Challenges of Conserving the Endangered Wild Dog (*Lycaon pictus*)

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ABSTRACT

African Wild dog (*Lycaon pictus*) population has been observed declining at high pace regardless of many conservation efforts done. This paper aimed at pointing out the threats which catalyse the decline of this endangered species and provide some mitigation measures. Among others, habitat destruction, diseases, human Wild dog conflicts and interspecies competition were observed to be among the threats which accelerate the decline of Wild dog population. It is recommended that health welfare of wild dogs such as mass domestic dog vaccination against Rabies, parvo, Canine distemper virus need to be addressed. Also participation of local communities on the conservation of Wild dogs is essential. Furthermore, provision of conservation education, implementation and enforcement of conservation laws together with involvement of different stakeholders were identified to be essential for the survival of the species.

Keywords: Challenges, Conserving, Endangered Wild Dog

INTRODUCTION

Wild dog is among the wildlife species whose range areas are moribund at high pace across Africa [1]. Wooded savannah habitat is their preferred habitat with packs ranging from 2-30 dogs, yearly home ranges extends at 200-600km², and are territorial animal [1]. The dominant or alpha male and female in a pack reproduce. The alpha female is usually the oldest in the group, and she gives birth in a den after a 3-months. Once they reach adulthood, the new pups may choose to remain with their natal pack, or disperse [1]. Wild dogs generally disperse in single sex groups, and either makes contact and joins another pack, or meets another set of opposite sex dogs and forms a new pack [1]. They are old enough to reproduce after 2 years, but rarely do so until they have achieved sufficient status in the dominance hierarchy. They are active at dawn and dusk, coursing predators.

In many African countries, the species has been considered extinct with few remaining in some few countries. For instance, in Benin, Burkina Faso, Ghana and Niger the species is thought to be extinct due to their disappearance for long time while Tanzania is among countries worldwide which represent good population of wild dogs [2]. The welfare of wild dogs in Tanzania has been attributed by good protection management and conservation for the species imposed by the government [2]. In addition, efforts has been done by government and other stakeholders to conserve wild dogs in TZ, for example in Serengeti, annual mass vaccination of domestic dogs in all villages surrounding Serengeti National Park (SENASA) as a way of preventing spread of rabies from domestic dogs to wild animals especially wild dogs, also there is an ongoing efforts to capture wild dogs occurring in Loliondo and create
a meta-population in Ngorongoro, however the challenge is some packs fail to colonies new areas and some return
to their former home range [Per’ observation by Ahmed Lugelo]. The southern part of Tanzania like Selous Game
Reserve with highest population of wild dogs (880) offers ideal habitat and large tsetse fly populations which
reduces the widespread of human especially the pastoralist. Another reserve which represents a good population
of wild dogs in Tanzania is Ruaha National Park, also found South of the country [2]. The population of wild dog
in the country is estimated to be 6,600 adults of whom 13% are found in Selous game reserve [3]. With increase in
threats to this species, the Population size is expected to continue declining if proper mitigation measures are not
taken. This paper aims at highlighting the threats which faces the wild dog’s conservation so as proper conservation
measures to be thought. In addition, experiences from researchers in the field were incorporated.

Threats of wild dogs

Threats to wild dogs are those material, actions, activities which endanger, or cause hostility to the survival and
wellbeing of wild dogs. These kinds of threats can cause the health problems, discomfort, death or even extinction
of the species [3]. While other threats can be natural, but most devastating once are caused by human beings. The
following are some of the threats which threaten the survival of wild dogs:

Habitat loss/degradation/fragmentation is observed to be among of the major threat observed in the con
servation of wild dogs. Human activities like development activities, agriculture, industrialization, and mining are observed to
pose threat to the habitat of wildlife such as wild dogs and restoration is required for the remedy [4, 5, 6, 7, 8, 9, 10,
11, and 12]. For instance, sesame farming in most of the habitats surrounding the Selous ecosystem is being
considered as major threats to the habitats of wildlife species found outside and even inside the reserve [13]. In
addition, wildfire, charcoaling, lumbering were observed to cause habitat loss [13]. In Kalunga forest reserve in
Kilombero valley, Morogoro, clearing of the forest for agriculture has forced species like Iringa red colobus
monkey to move into rubber plantation which is the highly modified habitat. The wild dogs are thought to move into
the nearby intact protected area like Selous Game Reserve following destruction of their range outside the reserve
[14]. For those groups still found outside the reserve their survival is highly compromised, especially with migration
of pastoralists to these areas. This is opening a door to think how to conserve wild dogs outside protected areas.

Human population and Habitat destruction go hand in hand. Upraise in human population increases the demand of
land for agriculture and other development activities [15]. In northern part of Tanzania the pastoralists like Maasai
have been forced to increase the grazing area of their animals in Maasai steppe. In so doing, the habitats for wild
dogs are being depleted and the survival of this species is being in question (Personal observation).

Human wildlife conflict has been identified as among threats facing the wellbeing of wild dogs. Human–wildlife
conflict is the interaction between wild animals and people in which its reaction results into negative results either to
wild animal, human being, biodiversity, wildlife authority or sometime the result can be combination of either[16].
Wild dogs like other carnivore species are predators. Hunting of preys needs a lot of energy to predators. Wild dogs
are often hunt wild animals, however if opportunity for obtaining the wild animal is deprived and the livestock is
available, then wild dogs will hunt livestock like cattle, sheep and goats [16]. In Maasai steppes, local communities
have negative attitude toward wild dogs because they are considered as menace to their livestock. The increases of
pressure on the prey species pose more threats to wild dogs.

In most conservation areas especially those with low legal conservation status like open area, game controlled area
the wildlife species area decreasing due to human intervention like agriculture, livestock keeping, poaching,
lumbering among others.

In addition, the introduction of domestic dogs (introduced by humans) to the area adjacent the protected areas is
thought to accelerate the decline of wild dogs through diseases transmission between domestic and wild dogs [18].
Rabies, Canine Distemper, Parvo virus, Adenovirus, Infectious Hepatitis, Corona virus, Herpes virus are example of
diseases which can be transmitted from domestic to wild dogs and cause decline in population by killing wild dogs
[18]. Vaccinating wild dogs and many of the wildlife is very difficult if compared to ring vaccination of domestic
dogs surrounding the reserves [18], hence a need to focus on domestic dogs vaccination campaign in order to control
some of the diseases.

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Human-wild dogs’ interaction should not be underestimated. Trafficking through roads in wildlife area kills a lot of wild dogs. [18] Documented that considerable number of African wild dogs are injured or killed by vehicles. Elimination of wild dogs for livestock protection is done by poisoning the animals through providing them with poisoned meat or any food which can be eaten by the animals in order to kill them [18].

Negative attitude toward wild dogs by the communities in areas of the wild dogs range can be another great threat. For example, experience from MUNGATA Wildlife Management Area (WMA) shows that, the attitude of local communities on wild dogs are negative due to none tangible benefit accrued from the wild dogs. MUNGATA WMA generates income to the village members through hunting (tourist hunting). However wild dogs are endangered species, hunting them is prohibited by the law. In this case, the local communities don’t see the benefit for conserving such species thus facing persecution by people in this area.

Competition with other larger carnivores is another threat to the survival of wild dogs. For instance, the study done by [19] showed that, the density on a 2600-km$^2$ area of the Selous Game Reserve, Southeast Tanzania was 0.04 adults/km$^2$ for wild dogs, 0.32 hyenas/km$^2$ for Spotted hyena (Crocuta crocuta) and 0.11 lions/km$^2$ for Lion (Panthera leo), and the relationship between wild dogs and either Spotted hyena or lion was negative. This leads to overlapping in terms of diet in wild dogs and these other species. The competition for food play essential role on the causing limited supply of food to wild dogs on the presence of other large carnivores. Also the study revealed that, wild dog commonly killed by lions and occasionally by hyenas. This suggests that, the interspecies competition plays a great role on threatening the wild dog species.

Plate 1; Wild dogs observed in Selous Game Reserve, Tanzania During the Large Carnivore Survey in 2014 which was conducted by staffs from Wildlife Division, Tanzania Wildlife Research Institute , University of Dodoma and IGF

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Diseases have also played a great role in the declining of wild dogs. According to [20], diseases is any deviation from or interruption of the normal structure or function of any body part, organ, or system that is manifested by a characteristics set of symptoms and signs and whose etiology, pathology and prognosis may be known or unknown. Wild dogs are affected by many diseases. Some of the diseases are zoonotic (transmitted between man and animal like Rabies, TB) while others can be transmitted among animal species like Canine distemper [21]. A study done in Tanzania revealed that, Canine distemper Virus (CDV) was responsible for the death of 49 African wild dogs out of 52 in 2000 for the duration of 2 months. This leads to conclusion that, protection of this species against such diseases is vital for insuring continuous survival of this endangered species [21]. Interaction of domestic dogs and wild dogs have facilitated the spread on diseases between domestic and wild dogs thus posing threat to wild dogs in the wild. For example, diseases like Rabies, Canine Distemper, Parvo virus, Adeno virus, Infections hepatitis, Corona virus and Herpes virus are well known to be transmitted from domestic to wild dogs [18].

CONCLUSION

The conservation of wild dogs is essential for they generate income through tourism activities. In addition, they are important in shaping the ecosystem by balancing the nature through prey-predator relationship. However, if the conservation strategies are not put in place, the species is at high risk of facing extinction in near future. To ensure successful conservation of the wild dogs the following needs to be addressed:

The species need to be protected against incoming diseases. For instance ring vaccination against Rabies to domestic dogs surrounding the protected area can be good strategies for conserving this species. In addition, direct vaccination to wild dogs and treating the curable diseases can be another best options especially those in captivity.

Local communities adjacent to areas which the wild dogs are found are supposed to be motivated in the conservation of biodiversity particularly wild dogs. This can be done in participatory way. For example in the Community based Wildlife management approach, the local community is given the opportunity to involve in the conservation of wild dog and wildlife in general at the same time benefit directly by the income generated from wild dog conservation. The benefits among others can include the revenue sharing and employment opportunity.

The wildlife authorities should make sure that conservation polices are enhances by continuous enforcing the law so as to sustain the prey species which are sources of food to the wild dogs. Furthermore, the conservation education and participation approach are essential to the local communities and those stakeholders involved in conservation.

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