Indigenous culture and water technology: A reflection on the significance of the Shona culture in light of climate change in Zimbabwe

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Research Article

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ABSTRACT

The study examines the indigenous Shona culture with a view to assess its relevance to contemporary society’s water technology in Zimbabwe. The study posits that the Shona people have unique ways of managing the community water supplies. The study further claims that there are some Shona cultural beliefs and practices which are consistent with technological changes. An understanding of some elements of the Shona culture is a prerequisite for a successful implementation of modern technological innovations in the contexts of the current climate changes. The policy makers and implementers on water technological innovations should ensure that the indigenous knowledge systems (IKSs) are studied and embraced so as to blend with the western technological values in order to mitigate the challenges associated with climate change. Methodologically, the qualitative research design was adopted in this study. Data collection techniques included the interview, observation and documentary analysis. Sampling methods were also used, notably, purposive sampling and snowball sampling. The study recommends that the particular Shona cultural beliefs and practices that are consistent with the water management in the communities should be strengthened towards enhancing water technological changes. Accordingly, similar cultural studies should be further conducted with other indigenous ethno-linguistic groups across the country and beyond.

Keywords: Climate Change, Culture, Water Technology, Indigenous Knowledge Systems, Taboos, Rituals.

INTRODUCTION

In the indigenous Shona culture, water management technology, to a large extent, hinges on the proper and sustainable management of the environment. In general, a number of scholars who grapple with African studies have observed that the indigenous communities were quite conscious of the significance of environmental protection and management even well before colonisation (Gelfand, 1971; Bourdillon, 1990; Hadebe, 1998; Mararike, 1999; Rusinga and Maposa, 2010; Maposa and Muguti, 2012). Rusinga and Maposa (2010), for instance, have argued that prior to the colonization of Zimbabwe in 1890, the indigenous methods of natural resource management posed little stress on the ecological environment. However, as Moyo et al. (1991) have observed some political, economic and social developments in Zimbabwe which have led to the country’s deep environmental crisis in recent years. These scholars further assert that the impact of the discriminatory colonial land policies such as the Land Apportionment Act (1930) and the Land Husbandry Act (1951) resulted in the Shona developing a negative attitude towards conservation and preservation of the natural resources. On the other hand, the introduction of Christianity among the Shona people led to the abandonment of their indigenous cultural beliefs and practices which had played some crucial roles in the management and conservation of the water sources and the natural environment.

As the study concedes, there is a deep concern given the fact that in the post-colonial era, no African country has done enough to salvage whatever has remained of the indigenous environmental culture to address or redress the water management techniques. Even in the post-colonial period in Zimbabwe, for instance, there has been evidence of neglect of the indigenous Shona culture by the water technology policy planners and implementers. Recently, the Zimbabwean Minister of Water Resources and Management, Samuel Sipepa Nkomo, told a Senate Committee on Gender and Development that some njuzu (memaid) were preventing government officials from installing water pumps at the Gwehava Dam Project in Gokwe district in the Midlands province (The Standard, 2010). This incident shows the tendency by the government officials to ignore the potentialities that indigenous culture can
play for the planning and implementation of water technology programmes in the rural communities. The Gwehava Dam Project was only successfully completed when the Shona traditional leaders were later on consulted and engaged by the government (The Standard, 2010).

The study examines the role and significance of the Shona culture vis a vis the management of water resources within the backdrop of the challenges being posed by climate change in the Zimbabwean context. Leong (1983) defines climate as ‘the average atmospheric conditions of an area over a considerable time. The various elements of climate are rainfall, temperature, humidity, air pressure, winds, clouds and sunshine’. Now, when we talk of climate change, Kerski and Ross (2005) define it to refer ‘to a large-scale change in one or more basic climate components such as temperature or precipitation.’ According to Foskett and Foskett (1999), ‘the causes of climate change are rooted in issues of pollution and the use of fossil fuels. Its consequences are potentially global in effect, affecting the developed and less developed world, and every part of the human environment may be changed as a result’. The study admits that Zimbabwe is experiencing serious pollution of lakes, rivers and streams. The net effect is that Zimbabwe is facing a deep challenge of shortage of clean drinking, particularly in the rural communities where about 80% of the population is located (Gogo, 2011). Even in the urban areas, specifically during the peak of the Zimbabwe crisis in 2008, people suffered from cholera and about 4 000 of the urban dwellers died and 100 000 more people were hospitalized due to cholera. Gogo (2011) further noted that ‘the increased water demand versus unmatching production levels, aided by the effects of climate change and global warming are a powerful destabilizing factor in the socio-political arena. This is the background which makes the study current in the Zimbabwean context. There is the need to engage the indigenous cultural beliefs and practices which were used in the management of water resources and also in the forecasting of weather so that people can be informed better about the threats that is increasingly posed by climate change (Maposa and Muguti, 2012). It must be stated on the onset that the study is inspired by the post-colonial framework on the Indigenous Knowledge System (IKS) which is embedded in culture. It is important to note that the Shona people viewed climate change through a religious prism. They also engaged religio-cultural beliefs and practices to manage climate change. It is therefore important that as Africans, we tap into this rich cultural heritage so that it complements the western scientific approaches. Below, let us describe briefly the vitality of the IKS.

Theoretical Framework

The IKS is part of culture and has been variously defined by some scholars. For instance, Ochella in Gwavaranda (2011:127) defined IKS as a 'complex set of knowledge and technologies existing and developed around specific conditions of populations and communities indigenous to a particular geographical area'. In addition, Dora-Hoppers as cited in Rusinga and Maposa (2010: ) also defined IKS as ‘knowledge that is characterized by its embeddedness in the cultural web and history of a people including their civilization and which forms the backbone of the social, economic, scientific and technological identity of such people’. Moreover, IKS also viewed as a local knowledge system which has been institutionalized and passed on from one generation to the next. Thus, IKS is culture-specific knowledge developed by indigenous people in their situatedness and culturedness. The thrust of the present research is to explore the role of IKS among the Shona people in the management of water sources. It must be noted that IKS should be seen as one among many cultural forms of knowledge which can be used to manage water resources in light of the climate change in contemporary Zimbabwe. The role of IKS in the development projects is now widely accepted in the post-colonial discourses in Africa. A number of organisations such as the World Bank now emphasise the role of IKS in the design and delivery of development programmes in the rural communities. It is the contention of this paper that the utility of the Shona IKS is still of great relevance on the management of water resources in the contemporary society. As Almquist et al. (1993) have posited, thus:

“Environmental degradation and the loss of biodiversity in Africa results from a variety of factors, including, and most importantly, the lack of recognition, understanding, and use of Africa’s indigenous knowledge, technology, and practices. The knowledge and skills developed by Africans over many millennia to adapt to and to manipulate their land, flora, and fauna constitute an invaluable resource. Indigenous knowledge and skills are key resources that should be used in conjunction with their Northern counterparts in the effort to craft sustainable biodiversity programmes”.

For any water technological innovation among the Shona to be effective and beneficial, it must take cognizance of the culture of the indigenous people. The inclusion of aspects of Shona culture in the management of the water and other natural resources will help the perception of the local Shona that any programme which engages IKS would be more acceptable and people may cooperate so readily. This helps in avoiding the usually hated ‘top-down’ or paternalistic approach to policy making and implementation in rural development. Thus, the article hopes that a
revival and strengthening of the indigenous Shona water management techniques and fusion with modern techniques might assist in the successful implementation of water technological programmes.

METHODOLOGY AND DELINEATION OF THE STUDY
The study used the qualitative research design which enabled the researchers to unravel the socially constructed nature of reality embedded in the indigenous Shona culture. Data was collected through the unstructured interview technique and documentary analysis. The people called the Shona are the largest ethnic linguistic group in Zimbabwe. According to Bucher (1980) ‘The term Shona is rarely used by the people themselves, who tend to refer to themselves rather by the name of the particular Shona-speaking group to which they belong i.e. the Karanga and Kalanga in the south and south-west, with the Ndu and Manyika to the east of them; the Zezuru in the central region; and the Korekore and Tavara in the north. Each of these linguistic groups is itself composed of numerous other sub-tribes’. The Shona people have since settled in other parts of the country due to the government policy of re-settlement that was adopted first, between 1980 and 1985 and second, after 2000 (Maposa, 2012). Since the Shona constitute the largest ethnic linguistic group and occupy the largest geographical area in Zimbabwe, they are likely to have a profound bearing on water management in Zimbabwe. This is the main reason why the study focused on the Shona society.

THE DISCUSSION AND ANALYSIS OF THE STUDY

Shona Culture and Holism
The Shona indigenous worldview, like that of other traditional Africans is guided by a holistic philosophy (Atkinson, 1999). The holistic notion perceives humanity as part of the environment. Mankind is part of the web where there is interconnectedness and interdependence among the different categories of being. The basis of the Shona holism is the notion of unhu, that is, good character. Every normal human being is expected to have unhu. A person with unhu is one who strives to be in harmony with man, nature and spirits. The Shona philosophy of holism is demonstrated in the maxims: ‘the land is the people’ and ‘the chief is the people, the people are the chief’ (Chikozho and Latham, 2005). These scholars maintain that the maxim, ‘the land is the people’ embraces the notion of man and his environment in ecological union. The Shona holistic philosophy is important for the management of water and water sources as people will not adopt an exploitative or destructive attitude towards the environment but a sustainable and constructive one. It engenders the attitude and praxis of collective responsibility among the people who share the common water sources and modern technology such as boreholes.

The Shona Religious Worldview
Mbiti (1969) observed that the African indigenous worldview is basically religious in nature. The Shona are no exception. The Shona religious universe, to a great extent, influences the way people view their environment. The Shona believe in a hierarchy of spiritual beings. At the top of the spiritual hierarchy is God to whom the Shona refer using various names. God is conceived as Musiki, that is, the Creator and Sustainer of the universe. This perceived God controls the natural phenomena like rivers, lakes and vegetation. It is the same God, perceived as Mupazvose, who can provide or withdraw rainfall as part of blessing or punishment, respectively. God is believed to punish immorality through natural disasters such as drought and is approached through a hierarchy of spirits of departed members of society. In this sense, the Shona perceive God as Mudzimumukuru. Below God, in the spiritual hierarchy, are various categories of other spiritual beings which include human spirits and nature spirits. The plethora of human spirits is called the mhandoro (spirits of the founding fathers of a clan or chiefdom). The mhandoros are believed to be powerful and to be guardians of the land. This is the reason why the mhandoros are often referred to as the territorial spirits because they are perceived to be owners of land (Schoffeleeers, 1979). The nature spirits are associated with natural phenomena such as trees, mountains, pools, rivers and springs (Mbiti, 1969; Parrinder, 1981). The study argues that any water technological innovations should not ignore the Shona deep sense of the sacred. The Shona people need to feel their religious beliefs as deeply respected by whoever is bringing about water technological changes.
Management of Water Sources

The Shona people have a cultural approach to identifying water sites for zvinyuka (hand-dug wells). Indigenous trees such as muonde (fig tree), mushavi and muchakata are associated with a lot of underground water. The churu (termite mounds) are also considered a sign of plenty of underground water termites are said to need water for mound building.

There is also the practice of mutuku which is quite common among the Shona people. Mufuku technology takes place when people dig water holes called mutuku in the sand bed of rivers and streams. While this form of technology used to supply clean water in the past, it is a risk these days because of the water borne diseases such as typhoid and cholera. Quite often, the Shona resort to the mufuku technology when there is no alternative water technology. However, water from mutuku can still be used provided it is purified using modern technology.

Status of the Guardians of the Land

The undertaking of major water projects such as the building of dams and the sinking of boreholes must respect the traditional beliefs of the Shona. In fact, no such major project is allowed to take place without the full knowledge and approval of the traditional chief. The chief knows the sacred areas in one’s territory and is the one who can conduct the rituals before the project starts. In some Shona areas, even the singing of hand-dug wells requires the approval of the chief. It is said that those who go ahead drilling boreholes or building dams might encounter problems such as loss of equipment, injuries or making no progress at all. In 2001, the people of Dande Valley in Mashonaland Central province led by local spirit mediums resisted the construction of a bridge by the Chinese company over the Dande River because they feared the waters of the newly constructed dam were going to submerge the grave of their founding ancestor known as Chingovo (Chikozho and Latham, 2005).

Hygiene Behavior and Water Management

The level of utsanana (hygiene) is an important cultural value among the Shona. The Shona emphasise personal hygiene like, hand-washing before meals because it prevents the spread of water-related diseases (Gelfand, 1979). This Shona value of hygiene ensures that water is not contaminated through unhygienic handling. As Davis and Garvey (1993) noted, ‘The water-related diseases are transmitted through inadequate body and hand washing…Washing hands after defecation can reduce the transmission of micro-organisms which cause diarrhea’. The indigenous Shona people discouraged their young ones from polluting water sources through the taboo system. The Shona warned the young ones ‘Do not urinate in a well or spring, you will suffer from bilharzia’. In the Shona indigenous society, some forms of anti-social behaviour would earn someone a label like, Nhundiratsime (One who urinates in the well/spring of water). In other words, the Shona perceived the pollution of water as one of the worst forms of anti-social behaviour. The Shona people also had a pragmatic concept of quality water and hygiene. For instance, household hygiene is also evident in the handling of water. For instance, zvirongo (clay pots) are used for both collection and storage of water. It must be mentioned that the Shona observe a number of taboos to promote community hygiene in order to keep water sources clean. Through some cultural beliefs and practices, the Shona protected sources of water from pollution and running dry.

The controlled land use ensured that water sources are protected from siltation. The Shona are strictly barred from engaging in any form of agricultural activities in catchment areas. Stream-bank cultivation is also prohibited in society. It should also be noted that the rule against agricultural activities along streams and rivers had a religious reasons, too. For instance, the Shona had a practice of burying babies along streams and river banks. This cultural practice of prohibiting agricultural activities along stream and river banks prevented sedimentation of water sources. The Shona water sources are well protected (Tatira, 2000). In most cases, wells are well protected using stones or logs. However, it is regarded a taboo in some cases to use cement to protect some sacred wells as it is believed the well will become dry. According to one informant from the Zvavahera area of Gutu district, one sacred well dried up soon after people had completed building the cement structure to protect it. One spirit medium is said to have advised the villagers to destroy the cement structure and in its place build a stone structure. It is said the spirit medium’s instruction was followed and water began to seep into the well again. The spring has never dried up ever since.

Sacrality of Water Sources

Many water sources are believed by the Shona to be sacred. The Shona associated most of these sacred water sources with powerful water creatures called njuzu (mermaids) which are believed to use the water sources as their habitats. One of such typical water source is the sacred Mushongaende Pool situated along the Dande River.
According to Spierenberg as cited in Chikozho and Latham (2005), ‘In this pool there are lots of things which belong to the different mhondoros... There are njuzu and tsunguni (water spirits). There are drums which are heard playing and people can be heard singing...’. In 1994 a team of water engineers from the Zimbabwe's Ministry of Agriculture commenced working close to the Pool as part of the implementation of the Dande Irrigation Scheme (Chikozho and Latham, 2005). They experienced a number of mysterious incidents which included two car accidents. This incident was immediately followed by the disappearance of one water engineer but resurfaced four days later but was mentally unstable (Chikozho and Latham, 2005). This team of water technocrats eventually realized the significance of Shona culture. The realisation was that if ever their water project was to be successful they were supposed to engage the Shona traditional leaders in the locality. It must be noted that the Shona observe several taboos which are related to njuzu water habitats and other sacred water sources. Such water sources include natural springs, wells and pools. It is a taboo among the Shona to fetch water from some scared water sources using a container with soot, metal cups and metal jars. The perception being that the water source might dry up or the forbidden items might disappear or the culprit might be mysteriously snatched by the njuzu. The water from some sacred springs is fetched using indigenous items such as mukombe (gourd) or a broken demhe (pot made out of wood or clay). It should be noted that such technology is not prone to pollutants such as rust, unlike metal containers. In addition, the women in their menstrual cycles or those who have just given birth are not allowed anywhere near some sacred water sources. Such women are associated with ritual impurity and are likely to pollute the water source and offend the spiritual guardians of the water sources. These Shona cultural beliefs and practices played vital roles in the management of water resources in the pre-colonial period. If these could be harnesses again, they can still be vital in preventing water pollution and the spread of water-borne related diseases in our day.

That the Shona regard water and water sources in high esteem is indicated by the Shona clan which has the pool (dziva) as its totem and its praise name as the Save River. The popular traditional Shona song, Mhondoro dzinomwa muna Save (Territorial or chiefly spirits drink water from the Save River) demonstrates that the Shona people value the water sources as the foundation of life. This is one major reason why the Shona people have a saying which says that mvura haina n'anga (water from any source does not cause any illness requiring the services of a doctor). Thus, the Shona have great faith in the way they manage their natural water sources within a specific cultural milieu.

SUMMARY AND RECOMMENDATION

The study has highlighted that the indigenous Shona people depend on flora and fauna in their environment for economic, artistic, medical and religious practice and survival. The taboos that are pervasive in culture are used to protect the flora and fauna in any given natural environment. Many of the Shona chiefdoms subscribe to the notion of marambotemwa (forests where tree cutting is forbidden) to ensure that the land and its ecological configuration are protected from soil erosion and degradation which in turn protect water sources from sedimentation. The flora also ensures that the water table does not fall as it minimizes water run-off and thereby preventing springs and wells from drying up. Even from the scientific perspective, natural vegetation plays an important role during the processes of the rain formation. The study bemoaned that much of the threats which result in the climate change today are due to man-made and non man-made factors. It was shown, for instance, that water resources are threatened by land pollution.

Yet, this threat can be prohibited through some taboos of a people in their situatedness and culturedness. As the study elaborated, the territorial spirits are believed to be offended by land pollutants such as the remains of animals and human beings. The spirits may punish the whole community through drought. The Shona believe that a clean environment ensures clean water sources and ultimately human longevity. Nevertheless, the study also made some salient observations that there is great hope towards the administration of water resources if the cultural beliefs are summoned and some cultural practices engaged to corroborate the western forms of technology in the management of water resources. The study concludes the discourse by suggesting one pertinent recommendation: the traditional chiefs and their indigenous institutions should be engaged and encouraged to play some key roles in the management of water and waters sources in order to mitigate the dangers of climate change and thereby attaining sustainable development in contemporary Zimbabwe.

REFERENCES


