

Dissonance in customary and statutory water management institutions: issues of cultural diversity in the management of water resources in the Okavango Delta, Botswana

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Abstract Customary institutions have existed in parallel with statutory institutions for many years in Africa. These traditional water management systems were employed to manage the use of water resources and resolve conflicts associated with them. Although national governments introduced conventional water management approaches, which operate more effectively in urban areas, customary institutions' activities in water governance continue to exist in rural Africa. Long before the advent of colonialism, most rural communities which have now transformed into modern African societies had various rules, norms, taboos and values governing the use of water. Although not legally recognised in the wake of colonialism, the concept of legal pluralism has continued to gain ground in colonial Africa. Rooted in the mass–elite theory and the cultural lag concept, the paper adopts a critical literature review approach to explain the dissonance in customary and statutory water management institutions in the Okavango Delta, Botswana. Analysis of existing water management documents revealed that the post-independence statutory water institutions continue to weaken the customary approach to water use and management. Findings indicate that statutory institutions emphasise on the economic conception of water despite the fact that the resource has also a social value. This absolute conceptualisation of water as an economic commodity creates the dissonance in water management, especially in rural areas and most especially in the Okavango Delta where water is still perceived to have cultural values.

Keywords Colonialism · Customary · Dissonance · Institutions · Legal pluralism · Statutory

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1 Introduction

The role and place of customary institutions in modern statutory legal systems have been the subject of academic discourse, particularly in countries where traditional legal systems existed before the introduction and imposition of statutory water institutions (Craig and Gachenga 2010). Institutions means a body of rules recognised as binding by any society. A society is said to have a polycentric, pluralistic legal system when it adopts more than one system of rules having different sources, and which in some cases contradict each other (Craig and Gachenga 2010). Customary water institution comprises those sets of rules, norms and taboos established through the process of socialisation, which enables members of a community to establish acceptable from unacceptable behaviour and includes conventions and usages adhered to and followed by people through generations for water use (Craig and Gachenga 2010; Gachenga 2012; Ramazzotti 1996). Despite the recognition of the link between indigenous rights, human rights and sustainable development at international level, its reflection in local-level environmental institutions is still inadequate (Craig and Gachenga 2010; Gachenga 2012). It is thus crucial to deal with human rights through domestic environmental institutions and to recognise indigenous water institution as part of this. Indigenous people have interrelated and unique relationships with the earth including land and water (Ramazzotti 1996), and they do not fragment or compartmentalise their rights and obligations relating to their ecological, spiritual, cultural, economic and social dimensions (Killander 2010). The paper begins by providing the theoretical underpinning of policy institutions in relation to water resource management (Sect. 2). While Sect. 3 highlights the methodological approach of the paper, Sect. 4 addresses cultural and spiritual values of water in traditional societies. Section 5 highlights the intersection of culture, institutions and water management in the Okavango Delta. While Sect. 6 analyses the statutory water management institutions in the Okavango Delta, Sect. 7 identifies the factors influencing the dissonance between customary and statutory water management institutions in the area. In sum, Sect. 8 buttresses the need for the application of a holistic approach in water resources management in the Okavango Delta.

2 Theoretical framework on dissonance in water management institutions

The thrust of this paper is rooted in the mass–elite theoretical framework which originates from the writings of Gaetano Mosca (1858–1941), Vilfredo Pareto (1848–1923) and Robert Michels (1876–1936) (Ostrom 1962; Sebola 2014) and William Ogburn's (1886–1959) concept of cultural lag. In the writings of Sidanius and Pratto (2001), Mosca's main focus is on how the minorities organise and outwit large majorities in the formulation of institutions. Thus, according to Sebola (2014) Mosca believes that there in any society, is a minority group with certain material, intellectual or even moral superiority over others. On the one hand, Pareto (1848–1923) is of the opinion that in a society with truly unrestricted social mobility, the elite consist of the most talented and deserving individuals, but in reality, they refer to those most adept at using the modes of political rule, force and persuasions and who usually enjoy important advantages such as inherited wealth and family connections (Anderson 2014; Sidanius and Pratto 2001; Walker 1966). On the other hand, Michel (1876–1936) regards elite to be the leaders

and experts of an organisation who enable the organisation to operate efficiently and these are people in whose hands power is concentrated (Burton and Higley 1987). On the other hand, Ogburn's concept of cultural lag emphasises the relationship between the tangible and intangible aspects of culture—the material culture (artefacts, textiles, food, music, etc.) and non-material culture (language, philosophies, customs, norms, mores, values, etc.). Ogburn states that the rate of change in the non-material aspect of culture lags behind that of its material aspect (Ogburn 1950), thus leading to a slow response in the alteration of people's mindset and their perceptions about a phenomenon (see Kolawole 2014; Lewin 1947). Invariably, the rate of change happens at a faster rate in the material than in the non-material aspect of culture due to many discoveries and inventions (Godin 2010). While the change in tangible component of culture is visible and pervasive, that of intangible aspect of culture is not easily noticeable and slow if at all it changes over time. Ultimately then, local people are naturally inclined to uphold age-long philosophies, mores, values and traditions, making them to exhibit more preference for their knowledge systems even in a technology-burgeoned environment (Kolawole 2012a). In other words, 'regardless of the degree to which they have embraced modernity, local people continue to prefer the knowledge which belongs to them in time and space...' (Kolawole 2001). It is this cultural delay (Godin 2010), which triggers what we refer to as water management dissonance between the two water management cultures (i.e. statutory vs. customary), each of which embraces a distinct approaches to water management. The seemingly regimented nature of the statutory approach may likely have aggravated the reluctance of the pushers of customary ideals to properly conform to conventional approaches.

Water institutions can be regarded as reflecting the values and preferences of governing elite (Anderson 2014). The essential argument of the mass–elite theory is that public institutions, like the Water Acts, are not determined by the demands and actions of the people or the *masses* but rather by ruling elite whose preferences are carried into effect by public officials and agencies (Anderson 2014; Liu et al. 2010; Sabatier 1991). The theory emphasises that any society is divided into two categories of people, that is, the few who have power and the many who do not (Wallace et al. 2015). While only a few individuals determine what constitute the value system of any society, the poor majority do not have the wherewithal to influence any institutions that affect them. Furthermore, Anderson (2014) and Peet (2007) argue that the few who govern are atypical of the masses that are governed. The elite are drawn disproportionately from the upper socio-economic strata of the society. The movement of non-elite to elite positions must be slow and continuous to maintain stability and avoid revolution (Anderson 2014), and only non-elite who have accepted the basic elite consensus can be admitted to the governing circles (Anderson 2014; McFarland 1987). The elite share a consensus on the basic values of the social system and the preservation of the system. Viewed in this way, water management institutions do not reflect the demands of the *masses* but rather the prevailing values of the elite. Change in institutions then becomes incremental rather than revolutionary (Sabatier 1991). This is because incremental changes permit responses to events that threaten a social system with a minimum alteration or dislocation of the system (Anderson 2014). The elite may act out of narrow self-serving motives (Anderson 2014), or they may initiate reforms, curb abuse and undertake public regarding programmes to preserve the system and their place in it (Liu et al. 2010). More often than not, most reforms arise due to a *crisis situation, politics as usual* (Grindle and Thomas 1991: 5) and personal interest (Kolawole 2012b). Thus, the active elite are, in their decision on institutions subject to relatively little direct influence from the apathetic *masses*.

Therefore, viewed from the perspective of the mass–elite theory, water institutions are a conceptualisation of the elite, reflecting their values and serving their own ends, one of which may be a desire to provide in some way for the welfare of the *masses* (Anderson 2014; Sabatier 1991). Thus, the establishment of the current water institutions in Africa is a response of the national elite to the need of a small minority of people rather than a response of the national leaders to the needs of the poor majority on water issues. For instance, the elimination of prior appropriation doctrine from the statutory water management institutions in countries like South Africa, Zambia and Zimbabwe was achieved largely through the dramatic appeals of the middle and upper class (elite) to the conscience of the government.

In summary, the mass–elite theory of institutions making focuses attention on the role of leadership in institutions formulation and on the reality that in any given society, the hapless majority are governed by a few, privileged individuals (Anderson 2014). Thus, whether the elite rule and determine water institutions, with little influence from the masses is, in the views of Liu et al. (2010) and Wallace et al. (2015), a difficult proposition to approve or disapprove. Figure 1 shows the diagrammatic representation of the mass–elite theoretical framework.

The mass–elite conceptual framework (Fig. 1) conceptualises the society (that is, the traditional and modern) as having two worldviews. While the former is mostly rural based, the latter is urban based and is the most dominant. In each of these societies, there exist the elite and the masses. In institutions enactment, the elite formulate institutions despite being in the minority. In the end, the interests of the majority are, in a way, disregarded and excluded in the customary and statutory institutions frameworks. Thus, a public participation policy making model as viewed by Sebola (2014), which encompasses the needs, interests, contributions and ideas of all citizens of a nation, is just a theoretical imagination in institutions making process

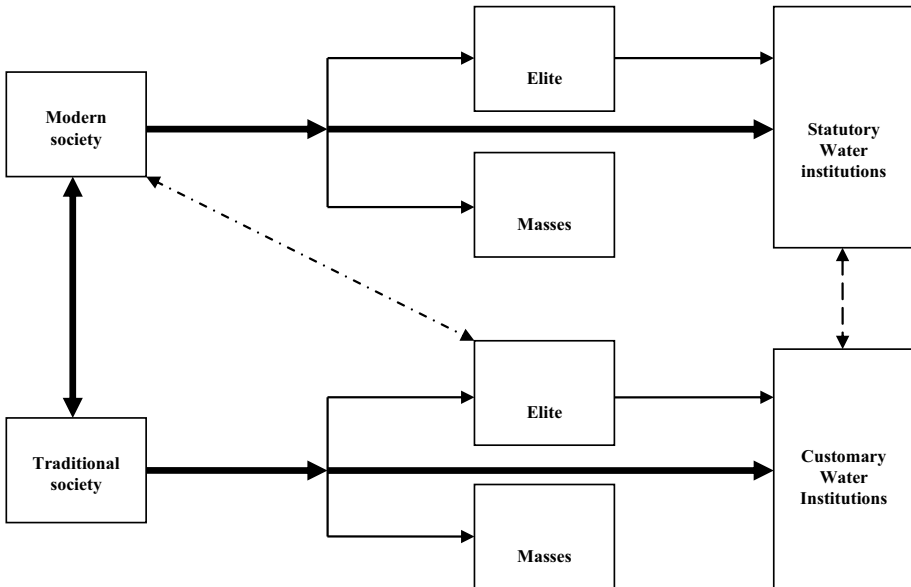


Fig. 1 A conceptual framework of water resources management institutions developed from the mass–elite theory (Source: developed by the authors)

of each of the two societies shown in the mass–elite conceptual framework in Fig. 1. At the same time, the cultural lag concept finds relevance in issues of water management between urban and rural areas in the Okavango Delta. In Botswana's urban areas, for instance, water management institutions are mainly the WUC and DWA which derive their mandate from the Water Act (1968) and guided by the Water Policy (2012) in accordance with the 2010 Water Management Plan. In rural Botswana, people are still strongly attached to their cultural modes of water management although they are serviced by conventional institutions which operate in urban areas. Thus, custodians of traditions uphold their taboos, norms and cultural ways of accessing and using water in the Okavango Delta. For instance, water is regarded as sacred and having therapeutic power such that traditional religion devotees claim that they use it to cure ailments and protect property in places like the Tsodilo hills (Segadika 2006) in rural north-western Botswana.

3 Methodology

This paper analyses the dissonance existing between customary and statutory water management institutions with a view to suggesting the harmonisation of the two forms of institutions for effective and efficient management of water resources. A critical review of relevant literatures is used to analyse the dissonance existing between customary and statutory water management institutions. In order to provide an in-depth scrutiny and insights into customary and statutory institutions enactments and their effects on the management of water resources in African countries particularly Botswana, a narrative approach is used by engaging in literature and document analysis. Document analysis is a methodical technique for studying or evaluating both electronic and printed documents (Bowen 2009). In this study, data are explored and examined using various themes related to the dissonance existing between customary and statutory water management institutions. Assigning meaning and providing a broader understanding of the contradictions within the two water management institutions are essential tasks in the analysis of this paper. The electronic database search was done systematically through the use of focused keyword search. Reviewing or searching the literatures in a systematic manner refers to the identification, evaluations and interpretation of available research relevant to a particular research question, or topic of interest (Kitchenham 2004; Kitchenham et al. 2009). The selected keywords include customary water management; recognition of customary rules; statutory water institutions; cultural water management practices; water resources governance; legal pluralism, amongst others. The retrieved literatures included water policy documents for the Republic of Botswana, reports, books, journal articles, etc. The dissonance in customary and statutory water management institutions in Botswana is thus investigated through the selection of appropriate subjects in which the two water institutions are in contradiction with each other. The analytical framework of the study is rooted in the mass–elite theory, which is employed to highlight the dissonance in customary and statutory water institutions in the Okavango Delta. This was achieved by the use of and/or employing the backward snowballing approach of literature identification through which relevant peer-reviewed articles in leading journals were identified and analysed.

4 A global perspective on cultural and spiritual value of water in traditional societies

Usually, people see the intangible value of water, but unfortunately the market systems rarely reflect the true utility of water in this respect (Bauer and Smith 2007). By gaining understanding of these innate values of water, managers and governments might give consideration to the intended social and cultural consequences of their decisions. If water is viewed from a cultural angle, its value is very difficult to quantify, thus making the concept of water utility as being highly intangible in traditional societies (Abrams 2004; Bauer and Smith 2007). Ultimately, the price tag placed on water by the market actually limits our understanding of its cultural values. In order to highlight the significance of water as it relates to cultural and spiritual use, this section provides a summary of the non-tangible value of water to various people all over the world. The thrust is to provide an insight on how indigenous communities view cultural and spiritual value of water and how this might help in guiding policy formulation in water resources management.

The literatures have shown that worldwide, the essence of water in a given culture is its being a force of life often representing the presence of a higher power (Russo and Smith 2013; Bauer and Smith 2007; Bowker 1997; Espeland 1998). According to Bauer and Smith (2007) and Russo and Smith (2013), there are two major reasons why water serves as a crucial resource in the practice and beliefs of many cultures. Firstly, the belief is that water cleanses and washes away impurities and pollutants. Secondly, water is considered a primary building block of life. In this cultural view, rivers are life giving in the physical realm, thus water gains a spiritual value. It is from this basis that the desire to include water as part of worship and traditional ceremonies became woven into the culture of many societies worldwide (Espeland 1998). For instance, Bauer and Smith (2007) note that Egyptians believe that water is the fundamental element in creation. Thus, in Egypt's traditional belief, only water was present in the beginning (Espeland 1998; Russo and Smith 2013). Indeed, the cultural importance of water is a universal commonplace. In France, for instance, a temple dedicated to the goddess *Sequana* is located at the source of River Seine, and the Marne River got its name from *Matrona*, meaning *Divine Mother* (Abrams 2004; Bauer and Smith 2007). In the same vein, the ancient name of the present day River Thames in England is *Tamesa* denoting a river god (Bauer and Smith 2007).

In the realm of religion, there is a link between various cultures, no matter how diverse the belief system is (Russo and Smith 2013). The literatures have shown that in both more economically developed countries (MEDCs) and least economically developed countries (LEDCs), traditional cultures embrace similar spiritual values in relation to water (Bauer and Smith 2007; Bowker 1997; Espeland 1998). Understanding the satisfaction, which different traditional societies derive from water, would go a long way in helping policy makers to better appreciate people's needs regarding water access and uses. We delve into certain aspects of selected religions and analyse their worldviews about water. In India's Buddhism religion, water is used in funeral ceremonies (Abrams 2004; Bauer and Smith 2007), where monks fill bowls and pour it over the grave reciting '*...as the rains fill the rivers and overflows into the ocean, so likewise may what is given here (life) reach the departed*' (Abrams 2004; Bauer and Smith 2007). In the Chinese traditional culture on the one hand, the value of water can be found in many aspects. In the *Fengshui* culture, for instance, water is used in shrines and burial sites (Russo and Smith 2013). On the other hand, *Shinto* is a traditional Japanese cultural practice which is based on the veneration of *kami*, the deities believed to inhabit water bodies

like springs, rivers, seas and oceans (Abrams 2004). The worship of *kami*, whether public or private, always begins with the important act of purification with water (Espeland 1998). Thus, in Japanese traditional cultures, troughs of water, which are meant for ritual washing are placed inside many sacred shrines (Bauer and Smith 2007). In Shinto cultural belief, waterfalls are believed to be sacred and standing under them is believed to provide purification (Bowker 1997).

Also in Hinduism cultural belief, water plays an immense value for community well-being. Hindus follow a morning ritual of cleansing that is also a basic obligation of Hindu worship and its devotees (Bauer and Smith 2007). Central to this cultural practice is the idea that one should take a bath before entering a temple (Espeland 1998; Russo and Smith 2013). Thus, in so doing the Ganges River plays a central role to Hinduism culture and belief. Hindus believe that bathing in the Ganges River washes away one's impurities (Bauer and Smith 2007). It is for this reason that the Ganges River is also called God's divine vehicle and the saviour of the world (Bowker 1997). Furthermore, Hindus cast the ashes of their dead in the river in belief that this will guide the souls of the deceased straight to paradise (Abrams 2004). In Judaism, ritual washing occurs with simple washing of hands and feet or total immersion (Bauer and Smith 2007; Russo and Smith 2013). Also the biblical Noah is believed to have survived the divine punishment of the *Great Flood* because of his good moral values (Abrams 2004; Espeland 1998). In another vein, the Red Sea is prominent in the Jewish culture because it served as a safe passage for the exodus of the Jews after they left Egypt (Bauer and Smith 2007). According to Bauer and Smith (2007) and Russo and Smith (2013), the parting and crossing of the Red Sea shows that God has power over nature, even the mighty oceans. Water here is powerful, but an instrument of God for punishment (for the Egyptians) and a blessing (for the Israelites) (Bowker 1997). In Islam religion and culture, water is also important for purification as Muslims must be ritually pure before approaching God in prayer (Abrams 2004). Thus, some mosques have a courtyard with a pool of clear water in the middle and most mosques house bathing areas outside the walls (Bauer and Smith 2007). Fountains, which symbolise purity, are also found in mosques (Abrams 2004). Today many Muslims accept that recycled water can be used not only for agricultural and industrial purpose, but also for cleansing purposes as long as its taste, colour and smell have not changed (Russo and Smith 2013).

In Christianity, the use of water for worship and in ceremonial rights has changed over time. As early Christians believed that the use of water for spiritual purposes was a pagan practice, early Christians banned the spiritual worship of water in Europe (Bauer and Smith 2007). Despite the ban, people's deep faith in the sacredness of water persisted and old customs were absorbed into modern day Christianity rituals and water worship hid behind Christian facade (Bauer and Smith 2007). Thus, water maintains its sacredness in rituals of baptism and hand washing. Today almost all Christian churches or sects have an initiation ritual involving the use of water. Baptism has its origins in the symbolism of the Israelites being led by Moses out of slavery in Egypt through the Red Sea (Russo and Smith 2013). This symbolism further emanates from the baptism of Jesus Christ by John the Baptist in River Jordan. Baptism, is therefore, generally regarded as a *sine qua non* in different denominations within the Christendom. It is believed within all Christian faith, except Catholicism, that baptism does not in itself cleanse one from sins, but it is a declaration of a person's faith in Christ (Bauer and Smith 2007). Thus, from the literature, the non-tangible uses of water in Christian symbolism is important because it indicates that just as people need water for washing and survival, Christians need God and it symbolises that everything is immersed in Him.

In the USA, water has had a cultural value amongst the New Mexicans for many centuries. In New Mexico State, water has a significant cultural value apart from its importance as an economic value amongst the aboriginal Indians. As subsistence farmers, aboriginal Indians keep cattle and grow crops in *Pueblos* (rural villages built by their ancestors) (Brown and Rivera 2000). The community value of water is reflected in physical structures, that is, the hand-dug ditches (known as acequias) through which water flows to all parts of their settlements and social structures. Field crops are irrigated by water diverted from the nearby sources and carried through a network of acequia. Indigenous people of New Mexico revere water as sacred substance—the life blood of society. To show this, seasonal changes in rainfall and river flows are observed through rituals, dance and feasts (Hutchins 1928). Each year, villagers come together at the acequia to clean it during an annual event. Thus, acequias cleaning promotes community responsibility for the water source. In New Mexico, acequias construction and maintenance have been a shared responsibility amongst the indigenous people. Acequias culture demands that villagers work together to ensure equitable and reliable water supply. During ditch cleaning, cultural traditions are revived, beliefs are shared, and young people are infused with sense of their culture (Brown and Rivera 2000). As people gather to clean the ditches, stories are told and passed from generation to generation. Thus, the socialisation processes that accompany ditch cleaning helps shape and reinforce the local water culture. It is a taboo for women to clean the ditch. The general belief is that bad luck will befall their area (in the form of longer winters and shortened growing season) where women are allowed to do ditch cleaning (Brown and Rivera 2000; Hutchins 1928). The importance attached to ditch cleaning is influenced by people's age. While the old generations regard ditch cleaning as a community activity which links them to their forefathers and a means through which water is supplied to their crops so as to earn a living, the younger generation does not consider this cultural activity as significant and at times perceives it as just a temporary job (Brown and Rivera 2000).

All things considered, the New Zealand water governance model appears to be a laudable approach to integrative water management. In New Zealand, governance of water has undergone significant restructuring in the past two decades, with wide ranging modifications. The revival of indigenous Māori customary rights led the government to recognise and incorporate customary water management institutions into statutory institutions within the New Zealand society, particularly that of Māori Ngai Tahu tribe in the Canterbury region of south island in New Zealand (Memon and Kirk 2012). In line with the Treaty of Waitangi (1840), the realisation of the injustice meted on Māori indigenous people by the White settlers (by way of dispossessing them of natural resources and thereby impoverishing them) was evoked (Harmsworth et al. 2016). Thus, the uniqueness of New Zealand water management framework is taking into cognisance the perceptions of the Māori tribe, which emphasise cultural and spiritual beliefs in the realisation of their well-being, thus interlinking the physical and spiritual realms of water with statutory institutions. As such, access to water in Canterbury region of New Zealand is governed by both customary and statutory institutions and water is free to every individual be it in urban or rural settlements (Kanwar et al. 2016; Memon and Kirk 2012). By and large, customary and statutory water institutions have an equal say in the management of water. Here, the basic tenets of the traditional Māori society are still very strong and influential in relation to access and use of water in both rural and urban environment.

5 The intersection of culture, institutions and water resources management in the Okavango Delta

This following section focuses on institutional structures in the management of water resources in Botswana. It specifically highlights the traditional water management institutions in the Okavango Delta, followed by the statutory water management institutional structure in the area. Figure 2 shows the nexus in customary water management institutions.

The organogram shows the customary institutions involved in water management in the Okavango Delta. At the top of the hierarchy is the Chief (Kgosi). With reference to the Chieftainship Act of 1987, a chief is someone who has been designated as such by his tribe which has assembled in the *kgotla* in accordance with customary institutions and has been recognised as a Chief by the Minister of Local Government, who is responsible for traditional leadership (Republic of Botswana, 1987). The Deputy Chief assists the Chief in administrative matters. Next on the organogram is the Senior Chief Representative followed by the Senior Chief and then the headmen; there are headmen of records and the others for arbitration. The Chief is the head of district and is based in the District Capital (Kgathi et al. 2006). Although the traditional institutions of chieftainship and related structure were retained in Botswana after independence, a lot of modifications have been made. Some scholars have acknowledged that the institution provides the legal cornerstone for the recognition and function of traditional leadership (Ifezue 2015; Sharma 2005).

In Botswana, the president has power to appoint, depose and suspend chiefs (Cantwell 2015; Kgathi et al. 2006; Sharma 2013). Worse still, these powers have been vested in the

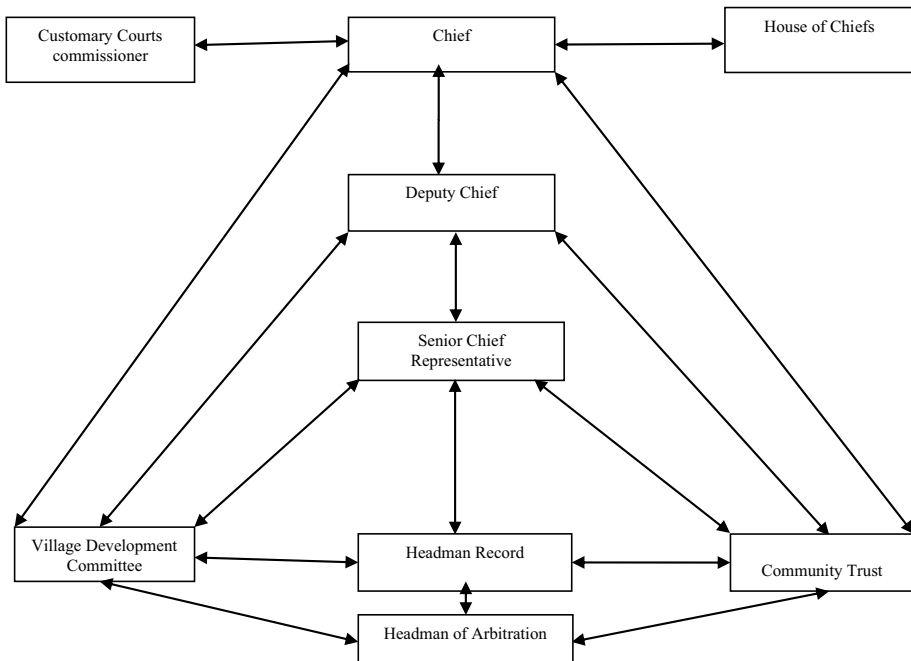


Fig. 2 Structure of customary water management institutions in Okavango Delta, Botswana (Source: Kgathi et al. 2006)

Minister of Local Government, responsible for traditional leadership. The power vested in the president defies the customary institutions, which strictly observes and respects hereditary lines in the appointment of chiefs. Given the fact that a minister is a political office holder, it implies that chiefs, who traditionally must be apolitical, end up aligning themselves with the ruling party. As Kgathi et al. (2006) indicate, '[e]very chief is required by law to carry out instructions given to him by the minister'. Any chief who fails to comply with any directive from the minister is liable to suspension or deposition (Sharma 2005, 2013). Automatically this clause as contained in the Chieftainship Act of 1987 reduces the traditional roles of Chiefs to nothing less than a mere civil servant. In the authors' point of view, this is an interference with the traditional roles of chiefs. Since chiefs are supposed to be apolitical in order to serve their tribal people without fear of favour, vesting more powers in the minister than the chiefs makes chieftainship a mere honorary position rather than the executive powers granted to the chief through tribal and ancestral injunctions. The fact that the minister can at any time withdraw recognition from the chief (Sharma 2005) if he/she considers it to be in the public interest to do so, naturally would make the chiefs loyal to the minister and the ruling party. In other words, the government may have treated the chieftainship in a manner that would continue to make all chiefs subservient to the ruling party (Sharma 2005); regardless of how the latter performs. Irrespective of their affiliation with different political parties, Botswana politicians favour the retention of traditional structures as they realise that dismantling those institutions could result in opposition from the grassroots and could create a serious dent in their image within their own support base (Sharma 2005).

Botswana values the role of customary institutions in the management of natural resources especially water, which is a scarce commodity in the country. Although cultural erosion is now witnessed in Africa, customary institutions played a key role during the pre-independence period of the African countries and still continue to play that role in natural resources management (Augustine 2016). But then, as many of the customary roles are now entrusted to local and state institutions, customary institutions are now visibly neglected (Augustine 2016). In other words, there are now many intricacies in the way local authority is discharged because traditional chieftaincy roles in natural resources management, particularly water, have been grossly overlooked, ceding the role to state agencies. While the loss of trust of customary authority by the citizens may have been witnessed, traditional institutions are still highly valued for being the custodian of African customs and values. Some studies done in Botswana on roles of customary institutions in natural resources management have shown that overlapping responsibilities especially in the management of resources like land and water have resulted in dissonance between customary and statutory institutions (Kgathi et al. 2006; Sharma 2005, 2013). However, the general consensus amongst researchers on cultural values and indigenous knowledge systems (IKS) is that traditional institutions are a vital component of natural resources management in their country, although old customary institutions of resource management are not currently and strictly observed (Kgathi et al. 2006; Mogende and Kolawole 2016). Ignoring cultural values could be anti-development in the first place. According to Agyenim and Gupta (2010), the erosion of knowledge is much more serious than the erosion of natural resources. They opine that natural resources can at times be reversed while loss of knowledge is irreversible. In their viewpoint, Kgathi and his team argue that the loss of traditional knowledge systems could lead to disempowerment of the rural poor, serving as a recipe for unsustainable development (Kgathi et al. 2006). Neglecting the role of traditional institutions in the management of water in the Okavango Delta noted for its increasing tourism industrial activities might be a recipe for disaster in the area and Botswana.

Culture is the means by which people understand themselves and can relate their experience, achievements, hopes, desires and fears at the family level to the nation and the world (Denbow and Thebe 2006). It is through culture that people build respect and identity. People communicate their ideas, feelings and insights through culture so as to build mutual understanding. Water could serve as a means of bringing individuals and nations together. The literature has shown that there are a number of cultural practices that the people of Botswana engaged in. These practices show people's orientation as a nation (Ifezue 2015;). Like most African countries, culture is one aspect that drives most developmental activities in Botswana (Denbow and Thebe 2006). We view water as the backbone of the country's economic and developmental activities. Studies by Schapera (1994) and Sharma (2005) have shown that the Batswana society attach high value to rain. There are many ways in which rain or water is culturally celebrated in Botswana. Water in Botswana is used in different rites and ceremonies. When there are prominent national celebrations or key national gatherings to be addressed by the highest official like the President, the slogan '*Pula*', which is also associated with blessings, is chanted (Morapedi 2010; Schapera 1994). This is done in anticipation for more rains which give abundant supplies of water. Furthermore, when a prominent visitor is received, the guest is said to be accorded a special welcome with respect to rain. The expression in Setswana thus goes, '*Goroga kaPula*' which is literally translated to '*arrive with rain*' (Ifezue 2015). In Tswana culture, when drought persists for too long or when the rains delay beyond the usually expected season, traditional ceremonies are conducted and the congregation members chant '*Pula! Pula! Pula!*' while looking to the heavens (Denbow and Thebe 2006) for the showers of blessings. This is done in anticipation for cloud formation.

Amongst the Hambukushu tribe, ancestral spirits are approached around a sacred fire (*okuruo*) (Denbow and Thebe 2006). Like any other African ethnic groups, the Hambukushu of Botswana pray to ancestral spirits rather than to God (*Ndjambi*) who is seen as a more distant figure associated with the clouds and heaven (Denbow and Thebe 2006). In some areas amongst the Hambukushu tribe, a mound of stones are believed to be inhabited by spirits and those who pass by are expected to add a stone to the cairn to show a sign of respect (Denbow and Thebe 2006). The Hambukushu people live along the waterways of the Okavango Delta, and they place considerable importance on the spiritual connection with their ancestors. The people believe that there are some individuals who are rain makers. These are renowned for their ability to make rain which is a precious commodity for farmers in the peculiarly dry environment (Denbow and Thebe 2006). Rain makers enjoy significant religious and political authority amongst their own people (Schapera 1994). Amongst the Tswana people, traditional religious beliefs often inform the events, actions and practices of contemporary life. The literatures have shown that there is a general belief amongst the rural folks of the Okavango Delta that ancestors (*badimo*) participate in the daily affairs of the living and are now taken for granted as a matrix within which life is lived and understood (Denbow and Thebe 2006; Morapedi 2010).

6 Statutory water management institutions in the Okavango Delta, Botswana

This section offers analyses on the statutory water management institutions in the Okavango Delta.

Figure 3 shows the statutory water management institutions in Botswana. The Water Works Act (1962), on the one hand, provides a provision for gazetted water works areas, where designated water authority, e.g. WUC who has the right to take, construct, make, purchase or take over all water works within the boundaries of the (water works) area and is also responsible for water supply. According to this act, water charges should be related to the water consumed and metered readings need to be used. It empowers the minister responsible for natural resources management to approve water charges. The Water Act (1968), on the other hand, governs the use of water in the country. According to this act, public water is owned by the State and every Motswana has the right to water for drinking, washing, cooking and livestock (Water Act, 1968). In that scenario, there is no water right required by individual users. However, a water right is required if one wants to extract, divert, store and discharge effluent into public water (Water Act, 1968). The possession of water rights does not necessarily mean that the amount of water is always available. There are provisions to cancel the water quota as granted in the water right if the available water resource does not meet current demand and if the right is not used within three years (Water Policy, 2012). Based on the Boreholes Act (1956), permission to develop a borehole should be sought from the Geological Surveys (GS) authority. The GS keeps a registry of boreholes in the country. The department can, at any point, access any borehole for inspection, water sampling, pump tests and is expected to keep records of this transparency for the government (DWA, 2011).

The Water Utilities Corporation (WUC) Act (1970) mandates WUC for bulk water supply or in water works areas where it has a statutory authority. The WUC is empowered by this act to take necessary measures to ensure adequate water supply *in areas of operation*; the act mandates the corporation to operate commercially and generate revenues for the agency. While the act is a good piece of institutions, the main challenge is that it was enacted in the 1970 s when there were designated areas to which the corporation should supply water. However, the WUC's change of mandate to supply water

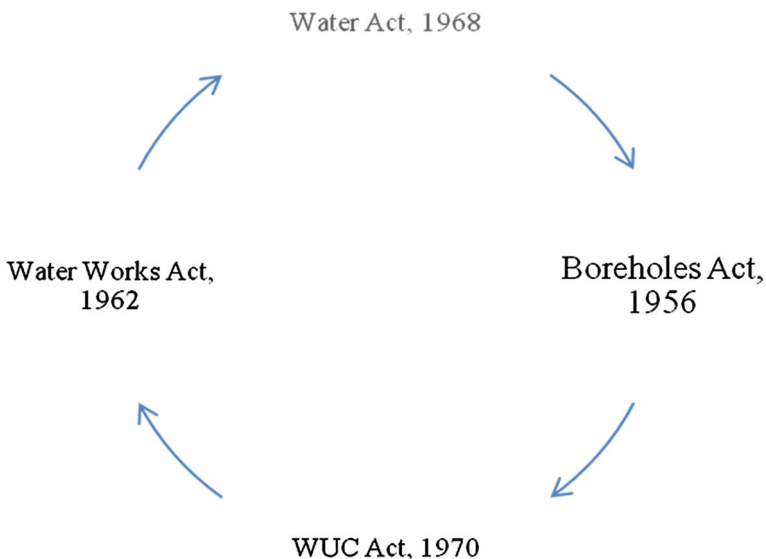


Fig. 3 Statutory water management institutions (Source: developed by the Author)

to all settlements in Botswana is not legally binding because the workings of the WUC Act (1970) still remain unaltered; it has outlived its time. However, the Water Acts as earlier outlined above have a number of weaknesses. As they were enacted in 1968 and beyond, it implies that they do not provide for integrated water resources management and current issues like climate change are not addressed. They also place little emphasis on water pollution. The population of Botswana was low in 1968 (650,835 people), and to ignore pollution issues now when the population has increased to 2.2 million people would be disastrous (Botswana Statistical Year Book 2012/13, 2015). Furthermore, there is no provision for management of shared water courses; the acts are not in line with the Southern Africa Development Community (SADC) protocols. The monitoring and enforcement of water use are inadequate. The penalties for non-compliance were pegged in 1968 and were high by then but have not been adjusted and are now very low. For instance, a person who is guilty of an offence under section 9 (2) and 36 (1) of the Water Act (1968) is liable to a fine not exceeding P1000 or imprisonment for a term not exceeding 1 year or both (Government of Botswana, 1968). While the duration of imprisonment for offender sounds good, it is the fine associated with the offence which needs an urgent revision. Also in addition the penalties which may be imposed by the court in the event of a continued offence, the court may impose a fine not exceeding P10 a day during which the offence continues (Government of Botswana, 1968). The amount attached to this fine is by far too low and less stringent as a punitive measure for water use abuse. There is also lack of integrated planning in land and water resources allocation.

Most importantly, the Water Acts may not have adequately taken into consideration the needs and values of the people in rural areas. Indeed, the act is silent on the role of indigenous knowledge (IK) in the management of water especially in rural areas such as the Okavango Delta. This is in spite of the 2007 Declaration on the Rights of Indigenous People, which affirms the right of indigenous people to self-governance through the use of their customary institutions systems (Killander 2010). Ethnic minorities in rural areas are noted for their possession of IK which if incorporated into statutory institutions would enhance effective and sustainable water management in the rural areas (Kolawole 2015; Mogende and Kolawole 2016). Furthermore, inclusion of customary institutions in statutory institutions and the application of IK in water management can assist in setting the scientific baseline for environmental and cultural flows through the establishment of standards and targets, as well as having a role in regulatory enforcement (Maganga 2003; Sage and Woolcock 2006). The integration of the two forms of institutions is important as national decisions on water would be more active, equitable and sustainable because informed decisions (with inputs from those who are knowledgeable about land and water resources) would have been made in the first place.

Another piece of statutory water management institutions worth mentioning is the National Water Policy (NWP). Throughout the formulation and implementation of the policy in 2012, three essential guiding and overarching principles were applied (Republic of Botswana National Water Policy 2012). These principles are equity, efficiency and sustainability. The nation's water resources are characterised by wide spatial variability, extreme scarcity, high dependency on internationally shared and transboundary waters. Most of the water is located in the north-west far from the population centres in the eastern corridor. One most important factor in Botswana's water sector is that all of the country's five major drainage basins are shared (Republic of Botswana National Water Policy 2012). As it is the case all the time, the Water Policy of 2012 is also silent on the role of customary institutions in water management and there is nothing about IK in the policy.

While some scholars (Coulter 2010; Fromherz 2008; Maganga 2003) acknowledge that in other African countries like Ghana, Nigeria and South Africa, contemporary statutory water management institutions have taken various approaches in their attempt to give recognition to customary institutions in a broader context of water management, indigenous water management practices are, however, often regarded as second-order rights to be assessed through broad policy objectives after statutory institutions have been guaranteed or assigned their more concrete rights. While this is at least a starting point, however, this paper is advocating for a more appropriate minimal approach which would try to identify the range of options for statutory provisions to better recognise customary institutions for contributing effectively to economic livelihoods of indigenous people in the Okavango Delta. But then, an approach in which provisions would allow for the incorporation of customary institutions in statutory water institutions is arguably still inadequate because it emanates from a one-sided statutory approach (Craig and Gachenga 2010). The most appropriate approach in the authors' perspectives would be to involve, to a greater extent, the recognition of a pluralist legal water system. In this proposed paradigm (which allows for two or more forms of institutions to operate within a given society), it is suggested that Botswana might have two water management regulations, one under customary institutions and the other under statutory institutions. The advantage of this approach is that it recognises both customary and statutory water institutions on an equal basis. If understood on this basis, customary water institutions may not necessarily assume a subordinate role in the process of water management.

7 Dissonance between customary and statutory water management institutions

This section compares customary institutions with statutory institutions with a view to highlighting the dissonance which exists between the two genres of water management institutions. African water institutions are usually unwritten, while all statutory institutions and legal systems are recorded (Latham and Chikozho 2004). They vary from district to district and even within the same district (Chikozho and Latham 2005). It is these variations which make it difficult to make a compilation of the existing institutions in order to apply them uniformly within the country. Customary water institutions are directly validated by community acceptance while statutory codes are validated by institutional enactment, case law and judicial precedents (Goldin and Gelfand 1975). The written and codified nature (Muyambo and Maposa 2014) of statutory water institutions makes it the preserve of professionals who engage in the esoteric work of interpretation, application and creation of rules (Latham and Chikozho 2004). On the other hand, African customary water institutions are easily identified with by Africans because they are passed from one generation to the other through oral traditions (Augustine 2016). African customary courts are open to all, and there are no stringent rules for court attendance. This is because it is easier to use and improve one's product than others (see for instance, Kolawole 2001, 2015). The advantages of customary institutions lie in the cost of administering it; customary water tribunals are cheap and lawyers are not permitted to practise in customary tribunals (Kane et al. 2005), thus eliminating a major expense. In customary institutions, litigants do not have to travel a great distance to access them because native courts are situated within local communities. Most of the structures of statutory institutions tend to be

situated in major urban areas, and statutory courts are not commonly found in remote areas where most people live.

Also, the language codes used in the customary institutions are easily understood by the people involved. This contrasts with the statutory institutions where the language of proceedings tends to be highly technical English which cannot be easily understood by the majority of the people living in villages or even those in urban areas. While procedures used in customary tribunals tend to be simple and clear, statutory institutions procedures tend to be too complex and seemingly archaic. According to Hook and Raumatı (2011), the institutions applied in customary tribunals can counter-intuitively be more 'modern' and relevant than the written statutory institutions. This happens when the legal framework and institutions in the statutory legal and judiciary sector become obsolete and out of tune with modern jurisprudential and socio-economic developments, and where governments are too strained for resources to undertake the vast work involved in legal reform (Hook and Raumatı 2011; Kane et al. 2005). In Botswana, for instance, the Water Act dating as far back as 1968 is still being used in the country's water sector. This is despite the fact that even colonial Britain has updated some elements of the Water Act or struck them off altogether from the act. Since customary institutions are organised at the grassroots and informal level, they are much less vulnerable to national disaster (e.g. national institutional failure). As they are closer to the people, confidence in customary legislative structures may persist even in times of crisis or during a breakdown of confidence in the statutory structures. This argument finds relevance in the proposition that the development of local knowledge is ecologically induced and is easily adaptable to local contexts (Kolawole 2015).

In general, customary tribunals tend to encourage decisions that are restorative (Mtisi 2011). For instance, fines or compensations tend to go to the aggrieved party, even in criminal cases. This type of restorative justice is very appropriate to the needs of the poor people and tends to rebuild community relations unlike statutory judiciary which is largely adversarial (Kane et al. 2005). Also fines imposed by statutory courts go to the state rather than the individual. This paper further pushes for the use of customary institutions in water management because of their flexibility in relation to time and space. In Botswana, customary water management institutions make little distinction between criminal and civil law. All litigations were and are still aimed at reconciliation. In African customary institutions, compensation for the injured parties is the prime objective rather than punitive measures meted on the transgressors as in statutory institutions (Chikozho and Latham 2005). The objectives of traditional courts or tribunal in African customs are to reconcile the disputants and maintain peace rather than to punish the wrongdoers (Goldin and Gelfand 1975). As many local people are financially poor (Kolawole 2015; Morapedi 2010), it is therefore contextually rational for them to identify with and use local products (in this case, customary institutions) which are relatively more suited to local conditions (Kolawole 2015) as against the foreign statutory institutions, which have western traditional connotations and orientations.

8 Discussions and conclusion

This section discusses the synthesis of the review of dissonance existing between customary and statutory water management institutions in Botswana. The review reveals a number of interesting observations in water management. To begin with, the general consensus amongst scholars whose works have been reviewed is that customary water management practices are considered as irrelevant, even though there exist both customary and statutory

water management institutions which scholars have conceived as legal pluralism. It has been shown that customary institutions are not written, but are only agreed upon by tribal groups. These are transferred from generation to generations by word of mouth. In Botswana, like in any other African countries, customary water management institutions have been dominated by statutory institutions, showing the impact of colonialism on IKS. None of the authors reviewed investigated the possibilities of addressing the dissonance in customary and statutory institutions through hybridisation of both systems. And so far, no study has been carried out in Botswana with a view to analysing the perceptions of stakeholders on the dissonance existing between the two forms of institutions, although all of the existing studies seem to have a general consensus on the strategic role of IKS as an integral component of natural resources management strategies (see, for instance, Kaplan 1990). Results of review of dissonance existing between water management institutions have shown that management of natural resources like water under customary institutions is based on the belief that all resources including water are owned by ancestral spirits. This belief has been shown to be very strong amongst rural folk who believe that water sources such as rivers and lakes are sacred as they serve as abode to ancestral spirits.

In Botswana, statutory water management institutions cover Water Policy (2012); Water Utilities Act (1970); Water Act (1968), Water Works Act (1962) and Borehole Act (1956). However, while Botswana's Water Policy (2012) is new, the main anxiety about its appropriateness is the fact that the Water Acts is too old and now needs to be urgently reviewed. Currently, the Botswana Water Acts is over 48 years old. It is, therefore, being perceived as out of tune with current issues such as transboundary water management, integrated water resources management as well as climate change issues. One common element in statutory water management is that they are silent on management of water resources using IKS. Findings emanating from the review show that people who live in rural areas depend mostly on natural water sources which are not covered in the Water Acts (1968) and National Water policy (2012). Although Botswana recognises the role of traditional leaders as shown by the enactment of its laws such as the Chieftainship Act and Customary Courts Act, it appears the country is silent on the role of traditional leaders and importance of IK in water resources management.

Another critical issue is the question as to whether or not chiefs should be apolitical. The literature has shown that although all traditional leaders are supposed to be apolitical, the opposite is the case in Botswana. This is because traditional leaders (who are the representatives of their people), for fear of being alienated, are now somewhat sympathetic towards the government of the day. This is because the Minister responsible for traditional leadership has been vested with the powers to *hire* and *fire* these traditional leaders. Fearing the possibility of losing their salaries, the traditional leaders have no other choice than to comply with the government's directives at the expense of their tribal people. While traditional societies have indigenous strategies for choosing their leaders, literatures have shown that there are other new or contemporary criteria for selecting traditional chiefs. These include a good command of English, amongst others (Kgathi et al. 2006). It, therefore, suggests that Chiefs are now equated with ordinary civil servants who can easily be hired and fired by the government.

Findings from the literatures do reveal that there is a clear distinction between water ownership and access in rural and urban areas. In rural areas, the locals and ancestral spirits are involved in the governance of water resource. Traditional leaders control and manage the natural resources on behalf of their ancestors, with and from whom they consult and seek advice, respectively. Thus, access to water in rural areas is gained and governed by one's acceptance as a member of the community and the willingness to

respect the ancestral spirits of the locality. It is against this backdrop that the water in rural areas is viewed as a God given natural resource under customary institutions. Indeed, water is viewed in the traditional system of governance as having more than the physical form in which it is found; it also attains a religious dimension, thus becoming that natural resource, which is made available by ancestral spirits through the request of community members (Nicol and Mtisi 2003: 45). While the custodians of water in rural areas are the chiefs and their people, the ultimate owners are the ancestral spirits. Ultimately, this implies that traditional leaders and communal farmers have access to water because it belongs to them and their Ancestors.

The literatures have shown that people living in urban areas view water from a different perspective. Here, the common view is that water is finite. As such, different uses and users compete for it, making it to easily acquire a commercial value. Since water is a vital, life giving resource without which people cannot survive, it may acquire both commercial and political values. Controlling water in urban areas thus becomes a political rallying point. Since water is naturally fugitive, it often requires sophisticated and costly engineering infrastructure to harness it. Ultimately, these three fundamental attributes of water could facilitate the emergence of powerful coalition amongst engineers, financiers and politicians. Engineering firms will be more than willing to apply their skills to ambitious water projects, making them to tend to favour the larger supply-oriented projects as it would generate more work and money. To financiers, a monopolistic water supply system for urban areas would be an attractive investment since the urban residents will always need water for which they are able to pay. Politicians on the other hand are likely to initiate water projects as this all important initiative will automatically portray them as the provider of life giving resource, thus enhancing their political career.

In sum, there is a general consensus amongst scholars that people who live in rural areas are not served by the current statutory water management institutions as they, in most cases, are not provided with water unlike their counterparts in urban centres. It is commonplace that the rent-seeking elite prioritise their values and needs at the expense of the poor and uneducated majority (the masses). By and large, the principles of integrated water resources management as adopted in southern Africa buttress the need for all stakeholders' participation in natural resources governance if only to achieve sustainable water management in the twenty-first century.

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