

The Roles of Indigenous Knowledge in Heritage Conservation and Tourism Development in the Historic Churches of South Wollo Zone, Ethiopia

By

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Abstract

This study examines the role of Indigenous Knowledge in heritage conservation & tourism development within the historic churches of the South Wollo Zone, Ethiopia, emphasizing the participation and experiential contributions of local and monastic communities. The study employed a qualitative research design with non-probability techniques (purposive and snowball). The study drew on a combination of primary and secondary data sources. Primary data, along with semi-structured interviews with 16 key informants, three focus group discussions with 18 participants, and field observations. The study examined Indigenous Knowledge practices related to heritage conservation and tourism development, including ancestral worship, handicraft production, church school, and spiritual healing, as well as the mechanisms through which such knowledge is transmitted within communities. The main findings reveal that monastic communities possess extensive Indigenous Knowledge that contributes significantly to heritage conservation & tourism development. This knowledge is primarily transmitted through experiential learning within families, peer networks, and guidance from religious and community leaders. However, its further development remains inadequate due to limited institutional recognition, weak knowledge-sharing cultures, insufficient records, mistrust, and increasing individualism. Despite these challenges, Indigenous Knowledge remains a vital and underutilized resource for sustainable heritage conservation and tourism development in the study area. By foregrounding applied experience and lived Indigenous Knowledge, the study demonstrates that integrating Indigenous Knowledge into heritage management & tourism planning can enhance cultural preservation, strengthen community history, generate income and employment opportunities, & foster meaningful relationships between host communities and visitors.

Keywords: Heritage Preservation, Indigenous knowledge systems, Tourism Development

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1. Introduction

1.1 Background of the Study

Indigenous Knowledge (IK) is homegrown and cultural Knowledge of a particular society. It is a manner of life, skills, experiences, culture, insight, and values embraced with the aid of human beings inside the local community (Hadlos, 2025). Every society has its local knowledge (LK) essential for livelihood and survival. IK forms the basis for local decision-making in rural activities, including health, fashion, food preparation, education, agriculture, religion, festivals, recreation, norms and values, institutions, politics, and technology (Wilson, 2020).

Tourism development is crucial to examine the traditional methods of conserving these resources that African indigenous peoples practiced long before colonialism (Agrawal, 2004). Africans societies historically possessed robust traditional institutions, particularly traditional leaders, who managed and regulated the use of natural resources. However, the authority of these traditional institutions has been weakened by the rise of modern state institutions, which often promote Western-influenced governance structures and knowledge (Kaba Tah, 2012). IK predates contemporary initiatives and is a longstanding and essential component of development (Githui, David, & Maurice, 2015).

All types of heritage are integral to Indigenous identity, including tangible objects, places, and the stories and traditions associated with intangible cultural heritage. Heritage encompasses the natural and cultural environment, including landscapes, historic sites, biodiversity, collections, cultural practices, knowledge, and living experiences (Sitotaw, 2025). IK is vital for local problem-solving, development, and the preservation of cultural identity, yet its recognition varies across communities. Historically, dominant modern development approaches have often undervalued IK and traditional institutions, viewing them as obstacles rather than assets. This perception has contributed to the undervaluing and marginalization of IK holders, who are frequently underrepresented and stigmatized, especially when IK is more deeply embedded in their communities (Agrawal, 2004). Recognizing its significance for sustainable development and responding to concerns about its erosion, several countries have begun implementing policies and initiatives to support IK (Plan & Don't, 2006). Governments and Non-Governmental Organizations (NGO) are increasingly promoting IK-based products and services such as traditional medicines, ecotourism, handicrafts, and agricultural goods (Tharakan, 2017).

Ethiopia, one of the world's oldest civilizations, possesses rich Traditional Knowledge (TK) and Indigenous Knowledge Systems (IKS) demonstrated in architecture, medicine, agriculture, and cottage industries (Kassaye, 2024). Practices such as the Konso people's hillside terracing, Bale farmers' trench-based crop protection, and Amhara barn rotation for soil fertility highlight rational environmental management; and monumental heritages, including the Aksum stelae and the rock-hewn churches of Lalibela, reflect advanced architectural knowledge and written language, and manuscripts preserve TK over millennia; the country's diverse IKS contribute to heritage conservation (Kassaye, 2024). IK, linked to the Ethiopian Orthodox Tewahido Church (EOTC), including medicinal plants, social insurance, and rangeland management, has been partially documented (Esubalew et al., 2020). However, there has been no research related to the roles of IK in heritage conservation and tourism development in the historic churches of the South Wollo Zone (SWZ).

Therefore, there is a research gap in identifying the roles of IK in heritage conservation at the historic churches of the SWZ, which needs to be addressed with empirical evidence. As a result, to fill the gap,

solve these deep-rooted problems, and realize the ambitions explicitly discussed above, the researchers are motivated to conduct a detailed study on IK and the conservation of cultural heritage. The main objective of this study is to examine the roles of IK in heritage conservation and tourism development in the historic churches of SWZ, Ethiopia. Specifically, the study seeks to examine the extent to which IK practices in heritage conservation and tourism development, to assess the contribution of IK to heritage conservation and tourism development, and to identify the challenges associated with the use of IK in heritage conservation and tourism development.

2. Literature Review

2.1. Concepts and Characteristics of IK

For a long time, IK has been understood as being in binary opposition to ‘Western’, ‘scientific’, or ‘modern’ knowledge. Initial studies of IK and its analogs, such as ‘traditional’, ‘local’ or ‘practical’, sought to underline its differences from scientific knowledge and its analogs, such as ‘western’, ‘rational’, ‘abstract’ or ‘modern’, along a variety of methodological and contextual criteria (Wilson, 2020). IK refers to the knowledge accumulated by local communities over generations within a specific environment. It is also known as LK, folk knowledge, TK, ethnoscience, and Indigenous Ecological Knowledge (IEK). IK is deeply connected to the environment, as it is derived from the experiences and observations of Indigenous peoples (Lepcha et al, 2021).

According to David (2025), Eurocentric researchers often describe IK as “traditional knowledge,” implying that it is static and outdated. Unlike Western knowledge, which is open, systematic, holistic, and analytical, IK is experiential, non-systematic, holistic, and based on novel experiences rather than deductive reasoning. IK can be applied across diverse fields, including agriculture, medicine, architecture, animal husbandry, natural resource management, and tourism (Gohori, 2020). IKS are typically perceived as qualitative, practical, intuitive, experiential, and transmitted orally, often tested through trial and error. In contrast, Western science is considered quantitative, reductionist, textual, analytical, theoretical, and linear (Gohori & van der Merwe, 2024). Although IKS often refers to traditional knowledge of the past, it is long-term, progressive, and contemporary, continuously incorporating new experiences, information, and technologies. Consequently, IK “is not just knowledge of the past, but also knowledge of the present” (Menzies & Butler, 2006). Gohori & van der Merwe, (2024) identify the following key characteristics of IK: (i) it is locally bound and specific to a particular area; (ii) it is non-formal; (iii) it is cultural and context-specific; (iv) it is primarily oral and not formally documented; (v) in nature it is holistic; (vi) it is dynamic and adaptable; and (vii) it is closely tied to the survival and subsistence of many Indigenous peoples worldwide. Additionally, Hutchinson, Movono & Scheyvens (2021) note that IKS may also have spiritual connections to the land, culture, traditions, and environment of Indigenous communities.

2.2. Practices of IK in Heritage Conservation and Tourism Development

According to Sue (2022), ancestor worship is a common indigenous practice involving rituals honoring the spirits of deceased relatives, including prominent community figures. Heritage sites of worship require ongoing maintenance and restoration to safeguard their spiritual and cultural significance. Handcrafts involve the transformation of raw materials into items with practical and decorative value (Tadesse & Melesse, 2022). In Ethiopia, traditional crafts like weaving, pottery, and blacksmithing are essential to both cultural identity and economic livelihood, particularly through their role in the tourism sector (Krebs, 2021). Symbolic practices, particularly in cultures with a wide variety of totems, have played a

significant role in the conservation of nature (NDUBISI, 2021). Spiritual healing emphasizes the holistic recovery of individuals, addressing both physical and spiritual well-being. Indigenous healing practices are often based on a deep connection to divine forces and community rituals (Lasair, 2020). Traditional church schools, particularly within the EOTC, have been integral in preserving cultural and religious knowledge for over 1,500 years. Today, these schools continue to play a pivotal role in conserving Ethiopian heritage, contributing to both national identity and global cultural heritage (Tilahun, 2021).

2.3. Significance of IK to Heritage Conservation and Tourism Development

IK is crucial for conserving culture and boosting sectors such as fashion, tourism, healthcare, and pharmaceuticals (Onwuegbuzie et al., 2022). Tourism involves visiting various places and people, making it inherently linked to communities (Gohori & van der Merwe, 2020). When implemented thoughtfully, tourism can positively contribute to the revival of IKS and culture. By its nature, IK is community-centric, reflecting local practices and deep connections to the land and community. Unfortunately, the profound bond that Indigenous peoples have with their lands and natural environments has led mainstream society to view them as 'inferior' and underdeveloped, resulting in their marginalization in geographic, political, social, and economic contexts (Melubo & Carr, 2021). IK is important for two key reasons. First, it empowers local communities, enhancing self-sufficiency and self-determination. Secondly, IK is vital in areas such as natural resource management, sustainable social relationships, natural remedies, environmental conservation, development projects, and the spiritual connection to land, soil science, and agriculture (Ambepitiya, 2025).

2.4. Challenges to IK Sharing in Heritage Conservation and Tourism Development

IK is often overlooked due to its simplicity and lack of formal documentation; It is vulnerable to extinction, as it is passed orally and not widely recorded (Orole & Adejumo, 2021). Additionally, IK is poorly managed because traditional creators and record keepers are separate, and Western preservation models do not accommodate it well. Access to IK is limited, and its use in development projects is hindered by disorganization and a lack of marketing strategies. Furthermore, some Indigenous people, such as healers, may be unwilling to share their knowledge, and IK may not always be accurate or suitable for all situations, as demonstrated by past resource mismanagement (Ngonzi & Lubega, 2020).

2.5. Theoretical Framework

The study on “IK and community participation in cultural heritage conservation in the historic Churches of SWZ, Ethiopia” is guided by three integrative theories: IKS theory, Stakeholder theory, and sustainable heritage conservation theory. IKS theory highlights how context-specific, orally transmitted knowledge, practices, and beliefs shape local approaches to heritage conservation, seen in construction, maintenance, rituals, and taboos (DILLA, 2025). Stakeholder theory (ST) has been consistently used to elaborate on various phenomena in tourism research (Song et al., 2021). Sustainable heritage conservation theory views heritage as not only physical artifacts or buildings but also intangible cultural resources (beliefs, rituals, traditions, languages, and spiritual meanings) that communities actively preserve and transmit (Hosny, 2024).

2.5. Conceptual Framework

The conceptual framework illustrates (Figure 1) IK shapes heritage conservation and tourism development in the historic churches of SWZ, Ethiopia. IK, expressed through religious rituals, traditional church education, handcrafting, spiritual beliefs, and indigenous conservation norms, influences the extent to which both tangible and intangible heritage are conserved. The framework also shows that IK contributes to tourism development by supporting cultural and religious tourism, authentic visitor experiences, community participation, and local economic benefits. At the same time, challenges such as modernization, weak institutional support, limited documentation, and generational knowledge gaps affect the effective application of IK. Overall, the framework demonstrates that integrating Indigenous Knowledge while addressing these challenges is essential for achieving sustainable heritage conservation and tourism development.

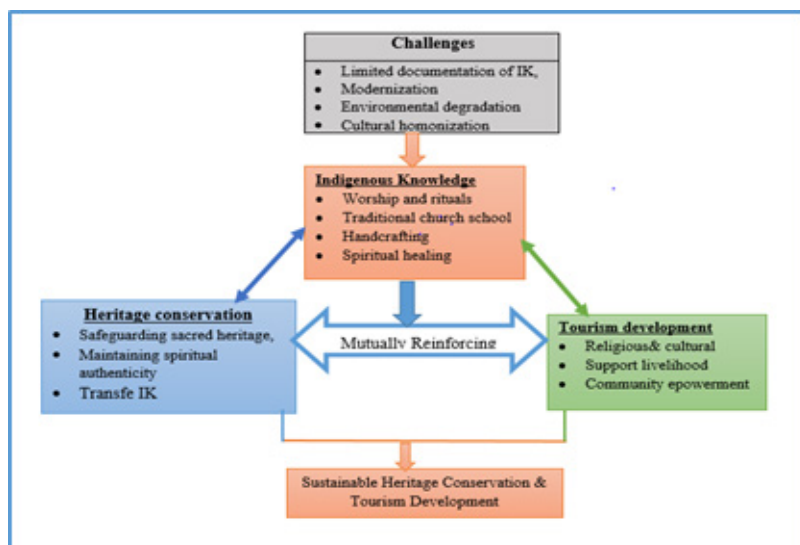


Figure 1: Conceptual framework (adapted from Magni, 2017)

Source: Base on theoretical foundation and reviwed literature, 2024

3. Research Methodology

3.1. Description of the Study Area

This study focuses on the historical churches of the SWZ in the Amhara National Regional State (ANRS), specifically those in the monasteries of Haiq Estiphanos, Abba Giyorgis Zegascha, Tedibabe Mariam, and Atrons Mariam (Figure 2). These historic sites were selected due to their rich heritage and historical significance.

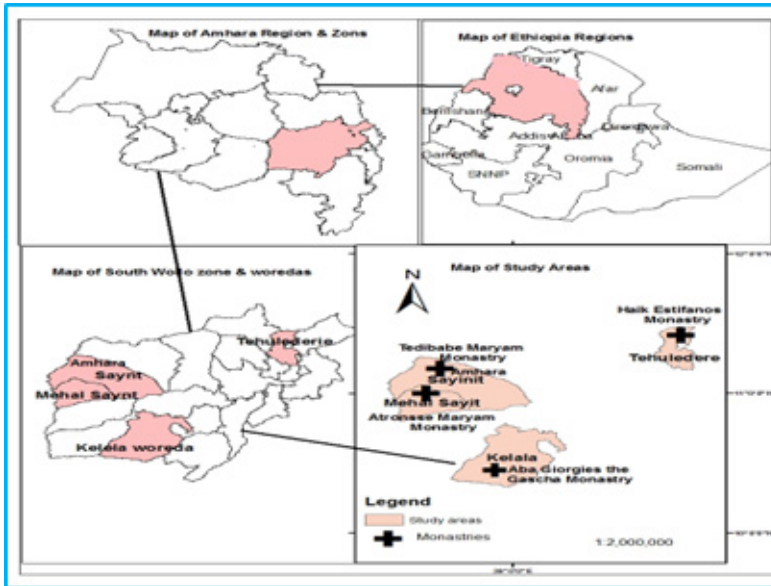


Figure 2: Maps of the study areas (Source: Developed by the corresponding researcher, 2025)

3.2. Materials and Methods

This study employed an interpretivist research paradigm, which seeks to understand the subjective meanings of social actions and reveal their interpretations (Merriam & Tisdell, 2015). A qualitative research design was used to analyze the role of IK in heritage conservation and tourism development in the historic churches of SWZ. This approach was essential for uncovering underlying issues and provided comprehensive insights into the study topic (Paraskevaidis & Andriotis, 2023). The research methodology flow is shown in Figure 3.

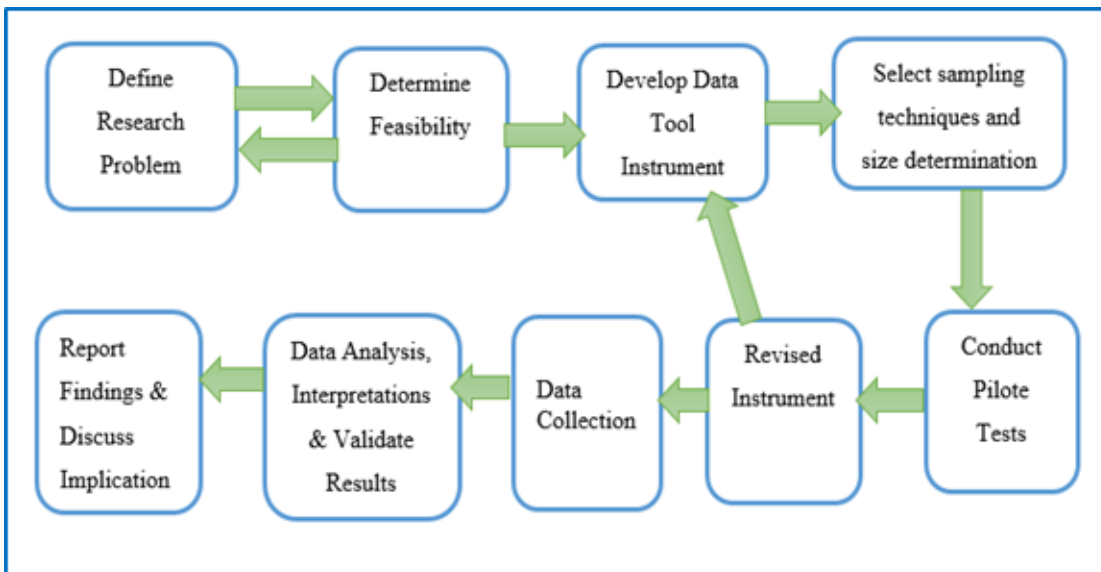


Figure 3: Flowchart of the research (by researchers, 2025)

3.3. Target Population

The subjects of the current study include the elders and leaders of local communities living in the study areas, the religious servants and leaders of the monasteries, and employees of the culture and tourism office at the district and zone levels.

3.4. Sampling Techniques and Sample Size Determination

In qualitative research, non-probability sampling techniques are preferred (Akkaş& Meydan, 2024). In this study, the non-probability method of purposive and snowball sampling has been used to select the research sites and informants. Purposive Sampling is affordable and easy when the target population is not easy to locate (Etikan, Musa& Alkassim, 2015). The study employed purposive sampling to select four historic churches (Haiq Estiphanos, Abba Giyorgis Zegascha, Tedibabe Mariam, and Atrons Mariam) based on their long historical significance and strong IK practices. Selection criteria also included diversity in conservation approaches, levels of community participation, accessibility for fieldwork, and relevance to tourism development.

Purposive sampling was further used to identify KIs from culture and Tourism Offices and monastery heads, while snowball sampling was applied to select local community elders and leaders. Snowball sampling is particularly helpful when appropriate candidates for the study are hard to locate (Altinay& Paraskevas, 2008). In this study, a snowball sampling technique was employed to select the representatives of local community elders and leaders.

The qualitative sample size was determined by data saturation (Charmaz, 2006), with prior studies indicating that as few as 12 interviews may be sufficient (Abdul Majid et al., 2018). Accordingly, the current study conducted 16 KIs and 3 FGDs (18 participants), each comprising 6 participants (Table 1). KI were purposively selected based on their expertise and community roles, as individuals with specialized knowledge are better positioned to provide in-depth insights into local social dynamics (Hidayati, 2024).

Table 1: Composition and number of interviewees engaged for this research

No	Category of Interviewees	Total No. Interviewees	Details
1	Woredas Culture and Tourism Office Heritage Conservation and Tourism Development	6	Semi-structured interviews were organized for these 6 heritage conservation and tourism Development experts separately for barely an hour and 20 minutes each.
2	Administrators of the Monasteries	4	Semi-structured interviews were organized for these 4 Administrators of the monasteries separately for barely an hour and a half each.
3	Representatives of the Local Community Elders	4	Semi-structured interviews were organized for these 4 Local Community Elders separately for barely an hour each.
4	South Wollo Zone Culture and Tourism Department Experts	2	Semi-structured interviews were organized for these two heritage conservators and protection experts separately for barely an hour and a half each.

5	Monasteries heritage custodians	18	Three FGDs for the six monasteries' heritage custodians lasted an hour and a half for each group.
	Total	34	

Source: Researchers' Construct from Fieldwork, 2024

3.5. Data Collection Instruments

The study employed both primary and secondary data sources. Primary data were collected through KIs, FGDs, & field observations, while secondary data were drawn from articles, books, media sources, and government and NGO reports. Semi-structured interviews, FGD, & field observations were used as data collection tools, with semi-structured interviews favored for their flexibility & capacity to facilitate open, two-way communication while addressing the study's objectives (Ruslin et al., 2022). The current study used interview guiding questions related to the study objective. These interviews were conducted face-to-face, making them ideal for gaining insights and perspectives from a small number of respondents (Creswell, 2009). The interviews took place from April to July 2024. The study utilized FGDs to cross-check unclear information from semi-structured interviews. The field observations and field notes data were utilized to triangulate and cross-check the findings of semi-structured interviews & FGDs.

3.5. Methods of Data Analysis

In this study, qualitative data from KIs, FGD, observations, and document reviews were managed and analyzed using content analysis. This involved systematically coding texts into categories at different levels (Nafi'a, 2019). Content analysis enables objectives and systematic interpretation of both written and spoken materials (Kothari, 2009). Moreover, the analysis was supported by different figures of heritage with explanations and supplemented by secondary sources. Figure 4 summarizes the content analysis process conducted in this study, adapted from Prasad (2016).

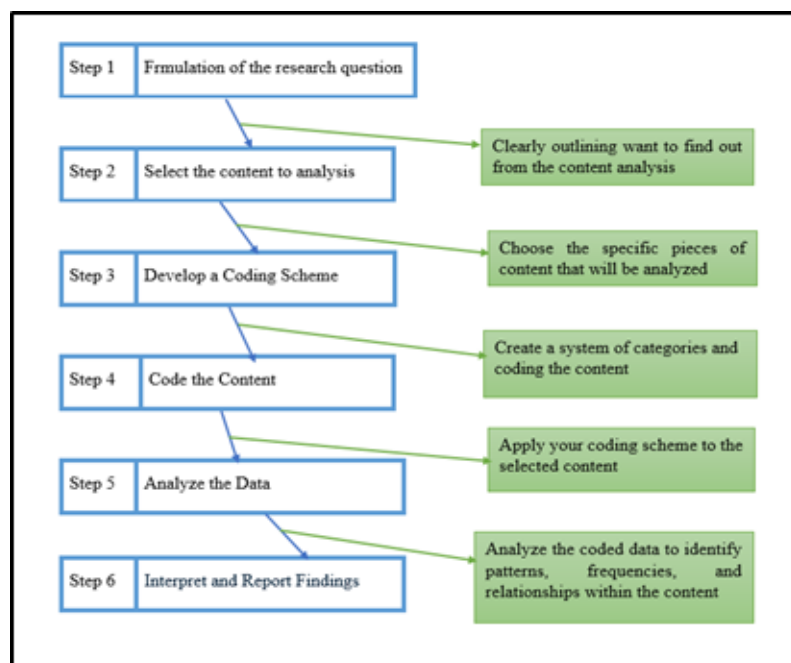


Figure 4: Steps of Doing Content Analysis (Adapted from Prasad, 2016)

3.6. Ethical Considerations

Researchers have a moral obligation to address the ethical implications of their work. Accordingly, this study followed all relevant institutional, national, and international ethical guidelines. Ethical approval for data collection was granted by the University of Gondar, Department of Tourism, on January 13, 2024 (Ref. No. TMGT/565/2016), following proposal defense and review of research procedures. The protocol ensured compliance with ethical standards, including informed consent, confidentiality, anonymity, and voluntary participation. All participants were fully informed about the study's purpose, procedures, potential risks, and benefits, and informed consent was obtained before data collection. The study therefore upholds principles of privacy, risk assessment, honesty, reliability, participant welfare, dignity, and rights.

4. Result and Discussion

4.1. The Extent of IK in Heritage Conservation and Tourism Development

Focusing on a broad definition of IK, the researchers examined four historical churches in SWZ to explore practices that support cultural heritage conservation and tourism. The EOTC has a rich history of writings, church schools, arts, and artifacts (Abate et al., 2023). Field observations revealed diverse Indigenous practices, including worship, handicrafts, traditional church schooling, and spiritual healing, shared among Indigenous and customary communities.

A. Worshiping

Christian worship extends beyond obligation to a higher power, emphasizing a reciprocal love of God as taught by Jesus (Norheim, 2024). Similarly, Ancestor worship is practiced in different forms around the world, such as in Korea, Japan, and Africa, and remains integral to local cosmologies and ritual life, even within modern societies (Valerievna, 2023). Interviews with KIs from monasteries further revealed that,

When we gather in our monasteries, we are not only practicing our faith but also safeguarding our religious heritage. The rituals and traditions of the EOTC, passed down through generations, preserve our identity and strengthen our sense of community and shared responsibility for conserving both the physical and spiritual heritage. (Participant 8).

Believers view ancestors as intermediaries between the living and the divine, maintaining social order and sanctioning moral violations (Ringo, 2019). Although the authority of African traditional institutions has declined with the rise of modern state systems, IKS continue to emphasize spiritual ties to nature, where misfortune is often interpreted as a warning against violating taboos (Menzies & Butler, 2006). These spiritual values underpin intergenerational cultural systems and play a vital role in nature conservation and heritage protection (Verschuuren, 2007). One KI shared,

The Church teaches us that conserving our heritage begins with unconditional love, noble actions, and a life guided by a purified spirit. Values such as humility, compassion, forgiveness, and respectful behavior help create harmony within the community, which is essential for protecting

our cultural and spiritual heritage. (Participant 21).

B. Handcrafting

Handicrafts, made by hand using traditional methods, hold cultural and religious significance and attract tourists as souvenirs (Mukherjee et al., 2016). In Ethiopia, the EOTC has supported indigenous handicrafting, contributing to arts, folklore, and economic livelihoods (Abebe & Amogne, 2024). Partnerships between tourism and local handicraft producers can enhance tourism development by promoting these cultural products. The KIs stressed that,

We often reflect on the importance of handicrafts to our local industries, particularly in supporting monasteries. Monks contribute to our culture through religious paintings and writings on Brana, a unique animal skin paper. (Participant12).

As Figure 5 shows, in the selected monasteries, the handicraft industry plays a key role in job creation and income generation in urban and rural areas. Its low startup cost and minimal skill requirement make it accessible to those lacking capital or specialized knowledge (Wondirad et al., 2022).



Figure 5: Monastic fathers doing handicrafts (Photograph by the corresponding researcher, 2024)

The handicraft sector is a vital part of the tourist market, providing income opportunities and reducing poverty and social issues in host communities (Abreham, 2022). Labor-intensive and based on traditional skills, it supports both skilled and unskilled workers with low investment (Kofler & Walder, 2024). Historically, crafts like metalworking have played significant economic and cultural roles, with Ethiopia using bronze, brass, and copper since the fifth century (Abate et al., 2023). Monastic communities used local resources like wood, ropes, and kerosene to make items such as cookers, pots, and beehives, often working collaboratively. KI did point out that,

The declining interest of younger generations in traditional crafts poses a serious risk to their survival. However, practices like manuscript creation and painting have not disappeared entirely. (Participant 28).

Writers and painters traditionally produced rich colors from natural materials such as plant leaves, flowers, and multicolored soils. The preparation of ink was a lengthy and meticulous process, often taking an average of six months to produce a single color. Wooden book panels were joined using finely prepared leather rather than metal hinges, achieved by carefully drilling at the joint (Gashaye, 2019). Manuscripts preserved in monastery treasure houses are parchment books made from animal skins, covered with wooden boards and fine leather (Figure 6).



Figure 6: The books made of animal skins and covered with wooden boards and fine leather

(Photograph by the corresponding researcher, 2024)

Except for a few manuscripts at Tedibabe Mariam Monastery, most manuscripts were handwritten in Ge'ez with black and red ink. Producing a single manuscript required long and labor-intensive work. The members of the KIs added,

Producing one large manuscript could take half a year or more. The inner parchment pages are decorated with paintings of our Lord and Savior Jesus Christ, the Virgin Mary, Holy Angels, martyrs, saints, and prophets. (Participant 9).

C. Traditional Church School

The EOTC embodies both spiritual and material heritage, reflected in medicine, architecture, literature, education, governance, and environmental stewardship (Tsegaye, 2020). Its traditional education preserves a rich cultural heritage through sacred songs, while the Solomonic restoration ushered in a “Golden Age” of Ge'ez literature and royal chronicles from the fourteenth century onward (Alemayehu, 2011). The FGD participants noted,

For many centuries, the EOTC has served as a center of learning on which society depended for both spiritual and secular life. The continued existence of traditional church schools in all four monasteries is vital for preserving religious knowledge and safeguarding both tangible and intangible heritage.

Education in Ethiopia began in the sixth century with the introduction of the Sabeen alphabet through

EOTC schooling, following the spread of Christianity from the Aksumite kingdom (Tilahun, 2021). Living religious practices such as liturgical chants and services attract visitors, and monastery church schools offer accessible educational tours that support heritage conservation and intergenerational knowledge transfer (Gedecho, 2014). As the researchers observed and KIs highlighted,

Church education is practiced at multiple levels across the monasteries. Estiphanos Monastery offers Schools of Liturgy (Qedasse), Hymn (Aqququm), Qine, Reading, and priest training, while Abba Giyorgis Zegascha focuses on Music (Zema Bet) and Liturgy (Qedasse Bet). Tedibabe Mariyam runs active schools of Reading (Nebab Bet), Music (Zema), Digua, Liturgy, Hymn, and Qine. Similarly, Atrons Mariyam Monastery practices the Schools of Reading, Music, and Liturgy. (Participant 5).

Intangible heritage, such as liturgy, rites, manuscript making, and sacred art, survives through the continuity of traditional church education (Heritage IC, 2022). While manuscripts are tangible objects, the knowledge of their production and meaning gives them heritage value. Thus, traditional church education is essential for sustaining and integrating both tangible and intangible cultural heritage.

D. Spiritual Healing

The Church is a major source of medicine in Ethiopia, where spiritual healing remains an important form of treatment (Cultural Atlas, 2022). The study found widespread practices of spiritual healing for physical and mental illnesses, including the use of sacraments, prayers, holy water, ash, mud, and relics by priests and monks. These healing practices and reported miracles continue to attract many people to monasteries in search of cures (Dima-Cozma & Cozma, 2012). Spiritual healing in the EOTC often involves the cross, which varies by artistic period, Aksumite, Lalibela, and Gondarian, and by type, including processional, hand, and architectural crosses (Nekatibeb, 2018). Furthermore, as the researcher observed, in the monastery of Tedibabe Mariam, the “Nii’wa At Tedibabe Mariam Monastery, the Nii’wa Biigu cross, believed to have been used by St. John to baptize Jesus, is highly revered. Measuring 20 × 16 cm, it is made of chased silver or silver-dipped bronze, engraved with St. Michael and St. Gebrael, and contains a gilded figure of St. Gebrael inside a hinged reliquary panel. A custodian representative emphasized,

The Nii’wa Biigu cross has brought hope and healing, curing diseases and guiding those in need. During epidemics, when fear and uncertainty prevail, the community and monks turn to the cross in prayer for divine intervention. (Participant 3).

Indigenous peoples’ cultural heritage incorporates both tangible and intangible manifestations of their ways of life. According to KIs,

“This monastery has conserved its heritage for centuries through indigenous conservation practices passed down within families and the community. Despite damage from wars and human actions, preservation mainly relies on appointing trusted indigenous guardians, usually clergy supported by the community.” (informant Ato Kassahun).

The EOTC is the repository of ancient religious arts, which are another tourist attraction in the historic churches (Nekatibeb, 2018). The magnificent paintings of the EOTC reach back almost fifteen hundred years. Icons painted on wooden panels, especially diptych and triptych icons, are fastened with hard

threads or thin leather strings, using the outer wooden board as protection for the icon paintings. Ethiopian church paintings and Icons may be divided into two great periods, which are the medieval and the Gondarian. Both medieval and Gondarian period paintings are found in the monastery of Tedibabe Mariam. In addition, the St. Luke Icon is kept inside the Maqdes in the care of monks and deacons and never revealed to the people. Manuscript binding knowledge is particularly interesting, as it greatly contributes to the manuscript's longevity and its resistance to natural hazards. Ethiopian manuscript covers are typically made of wood, with leather being rare. The wood is chosen for its resistance to decay and insect damage, and its lightness and ease of shaping. Additionally, animal skins, particularly goat skin, are tanned for book covers, as it is stronger and cheaper than sheep or other animal skins (Gashaye, 2019). Based on the interview question, respondents showed that,

There are remarkable efforts and the ingenuity of the guardians of the church in earlier times. When faced with human-made and natural threats, they developed traditional storage methods to protect sacred manuscripts for future generations. (Participant 4).

Another IK of the monasteries in preserving heritages from socio-economic and political crises, yet a risk is depositing those monasteries' heritages to the local balabats as well as the elderly people who were exemplary in their spirituality, with the full consent of the local community, for better protection.

The participants highlighted this idea,

The local balabats gained community support through their property, generosity, and spiritual maturity. Respected as community figures, they received voluntary labor and were entrusted with certain church items, while sacred objects remained restricted to professionals. (Participant 8).

According to Berkes (2009), Participation in rituals, feasts, and seasonal ceremonies is vital for transmitting cultural and ecological knowledge. Such experiential learning effectively preserves Indigenous Knowledge related to resource management and traditional practices.

4.2. Contribution of IK on Enhancing Heritage Conservation and Tourism Development

Historically, the EOTC has safeguarded Ethiopia's heritage since the 4th century, with monasteries and churches serving as major cultural and tourism assets (Nekatibeb, 2018). Tourism development supports socio-cultural progress, rural empowerment, and national integration, particularly when it enhances Indigenous cultural agency (Hutchinson, Movono & Scheyvens, 2021). The officers from the culture and tourism office affirmed that,

The use of Indigenous practices has strengthened cultural preservation and supported cultural tourism. Tourists visit to learn about and experience the unique local culture, and incorporating Indigenous Knowledge into tourism activities is essential for transmitting heritage to future generations. (Participant 19).

The EOTC safeguards Ethiopia's history, culture, and religious heritage, reflecting deep-rooted Christian traditions and innovations (Tsegaye, 2020). It plays a central role in fostering social relationships, collective life, and community solidarity. IK supports local livelihoods through handicrafts, guesthouses, and guiding tourists (Hosseinnia & Shoja, 2017) and attracts cultural tourism (Nkwanyana, 2016). The EOTC contributes significantly to Ethiopia's economy, accounting for 80 % of tourism potential

(Nekatibeb, 2018). The District Culture and Tourism Officer confirmed that,

IK has contributed to local income through guiding and selling handcrafted and local products. It has fostered positive relationships between the community and tourists, enhancing interactions and supporting the local economy. Visitors appreciate local traditions, and the income helps maintain museum buildings, church schools, and monasteries (Participant 34).

4.3. Challenges to IK sharing in heritage conservation and Tourism Development

Cultural tourism aims to conserve and interpret heritage, provide authentic experiences, and generate revenue sustainably (Timothy, 2017). Its development involves managing heritage, benefiting local communities economically and socially, and respecting Indigenous peoples and their culture (Kaul et al., 2025). However, IK faces threats from modernization, globalization, and knowledge-sharing barriers, limiting its role in heritage conservation and tourism (Mosissa et al., 2017). To emphasize this idea, KIs noted that,

Development processes, migration, population changes, famine, epidemics, war, and modern technology contribute to the loss of IK. Influencing factors include age, education, gender, social status, profession, daily experiences, and access to resources. (Participant 31).

5. Conclusion and Recommendation

5.1. Conclusion

Although interest in the role of Indigenous Knowledge in heritage conservation and tourism development is growing, empirical evidence from the study area remains limited. To address this gap, the study examined IK practices in conserving cultural heritage and supporting tourism in the historic churches of the South Wollo Zone using qualitative methods, including 16 KI interviews, 3 FGDs (18 participants), and field observations. The study focused on assessing IK practices, their contribution to cultural heritage conservation and tourism development, and the challenges to IK sharing in heritage conservation. Monastic communities possess diverse IK for conserving cultural heritage and supporting tourism development. This knowledge is reflected in indigenous monastic practices such as ancestor worship, handicraft production, traditional church school, and spiritual healing. IK is primarily transmitted through families, relatives, neighbors, personal experience, observation, demonstration, artisan groups, village leaders, and religious authorities. The absence of proper IK documentation, limited trust, individualism, and a poor culture of knowledge sharing are major constraints to effective heritage conservation and tourism development in local communities.

5.2. Recommendations

Based on the findings, the study suggested the following key recommendations:

Adopt IEK as a core approach to the conservation of historic churches and their cultural heritage. Protection of church buildings and sacred treasures should respect their religious meaning and the spiritual values they hold for local communities. As highlighted in this study, the annual religious festivals of EOTC play a crucial role in passing IK to younger generations through practical engagement rather than solely oral traditions. Therefore, these festivals should be promoted as key heritage tourism events in each monastery, supporting both cultural continuity and tourism development. In addition, conservation

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efforts should actively collaborate with Indigenous elders and knowledge holders to document IEK, oral histories, and spiritual relationships with the land and historic churches in culturally appropriate and accessible formats for future generations.

Effective tourism development requires strong collaboration and synergy between the tourism and craft-producer sectors. As arts and crafts play a vital role in heritage conservation and tourism, the government should establish art villages, upgrade artisans' work sites, and improve infrastructure to enhance production and visitor experience. In parallel, the EOTC should promote local products and traditional industries by integrating appropriate modern technologies while conserving the distinctive characteristics and heritage identity of local handicrafts.

The historic churches, with their worship practices, spiritual healing, paintings, manuscripts, sacred objects, and hymns, are major tourist attractions. To sustain this Indigenous heritage, the Culture and Tourism offices should implement cross-cultural education initiatives, such as workshops and seminars, highlighting the collaboration between monastic history and Indigenous traditions. This would foster understanding and mutual respect between monastic and non-monastic communities.

Methodologically, to enhance the validity and reliability of the study, the current study has used only qualitative data collection methods. Therefore, this study recommends that a mixed-methods approach should be employed to triangulate both qualitative and quantitative data. Surveys can be used to gather the broader community's perceptions of tourism and conservation, while qualitative methods, such as interviews and focus groups, can provide deeper insights into indigenous practices.

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