

The Indirect Socioeconomic Impact of Illegal Hunting of African buffalo (*Syncerus caffer*) for Trophy in East Wollega, Ethiopia

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Abstract

The indirect impact of illegal hunting of African buffalo (*Syncerus caffer*) for trophies on socioeconomic status of Dire Guda community was conducted from January 2012 to June 2013. The study was aimed to assess the indirect impact of illegal hunting for trophies on social, economic and health of people. Data was collected by semi-structured interviews guided with conversation. Interview was conducted by *Afan Oromo* language which is native to people in the area. As illegal hunting is criminal, respondents were identified by a snowball sampling. A key informant was identified first to locate one or two individuals in a population. Then, information was gets handed from informant to informant. Respondents were interviewed separately to avoid tension of being arrested. All hunters were males because only males are culturally allowed. Data collected was interpreted by interpretive interactionism. A study revealed that hunting African buffalo for trophies was frequently practiced in the area. The primary motivation of people for hunting was culture inherited from their ancestors. In addition, individuals who had killed African buffalo had special acceptance, and socially acknowledged as strong and superman. This was a key factor among many that encouraged individuals for illegal hunting. The disparities between African buffalo killers and non-killers elicited social conflict during social events. Buying bullet, paying gun rent and delayed sowing of crops due to illegal hunting activities all resulted in low productivity, economic crisis and low subsistence of food. Hence, community education and awareness creation on illegal hunting has an indispensable role in curbing problems observed as a consequence of illegal hunting of African buffalo for trophy.

Keywords: African buffalo; Dire Guda; Ethiopia; Illegal hunting; Trophy.

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1. Introduction

Sustainable conservation of wildlife resources has been the core objective of wildlife managers and biologists in many countries in Africa. For centuries, wildlife has been utilized for subsistence and commercial purposes. However, an increase in human population causes a severe pressure on wildlife resources which subsequently threatens their existence and sustainability [5, 13, 19]. Unsustainable use is a concern to natural resources conservation in Africa. It affects biodiversity that provides important ecosystem services, ecosystem dynamics and threatens the future of targeted species [1]. Hunting of wildlife is believed to be a key driver of serious population declines and local species extinctions in many parts of the world. Hunting certain species for meat is critical in Africa and especial to east Africa in threatening species for extinction. Illegal hunting is a serious problem in today's society. It is the act of violating wildlife law, and well documented in literatures [7, 14]. It was identified as the main cause for the decline of wildlife population in eastern part of Africa [20]. Hunting accelerates extinctions, mostly of large mammals [2]. This is usually resulted due to the low reproductive rates, population density, dispersal ability, trophic level and body size of large mammals. Larger, longer-lived and slower reproducing large animals are unable to compensate for high rates of harvesting because the potential for the population recovery over short time is low [8, 11, 17]. Wildlife and their product represent the third greatest illegal traffic after drugs and arms [18]. African buffalo, leopard, and lion generate 42% of income from hunting for Tanzania Wildlife Division, with African buffalo alone generating 22.1%. Illegal hunters are thought to consist mostly of economically poor and uneducated farmers [12]. Illegal hunting has served as a major coping and adaptive strategy against poverty. It is estimated that about 61% of illegal hunters hunt for their own consumption, 8% for cash and 31% for both purposes [9]. Other motivation that drives poachers may be culture which leads and enforces one to hunt for the sake of status or tradition [3]. Others suggested reasons such as obtaining a trophy specimen for personal use, thrill killing and necessity of obtaining food for survival [14]. To earn such substantial rewards, however, illegal hunters face significant risks in their daily activities. Some of the risks that they faced include social conflict with those people living around the hunting area, economic crisis due to buying of bullet and gun rent for poaching. Also, hunters faced risks which include: attack by wounded animals or other aggressive animals such as lion or snake bite, sprains, puncture wounds, infection, broken bones and contraction of malaria. Illegal Hunters or poachers learned to poach at an early age (nine to twelve years). The factors that push one individual to poaching may be different from the others [10]. Poachers may be also introduced to poaching by a family member, usually by a father or grandfather and close friends. All continued to receive support from family and continued to poach. This, cultural support from family, society and belief systems have continually reinforced and thus sustain poaching [7]. A recent study suggested that law enforcement is pivotal system to curb illegal exploitation of wildlife populations. Many governments have adopted a participatory approach to conservation as a result of pervasive loss of wildlife species [4, 16].

Research on poaching is still at its infant stage and much work needs to be done so that wildlife agencies design solutions to the problems. It is known that poaching occurs for a variety of reasons [15]. These reasons should be well explored and documented further from different geographical and cultural diversities. Knowledge of the regional and cultural variations for motivations of poaching is a cue to design techniques that helps to address and curb the issue. Though poaching is commonly practiced in different parts of the country, sever poaching of African buffalo for trophy was observed in the area. Therefore, this study aims to investigate the indirect socio-

economic consequence of poaching African buffalo for trophy and to suggest possible recommendations to curb the problem.

2. Materials and methods

The study was carried out at Dire Guda local administrative area of Gida Ayana district located in East Wollega Zone of Oromia Regional State (Figure 1) It is located about 160 Km North of Nekemte and 48 Km North of Gida Ayana district. The study area is generally located about 491 Km North West of the capital city, Addis Ababa. It is situated at $10^{\circ} 8' 34'' - 10^{\circ} 7' 27''$ N latitude and $36^{\circ} 32' 8'' - 36^{\circ} 44' 11''$ E. The study area was selected because of the frequent practice of poaching in the culture of the society. There were no poached animals for trophies in the area but the poachers traveled to other areas. The study area is lowland and characterized by warm climatic condition. Gida Ayana district was previously called Gida Kiremu while Kiremu was part of the district. Since the establishment of Kiremu as a district (2008), it was called Gida Ayana and its capital town is Ayana. Gida Ayana is bordered on the south by Guto Wayu and Abe Dongoro, on the south west by Limmu, on the north east by Kiremu, on the west by Ibanu districts, and on the north by Benishangul-Gumuz regional State. The study area receives a unimodal annual rainfall. The rainy season mostly extends from April to October with maximum rain from June to August.



Figure 1: Map of the study area

Illegal hunting of African African buffalo for trophy was one of the most know culture of Oromo society of Wollega. Previously, poaching was targeted to lion, elephants and African buffalo. However, due to local eradication of elephant and lion, currently, poaching African buffalo for trophies is continued. Formerly, poaching was carried out around Tullu Lafto Regionally Protected Area, which is located in Abe Dongoro district of Horo Gudur Wollega Administrative Zone. At this time, poachers travel to the boundaries of Illu Aba Bora and East Wollega Zones along Didessa riverine forest. Besides, the scope of poaching extends down to the

boundaries of Illu Aba Bora and West Wollega Zones in line with Dabena river valley.

2.1. Data collection and analysis

Data collection was carried out from January to June 2013 by using semi-structured interviews guided with conversation to elicit more information. Interview was conducted by *Afan Oromo* language (Native to the society) as it helps them to express their feelings in detail, and makes the qualitative analysis of poaching and poachers easier. This study analyzed in-depth qualitative interviews to understand the strategies that poachers used during poaching. As the act of poaching is criminal and leads to arrest, respondents were identified by a snowball sampling method which is commonly used in areas where finding informants are difficult because of various reasons such as scattered population over a large area and/or they feel shame or fear to respond and/or when populations don't care the interview [21]. Snowball is a technique in which a key informant is used to locate one or two individuals in a population. Then, information gets handed from one key informant to another and the sampling frame grows with each interview. A key informant was identified first through the relative of an author living in the area. The respondents were interviewed separately and intermittently at different times to avoid fear of arrest. To minimize the rate of fear, respondents were not asked their name and village. Some respondents who had suspected the interview were systematically excluded. Interview with the successful poachers (Those who had killed African buffalo) ranged from 1 to 3 hours. Individuals who had killed African buffalo, elephant and lion are locally known as *Ajjessa*, it is to mean killer of African buffalo, elephant and/or lion. It is a common name given to all successful killers of such animals in the society. Thirty four successful poachers were interviewed. All poachers were males because only males are culturally allowed to take part in poaching. An attempt was made to include females to assess their feeling towards poaching activities or poachers. However, they were not willing to share their passion. This might be because of shyness. Hence, only males were interviewed to share the emotion of females they had ever observed towards poachers. Each respondent was asked about the method of poaching, why engaged in poaching, the types of problems they faced during and after poaching and other related issues. All respondents belong to Oromo tribes and ranged from 25 to 45 years of age. Most respondents 21 (61.8%) have no formal education but the remaining 13 (31.2%) have attended only primary school education. The respondents were peasants and mostly lead their life through farming (bee keeping and agriculture). As the area is inaccessible in the district, relatively, the societies have less exposure to recent technologies.

The study examines the intention and methods of poaching, and the indirect consequences of poaching in the social and economic status of the society. Furthermore, it revealed other impacts of poaching on the society which is not recognized so far. The respondents were asked to present and speak all about their views regarding poaching which helped for detail analysis and interpretation. This method is called interpretive interaction which studies about meaning, motives, emotion, intention and feeling of individuals. Interpretive interactions attempts to reveal the world of problematic lived experience of ordinary people to the reader. Hence, interactionist interpret social phenomena and its meaning to the others [22]. The motives and feelings of individuals are also interpreted from scientific point of view.

3. Results

This study investigated the indirect impacts of poaching on the socioeconomic status of the society, and other negative consequences which were not recognized so far. In addition, the impact of species targeted poaching was analyzed from the conservation point of view. Accordingly, the findings of the study were presented separately as follows.

3.1. *Illegal hunting time and methods*

Respondents were asked about the techniques and suitable time that they preferred for poaching. Accordingly, all respondents replied in two ways: Techniques used during the distant past and near past. During the distant past, informally armed poachers moved to the poaching area during the night time and back at night if none of the poachers were successful. However, if one or more of them were successful, they send an individual to the wife and relatives of lucky poacher so that they get ready to welcome with songs and dances. As poachers approached home, they shift their journey towards day as they never frightened their own local people. Then, the relative of lucky poacher informed the neighbors to jointly welcome the poaching team.

Currently, due to well-constructed road across the different parts of the country, poachers used public transport to reach poaching area. However, areas which were inaccessible for transportation were covered by foot. As informally armed individuals were snatched and arrested, poachers didn't hold gun during journey. However, as replied by respondents, in order to pass traffic areas, they mold a stem of hallow bamboo as scepter and systematically placed bullet in hallows between the nodes. And, they hold hallow bamboo as a simple scepter which was not suspected by individuals at the traffic area. This was the utmost system that poachers used to pass bullet when traveled to poaching areas. Gun was rented up to 50 \$ (1,000 Ethiopian birr) from indigenous Gumuz people living around poaching area. Gun rented was used for a maximum of two weeks and returned at the end of poaching day. All respondents 34 (100%) replied that poaching is preferred to be carried out during spring season (March to June) both in the distant and near past. Similarly, poachers moved in team having 8 to 12 members during both poaching periods. Having optimal number of poaching team had paramount significant in minimizing the risk of being caught and attacked by other poachers, people around the study area and or local forest patrols. Besides, the team contains one or two leaders who had good knowledge of the ecology and topography of poaching area. This helps to secure and ensure the safety of the team from being caught and arrested.

As replied by all respondents 34 (100%), in the poaching area, the poaching team is divided in to two or three sub-poaching team based on the number of leaders. But, all sub-poaching team had a regular site were to back and take rest at night. Each member of sub-poaching team gets the chance of leading half day or a day shot attempt by simple random techniques. The chance of leading half day or a day shot attempts was given for each member turn by turn. During each period, encountered African buffalo was demonstrated to an individual who had given half or a day chance to shot African buffalo. The other members assist by making second and more shot. The period of poaching extends from one to two weeks depending on the amount of ration and success in poaching. Success in poaching increased the duration because they used the meat.

3.2. Reasons for illegal hunting

Illegal hunting of African buffalo, elephant and lion for trophy was the most known cultural practice deep-rooted in Oromo society of East Wollega Administrative Zone. Currently, elephant and lion had extinct locally. However, killing African buffalo for trophy relics as the species is left in remnant forests patches. Poachers were asked the motive for the frequent habit of poaching in the area. Accordingly, all respondents 34 (100%) replied that their primary motivation for poaching was culture inherited from their ancestors. Beside, killing African buffalo was perceived culturally as hero and increases social acceptance and respect in the society. For instance, during social aggregations, such individuals were given special position (sit relatively at the top position) while others take seats found at lower position. They are frontiers throughout any journey made with friends, colleagues and neighbors. Also, they never drank in broken, less quality and small glass/cup, and in partially filled glass/cup. Individuals who had killed African buffalo are socially acknowledged as strong and superman. Trophies taken from African buffalo include skin of tail and the horns along with forehead skin. Trophies were brought as an evidence of success in killing. However, taking trophies from died African buffalo shot by others had no social acceptance rather it evokes criticism over an individual. According to the culture of Oromo society, the trophies are drawn on the wall or gate of house and/or gate of house fence. Some respondents 13 (38.2%) stated that illegal trophy hunting served as revenue generation if a successful poacher had rich and many relatives. This is because successful poacher obtains material or financial reward from friends and relatives. As replied by most respondents 21(62.8%), recently, revenue generation as initiatives of poaching is minimal. This is because the amount of reward was insignificant as the income that most household gets per year does not exceeded their subsistence. Currently, illegal hunting is relatively minimized due strict patrolling around illegal hunting areas. The numbers of African buffalo killed were varied during the last six years (Figure 2).

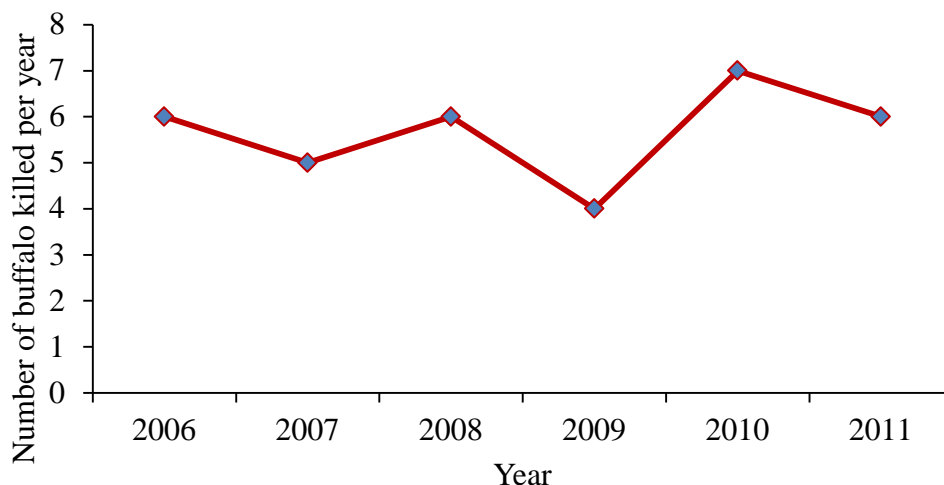


Figure 2: Number of African buffalo killed at different year

3.3. Problems associated with illegal hunting

3.3.1. Social problems

Individuals in societies might have faced several problems in their day to day activities. The problems may belong to social, political, economical, health and psychological. The cause of problems might be different, and each may have separate or synergetic effect on social cohesion. In line to this, the respondents were asked to state problems that they have ever encountered in the activity of poaching. Accordingly, the majority of respondents 26(76.5%) confirmed that illegal hunting of African buffalo had brought about social problems while the remaining replied that social problems encountered due to poaching were minimal and can be resolved. The most frequent social conflict happened in association with poaching was dispute raised between successful poachers and others who hadn't gone to poaching. The dispute was especially happened during social aggregations and social events. When African buffalo killer boasted and insulted individuals who hadn't gone to poaching area, conflict raised by the counter undermining response forwarded by individuals who hadn't gone to poaching area. This may lead to fighting in which an individual could be wounded and even died.

3.3.2. Economic problems

To explore the connection between low living status and frequent poaching activities of people in the area, respondents were asked about the time of poaching, materials used for poaching and the benefits of poaching. Accordingly, all respondents 34(100%) replied that the poaching period was from March to June. As replied by the respondents, these months were selected because the degree of rain fall is minimal to shelter in the field. All respondents 34(100%) also described that they obtained gun rent from people living in the poaching area. However, bullet was bought from their residence area. In addition, preparing lifelong food during poaching was not optional rather mandatory as they lasts for more than a week. Mostly, such long lasting food was prepared from barely which was not productive in the area. To realize this, they bought barely from the market. Besides, there is a transportation cost where there is an opportunity of road and vehicle. All materials that poachers need for poaching were bought from market except bullet (Buying bullet in open market is not allowed). Buying bullet was known in affecting the economy of the society and transportation cost was the least. However, crisis due to late farming system was not easily quantified and needs further study (Figure 3).

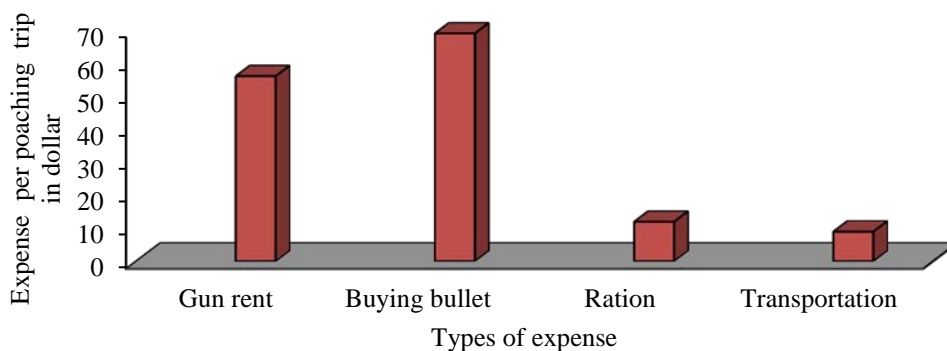


Figure 3: Average expenses of poachers per poaching in the study area

3.3.3. *Increased sexual partner*

The respondents were asked the indirect consequences of poaching African buffalo for trophies on the sexual partner of the society. Accordingly, most respondents 24(70.59%) replied that females were the driving force for poaching. Males who are successful in poaching have got the chance to increase sexual partner because they are considered as superman in the society. When a spouse was quarreled with her husband, she demoralized him for the fact that he hadn't gone to poaching. Sometimes, however, a spouse of individuals who had killed African buffalo undermines males who hadn't gone to poaching or spouse of individuals who hadn't gone to poaching. This creates psychological inferiority and enforced individuals for poaching whatsoever the poaching activity costs. In line with this, individuals who had been considered as superman among men in the society had a special respect from females. The remaining 10 (29.41%) respondents said that superior feeling of successful poachers who had gone to poaching driven males to poach during social events.

4. **Discussion**

The present study explores the indirect impact of poaching African buffalo for trophies on the socio-economic status of societies living in Dire Guda local administrative area. Accordingly, the study addressed on the socio-economic problems and the circumlocutory influence of poaching in the life of the society. As described by [6, 14] poaching is the act of violating wildlife law. It is practiced as coping and adaptive strategy against poverty and income generation [9]. However, according to this study, revenue generation as a motivation for poaching was minimal. This study showed that the key motivation for poaching was culture inherited from their ancestors. Similarly, as revealed by [3], the driving force towards poaching was culture and social acceptance which enforces one to hunt for the sake of prestige and tradition. In addition, obtaining a trophy specimen for personal use was stated as reasons for poaching [14]. According to this study, African buffalo killing was perceived culturally as hero and increases social acceptance. This can be insured by cutting parts of animals such as skin of tail and skin of forehead as trophies.

Any society has its own culture, norms and values. However, some cultural heritages might have a lot of social, economical, health and environmental problems. All cultures might not be equally important, and some are not recommended to be practiced. Poaching African buffalo and collecting trophies to be called superman in the society is common in the culture of Oromo people. For instance, during group work and other social aggregations, African buffalo killer began to sing boost over others (especially peoples with which he had no good relationships) to indicate his superiority, and demoralizes individuals who hadn't gone to poaching. The relatives and friends of killer encouraged a singer to sing more. The insulted one becomes violent and quarreled with the singer. The conflict can range from wounded to individuals death. The disparities between the two social groups cause long lasting social upset and crisis. The social acceptance of individuals who hadn't gone to poach African buffalo at least for one trip is very low. Poaching African buffalo for a trip adds a great social value though a person was not successful. This was because killing African buffalo is a chance and considered as it was the will of God. Gun was rented from indigenous Gumuz people living around the poaching area. A poacher paid up to 1,000 Ethiopian birr for gun rent at the end of the poaching day. Sometimes, conflict may be generated between poacher and gun rent provider when poachers deny paying gun rent. This might also

gradually lead to cause conflict between different ethnic groups which once happened difficult to resolve it.

Economic crisis and poverty may come progressively with minimized agricultural productivity. Decreased productivity might be the result of minimal rain fall, storm, prolonged drought, loss of soil fertility, lack of timely sowing, pest attack during pre or post-harvest and poor agricultural practice. Most individuals living in the study area are economically poor which can be confirmed from their wearing, physical appearance, residence types and low agricultural land. As replied by respondents, the period of poaching was from March to June. This period was selected because poaching area was not densely covered with bushes or shrubs making observation of African buffalo easier from a distant. However, it was the period of preparing agricultural land and sowing of corn and sorghum in the residence areas of poachers. When they back from poaching, sowing time for most crops was passed which might lead to poverty and famine in the next season. The poachers also need money to buy bullet and to pay for gun rent. If they have no enough money for bullet and gun rent, they borrowed to repay by selling crops sown. Crops sown unseasonably were less productive, not enough for subsistence and unable to fill money borrowed for poaching. If such activities were repeated annually, the economy, livelihood and living standard of the societies will collapse all of a sudden. Poachers also prepared lifelong food from barely during poaching. As barely was not productive in the area, they buy from market. Hence, all materials which were used during poaching need sufficient money which may affect their economy. According to their culture, a poacher who was successful was not expected to work for a year. This is because it is the time to grow his hair longer for more than a year and proud of his success. To prevent hair loss, a poacher used none spiced butter as smoothening cosmetics.

As replied by the respondents, poaching of African buffalo has an indirect impact on the spread of STDs in the area. Successful poachers have a special acceptance in the society. Killing African buffalo or other game animals like lion and elephant increases the social value of an individual. Naturally, females need for their husband in particular and males in general to be viewed as superman in the society. Males who had been considered as superman among the society had a special respect from females. As replied by most respondents, the social acceptance of superman males ranged up to sexual intercourse. This was because most females had a good attitude and feelings for such males having good social acceptance and superior position. Hence, increased sexual partner might increases the spread of sexually transmitted diseases including HIV/AIDS. These sexually transmitted diseases might affect both sexes leading to multiple social problems. Poaching groups might also face another problem during poaching. For instance, the group crossed different districts and zones to reach the poaching area. This might bring conflict with other poaching teams and local people. In addition, some poachers might be attacked by wounded African buffalo, aggressive animals and snake bite in the forest. Other significant risks associated with poaching activities includes sprains, infection, broken bones and contraction of malaria while moving and stay in the forest [2,3,6,10].

In the distant past, illegal hunting of elephant, lion and African buffalo for trophy was conducted around Tullu Lafto, which is regional protected by Oromia Regional State. It is located in Abe Dongoro district of Horo Guduru Wollega Administrative Zone. Elephant was locally extinct, lion was rear but relatively small African buffalo are found sparsely in the remnant forest patches. As revealed by [6, 14] illegal hunting of wildlife is a key driver for population declines and local species extinctions. Hunting mostly accelerates extinctions of large

mammals [2] because such species have low reproductive rates. Hence, they are unable to compensate for high rates of harvesting [8, 11, 17]. Due to the reduction of African buffalo in the previous poaching area and the patrolling of local agricultural developmental agency workers, poachers have shifted poaching activities to other areas. Currently, one has to spend 2 to 3 days in Tullu Lafto regionally protected area to see a African buffalo. Habitat loss owing to encroachment and agricultural land expansion in the area also contributed for the decline of African buffalo population.

5. Conclusions

The present study revealed that the practice of poaching in Dire Guda local administrative area was common and frequently exercised as a culture. Poaching African buffalo was common and conducted on yearly basis during March to June. The main motive for the activities of poaching was a cultural heritage handed down from their ancestors. Killing game animals is considered culturally as hero and increase social acceptance. Trophies collected from killed animals were drawn on house wall and fence gate as indicator. As poaching was conducted during the period of land preparation for agriculture, the activity had a severe effect on agricultural productivity. In addition, successful poachers are not involved in any task for a year which in turn affects their economy. Materials bought for poaching and gun rent also had an impact on the economy of the people. Sometimes, conflict rose among African buffalo killers and non-African buffalo killers when successful poacher undermines others. African buffalo is the target species for poaching. Such targeted poaching causes a serious population decline which periodically leads to local extinction of the species. Hence, in order to curb this problem, public awareness creation and apply the laws for any violation of the regulation are compulsory.

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