THE ROLE OF INDIGENOUS KNOWLEDGE SYSTEMS IN ZIMBABWE'S CONTEMPORARY ENVIRONMENTAL CONSERVATION CONUNDRUM

EVANS MANDOVA (PhD)

Contact Details:evamandova@gmail.com

ABSTRACT

The natural environment and natural resources are under serious threat. The Zimbabwe Environmental Management Agency (E.M.A) is currently working hard to instill into people its conservation and management ethics. This research attempts to refer back to pre-colonial Zimbabwe and unravel the strategies that were engaged to conserve the natural environment. The argument is that the pre-colonial conservation ethics and their sanctions which have helped to check abuse of the environment in pre-colonial Zimbabwe are still imperative in the current Zimbabwean environmental conservation conundrum. It is therefore critical that the history of environmental conservation strategies in pre-colonial Zimbabwe be unraveled. Even though the Zimbabwean people have been exposed to cultural hybridisation, they continue to be guided by their ethos, in the conservation and

management of natural resources. This study further contends that pre-colonial Zimbabwean environmental conservation ethos proffer a sustainable use of the environment, minerals, fish, forests and wildlife, protection of plants, management of water and water sources. It is thus critical that the history of the conservation of the environment be known in order to uphold the religious beliefs, cultural mores and practices which are still fundamental in sustainable use and management of the environment in contemporary Zimbabwe.

DISSECTION OF INDIGENOUS KNOWLEDGE SYSTEMS

Indigenous knowledge is that knowledge, which is passed orally from one generation to the other and in the pre-colonial Shona society acted as a guide on how people lived. This indigenous knowledge provided checks and balances on human behavior. Mawere (2015:59) defines Indigenous knowledge as a set of ideas, beliefs and practices of a specific locale that have been used by its people to interact with their environment and other people for a long period of time. Indigenous knowledge systems manifests themselves in traditional Information dissemination, beliefs, nutrition, health, veterinary care, human resources, education, communication like storytelling, agriculture and fisheries, food and

technology, hand crafts, performing arts ,religion and astrology and environmental conservation.

Indigenous Knowledge Systems recognise the interdependence in the ecosystem. Personal relationships reinforce the bond between persons, communities and the ecosystem. Elders who know ethos are responsible for passing them on to next generations orally. Indigenous knowledge is generated within communities and it is holistic and stresses the principle of loyalty. Indigenous Knowledge Systems cannot be captured and stored in a systematic way so writing it down changes some of its fundamental traits.
Indigenous Knowledge Systems have failed to die despite the racial and colonial onslaught that they have suffered at the hands of Western imperialism and racial arrogance.

The close attachment of indigenous knowledge to nature has enabled Zimbabwean cultures to survive for generations amidst pressures of change. The initiatives of the Zimbabwean people to respond to the present conditions of the environment and nature shapes the development of the former. In modern science changes occur through human intervention and experimentation. Modern science produces man-made technologies that are largely dependent on human action while indigenous systems depend on the natural conditions of the

environment. The common misconception is that indigenous knowledge is unscientific, backward and opposes change and development in the modern world.

Like modern science, indigenous knowledge observes a system that involves the theory of practice learning. Indigenous knowledge begins with concept that develops into ideas, philosophies and principles that are evaluated and verified scientifically. The final form of indigenous knowledge is not simply a product of scientific investigation but a reality based on the actual experiences of the people.

Unlike indigenous knowledge, that can sustain itself with inexpensive conditions of nature, the survival of modern science largely depends on highly complicated and expensive machines. In the absence of complicated machines however modern science can still survive, like indigenous knowledge on the basis of the human conscience. Thus common sense evidently serves as the inevitable link between indigenous knowledge and the global science.

Indigenous knowledge systems are unique in their own ways. They provided checks and balances on human behaviour. Indigenous knowledge systems have failed to die despite the racial and colonial onslaught that they have suffered at the hands of Western imperialism and

arrogance. Measures need to be put into place to safeguard indigenous knowledge systems in light of the contemporary technological revolution.

PRE-COLONIAL SHONA ENVIRONMENTAL CONSERVATION ETHICS

Indigenous Knowledge Systems play a crucial role for a successful and sustainable conservation of the environment. Culture is often seen as the sum total of the peculiarities, ethos and philosophy of life shared by a people. Cultures, beliefs and values from different societies have different explanation(s) for events, languages, and mode of dressing. There are underlying similarities shared by many ethnic groups which when contrasted with other cultures, reveal a wide gap of differences. It is usually observed that among all theethnic groups the preservation of the environment has an inextricable link to the culture of the people. This is also noticeable in the people's farming systems, care for the land, forests, wild life, trees, and streams. Traditional institutions provide considerable protection of ecosystems and biodiversity without governmental juridical restrictions.

In pre-colonial Zimbabwe, cultural beliefs played an important role in the conservation of natural resources.

Communities understood that their survival depended on living in harmony with their natural resources and their environment. In order to maintain that harmony, the communities developed local based knowledge systems which incorporated family histories, taboos, symbols, myths or legends, rituals, sounds or dances, festivals, proverbs, poetry or literature as well as drama and folklore (Karadzandima 2002). All these conservation ethics are passed orally from one generation to another. Moreover, In Zimbabwe the Shona and Ndebele regard certain plant species for example Burkea Africana and sclerorya as sacred. Therefore, such specified species could not be tempered with in any way. Their belief was that the ancestral spirits use such tree species to reach people. So, the cutting or destruction of such trees would detach people from their ancestors, thereby spelling doom to the societies.

African conservation was based on the belief that nature and the society were not separate categories. Humans thus could co-exist and co-relate with nature in such a way that did not allow them permission to exploit nature but mitigate and guided by religion, traditional values and cultural beliefs. Therefore, people were living in peace with their biophysical environment. Nyota and Mapara (2010) contend that, indigenous people had wide knowledge of their environment and could manage it

without any danger to the ecosystem. Pre-colonial Shona people controlled their environment and engaging agricultural methods such as intercropping, shifting cultivation, terracing, and mixed faming, which were later criticised by European settlers. All these methods of farming were helpful in preserving land from soil erosion and land degradation. The Shona people were quite aware of the dangers of soil erosion. This is why they resorted to shifting cultivation, making sure that the land was not over used as would lead to soil erosion. Land was left to gain its fertility. Overstocking and overgrazing were reduced through strategies such as loaning some cattle tofriends and relatives, transhumance and trading out surplus cattle. This clearly shows that Shona people had good relations with their natural environment through preserving and maintaining it.

Pre-colonial Zimbabweans conserved natural resources through the use of taboos. A taboo is 'any ritual prohibition on certain activities…It may involve the avoidance of certain places, objects or actions' (Jary and Jary, 1995). Some places were regarded as sacred and could not be molested by human activities. Taboos were used in order to protect or safeguard certain resources against possible damage. One taboo *Musasvuure muti wese uchisara usina kana divi rimwe rakanaka*. (Do not debark the whole tree). *Munotsamwisa vadzimu.* (You

will make the ancestral spirits angry). This taboo is on the preservation of the forests and also ensuring the sustainability of the forests. Among the Ndebele people *Ficus sycamores* and *Branchiostegal spiciformis* tree species are extremely valued by the community as they believe that their gods (the Rain Giver) and ancestors reside in those trees. According to local inhabitants destroying these trees means destroying the habitat for their ancestors who protect and supply for their needs. This fosters protection and conservation of the trees. Bearing a resemblance to Matabeleland cultural beliefs, in the region of Masvingo, the Karanga people also hold traditional ceremonies under the *Muchakata (Parinaria Curatellifolia)* tree where their ancestors are believed to reside (Tanyanyiwa and Chikwanha, 2011). Where such beliefs are valued deforestation is reduced. Therefore, as local people aspire to respect their ancestors, conservation is promoted by the communities. Thus, the whole idea of sustaining and retaining or even forming taboos was meant to ensure that immoral behaviour towards the environment was kept in check. The idea aimed at ensuring that there was no abuse of the environment. The belief in supernatural agencies hence played an important role in local people's conformity to the norms controlling forest use.

Pre-colonial Shona communities believed in the existence of sacred sites which include mountains, forests and pools. People were discouraged from visiting cutting down trees and hunting wild animals in those sacred places. Mawere (2013) asseverates that, sacred places represent different scales of conservation, from the individual hunter shrine to large sacred territories managed by several religious and political authorities. It is believed that those who visit a defiled sacred site risk getting temporarily lost or disappear forever. For example, *Durika* mountain in Chipinge is believed to be characterized by mysterious sounds of drums. Before iron ore mining commenced in 1952, *Buchwa*, was also considered as sacred with reports of the disappearance of transgressors. *Nyanga, Hanyanya* and *Guruguru* have similar reports and are regarded as sacred by local communities. In some cases, people are not allowed to climb these mountains without conducting some rituals. In other areas, such as Rasa in Gutu visitors should avoid negative speech about the mountain for this will cause calamity to the uttered person. Some mountains are considered so sacred that they should not be climbed at all. This is the case with Nyarushangwe in Chivi. Although these beliefs lack scientific validity, they have been instrumental in the conservation of the mountainous environments for centuries. Open access to them would have led to degradation and damage of natural ecosystems

leading to the disappearance of endangered forms of flora and fauna.

Matobo Hills is of spiritual significance to both the Shona and Ndebele people. Important traditional ceremonies are conducted at shrines in these hills, for example, during severe droughts rainmaking ceremonies are often performed at the Njelele shrine. Bourdillon (1976) avers that, in times of drought it was the responsibility of the chief to arrange for consultation with the medium of the senior spirit guardians to organise appropriate rituals. People would also conduct rain-making ceremonies at the hills to appease Mwari so that rain would precipitate. It is believed that the ancestral spirits of the people live among the hills. In most African communities, the ancestral spirits are believed to be living in the forests and special trees, caves and water bodies (Wilson, 1989). Such landscape elements are therefore normally treated with veneration to ensure limited human access into them lest the spirits be offended. In this regard, it is taboo to cut down trees found in a sacred place without the sanction of the local chief priest. All the land was kept under the custodian of the chief. Chiefs and Kraal heads gave punitive measures to the people who killed animals and or those who cut down trees in those sacred sites.

Mzilikazi King of the Ndebele people of pre-colonial Zimbabwe set up a game reserve in Matabeleland known

as Maduguza West which was on the North West of Bulawayo where no one was allowed to kill except upon his permission. Also, among the Shona people there was *Bunga forest* which was sacred such that if one gets there with the intention to harvest wild fruits such as mazhanje (Uapaca kirkiana), chakata (Parinari curatellifolia) and how (mushroom) for sale, they will be lost before leaving the forests. It was also said that once a person says something defamatory about the wild fruits or mushroom, they will disappear in the forest. Rusinga and Maposa, (2010) note that, the Ndau people of Zimbabwe, through the observance of taboos, were and still are able to control the indiscriminate harvesting of forest products, protect water sources and species of spiritual, nutritional and medicinal value and even rare species. Therefore, taboos are important as they obstruct over-exploitation and plunder of resources. This permits regeneration of resources and guarantee sustainable utilization of resources. The conservation of sacred natural sites hence yields improved results for conservation of biological and cultural diversity. This shows that cultural beliefs hinder commercialization of natural resources which results in over-exploitation of the resources. Thus, such beliefs act as regulatory measures towards conservation of natural resources.

There are also sacred pools which are related to wetland conservation. It is believed that the sacredness of some of the pools lies in the belief that there are some river gods or Njuzu (mermaids). Tsikai (2006) contends that water never dries up at the sacred water points and people were denied to use soap for bathing, use tins with soot or metal containers for fetching water in the sacred water points. If people disobeyed these regulations, soap, tins or their clothes disappeared in the river. Chirorodziva (Chinhoyi) caves is one of the sacred pools in Zimbabwe. At the base of the caves is a pool whose water cannot be fetched. Other notable water sources are natural springs known locally as Tsatse or Zvinyukwi or Zvitubu. It is a taboo for sick people to go and fetch water from those sites. Also, people who are viewed as unclean, such as menstruating women and lactating women were not allowed anywhere near the springs. Again, fetching water using containers that have been previously used on fire which contains some black, sooty substance was prohibited. If any of these taboos was not observed, it was said that the source of the water would eventually dry up at once. From these findings, one can deduce that the cultural beliefs have a regulatory effect in controlling the utilization and management of water.

Another most common tradition in Zimbabwe is totemism, which has been defined as the ‘practice of

symbolically identifying humans with non-human objects usually animals or plants, Mapara (2007:18) asserts that,

> Totemism can be valued for its role in the preservation of biodiversity in a given area. In the case of hunting and gathering communities, it reduces competition of some edible animals, birds, reptiles, insects and plants. Certain animals may not be touched, killed or eaten by some groups of people because of religious and cultural beliefs.

From an ecological point of view, totemism can be valued for its role in the preservation of biodiversity in a given area. This is because 'it is taboo for one to eat his or her totem animal; one risked losing teeth or some catastrophe would befall him or her for violating this taboo' (Duri and Mapara, 2007:106). For example, during hunting operations, members of the 'zebra' clan would not kill zebras as they were considered as sacred to them. The same applied to those who venerated the buffalo, eland, lion, elephant, baboon, kudu, birds, snakes and ants. Ezaza (1997, 201-202) notes that,

> Throughout the past centuries, African societies have lived side by side with wildlife. It is only recently that, these resources have been wastefully exploited as

> a result of contact with greedy outside influence.

Amongst traditional communities such as the Shona, where totemism is observed, it is taboo for clan members to kill animals which serve as the revered symbol of their families. Consequently, totemism encouraged selective rather than indiscriminate hunting thereby preserving any endangered species from possible extinction.

Africans use the philosophy of Ubuntu /unhu to conserve the environment. Respect for the natural environment and its conservation was reflected by some practices as unhu. Mbiti (1991:82) concurs with the idea saying,

> African religion is a dynamic phenomenon found in all aspects of African lives; in their activities and in protecting the natural environment …, Africans use the philosophy of Ubuntu to conserve the environment, Africans follow their cultural traits in order to preserve theirenvironment.

The philosophy of ubuntu entails that people should respect human life and the lives of animals as well as those of plants. In order to achieve this, traditional chiefs gazetted some rules and regulations on how to preserve Flora and Fauna and the environment at large. For example, it was not allowed to cut down big trees, fruit

trees and kill some species of animals such as Pangolin and Haka. Magadza (1992) argues that, certain animals may not be touched, killed or eaten by some group of people because of religious or cultural beliefs. Such animals are considered to be sacred because they saved the ancestors of a particular group of people in one way or the other during the pre-colonial era. So, it takes a person's ubuntu to obey all these religious and cultural beliefs.

CHALLENGES IN THE APPLICATION OF INDIGENOUS KNOWLEDGE SYSTEMS IN CONTEMPORARY ZIMBABWE

The quest for harnessing and developing indigenous knowledge remains at the core of the African continent. It has long dawned that the once looked down upon traditional practices have a greater bearing in locating our identity as Africans.

According to Sawyer (2004) the development of indigenous knowledge in Africa has largely been let down by a lack of funding into the required research. A case in focus is the existing constraints in developing healthcare that use local medicinal plants. It has however been witnessed that in some cases traditional medicine reigns supreme over the modern medicine. For example, in the African society, snake bites are better treated with the help

of traditional medicine. Thus elders will always ensure someone receives traditional treatment before they can be moved to the hospital for pain killers. Where individuals are rushed to the hospital only, fatalities are high. Such a state of affairs justifies the need to incorporate indigenous knowledge in the health sphere.

Furthermore, the absence of incentives for private investment has also had a negative impact on the development of indigenous knowledge. A case in close reference is the prevalence of malaria in Africa, when there are traditional means of mosquito control which are shunned in preference of western interventions that are not sustainable to the ordinary person. A plant that produces incense smelling like a mosquito repellent is locally available and known as 'mutandamansenya' in Tonga, loosely translated to mean chase away mosquitoes. The herb is put in the house in the evening to drive away mosquitoes prior to going to sleep. It is sad that such resources are not exploited for the benefit of society but rather ignored to the detriment of society as malaria gains acclaim to be the highest killer disease in the world according to the World Heath Organisation. Such an attitude coupled with stereotyping and colonial prejudices have left indigenous knowledge marginalized.

Lack of proper documentation of indigenous knowledge stifles the application of Indigenous Knowledge Systems

in contemporary Zimbabwe. This is because it is transmitted orally, experientially and is not written but is learned through hands on experience and not taught. With such lack of documentation, the current generation who are custodians of our future heritage, do not see value in indigenous knowledge and hence a low appreciation due to limited knowledge and exposure to social practices meant to define their identity.

There is a general preference of western systems of knowledge due to the marginalization of indigenous knowledge by African scholars, governments and scientists. This is a result of negativity attached to indigenous knowledge systems. The African mentality has to be revolutionarised and redirected for the development of African indigenous knowledge systems.

Indigenous knowledge relates to all domains of life and the environment. Alienating Africans from this knowledge is tantamount to running away from own shadows. Our indigenous knowledge is constitutive of our belief systems, livelihood constructions and expressions that distinguish Africans from other groups. There is therefore a need to erase the western driven belief and knowledge systems and replace it with African traditional knowledge.

Zeleza (2006) further buttresses the hegemony of western influence in indigenous knowledge as its epistemology remain deep rooted in African studies while only a marginal part of the academy accommodates indigenous knowledge. For example in the curriculum for agriculture there is little emphasis on traditional methods of farming and pest control while the modern methods that require monetary and material resources are over emphasized at the expense of locally available resources. This hampers the appreciation and development of indigenous knowledge systems in agriculture. Other forms of farming like conservation farming are pushed as new phenomena by the west through non- governmental organizations although these are the same methods that were used traditionally but were despised by the colonialists.

There is therefore a need to ensure provision of space for indigenous knowledge in the existing political, economic, cultural and pedagogical domains. The fragmentation of land and resources has led to restricted access to what used to be boundless. This has unnecessarily created competition and conflict among societies thereby promoting a lot of mobility. In the process of movement and relocation as well as mixing of races, indigenous knowledge has found itself losing grip and its growth is thus thwarted.

The view of indigenous knowledge as mere assumption or containers of superstition and opinion affect the world perceptive view expected. As Horsthemke (2004) purports, although indigenous knowledge is described as being inclusive and accommodative of all kinds of beliefs, within an African context, they fall short of making reference to truth or justification. Thus the power of indigenous knowledge is more pronounced in the hands of the beholder than the outsider. This has in turn generated a lot of resistance from outer circles in assimilating it into the mainstream activities of society.

Furthermore, cultural globalization poses another challenge to the harnessing of indigenous knowledge in contemporary Zimbabwe. The tendency to dismiss undocumented and unscientifically proven knowledge is greatly contributing to the erasure of Indigenous Knowledge Systems.

Msuya (2007) also notes that concentration has been on the cash value of indigenous knowledge, ignoring the non-monetary value. There has been more investment into medicinal plants with the hope that large pharmaceutical industries can buy as opposed to traditional dance, folklore, rituals and others whose value at facial sight may be difficult to appreciate to someone with an attitude. Such negativity impedes the application and use of

Indigenous Knowledge Systems in contemporary Zimbabwe.

There is also the challenge of Intellectual Property Rights. Expression of indigenous knowledge such as basketry, music, pottery, fashion and symbols are being reproduced and commercially privatized by outsiders. Works of art by many local artists have found their place in museums and other monumental institutions without the consent of the owners. This dampens the spirit of art and consequently affects the perpetuation of indigenous knowledge in the African continent due to this legalized piracy.

CONCLUSION

This research has discussed the role of Indigenous Knowledge Systems in Zimbabwe's contemporary environmental conservation riddle. It has highlighted the significant features of Indigenous Knowledge Systems which distinguish it from Western knowledge. The study further explored the role of totemism in the protection of biodiversity, the significance of taboos in Zimbabwe's environmental ethics, the role of ubuntu in environmental conservation and the nexus between Shona religious beliefs and cultural mores and environmental management. The research has contended that the pre-colonial conservation ethics and their sanctions which have helped to check abuse of the environment in pre-

colonial Zimbabwe are still relevant in the current Zimbabwean environmental conservation conundrum, irregardless of the cultural hybridization. It has further highlighted some of the challenges bedeviling the integration of Indigenous Knowledge Systems in environmental conservation in contemporary Zimbabwe.

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