The Role of Local Communities in Resource Management: A case of Okongo Community Forest and Conservancy, Namibia

Nguza Siyambango[1] and Angula N. Enkono[2]

Abstract

This paper presents the role of communities in resource management, with particular focus on the Okongo Community Forest and Conservancy. The study is part of the main research work that examined perspectives on community-based management practices, including the conservation area boundaries, but most importantly, the roles and responsibilities of various actors within the conservation area. The study was conducted to understand the state of community-based natural resource management (CBNRM) in the Okongo Community Forestry and Conservancy. It also explored the relationship between government functionaries and the local resource committees that are in existence as critical complementary proponents in the realisation of sustainable natural resource management. The study used a mixed research design, comprising qualitative and quantitative methods, and with this design, data collection methods included interviews and focus group discussions in four communities in the Okongo Community Forest and Conservancy, namely: Omauni East, Omauni West, Oshalande and Kumininenge. A purposive sampling method was employed to select participants for the study. The study revealed that the management of resources such as water, wildlife, grazing areas and forestry was possible through management committees. Most of the committees were established with the aid of the government. The majority of respondents observed positive relationships between the government and the committees; only few did not. Membership on such committees can be attributed to a strong interest in the management of resources, although some members are elected to serve in leadership positions irrespective of their commitment to resource management. Sadly, there are conflicts around the management of resources. However, these conflicts are either resolved strategically through community meetings or are directly dealt with by the committees. Overall, community participation has greatly improved access and the integrity of natural resources by ensuring equal distribution of resources and services within the conservation area.

Keywords: *Benefits, comparative, conservancy, common-pool resource, community-based natural resource management; functionaries.*

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Introduction

In the past, the management of natural resources largely relied on the command and control of central governments. In the twentieth century, for example, the conservation and management of resources such as wildlife and forests were largely achieved through establishing protected areas. The premise of this approach was to reserve places for the conservation of nature by separating society from nature (Jones & Murphree, 2004). During the colonial era, parks created in Africa (Hutton, et al., 2005), e.g., South Africa's Kruger National Park (est. 1926) and Namibia's Etosha National Park (est. 1907), exemplified what has been termed "fortress conservation" because of the strong underlying protectionist philosophy. Similarly, forest resources were often managed by the central government for commercial timber extractions, but recently, these forests have been collapsed severely due to deforestation and forest degradation resulting from overexploitation (Charnley & Poe, 2007).

Notably, the emergence of community-based management (CBM) saw the end of the centralised management of natural resources for conservation and commercial use, which have failed to consider the complex relationship between society and conservation. Of particular relevance to this study is the fact that the forced removal of indigenous people from protected areas and the adoption of legislation excluded them from resource use and ignoring their traditional knowledge of and dependence on natural resources (Fabricius, 2004; Child, 2004). The World Congresses on Parks and Protected Areas of 1982 and 1992 encouraged conservationists to adopt approaches to conservation that are more people-oriented and which encourage local participation and the sustainable use of natural resources (Brechin et al., 2003; Hutton et al., 2005). However, countries' sole reliance on command and control began to wane as central governments felt pressure from both international development agencies that wanted to address social inequality and rural poverty, and communities that viewed these top-down approaches as unjust.

Community-based management approaches to natural resources emerged between 1970 and 1990 in developing countries (Charnley & Poe, 2007). These more inclusive and people-oriented approaches gained traction in the twenty-first century and they have been widely implemented across the world (Berkes, 2004; Western & Wright, 1994). The core premise of community-based conservation is the creation of a link between the livelihoods of local people and resource conservation by involving them in the management of natural resources and providing them with incentives to support and comply with natural resource management principles and practices (Brechin et al., 2003). This approach devolves responsibility for managing natural resources to local resource users. Community-based management is thus defined through concepts such as local resources users' participation in decision making, local empowerment, 'management by, for, and with the community's economic well-being and respect for the rights of local resource users (Western & Wright, 1994). The fundamental assumption of the approach is that local resource users who live in close proximity to the resources will manage the

resources better if they derive benefits because they have more to lose if the resources are degraded (Thakadu, 2005; Twyman, 2000; Western & Wright, 1994).

In Southern Africa, some authors consider the terms community-based conservation and CBNRM to be synonymous (Turner, 2004), and there are many variants of community-based conservation in the world (Barrow & Murphree, 1998). In Africa, and Southern Africa in particular, CBNRM emerged in the 1980s during the transition towards decentralisation and democratic participation (Meinzen-Dick et al., 2002).

Globally, community-based natural resource management (CBNRM) has evolved as a novel approach to attaining conservation goals with the active participation of local communities. In developing countries, CBNRM approaches to natural resources emerged between 1970 and 1990 (Charnley & Poe, 2007). As with the case in other countries, CBNRM is playing a significant role in conservation in Namibia (MET, 2017). In addition, the Namibian Government has recognised CBNRM as one of the main approaches to meeting its obligations towards the attainment of the national development goals, economic growth, and poverty reduction (MET 2013). The definition of CBNRM is broad, embracing various concepts such as local resources users' participation in decision making, empowerment, management by, for and with the community, economic well-being, and respect for the rights of local resource users (Western & Wright, 1994). Prior to the advent of CBNRM, the management of natural resources was based on the command and control of the central government, where the government exercises absolute and centralised management of protected areas and resources (Charnley & Poe, 2007). The goal was to designate specific areas for the conservation of nature to improve the integrity of nature, particularly for wildlife and forest resources (Jones & Murphree, 2004).

Upon realising the value of involving local people in conservation around the country, the government devolved the rights of communities to use and sustainably manage natural resources for economic benefits (MET, 2013). Generally, the premise of CBNRM is to create a link between livelihoods and the conservation of natural resources by deliberately involving people in the management of natural resources, while providing incentives to encourage better stewardship of the natural resources (Brechin et al., 2003). In Namibia, CBNRM initiatives started before independence, with the appointments of community game guards to fight the reduction of wildlife populations (MET, 2017). However, the CBNRM concept only became a reality after independence in 1990, and relevant provisions around community conservation were included in the Nature Conservation Amendment Act of 1996 (MET, 2013).

The central purpose of CBNRM was to counter the exclusionary "fortress conservation" approach, which separated people from nature by creating protected areas (Adams & Hulme, 2001). Through an enhanced appreciation of the resource management landscapes, it became evident that access and integrity of natural resources would undoubtedly be enhanced, particularly for rural-based communities. Undoubtedly, CBNRM principles remain premised on the assumption that when implemented with

supportive institutional arrangements and incentives, this may culminate in communities sustainably managing local resources and partnering with the state in the delivery of improved natural resource management at a more cost-effective manner, thereby deriving direct benefits (Fabricius, 2004). This paper, therefore, sheds light on CBNRM in Namibia, with particular focus on the Okongo Community Forest and Conservancy in the northern part of the country.

Community-Based Natural Resource Management in Namibia

Namibia's landscape exposes the abundance of its natural resources, for example, biodiversity and mineral resources. In terms of biodiversity, most of these are found in protected areas, with reasonable abundance outside protected areas, in communal conservancies. These conservation areas are formally established in Namibia such that local communities are granted the rights to consumptive and non-consumptive use and the management of wildlife and other natural resources as well as tourism (Hoole, 2009; Scanlon & Kull, 2009; NACSO, 2010). As highlighted earlier, community conservation is among the development efforts being prioritised by the Namibian government towards meeting its national goals. Given the significant value derived from them, 83 conservancies were established in Namibia by 2017, with over 200,000 residents economically benefiting from them (MET, 2017). All conservancies have legally defined boundaries, and they have management committees with members who have been purposely selected to represent conservancy members. To date, Namibia has been recognised internationally for its successful implementation of CBNRM, and the country has made a significant contribution to conservation and poverty reduction at community level (Hoole, 2007; Hoole & Berkes, 2010; NACSO, 2010). The Nature Conservation Amendment Act No. 5 of 1996 has played a significant contribution in the establishment of conservancies and the subsequent ownership of wildlife by communities (MET, 2013).

Apart from conservancies, a reasonable number of communities depend on forestry resources for living. The Forest Act No. 12 of 2001 has provisions for local communities to obtain forest management rights, which enable them to establish community forests while at the same time allowing them to manage forestry resources in a sustainable manner (NACSO, 2012). History has revealed that the first conservancies in Namibia were established in 1998, while the community forests were established in 2006. By the year 2017, there were 32 registered community forests (MET, 2017). Nevertheless, the overall management of natural resources by communities is a daunting task for the Namibian government, particularly because of the high rates of poverty among many rural communities (Hoole, 2007; Hoole & Berkes, 2010; NACSO, 2010). Sadly, poor communities depend heavily on resources for their daily living, with a high possibility of consuming resources to the level of overexploitation, which is an unsustainable practice (MET, 2017). The truth is that when people are living in poverty whilst surrounded by rich resources, they have no choice but to rely on such resources for survival. Many communities have resorted to practising illegal activities such as wildlife poaching for economic gains and deforestation due to the increasing demands for wood energy

for domestic use and land clearing for agricultural production (MET, 2015; Nikodemus & Hájek, 2015). Consequently, it has become essential for them to be involved in the management of such resources while at the same time benefiting from them. However, if the use of these resources is unsustainable, it can lead to environmental degradation.

Namibia is relatively a dry country, and, as such, water scarcity is observed in many parts of the country. For most communities across the country, access to an adequate water supply is a serious challenge. Therefore, in 1997, a strategy is known as "the Community-Based Water Management (CBWM) Strategy" was developed and approved by the cabinet to create an organisation that can help all rural communities develop a reliable and accessible source of safe drinking water with sufficient capacity on a sustainable basis at affordable costs (Ruppel & Ruppel-Schlichting, 2012). In addition, the Directorate of Water Supply and Sanitation Coordination (DWSSC) under the Ministry of Agriculture, Water and Forestry (MAWF) has been tasked to facilitate the reasonable needs and expectations of the rural population, to explore and create a sufficient rural water supply scheme. The Water Resources Management Act of 2004 governs the overall management of the water resources in the country. This Act seeks to ensure that such resources are managed sustainably, developed, protected, conserved and utilised. Based on this Act, the management of rural water supply requires an establishment of water points associations and these are overseen by committees, commonly known as Water Point Committees (WPCs). The aim is to facilitate the provision of safe water to communities in a sustainable manner.

Overall, wildlife, forestry resources, water resources and all other natural resources in the communities of Namibia are strategically managed through the establishment of committees.

Community-Based Natural Resource Management in the Okongo Community Forest and Conservancy

The Ohangwena Region is among the regions that have embraced community conservation in Namibia, as demonstrated by the Okongo Community Forest and Conservancy Area. Established in 2009, the Okongo Conservancy is situated about 70 km east of Okongo Village in the Okongo Constituency. In addition to the conservancy, with support from the government, the Okongo Community established a community forest in 2006 to contribute to the sustainable management of indigenous forests through community participation (Hilfiker, 2011). The Okongo Community Forest is situated about 52 km east of the settlement of Okongo, bordered by Angola to the north with the Okavango West Region to the east. The two (conservancy and forest) share borders, and they operate as a joint conservation area commonly known as Okongo Community Forest and Conservation Area, for safeguarding the abundant natural resources such as wildlife, water resources and forestry products.

To ensure the sound management of the Okongo Community Forest and

Conservation Area, the community established various committees that are responsible for overseeing the management of resources on a sustainable basis (MET, 2017; Hilfiker, 2011). There is a Conservancy Management Committee, a Community Forest Committee, a Water Point Committee, and a Grazing Committee. The community forest and conservancy are actively managed to conserve natural resources while at the same time generating returns from them (MET, 2017). The primary objective for establishing the conservancy was mainly wildlife conservation, however, any other natural resource is taken care of since the conservancy is generally promoting environmental management and conservation.

In terms of the community forest, approximately 19% of the forest is utilised for grazing, while dead trees are harvested as wood for fuel, with consumption of roughly 42 tons per year by the year 2003 (Parviainen, 2012). Poles are also collected from dead trees. In addition, there are 16 types of fruit trees, four types of edible worms, and four species of honeybees. Furthermore, perennial grass species are used for thatching, with approximately 30% being harvested annually. According to Parvianen (2012), approximately 104 tons of thatch grass is used for construction in the community forest area. These valuable species are all managed by the Community Forest Committee. There is also an ecological campsite/rest camp that is managed by the community people within the Okongo Community Forest and Conservancy, from which income is generated through the fees paid by tourists, the hosting of workshops, and conducting a broad range of events (Hilfiker, 2011). Furthermore, this conservation area offers job creation opportunities from time to time, some of which are derived from carpentry, nursery, guinea fowl and beekeeping activities that take place there. Overall, the resources, products and services that are safeguarded/offered by the Okongo Community Forest and Conservancy include firewood, honey, thatching grass, horticulture, poultry, wildlife, grazing and an ecological campsite.

Although the community with support from the government spearheaded the establishment of the conservancy, several stakeholders have played a role in its establishment and allocation of land to inhabitants. Apart from government support, several stakeholders are involved in the support of the conservancy. These stakeholders include the National Planning Commission, Finnish Missionaries, the Evangelical Lutheran Church of Namibia, Ministry of Lands and Rehabilitation (MLR), the Spanish Agency for International Development Cooperation (AECID), the United Nations Educational, Scientific and Cultural Organisation (UNESCO), the Ohangwena Regional Council (ORC) and the Office of the Prime Minister (OPM), via technical support from the Desert Research Foundation of Namibia (DRFN), and the Namibia Red Cross Society (NRCS). Nevertheless, the overall management of natural resources is a challenge.

CBM in Namibia and the Legislative Dimension

After independence in 1990, and in line with its constitution, the Government reviewed all its policies and legislation affecting the management of natural resources.

The prime goal of this review was to develop policies and legislation to devolve rights over resources in communal lands from the state to communities. This devolution had two objectives: (if) to provide additional income and benefits to communities, and (ii) to incentivise communities to contribute to national conservation and development goals. Namibia's most widely recognised devolution programme was the establishment of conservancies (NACSO, 2010).

Wildlife Management (Conservancies)

Namibia has received regional and global credit for the successful implementation of CBNRM and for its efforts to simultaneously (a) devolve the management of natural resources to local communities while (b) addressing communities' need for poverty alleviation (Hoole, 2007; Hoole & Berkes, 2010; NACSO, 2010). The country's conservancy is a formally established community-based institution on communal lands that gives local resource users rights to consumptive and non-consumptive use and management of wildlife, including tourism (Hoole, 2009; Scanlon & Kull, 2009; NACSO, 2010). At present, Namibia recognises 86 registered conservancies covering an area of 166,045 km² and these are understood to benefit over 227,941 people (NACSO, 2020).

The first legislative change came in 1995 when the Wildlife Management, Utilisation and Tourism in Communal Areas Policy of 1995 (Communal Areas Policy) was developed to support the drafting of the Amendment Act. The change was aimed at redressing past discriminatory policies as well as giving the communal residents the right to utilise and benefit from wildlife (MET, 2013).

Water Management—Community-Based Water Management

The Namibian Cabinet approved the Community-Based Water Management (CBWM) Strategy in 1997 to create an organisation that can assist rural communities to develop a reliable, accessible, sufficient and sustainable source of safe drinking water at an affordable cost (Ruppel & Ruppel-Schlichting, 2012). In addition, the Namibian Cabinet approved a national water policy in 2002, which formed the basis for a new Water Resource Management Act 2013 (Act No. 11 of 2013) (Ruppel & Ruppel-Schlichting, 2013). The policy provides a framework for equitable, efficient, and sustainable water resource management and water service and stresses sectoral coordination, integrated planning, and management (Ruppel & Ruppel-Schlichting, 2013).

In short, CBWM is about communities in rural areas taking over the management of their rural water supply, which means becoming responsible for operating, maintaining and repairing their water supply schemes (MAWF, 2006).

Community-Based Rangeland Management

Community-Based Rangeland Management (CBRLM) aims to address the environmental degradation of common grazing land while increasing the income of poor

rural households. CBRLM is a holistic approach that deals with the livestock production chain, from increasing grass production to the livestock market. In 2013, 66 community rangeland management areas covering 4,004 km² were established in Namibia (NACSO, 2014). Most of the community rangeland management areas are overlapping with conservancies which could be regarded as an extension of the community-based management approach to another resource within the same community. A draft Rangeland Policy and Strategy is being developed for stakeholder consultations and promulgation by Cabinet (NACSO, 2014).

Community Forestry

In 2001, the Government approved Forest Act No. 12, which allowed local communities to obtain forestry management rights from the Ministry of Environment and Tourism (MET) and currently the MAWF. Community forests, "enable rural communities to acquire the rights, capacity and resource information for managing their forest and pasture in a sustainable manner in collaboration with relevant authorities and stakeholders" (NACSO, 2012, 31). In addition, 13 communities signed the first community forest agreement with the Minister of MET in 2004. The term 'Forest' includes woodlands, grazing areas, farms, settlements, roads, and rivers, while the term 'Forest Resources' refers to natural resources such as trees, fruits, shrubs, herbs, grasses, and animals. The community forests cover 30, 827 km² and most of the forests (19) were registered in 2013 (NACSO, 2014).

Policy Impacts of Community-Based Natural resource management

The Namibian government's policy of devolving some property rights to communal groups of local people and conservancies, and allowing them to benefit from tourism creates positive incentives for the local people to conserve local wildlife (Boudreaux, 2007). Also, if conservancies had a more complete devolution of legal authority over the wildlife within their borders, they would be able to respond more quickly to problem animals and they would have increased incentives to protect threatened animals such as the desert elephants that might be found within their borders (ibid).

More so, the government's policy of devolving some rights to manage wildlife and to benefit from tourism seems to make provisions for local conservancies with incentives to protect wildlife, find ways to live with predators, and search for entrepreneurial opportunities to serve tourists. There are also improvements in the standards of living in some conservancies: schools are being repaired and improved; people have better, quicker, and easier access to hospitals; people's diets have improved; and some members have jobs that support themselves and family members (NACSO, 2020).

Like other natural resource management policies in the region, the evolution of Namibia's conservancies is linked to broader historical processes of colonisation and apartheid, and the highly skewed land distribution that is engendered by those systems.

Given that Namibia's conservancy policy has been heralded as the most progressive initiative of its kind in Southern Africa, IRDNC and other NACSO member organisations have accrued a substantial degree of legitimacy as innovative and pioneering contributors to this legislation (Nuulimba & Taylor, 2015). The overall increase in wildlife numbers has made more games available for community harvesting and trophy hunting, and many conservancies are now allotted sizeable game quotas for trophy hunting (ibid).

Overwhelmingly, the benefits of clear community boundaries have been raised first in the available literature. It has been argued that such boundaries can enable a community in future to refuse outsiders that may be seeking access to grazing land in their territory. Rather than securing exclusive rights over land, the promulgation of boundaries was thought of to protect access for the future (Bollig, 2016). Therefore, the legal reforms of the 1990s established a new form of commons, however, the distribution of benefits from these new commons is still problematic, and a point of concern not only for those planning and facilitating conservancies but also for local activists (ibid).

Methodology

Study Area

Located in the Ohangwena Region, the Okongo Community Forest and Conservancy, locally known as the "Omauni Community Forest", is situated about 70 km east of Okongo village in the Okongo Constituency (Mouton & Dirkx, 2004; Figure 1). The Ohangwena Region is one of the 14 administrative regions in Namibia. The Okongo Community Forest is part of the Southern African *Baikiaea plurijuga* (Zambezi teak) woodland ecosystem, with most parts of the forest area having deep Kalahari sand. Essentially, the forest area provides grazing to thousands of cattle and other small livestock (Angombe et al., 2000). The conservancy was established for the purpose of wildlife conservation; however, it is safeguarding many other natural resources (Hilfiker, 2011).

It is estimated that about 20 villages found in the boundaries of the Okongo Constituency depend on the community forest for subsistence (Mouton & Dirkx, 2004). Two tribes inhabit the villages, namely: the Ovakwanyama and San people; these tribes are considered as primary users of the community forest. Each of the villages is represented by two people who form part of a management body known as the Forest Management Committee, which acts as the custodian of the Okongo Community Forest on behalf of the community.

The inhabitants of the Okongo Community Forest rely mostly on subsistence farming with their main staple crop is pearl millet. In view of subsistence by the two tribes living in the Okongo Constituency, subsistence agriculture is the main livelihood for the Kwanyamas, while the San people mainly rely on external support, such as that from donor-funded organisations, government, NGOs and faith-based organisations (Mouton & Dirkx, 2004).

Figure 1: *Map of Okongo Conservancy*
(Source: Legal Assistance Centre, Ministry of Lands and Resettlement and Namibia Statistics Agency)

Research design

To achieve the study purpose, a mixed research design was employed, whereby both qualitative and quantitative approaches were used. The qualitative design was used to establish an in-depth understanding of the role of the community in the Okongo Conservancy, while the quantitative design was used for quantification (Mouton, 2008).

Data Collection

To collect data for this study, a semi-structured questionnaire was used, and this was administered to different households that were randomly selected from four villages, namely: *Omauni East, Omauni West, Oshalande and Kumininenge*. A key informant guide was used to interview key informants from target institutions that are known to have some history of active participation in CBNRM interventions such as water management, involvement in conservancy and community forest management, and grazing rangeland. Focus group discussions were held with participants from various institutions operating community-based water management, conservancy, community forest, and grazing programmes. This research technique was opted for as it encourages interactions with participants (Smithson, 2007). Focus group discussions were used to collect data on CBNRM programmes in four communities of the Okongo Conservancy, namely: *Omauni East, Omauni West, Oshalande and Kumininenge.* The focus groups constituted the core assembly of respondents who represented participants from four different categories, namely: *(i) employed, (ii) farmers, (iii) pensioners and (iv) unemployed*. Group discussions with each group consisting of 5 to 10 active and knowledgeable participants representing committees on water, grazing, community forest and conservancy were conducted.

Sampling Design

The study targeted the communities within the Okongo Constituency, with a sample size of 100 community members, and this included community members that are involved in conservation activities within the Okongo constituency. To ensure the inclusion of key subgroups within the target area, and the fact that the exact number of households in the area was uncertain, a stratified sampling technique combined with non-probability sampling techniques was preferred. Generally, purposive sampling is a non-random sampling technique (Tongco, 2007). In each of the four communities, a stratified random sample of 54 households was drawn from the household survey that was carried out in the community of the Okongo Conservancy in October 2014. The use of this sampling technique ensured inclusivity of key subgroups within the sample population, particularly the non-probability systematic sample that catered for the number of households in the village that was not well known. Therefore, randomisation presented an unavoidable impediment and unrealistic expectation. In the analysis of the results, the study used Ostrom's (1990) concept design principles for ensuring common property resources (CPR) in Southern Africa.

Results

Respondents' Demography

The study revealed that 28% of the respondents were in the age range of 40–49 years, while 28.3% were older than 60 years. In addition, 20% were in the age range of 50–59 years, while 13% were in the age range of 18–29 years and 30–39 years, respectively.

With respect to the education level, only 37% of the respondents had received primary education, although this was not completed, while 30% indicated that they had no formal education at all. Twenty per cent (20%) of them had attained some high school education, while 7% completed primary education. At least 20% of the respondents had received secondary education while only 2% had completed it. Moreover, only 4% of the population had completed tertiary education (see Figure 2).

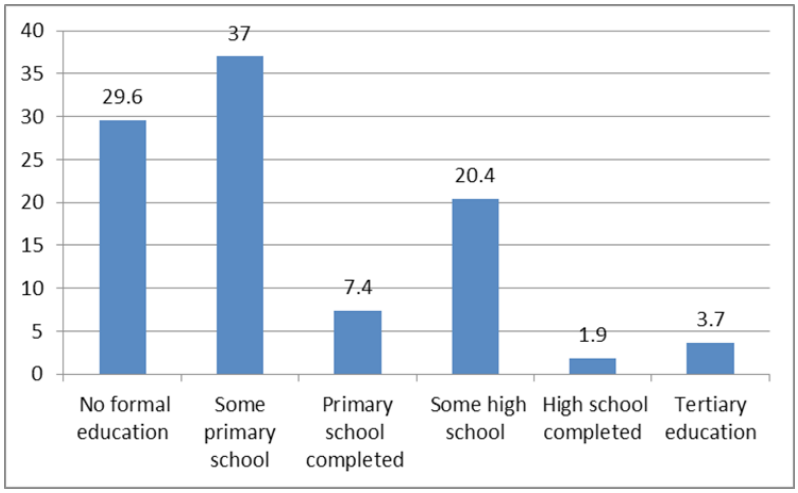

Figure 2. *Education attainment*

Furthermore, the composition of respondents comprised heads of households, and it included spouses, relatives such as sons, daughters and uncles, and a few non-relatives such as in-laws and employees. Most respondents were married, while only a limited number of the respondents were single, widowed, living together/cohabiting or divorced. Overall, it was established that there were more male-headed households compared to female-headed households.

Membership in the Various Management Committees

Evidence revealed that most community members are represented in various committees responsible for ensuring improved community livelihood and safeguarding the natural resources in the conservancy. The identified committees are concerned with the management of water points, the community forest, grazing, and conservancy. In terms of statistics, 51% of all the respondents, representing 94% of the study population, were members of the water committee, while 6% were not members of any specific resource committee. Furthermore, 63% of the respondents represented members of the Community Forest Committee, while 37% of the population were not members of this committee, nor were they aware of the value of forestry. Overall, a proportion of 26% affirmed being members of the conservancy. However, less than half (41%) of the respondents comprised members that belonged to the Grazing Committee, while 30% expressed total ignorance of their committee membership status (see Figure 3 below).

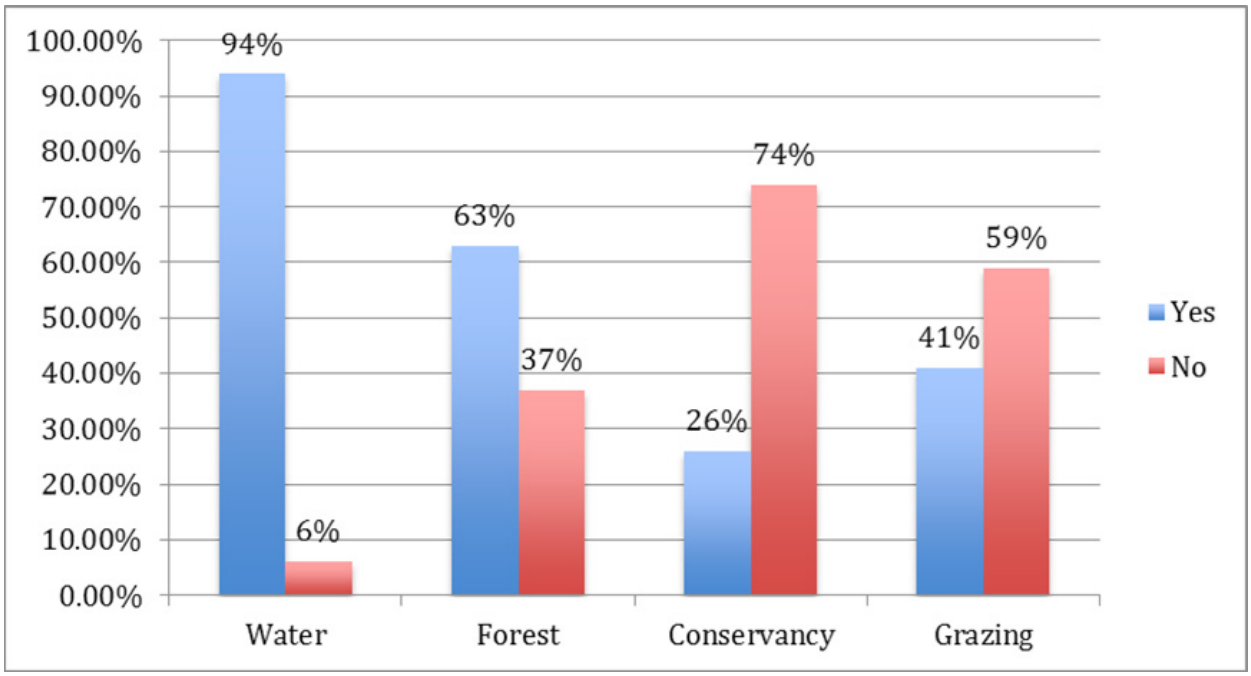

Figure 3. *Membership status of various committees*

Membership Motivation Nexus

Members of different committees identified various drivers for membership as

being important incentives and inspiration for associating or belonging to respective resource management groups. In terms of water management, 72% of the respondents indicated that access to the committee and use of water is the motivation to becoming a member, while 24% became members to contribute to water protection. In addition, 4% of the respondents were motivated to become members of the Paltry Committee given their interest in the maintenance of the water pump and generators. Conversely, 46% of community forestry groups identified forestry resources as being important to their livelihoods. Only 37% of the members aligned general participation to the conservation and protection of their catchment area to be a motivating factor for membership in the Community Forest Committee. Half of the respondents (50%) were members of the Conservancy Committee, and their motivation was derived from their participation in the conservation of natural resources. At least 25% of the conservancy members were elected to leadership, irrespective of their commitment to conservation. Furthermore, a quarter of the respondents (25%) observed that their motivation emanated from their commitment to eradicating illegal harvesting and hunting of wildlife in the community. In relation to motivation for attaining membership to the Water Point Committee, some of the participants of the focus group discussions said that:

> *We need water to drink and being a member of the water point committee makes it easy for us to access the water. We also have the responsibility of looking after our water, by managing it properly so that the water is always there to drink* (Focus group discussion 29.09.2014).

Interestingly, Grazing Committee members were incentivised by holding membership to the Grazing Committee which facilitated access to livestock grazing resources, and this invariably stimulated the protection of the grazing areas. A limited number of respondents identified their election to leadership positions as a motivating factor. In relation to motivation for membership in the Grazing Committee, some of the participants of the focus group discussions said that:

> *Being a member of the communal Grazing Committee means that our animals would have access to grassland* (Focus group discussion 29.09.2014).

> *We want to use the conservancy to access what it provides, but we also have the responsibility to look after the conservancy so that we do not deplete its benefits from it. Most of our animals depend on it as well* (Focus group discussion 29.09.2014)

The membership motivation nexus within the four study communities are summarised in Figure 4 below.

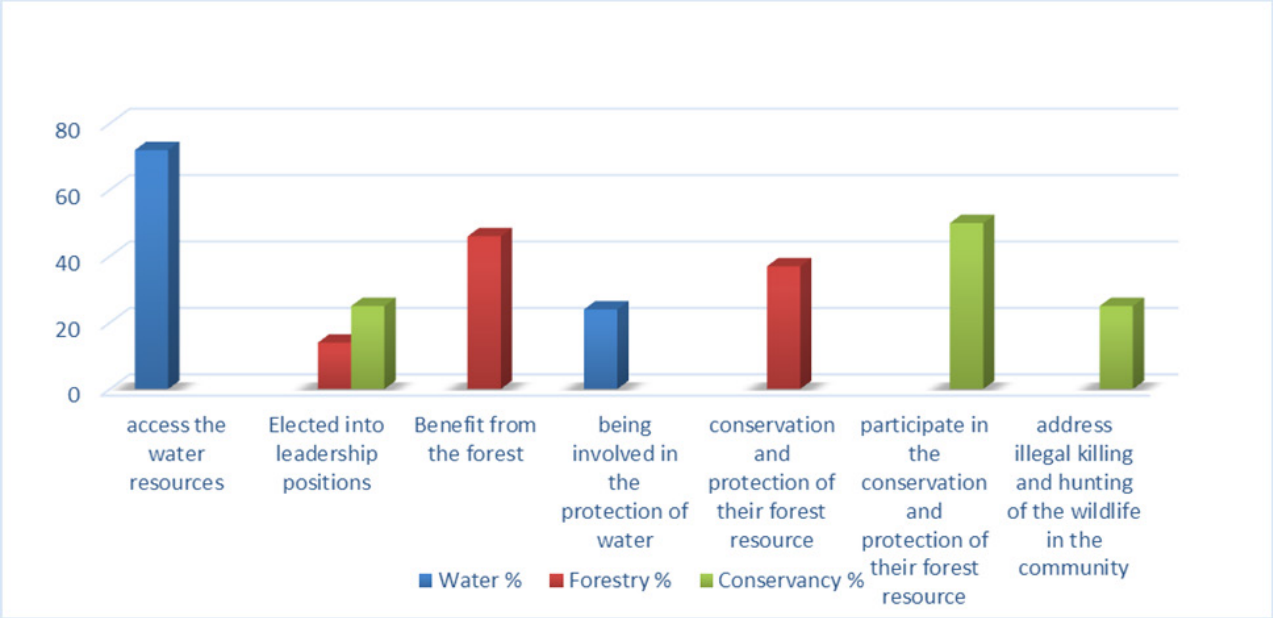

Figure 4. *Motivation for membership in different resource management committees*

The study observed a positive relationship between the government and the committee that was mandated to oversee natural resource management in the conservancy, and the members of the Water Point Committee, as indicated by 88% of the respondents. On the contrary, 20% of the respondents expressed ignorance concerning the relationship status of the government and the Water Point Committee. Given the management of the community forest, 75% of the respondents confirmed a positive relationship between the government and the Community Forest Committee. However, 20% of the members could not establish any relationship between their Conservancy Committee and the government. This could partly be attributed to the fact that some community members neither served in the leadership structures of the Conservancy Committee nor do they regularly attend meetings. Nevertheless, 80% of the respondents indicated that there is a positive relationship between the Conservancy Committee and the government.

Based on the findings, a limited proportion (9%) of the Grazing Committee members observed a non-involvement of the government in grazing issues, which was detrimental to their mutual relationship on the one hand, while on the other hand, 73% considered the relationship between their committee and the government as being good. However, 18% of the respondents expressed ignorance as they were not aware of the status of the prevailing relationship between the government and the Grazing Committee. The outcome of the relationship between the committees and the government is encapsulated in Figure 5.

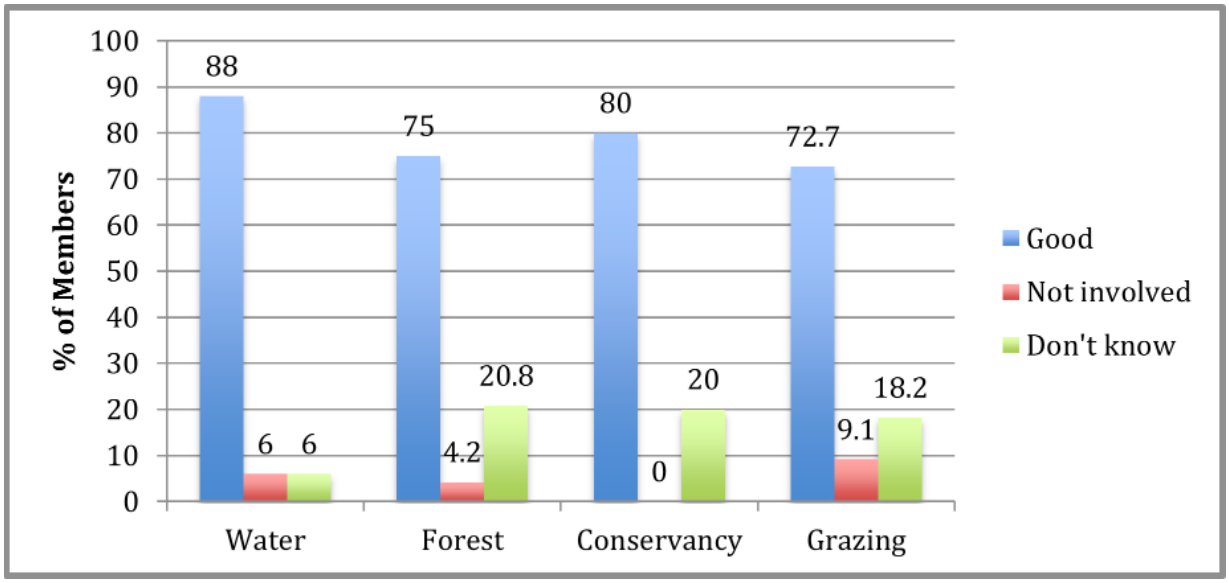

Figure 5. *Relationship between natural resource management committees and government*

The study attempted to establish an understanding of whether the government was involved in the establishment of the various committees that are operational in the conservation area. Evidence shows that there was a significant level of governmental involvement and support towards the establishment of the natural resource management committees. Some of the activities performed by the government included the provision of water infrastructure and supplies, capacity building for community members (drilling of boreholes, technical advice), and raising awareness in support of the establishment of rules, among others. Eleven per cent (11%) of the respondents indicated a lack of government involvement in the establishment of the WPCs.

In the nascent stages of identifying key operational areas of committees, government involvement through the line Ministry of Water, Agriculture and Rural Development (MAWF) was identified as being crucial in laying the foundation of the committees. The scope of government involvement included infrastructural support and financing, acquisition of necessary equipment, mobilisation of community members, awareness-raising, the election of new committee members, and setting up community rules (NACSO, 2010). Apart from infrastructural development, the government played other instrumental roles, that is, both financial and technical support roles for the community. Furthermore, government involvement extended to areas that are vital in facilitating and supporting the establishment of the Grazing Committee through the setting up of small-scale farming units and the erection of fences, as well as assisting in the setting up of the Grazing Committee.

The majority (88%) of the respondents indicated the existence of positive synergies between the government and the Water Point Committee. Furthermore, 75% underscored the existence of a good relationship between the government and the Community Forest Committee, while 21% of the members expressed a lack of awareness

regarding the nature of the relationship between the Community Forest Committee and the government.

Overall, the relationship between the Conservancy Committee and the government was largely considered good, as indicated by 80% of the participants. This was however not the same notion with the remaining 20% of the participants. A few of the members (9%) of the Grazing Committee emphasised the non-involvement of the government in this resource committee. At least 73% of the members indicated a positive relationship between the Grazing Committee and the government, while 18% were unaware of its existence.

The respondents indicated that they have not experienced any conflicts within the Conservancy Committee. However, the opposite is true for the Grazing Committee, where over 40% of the committee identified some conflicts, such as people not being willing to adapt to new ways of management like the fencing off the grazing land and clearing of land in the forest. Nevertheless, there were also those respondents (30%) who found no conflict at all, and those (30%) who were not aware of the conflict within the Grazing Committee.

Although most respondents who are members of the Water Point Committee (68%) observed conflicts within the committee, 26% indicated that there were no conflicts at all. Interestingly, some Water Point Committee members revealed that conflicts occur amongst members, particularly when it comes to the payment of their bills, which is often not honoured by some members. Sadly, some members are not cooperative at all, both with other members and with their leaders, as indicated by 17% of the respondents. Other conflicts occur because some committee members do not take their work seriously as revealed by 13% of the respondents. Some behave negatively when dams are without water, or when people in key positions are not paid in time, as indicated by 13% and 6% of the respondents, respectively.

Community Forest Committee members pointed out that the observed conflicts were mainly associated with access to resources such as illegal settlements in the forest area, harvesting of trees without the proper permits, boundary disputes, or settlement of people in the forest area by Traditional Authorities. These observations were revealed by 25%, 14%, 7% and 7% of the respondents, respectively. However, some members (18%) indicated a lack of co-operation with others as the cause of conflict. Furthermore, some members (18%) also indicated that there are no conflicts in the Community Forest Committee or they did not know about any, as revealed by 11%.

As an approach to conflict resolution, the conflicts experienced by the Water Point Committee were resolved by the Traditional Headmen, and this was revealed by 67% of the respondents. Community members and the headmen deal with them by discussing some of the key issues in a meeting. In addition, conflicts can also be resolved by putting restrictions on access to resources. The approach to dealing with conflicts in

the WPCs is more or less similar to the way forest committees handle them, where they are resolved during community meetings. This was revealed by 38% of the respondents, while 29% indicated that the committee discusses certain issues before they are shared with the community (29%). Nevertheless, a few of the respondents (9%), mainly those who experienced conflicts with access to resources, indicated that conflicts are never addressed. With regard to conflict management in the conservancy, although none had been experienced by the time of the research, conservancy members indicated that if conflicts occur, they will be addressed through community meetings or by the committee as revealed by 33% and 57%. respectively. Similarly, Grazing Committee members pointed out that should conflict occur, it will be resolved through community meetings by the committee as indicated by 64% of the respondents.

Discussion

The findings of this research revealed evidence of community conservation in the Okongo Community Forest and Conservancy, upon the devolvement of the rights to consumptive and non-consumptive use of natural resources and the management of wildlife, which includes tourism. The management of natural resources is further strengthened through the provision of infrastructure. Although CBNRM has been in existence for many years, it was only formally embraced in Southern Africa after the 1990s, such that it included the management of all natural resources, including water, forestry, and grazing, in addition to wildlife that has historically been at the centre of attention (Steiner & Rihoy, 1995).

The sustainable management of resources in the Okongo Community Forest and Conservancy is being promoted through the use of natural resource management committees. In such committees, there are certain members with specific responsibilities, such as the chairperson and treasurer, who ensure the coordination of various activities taking place within the conservation area (Dürr, 2004). However, generally, other CBNRM actors play a role in the management of the conservation area, including government representatives, NGOs, the private sector (tour operators), Conservancy Committee and staff, members of community-based organisations (CBOs), and other ordinary people who are not included in the mentioned groups.

The research further revealed the need to streamline the mechanisms of the devolution of resource management rights to local communities through increased participation of residents in a way that ensures equitable resource distribution. In this light, streamlining the devolution of resource management to communities should recognise the importance of training members while at the same time equipping them with valuable knowledge relevant to resource management. With this notion, it is suggested that the implementation of CBM is not dependent on the successful training of WPCs, as many other dynamics have a role to play. The ability to manage a conflict and look for solutions, for instance, is a skill that goes beyond training. This requires strategic leadership combined with the capacity to influence and motivate community members

(Matengu & Shapi, 2010). For devolution to be successful, the hurdles noted in this study need to be remedied by streamlining the concept of devolution through removing the usual hindrances that fail to appreciate the realities on the ground.

In terms of water resources management, the CBWM Strategy provided support to rural communities by availing affordable safe drinking water, which is managed through WPCs. This finding is not far from the findings of other studies, which have pointed out that local resource users who live in close proximity to the water resources are able to effectively manage resources because they derive specific benefits from them, and are aware of a loss to be experienced if the resource is depleted (Thakadu, 2005; Twyman, 2000; Western & Wright, 1994). As such, adherence to the National Water Policy of 2002 in providing an adequate supply of safe drinking water as a basic human need (Ruppel & Ruppel-Schlichting, 2013) should be upheld. On that note, our findings have shown that the accessibility and provision of clean, safe, and affordable water in the community was a perceived priority. Thus, the main reason for being members of the Water Point Committee is underpinned by the need to have ease of access to the resource, while at the same time protecting the resource. However, it was observed that a single household can have members in more than one water point to maximise accessibility and usage.

The inclination towards devolution has been to alienate communities, thereby leading to feeling isolated from the central government, thus abandoned. This resonates with Matengu and Shapi (2010, 46), who succinctly observed that “decentralization of water supply to communities should not result in state disengagement. Instead, it should empower communities with increased oversight and empowerment in form of continuous capacity building of Water Point Committee members, advising on how to address the encountered problems, and intensifying monitoring and evaluation”. However, our study noted that with regard to government support, it was evident that the government assisted with the provision of safe water and direct awarding of incentives to members who are actively participating in the management of their own water supply resources and took responsibilities over the ownership of water installations. Hence, the thrust of CBWM was to establish communities that were predominantly based in rural areas and active participants in the management of their own rural water supply, including the responsibilities that are necessary to undertake planning, decision making, operating, maintenance and repairing of their water installations.

The findings concur with the views espoused by Scanlon and Kull (2009), which identified institutional, policy and legislative infrastructure as being important attributes to support equitable, efficient, and sustainable water resource management and water service. Our findings affirm the significance of the wider national commitment, as evident within the study area through the existence of sectoral coordination, integrated planning, and management mechanisms. In the same breath, “CBWM should be espoused by greater policy and strategy clarity to make it efficient and successful” (Matengu & Shapi, 2010, 46). This necessitates integrated planning and management mechanisms with a lucidly drawn policy and transparently implemented strategy to make community

involvement in resource management efficacious.

Based on the findings of this study, there is evidence that government efforts in instituting the necessary policies and regulations to strengthen adherence to the laws are not in vain, thereby providing appropriate measures to sanction those that act at variance with the law. At an operational level, the government delegated the mandate to the local community as a way to exercise sufficient stewardship of the resources under their jurisdiction, while continuing with technical support to the committee and community as well as strengthening expertise, advice and delivery (MET, 2017). Increasingly, communities realise that they need to take charge of their lives and discharge functions that work in their interest.

Specific aspects that emanated from this study further suggest the need to consider some improvements in the conflict resolution mechanisms in potential grazing related issues. It was clear that enforcement remained essential to achieve reduced illegal use and access to resources for grazing. There was an observed need for the government to improve mechanisms to support the resolution of matters of settlements by promulgating laws to serve as deterrents or punishment for specific offences. To this end, there was justification for government interventions in conflict resolution, including clarifications regarding the rules. This was consistent with earlier findings by Mosimane and Silva (2012), who underlined the architecture of the Conservancy Management Committee, their management, and benefit distribution plans. Regarding the Community Forest Committee, the involvement of the government, particularly the line ministry (MAWF), in the establishment of the Community Forest Committee was considered an important undertaking that supports the provision of infrastructure and finance from the onset.

Evidence revealed that forestry, water conservation and grazing resources constituted important natural resources within the community, and they were well distributed within the distinct boundaries, widely known to the communities. Our findings indicate that community members prioritised forestry resources as important resources to ameliorate local community livelihoods, despite a few having identified elected positions as sources for additional incentives and safeguarding of the resources. Overall, there was a strong sense of knowledge of the boundaries that exist among the local communities, thereby affording them the right to use and management of the resource pools. However, not all community inhabitants constituted members of the conservancy; therefore, there was an observed restriction to access and the use of the resources of such residents of the study communities.

It is interesting to note that the management resources of concern i.e. water, biodiversity, forestry resources, and community grazing areas have guiding policies and supportive legislations that are familiar to the communities, which regulate the access and use of natural resources. Our findings share an interface that decentralisation promotes good governance and other democratic ideals by broadening access to decision-making and giving voice to communities in governance institutions. Within the

context of rural water supply, CBWM is considered the best approach to cost serving and community empowerment (Matengu et al., 2010, 7). It is argued that the majority of the communities living on communal lands predominantly do not have access to important natural resources such as clean water supply, grazing rangeland, and forest resources, among others. Thus, CBNRM allows the residents to have such access and be proactive by taking charge of lives through efficient, effective, transparent as well as equitable management of their natural resources.

According to Ostrom's (2005) sixth design principle, users and their officials have rapid access to low-cost local arenas to resolve conflict among users or between users and officials. Likewise, Weeden and Chow (2012) found that one of the important key principles of sustainable governance scenarios involves conflict resolution mechanisms. Therefore, the results point to a strong collective action within the common pool resource management in Okongo, and it indicates that community members were aware of the rules that govern common pool resources; as a result, there exists no conflict in the community regarding the shared resources. Although there are cases of conflict experienced with regard to some shared resources, they are easily dealt with because users of the resources have access to local arenas to resolve conflict amongst users.

The representation of household members on one of several shared resource committees means that household interests are better represented, and better decisions are made to resolve conflicts should they arise. This is supported by Thoms (2008), whose narratives indicate that households' interests are better represented when they are involved in making important community decisions about resource use, development and finances.

Conflict resolution mechanisms are amongst the key principles of sustainable governance scenarios. For water, the most common conflict is caused by the dispute of non-payment by some members who make use of the resource and choose not to co-operate with the leaders and with other members. A prior study found that the Conservancy Management Committee prepares management and benefit distribution plans, holds regular committee meetings and annual member meetings, and the government helps to mediate where conflict occurs (Mosimane & Silva, 2012).

There is strong consensus within the community regarding conflict resolution, where most of the community members agree that the process of conflict resolution is highly acceptable. However, there are those members of the various CPRs, such as members of the grazing, conservancy, and community forest committees, who are of the opinion that the process of conflict resolution is not acceptable.

The findings of the study suggest a departure from the study by Matengu et al. (2010), who argue that CBWM "is an ideological battle between those who believe that the government cannot and should never be allowed to abdicate its rural water supply responsibility, and those who believe that cost recovery promotes the sustainable use

of water and enhances the democratisation process through community involvement" (Matengu et al., 2010, 100). What emerged from this study was the appreciation of the evidence of efficacy, aptitude, and integrity of CBNRM delivery structures. This is apparent in incentivising membership, as evident in the good relationship that exists between government functionaries and the resource committees responsible for the sustainable management of natural resources. Cooperation has been observed between the government functionaries in the form of line ministries and the locally constituted committees that are responsible for the management of natural resources.

Based on the research, it was evident that the majority of community members had defined and delineated their resource boundaries. This is considered a practical measure that secures access to the natural resource and demarcates their boundaries for other resource pools such as conservancy, grazing and community forestry; it is furthermore an important incentive and inspiration to attaining improved communities' livelihood, including safeguarding the natural resource integrity for present and posterity needs.

To this end, Namibia's legislative system on CBNRM has been widely praised for its success in the country and also lauded as the best in Southern Africa. The policies, for instance, the water policy, makes provision for equitable and equal access to water while giving power to the communities to govern the resource through the CBNRM approach—an approach that has made a positive impact on local communities by benefiting from shared natural resources. Today, CBNRM uses that deep local knowledge, long-standing patterns of behaviour, and institutional arrangements in rural areas to manage some natural resources. Notably, community forests, "enable rural communities to acquire the rights, capacity, and resource information for sustainably managing their forest and pasture in collaboration with relevant authorities and stakeholders" (NACSO, 2012, 31). The impact of CBNRM on the local community cannot be overemphasised, and NACSO's (2012) report suggests that there are currently 86 registered conservancies, covering an area of 166,045 km² and these are understood to benefit over 227,941 people (NACSO, 2020).

The National Policy Framework for Community-Based Natural Resource Management stems from Namibia's Constitution, Article 95, which stipulates that the State is required to ensure "the maintenance of ecosystems, essential ecological processes and biological diversity and the utilisation of living natural resources on a sustainable basis for the benefit of all Namibians, both present and future". The Government of the Republic of Namibia's Policy on CBNRM, therefore, has a CBNRM programme that recognises the rights and developmental needs of local communities, recognises the need to promote biodiversity conservation, and empowers present and future generations to manage and benefit from wildlife, forestry, fisheries, and other natural resources in an integrated manner, which is also fully and recognised as a rural developmental option. These rights include rights to access, use, control and benefit. The main aim of the policy is to provide a framework that promotes the wise and sustainable use of natural resources on state land outside protected areas as well as the promotion of integrated land and

natural resource planning and decision making that considers the most appropriate land uses based on land capability, optimum economic return, and environmental and human needs. In essence, it is a management approach that generates economic benefits through conservation and promotes the development or strengthening of local institutions supported by national ones to promote rural development. Policies such as the policy on CBNRM ensure maximum community beneficiary participation.

Conclusion

CBNRM in the Okongo Community Forest and Conservancy positively affects the livelihoods of residents, particularly those who directly or indirectly benefit from a devolved and streamlined system of resource management. Our findings support the presumption that CBNRM is a vital approach for promoting decentralised economic welfare and growth, and that it is the only major forum available to the residents for them to exercise their rights over the resources found in their respective communities, with minimal interventions from the central government. It is conclusive that there is a relationship between the existing natural resource management committees and the government towards the realisation of sustainable natural resource management. Despite the differences that emerged in the study concerning governmental intervention procedures at a community level in the management, control and regulation of the accessibility and usage of natural resources (water, grazing land, land, wild animals), CBM was envisaged to be effective in improving the livelihoods of the residents of the four study communities.

Nevertheless, the results illustrated that despite a gap that exists between the provision of material benefits to residents of the four communities and an opportunity for them to locally manage resources, it is clear that significant strides have been made from the resources managed by communities through the central government. For instance, an assessment of common-pool resources, wildlife, water, forest and grazing in the Okongo Conservancy shows that the government, through its Directorate of Rural Water Supply, has achieved notable steps in remedying issues of rural water supply. The devolvement of rights to communities to manage natural resources through the Nature Conservation Amendment Act of 1996 is a means to strengthen conservation. Furthermore, the study demonstrated that the researched communities are now in charge of their water resources and they have taken ownership over them and are willing to be members of resource committees. As this study noted, the involvement of communities in natural resource management confirms the collective efforts towards the sustainable natural management of the resources being safeguarded by the Okongo Community Forest and Conservancy.

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