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Effect of depletion of natural resources in sustainable environmental management programmes in Zimbabwe

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The depletion of natural resources is one of the greatest challenges with far reaching consequences if sustainable environmental management programmes are not properly put into practice in Zimbabwe. The major contending issue, however, is how the exigency of sustainable environmental management can be contextualised in light of the local indigenous knowledge systems. Although literature is abound on the recommended environmental conservation models, it is heavily influenced by western scientific discourses whose perspectives are far removed from the existential realities of local populations. In our observations, Africans were and still conscious of the devastating consequences of the unsustainable utilisation of natural resources, which the Shona people call, *zvisikwa*. This concept of *zvisikwa* is constitutive of a deep-seated symbolism whose interpretations and meanings are rooted in the religio-cultural milieu of the locals. Specifically, this study is carried out among the Ndaus, a Shona linguistic group in south-eastern Zimbabwe. The traditional utilisation of natural resources is systematic and rational as people acknowledge the ability of land to continue to regenerate itself. It is this perceived paradigm of indigenous knowledge systems that the study embraces as it guarantees the continuity and harmony of the socio-cultural networks that ensure the survival of rural societies.

Key words: Traditional religion, natural resources, indigenous knowledge systems, utilisation and environment.

INTRODUCTION

The subject of the interrelatedness between traditional religion and ecology or environment continues to grow in contemporary African scholarship. This study is part of the surging debate concerning the link between traditional religion and natural resources. The article discusses the critical issues on the symbolism and utilisation of natural resources among the Shona People, with special reference to the Ndaus linguistic group in South-eastern Zimbabwe. The justification for choosing this distinctive linguistic group is that there are very few ethnographical studies that were carried out among these people as compared with the rest of the Shona Peoples (Karanga, Zezuru and Korekore). The Ndaus share a common

heritage which tries to explore the vitality of indigenous knowledge systems in ecological management, yet they have been neglected.

The focus is on exploring the significance of the indigenous knowledge systems concerning the utility of natural resources. Dora-Hoppers (2001) as cited in Maila and Loubser (2003) defines indigenous knowledge systems as 'knowledge that is characterised by its embeddedness in the cultural web and history of a people including their civilisation and which forms the backbone of the social, economic, scientific and technological identity of such people.' In a traditional African context, according to Sibanda (1997; 2000) natural resource use, management and conservation are products of people's spirituality, culture, practices, taboo systems and knowledge accumulated over centuries. The major contention of this study is that the Shona people, as represented by the South-eastern Ndaus linguistic Group,

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view themselves as symbiotically related to the physical environment since nature is intimately and ultimately correlated to the spiritual world. This spiritual world manifests itself in the landscape through phenomena such as rocks, caves, pools, trees and animals, especially lions and eagles (Fontein, 2006).

In most African societies, as Ranger (1999) has observed, nature and culture carry a symbiotic relationship with traditional religion. In concrete terms, it is this traditional religion that forms the core of a particularistic culture of local people in their situatedness. Thus, the utilisation of natural resources is more than satisfying the immediate needs; but also a part of the conservation and celebration of human life (Sibanda, 1997; 2000). It must be pointed out that the indigenous people utilise natural resources in quite systematic ways and with deep observance of a 'rich tradition' of norms, taboo systems and assorted practices that are grounded in the religio-cultural milieu. This body of belief system shapes local people's interpretation of their perception of the accessibility and utility of the available natural resources. On the onset, it must be pointed out that the colonial assumptions that prejudiced the Shona people as reckless and irresponsible with regard to the use and conservation of natural resources were very superficial. In our analysis, the colonial assumption was unfortunate because it merely expressed an egoistic conviction of the settler administration. Moreover, the ontological perspective grounded in the western discourse places the African humanity in some sort of philosophically informed symbiotic context (Light, 1997). It therefore suffices to assert that the colonial assumptions, as highlighted below, were just a way of alienating Africans from their land than an attempt to offer alternative but more viable environmental management strategies.

Such adherence to western perceptions is seen in how the significance of indigenous knowledge systems has long been, until recently, virtually ignored and maligned by the government and international organisations (Warren 1992; www.ciesin.org/docs/004-173.html). The post colonial government in Zimbabwe adopted and extended the colonial pieces of legislation which were resented by the local communities as destructive to their livelihoods. Wolmer (2007) asserts that the danger is that these initiatives will deepen antagonism over land and lead to further coercive regulations on natural resource use to be at odds with people's livelihood strategies. The perception of scarcity of natural resources is virtually distorted as local people view themselves as invisible on the landscape they have lived in and identified themselves with over centuries. In a related study done around Nyanga district, in the Eastern highlands of Zimbabwe, Moore (2005) showed that the local women at Kaerezi area complained and expressed scarcity of one natural resource, *huni* (firewood). The scarcity of *huni* was perceived to be as a result of *mbawu* (human greediness) that was impacted by the encroachment and extension of Nyanga National Park into the local people's

neighbourhoods.

As such, the term and concept of *zvisikwa* (things created or rather, natural phenomena) occupies a central position in the interpretation of the symbols and utility of natural resource use and conservation among the Ndaou people. Moore (2005) contends that *zvisikwa* are imbued with use-values and take on meaning through people's daily livelihood struggles. There is a sense of collective responsibility on meaning that each and every member of the community is bound to ensure that he or she extracts resources from the physical environment without compromising the ability of present and future generations to meet their natural needs in a sustainable way. Thus, *zvisikwa* does not posit an historical essence of natural resource use but it accommodates a range of cosmologies and religious idioms: a supreme being known as *Mwari*, guardian spirits known as *mhondoro* and a plethora of wandering spirits known as *mashavi*. All these spiritual entities are perceived to hold responsibility in the process of creation. In light of the study findings, therefore, the old colonial hypothesis that Africans are reckless and irresponsible in managing their ecology or environment is not justified anymore. Rather, it must be asserted that the Ndaou people were and still conscious of the importance of conserving natural environment. This is how a paradox of conflicting realities about interpreting the environmental crisis comes to the forefront. The adoption by Africans of such strategies such as poaching, deliberate burning of forests or woodlands and wanton killing of straying animals for meat must be understood in a wider context. This context ultimately points to an expression of resentment on part of the local people. In addition, as McGregor (1991) (cited in Alexander, 2006) has claimed, resistance is not so much of 'misunderstanding' the science of technical development but of seeing it as 'irrationality involved in ruling Africans and robbing them of resources.'

METHODOLOGY AND STUDY DELINEATION

Two interlinked methods, the phenomenological and participant-observation approaches were used in this study. Both paradigms are relevant for field research. The phenomenological method was very handy because it is concerned with seeing a phenomenon or behaviour or religion as the adherents see them, rather than imposing any sort of external value judgement. In fact, the phenomeno-logical approach provided a means for investigating the way people come to know reality (Cox, 1992). Through the principle and process of *epoche*, that is, we were able to gather data after 'bracketing' any of the value judgements that outsiders can hold. Accordingly, the Ndaou cultural beliefs and practices on the utilisation and management of natural resources were studied as pure categories, *sui generis*. The strength in the application of the phenomenological approach was the ability to differentiate between *noumena* (things as they are) from *phenomena* (things as we perceive them). By doing so, the first hand information was generated from the local people particularly when juxtaposed with the participant observation method. This methodological paradigm is located in ethnography as it grapples with the people's belief systems, customs, taboos, fears, interests and cultural practices.

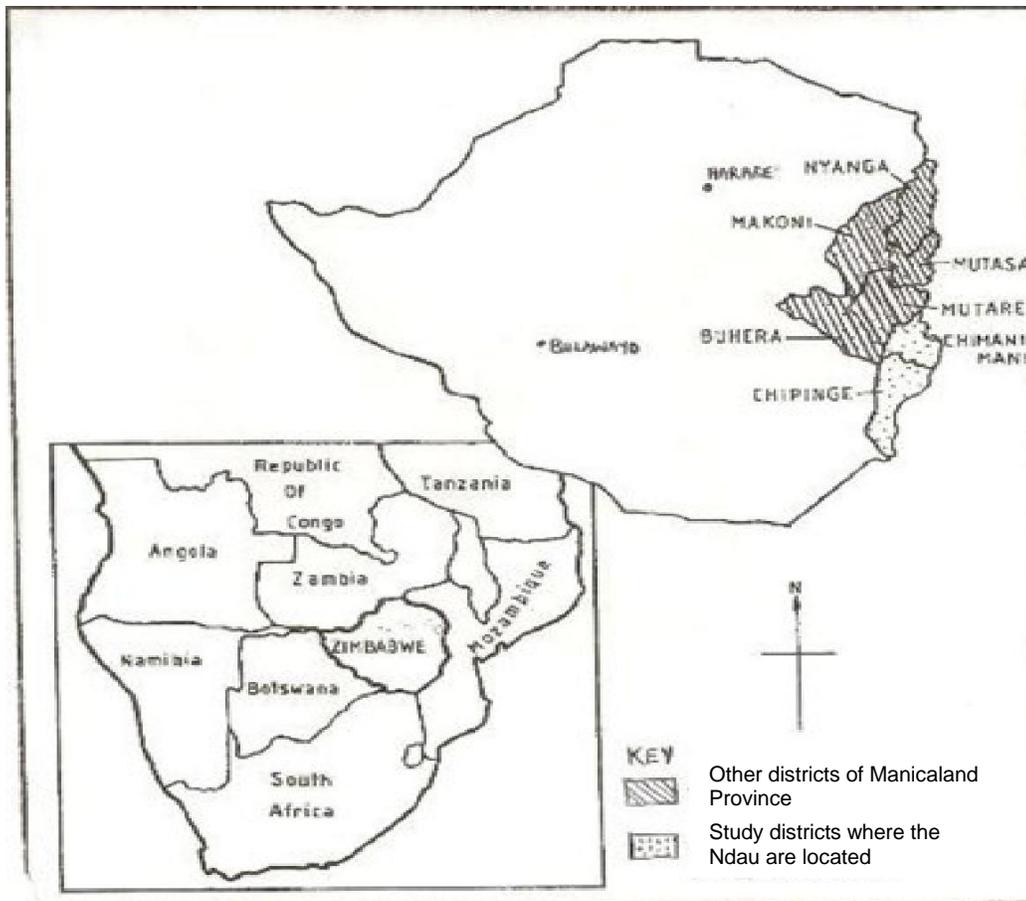


Figure 1. Map showing the Location of Ndau People in Chimanimani and Chipinge Districts of South-eastern Zimbabwe and an insert of Southern Africa Region. Source: Adapted from Alois Mandondo (1997), Institute of Environmental Studies, University of Zimbabwe.

In the application of the participant observation approach, we undertook a face-to-face interaction with the local people in their natural existential settings. We also undertook intensive interviewing and critical observation to what the people did when expressing their culture and religion *vis-à-vis* natural resource utility and conservation strategies. Through the participant observation technique, the research was positively shaped in three ways, which are:

1. Field investigation was done *in situ*, that is, in local people's situatedness and culturedness.
2. Our interaction with the people was direct and this yielded first hand data.
3. We gained understanding of the socio-cultural milieu that helped us to draw findings about their perspectives on natural resource use and ecological management.

In light of these two methods, we were able to get deep into the 'insider's point of view' and decode meaning of cultural beliefs, customs, taboos and traditions which govern the way locals use and conserve natural resources within their environment. These methods were very fruitful when corroborated by integral interviewing.

Literally, we got 'our hands dirty' during the six weeks, in-between March and April 2010, when we conducted fieldwork among the Ndau people in south-eastern Zimbabwe. This South-

eastern geographical belt shares a 'hard international border' with Mozambique in the east (Figure 1). It is a hard border because the Ndau people are found on either side of it, on account of colonial imposition despite their cultural homogeneity. The Ndau people have lived in this area at least since the 15th Century and thus have a long-standing relationship with the land and its resources (Anstey and De Sousa, 2001). Nevertheless, the study focussed on those local peoples found on the Zimbabwean side only. Two districts were chosen to carry out the study; these are Chipinge and Chimanimani districts. Besides participant observation, information was also collected through semi-structured interviews in ChiNdau dialect. In Chimanimani, interviews were conducted in a number of selected villages in Muusha, Chikukwa, Mutambara and Ngorima chieftaincies. In Chipinge district interviews were also carried out in some selected villages in Musikavanhu, Mutema, Mapungwana and Garahwa chieftaincies. Those interviews were targeted at the elderly people whom we consider are the credible custodians of Ndau history, culture and traditions.

RESULT

The paradox of competing perceptions

Different cultures hold divergent worldviews about the place of humanity within the universe. The major contention

is on the place of humanity in the context of their environment. This raises questions about how humans may interact with nature especially *vis-à-vis* the utilisation of natural resources. Two competing notions can be identified. On one hand, there is the dominance of the western worldview about natural resource conservation generated debate because of its failure to address environmental concerns and dilemmas especially in African communities. The shortcomings, according to Schoffeleers (1978), rest on its failure to distinguish what is being said and the way it is being said by the Africans themselves. On the other hand, there is an African perspective and does a call for a radical departure from the current understand. This latter perspective gives indigenous knowledge systems the importance they deserve with regard to natural resources utilisation and conservation. But, in as much as we have observed, both notions are conscious about the conservation of natural environment, the divergence is much on the extent humans dominates nature. Both notions somehow converge at the anthropocentric idea that humans have the right to exploit natural resources, *zvisikwa*, as this is the order of nature that life forms depend on each other for survival. Let us start by highlighting the western perspectives.

Some Western notions

The Western notions about the relationship between people and environment construct humans as fundamentally isolated from the rest of nature. It perceives humanity as quite superior and in charge of the rest of creation (Devall and Sessions, 2000). As stated by Wolmer (2007), the technocratic-industrial worldview constructs a wilderness image in which nature is seen as a potentially productive landscape or must be preserved in its pristine state. The wilderness is seen as a refuge or sanctuary in which those in need of consolation can find respite from the pressures of civilisation and modernity. To legitimise this kind of thinking, the colonial settlers introduced alien territorial paradigms such as private ownership and physical boundaries that subsequently resulted in land enclosures by way of fencing. As shall be highlighted later, this is in sharp contrast with the African worldview because this wilderness is also a place of human habitation since there were no discrete boundaries between people's communities and natural environment.

Some African notions

In describing African perspective, Croll and Parkin (1992) (Wolmer, 2007) have stated that 'humans and their changing environments are reciprocally inscribed in cosmological ideas and cultural understanding, they are part of each other: the forest is the people, in the same

way that ancestors can be, in a sense, extensions of the living'. Like the rest of Shona linguistic speakers, the Ndaou people regard nature and society as inseparable. The Ndaou have a spiritual veneration of the natural landscape as it has a symbol of ancestral (*vadzimu*) and other guardian spirits (*mhondoro*). They not only live on land but also off land since this land is symbolically viewed as serving social, economic, religious and ecological roles. In other words, the success in managing nature is inextricably linked to proper management and control of society. Information gathered from fieldwork in Chipinge and Chimanimani districts does confirm that the Ndaou people were sent by their chiefs to perform rituals whilst nude, spirit-possessed and where they sat down became the boundary of the village. As such, this space is a socially and religiously constructed landscape that does not need 'hard-hedged' boundaries to separate humans from nature.

Symbolism and utility of natural resources

The Ndaou people have a holistic understanding of nature that manifests itself in the symbolism and the way they utilise natural resources. Like other Shona groups, the Ndaou people take into account the interests of not only sentient beings but the whole of nature in general (Masaka, 2009). The preference of species not only depends on the utility of species but also on the symbolic meanings and interpretations that are rooted in their cosmic vision. As Anstey and De Sousa (2001) have claimed, the rules and regulations relating to the use of natural resources and the allocation of land are mediated through a combination of spiritual considerations and the unwritten customary law. As a number of our informants for the study have affirmed, the Ndaou strongly believe that continuity of social, religious and economic aspects of life can be sustained by living in harmony with the environment itself. Therefore, the Ndaou show their gesture of veneration by making some forests, animals and other parts of the natural landscape sacred.

The value the Ndaou place on the regeneration of the environment is inextricably linked to the centrality of descendants in their tradition. In other words, the continuity of the society rests on the concept of descendants and regeneration of the environment. The complexity of this relationship always makes the Ndaou to jealously restrict access to resources by lineage and kinship ties in order to regulate competition from foreigners. Competition is interpreted as a source of *mbawu* (human greediness). As much as we have found out, *mbawu* is always perceived by the Ndaou people as very inimical to sustainable utilisation of natural resources in their environment. Accordingly, *mbawu* has no place in the proper utilisation of natural resources among the traditional Ndaou people. The guiding principle is that present generations are customarily obliged to even reserve some land resources for future generations.

The Ndaus have a positive attitude towards non-human animals. Their dislike of cruelty to non-humans, animals and the environment itself is reflected through taboos (Masaka, 2009). Taboos are designed to enforce positive societal attitudes towards the environment (Duri and Mapara, 2007). The Ndaus, 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. For instance, ordinary people do not kill an animal called *haka*, a pangolin that carries special status in Shona communities. Its shells are used by *n'angas*, that is, traditional diviners when engaged in divination to get spiritual knowledge on behalf of their consultants. Due to its special status, therefore, the pangolin is only reserved for chiefs to be eaten on special ritual occasions (Anstey and De Sousa, 2001). What must be emphasised is that most of the taboos were designed in a way that people fear even to make negative comments or ridicule anything they see in the forests or mountains. Such a view symbolically means that the Ndaus possess a critical concern for conservation of natural resources. This critical concern is part and parcel of a venerable attitude that is more or less sacral in nature. As we have seen, some animals are given honorific titles that are similar to those given to respect the elderly members of the society. For instance, baboons are given honorific titles such as 'Sekuru' (grandfather) (Pfukwa, 2001) meaning wisdom. Elders are viewed as sources of wisdom among Shona groups. For a traveller, an early morning bark of baboon was taken as a sign that all was well (Pfukwa, 2001). In addition, when one came across a troop of baboons whilst on a journey, the Ndaus interpreted it as a good omen.

Like the rest of the other Shona groups, the Ndaus people have a culture of giving themselves *mitupo*, that is, totems. These totems are usually derived from the names of animals or from natural phenomenon such as a landscape or a pool. From the sociological perspective, the system of totemism is functional. Firstly, it helps to protect the environment as well as controlling personal behaviour and social arrangements. Secondly, totemism fosters the concept of 'unhuism'. This concept of 'unhuism' is anchored around human notions of virtue. In light of our findings, *unhuism* occupies a central place in influencing how people behave and interact with nature since the members of the society are socialised to act in moderation in all aspects of life. For instance, the use of totems helps to control the problem of incest since such deviant behaviour is believed to have some linkages with incidences of catastrophic events such as drought. Thirdly, totemism helps to maintain a sense of identity, that is, a feeling of belongingness and which is linked to a conviction of collective responsibility in society. It therefore symbolically means that the utilisation of natural resources is not only a matter of technology but also of

an ordered social life (Schoffeleers, 1978). It must also be mentioned that natural resources have both tangible and intangible utilities that range from serving the physical needs to their significance in the religious lives of the people. As Nhira et al. (1998) have observed, trees and forests play key roles in household production in the rural communities of Zimbabwe. Of particular note is the fact that natural environment provides timber and non-timber forest products, wildlife and water resources, among others. The non-timber forest products include grazing and browsing, traditional medicines, wild fruits, fuel wood, litter leaf, craft materials and construction materials.

Of great note is the fact that the pattern of natural resource utility among the Ndaus is centred around the emphasis they place on the multipurpose of species and the sacredness of selected species. In other words, this pattern is a by-product of the veneration of socially selected sacred species and places as well as the role of species to human health as sources of food and medicines and their importance in household production and reproduction. For instance, as our informant has claimed, *Mutarara (Gardenia globiflora)* tree is not used for construction purposes because it is placed on top of graves protect the corpses of the dead people against witches'. Such selective use of species is deeply rooted in the religious worldview of the Ndaus people and posits an intimate relationship between the social life and environmental management.

It must be highlighted that much of the south-eastern region where the Ndaus people are located, is dotted with several sacred places and whereto ancestors are regarded with high esteem in the causal life of the people. People are 'educated' from cradle to death not to cut trees or do any activity that is destructive to the natural landscape. However, people are allowed to gather fruits and dead wood. Suffice to state that the Ndaus people through religious prescriptions and prohibitions are able to regulate patterns of forest products utilization. From our observation, such areas are still endowed with forests and are abundant with diversity in tree species including the common miombo woodland species such as *Mnondo (Julbernardia globiflora)*, *Musasa (Brachystegia spiciformis)* and *Mupfuti (Brachystegia boehmii)*.

As in many parts of Zimbabwe, the Ndaus people have a complex system that fuses environmental management into social life. There are traditional arrangements that promote sustainable utilization of natural resources. One informant summarized that the community ensures that everyone has a place to stay and farm. Even when people go hunting they share the parts of the killed animal regardless of how small it is and how many hunters there are. Social life emphasizes collective responsibility that is extended to environmental conservation. People have a selfless conviction to conserve and safeguard the environment because they acknowledge

that the community is the custodian of natural resources while the individual belongs to the community. Newcomers, for instance, do not apportion themselves land but have to consult the 'indigenous' people in the locality. As one informant said, 'a person cannot just come and peg where to stay because he has to respect *zvibarirwe zvemwo* (those born in the area)'. Such a gesture constitutes two implications that are relevant for the study. Firstly, it is a gesture of immeasurable respect to *zvibarirwe zvemwo*. Secondly, it regulates and stifles the practice of *mbawu* (human greediness).

In Ndau cosmic vision, *vadzimu*, the ancestral spirits, are viewed as having a more or less equal role as the living with regard to both the utilization of natural resources and their conservation. These ancestors are many times consulted by people to give advice and guidelines on how to share and distribute *zvisikwa* in ways that reflect human values of equity, fairness and justice. When there is a lack or an infringement of these values ancestors can cause mishaps to befall the malcontents. Several mysterious incidents encountered by people who break ancestral rules and regulations are awash in Ndau society and traditions. Our informant narrated a tradition in which a calamity occurred to a wayward person. The tradition says that a man bathed in a sacred pool in Matsika River with a bar of soap but all his belongings mysteriously disappeared, and he shamelessly went home in the nude. In evaluating this tradition, among others, we see that it acts as a deterrent to other would-be 'lawbreakers' so that no one would ever attempt to bath in the same sacred pool. In functional terms the tradition discourages wayward people not to pollute or destroy the environment. This is one practical way the Ndau come to conserve their environment each time every person is conscious to respect the traditions of the people as a collective group and as a cultural unit. In our analysis, this is how traditions of a people in any cultural milieu are part of a rich indigenous knowledge system and when linked to natural resources conservation, become an effective strategy.

Conclusion

The significance of indigenous knowledge systems in environmental management programmes is neglected yet it is vital if local communities have to fully participate in environmental conservation. As the study has indicated, the neglect is not due to irrelevance of the indigenous knowledge system in environmental management but it is rather the failure to understand environmental concerns and dilemmas of the Africans. It was noted that the Ndau people have a rich tradition of norms and taboo systems that are grounded in the religio-cultural milieu. Their relevance and vibrancy in the utilization and conservation of natural resources, *zvisikwa*, should not be underestimated.

The indigenous knowledge systems should be an integral part of local community participation in environmental management strategies from the foundation of the formulation phase to implementation.

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