

SHORT COMMUNICATION

Indigeneity, Traditional Knowledge, and Environmental Sustainability

Daniel Boamah Asante^{1*}

¹ University of New Brunswick, Canada

* Corresponding author: Daniel.Asante@unb.ca

Article History

Received 2023-12-07

Revised 2023-12-30

Accepted 2024-01-02

Published 2024-01-13

Keywords

Biodiversity

Environmental Sustainability

Culture

Indigenous

Traditional Knowledge

Stewardship

How to cite:

Asante, D. B. (2024). Indigeneity, Traditional Knowledge, and Environmental Sustainability. *Journal of Innovations in Art & Culture for Nature Conservation and Environmental Sustainability*, 1(3): 190-198.

Copyright © 2024 The Author(s)



Abstract

This short communication explores the intersection of indigeneity, traditional knowledge, and environmental sustainability. Delving into the unique perspectives of indigenous cultures, the short communication examines how traditional beliefs and practices contribute to the effective management and conservation of local natural resources. It highlights the spiritual connections that indigenous communities maintain with the environment, showcasing their innovative and adaptable strategies for environmental stewardship. Despite challenges and external pressures, these communities persist in fostering biodiversity and ecological sustainability through their enduring traditional practices. The short communication underscores the vital role of traditional knowledge in shaping conservation strategies and addresses the implications for global environmental sustainability.

1. Introduction

Nature, when scrutinized through the lens of diverse religious belief systems, often serves as an "other," establishing a categorical distinction between humanity and its surroundings (Jenkins, 2013). These systems of faith, shaping the prevailing worldview, frequently endorse the notion of human dominion over the Earth, fostering a perspective that permits the unrestrained depletion of resources in support of human activities (Jamieson, 2008). This anthropocentric interpretation, centered on individual needs, overlooks the bidirectional relationship between humanity and nature, contributing to the contemporary global environmental crises (Grim, 2001). However, amidst this predominant worldview, there exist spiritual communities that perceive the environment as an integral extension of themselves. For these groups, establishing connections with nature is deemed essential in all aspects of life, presenting an alternative worldview that attributes value to natural resources beyond their immediate utility (Salmon, 2000). Indigenous peoples notably embody this alternative belief system, evident in their astute environmental practices that prioritize conservation and biodiversity (Aniah et al, 2014; Dawson et al, 2021). Indigeneity is considered a catalyst for a holistic understanding of the universe, its resources, and its interconnectedness with the fundamental essence of humanity (Berkes, 2012). This comprehensive perspective gives rise to diverse and innovative approaches to conserving and safeguarding both living and non-living natural resources. Consequently, the reservoir of knowledge embedded in indigenous cultures, coupled with their specific teachings, emerges as a fount from which conservation strategies can be derived and global environmental challenges addressed. The prospect of unearthing these contributions necessitates a comprehensive exploration of diverse indigenous groups worldwide, each offering a distinctive perspective and set of practices that collectively enrich the discourse on sustainable environmental stewardship.

1.1 Indigenous People and Environmental Stewardship

Indigenous peoples, defined as the original inhabitants of specific lands (Dudgeon & Berkes, 2003), are characterized by their distinctive cultural traits that have evolved independently from the global societal mainstream (Chunhabunyatip et al., 2018). Scattered across diverse geographic locations worldwide (Ross et al., 2011), these communities have historically been intimately intertwined with nature, fostering deep spiritual practices and often operating autonomously from external theologies (Jamieson, 2008). The advent of colonialism marked a pivotal juncture for indigenous populations, subjecting them to various forms of assimilation and catalyzing transformative shifts in land use, resource allocation, and relocation (Grim, 2001;

Berkes, 2012). Despite the subsequent era marked by global expansion, population surges, and heightened political conflicts, many indigenous communities persist in preserving their ancestral beliefs and practices, maintaining an enduring and mutually beneficial relationship with the environment (Ross et al., 2011, Adom, 2022). In recent decades, there has been a notable surge in the acknowledgment of environmental issues within religious groups, emphasizing the pivotal role that religious communities can play in conservation efforts (Dudley et al., 2009; Abdullah & Keshminder, 2020). This recognition underscores the potential for indigenous perspectives to contribute significantly to current discourse and initiatives aimed at fostering environmental sustainability.

The term "Indigenous" denotes a connection to the original inhabitants of a given land and their cultural practices, while "indigenous knowledge" encompasses the wisdom held by local indigenous peoples or the rare insights of the original inhabitants of a specific region (Dudgeon & Berkes, 2003). This concept is often used interchangeably with "traditional knowledge," reflecting the dynamic and adaptable nature of traditions and storytelling. "Traditional Ecological Knowledge" incorporates wisdom derived from direct experiences with nature, extending back to the era of hunter-gatherer societies, while "local knowledge" signifies more recently acquired insights (Berkes, 2012). Understanding the conservation strategies employed by indigenous communities requires an appreciation of their spiritual teachings and interpretations of the human-environment relationship. Much like established religions offering comprehensive theologies for understanding human life, indigenous belief systems provide a spiritual foundation for interpreting the environment. Indigenous communities perceive all aspects of nature as kin, necessitating preservation and valuation akin to living relatives (Salmon, 2000; Rose, 2002; Mazzocchi, 2020). These beliefs find expression in myths, believed to have emerged directly from the land, symbolizing the profound connection indigenous groups feel to their environment and its resources (Ross et al., 2011). Traditional societies are thought to govern their interactions with the environment based on prescribed rules derived from narratives of past ancestors and their understanding of nature's intricate *circle of life* and how each aspect of nature works in cohesion to support the ecosystem (Aniah et al., 2014). Indigenous languages also encode nature in traditional terms, attributing inhumanly power to certain natural aspects (Salmon, 2000; Awuah-Nyamekye, 2014). This underscores the evident spiritual connection that the indigenous belief system maintains with the environment, manifesting in ritualistic practices within nature, necessitating the protection and management of surrounding resources.

Across their rich history, indigenous peoples have developed and embraced diverse strategies for resource management and conservation in response to escalating environmental pressures on their local lands (Jamieson, 2008). These endeavors often emanated from a synergistic blend of community knowledge about the prevailing environment and the deeply rooted spiritual beliefs governing their relationship with nature (Aniah et al., 2014). The global recognition of the profound impact of traditional knowledge and spiritual practices on conservation is underscored by the International Union for Conservation of Nature (IUCN), which has delineated roles for integrating cultural and spiritual insights into the formulation of conservation initiatives (Dudley et al., 2009). Numerous documented reports highlight instances where indigenous spiritual belief systems have significantly influenced environmental actions, with such instances dispersed globally, spanning regions like Thailand, Africa, and Australia (Ross et al., 2011). While all indigenous spirituality is anchored in nature, the specific practices through which these beliefs manifest may vary across geographic locations, intricately linked to the diverse available resources (McNiven, 2004). Therefore, to comprehensively grasp indigenous knowledge about environmental practices, research must delve into the intricate complexity and adaptability of traditional practices, acknowledging the variations present within different indigenous groups. An exploration of these complexities is essential for a comprehensive understanding of the nuanced approaches employed by diverse indigenous communities in their stewardship of the environment.

1.2 Impact of Traditional Knowledge on Environmental Crises

The assessment of indigenous knowledge's implications on the surrounding ecosystem is most pertinent in regions grappling with recurrent environmental crises, often presumed to be instigated by global society's interests. While many developing countries are home to indigenous populations, there is a discernible trend of adopting Western resource management theories that unfortunately overlook the invaluable insights derived from indigenous traditional belief systems (Aniah et al., 2014). The chosen policies reflect governing strategies aligned with Western ideologies defining humanity's relationship with the environment, often rooted in Christian narratives of salvation (Jenkins, 2013). Furthermore, concepts of development significantly shape the selective application of traditional knowledge in policies, with prevailing paradigms of modernization tending to disregard the vital role of local knowledge in shaping theories of development (Dudgeon & Berkes, 2003). To comprehensively analyze the challenges faced by indigenous communities in safeguarding their lands, these multifaceted aspects—environmental crises, global societal interests, policy choices, and development paradigms—must be considered collectively. This holistic approach is essential for a nuanced understanding

of the obstacles encountered by indigenous communities in their ongoing efforts to protect their invaluable lands.

A persistent environmental concern affecting local indigenous communities and posing a significant threat to an essential aspect of indigenous spirituality is the substantial loss of biodiversity (Aniah et al., 2014). The escalating rates of deforestation, pollution, and forced relocation are attributed to various political and economic motives, collectively contributing to the global decline in biodiversity (Ross et al., 2011). Notably, these motivations are primarily championed by Westernized groups that, paradoxically, bear the least immediate consequences of the environmental repercussions, both in tangible and spiritual terms. In contrast, the concept of biodiversity holds a central position in traditional indigenous knowledge, forming a foundational element that permeates various ritualistic practices dedicated to the safeguarding of other species (Berkes, 2012). While biodiversity faces imminent threats driven by external factors, its intrinsic value within the framework of traditional indigenous understanding underscores the importance of recognizing and addressing the complex interplay between environmental degradation, Westernized motivations, and the preservation of indigenous spirituality.

In a cross-sectional study conducted by Aniah and colleagues (2014), an insightful exploration was undertaken to assess the influence of indigenous knowledge and spiritual practices on natural resource conservation in the North-Eastern regions of Ghana. The study revealed significant environmental challenges in the area, encompassing issues such as deforestation, indiscriminate land use, and illegal hunting. These challenges emerged in response to new local activities pressuring the need for expanded land for housing and agriculture, heightened demand for natural resources to sustain the community, and evolving policies aimed at maximizing profit (Aniah et al., 2014). The research focused on five communities that shared common traditional values and practices, each possessing sacred ponds, groves, and earth shrines dedicated to their Mother Earth, referred to as *Tinkogre*. Guided by a chief priest, or *Tindaana*, who serves as the intermediary between the people and their gods, these communities conduct sacrificial offerings to ward off environmental challenges. Moreover, specific natural elements within each community are designated as sacred, often linked to totems or earth shrines, creating sites of worship that demand protection to preserve their undisturbed and spiritual essence (Aniah et al., 2014). As a result, these areas are restricted to interactions with spiritual leaders, contributing to the survival of biodiversity within these spiritual sites. The research concluded that African traditional belief systems play a pivotal role in supporting ecological diversity by ascribing spiritual power to natural elements, thereby

facilitating the preservation of the natural environment. Additionally, the study supports the argument that the failure of state-controlled institutions to delegate resource control to local authorities with traditional knowledge may be a key factor contributing to the environmental challenges faced by communities in third-world countries (Aniah et al., 2014).

A parallel investigation, exploring the impact of indigenous knowledge on the local ecological environment, was carried out in the village of Ban Don Daen, Thailand (Chunhabunyatip et al., 2018). This study delineated the region as the abode of the deity known as *Don Pu Ta*, signifying sacred land for the indigenous peoples and consequently subject to stringent protection through traditional practices. Among these practices, the Akha people, predominantly residing in the forest, maintain a profound spiritual connection with the surrounding trees. As part of their worship, they observe a prohibition on the cutting of any tree species (Chunhabunyatip et al., 2018). A distinctive zone within the sacred confines of *Don Pu Ta*, significantly contributing to the land's biodiversity, is the wetland known as *Nhonchaiwan*. This wetland serves as a breeding ground for diverse aquatic species and supports agricultural activities. According to the study's data, at least 90% of the surrounding community utilizes this wetland for various purposes, with equitable distribution among the people to sustain the ecosystem (Chunhabunyatip et al., 2018). The utilization of this specific environment exemplifies the adaptability of indigenous peoples and encourages exploration into the myriad methods that other communities with specific resources may adopt.

Coastal indigenous communities constitute a distinctive realm of indigenous peoples whose traditional practices are intricately tailored to harmonize with their coastal surroundings. Specifically located in the Australian seascape, these indigenous groups, collectively known as Saltwater Peoples, encompass both indigenous inhabitants and Torres Strait Islanders (McNiven, 2004). Across generations of interacting with the dynamic environment, Saltwater Peoples have cultivated an intimate understanding of marine life, manifested in their profound knowledge of local and seasonal weather cycles, tidal patterns, and a comprehensive directory of plant and animal species (McNiven, 2004). In stark contrast to Western perspectives dominated by discussions of technological advancements and strategies to control unpredictable seascapes, Australian indigenous communities maintain a spiritual view of the seascape. Within this spiritual framework, powerful forces are perceived as the *spiritscape*, comprising ancestral spirits that have imbued the area with spiritual energy. This spiritual energy is tangibly reflected in the seascape, safeguarded by the Saltwater Peoples. Much like other indigenous communities, Australian indigenous people delineate spiritual ritual sites and totems, often in the form of animals, symbolizing their profound spiritual connection with the water and its elements

(McNiven, 2004). Through the application of their spiritual beliefs, coastal indigenous communities have developed adept methods for conserving seascapes, utilizing these sites not only for environmental preservation but also as expressive manifestations of their deep spiritual connection with nature.

In comparison to Western culture, societies grounded in traditional belief systems demonstrate notable adaptability, frequently evolving to integrate the changing characteristics of the environment and the communities therein (Aniah et al., 2014). In contrast, Western society often espouses the notion that these traditional belief systems cannot foster solidarity among communities. Instead, there is a tendency to dismantle and assimilate diverse cultural values into a singular, controlled worldview (Ross et al., 2011). The foundation of this worldview within Western societies traces its origins to the Christian church, where religious theological approaches grapple with environmental issues through the lens of ethics and Christian moral responsibility (Jenkins, 2013). Within this framework, environmental crises are shaped by prescribed metaphors and narratives of salvation, grace, and redemption inherent in Christian teachings. Particularly concerning salvation, these religious theologies emphasize human spirituality as distinct from environmental concerns, positioning man and nature on separate spiritual spectrum. Nevertheless, alternative narratives suggest that paths to salvation involve recognizing all of God's gifts, including an acknowledgment of nature (Jenkins, 2013). Hence, Westernized concepts of environmental engagement predominantly hinge on Christian belief systems, markedly diverging from those expressed in indigenous societies.

Conclusion

Indigenous cultures emerge as dynamic innovators in the adept management and conservation of local natural resources. Their distinctive traditional belief system is characterized by an encompassing cycle of energy, forging connections to every facet of the surrounding universe (Salmon, 2000). This spiritual foundation inspires the creation and implementation of traditional rituals and practices designed not only to interact with nature in a reverential manner but also to ensure its preservation (Chunhabunyatip et al., 2018). Demonstrating remarkable adaptability, these practices evolve in tandem with their specific geographical locations and available resources, navigating through unstable circumstances with resilience (Ross et al., 2011). Despite the absence of external support from global societies for their traditional resource conservation initiatives, indigenous communities persist within the local confines of their communities, yielding beneficial environmental impacts (Dudley et al., 2009). These enduring environmental strategies exhibit variations based on geographic region, the ecological identity of the land, and

the spiritual engagement of the community (Jamieson, 2008). Moreover, the contributions of individual groups of indigenous communities are discernible in the enhanced biodiversity and ecological sustainability of regions governed by these traditional practices (Aniah et al., 2014). The profound spiritual significance that indigenous cultures attribute to the environment and its natural resources, for the purpose of ritual practice, religious expression, and sustenance, is strikingly evident in their intentional and reverent treatment of the world and all its elements.

Funding

This research received no external funding.

Acknowledgement

The researcher would like to thank the reviewers and editorial team of JINCES for the diligent review and suggestions offering in strengthening the academic rigor of the paper.

References

- Abdullah, M. S., & Keshminder, J. S. (2020). Religion and pro-environmental behaviour: A comparative analysis towards environmental protection. *International Journal of Environment and Sustainable Development*, 19(2), 174-194.
- Adom, D. (2022). Catch them young: Children as bearers of indigenous ecological knowledge for biodiversity conservation in Ghana. *Journal of Wildlife and Biodiversity*, 6(3), 12-25.
- Aniah, P., Aasoglenang, A. T., & Boyne, S. Z. (2014). Behind the myth: Indigenous knowledge and belief systems in natural resource conservation in north east Ghana. *International Journal of Environmental Protection and Policy*, 2(3), 104-112. doi: 10.11648/j.jjepp.20140203.11
- Awuah-Nyamekye, S. (2014). Indigenous Ways of Creating Environmental Awareness: A Case Study from Berekum Traditional Area, Ghana. *Journal for the Study of Religion, Nature & Culture*, 8(1).
- Berkes, F. (2012). *Sacred Ecology* (3rd ed.). Routledge. <https://doi.org/10.4324/9780203123843>

- Chunhabunyatip, P., Sasaki, N., Grünbühel, C., Kuwornu, J. K. M., & Tsusaka, T. W. (2018). Influence of Indigenous Spiritual Beliefs on Natural Resource Management and Ecological Conservation in Thailand. *Sustainability*, 10(8), 2842. <https://doi.org/10.3390/su10082842>
- Dawson, N. M., Coolsaet, B., Sterling, E. J., Loveridge, R., Gross-Camp, N. D., Wongbusarakum, S., ... & Rosado-May, F. J. (2021). The role of Indigenous peoples and local communities in effective and equitable conservation. *Ecology and Society*, 26(3).
- Dudgeon, R. C. & Berkes, F. (2003). Local Understandings of the Land: Traditional Ecological Knowledge and Indigenous Knowledge. In H. Selin (Eds.), *Nature Across Cultures: Views of Nature and the Environment in Non- Western Cultures*, (pp. 75-96). Springer, Dordrecht. https://doi.org/10.1007/978-94-017-0149-5_4.
- Dudley, N. Higgins-Zogib, L., & Manscourian, S. (2009). The Links between Protected Areas, Faiths, and Sacred Natural Sites. *Conservation Biology*, 23(3), 568-577. <https://doi.org/10.1111/j.1523-1739.2009.01201.x>
- Grim, J. A. (Ed.). (2001). *Indigenous Traditions and Ecology: The Interbeing of Cosmology and Community*. Harvard University Press.
- Jamieson, D. (Ed.). (2008). *A Companion to Environmental Philosophy*. John Wiley & Sons.
- Jenkins, W. (2013). *Ecologies of Grace: Environmental Ethics and Christian Theology*. Oxford University Press.
- Mazzocchi, F. (2020). A deeper meaning of sustainability: Insights from indigenous knowledge. *The Anthropocene Review*, 7(1), 77-93.
- McNiven, I. (2004). Saltwater People: spiritscapes, maritime rituals and the archaeology of Australian indigenous seascapes. *World Archaeology*, 35(3), 329-349. <https://doi.org/10.1080/0043824042000185757>
- Ross, A., Sherman, R., Snodgrass, J. G., & Delcore, H. D. (2011). *Indigenous Peoples and the Collaborative Stewardship of Nature: Knowledge Binds and Institutional Conflicts*. Left Coast Press, Inc.
- Rose, D. B. (2002). Indigenous ecologies and an ethic of connection. In *Global ethics and environment* (pp. 175-187). Routledge.
- Salmon, E. (2000). Kincentric Ecology: Indigenous Perceptions of the Human-Nature Relationship. *Ecological Applications*, 10(5), 1327-1332. [https://doi.org/10.1890/1051-0761\(2000\)010\[1327:KEIPOT\]2.0.CO;2](https://doi.org/10.1890/1051-0761(2000)010[1327:KEIPOT]2.0.CO;2)