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RESEARCH ARTICLE

THE EFFECTS OF POACHING AND ITS IMPACTS TO COMMUNITY MEMBERS AROUND NATIONAL PARKS IN ARUSHA REGION

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ABSTRACT

This paper establishes the effects of poaching and its impacts to community members' around national parks in Arusha region. The study used a cross-sectional design due to limited research resources particularly time and funds in order to empirically investigate the effects of poaching and impacts to community development of members around Tarangire, Arusha and Ngorongoro national parks. Primary and secondary data collections tools were administered to a sample of 60 respondents, Management of Tanzania National Parks Authority (TANAPA) Head Quarter, Park warden, Community Leaders and community members. Whereby, questionnaires were used to collect quantitative data from Community members and Community leaders, Qualitative data were collected through interview schedules that were administered to the TANAPA HQ Management and Park Warden, focus group discussion were administered to community leaders and community members, observation and documentary analysis methods were also used to collect data. Using Statistical Package for Social Science (SPSS) for analysis and presenting of the findings, poaching activities contributes on lowering the social livelihood of the people around the parks. Though poaching activities, depressing the social livelihood of the people, it does to economic livelihood of the people too. From the study findings, some of conclusions were made to TANAPA (government) do face some challenges such as, poor policy on wildlife protection, low participation from local members and cultural interference, also women are not engage in poaching activities are being taken negatively in the society, that is they are wrongly in cultural aspects, also are taken has no other works to do.

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INTRODUCTION

Before independence in 1961, Tanganyika had only three National Parks namely Serengeti, Lake Manyara and Arusha but as of now, these have increased to a total of 15 National Parks and soon after the upgrading of Saanane Island in Mwanza, Tanzania will have 16<sup>th</sup> National Parks, (UN, 2013). All this is in line with the government's efforts to identify, preserve and improve our natural resources and heritage. The parks and national reserves are spread all over the country. Members of the Rhino Rescue Project have developed a novel technique to prevent rhino poaching in South Africa. They inject a mixture of indelible dye and a parasiticide that allows them to track the horns and poisons the rhino horn consumers. Since rhino horn is made of keratin, the procedure is painless, (Lowassa et al., 2012). The Legal Mandate of Tanzania National Parks is to manage and regulate the use of areas designated as National Parks by such means and measures to

preserve the country's heritage, encompassing natural and cultural resources, both tangible and intangible resource values, including the fauna and flora, wildlife habitat, natural processes, wilderness quality and scenery therein and to provide for human benefit and enjoyment of the same in such manner and by such means as will leave them unimpaired for future generations, (Lowassa et al., 2012).

The Purpose of Tanzania National Parks is

- To preserve areas possessing exceptional value or quality illustrating the natural or cultural resources of Tanzania's heritage
- To preserve areas with outstanding examples of a particular type of resource
- To Preserve water and soil resources critical to maintain ecological integrity and which support the subsistence needs of people outside park boundaries
- To Preserve Areas that offer superlative opportunities for public benefit, enjoyment or scientific study.

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## To Ensure

- National Parks retain a high degree of integrity as a true, accurate and unspoiled example of a resource
- Management Plans for parks are developed by interdisciplinary teams comprised of appropriate professionals with the best available information to achieve a balance between preservation and use that does not adversely impact park resources and values
- A quality visitor experience, rather than emphasizing “mass-tourism” at the expense of park resources and values
- Optimum levels of revenue and benefits accrue to the national economy, the parks and communities without impairing park resources.

Rampant wildlife poaching has brought bad publicity to Tanzania and somewhat ruined the country’s image especially with conservationist groups. The primary role of Tanzania national parks is conservation. The 15 national parks, many of which form the core of a much larger protected ecosystem, have been set aside to preserve the country’s rich natural heritage, and to provide secure breeding grounds where its fauna and flora can thrive, safe from the conflicting interests of a growing human population, (TANAPA, 2013)

The existing park system protects a number of internationally recognized bastions of biodiversity and World Heritage sites, thereby redressing the balance for those areas of the country affected by deforestation, agriculture and urbanization. Tanzania National Parks (TANAPA) is also currently acquiring further land to expand certain parks, and to raise the status of traditional migration access strip connecting protected areas, (TANAPA, 2013).

The Effects of poaching had been studied under different perspectives and none had been in the context of Tanzania national Parks. While there could have been several contributing factors; one of these are the activities performed by poachers in the society lead them to engage in poaching, unimplemented laws on conservation supporting the poaching and socio economic status of poachers encourage them to poaching. Hence the need for this paper to reveal the effects of poaching and its impacts to community members around national parks in Arusha region.

## MATERIALS AND METHODS

### Area of study

The study was conducted at TANAPA Head quarter in Arusha region and three national parks, Arusha, Tarangire and Ngorongoro national parks which are found in Arusha region. The choice of the study area was also purposive because the researcher needs the truth concerning the problem.

### Target Population

The target population in this study consisted of 60 respondents, Management of TANAPA Head Quarter, Park warden, Community Leaders and community members in Arusha region.

## Research Design

Orodho (2009) defines research design as a programme to guide the researcher in collecting, analyzing and interpreting observed facts This study used a cross-sectional design due to limited research resources particularly time and funds (Adam and Kamuzora, 2008). Also, the design is appropriate for this study since it involves collection of data on a sample at one point in time. The design was deemed appropriate because it allows the researcher to collect information, summarize, present and interpret for purposes of clarification. It also allows gathering of information by use of questionnaire, Focus group discussion and interview schedules and collection of information about the effects of poaching and its impacts to community members around national parks in Arusha region

### Sample size

According to Mugenda and Mugenda (2003) a sample is a small group obtained from the accessible population. Thus a small sample, but well selected sample may be superior to a larger but be neither too small nor too large. It should be optimum. The optimum size is the one that fulfills the requirements of efficiency representativeness, reliability and flexibility.

### Sampling method

Sampling is a systematic way of choosing a group that is small enough to be a true respondent and representative of the population from which it has been selected. In this research simple random sampling was used to select the community member which provides an equal chance for all members from the population to be selected and it is simplicity for matter controlling with minimization of bias to research. The technique is within probability sampling. On the other hand the researcher implement another simple technique which help in getting the information at any place for the circumstances that the number of sample size are not in fulfillment the accidental probability sampling was used to select Management of TANAPA Head Quarter, Park Warden and Community Leaders. This technique is within non-probability sampling.

### Data Collection

Data collection method was determined by the nature, the purpose and scope of inquiry which depend on the availability of resources and time to facilitate the process (Kothari, 2007). Both quantitative and qualitative were collected. The following are the tools for data collections

### Primary data

#### Questionnaires

The researcher used questionnaires to collect quantitative data from Community members and Community leaders. The questionnaire method is advantageous because it can capture information from a large number of respondents and the respondent remains anonymous, can be more truthful and permits use of standardized questions.

**Table 1. The sample size was 60 respondents and were categorized as shows below**

Category of respondent	Frequency	Percent	Valid Percent	Cumulative Percent
Management of TANAPA HQ	10	16.7	16.7	16.7
Park warden	10	16.7	16.7	33.3
Community leaders	10	16.7	16.7	50.0
Community members	30	50.0	50.0	100.0
Total	60	100.0	100.0	

Questionnaires are also easier to fill and have uniform procedures (Orodho, 2009). The questionnaires were used to elicit effects of poaching and measures taken by the government to eliminate poaching for community development in Arusha region.

### Interview

Mugenda and Mugenda (2003) points out that an interview is an oral administration of a questionnaire or an interview schedule. An interview schedule is a set of questions that the interviewer asks when interviewing. Qualitative data was collected through interview schedules that were administered to the TANAPA HQ Management and Park Warden. Interview method was appropriate as more information can be accessed in contrast to the questionnaire, and the researcher had time to clarify issues in the process of the interview. The interviews were used to seek information about measures taken by the government to eliminate poaching for community development

### Focus group discussion

The studies involved group discussion on which the respondents are selected in group basing on special characteristic and provide information. The researcher introduces a topic of the study and then act as a facilitator. The idea behind is to understand how different groups experience effects of poaching in that particular area. Participants are ten (10) people of the particular area of study and are being divided into two groups where by each group comprise five people each group have four (4) Community members and one (1) Community leaders.

### Observation

This method implies the collection of information by observing the physical objects without interviewing. The researcher used an observation method where goes to look what happening. Is a tool which involves the looking to the particular without asking any question for the aim of scene and check the validity and reliability concern the effects of poaching to the community development. Here the researcher went to the National parks and look directly

### Secondary Data collections

#### Documentary Analysis

Under this method the researcher obtained other data from different sources like, Newspaper, research reports conducted by other researchers, journals, magazines, internet and libraries. The TANAPA reports for the Outreach program were mostly used. Researcher passed through different materials concern with wildlife and poaching especially on the effects to community development due to poor implementation on wildlife conservation.

### Data Analysis

According to Orodho (2008), data analysis explains how classification, editing and tabulation of data are done while Kerlinger (1973) defines data analysis as categorization, ordering, manipulation and summarizing of data to obtain answers to research questions.

The researcher subjected the data collected from all the respondents to statistical analysis to establish the means, frequencies and percentages. The data was analyzed using statistical package for social science and presented in tables and figures. Qualitative data was analyzed thematically using coding categories as per the research questions.

## RESULTS AND DISCUSSION

### Understanding of the Respondent on the term poaching against respondents age

Table 2 below reveals that, (4), 6.70% of total number of respondents with mean distribution of 1.50 and age group below 18 and between 18-25 years they understand the term poaching as "Hunting". The finding indicates that, lack of knowledge concerning the poaching from wildlife specialists lead to this problem. (21), 35% of total numbers of respondents with mean distribution of 2.67 and age group between 18-25 and 26-33, they understand the term poaching as "Illegal taking of any natural resources which are conserved". Its shows that these age groups understand well the term poaching from wildlife specialists from their surroundings. Also age group below 18 and above 50 years, they understand the term poaching as "Illegal animal killing". Finding reveals that, there is higher pressure to eliminate the poaching activities so as to have community development.

### Understanding of the Respondent on the term poaching against education level

Table 3 below, reveals that, 38.30% (23) and 35.00% (21) of total respondents from college and secondary school respectively, they understand the term poaching as "Illegal taking of any natural resources which are conserved" and only 16.7%(10) they understand the term poaching as "Hunting and Illegal taking of any natural resources which are conserved" only. The finding indicates that, those respondents with higher education (From college and secondary school) they understood well the term poaching from wildlife specialist as compared to those respondents with low education (from primary school).

### Source of Poaching

The researcher aimed to understand in detail the sources that provided by the respondents towards poaching activities, all 60

Table 2. Understanding of the Respondent on the term poaching against respondents age

			Respondents by their age						Total		
			Below 18	18-25	26-33	34-41	42-49	50+		Mean	
Understanding of the Respondent on the term poaching	Hunting	Count	2	2	0	0	0	0	4	1.50	
		% within Respondents by their age	100.0%	22.2%	.0%	.0%	.0%	.0%	6.7%		
	Illegal taking of any natural resources which are conserved	Illegal animal killing	Count	0	7	14	0	0	0	21	2.67
			% within Respondents by their age	.0%	77.8%	82.4%	.0%	.0%	.0%	35.0%	
		Total	Count	0	0	3	15	12	5	35	4.54
			% within Respondents by their age	.0%	.0%	17.6%	100.0%	100.0%	100.0%	58.3%	
Total	Count	2	9	17	15	12	5	60	4.54		
	% within Respondents by their age	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	3.68	

Table 3. Understanding of the Respondent on the term poaching against Education level Total

			Hunting	Illegal taking of any natural resources which are conserved	Illegal animal killing	
Level of Education	Primary School	Count	4	6	0	10
		% within Understanding of the Respondent on the term poaching	100.0%	28.6%	.0%	16.7%
	Secondary School	Count	0	15	6	21
		% within Understanding of the Respondent on the term poaching	.0%	71.4%	17.1%	35.0%
	College	Count	0	0	23	23
		% within Understanding of the Respondent on the term poaching	.0%	.0%	65.7%	38.3%
	University	Count	0	0	6	6
		% within Understanding of the Respondent on the term poaching	.0%	.0%	17.1%	10.0%
	Total	Count	4	21	35	60
		% within Understanding of the Respondent on the term poaching	100.0%	100.0%	100.0%	100.0%

respondents replied effectively to the question that asked “*What do you think is the source of poaching*”. 23.3% respondents they said that, it is due to poverty, 40% said it is due to black market, 20% said it is due to the greed, and 16.7% they said that all three sources contributes in poaching activities. These contributions come from the individual thought in relation to the poaching activities. This shows that the poaching activities were controlled by individual behavior and the environmental situation encourage on the activities.

The Table 4 shows the above findings. From focus group discussion, respondents augured that, the *poverty line* is when people are poor and being used by the rich people to do poaching for getting the higher pays, the black market is the main reason

for those poor and the greed people as the market are there in needs for all items which are conserved so made people to do poaching.

#### Effects of poaching to community members

Researcher aimed to know the effects incurred to the community members due to the poaching activities. All respondents replied effectively to the question that asked “*Mention the effects to of poaching to community members*”. 33.3% they said there is loss of biodiversity, 25% they said that, loss of tourism, 25% argue that, lack of employment and 16.7% they said that, there is environmental degradation.

**Table 4. Source of poaching N = 60**

Source of Poaching	Frequency	Percent	Valid Percent	Cumulative Percent
Poverty	14	23.3	23.3	23.3
Black market	24	40.0	40.0	63.3
Greed	12	20.0	20.0	83.3
All of the above	10	16.7	16.7	100.0
Total	60	100.0	100.0	

**Table 5. Effects from poaching to community members N = 60**

Effects from poaching	Frequency	Percent	Valid Percent	Cumulative Percent
Loss of biodiversity	20	33.3	33.3	33.3
Loss of tourism	15	25.0	25.0	58.3
Lack of employment	15	25.0	25.0	83.3
Environmental Degradation	10	16.7	16.7	100.0
Total	60	100.0	100.0	

**Table 6. The ways community fighting against poaching N= 30**

Fighting ways	Frequency	Percent	Valid Percent	Cumulative Percent
Education	5	16.7	16.7	16.7
Community meeting	12	40.0	40.0	56.7
By laws	10	33.3	33.3	90.0
Provide motivation	3	10.0	10.0	100.0
Total	30	100.0	100.0	

**Table 7. The government contribution in support anti-poaching**

Government supporting	Frequency	Percent	Cumulative Percent
Make and implementation of laws	21	35.0	35.0
Ratification on wildlife laws	17	28.3	63.3
Collaboration with global wildlife organization	14	23.3	86.7
Encourage community participation	8	13.3	100.0
Total	60	100.0	

From finding as you can see in Table 5 below, large number of respondents 33.3% said that loss of biodiversity. This is also verified by the researcher by meeting with only few elephant and rhino in Manyara and Ngorongoro national parks compared to the past years as was being elaborated through interview by the Park warden from the specific national parks. Low in number of a lot of wildlife animals caused by movement to escape from poachers or being caught by poachers. 25% from loss of tourism and lack of employment respectively shown for how far one activity can results to loss of a lot of money from tourism sectors and the revenues from workers. This implies that more education is needed to around parks societies and at largely to the wholly society.

#### **The ways community fighting against poaching**

The researcher decided to find out the struggling of community in fighting against poaching activities.

From 30 respondents, 16.7% of all respondents said that, through education", meaning that the more knowledge was needed to the community in conserving and the protection for the wildlife, 40% of respondents they said that, the struggling should be through Community meeting, 33.3% of respondents they said that through by laws and 10% respondents argue on Provision of motivation as you can see in Table 6 below. In Table 6 reveals that, the respondents came out with many ways in abolishing poaching activities.

The major way the community members they use is through Community meeting in reasons that it had the wide chance to cover for the large group (message given) at once. The second is By laws every place has the rights in developing its policy and rules to guide them. Aim was to be accordingly to the environment in terms of the problem since poaching containing a lot of things and being differ from on community to the other and cultural aspects.

#### **The government contribution in support anti-poaching**

The researcher decided to find out the contributions of the most assistance of the anti-poaching activities, by finding this he gathered different input from the government as follows, 35% respondents they said that, by make and implementation of laws, 28.3% residents they said through the ratification on wildlife laws, 23.3% was through collaboration with global wildlife organization and 13.3% by encouraging the community participation in all activities concern the eradicating the poaching. Respondents come out with different opinions as you can see in Table 7 below on the effort made with the government to eliminating the poaching and achieving the community development. All the ideas are given in term of the power which the government have on, especially in laws making and encourages on the use of it. The presentation shown the government as the main provider for the solution cause the community depends from the government on obtains their social requirements. From this finding it is argued by the

respondents through interview that the government as the major supporter on anti-poaching have to insure salary and wage base line to the wildlife conservation workers, aim is to encourage them in protection and being out of backhanders from poachers so as find almost equal benefits.

### Conclusion

From the research findings the researcher has realized main things from the data collected, these are; Poaching activities contributes on lowering the social livelihood of the people around the parks and at largely circulation particular in national affairs that is losing of tourism, no foreign currency and lack of employment. Though poaching activities depressing the social livelihood of the people, it does to economic livelihood of the people too and this has been said is due to poor implementation of the regulation on the controls for poaching. Actually it can be said that it does not facilitate for investing the capital for the future life.

Women are not engage in poaching activities are being taken negatively in the society, that is they are wrongly in cultural aspects, also are taken has no other works to do. Most of people argue that women have to stay home with domestic activities which make difficult to women to know and report for the poacher as they are not involved. Up the moment the researcher reach to the area of study there were little campaign that support women who live around the parks to works on reporting the poachers for abolishing the activities, hence they work at hard condition.

Parks warden do work at the risk situation (do take risk of their employment) due to the fact that, they do not have a way out being safe from animals like rhino during patrol for the poachers with greatly and most risky they do not know all ways for dangerous animals and poachers respectively. TANAPA do face some challenges such as, poor policy on wildlife protection, low participation from local members, cultural interference such of the Maasai on killing the lion as the sign of majesty and poor government support.

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