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SHRINKING STATE OF WILDLIFE IN ERITREA: A CHALLENGING CONSERVATION

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Abstract

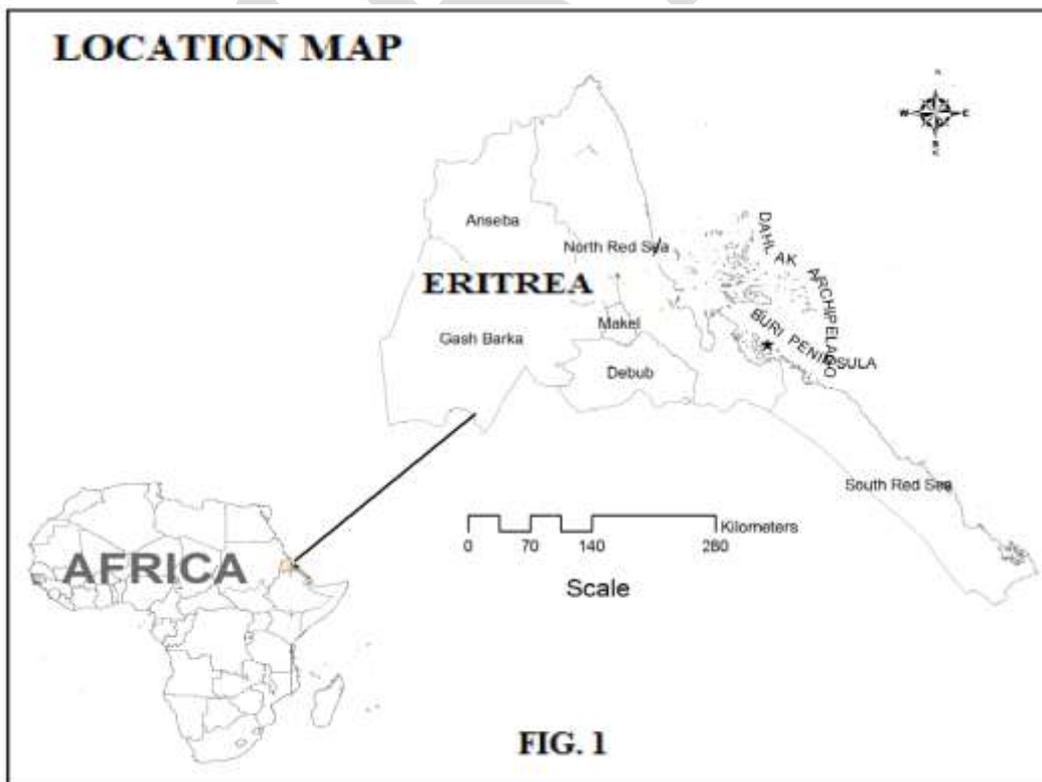
In the past Eritrea had wide variety of wild species. According to the available records, Eritrea was home of a wide range of wild animals. Just 60 years ago, Eritrea could boast all the large game species of the East African Savannah. But today only a few of these species remain. In fact, the present wildlife condition in Eritrea is not much known because no wildlife survey has been made for the last many years. But it is clear that the wild animals have been drastically decreasing from time to time owing to successive colonial administrations followed by decades of war, farming methods, persistent drought, population increase, desertification and accelerated rate of deforestation. Conservation of wildlife means the management, protection and rational use of wildlife resources. Wild animals make up essential parts of nature and contribute to the beauty and wonder of life. They are equally important for scientific research. The chief objective of conservation is to ensure the survival of wild animals. In response, some animals are protected in wildlife refuges or national parks, while the others live in zoos. Many zoos and research centres breed endangered animals with the hope of returning their off springs to the world. Through the ages, the human activities have resulted into the extinction of many wild animals. Today's human activities threatened the survival of wild animals despite of strict laws and regulations imposed on hunting. In the present paper, an attempt has been made to investigate the causes of shrinking wildlife in Eritrea and to find out the measures for its conservation. The study also tried to assess the economic and environmental significance of wildlife conservation.

Keywords: wildlife, Conservation, Eritrea

Introduction

Eritrea is one of the east African countries located in the horn of Africa. It sprawls between 12° to 18° north and 36° to 44° east, is bounded by Red Sea in the northeast and east, by Djibouti in the southeast, by Sudan in the north and northwest and Ethiopia in the south, fig.1. So far as the shrinking of wildlife in Eritrea is concerned, it has a long historical background. According to the wildlife history of the country, Eritrea was once a host to wide varieties of wild species. However, the coming of European colonialists to Eritrea, followed by decades of war and persistent drought marked the beginning of the destruction of wildlife habitat. In the past wild animals were generally considered as a nuisance and of little value and supposed to be targets of hunters and sportsmen. In recent times with the setting up of National Parks and Research Centres within these parks, this attitude has changed. Today, the tourist based industry for viewing wild animals in their natural states has become a major earner of foreign exchange especially the countries blessed with a good range of wild animals and natural habitats, like Kenya, Uganda, Tanzania, Zambia and Botswana. These countries now appreciate the values of their wild fauna much better than while they were under the colonial rule.

African wild animals are worldwide famous. The continent has hundreds of species of wild animals. In the past, Eritrea too had wide varieties of wildlife species, such as elephant, hippopotamus, buffalo, giraffe, greater kudu, wild ass, Nubian Ibex, waterbuck, lion, leopard, cheetah and colobus monkey as well as numerous other species. After decades of war, drought and neglect, population of many species have dwindled and in some areas have been disappeared. Though at present, population of a number of these species persists in parts of Eritrea, but they are few in number and are considered endangered.



Knowing the importance of wildlife today many African countries are introducing the methods of wildlife conservation. Since Africa has the greatest number of wildlife species in the world, much of the activity of conservation has been focused on this area and many large game reserve and parks are established. The creation of Kruger National Park in South Africa is the first toward the method of wildlife conservation in Africa, which was established in 1898.

Wildlife conservation in Eritrea implemented during the Italian colonialism period by locating a wildlife reserve areas like the Gash-Setit, the Yob and the Nakfa reserves, but neither effective protection measure nor development work have been undertaken to put into reality what exists on paper until independence. Though at present, wildlife conservation in Eritrea is at its lowest stage, but there are some measures that have been taken to preserve wildlife such as the creation of protected areas, including the Semenawi Bahri and Buri peninsula in addition to the former protection areas.

Objectives of the Study

1. To make people aware of the problems that caused wildlife reduction and to know which wild animals are endangered at present and which are still continuing to live in Eritrea?
2. To assess the importance of wildlife conservation and to identify the problems retarding wildlife conservation in Eritrea.
3. To assess the economic and environmental significance of wildlife conservation. Based on the identified problems, some possible solutions can be recommended to decrease the wildlife reduction.

Methodology

The present study is mainly based on secondary data. There is no as such methodology has been used because the paper itself is descriptive in nature. Data pertaining to the study was collected from different sources, i.e. from the published documents of Ministry of Agriculture, Asmara, Food and Agriculture Organization (FAO), different journals, magazines, and pamphlets and off course from browsing the Internet and reviewing relevant literature to make the study more effective.

Background Literature

During the last decades the world population has become increasingly aware of the accelerating loss and disappearance of wild life species from the earth. Thomas Love Joy places these problems in global perspectives as it arises in both developed nations such as USA and the developing nations of the tropics. Affluent countries with well-developed scientific communities, with vocal environmental movements and with legal institutions designed to address the problems of wildlife reduction and still find the problem as a recalcitrant one. The destruction of habitat continues as economic growth goes more and more, even species that are protected seem doomed to exist in limited ranges requiring human management in controlled preserves. Love Joy expresses his concern that biological diversity will be lose through "Incremental decision making."

In the developing nations of the tropics, deforestation continues and accelerates with entire habitat destruction. According to Love Joy, such a whole sale alternation of ecosystem is disastrous not only in

biological but also in human terms. He conceived that failure to protect diversity of wild animals is closely connected with failure to maintain a reasonable standard of living for human inhabitants.

The environmental studies conducted in 1985 project that if the present trends continue, 20 to 25 per cent of the existing wildlife species will be destroyed in the next quarter of a century. Most people live today in urban environments seldom encountering wildlife except in controlled setting like zoo and parks.

The problems of endangered wildlife species must be understood both locally and globally as well. It seems better identifying individual endangered species and finding means to minimize their reduction. It is certainly true that all people in the developed and developing nations will be affected worldwide by losses in biological diversity.

State of Wildlife in Eritrea

Eritrea is a country with a wide variety in altitude that ranges from Sea level to over 3,000 metres above Sea level. These differences in altitude provide the country with several climatic conditions. The climate varies from hot and arid in the coastal plains to cooler, mild and wetter environment in the highlands. These characteristics have endowed the country with diversified ecosystem, hosting different types of vegetation and wildlife, as Eritrea was well known for its accommodation of diversified fauna and flora.

Eritrea has been a home for a wide range of wild animal species. These include African Elephant, Buffaloes, Giraffe, Lion, Leopard, Gazelle, Wild Ass, Baboon, Monkey, Dikdik, Duiker, Great kudu, Warthog, Nubian Ibex, Cheetah, Jackal, Hyena, Hippopotamus, Oryx, Push buck, Zebra, Klipspringer, Hare Squirrels, Wild pig and other small mammals.

Though the present state of wildlife in Eritrea is not much known because no proper wildlife survey have been made for the last thirty years, but it is sure that wild animals have been drastically decreasing from time to time both in population and number of species.

Causes for Wildlife Reduction in Eritrea

In general, the threats and problems that caused and continued to cause for wildlife reduction and disappearance in Eritrea includes;

- Habitat destruction
 - Land conversion for agriculture
 - Overgrazing due to over population of livestock
- Lack of legislation
- Lack of protected areas and
- War

One of the greatest threats to wildlife in Eritrea is probably deforestation. As we know a century ago, 30 per cent of the total land mass of Eritrea was covered with forests. Today these forests have been mostly cut and it is now confined to only 0.4 per cent. Therefore, the deforestation which is mainly driven by demand for agricultural land and wood, has resulted in the migration and disappearance of many wild animals.

According to Mr. Hagos Yowhanes, head of the wildlife unit in the Department of Land Resources and Crop Production at the Ministry of Agriculture, wild animals are decreasing because of their habitat destruction by human for agricultural land. As an example Mr. Hagos mentioned that the elephant population which are found in the Gash-Setit areas extending on a distance of about 65-70 km. ranging from the Setit in the south up to the Gash river in the north. But when the Gash-Setit area was converted on a large scale to an agricultural land, it leads to the shrinking of the elephants range in a restricted place around the Antore area

in Eritrea and the Shire area in northern Ethiopia. In the Gash-Setit, as farmers largely cleared the area for plantation, a conflict emerged between the humans and elephants living in the area. When the news of war and chaos was replaced by the news of peace and stability over the entire region in 1991, elephant's migratory habitat began to be modified. Following two-three years the elephants were more or less cantoned along the Setit river on both the Eritrean and Ethiopian sides. In 1997, they adopted their old migratory route by travelling northward up to Haicota invading the banana plantation. This invasion led to great damage to the banana plantation in the Haicota area of the Gash Barka zone, which further resulted into human-wildlife conflict. This conflict increases as people are defending their properties and crops. In this process, the elephants are losing. It is unfortunate that such human-wildlife conflict appears at a moment where Eritrea is engaged in national reconstruction that involves all developmental sectors in which food security is a priority. The challenging nature of these conflicts is big considering the resources and material aspects implied, but it is important that it should be handled with care and seriousness. The elephants should be protected at any cost in order to guarantee their continuous existence.

Lack of Legislation

In order to set the stages for a sound national wildlife conservation, wildlife conservation laws must be proclaimed as soon as possible as part of a broader legislation on the protection of biological diversity. Specific legislation should be designed and passed to establish and maintain National Parks and other protected areas and to regulate international trade and hunting on wild animals.

According to Mr. Hagos legislation on wildlife conservation is designed, but it must involve consideration of realities and certain important procedures rather than emotional attitudes. Full participation of local people in the entire process is also an essential part to implement the legislation. Many neighbouring countries have had negative experience in this respect, which can serve as a lesson for us, so we cannot afford to make the same mistakes.

In fact, there was no strict legislation that prohibits wildlife trade and hunting in Eritrea in the last sixty years until independence. Although trade was primarily for domestic purposes with little or negligible export due to the effect of war, it is essential for Eritrea to carry out a general assessment of the flora and fauna to help to evaluate its potential. So, to have a clear policy toward the wildlife trade, Eritrea took a measure. This important measure is Eritrea's accession on January 1995 to the 1973 Convention on International Trade in Endangered Species of fauna and flora (CITES). CITES is the principal means through which international trade of threatened wild animals and plant species is prohibited.

Lack of Protected Areas

Protected areas (National Parks, Wildlife Sanctuaries, Reserves and related conservation areas) should be established to protect wild animals. Such areas play an important role in the maintenance of climate and soil apart from interest as areas of national beauty, scientific research, recreation and tourism.

In Eritrea protected areas of wildlife reserves were established during the colonial regimes which only existed on paper but neither effective protection nor visible effort has been made to translate into reality. At present, Eritrea is now in the process of establishing a protected area system.

War

The consecutive war in Eritrea, especially the war which took 30 years struggle has played a negative role as it facilitates becoming a main factor for the disappearance of wild animals in Eritrea.

Wildlife Conservation in Eritrea

At present, wildlife conservation in Eritrea is at the lowest stage with respect to its functional development and as it has been described above that the war and drought have been essential causes. Besides, the past colonial administration cared less about the natural resources of Eritrea.

Though humanity's record in conservation of natural resources of any kind is extremely poor and wildlife is not the exception, but at the same time we have to know that a number of actions were taken to conserve wild animals worldwide, which meets their targets. For instance if we take the case of East African countries like Kenya and Tanzania, they have been very successful. In contrast to these countries, Eritrea is at least fifty years behind to achieve such experiences. According to Mr. Hagos, although plans to wildlife conservation have been proposed, but still there is great need to ensure the presence of adequate wildlife species for future generation and this in turn helps to maintain the balance of nature. He added that the emphasis now is more on conservation of representative population of animals in their habitat in the forms of protected areas for their own sake, whereas in the past the emphasis was to conserve wild animals through controlled hunting. Now the research emphasis will be on the analysis of "wildlife and protected areas in Eritrea."

Wildlife and Protected Areas in Eritrea

According to the convention on Biological Diversity, a protected area is defined as "a geographically defined area which is designated or regulated and managed to achieve conservation objectives." When we speak of protected areas, it refers to National Parks and related conservation areas. Protected areas make important contribution in sustaining human society, especially through conserving the world's natural and cultural heritage. Protected areas range from the maintenance of representative samples of natural regions and preservation of biological diversity to protecting the environmental stability of surrounding regions. Protected areas are designed for the conservation of wild animals besides providing an opportunity for rural development. Wildlife conservation in the form of protected areas could also serve powerful purposes, such as research, monitoring for environmental conservation, education, recreation and for tourism.

In Eritrea, protected areas were established based on the realities of natural ecosystem with the hope of great capability to conserve wild animals in their natural habitats. Protected areas in Eritrea were implemented during the Italian colonialism and the former protected areas are viewed with a slight change in the post-independence. So, now the analysis of protected areas is done under two category; the former protected areas and the present protected areas.

Former Protected Areas

In the past, the Italian colonial rule proposed a protected area for wild animals to the area of Gash-Setit, the Yob and the Nakfa. But when we see their history, they were designed to meet the needs of colonial government as these protected areas were established unilaterally, without consultation with local population and primarily for hunting. The three former protected areas are as follows;

A) The Gash-Setit Reserve

The Gash-Setit absolute reserve was implemented under the Governor General Decree of 19 in December 19, 1928. Based on this treaty, the Gash-Setit protected area comprised the area between Biaghela-Tokombia road, extending up to the border with Ethiopia, including the Scetolghede and Asmat plain southeast of mountain Alit; the Gash and Setit area west of the Biaghela-Tokombo road up to the border with Sudan and mount Aighet in the Keren Commissionary and Barka. The Gash-Setit absolute reserve was proposed to preserve Elephant population, Gazelle, Greater kudu, Leopard and other associated wild animals of the region.

B) The Yob Reserve

The Yob and Nakfa reserves were also proposed at the same time with the Gash-Setit absolute reserve under the same Governor General and on the same date. The main purpose of the Yob absolute reserve was to meet the conservation of the last known refugees of the Nubian Ibex and the Nubian Wild Ass in which, two of them were critically endangered subspecies at a global scale.

C) Nakfa Reserve

The Italian colonialism proposed the Nakfa absolute reserve to conserve wild animals found in this region, such as the Greater kudu, Klipspringer, Warthog and Leopard etc.

The above former protected areas, which were implemented by the Italian colonial rule further formalized under the Game Regulation No. 61 of 1959 passed by the Eritrean National Assembly. But regarding these historical reserves it is not very much clear to what extent any of these reserves were ever actively managed as protected areas. With the annexation of Eritrea to Ethiopia in 1962, the legislation that established these reserves was nullified and the reserves ceased to exist as such. In 1980, the Derg regime promulgated proclamation No. 192, which still listed the protected areas, but with the on-going war this law was not enacted in Eritrea. Thus, at the time of independence, Eritrea inherited a completely non-function able formal protected areas.

Present Protected Areas

The historical reserve form the basis for the new protected area system as they still represent the best locations for in-situ conservation.

When creating the protected areas, we should consider the construction of some infrastructural work like roads, tracks, nature trails, camp sites etc. to provide fast and efficient facilities as they would be visited and appreciated by people both by local inhabitants and the foreigners.

The most important conditions in the creation of protected areas are as follows;

- Participation of local people in the programmes envisaged and in the determination of objectives right from the start. This stage would not only help during the creation stage but also during the implementation and management stage. In this process, there should be a mutual idea in order to promote coherent establishment and management of protected areas among concerned inhabitants, local authorities and conservation actors.
- Government policy on conservation and creation of protected areas should be clear and in sighting. According to Mr. Hagos, “the Eritrean Government is clear in its policy of protecting and enhancing the environment in general and natural resources of wildlife in particular.”

- Lack of professional and technical personnel at the local level. According to Mr. Redae Teclay, coordinator to Mr. Hagos in the Ministry of Agriculture, Eritrea do not have enough trained staff in the field of wildlife management. Therefore, training and capacity building are important components in the entire process of creating protected areas.

Today the former game reserves have no formal basis in law, as a result new protected areas are designed beside the Gash-Setit and Yob reserve areas and the areas that are prioritized are as follows;

A) Semenawi Bahri Area

This protected area is located in the northeast of Asmara referred to as “The Green Belt.” It contains the last remnant of mixed evergreen tropical wood land in Eritrea. Recently, the government put forward to protect the area and possibly proclaimed it as a “National Park”, considering the fragile nature of the area and the unproductive and exposing methods of cultivation exercised. For centuries, the area has had economic significance for lowlands pastoralists and agriculturists of the highland. It was proposed to protect the wild animals like Greater kudu, Leopard, Python, Hamadryas, Baboon, Bushbuck, Klipspringer and other associated wildlife’s. It’s distance from Asmara being only 50 km.; it could be a good source of attraction to visitors.

B) The Gash-Setit Area

The Gash-Setit reserve area is located in south western Eritrea in the same location with the former colonial reserve and is typified by an average rainfall and temperature. The only perennial river in the country, which also constitutes the south western boundary with Ethiopia, flows through this region. This area is believed to one of the least disturbed area, where about hundred Elephants, Greater kudu, Gazelles and other wild animals live, so the area was given high priority of protected area and possibly a national park to conserve the wild animals of the region, but agricultural projects are threatening.

C) Yob Absolute Reserve

Today the area which was formed the Yob absolute persists in similar overall ecological condition to that of 50 years ago. It has been rarely been visited by outsiders and little information on the bio-diversity of the area exist due to its remote location (near south Sudan). The significance of Yob is to preserve the last known refugees of Nubian Ibex and the Nubian wild ass if possibly present.

D) Buri-Peninsula and parts of Denakil Areas

This area is located on the sides of the Dahlak islands and in the northern edge of Denakalia province. The area is generally flat and sandy. Owing to the semi-arid climatic conditions and diversified physical features of the area, the vegetation is harsh condition resisting type.

The Buri-Peninsula is not a convenient place to visit because of its highest temperature condition. It was the home of several wildlife including large herds of Dorcas and Soemmerings Gazelle, Ostrich, Jackal, Wild ass, Hamadryal, Baboon, Warthog etc. There was also evidence that animals like Elephants and Rhino present in the coastal area as there is ancient lists of exports from Eritrea in Elephant tusk and Rhino horn. Beside, historically Lion, Leopard and Spotted Hyena roamed along the shores, but it is unlikely that they are still present, except in extra ordinary circumstances.

Today, this protected area is proposed to conserve Ostrich, Gazelle, Wild ass and other associated animals.

Zoo as Means of Wildlife Conservation in Eritrea

Zoo is a place where people keep and display wild animals. Today, zoo became one of the most important means of wildlife conservation as it helps many endangered species to breed and increase their numbers. Almost every large city has at least one zoo.

Today, the creation of zoological garden in Eritrea is very essential because it could benefit for peoples who might never have the chance to see animal species in their wild state, as peoples of all ages enjoy viewing different kinds of wild animals. So in such a case, if it designed effectively and appropriately a zoo could help to educate the public about wildlife. However, the establishment of a zoo has some problems. In order to function adequately and humanely, a zoo requires at least one veterinarian, animal keepers, ample space for each animal, funds for medicine, funds for purchasing varied diets and funds for maintenance. Without these inputs the animals would receive inadequate care.

In fact, zoo is an essential artificial habitat for wild animals making a great contribution to the balance and maintenance of the environment besides being the main source of national income and research centre as it is proved and functioned in many countries of the world particularly in the east African countries. For wild animals to be kept in a zoo, it is needed to prepare a full sized and an apparent natural habitat. An animal that used to live in a desert has to be provided a desert like landscape in the zoo, likewise those which used to live in grassy land have to be provided with such an environment. Therefore, if we want to have a zoo, it has to be designed in such a way so that it can encompass the aforementioned parameters. As mentioned above, time and again, such a beautiful and attractive zoological garden needs a large amount of funds or a very strong independent economy. So in case of Eritrea such programme is very costly which Eritrea cannot afford at this moment. Although we know that a large zoo is very important, but it is not a must for all kinds of wild animals to be represented in a zoo, instead as an alternative we can have a small but smart National Park or Wildlife refuges that meets the basic requirement.

Conclusion

The establishment of protected areas should be highly participatory. The surrounding local populations and relevant government agencies should work hand in gloves for the sake of conservation. The simple “pushing people out of a proposed conservation area” will not have a place in Eritrea’s conservation efforts. Conservation programmes should be implemented with the full consent and participation of all stakeholders. Eventually, local people have benefit from their participation in the establishment and management of the protected areas. Conservation plans and programmes of the Ministry of Agriculture have well taken into account of the importance of participatory principles.

If the wildlife situation of the country is expected to ameliorate, hunting and killing should stop, and natural habitat destruction should be absolutely controlled. It is not less than crime to push them to situations of further endangerment because of our irresponsible actions. Illegal actions should come under control by the active collaboration of the entire Eritrean population. It is only possible when

every Eritrean: farmer, herder, military, civil servant and the general people protect this natural resource and consider it as a national heritage that it could be naturally sustained. I wildlife is conserved and, whenever circumstances allow, sustainably utilized. Its economic, social and cultural contribution to the nation could not be underestimated. Moreover, since we hold this resource in trust, we have the moral responsibility to transfer it to future generations.

Our wildlife resource has been very resilient to challenging situations in the past and if at present, some of our wildlife species go extinct because of our irresponsible acts, who will be the culprit? It is this generation, and that would not certainly be a history of pride.

In short, it could be said that what we destroy today will not have trace for tomorrow, but what we conserve today will be heritage for tomorrow. Thus, let our children inherit our wildlife.

Recommendation

On the basis of the above study, the researcher recommended the following points hoping to serve as guidelines for further action that could minimize wildlife reduction and facilitates their conservation.

- To identify each individual endangered species of wild animals.
- To create a well developed protected areas that could serve as habitat for wild animals.
- Wild animal's census should be done regularly and the information should reach to the local people, so as they will understand the significance of wildlife conservation.
- To involve local people in the creation and management of protected areas by giving education and training concerning environmental awareness.
- To formulate and implement legislation for the protection of wildlife. Once National Parks and other reserves are established they must be recognized legally.
- In order to have smart and well developed protected areas we have to search for funds from international cooperation like World Wildlife Fund (WWF), with respect to technical assistance and financial aid.

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