



African indigenous cultural ontology and environmental conservation and management in some Kenyan communities

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Abstract

African Indigenous Cultural Ontology (AICO) provides standards for some of the neglected aspects in the environmental conservation and management, particularly in today's technological society. In the global level, this ontology has not been fully explored and appreciated. The claim of this chapter is that a fundamental feature of African contribution to environmental conservation lies in her rich ecological culture, which enables bio-systems to relate with their habitats. Under such ecological culture, indigenous Africans aim at living in a relationship of mutual responsibility with the natural environment. Any attempt to discredit the contribution of such indigenous cultural ontology to environmental management equally undermines the African involvement in the same process. This claim is supported by the holistic lifestyle of some selected Kenyan indigenous communities (Iteso, Kikuyu, Luyha, Kamba and Luo) that exhibit a similar regard of mutual relationship with the natural environment. The claim is discussed under the following objectives: to examine African Cultural Worldviews as a basis for African Environmental Ontology; to assess the contribution of African Indigenous Cultural Ontology to Environmental Conservation and Management; to give an account of African measures employed in regulating the use of the natural environment for its Conservation and Sustainability. The discussion is informed by the Cultural Sustainability Theory, which relates environmental conservation to enforcement of indigenous cultural practices. The discussion further employs the phenomenological method of cultural ontology, which provides insights into the place of indigenous culture in environmental conservation and management. The discussion advocates for a cultural ontological turn in regard to the natural environment; a turn which underlines the notable place of indigenous cultural metaphysics in environmental conservation.

Keywords: African indigenous cultural ontology; environmental conservation; cultural worldviews; symbolism of vegetation; water; land

Introduction

In the modern scientific and technologically determined society, the destructive exploitation of the natural environment is carried out in a massive and unconstrained manner (Ichuloi, 2018) ^[18]. It is motivated by the postmodern materialistically en-framed metaphysics and technical rationality, where what the traditional African person calls relational nature myths has shifted into a repertoire of exploitative practices. Such a rationality that does not view the world from the internal, cultural and religious frame of evidence or relationships, but rather it looks at it externally; as something detached from humans and standing-in-reserve for exploitation with exclusive benefits to them. The post-moderns are using the planet's resources faster than what the planet itself can replace for self-regulation, thereby generating extraordinary set of problems that greatly affect the entire ecosystem including humans themselves. The postmodern metaphysics and technical rationality entails a misguided change in focus, such that there is an alteration from nature oriented to person oriented approach that determine human-nature relation; nature memories, generative life forces, etc., are eroded by this scientific and technological reconstructions of the relation between humans and the natural environment. The instrumental regard denies the natural environment its own ontological significance, thus putting humans against their world, while undermining traditional and cultural practices that embrace a holistic regard to it.

The external human-environment relation in a way justifies the failures of the various attempts by organizations (the Green Belt Movement, United Nations Environmental program and World Commission on Environment to preserve and rehabilitate the environment, the Kyoto Protocol) to attain the intended goals of conserving the natural environment. In the attempt to find adequate solutions to environmental problems, a report by UNESCO (2001) ^[46], which forms the basis for this reflection, recommended the need for research into specific cultures with resourceful environmental regard. Cultural approaches entail bottom-up and top-down stances, incorporating local knowledge systems into the scientific attempts to sustain the environment (Gaillard, 2012) ^[16].

The chapter, therefore, argues that African Indigenous Cultural Ontology (AICO) of some selected communities (Luo, Teso, Luyha, Kikuyu and Kamba) in Kenya is a key mechanism to environmental conservation and management since it involves communities' local knowledge systems and lived-experiences with the natural environment; it aims at living in a relationship of mutual obligation with the natural environment. The argument is anchored under the following major areas: African cultural worldviews; cultural ontology and environmental conservation; cultural measures that regulate the use of the natural environment.

African cultural worldviews as a basis for environmental conservation in Kenya

In the attempt to engage African worldviews in the conservation of the natural environment, it is important to note that there are many different people and diverse cultures in Africa, each having its own perceptions and regard of the natural world in relation to humans. Despite the diversity, African worldviews have similarities. They are collective and practical ways of experiencing the world, and assessing the place of humans in the world. Worldviews take into account people's attitudes, values, insights, religious beliefs and practices that determine their regard and perception of the natural world. They aim at living in a relationship of mutual responsibility with the natural world as discussed under two fundamental cross-cultural features: religious undertones and man's place in the natural world.

a. Religious Undertones

The five cultures indicate that their worldviews have a religious character that informs their relation to the natural environment. The Kikuyu community, for instance, specify that the world is created by God and he is the sustainer, provider, nourisher and protector of it. This was explicitly explained by one Gikuyu elder who affirmed that "Ngai ni Mumbi", which means God is the Moulder or Creator of all things in the state of affairs, each with its specific ontological significance. This affirmation was reiterated by another elder from Kamba ethnic group who said that the Akamba people refer to God as Mumbi (Creator or maker) and Mwathani (the greatest Ruler) who manages His whole creation. To re-emphasize this, another Gikuyu elder narrated the following creation myth:

From the start, Ngai (God) the creator of the world, called Gikuyu the forefather of the Kikuyu people. Ngai was generous and gave Gikuyu land with rivers, valleys, big forests with sweet fruits and beings of all kinds. Ngai moved to live on Mount Kirinyaga, but every day he moves to inspect and protect his beautiful creation. This religious regard of the world is in agreement with Bujo (1998)^[11] who wrote:

God penetrates all his creatures with his presence. Therefore we must not treat any of his creatures (any elephant, plant or animal) recklessly but deal with them in a sensitive manner, with empathy and reverence. Whoever commits a fault against a creature, commits a fault against God, the Creator himself.

The texts emphasize that God has an internal relationship with the things in the state of affairs to the height that entities are the manifestation of his being; he is encountered through them. It is a relationship where the world (mountains, rocks, valleys, trees, etc.) is conceived of as God's dwelling place, thereby giving it a sacred connotation and interpretation, such that no other power, be it human or divine is to interfere with it; humans have no right to abuse, spoil, destroy or squander the product of God's creative activity. This gives a theological, spiritual and mystical determination of the world, to the point that there exists a very thin line of demarcation between the religious and the physical world in the African ontology (Mtetwa, 1996)^[33]. Under such relation to the world, communities come up with codes of conduct and ethics that guide their relationship and the use of natural resources (Shastri, *et al.*, 2002)^[41]. It is unfortunate that, today, the technical rationality embedded in modern science and technology challenges this deep-rootedness of religion in the conservation of the natural environment; it creates a dichotomy

between physical world and the religio-spiritual dimension of human nature.

b. Man's place in the natural world

Another important aspect of African cosmology considered in the sampled communities, which communicates their high regard to the natural world is that of man's place in the natural world. On this, a Kikuyu participant narrated:

When God was walking around, one day he took Gikuyu on the top of Mount Kirinyaga (Mount Kenya) and showed him a place in the centre where there were many big mikuyu (fig trees), which is believed to be the origin of the name Gikuyu (fig tree).

From the text, a Kikuyu person is a Mugikuyu – the person of the fig tree or of the natural environment. This implies that to be a human person in Kikuyu culture means or is to be determined by the manner in which the entire community relates with the fig trees as part of their being in the natural environment. The same regard is exemplified by the Akamba community that defines a person as *Mundu*; that is, according to his relation to nature and to others, such that one co-exists meaningfully with other people and with the natural environment. This is echoed by one informant from the Iteso cultural community who narrated that:

In my community, the relationship between people and the natural environment is so strong. This is represented in the manner we name the new born. When a child is born, a name is given as per the season. If it is during rainy season, then, we give the name *Okiru*; if it is in the forest, the child is named *Okitwi*, etc. This reminds the named child the relevance of the season in which his/her was born and thereby commit the child to better it; the person's relation to nature is determined by the name given to that person.

The fundamental point is that for both the Kikuyu and the Iteso communities, in their cultural rationality and belief systems, people are not isolated from the rest of creation or from the natural environment. Humanity is only part of the natural world and derives its meaning in relation with it. It is a philosophy of nature-human relationship or relational experience, which is different from that of Western rational influence or rationality of "I think, therefore I am"; it is a philosophy of "I participate, therefore I am" (McGann, 2002)^[32], where human beings and the cosmos complement each other to an extent that none can exist without the other (Bujo, 1998)^[11]. This African cosmology disregards the exploitative approaches within the postmodern technical rationality that has turned humans against their own world. This is reiterated by Steyne (1990)^[44], who succinctly explains:

The world interacts with itself. The sky, the spirits, the earth, the physical world, the living and the deceased all act, interact and react in consort. One works on the other and one part can't exist nor be explained without the other. The universe, the spirit world and man are all part of the same fabric. Each needs the other to activate it.

Humans feel one and at home with their world and their world mystically reciprocates them; they do not differentiate or draw distinctions between their relationship with the physical, material or the spiritual world, rather all is interwoven together as a whole in the entire spectrum of human-environmental meaning. In such fusion, a meaningful human life is achieved through a respectful relationship with the environment since it is part of human life and experience. This promotes conservation

values and practices that do not come from external regard and law enforcement, but rather from both internal, spiritual and cultural lived-practices that nurture the desire to have a meaningful integral life for both humans and the natural environment (Omara, 2006)^[37].

The greatest mishap of today's African postmodern societies, which tends to threaten community cultural environmental consciousness is the growing tendency to create a dichotomy between, God, humans and their environment, thereby adversely reconstituting the indigenous taxonomy of cultural environmental dialectic. Western worldviews that influence the African cultural mind-set promote the incursion of the environment by modern science and technology, thereby putting humans against the natural environment considered as part and parcel of their being; it tends to erode the cultural creative dynamics that are subjectively nature-based. It is a philosophy that sees reality in terms of a conflicting dichotomy between a subjective reality from the perspective of humans and an objective reality that is perceived to be independent of humans. Under such, the objective reality exists independent of religious beliefs, the human subject and consequently different from human experiential conceptions of it. Vernon Dixon (1976) succinctly articulated this difference as follows:

In the Euro-American world view, there is a separation between the self and the non-self (phenomenal world). Through this process of separation, the phenomenal world becomes an externalized object that is not affecting one's feelings and reflections. By this, I mean the totality of phenomena conceived as constituting the non-self, the antithesis of self-consciousness. In such regard, the phenomenal world becomes an entity considered as totally independent of the self.

The postmodern regard influenced by the Western objectifying worldview tends to detach the self from his experiential world, while AICO as explained reconstructs this mishap by considering the relationship between humans and environment as a regenerative ontological life cycle. Traditional African communities represented (Luo, Iteso, Luyha, Kikuyu and Kamba) in their wisdom interpret the world in theological, spiritual and anthropological terms rather than merely in scientific footings. Therefore, any attempt to divorce humans from the natural environment is to demean the integrative wholeness of reality, including humans themselves. It is this cultural consciousness that enable them to continue developing culturally determined environmental conservation practices that are related to their cultural lifestyle (environmental experience, economic needs and religious beliefs, etc.).

Cultural ontology and environmental conservation and management

The concept of "cultural ontology" is a philosophical concept that in the context of this reflection explains the *being* and *function* of culture in relation to environmental conservation and management; a direct metaphysic of interrelatedness of culture with environment, where all forms of community life are informed by environmental consciousness. In the African context, this ontology lies in the people's rich cultural heritage, which embed all forms of life that encourage interactions with the natural environment (Shastri, C. *et al*, 2002)^[41]. Any attempt to degrade human interactions with the natural environment implies a shift, which not only disrupts its physical interpretation, but also

tends to root out the traditional knowledge systems like instructive stories, myths and meanings that enrich the regard to the natural environment. This interactive ontology underlines practices that explain indigenous knowledge systems that are environmentally conscious: sacredness of the environment, vegetation, land and water sources.

a. The Sacredness of the Environment

In the preceding section, it was observed that nature has profound religious undertones as a creation of God; however, the reverence of nature alluded to in this subsection is not because it is created by God, but fundamentally because of its ontological sacredness and significance. Nature is seen as the abode of the spirits, deities, et cetera, manifested through the perseveration of sacred groves (forest lands, water catchment areas – hills and mountains, rivers, etc.) as exemplified by the sampled communities. The sacred groves are areas set aside as sacred sites for religious and cultural purposes such as burial grounds, abodes for traditional deities, etc. The setting aside of such places shows deep environmental reverence for their ontological sacredness. The Iteso indigenous community, for instance, designated such areas as burial sites, places for ceremonies, oathing, appeasing of evil spirits, cleansing of members infected by diseases considered contagious or members believed to have committed serious crimes such as murder and adultery. They are considered as places inhabited by clan gods and spirits, where cosmic energies or forces converge to enable communication with ancestors (Bhagwat, *et al.*, 2011; Rutte, 2011)^[8]; they are constructed places for learning and practicing of spirituality, sage philosophy and traditional medicinal science, which reflect the technologies and arts of the indigenous people. Many such sites are an expression of a naturally animated world encompassing their onto-cultural value. In regard to burials, one Iteso community participant said:

Once the dead has been exhumed and all the remains removed from the grave, he/she is transferred to some special and sacred sites, usually under *ekaireret* (a wild fig tree), where such remains were stored. Nobody is allowed to interfere with such a place or site.

Another participant from the same ethnic and indigenous group affirmed that

Such natural sites were places where elderly people used to offer spiritual sacrifices. Another tree of significance for the Iteso community is the tree locally known as *Ebule*. This tree was accorded spiritual relevance, such that the community members used to worship under its shade; it could never be tampered with since it was considered sacred. Sacred reverence to such trees enable their population to increase in the area.

What is claimed by the Iteso community in the texts are reciprocated by the Kikuyu community, which regard trees, shrubs, grass and forests as a manifestation of God's generosity in form of valuable gifts to humans. To this, one Kikuyu participant said:

The Kikuyu community respected big foresting trees especially mugumo (fig tree) as a place to meet God, where sacrifices and offerings were performed, particularly under the mugumo tree that is revered and considered to be sacred.

In the texts above, for the Iteso community, the trees *ebule* and *ekaireret*, and the Kikuyu the *mugumo* tree, both communities speak of them as 'trees of life', since they are regarded to be the

source from which all forms of community life emanate; they are strictly protected for their onto-sacred nature and functions for wellbeing of the community. This is also observed by the Shona people of Zimbabwe who consider it morally and religiously wrong to cut *Kirkia acuminata* trees, since such trees are considered to be imbued with spirits, particularly ancestral spirits (Stannard, 1981). Under such trees, the community gathered for worship and offering of sacrifices. Therefore, the onto-sacred nature of such trees in traditional African communities encourage their conservation, which consequently contributes to the wellbeing of other ecosystems that depend on them for their existence.

Apart from trees and forests, another sacred grove is that of mountains and hills. On this, the Nyala and Samia clans of the Luyha community consider the Wanga and Odiado mountains and hills to be outstanding with sacred meanings. To this, one Luhya elder affirmed that:

The hills for the Nyala and Samia is a symbol of Were's presence and blessings for the community. No one, particularly those considered to be evil people were allowed to visit such hills.

The Luhya regard to the hills is similar to that of the indigenous Kikuyu community, which makes its prayers facing Mount Kenya, conceived to be the chief of their other sacred mountains. It is a place of spiritual growth and encounter with the deities (Kenyatta, 1978)^[21]. The implication is that, for the Luhya and the Kikuyu communities, both mountains and hills have a spiritual connotation, people worship while facing these outstanding hills and mountains. This is further exemplified by one Akamba informant who noted that: "The Akamba community consider mountains and hills as abode of the spirits, particularly at night."

Unlike modern scientific regard of Western influence, which conceives of mountains and hills as standing-in-reserve resources for manipulation as exemplified through mining of cement and other related activities for economic purposes, the implied communities preserve particular natural sites not for anything else, but fundamentally for their sacred nature and natural ontological significance; people are not allowed to cut trees or interfere with them. They are protected from any internal or external incursion, thereby encouraging natural growth of vegetation that leads to growth of dense forests, which consequently become habitats for a variety of bio-diversity in the natural environment.

b. Symbolism of Vegetation

It has been claimed that some plants and tree species are conserved for their ontological significance. In this subsection this discussion is about the onto-symbolism of vegetation; that is, the out-reaching functions of vegetation to community: provision of spaces for social gatherings, medicinal value, purification ceremonies and rituals in relation to environmental conservation. This ontology of vegetation is the driving force for mythical trees to appear in a number of some African folk stories, etiquettes, beliefs and language. For instance, the study established that various Kikuyu proverbs demonstrate critical roles that trees and forests play. On this, one informant said: *Ngoro ni mutitu mutumanu*". This literally means: "The human heart is a very thick forest". Another respondent said: "*Mutitu uri ngoro ndunagwo ngu igathira*", which literally means: "A forest that has a heart is never depleted or destroyed as we fetch firewood".

These two proverbs imply that forests are given the vitality of the human heart and sentiment; they are equated to and treated as humans in the community. In other words, humanity cannot function without the forest as a principle source of life that the community depends upon.

The Luhya community, for instance, conserve Kakamega forest (Omare, 2006)^[37] for purification purposes. They use some special grass (manyasi) extracted from the forest for purification and cleansing purposes. Some places in the forest are called Kiungu or Kitasioni (places for offering sacrifices). In describing the Kamba community regard to the natural environment, Kyomo (2001)^[23] explains:

The forest is our skin and if one removes the skin of a human being, the result is death.' Death is at the door. We do witness the shortage of rain because the climate is affected by the destruction of the environment. People are no longer bound to our traditional African worldview. Modernisation is dominant to the extent that the culture of profit and money is made to have priority over humanisation. Money as a thing is above the worth of a human being. In such a situation, life is threatened by death.

The natural forests picture in the language and practices of the community, serving as a constant reminder to those who fetch firewood from them to do it sparingly since its destruction implies the destruction of the entire community.

Another onto-function of trees and other symbolic plants in most African communities is that of medicine and healing for both humans and animals. For indigenous communities, trees, leaves, roots and grasses provide herbal medicines. The Iteso community, for instance, attach medicinal value to specific trees like the Oak tree locally known as (*Eyolokome*) whose leaves are believed to be a mosquito repellent. It is regarded as effective and non-poisoners, not poisoners to humans and the rest of bio-diversity. This in their prescientific knowledge system should be preserved from extinction. Unlike chemically manufactured mosquito sprays that are poisoners and pose a threat to human health, such a plant is seen to promote all forms of life in the bio-diversity. The people are prohibited from cutting the implied tree. The Iteso community further attach onto-mystical powers to other indigenous trees such as *Elirat* (*Melia Volkensii*), *Eswaat* (*Markhamia lutea*) and *Ekodoi* (*Kigalia tree*). Besides being medicinal in nature, they are also associated with good luck and wealth. Because of this, they are found in nearly all homesteads and are never easily interfered with. The community, also believes that the *Kigalia Africana* tree locally known as *Edodoi* is an effective cure for mumps, whereby the patient only needs to visit it very early in the morning (earlier than anybody else) and go rubbing the infected chicks around the plant several times (Ayaa, 2016). Such a tree is never carelessly felled, and if that has to be done, then some sacrifice has to be performed. They hold that medicinal plants after harvesting should be treated, particularly on the harvested part through practices such as the application of cow dung so as to accelerate the callus formation as well as the re-growth of the cambium layer of the affected tree. Furthermore, the uncontrolled harvesting of young plants for medicinal use is strongly prohibited through strict rules that only allowed the harvesting of mature plants as it will be explained in the subsequent section. Similarly, the digging of only secondary roots rather than the main (tap) root of the medicinal plants is encouraged so as to protect these plants from any form of damage that will lead to their extinction (Ibid). On this, one elderly

Akamba informant alluded that some medicinal trees (muteta) are preserved in the kiumo (shrine) where nobody is allowed to cut them, neither to collect firewood from them. Because of their value, he noted that:

It is only myself as an elder that is allowed to collect firewood from the shrine. When I was born, I found these trees the way they were. As an elder, I have the responsibility of making sure that the shrine and medicinal trees are preserved for enhancement of human life.

Another Akamba informant informed that

The medicinal plants were not harvested by uprooting the whole plant, but by removing a small fraction of the roots, bark or leaves so as to let a plant survive for further use in the community.

This is also echoed by the Iteso community who use lantana camara shrub in fencing their homesteads. The reason for the use of this shrub was affirmed by one elder who narrated that:

We use lantana camara shrub because it has several functions: with its thorns it makes a good fence, which keep wild animals away; its wild seeds serve as food by the children. Its roots, apart from holding the soil together, they are medicine for stomach upsets. The dropping leaves fertilize the soil. The rough leaves are also used for washing utensils, since they are found to be a disinfectant with a pleasant smell.

The natural lantana camara fence for the implied community has multiple purposes with explicit environmental conservation implications. This knowledge system of the Iteso community is supported by Gitau (2000)^[17] who noted that:

Animals and plant waste are good sources of organic fertilizer which tends to promote organic farming. The use of nitrogen fixing pulses in mixed cropping, growing of plants of different patterns, maturity and duration assisted significantly in stabilizing soil fertility and prevention of soil erosion. In addition, the practice was an effective way, biologically, of managing pests and diseases. It also conserved biodiversity of animal and biannual crops and plants while reducing labour costs.

Traditional knowledge system in environmental conservation greatly contributes to the understanding of the relationships between plants (vegetation) and humans, thereby becoming irreplaceable strategy for conserving, planning and managing the natural environment (Ayong, 2007)^[7]. Today, we use chemically produced fertilizers that have negative effects on the soil by weakening the natural minerals and killing natural insects that make the soil rich for agriculture. We consume genetically modified fruits and foodstuffs and use chemicals for washing households. Above all, we undermine African natural medicine and resort to modern medicine found to have serious side effects, with dangers of over-dose and under-dose. Cultural practices and knowledge systems have environmental sensitivity, help to preserve the trees, vegetation and ecology in general. Members of respective communities are obliged to harvest such vegetation and plants with care and consideration.

It is also a common cultural practice for African traditional societies to use leaves of particular trees or plants as dishing plates or to serve food. For instance, the Iteso indigenous people use banana leaves for this purpose. One informant said:

It is not that that we cannot afford to buy modern utensils, especially plates, rather because the plant leaves are believed to be clean, preserve the natural taste of food and above all are friendly to the natural environment. Once they are used they are

disposed, where they can rot and preserve the fertility of the soil. Further, the Iteso community use branches of palm trees to make *Ibukitoo* (baskets) as containers for shopping, and *Imukegai* (sleeping and resting mats), etc., which apart from the domestic use, also serve their economy as they could trade with them (baskets). But, the most fundamental point is that the industry of both baskets and mats fabrics are friendly to the environment and the members of society were demanded to ensure that they conserve such plants by planting more. The traditional basket and mats industry does not pollute the natural environment. Unlike traditional industries, modern industries that make mattresses and all sorts of sponges while emitting poisoners gases onto the atmosphere. The traditional technology in the industry challenges modern technological society that manufactures and uses poisoners plastic bags and plates that have today proved to be detrimental to the natural environment and ecosystems as they cannot rot once used and disposed. Therefore, plant leaves and fibre play a fundamental role in the local processing industry in traditional societies (Umerie, *et al.*, 2004)^[45]; vegetation and trees play a vital role in the overall well-being of indigenous communities (Ogbuagu, 2011)^[36]. Under such ontological regard to the environmental, its conservation is paramount and efforts are made to ensure such consciousness is perpetuated such that environment is not fundamentally linked to modern manipulative and technical rationality with economic considerations, where the frame of environmental regard is intertwined with economic and monetary interests.

c. Land

In the African resource ontology, land is another fundamental resource that is regarded as a precious gift that nature accords to humans; indigenous communities have a strong connection with it as the basis of their livelihood; it is a life enabling resource upon which every aspect of peoples' life is built upon. On this, the struggle or fight for land and its preservation among various communities in Africa is not simply a struggle for economic goals, but more fundamentally for onto-social and moral significance. For indigenous communities, land is their indispensable *Other-self*, such that without it they are not complete as humans in the individual and social sphere of life (Ichuloi, 2018)^[18]. On this, one Kikuyu elder in the study said: Land is a sign of identity in the Kikuyu community. God gave it to the Kikuyu ancestor so that he may use it for his well-being and for the community's well-being. That is why the placenta is buried into the soil to connect the new born with God and ancestors. Nobody is allowed to play with land.

One Luyha participant reported that

After initiation into adulthood, every man is expected to have a piece of land given to him by his father for building a home, raising a family and growing crops to feed his family.

The Luyha people perceive and regard themselves as belonging and attached to their land, such that land inheres in the community to the height that it cannot be separated from the community. To this community, there was no commodification of land; land is not something that can be reduced to a commodity for economic purposes. Commodification of land, today, in a society that is materially determined has rendered economically poor communities landless as they sale it in the attempt to respond to their material needs (Durie, in Philips 1987, 78). The most

disgraceful thing is the technical and economic rationality which is crucial to the conservation of this natural resource, such that land is being perceived to exist for human manipulation. On this Ichuloi (2018) ^[18] argues that under such rationality, land has become a mental-picture such that all about it is perceived in the light of modern machination and exploitation, thereby making it lose its ontological significance. In such regard, land is dissolved and devoid of cultural reverence. Since land is strongly connected to life, then traditional African people had moral responsibility to take care of it. Land bound people together in one community. Its absence threatened to tear them apart. This is because for many Africans, land is communal property. Land belongs to the community and no one can trade with it.

Land also has onto-religious significance in that it is used for religious purposes. This is asserted by all the participants in the selected communities, who said that:

All our communities use soil in swearing rituals; oaths are administered by the practice of people licking some soil and swearing to bind the terms of the oaths. Soil is used well and never abused.

Therefore, the better use of land as a resource is not only seen from the economic prism but more fundamentally from all spheres of community life.

d. Water

Besides land, many African ethnic groups, particularly the selected communities in this reflection regard water as a symbol of life; the symbolism of water appears in most of their rituals of blessings, marriages, healing and purification. Since water occupies a central place in peoples' lives, sources like streams, rivers, lakes, et cetera, are regarded as repositories of cosmic forces, which should be conserved. One Kikuyu respondent informed that *mai ni muoyo* or "water is life". Also one Luhya informant echoed that:

The Luhya community (Bukusu in particular) take initiates to be circumcised very early in the morning to the river or stream, where they are washed and the spirits of the ancestors appeased. They are holy places for ritual purposes.

The ritual purposes of water, for the Luhya community, makes them preserve rivers and streams; they are believed to be dwelling places of cleansing spirits and ancestors for the integral life of the community. This regard informs the location and the planning of agricultural activities where almost all communities are situated not less than a kilometre away from streams, rivers, wells, and lakes; no agricultural activities around or near these water sources. It is their cultural believe that human activities anger the spirits living in water bodies, who may bring calamities to the defaulters (Acheampong, 2010). Any interference with water sources implied interference with the well-being of the indigenous people themselves, including their livestock and all biodiversity; the well-being of the environment is intrinsically connected to the life of humans. The thinking behind this is largely ecological (Ogbuagu, 2011) ^[36]. The reason to this is to reduce or avoid water pollution. Referring to the Kikuyu people, Gitau (2000) ^[17], notes:

Both river and stream water was regarded with a lot of respect. Proverbs and taboos were formulated to ensure that water was not contaminated by any form of pollution.... Water places (Mariuko) were always left open to all. Any traveller could not be denied drinking water.

Indigenous cultural ontology embeds and expresses the existential philosophy and environmental science of indigenous peoples. The cultural repute to water sources challenges the modern monetary rationality that has led to unregulated artificialization of natural sources of water for commercial purposes, thereby reconstituting their ontological reverence. Despite the intrusion of technical rationality on the management of the natural environment, AICO has strong elements of environmental conservation techniques that can be adopted for effective conservation of the natural resources and the protection of the environment.

Cultural Measures for Natural Environmental Conservation and Sustainability

In the global levels, there are conservations measures proposed by organizations like Green Belt Movement, United Nations Environmental program, World Commission on Environment. The Kyoto Protocol contains a series of measures aimed at reducing greenhouse gas emissions, known as mitigation, most notably the Clean Development Mechanism (CDM). Environmental conservation agreements and treaties are ever signed, environmental declarations and laws are enacted by different international organizations and environmental unions. All these measures are geared towards creating awareness and the care of the natural environment, but unfortunately with very little results. The inexplicable fact, which has been the basis for this chapter is that such environmental conservation efforts are made without any consideration to culturally motivated outlooks that underline the people's asymmetrical relationship with the natural environment; their environmentally conscious heritage, which embeds conservation measures (taboos, rituals, totems, etc.) is overlooked. For indigenous communities, such measures are designed to develop and nurture positive societal attitudes towards the natural environment (Auwah-Nyameke, 2014) ^[5]. Under the control of such measures, the destruction of the natural environment by any member of the community meets with an equal measure of disapproval from the same community (Ichuloi, 2018) ^[18].

a. Taboos

Taboos are cultural prohibitions which entail sanctions, either religious or magical; they influence people's comportment and guide their conduct towards the mismanagement of the natural environment and resources (Saj, *et al*, 2006) ^[40]. On this, an elderly participant from the Iteso community noted that:

It was an imperative to fetch firewood only from dead wood and from tree branches that could be reached from the ground and it is a taboo to cut young trees. Similarly, it is a taboo to cut the cactus and euphorbia trees because of their medicinal value.

In the same cultural group, there are also certain tree species that were never interfered with because of the mythical stories associated with them, such that if wood from such trees was used for cooking the resultant smoke would eventually lead to blindness and deafness; however, the idea is that they are trees which should not be destroyed due to other functions to community. For instance, the fig tree locally known as *Ebule* served the community as a sacred place for spiritual and ritual functions; the community does worship under it and therefore could not be tampered with. Likewise, the *Kigelia Africana* tree locally known as *Ekodoi* believed to be an effective cure for

mumps, whereby patients only needed to visit it very early in the morning, earlier than anybody else and rub the infected chicks around the plant several times. The implication is that for the Iteso community, taboos and other restrictive mythical stories are tools for the conservation of such indigenous trees and plants; thus members are prohibited from cutting them down carelessly. Similarly, a house constructed using such trees was believed to have the possibility of being invaded by evil spirits, thereby bringing curses to the occupants. To reiterate the conservation of trees, another Iteso informant noted that “it is a taboo to use a sharp knife to cut such symbolic trees, instead the use of a blunt knife is encouraged”. The reason to this is that it ensures no massive destruction of such trees. The Luyha community regard Kakamega forest as a home; something of a fundamental value to them as indicated by one informant who said that “one who destroys a home has no home”. This proverb is supported by other African proverbs such as: when there is something wrong in the forest, there is something wrong in society; a person who has planted a tree before he dies has not lived in vain.

The idea behind such proverbs is that the forest is the symbol of life and identity for the community and its destruction is equally the loss of community life and identity in its entirety. For the Kikuyu community, the fig (mugumo) tree symbolizes the life of the community (spirits, gods and power of the community); it is considered sacred, such that prayers and offerings are performed under it. Other community rituals (appeasing the gods, ancestors, sacrifices, swearing and oath-taking, including curses, etc.) are performed under the fig tree. It is, therefore, a taboo to cut or destroy a fig tree, not even to cut it for firewood (Kenyatta, 1978)^[21]. A participant from the same community emphasized that:

No one is allowed to cut a tree with any human made tool but only with the help of a blunt stone. No setting forests on fire. No reckless collection of firewood in the forest. It was strictly prohibited to hang beehives on trees inside the forest. One cannot fight or engage in other acts of violence within the forest. Sexual activities were not allowed in the sacred forest. Wood from sacred forest was never used for construction of houses.

This is not specific of the Kenyan communities, in other societies (Tonga of Zimbabwe) it is a taboo to use fruit trees for firewood (Mapira, 2013)^[27]. Myths, taboos, proverbs, idioms and riddles are used to create consciousness in the communities that those sources are to be preserved. Idioms are used to express various taboos related to environmental conservations. For instance, a member from the Akamba community informed that “rain is the saliva of God” and the same is echoed by a member from the Luo community who informed that “do not drain the river till it dries”. The Chagga people of Tanzania use the famous idiom that “utawaame mringeni, mama afo nyeshinda na mringa,” which literally means that people should not urinate into water because they might fall in danger of their mother being carried away by water. Destruction of the natural environment would lead to the plight of the community as described by the poet Langer (1976)^[24]:

Most people have no home that is a symbol of their childhood, not even a definite memory of one place to serve that purpose. Many no longer know the language that was once their mother-tongue. All old symbols are gone. The field of our unconscious symbolic orientation is suddenly ploughed up by the tremendous changes in the external world and in the social order.

People will no longer speak the language of nature with the natural world and will live unconsciously with it. Taboos and other symbols enshrined in the language of the indigenous communities ensure the conservation of forests, streams, rivers, lakes, land and other resources as the basis for their livelihoods; they are to be preserved by each member of the community.

b. Totems

A totem is a natural object, animal or plant regarded as a symbol by a given tribe or family for self-identity. The study found out that all sampled communities uphold totemism. Totems are symbolic animals, plants, reptiles, etc., that binds a person with the clan. Nobody is supposed to kill or cut a clan totem. The study found out that totems are the basis for the formulation of environmental laws; they create environmental legal systems that enhance the ethics of nature. For instance, a participant from the Iteso community said:

In the Igara clan nobody is allowed to kill a calf, for it is a symbol of identity for the clan. Whoever kills and steps on the blood of the calf will have rashes all over his/her body.

For the Iteso community, cows are regarded as a symbol of wealth, and interference with a calf is tantamount to interference with their cows and consequently to their wealth. Taking the calf as a totem enabled the population of cows to grow, thereby offering the community sufficient sources of livelihoods. To maintain this, the calf therefore is accorded supernatural powers and forces; it is respected, venerated, given awe and fear. This is also reflected by the totemic system of some Luhya clans, which hold the bushbuck (Imbongo) as their totem animal. On this a participant in the study said:

It is forbidden to eat the flesh from this animal, and it is believed if a person eats it, then, the whole body would swell.

Another Luyha participant said that

The palm tree (Olukhindu) is our totem plant. When one is suspected to have done something wrong against the community, he/she is made to swear and also oath under Olukhindu tree to prove his/her innocence. It is believed that if one lied, then the totem will bring him or her bad luck or even kill him. It is forbidden to cut Olukhindu tree.

Regarding insects, African indigenous knowledge systems takes into account their totemic meanings. For instance, among the Tachoni clans a bee symbolizes fertility, riches (the honey of life) and accomplishing the impossible. Destroying forests and flowers amounts to killing the progress of the clan which is an abomination that calls for sacrifices to appease the gods. The numerous trees in and around homes are not cut for firewood, but are left in their natural state because they are prescribed homes for bees. Members of such clans are expected to make their lives productive to realize their dreams (Kakai, 1992)^[19]. In the Iteso community, a bee is also associated to luck. One Iteso informant noted that:

A bee is a symbol of good luck. When a bee comes and makes noise around your ear, it brings a message of good luck, a visit of a friend or family member. It is a taboo to kill or chase it away as that could result to a withdrawal of luck that a bee brings to you and to your family.

The science behind this is insects play a fundamental role of pollinating plants which leads to thinks bushes and forests. This,

today is threatened by insatiable use of pesticides that have brought various diseases associated with them and loss of habitats for other ecosystems. Destroying forests and flowers, habitats for bees, is tantamount to the destruction of the importance bees play (Mandillah, 2018) ^[26].

For the Luo community, reptiles are totems, particularly the snake commonly known as Omieri. One Luo participant in the study narrated:

Omieri is our totem of unity and identity. It is associated with the spirit/god of the Luo community. It brings good luck and fortunes; its appearance brings rain and good harvest to the community. It is respected and taken care of (given food and drink) when it visits your home. It is never sent away or killed. To send it away or threaten it will bring misfortune or even death to your family. Bushes and trees within the homestead are not supposed to be destroyed since they are the habitat of Omieri. Since the reptile brings lack and fortunes to the community, surrounding bushes, forestlands are protected, thereby encouraging their growth, which contribute to environmental conservation.

In central Kenya, particularly the Kikuyu community, one informant noted

After circumcision ceremonies, young people were grouped in different age sets and age groups named after a plant or animal. Such age sets include *Njogu* – Elephant symbolized strength while *Ngari*-Leopard symbolized courage. Persons under the same totemic group enhanced conservation of biodiversity by protecting the object they were named after.

Totemic objects and materials vary significantly over tribes and clans (Eneji *et al.*, 2012; Awuah-Nyamekye, 2014) ^[14,5]. Totemic systems place a profound responsibility on each member to promote ecological ethic. It forms a basis for cultural environmental legal measures, which ensure that natural environmental resource utilization is conserved, such that some trees and places where trees are found were protected for the benefit and promotion of ecological biodiversity without disturbance. They embrace ideological, emotional, reverential and genealogical attachments members of society have with the natural environment or biodiversity (Eneji *et al.*, 2012) ^[14]. Consequently, the social control of the use of natural resources found at these sites makes sure that degradation, pollution or contamination of the natural environment is minimized or avoided.

c. Rituals

Environment-related rituals in most African ethnic groups form a practical base of internalizing and expressing values related to environmental conservation; they communicate peoples' religious environmental consciousness in their lived experiences. All the study communities were found to have cultural rituals performed by specialists that are known for their art and power to make, redirect or predict rainfall, usually during droughts. In this one Kamba informant had to say:

The Kamba people have their own way of offering sacrifices for rain. All involved in the ritual are required to assemble very early in the morning at the site of the ritual, which is usually by the hillside. It was a respected and revered site. The ritual was accompanied by the traditional dance known as *Kilumi*. The ritual begins with libations and prayers followed by beating of drums,

blowing of whistles, shaking of rattles, singing and intense vigorous dancing. The participants make a dance accompanied by the offering of sacrifices like pouring of blood of animals, milk, seeds, crops, beer or cooked food to appease the spirits *aimu*. This is because the community considered droughts as caused by ancestral curses for wrongdoing. Libation is meant to invoke the rainmaking ancestral spirits that attend the dance.

The drought compel community members to come together and make *Kilumi* dance to beseech the blessings of water spirits and deities. The dance is meant to impress the spirits of rain (Korster, 2011) ^[22]. The Kikuyu community performed their ritual prayers facing Mount Kenya directing them to Mogai (God) at the sacred mogumo tree, which should not be cut without performing a ritual. In both communities, it is believed that rain falls almost immediately after the ritual sacrifices. Such ritual places are transformed into locus of power and awe. Such a tree cannot be felled without performing a ritual to appease the gods, spirits or ancestors believed to reside in it (Agyarko, 2013) ^[32].

For the Luhya (Banyore clan), drought is attributed to disappointment of the Nganyi family believed to be the makers of rain and, therefore, made it not to rain. Ritual words and ceremonies can evoke experience of awe, mystery, wonder, and delight. In the rainmaking ritual, the invocation of the rain deities and spirits demands bodily purity and correct human behaviour for the consummation of the ritual (Matsuhira, 2013) ^[30].

The study found out that the Bukusu (branch of the Luhya community), water sources had important ritual function. One informant said:

During a circumcision ritual, initiates bath in a stream, river or swamp to wash away childhood. Special soil is then applied on the body before circumcision to symbolize entry into adulthood. Blood is poured into the soil as a symbol of unity with ancestors. Such water ritual sources are every protected for the value to society. The same community, the placenta is buried in the ground and upon death the body is also buried to fertile the soil to symbolise that life emanates from the soil which is fertile and continues to produce life. To this community, land is held with deep respect and reverence; it cannot be abused or exploited.

Such rituals are regarded as ideal custodians of natural resources (land, water sources, forests, and ecosystems); they are key measures that limit the misuse of the natural environment, thereby promoting sustainable conservation of the natural environment. Nobody is allowed to cultivate in the forest and around water sources or wash in or near a water source (Lssozi, 2012). Trees along rivers and streams are not cut and vegetation was kept to ensure that such sources are not disturbed. Prohibitions enabled to cut trees, enabled forests to grow into thick forest for other ecological species as their habitat and also enabled streams and rivers to ever have water.

Conclusion

The study has tried to give an AICO that resonates with environmental conservation and sustainability concerns. It has given a philosophy of cultural and environmental relationship within the frame of peoples' lived-experiences encompassing culture, cosmogony, cosmology, mythology, religion, and anthropology for a harmonious existence between humans and other ecosystems.

The study reiterated that the African worldview and beliefs encourage the sacredness of the universe and all entities in the

state of affairs, which provokes respect and reverence to nature as a fundamental aspect that enhances life. Mere promulgation of laws to enhance the beauty and ontology of the natural environment is not enough, it is paramount to get to people's cultural skills, practices and attitudes which acknowledge the natural order of the universe.

Therefore, disregard to cultural ontology in the environmental management, makes it much more difficult to imagine any other effective systems that comprehensively addresses or mitigates the problem of exploitation of the environment in Africa and all over the world in a manner that takes into account the people's way of life. Furthermore, development in any part of the globe, including the "technologically developed" societies cannot be realized outside of people's environmentally conscious culture, since the natural environment is the world in which they live and express their being; AICO as a key factor in environmental conservation and management; an active rather than a passive relationship with the natural environment.

References

1. Adu-Gyamfi Y. "Indigenous Beliefs and Practices in Ecosystem Conservation: Response of the Church". In *Scriptura*. 2011; 107:145-155.
2. Agyarko R. *God of Life: Rethinking the Akan Christian Concept of God in the Light of the Ecological Crisis* The Ecumenical Review, 2013.
3. Danquah JB. *Akan Doctrine of God: A Fragment of Gold Coast Ethnics and Religion*. UK: Routledge, 2014.
4. Appiah-Opoku S. "The role of traditional institutions in the conservation of forest resources in East Usambara, Tanzania" in *International Journal of Sustainable Development and World Ecology*. 2007; 10(2):101-107.
5. Awuah-Nyameke S. *Managing Environmental Crisis in Ghana: The Role of African Traditional Religion and Culture with Special Reference to Berekum Traditional Area*. Cambridge, 2014.
6. Ayaa DD, Waswa F. "Role of Indigenous Knowledge systems in the Conservation of the Bio-physical environment among the Teso Community in Busia County-Kenya", in the *African Journal of Environmental Science and Technology*. 2016; 10(12):467-475.
7. Ayong FM. 'Environmental awareness and management in Pre-Colonial Zimbabwe', *Journal of Geographic Research*. 2007; 2(1):98-111.
8. Bhagwat S, Ormsby AA, Rutte C. *The Role of Religion in Linking Conservation and Development: Challenges and Opportunities*. *Journal of Study Religion Nature Cult*. 2011; 5(1):39-60.
9. Branzei OI. "Corporate Environmentalism Across Cultures: A Comparative Field Study of Chinese and Japanese Executives", *International Journal of Cross-Cultural Management*. 2001; 1(3):287-312.
10. Brink P. *Nature and its Role in the Transition to a Green Economy*. London: Chatto Academic Publishers, 2012.
11. Bujo B. *The Ethical Dimension of Community: The African model and the dialogue between North and South*: Nairobi, Paulines Publications Africa, 1998.
12. Christensen N. *Environment and You*, 2nd Edition, Duke University, 2016.
13. Derkes F. "Rediscovery of Traditional Ecological Knowledge as Adaptive Management" in *Journal of Ecological Applications*. 2000; 10(5):1251-1262.
14. Eneji CV. "Ethical Basis of African Traditional Religion and Socio-cultural Practices in Natural Resources Conservation and Management", in *Cross River State, Nigeria*. 2012; 2(2):034-043.
15. Eneji. *Indigenous Beliefs and Environmental Stewardship: A Rural Ghana Experience*. *Journal of Cultural Geography*. 2012; 22:79-88.
16. Gaillard CJ. *From Knowledge to Action: Bridging Gaps in Disaster Risk Reduction*, in *Progress in Human Geography*. 2012; 37(1):93-114.
17. Gitau KS. *The Environmental Crisis: A Challenge for African Christianity*. Nairobi: Acton, 2000, 131.
18. Ichuloi A. "Phenomenology of Planet Earth Ontology: A stride towards Environmental Integrity and Conservation" in *International Journal of Humanities Social Sciences and Education (IJHSSE)*. 2018; 5(10):1-14.
19. Kakai PW. *Social Concepts in the Initiation Rituals of the Abatachoni: A Historical Study*. M. A. Thesis. Kenyatta University, 1992.
20. Kelbassa I. *Qualifizieren des Laserstrahl-Auftragschweißens von BLISKS aus Nickel- und Titanbasislegierungen*. Aachen, Hochsch, 2006.
21. Kenyatta J. *Facing Mount Kenya*. Nairobi: General printers Limited (Google Scholar), 1978.
22. Korster MM. "The Kilumi Rain Dance in Modern Kenya". *The Journal of Pan African Studies*. 2011; 4(6):171-193.
23. Kyomo A. "The Environmental Crisis as a Pastoral Challenge in Africa," in *Theology and Environmental Responsibility*, ed. J. N. K. Mugambi and Mika Vähäkangas, 57-63 (Nairobi: Acton, 2001, 60).
24. Langer KS. *Mind: An Essay on Human Feeling*, Vol. II, in the *Journal of Value Inquiry*. 1976; 10(1):292.
25. Lssozi A. 'Values and Participation: The role of Culture in Nature Preservation and Environmental Education among the Baganda', *The Journal of Sustainability Education*. 2012; 7(3):88-99.
26. Mandillah KL. "African Totems: Cultural Heritage for Sustainable Environmental Conservation. Masinde Muliro University of Science and Technology, Kakamega, Kenya, 2018.
27. Mpira J. 'Indigenous knowledge systems and their implication for sustainable development in Zimbabwe', *Journal of Sustainable Development in Africa*. 2013; 9(4):74-85.
28. Markussen A. *California's Arts and Cultural Ecology*, 2011.
29. Matsika C. *Traditional African Education: Its Significance to Current Education Practices with Special Reference to Zimbabwe*. Mambo Press, Gweru, 2012.
30. Matsuhira Y. *Rain Making Ceremony in the Nyandoro Region, Zimbabwe*. *Journal of African Religious Dynamics*. 2013; 1:165-182.
31. Mbiti J. *African Religions and Philosophy*. Nairobi: Heinemann, 1969
32. McGann J. "Think Tanks and US Foreign Policy: An Historical View", in *US Foreign Policy Agenda*. 2002; 7(3):9-12.

33. Mtetwa S. African Spirituality in the Context of Modernity. *Bulletin for Contextual Theology in Southern Africa and Africa*. 1996; 3/2:21-25.
34. Mutasa CA. "Brief History of Land in Zimbabwe: 180 – Today", in *Focus on Land in Africa*, 2015.
35. Nakamura K. Why Japanese Firms Choose to Certify: A Study of Managerial Responses to Environmental Issues", in *JEEM*. 2001; (42):23-52.
36. Ogbuagu BC. We Who Are Strangers: Insights into how Diasporic Nigerians Experience Bereavement. *Loss. Journal of African. Am. Studies*. 2011; 16(2):300-320.
37. Omare G. "Role of Isukha Religious Beliefs and Practices in the Conservation of Kakamega Forest". In *Religious Studies*. Maseno: Maseno University, 2006.
38. Risiro J. Indigenous Knowledge Systems and Environment Management. A Case Study of Zaka District, Mansvingo Province, Zimbabwe. *Int. J. Acad. Res. Prog. Educ. Dev. Vlm*, 2013, 2:1.
39. Rutte C. The Sacred Commons: Conflicts and Solutions of Resource Management in Sacred Natural Sites. *Biol. Conserv*. 2011; 144(10):2387-2394.
40. Saj TL. Traditional Taboos in Biological Conservation: The case of Colobus Vellerosus at the Boabeng-Fiema Monkey Sanctuary, Central Ghana, in *Journal of Social Science Information*. 2006; 45(2), 285–310.
41. Shastri C. Combining Belief and Utility in a Structured Connectionist Agenda Architecture", Paper Presented at *Proceedings of Cognitive Science*. Fairfax, VA, 2002.
42. Sobrevila C. *The Role of Indigenous Peoples in Biodiversity Conservation*: World Bank, Washington, 2008.
43. Stannard BL. "A Revision of *Kirkia*", in *Kew Bulletin*. 1981; (35):829-839.
44. Steyne PM. *Gods of Power: A Study of Beliefs and Practices of Animists*. Houston: Touch Publishers, 1990.
45. Umerie SC. "Stabilization of Palm Oils by Using *Ficus Exasperata* Leaves in Local Processing Methods", In *Bio-resource Technology*. 2004; 94(3):307-310.
46. UNESCO. *Universal Declaration on Cultural Diversity*, 2001.
47. United Nations. *Conference on Environment and Development (the Earth Summit)* in Rio de Janeiro, 1992.
48. Venon D. *Worldviews and Research*. In *African Philosophy: Assumptions and Paradigms for Research in Black Persons*, Los Angels, 1976.
49. Wangpa KP. *Fallow to Forest: Applying Indigenous and Scientific Knowledge of Sweden Cultivation to Tropical Forest Restoration*. In *Ecological Management*. 2000; (260):1399-1406.