

# **Ecosystems and African Ecological Sense of Biocentricism: An Eco-Theological Perspective**

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## **ABSTRACT**

*Many people all over the world are becoming increasingly aware that the entire ecosystem is under serious threat of distortion, dysfunction and destruction; a threat occasioned by factors such as human greed and selfishness, the influence of Western mechanistic world view and its resultant laissez-faire attitude with which many people regard environmental issues. As a result, it has become critically important to initiate synergy towards reducing ecological footprint and particularly the harm done to the entire ecosystem resulting in impaired health status. This work, the result of review of many eco-theological literature on the subject matter, is a significant synergy which not only shows that Christianity had been and is still committed to enhancing the integrity of creation, but also demonstrates that the contextualization of Christian eco-theological resources in order to accommodate African ecological ethics could be useful in protecting the ecosystem on which humanity depends for survival.*

## **Introduction**

More recently there has been a renewed consciousness and a call to all humans to ensure “intergenerational justice” in the use of ecological resources which will not only ensure ecosystem health but will, in the long run, make the earth to remain fruitful for the present ‘earth community’ and that of generations to come. As the destruction wrought on earth through human activities increases, people, including Christians are beginning to explore their role in protecting the earth in order to health of eco-system. This awareness has necessitated the need to adopt a more urgent and practical course of action if we are to avoid the predicted doom that “when the earth is disfigured and its fruitfulness impaired, then every succeeding generation of people is automatically condemned to poverty and doom”. It is important to remind, nay to caution that, unless the ecosystem balance and health is maintained, the ability of the earth to provide the necessary resources for the survival of the whole ‘earth community’ as well as for developments to meet human needs and enhance livelihood, would be impaired. It is also crucial to note that if the ecosystem’s health is distorted or destroyed, and as a result, if the earth resources are irreparably damaged beyond their capacity to renew themselves, then the future of life of the ‘entire earth community’ is endangered.

In order to escape the environmental catastrophe resulting from ecological distortion, the need for collective concern, commitment and shared responsibility in fostering global environmental ethics for sustainability has become imperative. The above need is what this work is aimed to achieve by synthesizing eco-theological resources and African ecological sense of biocentrism. It is believed that with such synergy, collective concern, responsibility and action will be achieved and this in turn will engender increased global efforts in making peoples and governments aware of the value of the environment and the importance of its protection while pursuing development.

## **What is Ecosystem Health?**

Before we discuss issues around ecosystem health, it is necessary to delineate the term ecosystem as it applies to this work. The term ecosystem is derived from ecological system. But, it is also pertinent to ask-what is ecology? Bramwell (1998) tracing the introduction of this word into scientific and ecological literature says that Ernst Haeckel, the German biologist was the first to coin the word “ecology”. According to him, ecology refers to “the science of relations between organisms, their characteristics, especially their life-cycles, their environments, in particular the kinds of environment in which they flourish, their place in the totality of all organisms and environments, the totality being understood as connected and related to one another through the flows of resources and energy”. Ecology, as we have seen, broadly means the study of the *oikos*-home. The environment generally, at least at the scale of the planetary system, planet earth, is taken as home, though some would argue for the use of “environment” as a more encompassing term. (Caroll 2004, Alokwa 2008).

From an operational context, ecology is featured in this work, rather than environment because the term “ecology,” more than “environment,” draws attention to earth’s interrelated life systems. Ecology as the chosen focus of this work brings to mind that not only is “ecology” a more encompassing term than “environment,” but also it is a more complex one. In addition, “ecology” is sometimes used to name a social movement, such as the “Deep Ecology” green movement (see the work of its founder Arne Naess (1989).

Although the term “ecology” is preferred over and above “environment,” the term “environment” has a history of being used interchangeably with “ecology”. For example, Aldo Leopold (1887-1948), one of the first American conservationists, often invested similar meanings in the terms “environment” and “ecology” in his classic book, *Sand Country Almanac*. To buttress this point Leopold, heavily criticized the idea of treating the environment as something to tame and control in the name of human progress, arguing that the proper way to speak of the environment was as a “living organism” in which all the parts constitute a vital whole as is also understanding with the term “ecology”. The idea of the environment as an organic-holistic emphasis affirms the “earth” as a household of life with humans as members of local biotic communities.

Having fore grounded the term ecology, let us now look at what is meant by *ecosystem health*. The term “*ecosystem health*” has become widespread in ecological literature, as a general metaphor meaning something good and stable in terms of well being (Kurt 2010). It is understood as an environmental quality goal in field assessments of rivers, lakes, seas and forests. (Davies 2010)

According to Rapport (1998) ecosystem health is a metaphor employed to describe the condition of an ecosystem. He suggests that ecosystem condition could vary and could be affected as a result of many factors such as fire, flooding, drought, extinctions, invasive species, climate change, over exploitation, farming or logging, chemical imbalance and a host of other factors. Meyer (1997) has argued that there is no universally accepted benchmark to assess or measure a healthy ecosystem; rather the apparent health status of an ecosystem can vary depending upon which health metrics are employed in judging it and which societal aspirations are driving the assessment. Advocates of the health metaphor argue for its simplicity as a communication tool. Policy-makers and the public need simple, understandable concepts and examples or analogies to understand ecosystem health. Without such simple, down to earth examples and analogies to vividly describe ecosystem and the concept of ecosystem health – a “value-laden construct,” which is often regarded as *science only* issues – efforts geared towards ecosystem protection and health, will be a futile one. This work underscores the relevance of

using Christian eco-theological resources to describe through the agency of contextualization of theology those terms and terminologies often taken by the public as “science-only” issues.

### **Why care about ecosystem health?**

Perhaps it is not enough to simply submit that our obligation to care for the ecosystem is because our humanity and well-being depends upon the ecosystem balance. Watts and Peet, (2004) extensively discussed the need for proper care of the ecosystem and its health in an inter-generational and non-theological terms, but also reflecting the theological concept of stewardship. They made reference to a quote credited to Karl Max in which he stated that: “Even society as a whole, a nation, or all existing societies put together, are not owners of the earth. They are merely its occupants, its users; and like good caretakers, they must hand it down improved to subsequent generations”.

Gitau (2000) recalls an attempt that was made for a renewed effort for Christianity’s commitment to the concept of stewardship, in a declaration made in Assisi, the home of St. Francis in 1986 during the 25<sup>th</sup> anniversary of the World Wild Fund (WWF). World Wild Fund is now renamed World Wild Fund for Nature (WWFN). The Assisi Declaration reads thus:

God declared everything to be good, indeed, very good. He created nothing unnecessary and has omitted nothing that is necessary. There exists a divinely willed harmony because the creatures have received their mode of existence by the will of their creator. Dominion (by human beings) cannot be anything other than a stewardship in symbiosis with all creatures.

All the quotations above refer to the stewardship role of humanity towards sustaining the earth. The stewardship concept was popularized by the rule of the Benedictine Monastery. Monastic life does not exist only for itself and profit but for the sake of others. This is how the idea of stewardship should be understood by Christians in dealing with ecological issues. The overarching issue emerging from the concept of stewardship is a caution that humans are not the owners of the earth and therefore cannot treat it irresponsibly. The concept of stewardship has been discussed in greater details by Alokwa (2013) on the generation of ecological motifs.

The relevance of the idea embedded in stewardship with regards to the whole of creation as one of the reasons to care about ecology, is seen and appreciated in its ability to integrate economy, ecology and the entire world order as a holistic entity. The idea is used to capture the necessity of a comprehensive notion of justice which is capable of speaking to both economic injustice and ecological degradation resulting in poor ecosystem health condition. The cry for ecological justice is eloquently expressed by Pope John Paul II (1990:71-72) when he decried that: “It is manifestly unjust that a privileged few should continue to accumulate excess goods, squandering available resources, while masses of people are living in conditions of misery at the very lowest level of subsistence. Today the dramatic threat of ecological breakdown is teaching us the extent to which greed and selfishness – both individual and collective – are contrary to the order of creation”

Similarly Parker and Robert (1996) had criticized the prevailing economic dogma based on abstractions and reductions which conflate human well-being with increasing GNP and a reductive view of the human person as *homo economicus* whose essence is unlimited wants. They rather argue that relationships – to other individuals, to communities, to the land – are at least as important as possession of commodities, and these relationships are often destroyed by growth-oriented economies which alienate individuals from their human and natural

communities. This criticism points us to the deeper meaning and appropriation of the whole idea of the “earth community”. We shall return to this later as we discuss the African ecological sense of biocentrism.

An important reason or motivation for caring about ecosystem health is seen in what Nick and White (2007) wrote about what the Bible teaches regarding human relationship to the rest of the creation. The opening chapters of Genesis highlight the commonalities between humanity and the rest of the animate creation. Genesis 2 uses the same word to describe how animals, birds and humans were formed from the ground. Humans were formed especially from the dust of the ground – that hardly constitutes an accolade of superiority. Humanity shares the same food as other animals and the same breath of life is given to animals and humans alike. To care for the creation is therefore to care for a system of which we are a part and upon which we are utterly dependent.

The implication of the above is that human flourishing and the well-being of the rest of creation are inextricably linked in the biblical narrative. As a result, we need the beauty of the world around us – the air, mountains, rivers, birds, animals – to experience the fullness of the life God has created. Apart from the perspective of aesthetics, the truth is that we also need water, air and food to survive. But, with the loss of each species, and the ugliness of pollution, we do not only dehumanize ourselves and those around us, we are also faced with water shortage and food security threat. The way we respond to our neighbors ie, other members of the earth community, is a pointer to our humanity. When we denigrate the environment, we also indirectly denigrate ourselves.

### **Why engage in Eco-Theology?**

The word eco-theology is coined by joining ecology and theology and this indicates the study of ecology from theological perspectives. The study of eco-theology is in recognition of the reasons mentioned above that the role of Christian sense of stewardship and Christian ecological/environmental discourse has become a necessity. This has been demonstrated in the dialogue on the interface between ecology and theology. In many developed countries for example, the idea of interdisciplinary and multi disciplinary interface has gained much ground within the formal academic setting. As a result, theological studies have begun to interface with other fields of study especially in the areas of environment and development as a theological expression of the Church’s commitment to the current *earth crisis of environment and poverty*. This interface has some far reaching implications.

1. It helps to articulate an eco-theological framework, which would be responsive to the ecological challenges of our time,-a paradigm capable of conscientizing and inspiring Christian practical commitment to ecological responsibility.
2. It is a clear demonstration that Christianity as one of the major world religions is deeply committed to its own project of caring for the earth.

This has been evident in the Earth Bible Project in which Christianity has been involved in as well as many other projects relating to the environment (The Earth Bible Project. 2009). All these are as a result of her deep concern and commitment for social development in general. The significance of the above Project is that it encourages writers from around the world to read the Bible from the perspective of justice for Earth. In this regard, Eco-justice principles are used as guidelines to ask the questions about a particular text to determine the following (a) whether a given text values or de-values the Earth, (b) whether the voice of Earth is heard or suppressed, (c) whether humans are portrayed as 'rulers' over Earth or kin with Earth and (d) whether Earth

suffers unjustly. The importance of the Earth Bible Project lies in the fact that it develops eco-justice principles appropriate to an earth hermeneutic for interpreting the Bible and for promoting justice and healing of Earth.

Eco-theological discourse is a theological synergistic contribution towards halting ecological footprint of our time as well as a creative way of challenging the Christians (theologians) to produce a theological framework and resources for the needed engagement in the current ecological challenges. This work is therefore concerned with the pragmatic exigencies of the *Oikos* (earth) that has been ecologically decimated and economically impoverished and the concern of the Church to construct an eco-theological missional, inspired by contextualized theological reflection to synthesize with African ecological ethics with particular reference to biocentrism. The distortion of the values of ecology necessitates a rethinking of the Church's theological contribution to the global ecological challenges.

From the Church's perspective, it is more appealing and inspiring to employ eco-theology in relation to either ecological or environmental discourse. Eco-theological studies portray the essence of interrelatedness, interdependence and solidarity within the faith community as well as the earth community. Looking at ecology from the concept of African sense of biocentric ethics inspires us to create a new eco-theological sensibility that addresses our destructive attitude toward creation. It proposes a change of our socio-economic structure and behavioral patterns that fuel despoliation of ecological resources. It therefore offers an overarching framework for the re-visioning of religious engagement and the en-visioning of eco-theological spirituality that supports the abundant life that Christ came to give as expressed in the gospel of St. John 10: 10, not only to us humans, but the entire ecosystem.

Ecotheology, also stresses the idea of interconnectedness. According to Siders (2003:219) interconnectedness is what ecotheologians think when they speak of "our own nature as constituted by our relationships with other living things". According to Boff (1995) eco-theology emphasizes that "all that exists, coexists". This is implied by Larry Rasmussen's (1996) idea of 'earth community' to acknowledge the shift in science from the mechanistic to the relational understanding of natural systems, to the affirmation of the doctrine of creation in theological connotation which emphasises that creation is a community in which the whole and its parts bear an integral dynamism and spirit both of which are expressions of divine creativity. This is also reflected in the concept of *oikos* theology as espoused by Warmback (2009) and Alokwu (2013). Essential to the principle of both earth community and *oikos* theology is the understanding that there ought not to be a distinction between human life and nonhuman life at least from the relational context. Both share the same source of being. According to Edwards (1995) we are kin to all else because we share a common origin in divine creativity including an ongoing journey as *creation continua*. In this sense the earth does not belong to humanity, but humanity belongs to the earth. We are not stewards of creation, but an integral part of it; and in many ways we are stewarded by it in a reciprocal relationship.

From the above discourse, both ecotheology and *oikos* theology are related to the principle of interdependence- which according to Siders (2003) is an aspect of environmental ethics which implies that human species and other non-human species are related and are therefore engaged in a sort of interrelationship which is not necessarily defined only in biological terms but, in a kinship sense, in a broader ethical context. He goes on to opine that the principle of interrelatedness recognizes the "genealogical, evolutionary continuity that exists between all living things". Sider's' idea represents a dominant thought in ecological discourse which implies that humans are kin with all other life-forms because of humanity's common evolutionary

heritage. In this sense interdependence as a biological continuum stresses human genealogical relationship – a shared genetic material with other organisms. From ecotheological perspectives, interconnectedness is the fabric of nature's well being. It is used to express the ecosystemic relationships in which the activities and fate of one member of the system have consequences for all others. So long as these links are not damaged or severed, the ecosystem health would be ensured and all beings will generally flourish.

McFague (1997) made a good observation worthy of note in this respect when he said that the ecological model of interrelationship supports a holistic understanding of well-being that says "the health of nature and my health as well as the health of other beings are interrelated". Radford (1994) in her observation argues that biophilic mutuality and symbiosis are indications of nature's proper functioning and these become disrupted by human intervention which brings distortions and eventually death to biotic communities.

The particular problem with ecotheology is its inability to incorporate the issues of ecology and economy. In this regards, it only deals with ecology without dealing with economy. But, ecology and economy are inextricably linked that any meaningful discussion must necessarily involve both. It therefore becomes romantic if it fails to deal with issues around economy, poverty, globalization and other key developmental concerns which in themselves constitute avenues of ecological exploitation.

The above view on the important role of Christian theology in ecological concerns and the need for a relationship between theology and science received support from the one-time General Secretary of the World Council of Churches, Philip Potter, as far back as 1979. This is observed in a keynote address at the Conference on "Faith, Science and the Future." In that year, Potter posited that an intensification of the dialogue between science and religion would chip away the wall of separation that once stood them. This dialogue, in the opinion of the present matter, is an expression of the religious response and willingness to engage in the environment discourse. The dialogue will create a platform in which both theologians and practitioners in other various fields of sciences would feel at home with each other to engage in meaningful discussions about not only the very existence of the universe, but mainly on the need for its conservation and its sustainable governance.

This initiative for the interface between religion and science, in general, and ecological conservation in particular, is based on the conviction that such collaboration could help create a self consciously moral society, which would enhance ecological conservation grounded in respect for God's creation. It could also regulate individualism, materialism and the anthropocentric-induced desire to subjugate nature as well as engender the much needed religious commitment, moral and ethical engagement to transform the ecological crisis from an issue on paper to one of effective policy; from rhetoric in print to realism in action.

### **African Ecological Sense of Biocentrism**

This section will discuss the communitarian nature of human existence from African perspective. This has a wider spectrum because the concept of communitarianism cuts across Africa. In African ecological ethics the concept of communitarianism is represented in biocentric ethics. According to Jason (2004) the term biocentrism encompasses all environmental ethics that "extend the status of moral object from human beings to all living things in nature." Biocentric ethics calls for a rethinking of the relationship between humans and nature. It states that nature does not exist simply to be used or consumed by humans, but that humans are simply one species amongst many, and that because we are part of an ecosystem, any actions which negatively affect the living systems of which we are a part adversely affect us as well, whether or not we maintain a biocentric worldview. Biocentrists believe that all species have inherent value, and that humans are not "superior" to other species in a moral or ethical sense.

The four main pillars of a biocentric outlook are:

1. Humans and all other species are members of Earth's community.
2. All species are part of a system of interdependence.
3. All living organisms pursue their own "good" in their own ways.
4. Human beings are not inherently superior to other living things.[

It is important here to observe that there are adumbrations of biocentric ethics which are expressed in African ecological ethics. The traditional African believes that humanity is closely connected to each other and to other creatures itself. This idea has been explained by Mbiti (1980) in his popular *obiter dictum* "we are, therefore I am". By this dictum, Mbiti means that an individual does not exist apart from the community. He writes: "What happens to the individual happens to the whole group, and what happens to the whole group happens to the individual. The individual can only say: "I am, because we are, and since we are, therefore I am". The phrase "being in plenitude" best describes the traditional African notion of persons because it emphasizes the unity or connectedness of persons to one another, to the community and to nature. No less explanation could be offered to understand the phrase "being in plenitude" than the eloquent elucidation by Sindima (1990) in the following quotation:

We cannot understand persons; indeed we cannot have personal identity, without reference to other persons. Nor can we understand ourselves without reference to nature. People understand themselves and gain identity only in a total framework of life. They are defined as they engage in work, ritual practice and symbolic activities. But they must also understand themselves as belonging to nature, as living the life of nature. It is through their relationship with nature that people discover their identities and approach the possibility of living life fully. As nature opens itself up to people, it presents possibilities for experiencing the fullness of life, possibilities for discovering how inseparably bonded people are to each other and to all creation.

According to Botman (2007) in Africa, a strong sense of community is what holds the society together. Rukuni (2007) in his contribution uses the concept of *oikos* to equate to the African notion of *ubuntu*. He goes further to suggest that the *oikos* concept is not only key to the Bible but that it is also a central concept in African cosmology and ecological ethics in particular. *Ubuntu* as a concept is a bit difficult to translate to other meanings. But its contextual meaning is that it is the essence of being human. It emphasizes that "my humanity is caught up and inextricably bound up in yours ...I am because I belong". This fosters a strong sense of community. Ronald (2008) opines that the term community in its African wider context refers to an organic relationship between individuals. Community recognizes that we live in one household, that we need one another to survive and thrive. Both the concept of *Oikos* and *ubuntu* are related to the Igbo notion of *onye aghana nwanne ya*. The notion of *onye aghana nwanne ya* aims not only at recognizing the humanness and the dignity of the individual members of the community especially the weaker ones, it also seeks to ensure that their rights in whatever forms are guaranteed. It fosters the collective well-being and happiness of the whole community. In this regard, there is no justification for a community member to be happy while a fellow community member is suffering. The notion of *onye aghana nwanne ya* simply stipulates-do not leave your fellow community member alone in their suffering.

Sindinma (1990) strongly argues that in Africa, the word ‘community’ refers to more than a mere association of atomic individuals. According to her, the term suggests bondedness; it refers to the act of sharing and living in communion and communication with each other and with nature. To communicate is to stay in a relationship and inculcate a sense of sharing. This is what she meant by saying that “in community we share and commune with selves who are other than ourselves and yet united to us”. She continues, “in a community of life where all are bonded together, everyone is responsible for everyone else”. Shutte (1993) in his contribution suggests that ‘persons’ are not individual entities or strangers to one another. It is the community which defines the person as person, “not some isolated static quality of rationality, will or memory”. According to him, since people belong to the fabric of life, their life-like nature must be respected. This call for respect is also a charge to the community to create possibilities for persons to realize full personhood.

In what he describes as ‘biocentric theology’ Setiloane (1995) has lucidly shed more light in our understanding of community in relation to *oikos-theology* and African sense of community especially as it relates to the Igbo notion of *onye aghana nwanne ya*. Cock (2007) in his contribution, uses the term biocentric theology to emphasise the inclusive nature of community life in all its forms. He reminds us that the term “biocentric” was originally formulated by Leopold in his notion of land ethic which implies an expansive notion of community. This term was later broadened as “ecocentric” or “biocentric” ethics by different philosophers over the decades to mean that we are all part of a biotic community. Cock, amplifying Leopold’s position, argues that all living things have intrinsic worth-value in and of themselves-not just instrumental or utilitarian value. He concludes that land ethic involves the extension of our human ethics to include the other species with which we share the land. In this perspective, all ethics rests upon a single premise: “that the individual is a member of a community with interdependent parts and the land ethic simply enlarges the boundaries of the community to include soil, waters, plants and animals”. Therefore “biodiversity is necessary not only for utilitarian and humanitarian reasons (for maintaining the present and future health of the entire biosphere, for enhancing the quality of life, and for aesthetic enjoyment), but its own sake. Merchant (2004) maintains that biocentrism expands the goods of the human community to embrace and include within it the good of the biotic community”

From the discussions so far, an emergence of strong commonality between eco-theology and African sense of ecological ethics of biocentrism could be established. The implication is that the success of life in both the Christianity and African cosmology is found in the ability to maintain relationship with all life forms. This relationship is also expressed in the Igbo principle of live and let live. The Igbos strongly believe in notion of *Egbe belu, ugo belu. Nke si ibe ya ebena, nku kwaa ya*,- “let the kite perch as well as the eagle. If anyone refuses the other right of existence, let its wing be cut off.” The rationalization of *egbe belu* principle tries to enforce respect for all life forms. As a non anthropocentric concept, it recognizes the right of existence of all life and insists that none has the right of refusal to existence to other life forms. The *egbe belu* principle guarantees protection to all the community members including the weaker ones who would not have been able to protect themselves. The application of this principle ensures safety in the whole community of life as none is marginalized for any reason. This healthy relationship which the *egbe belu* principle promotes eliminates greed in its various dimensions as only one’s legitimate needs are sufficiently satisfied. Therefore, it is sinful for one not to recognize the right of existence of others or to disturb the constant cycle of existence which affects the corporate existence of the community. In order to maintain this *egbe belu* principle, the Igbos (and most



African societies) developed the idea of totemism where certain groups of species animals, plants, rivers etc, are prohibited from being killed or destroyed. It is generally believed that non adherence to this prohibitive order would attract the wrath of the gods on humanity.

### **Conclusion and Recommendation**

This work has highlighted the need to appropriate the African sense of Biocentrism from an eco theological perspective in the quest to protect the ecosystem health. It is a creative attempt to synthesize African ecological ethics and Christian ecological resources in an age that could be described as an age of erosion of African cultural and ecological ethics, a major result of globalization in its many and varied forms. The synthesis of African ecological ethics and Christian eco-theological resources is a valuable contribution to scholarship especially as synergy in interdisciplinary and multi disciplinary collaboration is needed urgently to address the current ecological challenges in Nigeria.

In order to effectively address the ecological challenges facing the nation especially in the face of the current economic recession, poverty and environmental challenges in the country, the work recommends as follows:

1. The need for an interdisciplinary and multi dimensional research to articulate policy on national resource management. The national policy on resource management should be able to highlight the link between ecology and economy and therefore the need to protect ecological resources for improved economy. This is because if ecological resources are depleted faster than they can be renewed, and if anthropogenic activities that cause harm to the environment continues unabated, then the ability of the earth to produce the resources for economic activities, goods and services will be jeopardized.
2. The work recommends the appropriation of the concepts of biocentrism, *ubuntu* and *egbe belu* as precautionary principles in our national life and institutions including trade and economy. These concepts being precautionary in themselves would provide the much needed national conscience that upholds the integrity of creation. When the nation's ecological resources are properly managed in just and equitable manner through the appropriation of these concepts, any discussion or policy on diversification of the nation's economy would Not only be meaningful but feasible.