

Community participation and Community Based Wildlife Resource Management in Mumbwa Game Management Area in Zambia

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Abstract: The purpose of this study was to examine the extent of community participation in natural resource management in Mumbwa Game Management Area of Zambia. Quantitative and qualitative data were gathered through interviews and surveys in the case-study area. The data were analysed with descriptive statistics. The study found that local community participation in wildlife resource management was passive in the study area. This was because the Department of National Parks and Wildlife was not actively engaging the local community in decision-making process of wildlife resource management in the area. The study recommends that the is active participation of the community in managing wildlife resources in the study area would ensure the sustainability of natural resources and hence promote an effective Community Based Natural Resource programme in Mumbwa Game Management area.

Keywords: CBNRM, community managing, participation, GMAs, wildlife resources

I. INTRODUCTION

Several scholars (Milupi *et al.*, 2017; Milupi *et al* 2020; Pimbert and Pretty 1994; Mashinya 2007, Murphree 2004, Nelson 2008 and Luyet 2012) have recognized that community participation in natural resource management is an important mechanism to ensure sustainability of natural resources. Ostrom's design principle for common pool resources also recognises the importance of active participation of resource users in managing their resources as an ingredient to sustainable utilization of natural resources. The Community Based Natural Resource Management (CBNRM) approach has received much support in the past years because of its dual objective of achieving both biodiversity conservation and social economic objective (Kellert *et al.* 2000 and Gibbes, 2010) The approach became more popular in the late 1970s and early 1980s (Songorwa, 1999) when it became obvious that governments in most African countries were excluding local communities from becoming involved in the management of their natural resources. The result of excluding local communities from becoming involved in the management of their natural resources, led to a degradation and unsustainable use of natural resources (Ayoo, 2007). Conservationists and policy makers, therefore, considered CBNRM as a viable and

sustainable approach to natural resource management because it will yield numerous advantages economically and environmentally (Ozuruoke *et al.*, 2021). Active participation of the local communities in wildlife management further promotes sustainable management of wildlife resources which would have positive conservation implications (Milupi *et al.*, 2017). Using Ostrom design principles in examining the sustainability of wildlife resources as noted by Milupi *et al.*, 2020, meaningful decision-making being an active way of community participation is key in ensuring wildlife sustainability.

CBNRM in Zambia was introduced in 1987. The strategy was aimed at creating awareness in the rural communities of the importance of conserving wildlife resources. This is because poverty in Zambia is more in rural communities than in urban communities (CSO 2012; Richardson *et al.* ,2012).The approach was also introduced in order to improve the livelihood of the local people in rural communities living in the national parks and GMA (ZAWA, 1998) The poverty level is estimated to be at 77.9 % in rural areas compared to 27.5 % in urban areas (CSO, 2012). This includes local communities living in GMA. GMA are areas surrounding national park and they serve as buffer zones. In the GMA, both humans and animals are supposed to co-exist. Illegal activities such as poaching, expansion of human settlements due to human population growth is rampant in the GMA. The illegal activities provide cash and meat. The result of these illegal activities is loss of biodiversity and the shrinking of wildlife habitats (Simasiku *et al.*, 2008). These pose a threat to the environment, wildlife and people.

In this paper, we examine the extent of community participation in wildlife resource management in Mumbwa Game Management Area of Zambia using active participation as a social indicator. We regard this as important because active participation of the local community in the management of wildlife resources could promote sustainable wildlife resource management in the study area.

II. METHODOLOGY

The survey research was conducted during the period November - December 2020 at the Mumbwa GWA site Zambia. The data collected consists of primary data through household surveys and key informants, and secondary data collected through policy documents such Wildlife Act 2015 and published journal articles. The study was based on secondary and primary data collected between November and December 2020. Secondary data were derived from published materials and policy documents, whereas primary data were collected through two methods, namely household surveys and key-informant interviews, as outlined below. Secondary data analysis provided a better understanding of the evolution of CBNRM in the present study, journal papers, the ZAWA Act, the Forest Act, the Fisheries Act, national policy on environment (2007) and government records such as the national environmental policy were examined. These documents provided background information for the research and allowed for assessment of the suitability of the project before conducting interviews (Owen, 2014).

Household surveys

Household surveys generated quantitative data through the structured, researcher-administered questionnaires, which comprised both closed and open-ended questions. The sampling unit for Mumbwa GMA was the household, with the target respondent being the household head. Households were randomly selected. In total, 100 household heads from the Mumbwa GMA were interviewed. Both men and women were interviewed during the survey. Of the respondents interviewed in the Mumbwa GMA, 63.1% were males, while 36.9% were females; Three chiefdoms, namely Kabulwebulwe, Mulendema and Chibuluma, were covered in the Mumbwa GMA. To ensure that the questionnaire was suited to the context, a pretest was conducted in one of the chiefdoms in the Mumbwa GMA. The households were interviewed as regards the following aspects of CBNRM:

- Community involvement in CBNRM
- Decision making process in wildlife resource management
- Sensitisation Activities

Key-informant interviews

Key informants, including ZAWA officials and traditional chiefs from the Mumbwa and Lupande GMAs, were interviewed. The ZAWA officials were interviewed in English, while the traditional chiefs were interviewed in their respective local languages, which included Kaonde, Lamba, and Tonga. The responses of the traditional chiefs were transcribed and then later translated into English with the help of research assistants used in the study areas. The chiefs were specifically asked questions about their role in wildlife resource management, and the ZAWA officials were asked about the performance of the CBNRM Programme in Mumbwa GMAs in relation to community involvement. Quantitative data were coded and processed using Statistical

Package for Social Sciences (SPSS) software to generate the frequencies of responses. Below, we report the results of the study, highlighting the nature of community participation, CBNRM players and challenges faced by CBNRM initiative in the study area.

III. METHODS ANALYSIS

Results

Community Involvement in wildlife resource management

As reflected in table 1, most of the respondents (72.0%) interviewed in Mumbwa GMAs, believed that they were not involved in the management of wildlife resources in the GMA. This shows that 71.6% or 72,0 (show above statement) of the local people were not involved in wildlife resource management. Only 28.0% of the respondents were involved in the management of their wildlife resources through being employed as village scouts in the Community Resource Boards (CRBs) in the GMA. Their role was to help ZAWA in monitoring and enforcing the law by arresting poachers.

Table1: Respondents' responses on involvement in wildlife resource management

Response	frequency	percentage
Yes	72	72.0
No	28	28.0
Total	100	100

Decision making process in wildlife resource management

Regarding being involved in decision making process of wildlife management in the study area, most respondents (83%) said were not involved. Only few respondents (17%) said were involved in decision making process regarding wildlife resource management in their area (Table 2)

Table 2: Respondents' responses on decision making process in wildlife resource management

Response	frequency	percentage
Yes	83	83.0
No	17	17.0
Total	100	100

Regarding attending wildlife management meetings, most respondents (86%) said they do not. Very few (13%) said they do attend the meetings (Table 3)

Table 3: Respondents' responses on whether they attend wildlife resource management meetings but do not say anything

Response	frequency	percentage
Yes	13	13.0
No	86	86.0
Total	100	100

Responses on whether the local community is only informed of what has been decided regarding wildlife management in

their area indicated that most respondents (83%) said yes and only (17%) said no to the statement.

Table3: Respondents' responses on whether they are only informed of what has been decided regarding wildlife management in their area

Response	frequency	percentage
Yes	83	83.0
No	17	17.0
Total	100	100

Sensitisation Activities

Responses on organisations involved in community sensitisation about wildlife conservation showed that 86% of respondents confirmed that there is little community sensitisation on wildlife conservation in the area (table 4)

Table 4: Respondents' responses on sensitisation activities in Mumbwa GMA

Response	frequency	percentage
Yes	11	18.0
No	84	84.0
Don't Know	5	5.0
Total	100	100

Wildlife resources in Mumbwa GMA

Responses on the knowledge of wildlife resources in the GMA showed that local community are aware that wild animals are becoming fewer in the recent past (Table 4 and 6)

Table 5: Respondents' responses on whether animals are becoming fewer in Mumbwa GMA

Response	frequency	percentage
Yes	11	70.0
No	84	26.0
Don't Know	5	4.0
Total	100	100

As indicated in table 6 below, the respondents in Mumbwa GMA are aware that there were more wild animals in the past 10 years.

Table 6: Respondents' responses on whether there are more wild animals now than 10 years ago in Mumbwa GMA

Response	frequency	percentage
Yes	11	25.0
No	70	70.0
Don't Know	5	5.0
Total	100	100

Policy provision/position on community participation in wildlife resource management

Information from policy documents that were examined, such as the ZAWA Act (2015) and the

National Policy on Environment (MTENR, 2007) stipulates explicitly that the local community should be involved in the planning and establishment of CRBs but does not offer insights on how they should participate in the GMAs. The policy therefore is not clear on the nature of community participation in the GMAs as there are several types of participation according to Pimbert and Pretty 1994 among which some do not promote active participation of the local community.

IV. DISCUSSION

The aim of this study was to examine community participation in CBNRM initiative in Mumbwa GMA using active participation as a social indicator in relation to Ostrom design principles of natural resource management. The study showed that local community participation in wildlife resource management in Mumbwa GMA was passive. This was because the local community were not involved in decision making process as they were told what had already happened agreeing with Pumbert and Pretty 1994 and Mashinya 2007 who noted passive participation as one of the weak ways of community involvement in wildlife resource management. The passive community participation shown in the study area according to Pimbert and Pretty 1994 does not lead to an effective CBNRM. Furthermore, the passive participation exhibited in the study area does not promote wildlife resource sustainability as the study indicated that animals were becoming few in the GMA hence wildlife sustainability is questionable. This is further confirmed by Milupi *et al* 2017 who noted that only active participation of the local communities in wildlife management does promote sustainable management of wildlife resources thereby leading to a positive conservation implication. The unsustainable use of wildlife resources in the study area is further indicated by the study where the number of wild animals in the study area are less than they were 10 years ago (Table 6).

The study further showed minimal community sensitisation in the study area which could have contributed to passive community participation. This agrees with Milupi *et al.*, 2020 and Milupi, 2008 who noted that sensitisation activities through environmental education could lead to active participation of the local community because they would be knowledgeable of the reasons behind wildlife conservation

Secondary information from Zambia Wildlife Act of 2015 provided for the active participation of the local community in the management of wildlife resources in their GMA or in open areas falling within its jurisdiction through the creation of CRBs. One of the many functions of ZAWA was to share the responsibilities of management of the GMA with the local community (ZAWA, 1998). This however was not the case in the study area. In order to have meaningful participation of natural resource users, Campbell and Vainio-Mattila (2003) observed that effective participation should have occurred at all the stages of the CBNRM programme from initial development and implementation to decision making, data collection and during programme evaluation. Furthermore,

Measham and Lumbasi, (2013) also observed that for CBNRM to be effective, it must be initiated by the communities themselves rather than by state managers or donors. Recruiting of village scouts came at the end of the conservation initiative where the offenders were charged for their wrongdoing.

V. CONCLUSION

The results from Mumbwa GMAs showed that local community participation in wildlife resource management was passive. This was because the local community were not involved in the decision-making process of wildlife resource management. The findings further revealed that there was lack of sensitisation activities done in Mumbwa GMA and was mostly conducted by NGOs Department of national parks and wildlife (DNPW) according to the study findings was not very active in community sensitisation as their role was mostly seen to enforce the law and punish the offenders. The study therefore recommends that, for CBNRM programmes to be effective in Mumbwa GMA, greater attention should be paid to the active participation of the local community through involving the local community in decision making process of their wildlife resource management. Doing so would promote effective CBNRM in the study area and promote sustainable management of wildlife resources, which would have positive conservation implications. It is further recommended the policy should clearly stipulate how the local community should be involved in the management of their wildlife resources, something that is not presently provided for. In order to promote active participation of the local community in wildlife management in the study area, the study finally recommends that DNPW to promote local community sensitisation through Environmental Education.

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