opined that, indigenous knowledge increases learning experiences through culturally responsive practices.

Table 3: Oral traditions and narratives as informal regulatory instruments for conservation of biodiversity and sustainable tourism management.

Impacts of Oral Tradition	OsunOsogbo Sacred	Idanre Hills

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	Grove			
	Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
Spiritual Sanctions/Mythology acts as a deterrent for environmental encroachment.	188	94	148	74
Totemic Beliefs (Animal/Plant protection) preserves specific endangered species within the sites.	192	96	92	46
Ancestral Seasonal Prohibitions regulates visitor access and manages carrying capacity.	44	22 11.0	122	61
Folklore on Sacred Water/Land maintains water purity and prevents soil degradation.	176	88	98	49

Field work, 2026, Author's data

Objective 3: Effect on sustainable tourism development and community entrepreneurship of traditional management strategies.

Table 4 shows the contribution of traditional management practices to sustainable tourism development and the entrepreneurship of the study sites. Approximately 65% of the respondents from the Idanre hills agreed that one of the impacts of the traditional management strategies has been on community led entrepreneurship. The local employment rate at Idanre hills was 61% while it was 52% at Osun –Osogbo Sacred grove.

Idanre Hill (65%) has higher entrepreneurship rating and Osun-Osogbo (78%) has higher conservation rating. The results of the impact of traditional management strategies on sustainable tourism development and community entrepreneurship are shown in Table 3.

Table 4: The impact of traditional management strategies on sustainable tourism development and community entrepreneurship.

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Impact Indicator	Osun-Osogbo Sacred Grove (%)	Idanre Hills (%)
Community-led Entrepreneurship	35	65
Ritual-centric Preservation	78	22
Livelihood Diversification	40	58
Local Employment Rate	52	61

Field work, 2026, Author's data

Objective 4: Difficulties associated with the incorporation of indigenous "unwritten laws" in formalised UNESCO management plans.

Table 5 shows challenges to incorporating indigenous laws into formal management plans. The scientific validation gap (71%) has the highest, in which there is difficulty in quantifying "myths" as scientific data. Formal management plans typically include measurable indicators (e.g., rate of carbon sequestration or number of visitors) while indigenous laws are qualitative in nature, meaning they are narrated. Lee &Hartanto, (2025), believed that there is "epistemological clash", with western-trained conservationists having to come to terms with the fact that a "sacred taboo" can be as effective as a technical buffer zone. One of the challenges mentioned were weak governance and poor policies. This corresponds to the findings of Ngongolo & Kyando (2025) that corruption and inadequate governance and enforcement of conservation laws pose threats to Africa's biodiversity. Moreover, poor policies also enable illegal activities like poaching and habitat destruction, resulting in loss of species and ecological imbalance. Another challenge is Generational Attrition (65%) that is, there is a rising concern that the "unwritten" nature of these laws makes them vulnerable. At Idanre Hill, it was mentioned that many young guides are interested in the physical aspects of

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climbing, rather than the ancestral stories that safeguard the site. This indicated that, using IK to preserve the nature may erode away with time. This has also been mentioned by Lee &Hartanto (2025) that emphasises that if a Traditional Ecological Knowledge (TEK) is not formalised (such as in a digital archive), then it will be lost as the older generation of custodians leaves. This implies that there may be a lack of oral culture among the youths.

Religious and Cultural Dynamics (45%) at Osun-Osogbo reports that while some traditional taboos are being integrated, others are being challenged by modern religious groups who consider the taboos as "idolatry" instead of "ecological tools. This religious tension makes community-based conservation more challenging, because it divides the local population on what their responsibility is to the grove, Ajibade & Ajadi (2025) argued. On the Legal and Bureaucratic Incompatibility (40%), formal management plans tend to focus on state enforced laws over traditional ones. The respondents were unanimous that a traditional law that requires a spiritual affirmation is not binding in a modern court of law in Nigeria. UNESCO (2025) has recently admitted that "Hybrid Management" is required, but the process of transitioning is slow due to the nature of formal bureaucratic systems which are often inflexible and reject non-standardised methods of management (Nzereogu & Chukwu, 2025).

On the religious conflicts, the respondents (45%) agreed that there is modern religious opposition to “ritual-based” conservation.

Table 5:Challenges to Integrating Indigenous Laws into Formal Management Plans

Challenges	Osun-Osogbo Sacred Grove	Idanre Hills	Total (%)

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Scientific Validation Gap	164	120	71.0
Weak Governance &Policies	122	151	68.3
Generational Knowledge Attrition	112	148	65.0
Legal Incompatibility	90	110	50.0
Bureaucratic Rigidity	84	76	40.0
Religious Conflicts	130	50	45.0

Field work, 2026, Author's data

Objective 5: Evaluate younger generations' attitudes towards the implementation and continuity of Indigenous Knowledge in traditional tourism.

Table 6, on the other hand, emphasizes the complex and dual aspects of young adults (18-35 years old) attitudes towards the assimilation of Indigenous Knowledge (IK) into current environmental protection. The most robust agreements focus on the systemic issues that exist in society in the present day. Most of the respondents (92.3%) strongly state that modernization is a challenge to youth adoption of IK, and (85.9%) is supportive of formalising these traditions through using multimedia documentation. At the same time, there is a general trend (84.5%) that suggests the youth group favour traditional scientific conservation techniques over only traditional approaches. This highlights a generational divide, as institutional science is sometimes seen as more effective. Other indicators that reflect specific practices such as indigenous taboos, learning from elders, and career trajectory in cultural tourism (39.4%) are around moderate levels.

The empirical patterns are in accord with Liambela & Mandume (2025) who stress the need to include Indigenous Ecological Knowledge (IEK) in formal educational systems to ensure

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that it is valued as a key tool for sustainable development and cultural heritage in Africa. Furthermore, although communities are increasingly calling for hybrid approaches that bring together Western science and traditional ecological knowledge, institutional support, the integration of social studies education, and concrete socio-economic benefits for young people are essential for local engagement with young people (Nzereogu & Chukwu, 2025; Ajibade & Ajadi 2025; Eden et al., 2024). The need to bridge this divide is crucial for sustainable resource management as the continued skepticism of the taboo and the rural elder's point indicates a growing need to re-conceptualize indigenous heritage as relevant and profitable to younger generations.

Table 6: Attitudes of Respondents Ages (18-35) towards IK n=142

Statement	Frequency	(%)
Indigenous taboos are still relevant for biodiversity protection today	63	44.4
I am willing to learn conservation practices from elders	60	42.3
I prefer scientific conservation methods to indigenous practices	120	84.5
IK should be documented in videos/books for future generations	122	85.9
I see a career opportunity in tourism based on indigenous culture	56	39.4
Modernization is hindering the youth from using IK to preserve nature	131	92.3

Field work, 2026, Author's data

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Conclusion

The conclusion of the study is that indigenous knowledge is an important part of traditional tourism in the conservation of biodiversity and the development of sustainable tourism. It will improve the protection of the environment, livelihoods and benefit for current and future generations in tourism. IK must be passed on to the younger generation so that nature /natural environment can be used sustainably, and be preserved for future generations as well.

Recommendation

1. Integration of Indigenous Knowledge: Government agencies and tourism stakeholders should

actively include indigenous knowledge systems into mainstream environmental management

and tourism planning.

2. Policy Support and Recognition: Making and enacting policies that will legally recognize,

protect, and promote indigenous practices for sustainable tourism development.

3. Community Education/ Campaign and Capacity Building: Provision of accessible training and

awarenessprograms to empower local communities with the skills needed to preserve and

use their traditional heritage.

4. Intergenerational Collaboration: Enhanced structured cooperation and knowledge-sharing

initiatives between community leaders and the youth to bridge the generational gap in conservation practices.

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