

**Leveraging Spiritual intelligence in the development of
Sustainability mindset: An African Nuance**

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Biography – Doyin is a lecturer in management at the University of Sunderland in London. Her research focuses on entrepreneurial intersections. She is also a keen methodologist and has published work on the use and benefits of diary studies in entrepreneurship research. As an educator, Doyin is practice-leaning and seeks to enrich pedagogy with practice.

ABSTRACT:

Ecological protectionism is a must, and a mindset change may be the ingredient that stimulates positive change that achieves this. As scholarship into what facilitates the development of this mindset grows, it becomes pertinent to understand the role of indigenous practices and how this nuances the intelligence that effects change. Examining five indigenous African groups from Ghana (West), Tanzania (East), Camerron (Central), Morocco (North) and Zimbabwe (South), this chapter sheds light on how African communities utilise indigenous knowledge systems as a facilitator of spiritual intelligence. It is apparent that while beliefs and taboos proactively protect sacred areas from exploitation; rituals seek to enforce the reverence accorded to ancestral spirit and non-human species (including animals and plants). Combined, these two result in an African-nuanced spiritual intelligence that produces environmental gains. Although a non-western approach to combatting ecological challenges, these indigenous practices have proved credible and deserve recognition as a nuanced form of African spiritual intelligence.

KEYWORDS:

1. Sustainability mindset
2. Ecological protectionism
3. Spiritual intelligence
4. Indigenous knowledge systems
5. Africa
6. Sacred groves

INTRODUCTION

Effecting change in the rapid decline of earthly ecosystems and worldly forms has necessitated collective action in the form of policy, debates and incorporation of sustainability in business practices (Chabay 2015; Moyer, Sinclair, and Quinn 2016; Sorooshian 2024). However, there is a consensus that little has changed and a different approach which engenders action from within might be the panacea for change (Ivanova and Rimanoczy 2021; Tague 2022). To this end, scholars argue that a mindset change, referred to as the development of a sustainability mindset might be more effective in actions that directly impact the environment and restore ecological balance. Prominent in this discourse, Isabel Rimanoczy theorises twelve principles, encased in four content areas, to be cognisant of when defining this sustainability mindset (Rimanoczy 2020). In addition to ecological world view and a systems perspective, she earmarks two areas of intelligence – spiritual and emotional. Intelligence is defined as “a set of abilities used to solve problems and create products that are valuable within a cultural setting or community” (Gardner, 1983, p27), and is a growing body of research (Amram 2022; H. E. Gardner 2000) which is increasingly apparent in phenomenon requiring behavioural change.

Sustainability is a global phenomenon, and therefore makes the spiritual intelligence content area, defined as “thoughts that people have about being connected to a higher order, and the consequences of this connection on one’s life and behavior, such as the need to find purpose, make a contribution, or commit to actions for the greater good of our society” (Rimanoczy, 2017, p. 26), interesting. This is because what constitutes spiritual intelligence differs significantly across the globe and necessitates critical frameworks theorising it to be culturally aware (Barron and Chou 2017; Butler-Barnes and Martin 2023; Skrzypińska 2021). For instance, while western practitioners may focus on the interconnectedness of human as the core of spiritual intelligence (Baykal 2024; Zohar and Marshall 2004), a global south perspective appears to conceptualise this as interconnectedness with earth forms, steeped in traditions and religious practices (Oyewunmi, Esho, and Oyewunmi 2021; Smith 2021). Whether or not the perceptions and definitions influence the outplay of spiritual intelligence, and its impact on sustainability mindset remains an unknown in academic literature. While scholarship that nexus sustainability and traditional practices theorise ‘indigenous knowledge systems’ (Masoga and Shokane 2019; Reniko, Mogomotsi, and Mogomotsi 2018; Risiro, Tshuma, and Basikiti 2013), there is little said about how these impact on mindset or become a driver for change.

This chapter therefore seeks to proffer understanding of the outplay of spiritual intelligence in the African context, the role it plays in the sustainability discourse and how this can be harnessed to proactively impact mindset. The study utilised a comparative analysis of published cases showcasing regional practices in the five demographic divisions of Africa i.e. North, East, West, South and Central Africa. This recognition of the diversity of African traditions make original contributions from the emerging themes. Of the three prominent themes from the study findings i.e. ‘beliefs’, ‘rituals’ and ‘environmental gains’, rituals appear to be the overlap that nexuses mindset change and environmental gains in sustainability.

This study makes original contribution to scholarship on Indigenous Knowledge systems (Masoga and Shokane 2019; Reniko, Mogomotsi, and Mogomotsi 2018; Risiro, Tshuma, and Basikiti 2013; Sheridan 2009), highlighting it as a facilitator of spiritual intelligence in the African context. It also makes original contribution to the sustainability mindset discourse (Rimanoczy 2020), especially in the content area of spiritual intelligence, showcasing how this is nuanced by context. As governments and organisational bodies work to promote sustainable

practices through policy, this study offers suggestions that could accelerate this in the global south.

The rest of the chapter progresses from a brief literature review to an analysis of cases from which these conclusions are drawn.

LITERATURE REVIEW

The Sustainability Mindset Principles as proposed by Isabel Rimanoczy

In her book on how to engage a new generation of business leaders in sustainable thinking, Isabel Rimanoczy argues on the importance of a sustainability mindset in achieving positive impact in the sustainability discourse (Rimanoczy 2020). Critiquing the current approaches and their inability to result in noticeable action, she suggests that a mindset shift could better achieve the goal of an outward change. Furthermore, she advocates for a move from rational appraisal of the climate change issue to one which incorporates individual social action. To this end, she defines twelve principles, encompassed in four content areas, namely: (1)ecological world view (2)systems perspective, (3)emotional intelligence and (4)spiritual intelligence as an alternative way of facilitating individual action, mindset shift and consequently, impact. Although, the complexity of mindset means that the impact that it can facilitate won't be fully grasped through these principles, it offers a pragmatic operationalising that accelerates a transformation from within (Ivanova and Rimanoczy 2021)

The first content area, 'Ecological Worldview', encompasses the principles of Ecoliteracy and My contribution. It defines the cognitive and emotional aspects of how an individual is connected to and makes meaning in the environment. It also earmarks individual action as crucial. In other words, it suggests that it is as important to empower individuals to act as it is to create corporate strategy in a bid for change/action.

The second, 'Systems Perspective', is made up of four principles – Long term thinking, Both+and thinking, Flow in cycles and Interconnectedness. It conceptualises the ecosystem as a system and looks at how feedback and integration is a given in the processes of nature. As with the previous content area, principles in this area also place a substantial burden of action on the individual, suggesting the move from idea dominance and fragmentation to collaborative thinking that drives social awareness and commensurate action.

Principles 7 – 9 comprise the third content area, 'Emotional Intelligence' and include creative innovation, reflection and self-awareness. Emotional intelligence is the ability to consider the feelings of others as a guide for behaviour, and expression of personal feelings. This principle proffers a measured attitude as the yardstick for engaging with others, and one which is informed by reflection and self-awareness. Additionally, it encourages creative solution to challenges in a manner that is not destructive, but rather complimentary to positively impacting initiatives.

Finally, the last content area is Spiritual intelligence, defined as "thoughts that people have about being connected to a higher order, the consequences of this connection on one's life and behavior, such as the need to find purpose, make a contribution, or commit to actions for the greater good of our society" (Rimanoczy 2017). It explores purpose, mindfulness and oneness with nature. Spirituality, at times used interchangeably with spiritual intelligence (Baykal 2024) was found to be an altruistic driver for business leaders who were keen to do good. However,

beyond the desire to do good, this content area also delves into the awareness of humans being part of the ecology and solidarity with nature as being positively impacting on actions taken.

While the postulation of these areas appears noble and with the ability to effect meaningful change, it is the interpretation of these principles that demand a keen examination, since the discourse on climate action is a global concern. Considering Rimanoczy's work is aimed at educating both business leaders and students existing in diverse contexts, this paper focuses on the Spiritual Intelligence content area. This is necessary because the idea of spirituality evokes different sentiments amongst people i.e. the perception in the western world significantly differs from the perception of the global south (Oyewunmi, Esho, and Oyewunmi 2021).

Spiritual Intelligence in African Contexts

Africans and African communities conceptualise "Spiritual intelligence" as a construct which is rooted in their rich cultural, religious and spiritual traditions (Oyewunmi, Esho, and Oyewunmi 2021; Smith 2021). In this sense, spirituality and spiritual traditions coexist with the economy and materialism, and is intertwined with death, life and health (Mashabela 2024). Even though spiritual intelligence broadly encapsulates the capacity to connect with one's inner self to realise purpose, meaning and ethical integrity (Rimanoczy and Llamazares 2021; Skrzypińska 2021), the African communities go beyond spiritual intelligence as a mere psychological construct. Rather, spiritual intelligence seem to be intertwined with indigenous knowledge systems, community living, religious beliefs and liturgy (Mashabela 2024; Oyewunmi, Esho, and Oyewunmi 2021). Atimes this liturgy has been known to include rituals and ceremonies that celebrate communality and draw on divination as a means of navigating life's challenges (Masoga and Shokane 2019). This disparity in the conceptualisation of spiritual intelligence by diverse contexts thus raises the question of how someone steeped in the African context understands and relates to this terminology. The response is necessitated by spiritual intelligence being a crucial content area of the sustainability mindset principles described above, and a panacea to stimulating action, regardless of context.

Interestingly, recent scholarship also relay how the outplay of spiritual intelligence in the African continent has increasingly been linked to concepts like Ubuntu (Le Grange 2012; Quan-Baffour, Romm, and McIntyre-Mills 2019; Terblanché-Greeff 2019). Ubuntu, a philosophy which reflects spiritual intelligence through the belief that "I am because you are" (Battle 2009) emphasises compassion, empathy and communal responsibility. Therefore, when such a philosophy (like Ubuntu) is considered viz-a-viz a parallel of interconnectedness fostering responsibility, it brings forward intersections between environmental consciousness and other inward-driven behaviour. Consequently, spiritual intelligence in African contexts appear to adapt to new forms of expression while retaining core principles of connectivity to the divine, to self and to the community (Museka and Madondo 2012; Oyewunmi, Esho, and Oyewunmi 2021).

The Convergence of the Sustainability Mindset and African Spiritual Intelligence

Sulphey (2022) suggests that sustaining sustainability is becoming a mainstream discourse amongst academics and social scientists and argues that spirituality should be considered as a fourth dimension to sustainability. Other scholars suggest that it is the interconnectedness and purpose-driven qualities encapsulated in the definition of 'spiritual intelligence' which are able

to cause a mindset shift that can move the needle on the status quo (Afsar, Badir, and Kiani 2016; Alshebami et al. 2023; Rimanoczy 2020).

Mària SJ and Sroufe (2022) progress this discussion by arguing that there is a need to build on the foundations of sustainability and individual responsibility through incorporating a spiritual dimension to business practices. This integration, especially in the strategic planning process, could support the goals of long-term sustainability (Barron and Chou 2017; Rezapouraghdam, Alipour, and Darvishmotevali 2018). It could also be a contributor to individual well-being which translates to a productivity that stems from an inward perspective rather than materialistic extrinsic motivations (Akhtar et al. 2018; Kjell 2011). Further reified by (Csutora and Zsóka 2014) in their empirical study, intrinsically motivated and values-driven living - key components of purposeful living and spiritual intelligence - correlate with reduced levels of ecological footprint and ecological impact (Rimanoczy and Llamazares 2021). Mària SJ and Sroufe (2022) opined the integration of the ecological, social and spiritual divides as a necessity because addressing one without the other has little to no effect on changing the status quo. It thus seems a consensus that philosophies that proffer a living out from within are incidental to impactful climate discourses.

Relating this to the African context, where traditional religions is a core foundation for understanding spiritual intelligence, Taringa (2006) argues that the ecological attitude of African traditional religions emanates from a combination of their respect for ancestral spirits and nature itself. Designated sections of forests, referred to as sacred groves are revered and treated with respect in honour of ancestors (Aniah and Yelfaanibe 2016; Dossah 2021; Nganso, Kyerematen, and Obeng-Ofori 2012). Ancestors are revered as the foundations of what we enjoy in today's world, therefore daily living and choices are tapered to this consciousness (Mabvurira, Muchinako, and Smit 2021; Museka and Madondo 2012; Quan-Baffour, Romm, and McIntyre-Mills 2019).

Furthermore, a tenet of spiritual intelligence is a strong sense of moral responsibility, which is critical in the development of a sustainability mindset (Ivanova and Rimanoczy 2021) and which African spiritual traditions emphasise as a staple towards humans, animals, plants and the earth as a whole. For instance, overharvesting and wasting natural resources are taboos in certain African societies, who believe that doing such can have grave repercussions on the community (Marumo 2016; Sinthumule 2023; Thondhlana and Shackleton 2015). Consequently, there appears to be an ethical framework that nexuses African societies and sustainability, and which inadvertently supports sustainability by promoting actions that protect the environment for future generations as those before us protected it for us. These indigenous knowledge systems, assumed to preserve what is perceived as important to the ancestors and their habitation, therefore culminate in a sustainability mindset (Alexander and Okorie 2024; Botchway and Sarkodie Agyemang 2012; Masoga and Shokane 2019; Reniko, Mogomotsi, and Mogomotsi 2018). Thus, the belief in the interconnectedness of all life forms is a strong ethical imperative to act sustainably.

UNDERSTANDING AFRICAN SUSTAINABILITY: A COMPARATIVE ANALYSIS

To understand the outplay of sustainability mindset in lieu of spiritual intelligence in the African context, a comparative case analysis method was used. Published cases of five African regions (North, East, West, South and Central) were obtained from academic peer reviewed articles. Covering these five regions gives a good view of practices within Africa since the

continent is usually subdivided into these five regions when classified. Choosing specific cases was also justified by the niche insight which this study sought to illuminate (Small 2009). Furthermore, Flyvbjerg (2006) argues that the advantage of cases is the depth of information they reveal, and that even though they lack breadth typical of large samples, they are indispensable in research that are of paradigmatic importance. The following subsections briefly summarise these cases.

Case 1: The Zaka District of Masvingo in Zimbabwe (Risiro, Tshuma, and Basikiti 2013)

Zaka district is located in south-eastern Zimbabwe in southern Africa. Its indigenes practice a mixture of Christianity and the African traditional religion and are mostly subsistence farmers. Although designated as a semi-arid region, Zaka is surrounded by rivers which provide irrigation, and the challenges of land degradation, deforestation and water scarcity, typical of a semi-arid region, are mitigated by taboos. These taboos are enforced in the community by clans tasked to preserve sacred areas because the sacred areas are largely believed to house ancestral spirits and violating them could cause drought, illness and calamities. Specifically, the Joto and Matsai clans perform traditional ceremonies like *mukwerere* (rainmaking) and *mutoro* (harvesting) to ensure the conservation of natural resources. For example, tree cutting and other exploitative activities in sacred places like Bvuma Mountain, Chikona Hills and Runinga forests are prohibited.

Premature and excessive exploitation of resources are kept in check through religious practices like *mutoro*, which restrict when certain wild fruits (e.g. wild loquats called *mazhanje*) can be harvested, or edible insects (called *harurwa*) collected. Similarly, wells designated as sacred are protected by taboos, thereby maintaining the water quality and ensuring continuous supply. The taboos include the insistence on using traditional gourds instead of metal or sooty utensils to draw water from the wells. These traditional methods of conservation which promote environmental sustainability are intertwined with spiritual and cultural beliefs and it is impossible for one to exist without the other. The suggestion, therefore, is that the indigenous knowledge subsystems steeped in religious practice, inadvertently result in practices that are environmentally friendly and constitute a measure of spiritual intelligence that influence mindset and commensurate action.

Case 2: The Sekyere District in Ghana (Botchway and Sarkodie Agyemang 2012)

Located in the Eastern part of the Ashanti Region in Ghana, West Africa, the Sekyere district is nearly all tropical forest. The Sekyere people are predominantly engaged in Agriculture and rely heavily on their environment for sustenance. This necessitates environmental management, expressed through indigenous beliefs as a means of connectedness to the natural world and divine. Sacred groves, rivers and natural elements, protected through religious practices, become central to both spiritual and communal life and prevent environmental exploitation and degradation. The Sekyeres hold an indigenous worldview that links spirituality with the environment and believe that a harmonious relationship with nature undergirds environmental sustainability.

From a very young age, community members are taught to respect the sacredness of the environment, and rituals such as sacrifices are performed to appease the gods and ancestors, in exchange for good harvest and favourable weather. The belief in the ancestral spirits who

inhabit Sekyere protected areas plays a crucial role in environmental conservation. For example, taboos exist that forbid activities like tree felling, fishing in sacred rivers and this inadvertently helps maintain biodiversity and protect water sources. Additionally spiritual practices such as leaving land fallow for rejuvenation and controlled hunting helps avoid overexploitation and consequently regulate natural resources.

Unfortunately, the new generation of Sekyeres find these indigenous practices outdated and the increasing growth of western religion poses challenges to the continuation of these traditional practices, and hence conservation. However, despite these challenges, the spiritual connection between the Sekyere people and their environment continues to be a vital part of their environmental management practices and cultural identity.

Case 3: Sacred Groves of the North Pare region, Tanzania (Sheridan 2009)

The North Pare region is a mountainous range in the northeastern part of Tanzania in East Africa. The landscape is shaped by centuries of farming and a significant proportion of the original forest cover has been lost. Interestingly, over 900 small forest land (Mwihomeke et al. 1998), known as *mpungi* (small shrines) and *mshitu* (larger forests), designated as sacred groves are protected by elders and traditional methods. Spiritual practices are integrated with environmental management and reveal a complex yet dynamic nature of the groves.

While different clans have used ownership and responsibility of the sacred groves to exert control and legitimacy over the land and resources, the Wasuya and the Wasangi clans are known to control most of the groves and use it as a means of achieving political and ecological advantage. In recent years, more attention has been paid to the groves as local communities and conservationists recognise the environmental benefits they offer. This includes deforestation, water conservation and protecting biodiversity.

Case 4: Ba'Aka Pigmies in Cameroon and Central Africa (Eyong 2007)

The Ba'Aka Pigmies are an indigenous forest-dwelling tribe in Central Africa, primarily located in Cameroon. Their concentration in tropical rainforests with rich ecosystems encourage their dependence on these forests for food, shelter and cultural resources. Unsurprisingly, a large population of Ba'Akas are hunter-gatherers and utilise their locally gained ecological knowledge to survive and thrive in the forests.

Ba'Aka Pigmies engage in spiritual practices that reinforce an ethos of coexistence with nature and which fosters conservation. Hunting is done selectively, species are prevented from over-exploitation and certain species are linked to spirits, revered as scared and completely off-limits. Furthermore, their farming practice employ rotations and land fallowing, and is done in small scale for consumption, not commercialisation. Consequently, through a rich tradition of oral transfer, tacit knowledge is passed from one generation to the other, ensuring reverence for life and life forms and resulting in an intricate outplay of survival skills and practices.

As with numerous other African tribes, Ba'Akas practice animism and attribute spiritual significance to animals, plants, rivers and other elements, designating areas as sacred. Specific animals also serve as totems and are treated with reverence, necessitating the imposition of hunting taboos and restrictions on what can be hunted. Interestingly, the Ba'Akas demonstrate strong knowledge of medicinal plants and interweave this with spiritual practices and rituals before harvesting and using these. These imposed restrictions and reverence for nature and

existing ecosystems are in themselves indigenous knowledge systems which result in sustainable gains for the environment.

Case 5: Berber Mesioui in High Atlas Marrakesh, Morocco (Domínguez 2017)

The Mesioui tribe occupies areas in the High Atlas Mountains, which stretch across Morocco in the South of Marrakesh. This stretch is characterised by rugged terrain, deep valleys, dramatic peaks, all of which has historically shaped the Mesioui lifestyle, including their architecture, agriculture and transportation methods. The region's Mediterranean to Alpine climate, with instances of snow at higher altitudes in winter, impacts on agricultural practices and choice of crops grown. As a people, the Mesioui are part of the larger Amazigh (Berber) tribe of North Africa and follow a semi-tribal social structure emphasizing kinship and collective decision-making. For instance, a council of elders, *jmaas*, regulate collective labour, festivals, daily social life and religious practices. Furthermore, Berber cosmology often views humans as custodians of the earth, tasked with maintaining harmony between the natural and spiritual realms.

This case is unique because “in Morocco, detailed approaches to the interaction between modernity and traditional communally and ritually regulated systems of natural resource management are surprisingly rare” (pg 228). This is probably because Morocco, like other North African countries are Muslim countries by constitution and predominantly adhere to traditions that are permissible in Islam. Notwithstanding, this case showcases traditional and indigenous practices of ecological conservation through the use of Adgal systems.

Adgal, which refers to a protected area enables cultural and ecological protection of pastures, forests and water resources by restricting access to these areas for certain periods. Traditionally, the Berber Mesioui held the religious belief that the local *sufi* saint, *Sidi Boujmaa* and his descendants (*Zawiya*) were custodians of the natural resource and therefore regulate when these areas can be used. This restriction allowed for optimisation of natural resource production in an egalitarian way.

SUSTAINABILITY AND THE NUANCES OF AFRICAN SPIRITUAL INTELLIGENCE

To extract the core meaning from the cases, they were read numerous times and coded thematically, as shown in Table 1. Analysis revealed that spiritual intelligence was expressed through ‘beliefs’ and ‘rituals’; and sustainable practices resulted from ‘rituals’ and ‘environmental gains’. Consequently, ‘rituals - a religious or solemn ceremony consisting of a series of actions performed according to a prescribed order - appeared to be the intersection of spiritual intelligence and sustainability practices. These rituals embodied practices and actions, which have spanned decades, and which demonstrate interconnectedness with nature that translate to sustainable environmental impact.

TABLE 1 HERE

Furthermore, central to the interpretation of beliefs and the ensuing rituals was a clear indigenous knowledge system (IKS) as shown in Figure 1. IKS is a knowledge system which has existed and dictated how indigenous people live over a long period and which is passed from one generation to the other (Botchway and Sarkodie Agyemang 2012; Eyong 2007). While IKS appear to be eroded with enlightenment and western religious practices (Alexander and Okorie 2024; Mwihomeke et al. 1998; Sheridan 2009), the cases show how embers of practice of IKS translate to a form of spiritual intelligence. The subsections below shed light on these themes as components of IKS.

FIG 1 HERE

Beliefs

Mashabela (2024) opined that African beliefs coexist with economy and materialism, intertwining life and death. In other words, the structures put in place to generate resources and improve livelihood emanate from rich spiritual traditions. In the examined cases, ancestral spirits are deemed to exert more power in death, directing the course of the indigenes and determining if their action result in misfortunes or blessing. This reverence, which could also be viewed as deep-set respect, therefore translate to values that demand consideration and inward reflection before actions are executed. The core of spiritual intelligence in the sustainable discourse, as theorised by Rimanoczy and Llamazares (2021) is introspection which culminates in purposeful and mindful living, and appears to intersect with the value-laden belief systems in these cases.

Furthermore, there is strong belief that relationship with other actors in the earth ecosystem must be mutually benefitting – if the earth is treated well, the earth yields well. Again, this reiterates consideration in behaviour and a transference of principles that are already accepted to result in harmonious living with other humans. These belief systems therefore extend human norms to the entire ecosystems in the understanding that plants, animals and other life forms are as vital as humans. Even though, some of the beliefs e.g. the habitation of plants and animals by spirit entities, appear extreme, they seem to guide actions and create outcomes of intelligence that is useful to preservation and conservationism.

Thus, beliefs which at first appear to have undertones of religiosity, have underlying principles of mutuality, interconnectedness, respect and values which can be harnessed and used in secular settings and society as a whole.

Rituals

The decision to code as *rituals*, instead of merely referring to the activities emanating from beliefs as *practices* owes to the influence these practices have on the indigenes and the liturgical way they are carried out. Unconsidered human behaviour seem to be put in check by a forbearance to certain actions, including restrictive access to landforms and sites as well as an injunction to exercise restraint in revered situations (Aniah and Yelfaanibe 2016; Museka and Madondo 2012; Taringa 2006). While these constraint mechanisms are embedded in the belief systems set up by these indigenous groups, human psychology of the threat to life and existence also plays a major role in the adherence to these rules. Furthermore, rituals are put in place to

realign the offender and proactively protect those who adhere to the belief systems (Domínguez 2017; Mabvurira, Muchinako, and Smit 2021; Taringa 2006).

As these rituals are examined, e.g. preservation of powerless animals (Risiro, Tshuma, and Basikiti 2013) or reverential protection of the earth (Botchway and Sarkodie Agyemang 2012), we draw links directly to sustainable practices which are encouraged in today's world through eco-literacy and otherwise (Alshebami et al. 2023; Rimanoczy 2017). Thus, practices which seem logical and scientific e.g. preferential use of gourds to draw water from wells instead of metals (Botchway and Sarkodie Agyemang 2012; Risiro, Tshuma, and Basikiti 2013) suggest that perhaps these rituals emanate from a knowledge base of concrete experiences which result in acceptable ways of doing (Kolb 1984). Furthermore, rituals are steeped in the desire of humans to connect with transcendence a being(s) that is perceived of higher powers. Again, this reifies the core of spiritual intelligence as a demonstration of interconnectedness with the earth and earth forms (Mashabela 2024; Quan-Baffour, Romm, and McIntyre-Mills 2019; Rimanoczy and Llamazares 2021).

Environmental Gains

At the core of sustainability initiatives is the desire to create environmental gains (Mària SJ and Sroufe 2022; Rimanoczy 2020). These were evident in the cases analysed for this study – adherence to rituals, emanating from indigenous beliefs resulted in environmental preservation. Large ecological spaces were preserved, animal species prevented from extinction through revering them as totems and reverence for the earth and environment passed down through generations. While the reasons for the enforcement of restrictions were shrouded with spiritual inference, the gains to the environment remain notable and significant. Thus, the outplay of IKS translated to an intelligence which culminated in sustainable actions.

Sheridan (2009) argues that IKS is at the core of decision-making in agriculture, environmental management and food education. In other words, while indigenous people may consider it a means of protecting sacred places and revering ancestral spirits, it translates to a philosophy of conservation expressed in traditional ways.

CONCLUSION

Spiritual intelligence describes a set of abilities used to solve problems within a cultural setting, with a consciousness of connectivity to a higher order or life form. This spiritual intelligence is a crucial component of the mindset expected to positively respond to the depletion of environment while embracing sustainable practices. However, though crucial, there is little said about the contextual nature of spiritual intelligence and if the nuance of culture influences how spiritual intelligence is expressed and its impact on the resulting practices.

This chapter sheds light on this, analysing the practices within five African regions in North, West, East, South and Central Africa. It concludes that the beliefs and rituals which result from indigenous knowledge systems culminate in practices that preserve the environment and achieve the aims of sustainable practices. Though at times appearing mysterious, the rituals which express indigenous belief systems deter violators and unconsciously become a means of policing the natural ecosystem.

Interestingly, the study found that though effective, the advent of western culture and its adoption by youth and non-traditionalist appear to threaten the combination of factors that

result in the African-nuanced spiritual intelligence. It therefore becomes pertinent for policy makers to explore how these effective practices can be incorporated into school curricula and made mainstream within African communities. While agreed that some of these practices are outdated and do not directly serve the goal of sustainability, a demonstration of interest and closer examination of these practices can be harnessed for ecological gains.

As Botchway and Sarkodie Agyemang (2012) argue, ecological protection is a cross-cultural issue which necessitate going beyond western mindset and ideologies and returning to indigenous means which achieved ecological protectionism in the past and has potential for same in the future. This study affirms this stance and concludes that a nuanced approach should be adopted in the expression of spiritual intelligence.

Application of findings to policy and practice

(Eyong 2007) likens the efforts to support the earths' ecology to a boat, where a leakage in one area impacts on the entire boat, and not just the affected area. As such, it is essential for strategies set out to address ecological concerns to convene a table that is representative of everyone that could ensure success or be a point of failure. In other words, no party should be allowed to 'leak' so that we ensure that the boat is preserved. Solutions therefore need to be both intergenerational and multicultural, inferring that western strategies must embrace other nuances, including African strategies for environmental gains as discussed in this chapter.

Rather than ignore practices that have worked for many generations, institutions like the United Nations should set out plans to codify indigenous knowledge and apply relatable ones in other contexts. While misappropriation of trust in past collaborations might make this difficult, it is necessary to rebuild this trust as a first step and prevent this tacit knowledge from being eroded.

Lastly, African IKS have spanned centuries and underpin tight bonds with the environment as a panacea for irreverence, misuse and waste. Reaffirming this mindset could therefore be beneficial to other contexts and the benefits enjoyed.

Limitations and Future Research

This research is not without limitations which provide avenue for future research into the subject. For instance, the use of secondary data prevents the collection of data specific to the research question and richer insights into how indigenous practices can be practically incorporated into today's society. Knowledge in this field would therefore benefit from primary data collection and first-hand accounts which could further seek to understand tribal indigenous practices, especially for tribes which span multiple countries. This will negate the likelihood of findings being biased because of country infrastructure and further reinforce the expression of IKS.

Also, with regards to tribal differences, although Africa is often segmented into the five regions represented in the cases, it is a continent of numerous tribes. A quick online search suggests there are over three thousand tribes¹, which are further subdivided into smaller entities. Thus, the question of adequate representation may arise, querying the use of only five tribes in this study. In response, I reiterate the aim of this study, which rather than seek generalisation, sets out to proffer idiosyncratic understanding which relay patterns and suggests further

¹ <https://whileinafrica.com/meet-the-tribes-in-africa/>

examination. While African tribes differ in their conduct of daily living, it is interesting that the culture of beliefs which conjure to spiritual rituals with environmental gains are consistent. However, future studies could consider larger samples and surveys which operationalise these findings and test their efficacy in promoting sustainable practices that translate to environmental gains across more indigenous tribes.

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TABLES AND FIGURES

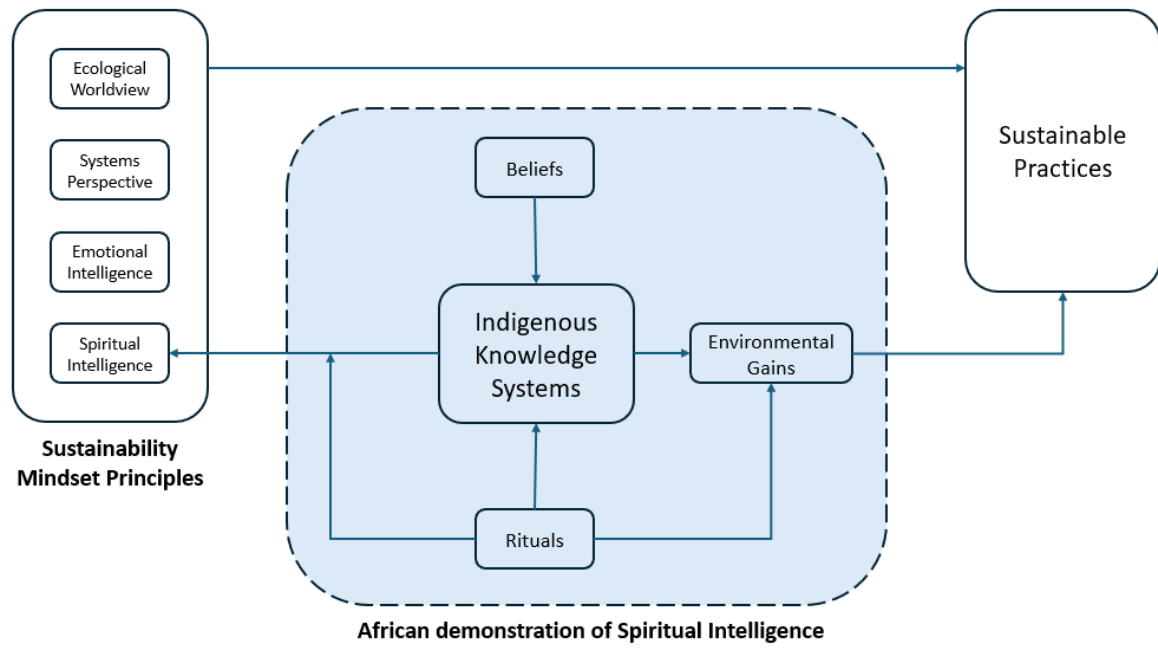


Figure 1: Conceptual Framework depicting African-nuanced Spiritual intelligence

Table 1: Comparison of cases with representative quotes

	Beliefs	Rituals	Environmental Gains
Zaka district, Zimbabwe	<i>“The fear for the unknown was good enough for one not to tamper with sacred forests and other animal species. Tampering with sacred forests, taboos and totems had penalty to the offender such as illness, death, drought and disappearance”</i> (pg. 2) <i>“hills had caves where the Matsai ancestors were buried. This emphasised the sacredness of the area leading to the conservation of flora and fauna in the Chikona hills”</i> (pg. 5) <i>“It is believed that the wells have got njuzu (mermaids) such that if offended by using unaccepted utensils to collect water, the mermaids will make the water muddy or... worse still the offender may be drowned or disappear into the waters”.</i> (pg. 6)	Taboos, totems and designation of sacred places are used to preserve the environment. Clans have totems that they are prohibited from killing or eating (pg. 3) Values and respect “powerless creatures” such as pythons and pangolins (pg. 3) Preservation of water sources through adherence to taboos Responsibility of preserving and carrying out traditional practices and ceremonies designated to Joto and Matsai clans (pg. 4)	<i>“The rain making ceremony is essential as it brings rains... The vegetation becomes dense and green as well”</i> (pg. 5) <i>“These myths and beliefs help maintain sacredness of these places thereby keeping the water unpolluted and conserved”</i> (pg. 6)
Sekyere district, Ghana	<i>“have a variety of beliefs encompassing transcendent reality... veneration of ancestors; ... animism and totemic beliefs bases around a sacred identification with and animal, plant or natural phenomenon”</i> (pg. 67-68) <i>“believe that all natural things are either domiciled by a deity and/or have their own inherent spirits... nature shares its in-built spirit... with humankind”</i> (pg. 69) <i>“priority is given to the spiritual aspect because it is prior in the order of existence and function”</i> (pg. 69) <i>“a Sekyere is a being-in-relation not only with the Creator and fellow humans but also in relationship with all of creation”</i> (pg. 70)	Taboos protecting water bodies (pg. 71) Treatment of earth as a mother-figure and according it the relevant reverence through adherence to taboos. (pg. 70) Tree planting as a foundation of towns and protection of these trees by taboos (pg. 71) Respect for humans, especially elders and nature through a symbiotic relationship (pg. 75-78) Reciprocity and the value of care towards others and nature (pg. 78)	<i>“Asante spiritual traditions determined Sekyere’s worldview...the nature of the relationship that should exist between humans and the physical environment in order to make life liveable”</i> (pg. 66)

North Pare Region, Tanzania	<i>“Each mpungi contains the skulls of a particular lineage’s ancestors, and there the living ask the dead for their blessings ... Young men are initiated into manhood in the mshitu forests, which are more powerful than the mpungi shrines - as well as far fewer in number - because they represent the ancestors of a ruling clan rather than an isolated lineage.” (pg.79)</i>	<i>“By establishing a special council of elders to supervise the content and practice of initiation, the chiefs of Ugweni directly controlled the means for youths to marry, bear children, achieve respect, and eventually have their skulls installed in the clan or lineage shrine” (Pg. 83)</i> <i>"the old men went into the mshitu, and as soon as they came out it would begin to drizzle" (pg. 84)</i>	<i>“The people of North Pare are quite aware of the many ecosystem services that their mpungi and mshitu provide, and often point out the groves' ecological functions when discussing soil and water conservation projects” (pg. 83)</i>
Ba’Aka Pygmies, Cameroon and Central Africa	<i>The existence of restricted areas or sacred forests makes certain sections of rivers and streams to be declared sacred (pg 129)</i> <i>Ill-health is in most instances associated with non-respect of a taboo, causing ancestors to be angry and to punish the victim by inflicting some mystical pain or ailment. (pg 129)</i> <i>Most tabooed animals are totems and when owners of these totems die, the animal in the forest dies. (pg 129)</i>	<i>In the rainy season, hunting with guns is restricted and only minimal trapping is carried out. These attitudes are seen to be positive for the animal population since there is limited disturbance in the forest over a period of about six months (pg 129)</i> <i>Important and expensive rituals are performed to mark an important event and only members of the respective sacred societies are allowed access to such parts of the forest. (pg 129)</i> <i>Respect of food taboos is a cultural ritual that binds members and is crucial for the smooth functioning of society. Ill-health is in most instances associated with</i> <i>Serious cleansing ceremonies are often performed to heal the sick. I[made unwell by violating food taboos]</i>	<i>the intention is for household subsistence, farm sizes are generally small, varying from 1 to over 5 hectares and in some cases social surplus is generated. (pg 127)</i> <i>Generally, farm sizes are small (on average, less than one hectare per household) because the people cultivate to meet their domestic needs and not for sale. This implies that only a very small social surplus may be generated (pg 129)</i> <i>These taboos coupled with the fact that hunting is a risky venture are good for conservation. (pg 130)</i>
Berber Mesioui Tribe, High Atlas, Morocco	<i>Religious practices and beliefs regarding different sufi saints, their descendants, their tombs, as well as genies, wizards, clairvoyants, and others of the sort, are common trade among all types of people, including many with high levels of education (pg 237)</i> <i>The systems of Mesioui sufi saints remains particularly alive and diverse... the spirits of the 360 sufi saints constantly patrol the territory jointly and punish those who do not</i>	Agro-sylvo-pastoralism [through very structured social levels including jmaas] is central to the economy of these populations (pg 231) <i>Herding access to collective pastures is forbidden from approximately the 28th of March...depending on each year’s rainfall (pg 232)</i> <i>The descendants of Sidi Boujmaa announced the lifting of the adgal prohibition every year until the 1960s (pg 237)</i>	<i>The main reason motivating the adgal herding prohibition in the Yagur, which is imposed by the tribal assembly of users and which protects pastures from overgrazing (pg. 230)</i> <i>Yagur adgal-managed pastures also contribute to farmers’ agricultural enrichment through recycling of nitrates...(pg 234)</i>

	<i>demonstrate appropriate use of and respect towards the adgal</i> (pg 237) <i>Sidi Boujmaa was given “the key of the Yagur” by other sufi saints</i>	<i>... saints presence are most ofien represented by small mausoleums ... ofien hosting the tomb of the faction’s main sufi saint”</i> (pg 238)	
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