



ADAMA SCIENCE AND TECHNOLOGY UNIVERSITY

OFFICE OF GRADUATE STUDIES

**Challenges that influence Management of Protected Area, The Case of
Dera Dilefekar Block, Arsi Mountains National, Park Arsi Zone Oromia
Regional state**

**A thesis Submitted to the Department of Applied Biology School of
Applied Natural Sciences, in partial Fulfilment of the Requirement for
the Degree of Master's Science in Biology**

BIRHANE BENTI DIRO

December 2017

Adama, Ethiopia

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APPROVAL SHEET

To: The Department of Applied Biology

Subject: Thesis Submission

This is to certify that the thesis entitled "**Challenges For Effective Management of Protected Area ;The case of Dera Dilfeker Block of Arsi Mountains National, park Arsi Zone of Oromia Regional State**" submitted in fulfillment of the requirements for the degree of Master of science in Biology .the Graduate program of Applied Biology, and has been carried out by **Birhane Benti ID.No GSU/0400/06**, under my supervision. Therefore, I recommended that the student has fulfilled the requirements and hence here by she can submit the thesis to the department.

Major Advisor: Yeshimebet Major (PhD)

Signature -----

Date -----

Acknowledgements

I would like to express my sincere thanks to my adviser Dr.Yeshimebet Major for her support, during writing the thesis paper. Her concern and considerate approaches have also aided for the smooth flow of the research paper and also my husband Mulugeta Ijeta, my Brothers Haile Benti and Bayisa Benti for experience sharing and support.

Acronyms

ASDAS	Association for sustainable Development Alternatives
ASLNP	Abijata-Shala Lakes National Park.
CBC	Community Based Conservation
CBD	Convention on Biological Diversity
CBNRM	Community Based Natural Resource Management
DCNAE	Developed Countries of North American Europe
DD BAMNP	Dhera Dilfeker Block of Arsi Mountains National park
EBTFA	Ethiopia Biodiversity and Tropical Forest Assessment
EU	European Union
EWCO	Ethiopia Wildlife Conservation Organization
FAO	Food and Agricultural Organization
GERP	Gross Enrolment Rate Program
HWA	Hunting for Sustainability in Africa
UNEP	United Nations Environmental Program
WCPA	World Commission Protected Area

Abstract

Ethiopia has various protected areas in different part of the country areas like Arsi Mountain National Park has been challenged largely by anthropogenic impacts. However, unlike the other known protected areas of Ethiopia, the challenges facing Dera Dilfekar Block Park were not rigorously investigated. So the main objective of this study was to assess the major management challenges and conflicts between local people and park managers. Survey questionnaire was employed to collect primary data and literature was reviewed to acquire secondary data in order to assess the socio-economic situation of households, and problems of natural resource management. Four kebeles were selected using purposively sampling from out of 12 kebeles in and around Dera Dilfekar Block NP .In addition to questionnaire, four focus group discussions were made with park staff and other eight key informants (two from each kebele); and again, the ten focus groups (five from park resource dependent sand five from non-park resources dependents) were used to acquire data. Participant of focus group discussion and key informants except households of local people have been selected by purposive sampling. Result of the study revealed that grazing (open), cutting living tree, voluntary settlement on the government side were the major management problems of the Park. The data obtained from all selected sample kebeles indicated that, here is a great increase in live stock population and human pressure in and around park areas. The major management problems of the Dera Dilfekar Block national park as identified by the respondents were grazing (93%), cutting living tree (32.4%), conflict between the park management and local communities (91.2%). Most respondents had appositve attitudes towards conservation of the Park. Therefore to bring sustainable park management in Dera Dilfeker Block Park, require awareness creation by the stakeholders for the surrounding communities. This may help create sense of ownership on the part o f the communities settled surrounding the park Moreover this may help mitigate the conflicts that could happen between the interest of the local people and the park.

Keywords: *attitude, challenges of Dera Dilfekar NationalPark, conservation management livestock.*

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1. INTRODUCTION

1.1. Background

East Africa is noted for its diversity and abundance of large mammalian herbivores. The Horn of Africa shows a great diversity of landscape and Environment (Kutilek, 1979). The wide range of habitats in Ethiopia, from arid desert, open grassy steppe, and semi arid savannas to highland forest and afro-alpine moor lands, support an exceptionally diverse fauna and flora species. Ethiopia is one of the few countries in the world that possesses a unique characteristic biota with high level of endemism (Jacobs and Schroeder, 2001). However, wildlife population and forest in Ethiopia has diminished over the past century both in number and distribution. Therefore protected areas are seen as a key to conserving natural resources. Ethiopia is one of the countries in the world which established protected area to conserve unique characteristic fauna and flora with a high level of endemic species in the country (Hilman, J.C, 1991).

The degradation and destruction of natural habitats due to human-induced actions are major causes of global biodiversity decline (Brooks *et al.*, 2006; Chown, 2010). This is expected to be increasing in future in developing Tropical countries like Ethiopia, coupled to the ever increasing rate of population growth, where there is a high demand for extensive arable land and grazing areas to meet their basic life needs (Chown, 2010). Understanding the associated threats these actions cause and the way in which plants and animals respond to them is thus important for efficient and effective conservation decision making and management actions (Brooks *et al.*, 2006).

Ethiopia's protected areas are increasingly degraded. Land is being converted for subsistence and commercial agriculture, timber used for fuel wood and construction, protected grasslands used for livestock grazing. The loss of forests and other protected land is underpinned by a growing population, unsustainable natural resource management, poor enforcement of existing legislation, uncertain land tenure and very low public awareness of the impact of climate change and the importance of biodiversity and ecosystems (James, 2012). To conserve this unique endemic species in the country establish a number of national parks, sanctuaries, wildlife reserves and controlled hunting areas (Desalegn, 2004). However, these protected areas in the country now a day are degrading and facing different challenges due to growth of population and settlement, illegal agricultural expansion, habitat loss and destruction, grazing, deforestation, soil degradation (Tedla,

1995; Ashenafi *et al.*, 2005) and misuse of natural resource in the country (Darren *et al.*, 1998). On other hand lack of comprehensible national and international policies, less commitment from government organs are the major challenges of protected area in the Ethiopia. Dildfekar block Park is one of the protected areas in the country found in Arsi Zone and which was established in 1976, and is one of the last remaining sites. Now a day the management challenges of the park was unknown because of it's newly establishment no research conducted on it. Basically this study was focused on the major management challenges of area. The finding of the study will provide baseline data on challenges in conserving Dildfekar Park and forward the finding to the stakeholders to act on identified challenges.

1.2. Statement of the Problem

In order to conserve the wildlife genetic resources, Ethiopia has established protected areas at different level, all the important ecosystems in the country are not represented in the existing proper protection zone (Desalegn, 2004) . Even the areas dedicated for wildlife protection are facing many problems. The major problems to protected areas in Ethiopia emanate from demographic pressure, settlement within the parks or adjacent to them; deforestation, farm land expansion, grazing, and cutting living tree, illegal encroachment by people, uncontrolled fire, soil erosion and hunting (Darren *et al.*, 1998). Almost 85% of the populations in Ethiopia live in rural areas, and a large part of this population depends directly or indirectly on natural resources (Desalegn, 2004).

The conservation for biodiversity in Ethiopia is crucial to the sustainability of sectors diverse as energy, agriculture, forestry, fisheries, wildlife, industry, health, tourism, commerce, irrigation and power services. However recently, habitat loss and disintegration, soil deprivation, over grazing, uncontrolled fire deforestation and soil erosion in the country have resulted in loss and decline of biodiversity (Darren *et al.*, 1998). These challenges of protected areas in Ethiopia are related mainly population growth and settlement. the continuing degradation of biodiversity, the Ethiopian government has long been establishing and expanding various sorts of protected areas in Ethiopia including Dera Dildfekar Block of Arsi Mountains National Park `. Both the old and newly established National Parks of Ethiopia are facing enormous challenges. This requires a careful *in situ* investigation on the matter so as to overcome management problems of Dera Dildfekar block, and also to address the social and livelihood constraints of the people residing within and around the protected area.

1.3. Significance of the study

Recently habitat loss and disintegration, soil deprivation, over grazing, uncontrolled fire deforestation and soil erosion in Ethiopia have resulted in loss and decline of biodiversity (Darren., 1998). These challenges of protected areas in Ethiopia are related mainly to human population growth and settlement. The demographic pressures and concomitant demands for ecosystem services have resulted in the various problems and challenges threatening the very existence of our life support system (biodiversity) and ecosystem we drive from them. To curve the continuing degradation of biodiversity, the Ethiopian government has long been establishing and expanding various sorts of protected areas in Ethiopia. Both the old and newly established National Parks of Ethiopia are facing enormous challenges. Therefore, very little is known about the intricate and multifaceted problems of managing Arsi mountain national park Dera-Dilfekar block. This requires a careful insitu investigation on the matter so as to overcome management problems of Dera-Dilfekar, and also to address the social and livelihood constraints of the people residing within and around the protected area.

1.4. Objectives of the study

1.4.1. General Objective

- To assess the major challenges that influence effective management of Dera Dilefekar Block of Arsi Mountains National Park.

1.4.2. Specific Objectives

- To identify the major challenges and problems related to management and conservation of Dilefekar block of Arsi Mountains National Park.
- To investigate the causes of conflicts between local community and park management.
- To explore the local communities involvement and participation in the management processes of the Dera Dilefekar Block of Arsi Mountains National park.
- To assess the perception of the local communities toward park management.

1.5. Research Questions

- What are the causes of conflict between local communities and park management?
- How do the local community involve and participate in the management of Dera Dilefekar Block Arsi mountains national park
- How do the local communities perceive towards the Dera Dilefekar Block Arsi Mountain National Park management?
- What are the major challenges and problems of managing Dera Dilefekar Block Arsi Mountain National Park?

1.6. Scope and Limitations of the Study

The study analyzing or investigating challenges of protecting protected areas in Arsi mountains national park in Oromia Arsi Zone. The study area was also related to the ongoing limited management challenges related to Dilfekar Block. The challenges of protected areas were wide in its components. It may not be possible to address all management challenges in this paper due to limited time and resources. Therefore, the paper covers only some selected challenges of Dilfekar block Arsi mountains national park. Further, the study was done under several constraint challenges, particularly during the process of data collection. The time spent is not sufficient to collect the necessary data from the selected kebeles situated at different areas. Further due to inaccessibility of some of anticipated respondents and again the shortage of money to fulfil useful things during data collection processes. Hence this can be taken as the major limitation the study.

2. LITERATURE REVIEW

2.1 Theoretical Literature

2.1.1 Forests Conservation

Fortress conservation is an approach that gives primacy to the biological aspect over the human/social dimension of conservation. It is preservationist or protectionist in approach. As a way of preserving nature, it employs militaristic style and infrastructure through its “fine sand fence” approach and hence its depiction by critics as “fortress conservation” (Fisher *et al.*, 2005). It presumes that nature is best conserved in protected areas wherein disturbance from human activities should be precluded. Certain areas are designated as protected amid the wide environment. This idea has been shaping the planning and designing of protected areas in the 20th century and beyond. Consequently, protected area policies based on this model either restricted access to natural resources or led to the total eviction of local people living inland around the protected areas (Neumann, 2005).

Historically speaking, this was the main approach to the conservation of nature in the 1960s and 1970s. This approach in turn has its roots in the thinking that magnifies the aesthetic value of wild nature as serving to uplift the spirit of man. Thus follows the dichotomization between man and the environment wherein the former is pictured as destructive and ignorant. By this equation, local rural residents and indigenous peoples who lived in and around the wilderness areas are seen as inherently destructive and hence their activities will be seen as incompatible with nature conservation. Backed by elites both from the developed and the developing world, this gave rise to the prominence of parks as safe-havens to nature from the ravages of ordinary use or the meddling hand of man (Fisher *et al.*, 2005). Therefore, it is argued that such an approach was undoubtedly elitist and very much favoured the value of nature to humans in general.

Little interest in the value of nature to poor rural people (Fisher *et al.*, 2005). Such elitist perspective becomes even a more serious problem to the livelihood of the poor rural people (particularly in Third World Countries) when it is combined with the environmental theories and thus: Threats to nature in developing countries will usually be framed in terms of the ‘ignorant behaviour’ and ‘reckless

management' of rural peoples and in the context of 'uncontrolled population growth'. Problems identified with these threats included overgrazing and exceeding carrying capacity, slash- and burn agriculture, the impoverishment of vegetation leading to the disappearance of climax vegetation, as well as the poaching of wildlife. Solutions for protecting nature inevitably followed. In the early years conservation funds financed preservationist approaches to conservation, such as establishing protected areas and reserves, removing local populations, supplying anti-poaching equipment, and conducting animal and plant surveys (Fisher *et al.*, 2005). The practical manifestation of this conservation approach comes as exclusion. As a result of such exclusion, resettlement of local people to other location; restriction of access to livelihood resources; break up of communal lands; collapse of local management systems and social structures; fines and imprisonment; and increased rural conflict and famine are among the impacts generated. Such conservation thinking influenced how the local people living in and around protected areas are perceived in conservation and thus: Local people will – and still are- labelled as poachers or squatters rather than hunters or settlers (Fisher *et al.*, 2005). Consequently, resource extractions like grazing, hunting, gathering etc are no more accessible to the local people. They rather become under direct state ownership and designated as protected areas for the conservation of the flora and the fauna and for their touristic importance (Neumann, 2005).

Sanderson & Redford (2004) would argue that conservationists have no responsibility for economic enhancement of the local people. On the other hand, Brockington & Schmidt (2004) argue that conservation should consider the immediate need of the local people and thus should contribute to poverty alleviation. In the same manner, (Fisher *et al.*, 2005) argument reinforces this assertion when they write that fortress conservation is criticized because of its ethnocentric orientation favouring Western ideas of nature; its list approach ignoring the land rights of the indigenous inhabitants; its neglect of the wider ecosystem approach in which human are also a part in influencing landscape; and its separation of people from protected areas which has resulted in ecological simplification and pressure on resources outside of the protected areas that finally impacts on the protected areas themselves. In general, fortress conservation marginalizes, criminalizes and impoverishes local people. This has resulted in the protest of the local people against conservation injustices. As a result, illegal hunting and grazing and other everyday forms of resistance became the signals of the failure of fortress conservation. From this it follows that fortress conservation often works towards its own demise. However, such protests from people are usually

presented as a problem caused by population growth and thus pressures from the surrounding areas and lack of appreciation of nature conservation from the part of the local people.

2.2. Challenges of Protected Area

2.2.1. Conflicts between local people and park management

Historically, the now evicted locals had been sparsely inhabited in many of the conservation areas for a long time. Upon the eviction, the indigenous people are forced to use resources that are outside the protected areas (Fiallo & Jacobson, 1995). However, as population increased unsustainable land use practices outside the protected areas made life difficult. Thus, demand for resources found people illegally use and then destroy the natural resources inside protected areas and getting into conflict with conservation authorities (Lumprey, 1990). Complete removal of the local people from using the resources in protected areas at the time of establishment resulted in conflict between the conservationists and the people (Davey, 1993). As a result, different illegal activities were carried out inside the protected areas against the law and regulations of conservation. The conflict between park and local people living adjacent to protected areas can probably never be entirely eliminated. However, the conflict can be mitigated by discouraging agricultural activities associated with high human density on land adjacent to protected areas that attract wildlife (Newmark *et al.*, 1994). With increasing human pressure on many protected area, human-wildlife interactions are becoming more common. In particular, crop raiding is becoming a more widespread and complex problem throughout the developing part of the world (Hill, C.; Osborn, F. and Plumpter, A. J. (2002). The success of protected area and human wildlife conflict reduction largely depends on the ability of managers to recognize, embrace and incorporate differing stakeholder values, attitudes and beliefs (Messmer, 2009). Traditionally, management decisions have relied more heavily on insight from the biological sciences than social assessments of the human dimension (Decker *et al.*, 1992). A major bottleneck in wildlife conservation is the inadequate direct benefits that local communities derive from wildlife related tourism (Earnshaw & Emerton, 2000).

Most of the African wildlife institutes were established around the same period, i.e., in 1950's. Some of them started conservation practices late, during 1970's and these wildlife institutes are successfully managing and utilizing their wildlife resources. However according to (FAO, 2003) represent Eastern Africa has a high human population have also contributed biodiversity loss can be attributed to multiple causes; a large part is accounted for by the real and widespread conflict

between people and wildlife. For example in Mauritania unsustainable natural resource exploitation, habitat conversion and destruction, pollution and soil degradation, coastal erosion, seawater intrusion, bush fires, overfishing in lagoons, long line and fine net fishing, coastal urban tourist development, building on wetlands, water pollution, land reclamation with its degradation of lagoons and coral reefs (Republic of Seychelles, 2004), sand mining in lagoons, islets and coastal areas (Government of Mauritius, 2005), hunting (Louette and others, 2004), inadequate management of waste and intensive farming are the major causes of conflict.

The loss of key dispersal areas for wildlife leads to greater pressure within the protected areas, and heightened human wildlife conflict. Hostilities have built up as consecutive governments ignore the hardship that wildlife causes people (Yeager and Miller, 1986, Western, 1997). In many parts of East Africa, human-wildlife conflict falls under the jurisdiction of wildlife conservation authorities, which often ends at the boundary. Park managers increasingly recognize that the survival of the remaining wildlife populations in Africa depends upon the willingness and ability of people living in and adjacent to areas inhabited by wildlife to support their presence (Anderson and Grove, 1987). Africa, compared to other continents, has the largest number of endemic families and genera of big games with high degree of endemism. This is one of the reasons for the African fauna to be so interesting and spectacular (Delany and Happold, 1979).

Despite the obvious economic benefits that wildlife brings, many farmers, herdsman and ranchers living adjacent to parks look upon wild animals with considerable respect (Knborn and others, 2003). Many nations accept the desirability of protecting their natural heritage to contribute for the protection of natural resources and conservation of the biological diversity of the world (Mackinnon *et al.*, 1986). Realizing the need of conserving and protecting its biodiversity, Ethiopia has become one of the nations of the world that ratified the Convention on Biodiversity. The country commenced its wildlife conservation and development program in 1965 (Hillman, 1993). Ethiopia's geographical location and physical feature has resulted in the diversification of wildlife (Shibru Tedla, 1995). The large altitudinal and latitudinal ranges make Ethiopia an ecological diverse country and home of several unique habitats. Out of the 277 mammalian species known to occur in Ethiopia, 31 are endemic (Hillman, 1993). Many of Ethiopia's protected areas exist on paper only, while others have declined in size or quality (Schloeder and Jacobs, 1993). For example the area became under increasing human pressure impacting the habitat available to the native wildlife.

Considering the actual population growth rate of humans, increasing demand for natural resources and the growing pressure for access to land, it is clear that the human-wildlife conflict may not be eradicated in the near future. This needs to be managed urgently (IUCN, 2003). The subspecies is threatened by further loss of habitat to subsistence agriculture, overgrazing by domestic cattle and by increasing number of new settlements in and immediately around the protected area. Hence the same problems that mentioned in the above are created in Dera Dilfekar Block of Arsi mountain national Park.

2.2.2 Grazing

Grazing by livestock has been an important issue for the management of the national parks and protected areas. Overgrazing by domestic livestock is an important cause of land degradation in arid (Perveen et al., 2008) and semi arid ecosystems (Huang *et al.*, 2007). Grazing frequently operate through the reduction of plant cover and fragmentation followed by disappearance of vegetation patches, reducing their size and/or numbers (Pervazqen and Hussain, 2007) and leading to soil erosion and losses of nutrients (Holm *et al.*, 2002). Grazing increased, reduced or lacked consistent effect on plant diversity (Proulx & Mazumder, 1998). These contrasting patterns of response have frequently been attributed to differences in grazing intensity. Overgrazing represents the most obvious impact on the native biodiversity of grasslands. As overgrazing causes retrogression, stimulates growth of weeds and loss of diversity. Overgrazing reduces the tall grass cover to tufted grass type (Olsen and Larsen, 2003). Livestock impact on biodiversity through trampling and removal of biomass, alteration of species composition through selective consumption and changed inter-plant competition. Grazing animals influence species composition, change in biomass and distribution of biodiversity. Similarly, Pratt and Gwynne (1997) and Sher and Hussain (2009) observed that overgrazing reduces the ground cover vegetation, plant diversity and productivity. Furthermore, the impact of grazing on rangeland vegetation Grazing animal may exert beneficial or mutual influences on the vegetations for their own good but on the other hand, large concentration of them often have harmful effects on the plants because of selectivity and over grazing. Quantifying the impact of livestock grazing on natural communities (forages) has become a major issue (Sher *et al.*, 2005:147) in the management of rangelands especially where the grazing is very widespread and its impacts may be in conflict with conserving biodiversity (Olsen and Larsen, 2003; Sher *et al.*, 2005). Lamprey (1967) documented that grazing is among the important agents, which influence the distribution of some vegetation types. Grazing animals influence species

composition, change in biomass and distribution of biodiversity. These changes are generally characterized by the replacement of grasses by woody species, leading to shrub and/or tree invasion and the concomitant increase in the scale of the spatial pattern of plant patches and soil resources (Adler *et al.*, 2001).

Awash, Abijata-Shala and Nechisar national parks, encroachment and grazing forced many wildlife species out of the park due to increased competition for forage (Hillman, 1991 and others, 1992, Jacobs and Schloeder, 2001). According to Zewdu and Yemisrach (2003), the level of rural poverty, lack of incentives, increasing demand for grazing and many other multi-faceted problems have put a lot of stress on the conservation strategy of the country. (Desaleny,2008) stated that authorities consider cattle grazing on Nechisar NP as the most pressing problem of the park for several reasons as the park warden explained: “Grazing in the park negatively affects biodiversity by exhausting grasses and related resources; common use of the grassland plains by wildlife and domestic animals increase the risk of disease transmission to and from wildlife; and their presence in the park makes the park less attractive to tourists as they are interested more in observing wild animals (Desalegn,2008). These referring to the signs of exhaustion in the grass cover, the authorities argue that the park area suffered from overgrazing by the cattle emphasizing that the cattle population is well beyond the carrying capacity of the area (Bolton, 1973). A similar case of habitat loss and fragmentation has also been reported for all National Park in Ethiopia, the shortage of pasture land to the local people and the local community direct involve on protected area in order to feed their cattle (Hillman, 1988). Hence the same problem in the Arsi mountain National park occurred and the cases were describe and explained in detail below.

2.2.3. Hunting

Although many parks have been notified for their protection, they continue to face serious threats. Historical records (Murray, 2003) tell us that numerous species are extinct or have been locally extirpated at least partly because of unregulated hunting, often in synergy with habitat alteration (tertiary animal mega fauna, pacific islands large fauna, passenger pigeon, American bison, and North-African elephants for example), local hunters being the one most important challenges for protected areas. Local hunting is carried by a large number of people, and it targets a wide variety of species. The biological impacts of hunting are poorly understood around protected area (Madhusudan and Karanth, 2002) Nyaoi and Bennett (2004) found that hunting wild animal in Asia

particularly in Batang Al national park is the major challenges predominantly carried out by men; in park bearded pigs will a regular hunted animal and sometimes large snakes such as pythons was hunted for local trade in the Lubok Antu market.

The main animals hunted by local hunters are ungulates, with bearded pigs being the main prey (Bennett, 1992). In Latin-American the Chiquita no communities and the Ayoreo of Santa Teresita, use hunting, and for subsistence use and local sale are similar problems in the countries protected area (Linzer *et al.*, 1998). In the Tang koko Duasudara Nature Reserve in Sulawesi, Indonesia, between 1978 and 1993, the population of crested black macaques declined by 75%, while anoa and maleo bird populations declined by 90%, and bear cuscus numbers fell by 95% (Brien and Kinnaird, 2000). Similarly in Viet Nam, 12 species of large vertebrates are either extinct or on their way to extinction as a result of hunting. These extinct species include Eld's deer, wild water buffalo, batagur turtle and Siamese crocodile. While the tiger, elephant and banteng are close to extinction in the country (Bennettn & Rao, 2002). In Africa Elephants are hunted for ivory and bush meat, this illegal killing of Elephants may be reduce the number and increasingly confined to protected areas and their immediate peripheries (Blake, 2002).

The expansion of bush meat hunting is a major threat (Robinson and Bennett, 2002, Robinson and Bennett, 2004). Casualties of the bush meat trade include the great apes (gorillas, chimpanzees, and baboons), which coupled with the real and growing threat from the Ebola virus could be driven to the verge of extinction within a decade (Walsh and others, 2004). In a report from IUCN (Eves & Ruggiero, 2002), it was estimated that the number of all duikers decline through illegal hunting. The same document estimates the harvest rates of blue and bay duikers at 18 and 0.25 million respectively, based on the assumption that 50% of the forest area is hunted in Central Africa (Mayaux *et al.*, 2004). Between 1925 and 1950 up to 800,000 duikers pelts were annually exported from French Equatorial Africa (Fargeot, 2003). However in several countries much of the hunting takes place in the more productive forest-agriculture mosaic. For example 385,000 tons of bush meat is harvested yearly in Ghana (Ntiamoa-Baidu, 1998 in Cowlshaw *et al.*, 2004) and 118,000 tons in Côte d'Ivoire (Casparly, 1999) are harvested in the forest. The status of such species may not be of immediate conservation concern, and will not attract tourists but they have both economic and ecological value and deserve to be taken into account in management decisions (Naughton-Treves *et al.*, 2003). Note however that many of the original species inhabiting these areas are now locally

extinct. For example in Cameroon, many species of large mammals, including elephants, gorillas and other primate species, have become locally extinct in the past 50 years due to hunting (Maisels *et al.*, 2001). Bush meat hunting is also a significant challenge in Madagascar (Golden, 2005). On the other hand in Lukusuzi NP Illegal hunting reduce wild life condition in Luangwa's Pas in Zambia (Lewis, 2005).

Food unconfident families living in areas where wildlife is an available resource sometimes compensate for poor farming results by snaring wildlife and using game meat for barter. This coping strategy is widely practiced in Luangwa Valley by relatively unsuccessful farmers and in previous years accounted for annual losses of over 3,000 wild animals (Lewis and Travis, 2006). Ethiopia is a country exceptionally high in globally unique biodiversity; however wildlife populations throughout the country have been reduced to a fraction of what they will due to a number of causes, including hunting. This appears to have several root causes, including cultural traditions, subsistence, and buffers during famines and reprisal against government (HUSA, 2012). Several national parks and controlled hunting areas are spread across the country, but the institutional and financial capacity for protected area management is low and benefit sharing mechanisms with communities are lacking (HUSA, 2012). Hunting management is highly focused on revenue derived from concessions and trophy fees, particularly those targeting the endangered mountain Nyala - the world's rarest mammal still subject to commercial harvest. HUSA examines the multiple drivers and impacts of hunting in both highland and lowland areas and assesses the potential for benefit sharing to help develop sustainable approaches to wildlife conservation. Illegal hunting tends to destroy wildlife; further exacerbating the status by decreasing the number (including lions and their prey species). So does human-lion conflict, resulting the reductions in lion numbers (through indiscriminate killing; poisoning, trapping and shooting) (Gebresenbet *et al.*, 2010). The Awash-Shala lake national park in Ethiopia also provides deference mammalian species (Fekadu and Rezenom, 2002)Historically, as noted by "Stephenson (1978), abundant species including Oryx (*Beisa oryx*), Swayne's hartebeest (*Alcephalus busephalus*), Buffalo (*Syncerus caffer*), Waterbuck (*Kobus ellppsiprymnus*), Giraffe (*Graffa camelopardals*) and Lion (*Panthera leo*) in the park but currently these animals have been exterminated through illegal hunting and replaced by other species in ASLNP". Hence in Oromia Ethiopia, illegal hunting, usually described as a culturally important economic activity; there for Dillefekar regional park also one of the protected area in Oromia Ethiopia similar problem create repeatedly in the park.

3. MATERIALS AND METHODS

3.1. Description of the study area

The study area is located in Arsi zone of Oromia Regional states .It is one of protected areas found in Arsi Zone. It is situated 120 km away from Addis Ababa in the south east and 50 km north of Asella the zonal capital city. It is 20 km from Adama in the south and 15 km from the Sodere Resort Centre in the south west; which is the most popular resort area. Dilfekar is the nearest to Addis Ababa from any other park of our country and it is found in the low land which is situated in 1300 to 1841 meters above sea level. This makes the block to be visited all over the year. Dilfekar Blockpark was established in 1976 on 0.4 km² as an enclosure area to prevent Dera town from flooding during rainy season and protecting wild animal in area enclosed with continual compromise between local community and woreda, zonal and regional officials they enlarged the protected area to 13 km² and 2,500 ha. Before the establishment of Dera block of Arsii Mountains National Park it was known as Dera Dilfekar sanctuary.

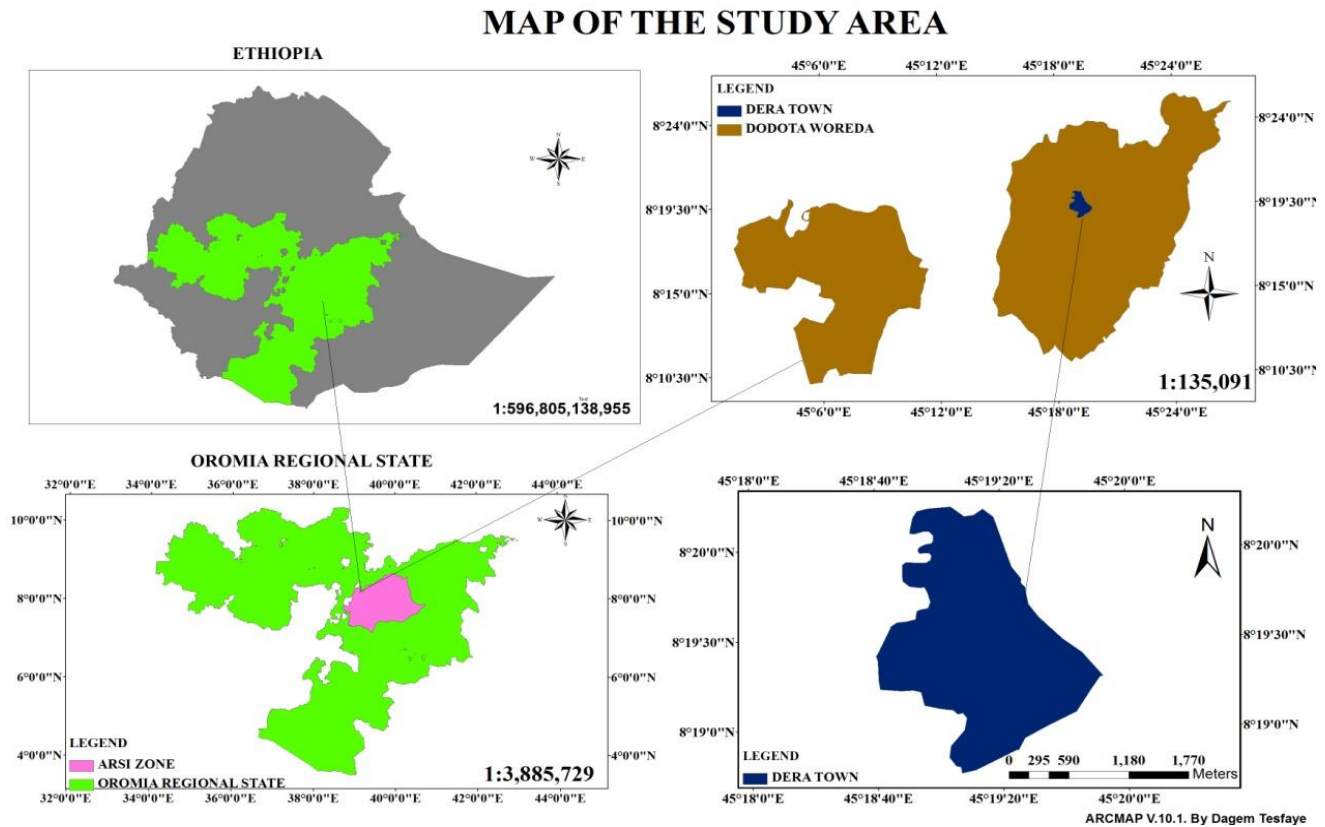


Figure 1: Map of the study area

3.1.1. Climate and Drainage

The agro-ecology of Dera Dilefekar Block of Arsi Mountains National Park and its surroundings may be recognized as semi arid(which lies between 1300-1841m above sea level) and is characterized by a cold, climate following the traditional classification of agro-ecological zones in Ethiopia. The region is characterized by semi-arid area and coordinates are 8 02'0 N 38 051 0 East. The Geological structure of the park has produced diverse topographic features including a vast plain, some sloppy areas, small hills, river vales, escarpments and chain of mountains at boundaries Dera Dilefekar Block of Arsi national park and its surroundings have unique natural, physical features such as, natural caves, and high mountains peaks. This city has a tropical climate. Most months of the year are marked by significant rainfall. The short dry season has little impact. In Dera, the average annual temperature maximum is 28.4 °C and minimum 13.7. The average annual rainfall is 569.72 mm (Eastern and central oromia metrological service center).

3.1.2. Fauna and flora

Dera Dilefekar block national park has *Acacia or* Asengal dominated the vegetation cover. According to a wild life census conducted in February 1996, there are about 25 mammals species those are dominated by greater kudu, lesser kudu, and also more than 189 birds those are dominated by helmeted guineafowl, little beer eater, black wood hoopoe, etc.

3.1.3. Socio-economic profile of the area

The total population of the sample kebele around Dera Dilefekar bock of Arsi Mountain national park is estimated to about 10,475 numbers of households. Pastorals and subsistence farming are mainly dominating the socio-economic conditions in Dilefekar national park and the surrounding areas Association for sustainable Development Alternatives (ASDAS staff, 2006). Being among the major socio-economic problems, highly increasing size of population and livestock density, could account for the deterioration of the general situation of the park. The park area was suitable for agriculture and heavy grazing.

3.1.4. Human resource development of Dera Dilefekar Block of Arsi mountain national park

The current records from Dera Dilefekar Block of Arsi mountain park indicated that there are Twenty two employees in the park. It is worth maintaining that out of these 22 employees 2 are

from the local community.

3.2. Research Design

In this study both qualitative and quantitative methods of data collection were employed to find adequate information and to get individual group and institutional views.

Data Source

Both primary and secondary source of data were used for this study. The primarily data were gathered through household survey, key informant interview, and direct observation techniques. The survey generated both qualitative and quantitative data pertaining to their socio economic and demographic characteristics, aspects of participations and perception. Views of those non user households were also included through focus group discussions. Secondary data sources included published and unpublished materials, books and etc.

3.3. Sampling method

The study focused primarily on management challenges of Dera Dulfekar Block of Arsi mountain national park, however the challenges were created by Dodota woredas recently. In order to undertake the study four kebeles from Dodota woreda of the park were purposely selected out of twelve kebeles more closely to the park. These were Dulfekar, Direkiltu, Awash Bishola and Dera. The four kebeles were purposely selected based on the distance from the park. The selected kebeles households –marginalized occupational groups believed to heavily depend on the resource off the park to meet there subsistence needs. Hence, it is highly conceivable that the study area kebeles represent perhaps the major challenges of the park. The total number of house hold in the study area was 10475 of which 4108 Dulfekar, 3081 Awash Bishola, 2156 Direkiltu and 1130. The total sample from each kebeles was taken proportionally from to make the number of household representatives. Accordingly, 102, sample household were taken that means 40 households from Dulfekar, 30 households from Awash bishola 22 household Dire kiltu and10 from Dera kebeles.

3.4. Methods of Data collection

3.4.1. Primary Data collection

Structured Questioner

The study was based mainly on house hold cross sectional survey using pre-tests structured questioner organized in logical order of presentation. The survey generates qualitative and quantitative data pertaining to demographic characteristics, aspect of participation, park resource use and dependence. 7 open ended question and 22 closed ended questions were constructed and distributed for respondents to get relevant information.

Key Informant Interview

in Depth key informant interview was conducted with selected informants who depend on park resources, park workers, park expert, farmers, local traditional leaders, woreda level of administrative bodies.

Focus Group Discussion (FGD)

Focus group discussion was also another qualitative method of data collection instrument used in this study. Accordingly focus group discussions from four selected kebeles and another four focus group discussions. A total of 8 to 10 participants in each focus group were participated and the general directions pursued in those discussions were left for the researcher to trigger issues for discussion and promote active group perception based on the topics listed on the questionnaire (Appendix 2)



Fig 2: Focus group Discussion (Source; PhotoBy Birhane Benti)

3.5.2. Secondary Data collection

The major secondary sources of data utilized during the study included books, journals , reports and which are related to challenges of park management.

3.5. Data analysis

The y data was analyzed employing mainly descriptive statistics with the help of statistical software (SPSS) version 20. The portion of data that is readily quantifiable information from closed equation of the questionnaire were discussed using tabulation of variables with percentage values and other descriptive stastics readily non quantifiable data (information from open ended question). Key informant interview and focused group discussion was analyzed through qualitative description and open ended questions was grouped in to different categories based on similarity.

4. RESULTS

4.1. Background and Characteristics of Respondents

Sample households were in adult age class (31-43). Such age class was important in identifying the detailed information of management challenges of the area. Further 54.9% of respondents had a family size of 1-4. The local people around Dera Dilfekar Park were agro-pastoralists and their household economy depended exclusively on agricultural and livestock production. Based on samples which were taken during field survey each household had on the average about <0.2 ha farmland and the total households of estimated of 10, 475 could owned about 2,095 ha of farmland. All the respondents depended on land to generate income from farming. Majority of respondents (83.3%) had a land holding less than 0.2 hectare; only 1% had land size greater than 0.5 hectare and 1% were landless. Separate plots are not allocated for livestock grazing. All members of the kebeles consider Dilfekar block of Arsi mountains national park as protected area. According to the respondents, the productivity of the land for the majority of farmers is less than sufficient and has no guaranteed source of income to supplement their livelihood. Besides, such low income groups around the park did not get any incentive from the park. Information obtained from the staff of the park and key informants showed that hunting was not problem.

Age of Responds	Frequency	Percent
18-30	22	21.6%
31-43	54	52.9%
44-55	20	19.6%
Above 55	6	5.9%
Total	102	100.0%

Table 1: Age of respondents in sample selected kebele

Sexs of respondents	Frequency	percent
Male	89	87.3%
Female	13	12.7%
Total	102	100.0%

Table 2: Sex of respondents in sample selected kebele around Dulfekar Park

Educational status	Frequency	percents
Illiterate	26	25.5%
Read and Write	62	60.8%
Elementary	14	13.7%
Total	102	100.0%

Table 3: Educational status of respondents around Dulfekar Park

4.2. The land size hold by the respondents around Dulfekar Park

Patterns of land holding system of the respondents in the study kebeles shows that only 1 (1%) were hold land greater than 0.5 hectare. While 15.7% of the respondents had land size ranging from 0.3 to 0.4 hectare and 83.3% of the responding kebeles had land size less than 0.2 ha

Table 4. Marital status of Respondents around Dilefekar park

Marital status	Count% with	Respondents from kebeles				
		Dera	Dilefekar	Awash Bishola	Dire Kiltu	Total
Married	Count	8	40	29	18	95
	%	72.7%	100.0%	96.7%	85.7%	93.1%
un married	Count	3	0	0	1	4
	%	27.3%	0.0%	0.0%	4.8%	3.9%
Divorced	Count	0	0	0	1	1
	%	0%	0.0%	0.0%	4.8%	1.0%
widowed	Count	0	0	1	1	2
	%	0%	0.0%	3.3%	4.8%	2.0%
Total	Count	11	40	30	21	102

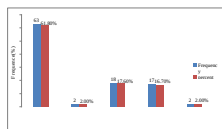


Figure: 1 Major source of income of the respondent

The major source were investigated for the surveyed kebeles primarily two basic source of income were identified these were farm based and park resource based in comes

4.3. Challenges and problems of park management

As described on the table 6 below, majority 41 (41.2%) of respondents said that they had prevented from the resource of the park by the management of the park and only 60 (58.8%) replied that they had allowed to use the resource of the park.

Table 5: Respondents prevented from the park resources

Question	Responses	Frequency	Percent
Is there any resource that you have been prevented from the park?	No	60	58.8%
	Yes	42	41.2%
	Total	102	100.0%

Accordingly, responses of respondents during household socio-economic survey relating to management or conservation problems of natural resources of Difeke National Park indicated that live stock grazing (50)49%), cutting living trees (33), 32.4%),

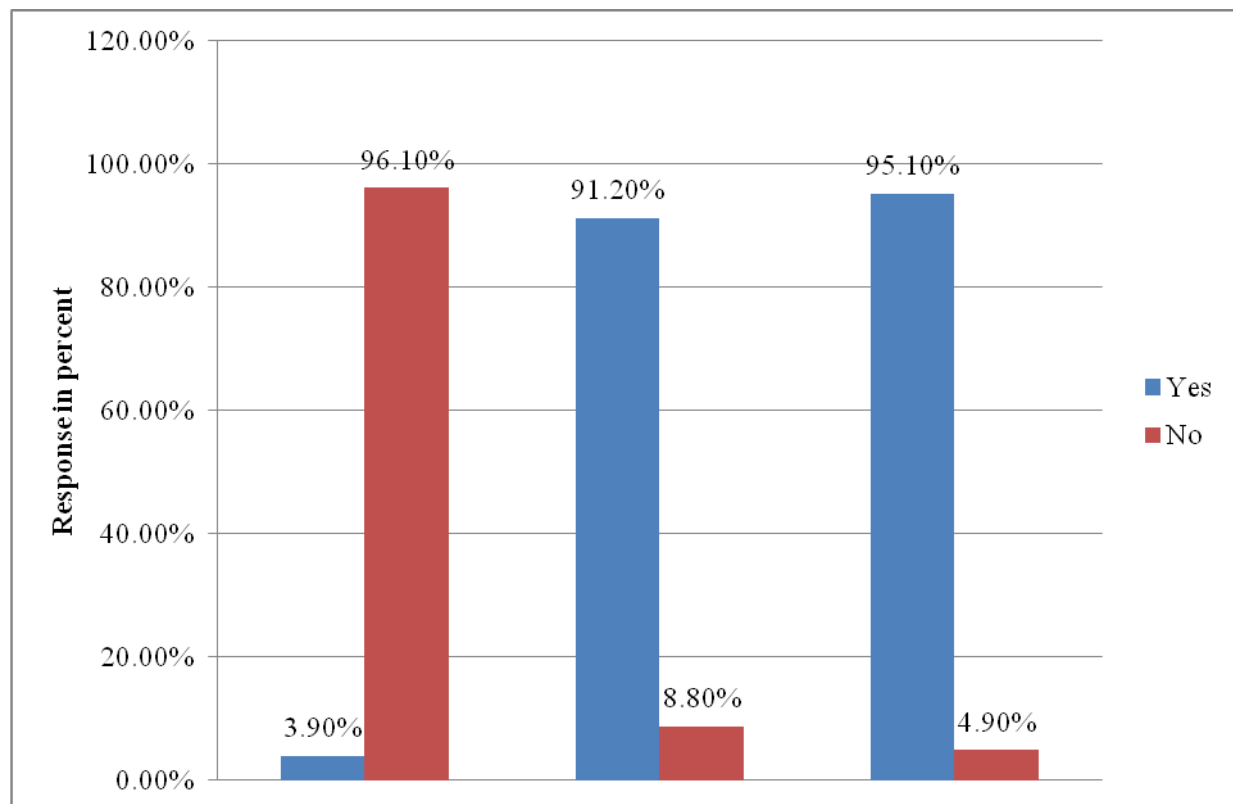
Table 6: Major Challenges of the Park

Major challenges	Frequency	Percent
Human encroachment	2	2%
Expansion of Farm land	0	0
Settlements	2	2%
Live stock grazing	52	49%
Hunting Wild animals	0	0
Cutting living trees	33	32.4%
Construction roads	4	3.9%
Others	9	8.8%
Total	102	100.0%

Table 7: Need for External Support for park management

Question	Responses	Frequency	Percent
Does park management need external support?	Strongly Need	45	44.1%
	need	47	46.1%
	FairlyNeed	7	6.9%
	Do not Need	3	2.9%
	Total	102	100.0%

Majority of the respondents 97.1% strongly need 44.1% believe that the park management needs external support while only 2.9% of the respondents believe that the park management do not need any external support.

**Figure 2. Opinion of respondents on conflict between local community and park management**

Almost all respondents (95.1%) replied that they expect benefits from park resource for grazing, firewood, building, and fodder farm land (Fig 5). Majority of respondents (74.5%) said that they and their

family partially use park resources for their lively hood and 12.7% totally use the park resources and the same amount (12.7%) of respondents do not use park resources at all (table 9). 19% respondents believe that the dependency on park resources strongly hinders the park while 68.6% believe that it only affects the park slightly and 12.7% responded that it does not hinders the park at all (table 10).

Table 8: Park resource use for Livelihood

Question	Response	Frequency	Percent
Do you and your family use park resource for their livelihood	Totally	13	12.7%
	Partially	76	74.5%
	Not at all	13	12.7%
	Total	102	100.0%

Table 9: Attitude of respondents dependency on Park resource

Questions	Response	Frequency	Percent
Does this dependence on the park hinder the park?	Strongly	19	18.6%
	Slightly	70	68.6%
	Not at all	13	12.7%
	Total	102	100.0%

.Further, focus group discussions and individual interviews revealed that the conflicts often encountered are of two types in nature. One is minor conflict among park resource users with the regard to the use of park resource products. In relation to this, some informants stated that they were dissatisfied due to the restoration imposed over the previous unlimited access. This ill-feeling intensify and create problems on the park management. The second one and the most important are related with the border demarcation. In the time of field observation the park bordered in between four Woreda and within this Woreda Five kebeles are closer to the park. During the border demarcation process fertile soil which is found at the park of the river and the vast grazing area included in to the side of the park .Especially in dry season the local people practices in using these resources from the park. Many of the local communities and the park officers agreed that the tension of conflicts between park and local community has decreased during the rainy season and this was mainly due to reduction offering and hunting, availability of sufficient amount of forage sources for

the animals and government interferences settle the problems. And most respondents have agreed that conflicts were managed by community elders, religious leaders, respected individuals and government bodies. This is similar to earlier report that the inter-clan and community conflict can often be solved using traditional and social organizations. The same authors further suggested that traditional and institutions have a key role to play In resolving conflicts, management of natural resources and to maintain peace between local community and protected areas.

4.4. Perception and practices of local community of towards park management

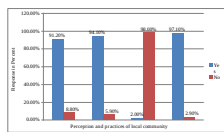


Fig 3: Perception and practices of local community of towards park management

As presented on Fig 4 above majority (91.2%) of respondents perceive that the presence on the park benefited the community and want to involve in managing the protected area (94.10).

5. DISCUSSION

This study revealed that, there is a great increase in livestock population and human pressure in and around park areas. The major management problems of the Dera Dilekar Block National Park as identified by the respondents were grazing (93%), cutting living tree (32.4%), conflict between the park management and local communities (91.2%). As a result, communities have been imposing maximum pressure on the park resources by cutting living tree and grazing their livestock in the Park. The work of (Hillman, 1988) on Bale mountain National Park, showed that habitat loss, fragmentation and the shortage of pasture land to the local people and the local community, led to direct involve on protected area in order to feed their cattle (Hillman, 1988). Lamprey (1967) documented that grazing is among the important agents, which influence the distribution of some vegetation types. He added that Grazing animals influence species composition, change in biomass and distribution of biodiversity. These studies support the finding of our study which indicated grazing as the major problem of park management. In addition this study found that cutting trees for wooden fuel purpose is the second problem that challenged the existence of the park as protected area.

The main significant management challenges of Dilekar national park are due to human induced impacts through Livestock grazing, illegal farm land expansion, and cutting of trees (grass collection) for deferent purposes, uncontrolled fire and hunting wild animals. So, in order to manage the park resources and to effectively conserve wildlife, in the area cooperation of local community and work with them is essential. Lack of a buffer zone, high number of cattle and other domestic animals graze on the edges of the Park. There for deterioration of vegetation close to the edges that might influence the destruction of park resources. Human-park interactions are becoming more common (Corti et al., 2002). This makes the park resources more degraded, through commonly practiced activities, such as: large number of livestock overgrazing, expansion of farm land and uncontrolled fire are considered primary factors that affect the park resources. Moreover, this enhances bush encroachment in the area. The effect of overgrazing by livestock population for many years has resulted in a significant change on the vegetation cover. One of the accepted causes of bush encroachment is the reduction or degradation land of grass, e.g. by overgrazing, which allows more water to penetrate to deeper soil layers thus becoming available for woody growth (Messana and Bereket Nestereab, 1994).

The other study on Nechsar NP (Desalegn, 2008) stated that authorities consider cattle grazing on Nechsar NP as the most pressing problem of the park for several reasons as the park warden explained: "Grazing in the park negatively affects biodiversity by exhausting grasses and related resources; common use of the grassland plains by wildlife and domestic animals increase the risk of disease transmission to and from wildlife; and their presence in the park makes the park less attractive to tourists as they are interested more in observing wild animals (Desalegn, 2008). These referring to the signs of exhaustion in the grass cover, the authorities argue that the park area suffered from overgrazing by the cattle emphasizing that the cattle population is well beyond the carrying capacity of the area (Bolton, 1973) which is similar with our studies that was seen during data collection while cattle was grazing in the protected area of the park (fig 4).

Similarly studies conducted in Awash, Abijata-Shala and Nechsar national parks, encroachment and grazing forced many wildlife species out of the park due to increased competition for forage (Hillman, 1991, Gebre Michael and others, 1992, Jacobs and Schloeder, 2001). According to Zewdu and Yemisrach (2003), the level of rural poverty, lack of incentives, increasing demand for grazing and many other multi-faceted problems have put a lot of stress on the conservation strategy of the country. In our study the presence demand for grazing, lack of incentive which resulted in conflicts concerning use of park resources. Studies indicated that upon eviction of the indigenous people, they are forced to use resources that are outside the protected areas (Fiallo & Jacobson, 1995). However, as population increased unsustainable land use practices outside the protected areas made life difficult. Thus, demand for resources found people illegally use and then destroy the natural resources inside protected areas and getting into conflict with conservation authorities (Lumprey, 1990).

Complete removal of the local people from using the resources in protected areas at the time of establishment resulted in conflict between the conservationists and the people (Davey, 1993). As a result, different illegal activities were carried out inside the protected areas against the law and regulations of conservation. These activities destroyed the natural resources (Wells & Barandon, 1992). In this study conflict between the park management and local communities was identified as problem that challenged the park as majority had complained that they have prevented from using the parks resource. The natural resources of the study are mainly controlled by the governments a national park and local community around the area. The newly established national park had a variety of natural resources (wildlife, vegetations, land form topography, spring water and surface water) a tourist

attraction and the community uses the park resource as the source of animal feed, farming land, pastoral and, fuel wood resource. These attributes could cause some conflict between park officers and the local community. The use of the term conflict in the context of this study refers to land use conflict in the study area between the government and the local community, which reflects on going competition over access to farm land, grazing, house building materials and other resources. The respondents respond that there was slight conflict between the park offices and the farmers. The cause for the conflict between the park offices and the farmers were shortage of grazing land and water, inadequate area for settlement and farm land, demand for house building materials, demand fuel wood and fodder and ownership of territory.

Most respondents considered that the existence of the park had a negative impact on their livelihood. Lack of free access, grazing, fear of displacement from their farm land area was the major cause. However, only few of the respondents expressed a positive attitude to conservation and indicated that the existence of the park will serve as a means of generating income and services. They recommended that the park has to be free from human intervention. A study in East Africa equally reiterates that the attitudes of local people on protected areas were subjective to armed forces and settlement they personally get from the protected area (Newmark *et al.*, 1994). People determine simply seeks to manage natural resources when they become conscious that the incentive exceeds expenses (Murphree, 1991). At the same time, expansions in terms of conservation the need of the local people are very significant part of conservation. In addition to lack of benefits, low level of awareness on the importance of protected area makes the problem more severe in the area.

6. CONCLUSION

Dera Dilfekar Block of Arsi Mountains National park is one of recently established parks in Ethiopia which is located in Arsi Zone Oromia region, It was found that the majority of the respondents surrounding the park oppose the presence of park in the area. Contrarily, they believe that the eradication of park will make possible for them to take over the area which is occupied by the park for their live livelihood. For instance, they want the park area for a free grazing land, for their livestock as well as farmland. Discussion with the local community has also revealed that the attention of community members is to have some part of the park for their own use.

The study explored the perceived and actual benefits from the park, family size, and level of education; age and association by the staff of the protected area are the major factors that determine the perceptions of local communities. For example, most communities powerfully require without charge to have access to grazing for their livestock inside the park. They also maintain that they have the right to use the natural resources of the park. It requires awareness creation by the stakeholders for the surrounding communities. This may help create sense of ownership on the part of the communities settled surrounding the park. Moreover, this may help mitigate the conflicts that could happen between the interest of the local people and the park.

A number of procedures need to be taken in order to mitigate the problems such as introducing family planning, reducing the livestock number, emphasizes on fineness, foreword of animal feed extension, and responsive plant awards park protection, supplying clean water, grazing land shortage, low production and productivity and introducing other community services. In addition, technologies that could improve the fertility status of farm plot and the use of new technologies that would improve the income of the local community. It was found that the park has been facing serious management challenges which should be solved in sensible way. This may require concerted and coordinated efforts by the relevant stake holders so as to ensure the sustainability of the park and maximize the benefits from the park to the local communities surrounding the park and the region and the nation at large.

7. RECOMMENDATIONS

Based on the findings of this research the following recommendations have been forwarded.

- The government should transfer those people living in and very close to the park to the area that is comparable in climate and other necessary conditions should be met.
- The park authority and NGOs cooperatively should work hand in hand to increase awareness of the local people about the importance of wild life conservation.
- The government should take consideration to the number of tourists visiting the park in season when making tourism development strategy on the area.
Family planning services should be given extensively for the local communities to reduce future pressure on park resources.
- To reduce conflicts between wildlife managers and local communities, there should be close link between the park authority and the local communities living around.
- Experts in natural resource management (i.e. members of Department of Agriculture) and in those evolved environmental education, and staffs of tourism management need to provide continuous awareness to the local people about the adverse effects of frequent grass collection, open livestock grazing and encroachment of the park.
- The tourism board should invite and strengthen the cooperation between NGOs (UNESCO; ASDCE) for the sustainable development of the park.
- Share the benefits that might be generated from the park to the local population in order to win their active support for the protection of the park.
- Conservation measures will not be successful without the active participation of the local people. So community based conservation system (co-management) should be an integral component for the conservation of the park.
- Shifting the attitude of local communities through education and allocation of benefits from the park can serve as means of protective measure.

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9. APPENDIXES

ADAMA SCIENCE AND TECHNOLOGY UNIVERSITY SCHOOL OF APPLIED NATURAL SCIENCE

Challenges for Effective Management of Protected Area, the case of Dera Dilfekar Block of Arsi Mountains National Park.

9.1. Appendixes 1: Questionnaire

I. Consent

Dear Respondents

This questionnaire has the research purpose .The outcome of this research will help to identify the challenges of protected area by investigating the participation of local community in Dilfekar regional park .it is believed that the study will gather useful information for the community, the government and non government organization in designing mechanisms to ensure effective management of protected area, there for I kindly request the cooperation of respondent in filling out the questioner. I confirm you that all data will be treated confidentially.

II. Demographic and household profile

1. Code of respondent-----Age -----sex-----peasant association -----
2. Family size Male-----female-----total -----occupation-----
3. Educational status .A .illiterate B. Read and write only C. Elementary
4. Land holding size (ha) A.<0.2 ha B.0.3-0.4ha C.0.5-0.8ha D.>0.8ha
5. Marital status 1.married 2.unmarried 3.Divorced 4.widowed 5 .others
6. Number of livestock -1.cattle 2.sheep 3.Goats 4.Donkey 5.others
7. What activities other than farming do you do? 1.petty trade 2.collecting and selling fire wood 3.pottery 4.wavering 5.others
8. what are your major sources of income?

A. selling cereal crop, such as wheat, teff. maize B. selling of Honey C.selling of fruit and vegetables D .selling of fuel wood

No	Item	Tick	Rank	By whom
1	Human encroachment			
2	Expansion of farm land			
3	Livestock grazing			
4	settlement			
5	fire			
6	Hunting wild animals			
7	Cutting living tree			
8	Construction road			
9	Other			

III. Challenge and problem of park management

Is there any resource that you have been prevented from the park? Yes/No. If yes what type of the resource? And mention and describe the reasons. Which do you think the most serious problem with regarding to park protection?

9. Does park management need external support?

- a. strongly need
- b. need
- c. fairly need
- d. do not need

10. For the question above the answer strongly need what type of support?

11. Do you participate on hunting wild animals? Yes/NO. If NO which community and what type of animals

IV. Case of conflict between local community and park.

13. Are there conflicts concerning use of park resource? A.yes B. sometimes if yes what conflicts?

12. Do you and your family use park resource for their livelihood? 1, totally 2.partially 3.

Not all if the answer in the above question 1 or 2. does these dependence on the park hinders the park? A. strongly B. slightly C. not all

Do you have range land yes/No, if No how you feed your livestock?

13. Is there any conflict between you (local people) with the park management? Yes/No if yes why? Especially when?

14. Do you expect any benefit from the park? A .yes B .NO if the answer is yes indicate the benefit gained from the park use the following

Indictors	Rating				
Benefit	Highly (1)	Increas e(2)	To some(3)	Decrease (4)	Insignifi cant (5)
Grazing					
firewood					
building					
fodder					
bush meat					
farmland					
forest					
product					

V. Perception and practices of local community.

15. Do you know why the park was formed? a. conservation B. tourism C. doesn't know D. others .

16. Do you think that the presence of the park benefited the community? Yes/ No. if yes in what way?

17. Do you want to involve yourself in managing the protected area? Yes/No.if no why? 21.
For what purpose do you ue grass from the parka. A grazing B. house construction C.
Harvest and sell to generate income.

18. What are the main factors that contributed for the above relationship?

19. Is there any traditional hunter in your area?

20. Do you like the existence of the park nearby you yes/no .if no why?
21. Do you think the presence of people and livestock in the conserve the park? Yes/No if yes in what why?
22. What is your opinion on the size the park? How do you prefer the area to be managed in the future?
23. Does the park way clearly remark? Yes/NO. if no does it create a problem what problems.
- i. _____
 - ii. _____

9.2. Appendixes 2: Focus group discussion

- a. What is the external of community in resource use in the park?
- b. -how do you evaluate the current socioeconomic strength of the local people in time of income and Education?
- c. Do you think the presence of the park close to your area benefited the community?
- d. In what way and what benefits have been realized up now?
- e. Do you think that people and livestock effect wildlife?
- f. Park dependents live hood condition perception
- g. What type of resource do you use from the park?
- h. What is the major benefit do you get from the park?
- i. Are you satisfied by gazing the area in the park?
- j. Which challenges do you get from demarcation of the area in the park ?
- k. What solution do you propose have traditional hunters in your community?
What type of animals they hunt?
- l. Do you practice your livestock grazing in the park? Why?
- m. Is there conflict with the local community people park resource? How conflicts often occur? How are conflicts resolved?

For park management staff

- i. Who owns and use the area before introduction to national park? And in what condition? –Do you think park management plan is being implementing effectively?-
- ii. Are you comfortable by law of park management plan? Is there treating to the park from the surrounding community?-does the park face any challenge from outside?
If yes. What are

By Translate English Language in To Afan Oromo

Gaafannoo 1

Gaafannoo jiraatotanaannoo park Dilfekar iif dh i yaate

1/ Kodii warra d eebe kennanii -----umurii-----saala -----ganda -----

2/baayina maatii-----dhi----dub-----wg----- bakka jirenya

3/sadarkaa barnootaa A/barressuu qofa B/dubbisuufi bareessu C/sadarka tokkoffa kan xumure

4.ballina lafa irra qubatanii(he). A/<0.2 he B/0.3-0.4 he C/0.5 -0.8 he D/0.8he

5.haala fuudhaafi heerumaa 1/kan fuudhee/heerumte 2/kan hin fuune/hin heerumne 3/kan hike
4/kan bira

6/baayina horii qabanii A/horii gaanfaa B/hoolaa C/Re"ee D/harree D/kan biro

7/hojii qonnaa irratti dabalataan maal hojjattu .A/daldala B/qoraan guurun gurguru C/Hojii suphee
dha"uu D/hojii broo

8/ maddi galii kee guddaan maal? A/ midhaan gurguruu B/Damma gurguruu C/kuduraafii
fuduraagurguru D/ cilee gubuun gurguruu.

9/qabeenya parkii irraa dhorkamu jiraa? A/ eyyen B/ lakkii yoo jiraate maalin

10/ Rakkoo guddaan paarkii kanaaf irra caalatti guff tahe isa kami

1/Adamoo 2/ lafa qonnaa babal"fachuu 3/horiin seenuun dheeduu 4/qubannaa 5/ibidda 6/muka
muruu 7/Ijaarsa adda addaa 9 kan biroo

11/ Maanajerri parkichaa gargaarsa ni barbaaduu?
c/ hin barbaadu

A/bay"ee B/giddu galeessa

gargaarsa bay"ee yoo barbaade gargaarsa Akkamiit

12/Adamoo irratti hirmaattanii beektuu? Eyyee/miti

miti yoo ta"e uummata

akamiitu bineensota akkamiti adamsa?

Sababoota parkii fiuummata naannoo walitti buusan

13/ Sababiin walittibui”insa qabeenya parikchaa fayyadamuunii? A/eyyen B/yeroo tokko
tokko Eyyen yoo ta”e walitt bu”insa akammii?

14/atii fi maatin kee horii keessaniif qabeenya paarkichaa ni fayyadamtuu? 1/yeroo hunda
B/yeroo tokko tokko c/ muraasa

15/walitti dhufeyyi siniif/siifi manajera parkichaa ni jiraa A /eye B/miti eyyen
yoo ta”e keessattuu yoomi?

16/paarkicha irraa Faayidaa/bu”aa ni eegdaa? A /eyyen B/miti eyyen yoo ta”e bu”aa paarkirra
eegdu tarreessi .

Ilaalchaa fi hubannoo uummanni naannoo parkicha irratti qabu
17/sababii paarkii kun asitti hundaa”eef beektaa? A/bineensotaafi biqilootaa kunuunsuuf
B/tuuriismiif c/ hin beeku D/wanta biroo

18/ parkiin kun asitt hundaa’un uummata naannoo ni fayyada jettee yaaddaa?

A/eyyee B/miti eyyen yoo ta’e karaa kami

19/ parkicha kessatti hirmaachuu /hammatamuu ni baribaaddaa? A/eyyen B/miti miti
yoo ta’e maalif

citaa parkicha irraa argattan maaliif itti fayyadamta ? A/horii dheechisuuf B/mana ittn ijaaruuf
c/hamuun gurgureen galii argadha

20/wantoonni armaan oliitti ibsame

21 /naannoo kee adamoon aadaa ni jira? 22/

24/ yaann ati bal’ina parkicha irratti qabdu maali gara fuula duraatt bal’nich a akkamiti too’achuun
danda’ama?

25/karaan parkichaa karaa qulqullina qabuun ibsame jira?A/eye B/lakki
lakki yoota’e rakkoon akka hin ibsamne gufun maali

Marii garee

a/ Parkichi ummataa maali irraa fayyadama

b/cimminni yeroo ammaa hawaas diinagdee irratti uummmata naannoo karaa galiifi barnootaa
maal fakkaataa ?

C/parkichihawaasa naannootiif gargaarsa godhuu irratti cufaadha jettee yaadda?

D/Faay iaa f i karaa kamui in park icha irraatt i hirmaachuiui barbaadda?

E/buineensonn park icha kessajiran beeyladoo n i midhui j ettee yaaddaa?

G/parkratt jireenyi keehuind ahaa?

g/ qabeenya parkii maali fayyadamtu ?

h/Faayidaa guddan parikicha irraa argattan maali ?

I/citaa /marga horiin keessan dheedutti itti quuftanii jirttuu?

j/daangaa parkichaa kan dhiibu maali k/adamoo adaatiif furmaata maalii qabda bineensota akkamiti adamsu?

L/hooriin /loon kee parkii kessa senanii dheedani beekuu? Maaliiif?
m/walitti bu'insi siniifi manaajera parkii gidduutti uumamee beekaa ?
walitti bu'insa akkamitt I uumame walitti bi'insich akkamiti hiikame?

Gafannoo hojjattoota parktiif dhihaate

i/parkiin kun osoo hin hunda'in dura laficha eenyutu ittifayyadamaa ture? Haala kamiin?

Manaajerr parkii karoora baase hojiirra oolcha jettee yaaddaa?

ii/karoora manajera parkichatti gammaddee/itti quuftee jirta?

parkiicha hawaasa/ummata naannoo irraa ittisaa jirtuu? Parkichi rakkoo alaatiin miidhamaa jira ?eyyen yoo ta'e maal fa'i?