



## Socio-Economic Benefits of Community Participation in Wildlife Management in Zambia

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### ABSTRACT

Participation of local communities in wildlife management through Community resource boards (CRBs) has been in existence for many years. However, the socio-economic benefits regarding community participation remains questionable. The main objective of this study was to investigate the socio-economic benefits and challenges of community participation in sustainable wildlife management. A survey was conducted with the households living in Chiundaponde chiefdom. Stratified random sampling was used to select 170 households. Data for this study was collected through semi-structured interviews with heads of households, focus group discussions with CRB members and community meetings. The results revealed that socio-economic benefits derived from wildlife resources have not made a great impact in uplifting the standard of living. Furthermore, households living in GMAs have lower average income than households in other rural areas. However, the study has established that there is a link between sustainable wildlife management and improved rural livelihoods. This is so because revenues from wildlife are used to build schools, clinics, roads, bridges etc. It also offers employment to local. However, the proportion of people who benefited from wildlife was not significantly different from those who did not benefit (Pearson  $\chi^2 = 2.9$ ,  $df=2$ ,  $p < 0.24$ ). Rural poverty and lack of food security contribute to poaching in protected areas. Therefore, the solution lies in improving the local capacity for investing wildlife revenues into sustainable revenue generating activities

**Keywords:** wildlife management; socio-economic benefits; Chiundaponde chiefdom.

### 1. INTRODUCTION

The Zambia wildlife Act No. 14 of 2015 enhance community participation in Wildlife management by specifically providing for the formation of community resources boards (CRBs) as local institutional structures through which local communities in Game management areas (GMAs) and open areas could collaborate with the Department of National Parks and Wildlife (GRZ, 2015). The reward to communities through CRBs for co-managing the wildlife is participation in sharing the benefits generated from the utilisations of wildlife (Arjunan et al., 2006; Child, 2004). The communities decide how their share of the benefits/revenue is to be used; and this is usually devoted to community projects thus helping in community development and poverty reduction

(Emerton, 2001; Ashley, 2002). According to (Kalyocha, 2000; Fernandez et al., 2009), the Zambian government recognises the important role of the wildlife sector in the economic development process of the country and also the valuable input of the local communities in wildlife management in GMAs and open areas. It is for this reason that a comprehensive community-based- natural resource policy for GMAs and open areas has been formulated to provide a framework to guide the participation of various stakeholders in wildlife management in GMAs and open areas (Simasiku et al., 2008). The government of Zambia continues to support the involvement of local communities in the sustainable management of wildlife resources (ZAWA, 2010). Community resource boards (CRBs) seek the support of local communities and the private sector to ensure sustainable use of wildlife resources (Marks, 2005). The challenge for Zambia is to consolidate and utilise the lessons learnt from community-based wildlife management, for the nineteen years so as to develop a new phase of initiatives that would benefit both the wildlife estate and the rural populations of Zambia (Arjunan et al., 2006).

The ADMADE–Zambia, programme “Administrative Management Design for Game Management Areas” funded by USAID through the Wildlife Conservation Society (WCS) of the New York Zoological Society for example benefited the communities in the Bangweulu GMA in that there were increases in the flow of revenue into rural communities and this resulted in the promotion of secondary, small scale business offering a range of services to the community and an increase in economic activities from wildlife (ZAWA, 2002 ; Child, 2004). The socio-economic benefits that were attained in the ADMADE programme in Bangweulu GMA are similar to those in the communal based natural resources management programme for indigenous resources (CAMPFIRE) programmes in Chikwarakwara village in Zimbabwe (Sibanda,2004). However, it is important to note that both ADMADE, under the National Parks and Wildlife Services and the community based natural resource management under Zambia Wildlife Authority (ZAWA), approaches had common features focusing on empowering local communities in wildlife management (Mpemo, 2002; Pitt et al., 2006). It is nevertheless, appreciated that the ADMADE programme laid the foundation on which correct and future community programmes are based regarding socioeconomic benefits of joint wildlife management (Chabwela and Haller, 2010). Benefits sharing according to the convention on biological diversity require that benefits are shared fairly and equitably with all who have contributed to the resource management (Ancrenaz et al., 2007). The benefits which may be monetary or non-monetary are directed in such a way as to promote conservation and sustainable use of biodiversity (United nations world trade, 2006). This aspect of incentive creation is core to this assertion and forms the foundation for community involvement in wildlife resource management (Lewis et al., 2011).

CBNRM programmes in Zambia have to a larger extent had only limited impacts on livelihoods except in a few isolated incidences especially where wildlife resources are high and human populations small (Child and Clayton,2002). This has mainly been so because the magnitude of benefits has generally been small resulting in insignificant impacts on community livelihoods especially at the household level (Virtanen,2003). The investment of revenue from CBNRM programmes into social infrastructure and services such as schools, clinics and water supply has remained dominant and yet questionable as an incentive (Akumsi,2003). This so because individuals or households would rationally want to get their income paid in cash rather in social infrastructure

(Dejanvry and Sadoulet,2001). However, where cash dividends have been tried under LIRD–Zambia, Luangwa integrated resource development project” funded by the Norwegian Agency for International Development (NORAD) they turned out to be too small to make a difference in per capital income (Emerton,2001). Furthermore, current CBNRM programmes tend to benefit a limited number of people (Barrow and Fabricus,2002). The number of local people who secure employment from these initiatives is small such as community scouts and CRB committee members as volunteers. Thus, by large community participation in wildlife resource management does not fully address livelihood security and diversity in a holistic manner that could link to community livelihood activities and strategies (Kipkeu et al., 2014a). Surely most of the current CBNRM programmes have remained isolated as single resource income generating activities without integration into overall local livelihood systems (Roe,2001). While priority livelihood issues at household level focus on income and food security and other vulnerability issues, CBNRM benefits currently are in terms of employment and incomes. Thus, local communities continue to focus on strategies that have a direct link to their daily needs (Brockington and Schmidt-Soitau,2006; Kipkeu et al., 2014a).

The differential benefit sharing approach in CBNRM is aimed at rewarding communities according to their input and participation or contribution in the management of wildlife resources from which benefits are derived as an incentive for more community participation (Bajracharya et al., 2005). Thus, differential inputs must result into differential benefits meaning those communities living with the resource and bearing a higher cost should receive higher benefits than those who do not bear these costs (Khadka,2010). As a principle, the differential benefit approach has largely not been realized in most of the CBNRM programmes in Zambia as revenue share percentages are preset (Simasiku et al., 2008). There are no rewards for example tied to recorded levels of law enforcement related to illegal incidents. Thus, there is no positive correlation between quality of management provided and magnitude of benefits because the incentive for good management is not rewarding. (Hiborn et al., 2006).

### *1.1 Distribution of benefits.*

Who gets what and why? How are the economic and intangible benefits and costs distributed over all stakeholders involved? According to De Merode et al., (2001) distribution of benefits is probably the most crucial component of CBNRM and if not worked out in sufficient detail, becomes a potential stumbling block for community based organisations (CBOs). A CBO with a lot of money in the bank may lose the interest/support of its members when they see that their living conditions, do not improve (Kipkeu et al., 2014b). A CBO which is run by a small elite group may see most of its funds benefiting this group either in the form of high sitting allowances or by projects which only benefit a few. Given that these communities live in areas that are gazetted for sustainable management and utilization of wildlife and communities express support for conservation in anticipation of benefits. It is common knowledge that despite the income received from safari hunting by communities in GMAs, the benefits are not enough to impact on households (Adams and Hulme,2001b). According to Ashley et al., (2002), it is unrealistic to pursue a conservation agenda without stimulating economic activities and generating benefits at household level. The major incentive for the

community is that improved wildlife conservation may lead to increased incomes from hunting concessions which would benefit the community within the GMA. Under the Zambia wildlife Act number 14 of 2015 CRBs are supposed to integrate natural resource management with community development using 50% income that they are entitled to from safari hunting and 20% from concession fees in the GMA as an incentive.

### *1.2 Challenges*

Community access to wildlife resources is more difficult compared to other resources such as forestry and fisheries (Andrew-Essein, 2014). In most areas, local communities look at wildlife as meat on the hoof, a serious agricultural pest and a resource that only the rich can easily exploit (De Merode et al., 2004). This has a serious impact on the management of wildlife thus the community would make use of any opportunity to illegally extract the resources due to the situation they find themselves in (Ashley et al., 2002). HIV/AIDS have continued to be a problem in the communities with a devastating effect in the management of wildlife resources. Many widows, orphans and vulnerable children become heads of household and the children are forced to drop out of school (Songorwa et al., 2001b). These have resorted to activities such as poaching that impact negatively on the environment (Bennett, 2002; Gadd, 2005). Rural communities rarely have the resources and skills to manage wildlife resources completely on their own (Simasiku et al., 2008; Roe et al., 2009). Even though indigenous communities may at one time have had effective systems for sustainable wildlife management, the socio-economic and technological foundations of those systems are often eroded or completely gone, and today communities are often less concerned and equipped to conserve their wildlife resource base (Paris et al., 2001; Shibia, 2010). The participation of local communities in wildlife management is limited to the recruitment of community scouts who under the supervision of wildlife police officers can perform duties of wildlife police officers in the areas of jurisdiction of the CRB (GRZ, 2015). Therefore, communities on their own cannot be entrusted with the management of wildlife without supervision from the DNPW (Posey, 2002). The CRBs and other local level institutions developed for CBNRM implementation make decisions through their committees on behalf of the community. However, where literacy levels are low in the community and a few local elites exist, these committees may sometimes make decisions that do not reflect the needs or aspirations of the community (Hara, 2004; Ngoufo et al., 2014).

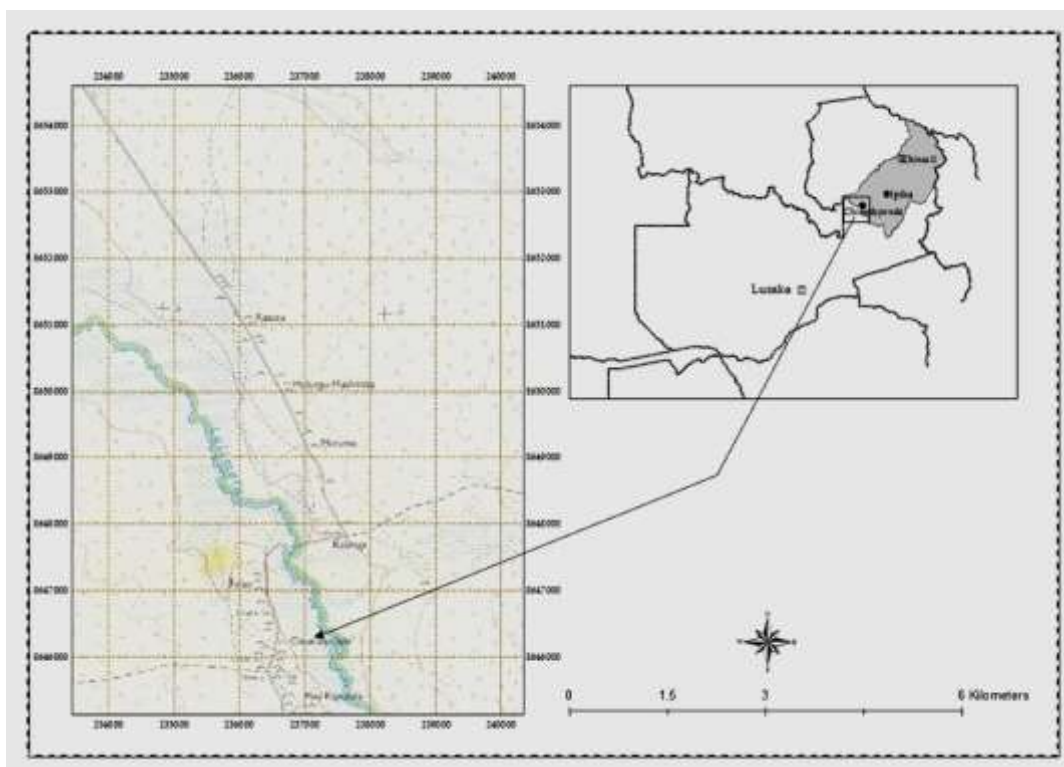
Transparency and accountability are key to successful community based programme implementation (Child and Clayton, 2002). Thus, a successful CBO must be transparent in decision-making and in accounting for the execution of the decisions made. With particular reference to CRBs, Village Area Groups (VAGs) there is still lack of transparency and accountability at all levels. Preventing situation where CRBs are dominated by the local elite critically depend on the ability of VAGs to keep CRB accountable and transparent to their local people (Simasiku et al., 2008). Unfortunately, due to a number of reasons, one of which is lack of capacity of the communities to undertake quota setting. This remains a problem in wildlife utilization and benefit sharing between government and the communities (ZAWA, 2004).

On average, households in GMAs gain from living in GMAs, but benefits accrue to households that are relatively already well off. This is supported by audit reports of CRBs in the Kafue National Park system which revealed that a larger proportion of the expenditure went to allowances, accommodation and meetings (Simasiku et al., 2008). It is unfortunate that resident communities in GMAs do not seem to benefit when reports from Kenya and Uganda reveal that people derive significant benefit from living alongside wildlife. A call was made for a comparative study to show how wildlife management in other African countries has benefited their rural communities (Gadd, 2005).

## 2. MATERIALS AND METHODS

### 2.1 Study area

The study area Chiundaponde is situated on the western side of Mpika Boma and is about 120 km from Mpika Boma. The area is divided into two parts the upland i.e. plateau and the Bangweulu swamps (Chikuni area). Chiundaponde lies between 12° 15' S and 30° 35' E.



**Figure 2.1:** Map of Zambia: Mpika District and Chiundaponde (Source: ZAWA, Atlas 2012)

### 2.2 Vegetation type

The natural vegetation of the plateau consists almost entirely of Miombo woodland with *Brachystegia*, *Julbernardia* and *Isoberlinia* as dominant species. *Terminalian* species occur where the soils are water logged

for most of the year and are characterized by termite mounds and low shrubs. (Chidumayo, 2012). Generally, Chiundaponde has two major vegetation types namely Miombo woodland on the plateau and the wet and dry dambos in the Bangweulu plains as shown in the figures below.



**Figure 2.2:** Miombo woodlands



**Figure 2.3:** Bangweulu plains

### 2.3 Data collection: Primary data

#### *(a) Interviews.*

Personal interviews were conducted with key persons connected with wildlife management both in the study area and the Department of National Parks and Wildlife (DNPW) officers in Mpika and the sector in charge for Chiundaponde. The ward councilor chief and CRB executive members were also interviewed.

#### *(b) Household questionnaires.*

The selection of an individual to be interviewed from a household was based on the position that one occupied in the household hierarchy in terms those making decisions at household level were interviewed in the study regardless of sex (Saunders et al., 2009). Interviews were conducted on spot and in most cases, the interviewee had to fill in the questionnaires as most of the sampled population could not read and write.

#### *(c) Qualitative information was also obtained from focus group discussions with CRB members.*

#### *(d) Field visits. The primary data were also recorded through observations during the field visit.*

Secondary data: As a supplement on the primary data, a wide collection of secondary data describing background information, climate, soil and demography was obtained from library books, publications and the internet and other relevant literature were also consulted.

## 2.4 Sample design

The nature of the information dictated that the survey elements be the villagers living in Chiundaponde chiefdom. The population of the study area was therefore defined as all the villagers living in Chiundaponde chiefdom and stratified random sampling was used. A questionnaire survey was administered to local residents in Chiundaponde chiefdom of Bangweulu Game Management Area (GMA) with the intention of determining the benefits of community participation in wildlife management.

## 2.5 Selection of household

Selection of the households used in the study area was done with the help of the two ward councilors for Lulimala and Lukulu wards. An informal meeting was held with the two councilors which revealed the number of households in the area. A list of male headed and female headed households in the area was compiled for the area (1700) households in total (360) female headed households and (1340) male headed households (Central statistics office,2002).

## 2.6 Selection of the study area

The area was selected because of its strategic proximity to the wildlife and fisheries resources as well as its accessibility. Among other reasons include; (i) the CRB is very active. (ii) The chiefdom has quite a number of wildlife resources (black lechwe) as compared to other chiefdoms in Bangweulu GMA i.e. Nsamba and Bwalya Mponda in Samfya District, and Kopa, Mpumba and Kabinga in Mpika District. (iii) Chikuni part of Bangweulu GMA which largely falls in Chiundaponde chiefdom is recognized internationally as a Ramsar site. (iv) The wetland in Chiundaponde (Chikuni) is in its natural state as it has not suffered any human activity e.g. through rice growing. Most importantly it gets the largest revenue share from DNPW.

## 2.7 Sample size

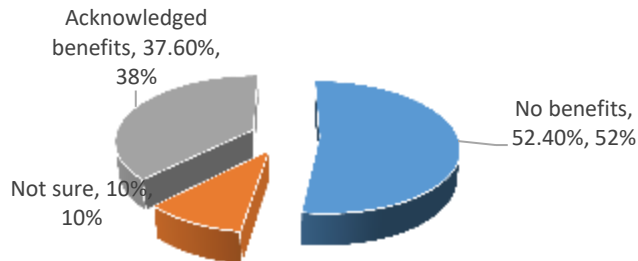
Ten percent sample size was considered in this study. This is so because according to Fowler et al., (2006), a 10% sample is representative enough with respect to descriptive studies. Therefore 170 households were interviewed as follows; 36 Female headed households i.e.10% of 360 and 134 Male headed households which are 10% of 1340 were interviewed.

## 2.8 Data analysis

Data analysis was done using computer software package Statistical Package for Social Scientists (SPSS). Questionnaire responses were coded for analysis, by grouping responses to any one question and allocating a common heading to all those that were similar. This grouping was given the same code. Responses that were unique were given individual codes. Thereafter, coded information was processed using SPSS statistical software.

### 3. RESULTS

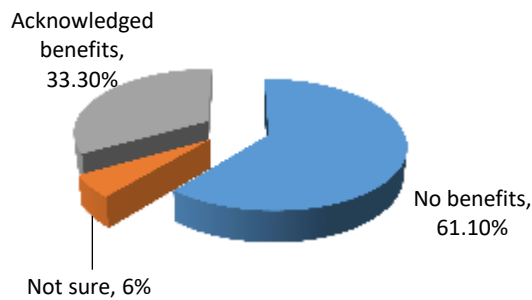
#### 3.1 Perception of households on benefits from wildlife resources



**Figure 3:** Households' perception on benefits from wildlife resources

According to figure 3.1 (52.4%) indicated that there were no benefits from wildlife resources in the area despite their participation in wildlife management and (10%) were not sure whether they were benefiting or not. However, (37.6%) acknowledged that there were benefits from wildlife and they cited things like construction of teachers' houses, rehabilitation of bridges, schools and employment of community scouts. The percentage of people who thought there were no benefits was not significantly different those who acknowledged that there were benefits across two areas (upland:  $\chi^2 = 0.25$ ,  $df=1$ ,  $p < 0.62$ ; Bangweulu plains:  $\chi^2 = 0.053$ ,  $df=1$ ,  $p < 0.82$ ).

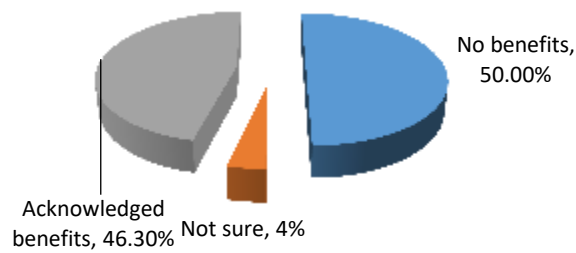
#### 3.2 Perception of benefits by gender



**Fig 4:** Female headed household perception on benefits from wildlife resources

In female headed households (61.10%) indicated that there were no benefits from wildlife resources while (33.33%) indicated that there were benefits such as construction and rehabilitation of schools, boreholes, and health posts and teacher's houses. However, (5.60%) were not sure.



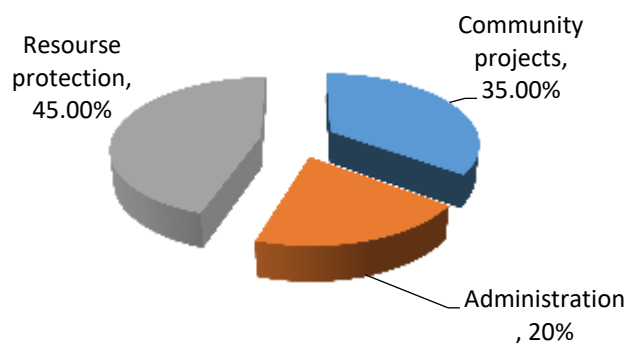


**Figure 5:** Male headed household perceptions on benefits from wildlife resources

In male headed households (50.0%) indicated that they did not see benefits from wildlife resources in their area while, (46.30%) did acknowledge the benefits from wildlife resources such as construction and rehabilitation of schools, health posts, bridges, teachers houses and employment of community scouts. While (3.7%) were not sure.

Most female headed households (61.10%) indicated that they were not benefiting from the presence of wildlife than male headed households (50%) (Pearson  $\chi^2 = 20.9$ ,  $df=2$ ,  $p < 0.0001$ ). This perception was also strongly linked to gender, with (33.33%) of female headed households perceiving a benefit, 46.30% of male headed households perceiving a benefit. This could have been a confounding effect between area and gender, but within Chiundaponde itself, the proportion of people who believed they benefited from wildlife was not significantly different from those who believed did not benefit (Pearson  $\chi^2 = 2.9$ ,  $df=2$ ,  $p < 0.24$ ).

### 3.3 Usage of wildlife revenue disbursed to CRBs



**Figure 6:** Usages of CRB Funds

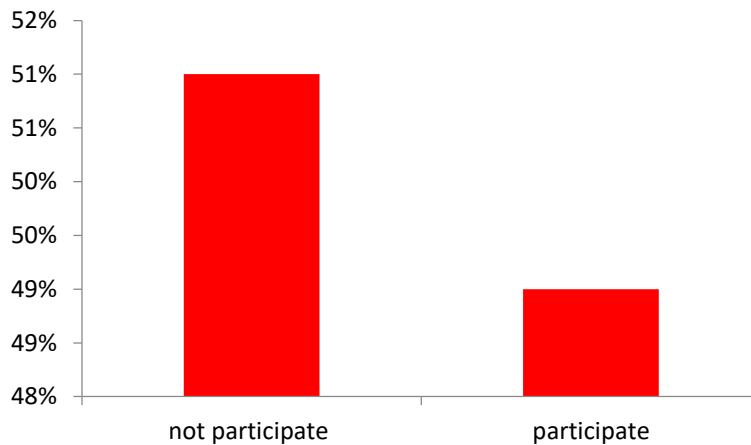
From figure 3.4 (20%) is used for administration, 45% for resource protection and 35% for community projects. The largest percentage of the revenue received was used for resource protection that is; salaries and uniforms for the community scouts, food rations for patrols by both DNPW scouts and community scouts. The other substantial amount was used for community development projects in various village area groups (VAGs)

such as schools, bridges as shown in figure 3.5. The smaller percentage was used for administration i.e. upkeep for board members and stationery.



**Figure 7:** Bridge at Lulimala stream rehabilitated using CRB funds

3.4 Extent to which local communities participate in wildlife management



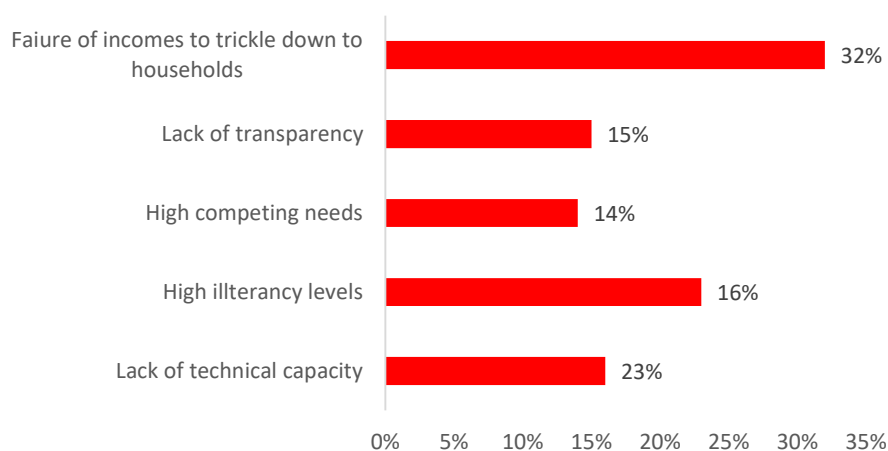
**Figure 8:** Community participation in wildlife management

According to figure 3.6 (51%) do not participate in wildlife management while (49%) participate due to various reasons. Fifty-one (51%) of the local communities do participate in wildlife management because they do not receive benefits. Forty-nine (49%) reported that they participated as tourism was beneficial, but that the benefits did not reach their villages as financial benefits accrued to someone else (government or the Department of National Parks and Wildlife).

3.5 Challenges in wildlife management

As shown by figure 3.7 (32%) indicated failure of incomes to trickle down to households as major challenge in wildlife resource management. While 15% cited lack of transparency in the usage of revenue. 14% indicated high competing needs against little revenue from wildlife resources. 16% cited high illiteracy levels as a

challenge in wildlife management and 23% mentioned lack of technical capacity by local communities in wildlife management as a challenge.



**Figure 9:** Challenges in wildlife management

#### 4. DISCUSSION

##### 4.1 Perception of households on benefits from wildlife

Most local communities (52.4%) indicated that there were no benefits that the households got from wildlife resources. On the other hand, a small number of local communities were not sure as they had little knowledge on wildlife benefits. Some local communities indicated that it only benefits some of the households i.e. those in the CRB and community scouts in form of sitting allowances and employment as community scouts. This is so because the share of revenue is mainly targeted to community development projects and not individual households. The revenue is only used in various communities or VAGs to address local needs that prove to be urgent at any given time.

According to the study ten VAGs that make Chiundaponde CRB, had different socioeconomic projects being under taken. For instance, in Chiundaponde VAG a teacher's house was constructed using CRB funds. While in Lulimala VAG Makanga community school had been built at the same time bridges were maintained. In Chifinshi VAG a 1x2 classroom block was constructed. In Ngweshi VAG the health post was under construction. While in Mwendachabe VAG a school was being rehabilitated, and in Fifungo VAG a 1x2 classroom block was under construction. The CRB has also acquired a community truck in order to ease the problem of transport in the area which was subsidized instead of paying k60 to Mpika Boma they charged k30 per person. However, it was also discovered that CRB funds were not released promptly as such most of the community projects had stalled for a long time. This also applies to the 5% chief's share.

According to the local community, the benefits generated by Chiundaponde CRB were too little to make any significant impact in the development of the chiefdom. These observations agree with those made by Kipkeu et al., (2014a). Furthermore, revenues had decreased due to the fact that animal population had decreased and thus the number of safari hunters were also reducing. This was also supported by a study done by Kalyocha (2000) who indicated that the benefits were not enough to have any significant impact on individual households. This is true in the sense that the most active group in wildlife management is the CRB largely because of the assured

income which is due regularly from hunting safaris. It was noted that despite this assured income which was due regularly and could, therefore, be planned for, however, there was no business planning for that income. Most of it was spent on resource protection through community scout programme and on community development projects.

While this type of investment provided a visible sign of benefits accruing from wildlife to the community through employment and infrastructure. However, the potential to generate more funds is not utilized. This might be as a result of the money not actually being enough to meet the entire obligation as mentioned by (Akumsi, 2003). It is however, noted that through partnerships with Shoebill safaris this scenario might change soon. This initiative has potential to become a sustainable source of income for the community particularly if potential conflicts with hunting safaris in the GMA are resolved. Chiundaponde CRB also has Nsobe community camp developed with support from Tourism Credit Facility Fund and has potential to grow if marketed. The bottom line, nonetheless, is that none of the hunting income currently being received by Chiundaponde CRB is invested in short and long term income generating activities.

However, for programmes to be successful both in providing benefits to communities and protecting wildlife, not only must the benefit be received and valued by the local people, but the linkage between the benefit and the wildlife resource must be made clear. Although respondents at upland and Bangweulu flats received services or indirect benefits from wildlife and tourism-related industries, they did not perceive a direct benefit from wildlife. Although Bangweulu flats hosts wildlife researchers and visitors from overseas, few of local residents made the linkage between wildlife and their jobs. They were aware that wildlife provides benefits, but they felt they were not the beneficiaries. Farmers at upland mentioned that tourists were helpful to them, but were even less likely to link tourism to any benefit. By contrast, people at Bangweulu flats were aware of the importance of wildlife to their community, and most people stated a direct linkage between increased wildlife and tourists and increased local benefits. To that effect the CRB had been successful in distributing benefits equitably and gaining support of most local communities.

#### *4.2 Perception of benefits by gender*

In female headed households (61.10%) indicated that there were no benefits from wildlife resources while (33.33%) indicated that there were benefits such as construction and rehabilitation of schools, boreholes, and health posts and teachers houses. However, (5.60%) were not sure. This scenario was attributed to the fact that the CRB was not gender sensitive as it was seen from the CRB Executive. Furthermore, most female headed households did not attend CRB meetings and the education levels of most female headed households were very low. These results of the present study concur with the findings of Hara (2004). In male headed households (50.0%) indicated that they did not see benefits from wildlife resources in their area while, (46.30%) did acknowledge the benefits from wildlife resources such as construction and rehabilitation of schools, health posts, bridges, teachers house and employment of community scouts. While (3.7%) were not sure. Therefore,

socioeconomic benefits from wildlife resources were not felt by individuals in the area. This was also supported by a study done by Kalyocha (2000) who indicated that the benefits were not enough to have any significant impact on individual households.

#### *4.3 Community participation in wildlife management*

According to the local communities the benefits generated by Chiundaponde CRB are too little to make any significant impact in socioeconomic development of the chiefdom. It is for this reason that 51% of the local community did not participate in wildlife management. The households' reasons for not participating in the wildlife management include; benefits were not enough as a result households tend to resort to other activities so as to earn a living. Furthermore, benefits do not directly target the households. When asked to what extent the households participate in wildlife conservation, the following were the households' responses; providing labour for construction or rehabilitation of schools, health post, and teacher houses or generally providing labour for any developmental project. Attending VAG meetings where issues affecting the community are brought out and solutions suggested. Reporting any illegal activities to the community scouts and DPNW officers. Avoiding engaging in poaching and handing over of firearms used in poaching in exchanging for food. Those household who participated in the Chiundaponde CRB programme felt that they were fully involved in the activities of CRB as they indeed had a say in what goes on in the different VAGs/communities in their area. For instance, they elected members to the CRB and in the VAG committees. It is the households at VAG level in their respective VAGs who make most of the decisions concerning how to use funds generated from the sale of wildlife hunting licenses by DNPW. It is also at VAG meetings where households air their views on the projects they want to be implemented by the CRB. Households within a given VAG are allowed to debate among themselves with a view of them coming up with the most beneficial projects that would offset the problem they may be facing. However, the Chiundaponde CRB provides a formal forum for household participation in decision making. According to figure 3.6 (51%) of the households did not participate in wildlife management because they do not see any benefits at household level to offset costs of conservation as supported by Ashley et al., (2002). The households feel the funds should be directed to the individual households so that they can have means of supporting their families as recommended by Simasiku et al., (2008). Therefore, it true to say that local communities participate and support activities that they see bring them clear tangible and preferable benefits in terms of products or income as supported by Khadka (2010). Besides communities also lamented that

benefits from sustainable use of wildlife should not replace economic development by the central government as the central government had an obligation to bring basic socio-economic facilities for its citizens. The study has also reviewed that the level of education among the local community is correlated to their participation in wildlife management. This is true in the sense that education helps easier understanding on the role of wildlife in socio-economic development of the area.

#### *4.4 Challenges in wildlife management*

The study has reviewed the following challenges which communities face:

- CRBs direct revenue to infrastructure development which negatively impacts on tenets of demonstrating benefit sharing at household level.
- Failure of income to trickle down to household level has resulted in a failure to demonstrate improvement in socio-economic conditions of local communities.
- High competing needs for the little income from wildlife make communities to remain underdeveloped.
- Low capacity of local communities to effectively deal with emerging wildlife management issues.
- High illiteracy levels impact negatively on the implementation of CBNRM programmes. Therefore, emerging concepts cannot permeate societies.
- Lack of technical capacity within the community to address planning, management and monitoring issues.
  - Lack of power or capacity to control resource use by outsiders.
- Communities have little capacity to manage large amounts of money disbursed to CRB from the Department of National Parks and Wildlife as indicated by Simasiku et al., (2008).

## **5. CONCLUSION**

Chiundaponde chiefdom offers a lot of opportunities for tourism growth. The Bangweulu swamps with the presence of animals and birds offer excellent scenic beauty especially when it is flooded with a variety of bird's species migrate from other parts of Africa and Europe. However, the wildlife resource is underutilized due to poor infrastructure. Furthermore, poaching and habitat destruction for agriculture threaten the safari hunting industry.

CRB funds contribute more to poverty reduction however; these benefits do not result in immediate cash but just assist the community with various community projects moreover, communities prefer not to invest labour and time in schemes which fail to deliver recognizable benefits over time. Therefore, the major concern is that wildlife resources should provide the community's immediate needs locally. Thus, distributions of socio-economic benefits play an important role in the perception about wildlife benefits and performance of CRBs. It is not sufficient to generate benefits, but what is essential is how to distribute them fairly and wisely from the economic, social and environmental perspective. The distribution of benefits is important as it determines the

CBNRM impact on livelihoods, the appreciation of CBNRM projects and the degree to which the CBNRM projects offer as an incentive for members and communities to conserve wildlife.

Therefore, the link between CBNRM and livelihoods has not been concretely demonstrated so far as such CBNRM is still far from being a rural development strategy than its current manifestations as a conservation strategy serving interests of the state. Generally, joint wildlife management creates a sense of ownership in rural communities for wildlife and the CRB finances to enhance local development with hunting fees and organizes anti-poaching patrols and educational activities. For the CRB to be a success it should provide direct socio-economic benefits for local people as well as a sense of responsibility and control. However, rural communities rarely have the resources and skills to manage wildlife resources completely on their own. The status of the local population in terms of social and economic aspects influences the people's attitude towards protection of wildlife. Sustainable wildlife management has shown that it contributes to poverty alleviation and improvement of household food security. This, in turn, improves livelihoods and acts positively on life expectancy. Therefore, many rural communities whose livelihoods are dependent on wildlife, both socially and economically are disadvantaged a lot with any reduction in wildlife populations. The rationale of this study was to highlight the socioeconomic benefits and challenges of local communities in wildlife management. The increased local socio-economic benefits arising from wildlife resources would then lead to a higher appreciation of wildlife resources and to greater wildlife resource conservation efforts by the local communities. Therefore, the increased benefits offer opportunities to offset the costs of living with natural resources such as wildlife. Rural poverty and lack of food security contribute to poaching in protected areas. Therefore, the solution lies in improving the local capacity for investing wildlife revenues into sustainable revenue generating activities. This research has examined the socio-economic benefits, potential and challenges of wildlife management involving local communities. The research has also examined the local community objectives for wildlife utilisation and management schemes and explores the integration of conservation and socio-economic development based on exploitation of wildlife resources. The limitation of this study was that some people supposed to have important information pertaining to the research subject were reported to have been out of the villages while others shunned interviews. However, the majority were of great help and co-operated very well.

## **6. CONFLICT OF INTERESTS**

The author(s) have not declared any conflict of interests.

## **7. ACKNOWLEDGEMENTS**

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