



## Socio-Cultural and Historical Significance of Tinti: Community Perspectives from Monze, Southern Zambia

Richman Wankie<sup>1\*</sup>, Ata Silungwe<sup>2</sup>, Ignatius Ncube<sup>3</sup>, Trywell Nankulo<sup>4</sup>, Irene Chimoga<sup>5</sup>  
<sup>1,2,3,4,5</sup>Rusangu University

Corresponding Author: Richman Wankie\*, Email: [rwankie@ru.edu.zm](mailto:rwankie@ru.edu.zm)

**ABSTRACT:** Sacred natural sites are widely recognized as biocultural hotspots where spiritual authority, cultural memory, and local environmental governance converge, often-generating conservation outcomes through customary rules, taboos, and ritual sanctions. This study examines Tinti, a sacred landscape near Rusangu Mission in Monze District, Southern Zambia, as a dynamic arena of cultural meaning, environmental change, and political contestation. Drawing on focus group discussions and key informant interviews with elders, community leaders, and residents, the study addresses three objectives: (i) to document community perceptions of Tinti’s socio-cultural and historical significance; (ii) to analyse local explanations for its degradation; and (iii) to examine community perspectives on restoration pathways. Framed by Political Ecology, the analysis treats ecological decline as inseparable from shifting relations of power and authority over land, knowledge, and legitimacy (Blaikie & Brookfield, 1987; Robbins, 2012; Roberts, 2020). Findings show that community interpretations of Tinti’s degradation extend beyond biophysical loss to include perceived moral and spiritual ruptures, linked to weakened customary institutions and competing religious interpretations of sacred landscapes. These findings resonate with broader African scholarship demonstrating that sacred forests and groves persist or decline in relation to transformations in governance, belief systems, and social cohesion (Barre et al., 2009; Sinthumule, 2024). The study argues that restoration prospects are strongest where ecological rehabilitation is pursued alongside culturally legitimate governance, including community-led rule-making and, where locally acceptable, the re-authorization of ritual protection.

**Keywords:** sacred natural sites; political ecology; indigenous environmental governance; taboos; cultural heritage

---

### 1. INTRODUCTION

Sacred natural sites are not merely “places” in a physical sense; they are relational landscapes where spiritual practice, identity, and social order become anchored in specific ecologies (Mazumdar & Mazumdar, 2004; Verschuuren et al., 2010). Across Africa and elsewhere, sacred forests, pools, hills, and groves have historically been protected through legitimate local institutions—ritual restrictions, taboos, and moral sanctions—that regulate access and resource use, often functioning as informal but effective environmental governance (Colding & Folke, 2001; Barre et al., 2009). Contemporary conservation scholarship increasingly recognizes these sites as biocultural reservoirs whose persistence depends not only on ecological conditions but also on the durability of cultural authority and locally meaningful rules (Verschuuren et al., 2010; Tatay & Merino, 2023; Sinthumule, 2024).

Yet sacred sites are also vulnerable to disruption where governance systems are reworked by modernization, land-use pressures, and religious change. Transformations in belief systems can reframe sacred landscapes as illegitimate or “backward,” weakening the social mechanisms that historically enforced protection (Mazumdar & Mazumdar, 2004; Verschuuren et al., 2010). In such contexts, degradation may be experienced simultaneously as ecological decline and as the erosion of moral and institutional order—an entanglement that is often missed by purely biophysical accounts of land change.

Political Ecology offers a framework for analysing these dynamics by foregrounding how environmental change is produced through power-laden relations—including struggles over authority, knowledge, and access to resources (Blaikie & Brookfield, 1987; Robbins, 2012; Roberts, 2020). From this standpoint, sacred sites are not inert cultural relics but contested terrains where competing institutions and epistemologies meet: customary authority and state governance, indigenous cosmologies and missionary legacies, locally grounded stewardship and external narratives of “proper” land use. Environmental degradation, therefore, becomes a socio-political process as much as a material one.

These tensions are particularly salient in Southern Zambia, where rainmaking traditions and ritual authority have long been central to the political and spiritual organization of communities. The Monze Lwiindi (rain festival),



for example, has been documented as a historically evolving institution shaped by changing political conditions and competing claims to religious legitimacy (O'Brien, 1996). The continued cultural salience of Lwiindi within contemporary debates on ecology and earth-care has also been discussed in theological and socio-ecological scholarship, illustrating how rain rituals can encode ecological ethics and landscape guardianship (Kaoma, 2017). Such scholarship underscores that sacred landscapes and ritual institutions are historically dynamic, not static, and that their trajectories are shaped by wider political and ideological transformations.

Within this broader context, Tinti, located near Rusangu Mission in Monze District, provides a valuable case for examining how sacred landscapes are remembered, contested, degraded, and potentially restored. Community narratives describe Tinti as historically associated with fertility, dense vegetation, and a water source, and as a site for rainmaking, healing, and culturally regulated access. However, local accounts also describe accelerating degradation linked to tree removal, soil disturbance, and weakening enforcement of customary rules—changes frequently interpreted as both environmental harm and spiritual desecration. Similar patterns are reported elsewhere in Africa, where sacred groves persist or collapse depending on whether local institutions retain legitimacy and enforcement capacity under changing socio-economic and religious conditions (Barre et al., 2009; Sinthumule, 2024).

Accordingly, this study examines Tinti as a political-ecological landscape whose condition reflects not only land-use change but also contested authority and shifting moral economies. The study is guided by three objectives: (1) to document community perceptions of Tinti; (2) to analyse community views on the causes of its degradation; and (3) to examine community perspectives on restoration pathways. By centering local narratives, the study contributes to scholarship on sacred natural sites and indigenous environmental governance, and it highlights the need for restoration strategies that are simultaneously ecological and culturally legitimate (Colding & Folke, 2001; Verschuuren et al., 2010; Tatay & Merino, 2023).

## 2. METHODS

### 2.1 Location of the study area

The study was conducted in Monze District, Southern Province of Zambia, focusing on communities surrounding Rusangu Mission where the sacred site locally known as *Tinti* is located. Monze District lies within Zambia's Southern Province and forms part of Agro-ecological Zone II, characterized by semi-arid to sub-humid climatic conditions and pronounced rainfall variability. The area experiences a unimodal rainfall regime between November and March and is historically associated with Tonga cultural institutions, including rainmaking traditions such as the Lwiindi ceremony.

Tinti is situated within a rural smallholder agricultural landscape governed predominantly under customary tenure. The area reflects a historically layered socio-religious environment in which indigenous belief systems coexist, and at times compete, with Christian missionary influence centered around Rusangu Mission. Oral histories describe Tinti as formerly characterized by dense vegetation, fruit-bearing trees, and a natural water source, with access regulated through ritual protocols and moral codes. In recent decades, however, the site has reportedly experienced ecological transformation associated with vegetation clearing, soil disturbance, and weakened customary enforcement. The site was selected due to its continued symbolic importance amid visible environmental and institutional change, making it analytically suitable for examining the intersection of sacred landscapes, governance transformation, and degradation narratives.

### 2.2 Research design

This study adopted a qualitative research design grounded in the interpretivist paradigm. The interpretivist approach assumes that social realities are multiple and socially constructed, and that meanings attached to landscapes, spirituality, and environmental change emerge through lived experience and relational engagement. The design was appropriate because the study sought to understand how community members interpret the socio-cultural significance, degradation, and potential restoration of Tinti, rather than to measure ecological variables quantitatively.

The inquiry focused on three interrelated areas: community perceptions of Tinti's historical and spiritual significance; local explanations for its degradation; and perspectives on restoration pathways. The qualitative design enabled in-depth exploration of narrative memory, symbolic meaning, and political contestation surrounding the site. Triangulation across focus group discussions, key informant interviews, and field observations strengthened analytical depth and interpretive validity.



### **2.3 Sampling strategy**

Purposive sampling was employed to identify information-rich participants with deep contextual knowledge of Tinti. Participants were drawn from four villages surrounding Rusangu Mission that have historical and cultural connections to the site.

Four focus group discussions (FGDs) were conducted, one in each village, with between eight and ten participants per group. Gender balance and generational diversity were deliberately incorporated to capture differentiated perspectives on spiritual authority, ecological change, and cultural continuity. Participants included smallholder farmers, elders, youth representatives, and long-term residents.

Additionally, twelve key informant interviews (KIIs) were conducted with traditional leaders, elderly custodians of cultural knowledge, church representatives, and local administrative actors. This diversity allowed the study to capture multiple interpretations of Tinti's legitimacy, governance, and transformation. Sampling continued until thematic saturation was reached, meaning that additional interviews yielded no substantially new insights.

### **2.4 Data collection**

Data were collected through focus group discussions, semi-structured key informant interviews, and non-participant observation. A semi-structured interview guide was used to facilitate open-ended discussion while ensuring consistency across interviews. The guide explored historical functions of Tinti, spiritual regulations and taboos, perceived drivers of degradation, and views on restoration and governance.

All interviews and discussions were conducted primarily in Tonga to enable narrative richness and cultural nuance. Audio recordings were transcribed verbatim and translated into English. Translation procedures emphasized conceptual fidelity, particularly for culturally embedded spiritual terminology.

The principal researcher conducted non-participant observation over two-week periods in each village, documenting ecological conditions of the site, patterns of access, and community interactions with the landscape. Field notes and reflexive journals were maintained to enhance transparency and support analytical triangulation.

### **2.5 Data analysis**

Qualitative data from FGDs, KIIs, and field observations were analyzed using thematic analysis. The analytical process involved iterative stages of familiarization, open coding, theme development, and refinement. Codes were generated inductively from participant narratives and subsequently organized into broader thematic domains including spiritual significance, governance transformation, ecological decline, and restoration discourse.

Two independent coders conducted first-cycle coding to enhance analytical reliability. Differences in interpretation were discussed and resolved through consensus. Credibility was strengthened through triangulation across data sources and peer debriefing.

A political ecology lens guided interpretation by situating community narratives within broader structural dynamics, including shifts in religious paradigms, changes in customary authority, and evolving governance frameworks. This approach enabled the study to interpret degradation as both ecological and socio-political transformation.

### **2.6 Ethical considerations**

Given the cultural sensitivity of sacred landscapes and the potential risks associated with discussing spiritual practices, ethical safeguards were rigorously observed throughout the study. Ethical clearance was obtained from the relevant institutional review body prior to fieldwork. Formal permission to conduct research was also secured from district authorities and traditional leadership structures in the study area.

Informed consent was obtained from all participants prior to interviews and discussions. Participants were informed of the study's purpose, procedures, potential risks, and their right to withdraw at any time without consequence. Consent was provided verbally or in writing depending on participant preference and literacy levels. Confidentiality was ensured through anonymization of transcripts, removal of identifying details, and secure storage of digital recordings and field notes.

Given the sacred nature of Tinti, special care was taken to avoid eliciting restricted ritual knowledge or culturally protected information. Participants were informed that disclosure of sacred or esoteric knowledge was entirely voluntary and that they could decline to answer any question. Discussions were conducted with sensitivity to local protocols and cultural hierarchies.

The researcher maintained reflexive awareness of positionality, particularly in navigating relationships between customary authority and Christian institutions within the study area. Reflexive journaling was used to



critically examine potential biases and power dynamics during data collection and interpretation. These measures ensured that the research process respected community norms while upholding principles of ethical qualitative inquiry.

#### **4.0 RESULTS**

This section presents findings from focus group discussions (FGDs) and key informant interviews (KIIs) conducted with elders, community leaders, and male and female residents of Rusangu Mission regarding the Tinti site. The results are organized in line with the study objectives: first, community perceptions of Tinti; second, perceived causes of degradation; and third, perspectives on restoration and future use.

#### **4.1 Community Perceptions of Tinti**

##### **4.1.1 Tinti as a Sacred and Spiritually Regulated Landscape**

Participants consistently described Tinti as a sacred site of longstanding cultural importance. Community members reported that the site has existed for as long as they can remember, with some tracing its presence back to at least the 1970s. It was widely referred to as a place of great value, both spiritually and materially.

One female participant explained: “Tinti was well protected... the local people would go there to pray for rains. After the spiritual leaders cited some incantations, it could rain.”

Participants emphasized that spiritual rituals were central to the identity of the site. Rainmaking ceremonies were performed during times of drought, and community members believed these rituals were effective. Entry into the site was governed by strict norms. As one participant stated: “No one was allowed to walk in with their shoes on. You had to respect the place because it was sacred.”

Access was regulated not only spiritually but also administratively. Some respondents noted that individuals needed permission or a permit to access resources because the land was associated with Rusangu Mission: “One had to get a permit in order to obtain resources from it because it is believed to be land for the mission.”

These accounts demonstrate that Tinti was historically embedded within both customary spiritual authority and mission-based oversight structures.

##### **4.1.2 Ecological Abundance and Environmental Characteristics**

Community members described Tinti as previously rich in vegetation and biodiversity. Participants recalled that the area was covered with dense green trees and fertile soils that supported natural food production. One male respondent remarked: “It was cared for by whites and it produced beautiful fruits.”

Female participants similarly described the site as abundant: “It was rich in vegetation and had very fertile soil.”

Respondents reported that oranges, guavas, bananas, and other edible plants were commonly found at the site. It was also described as a habitat for common and rare birds, the velvet monkey, the bushy-tailed squirrel and snakes – thus reflecting the Tinti’s ecological diversity.

Participants noted unusual hydrological characteristics associated with Tinti. One respondent explained: “Water would only be found during the cool and dry season. Strangely the Tinti would be dry in the rainy season.”

Additionally, participants referred to some heat emerging from the ground, which they associated with the site’s geothermal character. These natural features were often interpreted within spiritual frameworks.

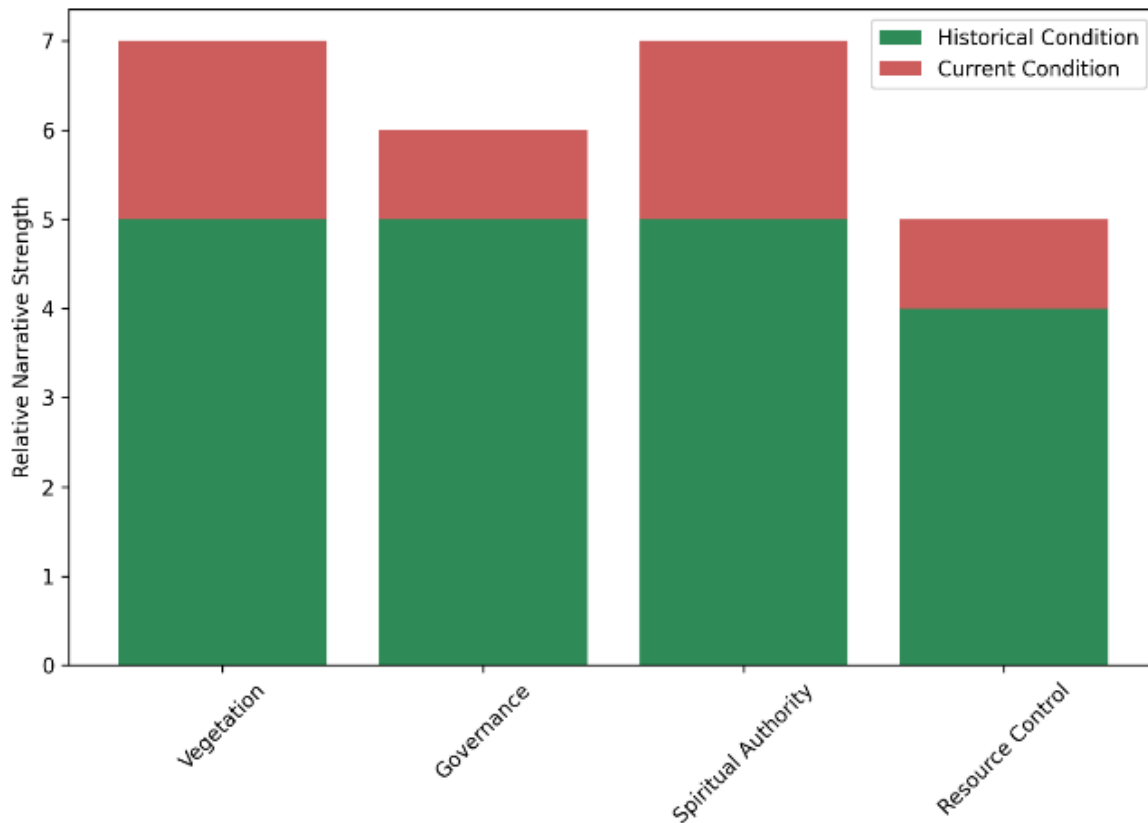
##### **4.1.3 Historical Governance and Protection Mechanisms**

Participants consistently reported that Tinti was historically protected through both social and physical controls. Elders stated that a watchman was stationed at the site for many years to regulate access and prevent misuse. One elder explained: “For many years in the past Tinti was secured by watchmen, but not anymore.”

The site was also enclosed by a wire fence, which functioned as a boundary marker and deterrent to unauthorized entry. According to respondents: “It was protected and preserved by a wire fence.”

However, participants reported that the fence was later vandalized by straying livestock and trespassing individuals: “The fence got destroyed by individuals that wanted its vegetation and fertile soil for personal purposes.”

The removal of fencing and the absence of a watchman were widely described as critical turning points in the site’s transformation.



**Figure 1: Perceived shift from historical to current conditions of Tinti**

#### 4.2 Perceived Causes of Degradation

##### 4.2.1 Tree Cutting, Burning, and Soil Extraction

Participants identified the early 2000s as the period when noticeable degradation began. A female participant stated: “It all started in 2000 when some people decided to desecrate the place by burning and cutting down the tall trees for construction logs and dried trees for firewood.”

Respondents described extensive deforestation through tree cutting and charcoal production. Soil extraction was also frequently mentioned as a driver of environmental change. One participant explained: “People began to take the dark loam soil and harvest the trees without permission. It was like the place became accessible to anybody.”

Another stated: “Individuals are cutting down trees and collecting soil from the site.” Wild fires have become a common sight. According to one respondent: “A careless individual caused the fire.” These activities were generally attributed to carelessness and declining respect for the site.

##### 4.2.2 Breakdown of Leadership and Spiritual Discipline

Participants linked environmental decline not only to physical activities but also to weakening leadership and spiritual norms. One key informant stated:

“The leaders became corrupted and that brought about the loss of the spiritual connection.”

Dying morals have also been associated with the degradation of the Tinti’s site. Several respondents suggested that violations of customary taboos contributed to spiritual imbalance. One participant explained: “The spirits of the guardian of the land and its resources were roused to anger against activities like sexual immorality performed by wayward individuals under the cover of the Tinti’s thick virgin vegetation.”

Religious transformation was also cited as a contributing factor. A participant remarked: “The introduction of Christianity had a huge impact because people focused more on praying to God instead of African spirituality



(ubuntu) that is inseparable from their daily lives and is buttressed by a phalanx of ethics, customary taboos and perceived immediate or long-term repercussions on offending persons.”

Participants suggested that these shifts weakened the authority of custodians of Tonga culture (elders across the gender divide) and reduced the community’s adherence to ritual-based promotion and conservation of the Tinti.

#### 4.2.3 Institutional Collapse and Open Access

The destruction of fencing and the withdrawal of watchmen were repeatedly described as enabling uncontrolled access. One elder noted: “There was a watchman who controlled entry, but now no one watches. People take what they want.”

Respondents explained that once physical barriers were removed, stray animals entered the site and hunting of fauna increased. The absence of monitoring created conditions where extraction occurred without restriction.

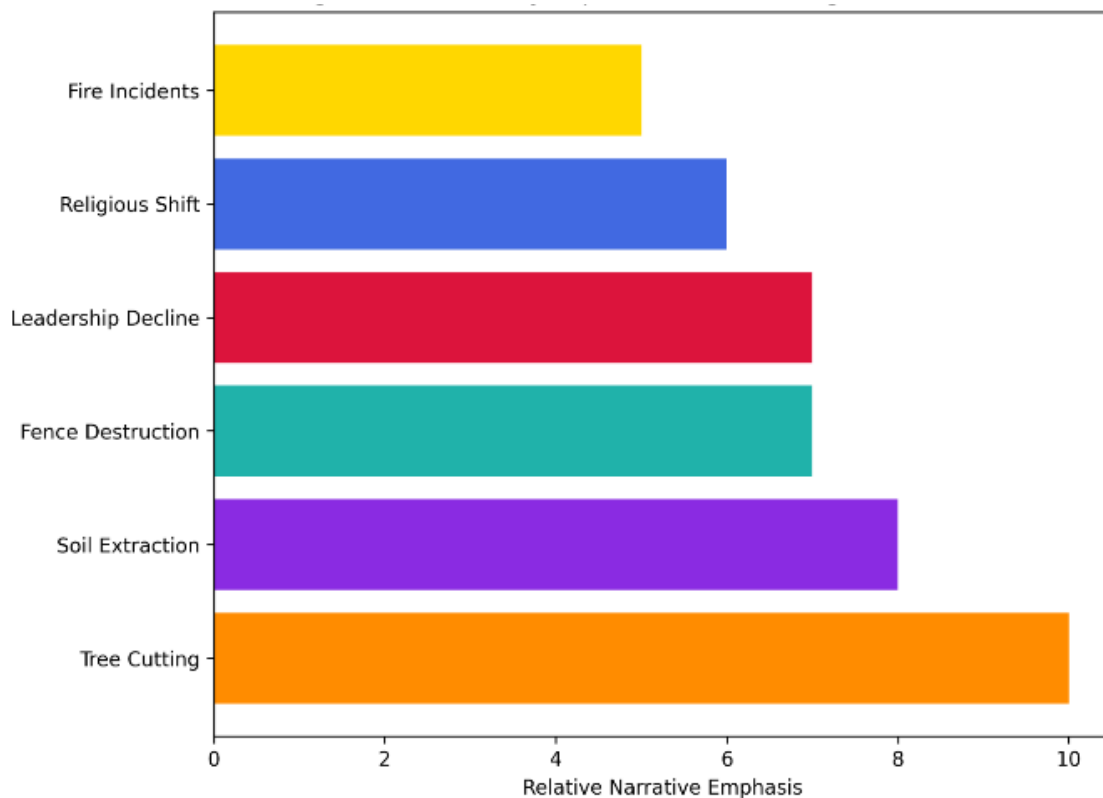


Figure 2: Community-Reported drivers of Degradation at Tinti

### 4.3 Perspectives on Restoration and Future Use

#### 4.3.1 Proposals for Ecological and Structural Restoration

Participants proposed several measures to restore Tinti. Many emphasized reforestation as a first step. One respondent stated: “Restore the site by replanting the acclimatized indigenous trees and other vegetation.”

Others suggested reinstating physical protection mechanisms: “Build a shelter for watchmen near the site in order to preserve it.”

Participants also proposed rebuilding the fence and restricting unauthorized access. Community sensitization was seen as important for preventing further degradation.

#### 4.3.2 Spiritual Reconciliation

Views on spiritual restoration were divided. Some participants believed reconciliation with ancestral spirits was possible through ritual engagement: “Engagement of spiritual leaders can plead with spirits of guardians of the land for mercy.”



Others expressed skepticism: “The spirits are still angry... it may not be possible to make peace again.” These differing views indicate internal variation on how spiritual restoration is perceived.

#### 4.3.3 Economic Development and Community Participation

When asked about implementing economic activities at the site, many participants expressed conditional agreement. One respondent explained: “The community agrees on the quest for restoration of the Tinti provided such an activity brings the people tangible economic benefits.”

However, respondents strongly emphasized that decision-making must involve the community: “The community should be allowed to participate in the decision making of whether to restore the site or use it for other economic activities.”

Participants expressed concern that external actors might take control of the site if local community involvement was not assured/respected.

#### 4.3.4 Scientific Investigation

Participants encouraged scientific studies to understand better the geothermal features of Tinti, but cautioned researchers to proceed carefully. One participant stated: “Researchers should study the caves carefully; some parts are very deep and dangerous.”

Several respondents expressed interest in obtaining scientific perspectives while maintaining respect for spiritual beliefs.

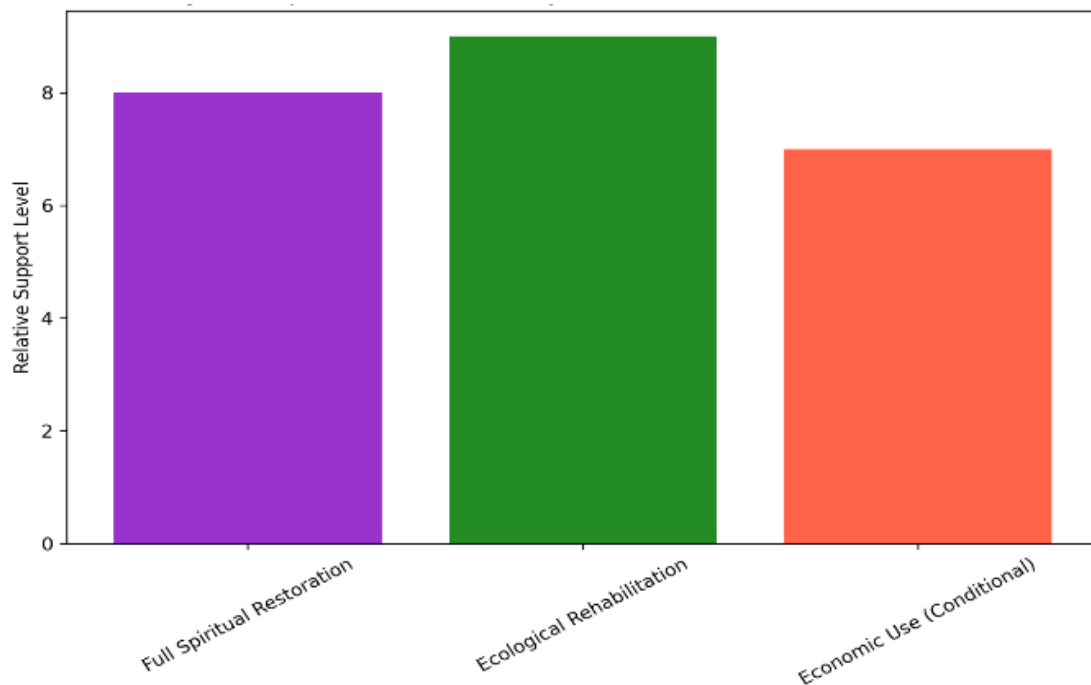


Figure 3: Spectrum of Community Views on Restoration and Future Use

## 5.0 DISCUSSION

### 5.1 Sacred Sites as Informal Environmental Governance Systems

The findings demonstrate that Tinti historically functioned as a spiritually regulated socio-ecological system in which ritual authority, taboos, and institutional oversight structured environmental stewardship. Participants’ descriptions of barefoot entry, rainmaking ceremonies, entry permission requirements, fencing, and watchman oversight indicate that the site was governed through a combination of moral norms and material enforcement.

This aligns closely with research demonstrating that sacred natural sites frequently operate as informal conservation institutions embedded within cultural belief systems (Verschuuren et al., 2010). Studies across Africa and Asia show that ritual restrictions and taboos regulate extraction and protect biodiversity, often achieving



conservation outcomes without formal state enforcement (Colding & Folke, 2001; Dudley et al., 2009). In Ghana, for example, sacred groves have been shown to retain higher biodiversity precisely because spiritual prohibitions limit access and resource use (Barre et al., 2009).

Similarly, Berkes (2012) conceptualizes such systems as part of “sacred ecology,” where environmental regulation is embedded within cosmology and moral authority. The historical condition of Tinti—characterized by dense vegetation, fruit-bearing trees, and restricted access—fits within this broader pattern of spiritually mediated stewardship.

Importantly, the presence of fencing and watchmen suggests that spiritual governance was reinforced through physical and institutional mechanisms. This hybrid arrangement challenges simplistic dichotomies between “traditional” and “modern” governance, reflecting instead what Robbins (2012) describes as layered political-ecological regimes shaped by historical interactions between customary authority and formal institutions.

### **5.2 Institutional Erosion and the Shift Toward Open Access**

A central empirical finding is the early 2000s as a turning point, marked by fence destruction, absence of watchmen, tree cutting, and soil extraction. Participants consistently framed this moment as the beginning of ecological decline.

From a political ecology perspective, this shift represents institutional erosion rather than simple environmental misuse. Environmental degradation literature has long demonstrated that breakdown of governance structures often precedes resource over-exploitation (Berkes, 2012). When monitoring and enforcement mechanisms collapse, regulated commons can transition toward open-access conditions, increasing vulnerability to extraction pressures.

The narratives from Tinti parallel documented cases where sacred forests deteriorated following weakening of custodial authority and declining adherence to ritual prohibitions (Dudley et al., 2009; Verschuuren et al., 2010). The removal of fencing and unavailability of Tinti watchmen symbolized not merely physical change but the collapse of regulatory authority.

Political ecology emphasizes that such transformations are rarely accidental. Instead, they reflect shifting power relations and legitimacy structures (Robbins, 2012). Participants’ accounts of “leadership corruption” suggest that institutional decline was internal as well as structural, reinforcing the argument that environmental change is mediated through governance politics rather than purely ecological dynamics.

### **5.3 Religious Transformation and Environmental Governance**

Participants repeatedly linked the decline or substitution of indigenous spirituality to the introduction and expansion of Christianity. Statements such as “people focused more on praying to God instead of the ancestral and guardian spirits” indicate that religious realignment reshaped the moral authority governing Tinti.

Scholars of sacred natural sites have documented similar processes whereby missionary expansion and religious conversion weakened ancestral cosmologies that previously regulated environmental behavior (Verschuuren et al., 2010). Mazumdar and Mazumdar (2004) argue that sacred spaces derive their regulatory power from shared religious meaning; when belief systems shift, place-based norms may lose legitimacy.

Political ecology provides a useful lens here. Environmental governance is inseparable from struggles over knowledge and authority (Robbins, 2012). Religious transformation constitutes not only theological change but an epistemic reordering of causality and legitimacy. In the Tinti’s case, ancestral rainmaking rituals historically structured ecological governance. Their decline disrupted the moral infrastructure that previously constrained extraction.

This does not imply that Christianity inherently causes environmental degradation. Rather, it highlights how shifts in cosmology can reconfigure governance systems. Sacred natural site research demonstrates that conservation outcomes are strongest where spiritual legitimacy remains intact (Dudley et al., 2009; Verschuuren et al., 2010).

### **5.4 Moral Narratives as Environmental Explanation**

Community members interpreted geothermal heat and ecological decline as consequences of spiritual imbalance and violations of customary taboos. Such interpretations are consistent with findings from sacred ecology research showing that environmental disturbances are frequently understood through moral and cosmological frameworks (Berkes, 2012).

Rather than dismissing these narratives, political ecology encourages understanding them as socially embedded explanations of governance breakdown (Robbins, 2012). Statements that “the spirits were angered” reflect



a moral grammar linking social conduct, leadership integrity, and ecological stability. These narratives encode critiques of corruption, disrespect of traditional norms and values, and institutional failure.

In many sacred landscapes globally, ecological degradation is interpreted as cosmological rupture rather than merely resource mismanagement (Verschuuren et al., 2010). The Tinti's case reinforces the argument that environmental meaning is culturally mediated and that governance collapse can be experienced as spiritual dislocation.

### **5.5 Restoration, Participation, and Knowledge Pluralism**

The findings reveal divergent views on restoration. Some participants advocate a purposeful and well-intentioned (result-bound) action to reconcile with African spirituality and ecological rehabilitation, while others express skepticism about spiritual repair. The expressed conditional support by the local community for the restoration (recovery) of the Tinti area from on-going degradation, is coupled with strong demands for transactional support to the hosting community in its development initiatives. Precisely, an action plan for the restoration and return to normalcy of the Tinti area should of necessity be double-barreled so that it also empowers the surrounding hosting populace with opportunities for individual and group development. Such an approach would doubtlessly motivate the community to get involved and share in the success story and retain the ultimate ownership of the ecological project, let alone, its sustainability.

This reflects broader scholarship emphasizing that restoration of sacred sites must engage cultural legitimacy alongside ecological repair (Dudley et al., 2009; Tatay & Merino, 2023). Participatory governance has been repeatedly shown to enhance sustainability outcomes where communities retain decision-making power (Berkes, 2012).

Notably, participants encouraged scientific investigation of geothermal features while cautioning researchers to proceed carefully. This openness reflects what Berkes (2012) describes as knowledge co-production, where indigenous and scientific systems coexist and can be integrated.

Political ecology scholars argue that sustainable governance requires navigating plural knowledge systems rather than privileging one epistemology over another (Robbins, 2012). Tinti thus represents a site where ecological assessment, spiritual meaning, and participatory governance intersect.

### **5.6 Implications for Sacred Natural Site Governance**

The case of Tinti contributes to sacred natural site literature by illustrating how degradation emerges from institutional erosion, religious transformation, and shifting legitimacy structures. The findings support the broader argument that sacred landscapes function as socio-ecological systems whose resilience depends on moral authority and governance continuity (Verschuuren et al., 2010; Dudley et al., 2009).

Environmental decline at Tinti cannot be reduced to tree cutting or soil extraction alone. It reflects the unraveling of hybrid governance arrangements of traditional and pre-Colonial Africa that subtly integrated spiritual norms and institutional enforcement. Restoration efforts must therefore address legitimacy, participation, and governance reconstruction alongside ecological interventions.

In line with political ecology, Tinti demonstrates that environmental change is deeply political—embedded in authority, belief, and access dynamics (Robbins, 2012). Sacred sites remain critical but fragile governance spaces where ecological integrity depends on culturally grounded stewardship

## **6.0 CONCLUSION**

This study examined the socio-cultural and environmental transformations of the Tinti site near Rusangu Mission in Monze District, Southern Zambia. Drawing on community narratives from elders, leaders, and residents, the research demonstrated that Tinti historically functioned as a sacred socio-ecological system governed through ritual authority, taboos, and institutional controls. These mechanisms collectively regulated access, constrained resource extraction, and sustained ecological integrity.

However, the findings reveal that Tinti's contemporary condition reflects a layered process of governance erosion. The destruction of fencing, withdrawal of watchman oversight, weakening of customary leadership, and shifts in religious authority collectively destabilized the regulatory framework that once protected the site. Tree cutting, soil extraction, and fire incidents emerged not as isolated acts of environmental misuse but as symptoms of institutional fragmentation and declining legitimacy.

Importantly, community interpretations of degradation extend beyond biophysical change to include moral and spiritual dimensions. The linkage between environmental decline and perceived spiritual imbalance underscores that sacred landscapes operate within relational cosmologies where ecological, social, and moral orders are



inseparable. These findings reinforce broader scholarship on sacred natural sites as dynamic political-ecological terrains rather than static cultural relics.

The study also reveals contested but constructive pathways forward. While views on spiritual reconciliation vary, there is strong support for ecological rehabilitation, reinstatement of protective structures, and participatory governance. Conditional openness to economic development—provided community decision-making authority is respected—demonstrates pragmatic engagement with contemporary realities. Furthermore, participants' interest in scientific assessment alongside spiritual consideration signals potential for pluralistic knowledge integration.

The case of Tinti contributes to sacred site and political ecology literature by illustrating how environmental degradation in culturally significant landscapes is fundamentally linked to shifts in power, legitimacy, and governance authority. Restoration, therefore, cannot rely solely on technical ecological interventions. Sustainable recovery must address institutional reconstruction, cultural legitimacy, and inclusive decision-making structures.

Ultimately, Tinti exemplifies how sacred landscapes in postcolonial contexts are shaped by intersecting spiritual, political, and economic transformations. Strengthening culturally grounded governance systems—while fostering respectful collaboration between indigenous and scientific knowledge—offers the most promising pathway toward ecological resilience and social cohesion.

### References (APA 7th Edition)

- Barre, R. Y., Grant, M., & Draper, D. (2009). The role of taboos in conservation of sacred groves in Ghana's Tallensi-Nabdam district. *Social & Cultural Geography*, 10(1), 25–39. <https://doi.org/10.1080/14649360802553194>
- Berkes, F. (2012). *Sacred ecology* (3rd ed.). Routledge.
- Blaikie, P., & Brookfield, H. (1987). *Land degradation and society*. Methuen.
- Colding, J., & Folke, C. (2001). Social taboos: Invisible systems of local resource management and biological conservation. *Ecological Applications*, 11(2), 584–600. [https://doi.org/10.1890/1051-0761\(2001\)011\[0584:STISOL\]2.0.CO;2](https://doi.org/10.1890/1051-0761(2001)011[0584:STISOL]2.0.CO;2)
- Dudley, N., Higgins-Zogib, L., & Mansourian, S. (2009). The links between protected areas and faiths. *Conservation Biology*, 23(3), 568–577.
- Kaoma, K. (2017). Towards an African theological ethic of earth care: The Iwiindi as ecological resource. *HTS Theological Studies/Theological Studies*, 73(3).
- Mazumdar, S., & Mazumdar, S. (2004). Religion and place attachment: A study of sacred places. *Journal of Environmental Psychology*, 24(3), 385–397. <https://doi.org/10.1016/j.jenvp.2004.08.005>
- O'Brien, D. (1996). *The Monze Rain Festival: The history of change in a religious cult in Zambia*.
- Robbins, P. (2012). *Political ecology: A critical introduction* (2nd ed.). Wiley-Blackwell.
- Roberts, J. (2023). Political ecology. *Open Encyclopedia of Anthropology*.
- Sinthumule, N. I. (2024). Sacred forests as repositories of local biodiversity in Africa. *Journal of Environmental Planning and Management*.
- Tatay, J., & Merino, S. (2023). What is sacred in sacred natural sites? A literature review from a conservation lens. *Ecology and Society*, 28(1), Article 12.
- Verschuuren, B., Wild, R., McNeely, J. A., & Oviedo, G. (Eds.). (2010). *Sacred natural sites: Conserving nature and culture*. IUCN.