



Trends of poaching, Livestock Trespassing, Fishing and Resource Collection from 1986-2010 in Dinder National Park, Sudan

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ABSTRACT

Poaching, Livestock trespassing and resource collection have been practiced in Dinder National Park (DNP) since it's established in 1935. The aim of these study to providing information about the illegal activities. Collection the record of wildlife violation from the Wildlife Conservation General Administration (WCGA) from (1986-2010) in order to know the offenses in DNP, and it's clear all the offenses and violations of wildlife law had been done in recent decade. a high percentage for sheep confiscation from the park 2005(58.9%), Goat and Camel 2009 (49.1%, 69.6%) respectively and also Charocal 2007 (75%).

Keywords: DNP (Dinder National Park), Violation, offenses.

INTRODUCTION

The problems facing Dinder National park

The park is confronted with several problems that threaten its very existence as many parks in Africa. During the last 18 years unlicensed mechanized rain-fed farms were established in the areas surrounding the park. Large agriculture schemes were established in the wet season habitat of the wild animals as a part of integration policy between Sudan and Egypt (Nimir, 1983, Abdel Hameed, 1985). Licenses have also been issued to establish farms around the park without any coordination with Wildlife Administration. Drought that hit the Sudan was mainly caused by increased shifting cultivation and overgrazing which caused loss of wood cover. This in turn forced people to move to areas where charcoal production and farming activities are practiced (Moghraby 1983, Nimir 1983). Dinder National Park, faced obstacles for conservation as well as management, such as lack of enough finance, inadequate personnel, giving more priority to human interest than development of wildlife resources, lack of enough and adequate vehicles for patrolling (Nimir, 1983). As appeared from most of the studies carried in Dinder National Park the problems of the park confined with the increase in agriculture around the park, shrinking of water poles and grazing land outside its boundaries that lead to most these problems. But it is clear that among these problems the most serious one is pastoralist's problem that resulted in livestock trespassing inside the park. Beside the natural causes, the park is confronted with several anthropogenic problems that lead to land degradation. Degradation can also be caused by variety of factors, including a combination of droughts and poor land management. According to Prince (1990) the proximate causes of degradation are extensive fuel food demand, over cultivation and high stocking rates. Most of these causes result from illegal activities in and around the park boundaries, which include the following:

Charcoal production

Licenses are being issued by forestry administration, allowing felling of trees for charcoal production. The wet season habitat is affected by this practice and it requires strict control measures to be taken for its conservation (Nimir, 1983).

Staffing

The park staff is markedly inadequate. In 1973 three game officers, 30 game scouts with 13 camels, 5 polices officers, one radio man, one motor grader and one lorry were assigned to the park (Dasman, 1972). Now days the number of personnel is quite enough but it seems there is a lack of funds for supporting various administrative activities. The most widely used vehicles for patrolling is the Toyota, Land cruiser pickups. But these are old vehicles and fuel is always in short supply.

Mechanized agriculture

Licenses were issued for establishing farms around the park without consulting the wildlife Administration (Nimir, 1983). In addition many unlicensed farms were being developed and efforts to prevent them have not been successful. The farms have reduced the area of wet season Mechanized farming destroys the natural vegetation, which may not recover even if this practice is stopped. The expansion of the farms surrounding the park has limited the movement of nomadic herders, reduced forest cover and natural rangelands and forced them to trespass into the park, poaching is also practiced by farmers.

Livestock

According to Hakim (1977) records kept by the park Administration showed that the livestock trespassing increased fourfold within three years. The trespassing of livestock into the park during the dry season consumes most of the fodder and water available for wild species (Nimir, 1983). Consequently competition takes place between livestock and wild animals which jeopardizes the survival of the wild animals. Transmission of contagious diseases at the end of the dry season, such as Rinder pest and Anthrax killed many animals in 1971, 1972 and in 1980 (Mohammed, 1980).

Human settlement and poaching

Immigrants from Western Sudan and West Africa have established villages near the park. When visiting the Dinder area in 1898, Harrison noticed that the area was devoid of human presence, but remnants and traces of earlier human settlements were evident (Mohamed, 1999). The resettlement of the area was intensified by immigration from the drought and famine stricken areas in western Sudan and West Africa countries together with the severe drought of 1980s (Suliman, 1986). West Africa Muslims used to pass through the area in their pilgrimage journey to and from Mecca, and many of them decided to settle in the area permanently. A large number of these immigrants have settled along the banks of the Rahad and Dinder rivers. These new communities are allowed by the wildlife authorities to practice subsistence farming and livestock grazing in the park buffer zone within an area of about 5 km² during the dry season, some villagers are active poachers. The number of villages inside the park are eight, outside the park boundary, along Rahad River there are more than 15 villages. The villagers engage in the following activities; poaching, grazing, honey collection and cultivation as well as charcoal production (W.C.F, 1991). According to Dasman (1972) the most serious limitation of the park is that it is left open to human settlement, cultivation, poaching and heavy use by livestock. He reported that the practice of closing the park and pulling out all the staff at the start of the rainy season leaves the park wide open to poaching. People from the villages that have sprung up during recent years within the Rahad Game Reserve are generally recognized as poachers (Dasman, 1972). Tribesmen from Ethiopia cross the border into the park to kill game and take home loads of biltong to sell (Dasman, 1972).

Fire

In late 1971 and early 1972, before the game department personnel were stationed in the park for opening the roads, most of the park was burned (Dasman, 1972). Many of the fire originated and are admittedly set outside the park by nomads herdsmen, cultivators, honey collectors and others seeking to reduce the grass cover in order improve access of livestock to perennial grasses. Game scouts also set fires when opening up roads at the beginning of the dry season. The park staff could do little control these fire without firefighting equipment. They were forced to let them burn. It is generally admitted by park personnel that most, if not all, of the park burned nearly every year (kanno, 2004).

Status of Biodiversity in DNP

Wildlife ecosystem in Sudan is composed of biosphere reserves, national parks, game reserves and sanctuaries. The wide variety of ecosystem and vegetation types in the Sudan are reflected in its fauna. It has always been mentioned that Sudan has 224 species and subspecies of mammals (GOS and HCENR, 2006). In 1983 it was reported that there were 52 major wildlife species in northern Sudan while in 1991 a list of 83 was produced. Major species were distributed in 19 protected areas all over the Sudan. In Dinder National Park showed that 27 mammals and also several species of small mammals, and partial summer lists of 115 birds 14 snakes and scorpions, and 108 species of insect and 26 fish species are recorded. About 49 common tree species and shrubs (of which eight endangered) and 195 common herbaceous plants are identified (GOS and HCENR, 2006). Dinder National Park support a large population of animals during the dry season and the lesser number during the wet season (Dasmann, 1972). A systemic animals census had been conducted by Minga (1971) on nine of the principle of Mayas, he counted a total of 5613 large game animals during the period March to April 1971. Dasmann (1972) believed that this constituted only a small fraction of the total animals population. He carried out road counts. Dasmann (1972) used aerial counts in August, counted 49 animals outside the park include reedbuck, roan antelope, tiang and ostrich. Although sight of animals was difficult because of the dense wooded vegetation. Hashim and Nimir (1977) were able to count 690 tiang in the Mayas. They found tiang decreased by 1041 when compared to Minga counts 1971. Also found tiang ranked as the second animals, species in the park. Hashim (1977) using Mayas and water holes counts, in the dry season for three animals. He estimated 40 tiang, 79 roan antelope and 60 water buck. Saad and Hassan (1980) conducted road counts and estimated 51 tiang, 162

reedbuck and 77 buffalo along Galagu/ Daffala and Ras Amir/Galagu roads. Dasmann (1972) and Abdel Hameed (1985) found that reedbuck were the most abundant animals everywhere in the park. Tiang appeared as the second followed by Oribi and water buck. Dropping counts and road counts of the large herbivores conducted by Wildlife Research Center (WRC) in the most of the principle Mayas during 1971- 1994 (Abdel Hameed 1994) showed that generally there was a decline trend in the total number of the animals using the Mayas. The Lewell hartebeest was last reported in the 1950s (Nimir, 1983). The Sommering gazelle, which was abundant until the 1960s, was completely exterminated from the park 1970 due to vast expansion of mechanized agriculture in the wet season habitat of these animals. A serious decrease in the number of tiang and waterbuck, amounting to 60% and 30% respectively, between 1970 and 1976 was also attributed to shrinkage of their wet season habitat and competition with livestock in their dry season habitat (Hashim and Nimir, 1978).

MATERIALS AND METHODS

The methods used in obtaining the necessary data and information pertaining to the study are: 1-Personal contacts; 2-Interviewers; 3-Questionnaire conducted with wildlife officers and other rankers; 4-Annual reports on DNP and head quarter of Wildlife Administration in Dinder town. The aim of going over the annual reports is to know the number of livestock that trespassed, poaching, and illegal activities in the park each year from 1986-2010.

Materials:

1-Data sheets; 2-pencil; 3-SPSS (version.16); 4- Excel programme (Office 2007. Windows7).

Statistical analysis:

The questionnaire and record of wildlife violation data was analyzed by frequency percentage as descriptive statistic was used to analyzes the questionnaire inform of percent frequency.

RESULTS

The violation of DNP from 1986-210:

Table 1.Trespass arrested for illegal activities in DNP (1986-1995)

Items	Year										Total
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	
Livestock	1826	6800	7261	4861	9654	5984	8685	4555	8220	6510	64.356
Herdsmen	68	55	47	72	68	57	49	73	69	86	644
Charcoal production	26	13	29	17	46	78	27	63	102	93	494
Fishermen	53	29	11	11	21	41	7	22	39	36	270
Honey collection	7	16	9	17	3	0	13	6	12	11	94
Poachers	15	9	4	0	7	5	9	19	8	13	89
Firearm	3	0	5	0	7	2	6	19	8	7	57

Table 2.Trespass arrested for illegal activities in DNP from(1996-2000)

Animals	Year					Total
	1996	1997	1998	1999	2000	
Cattle	34.1%	17.1%	4.9%	12.2%	7.3%	100%
Sheep	15.8%	35.2%	0%	32.8%	16.2%	100%
Goat	23.9%	36.8%	0%	26.9%	12.4%	100%
Cattle	45%	23%	6%	16%	10%	100%
Camels	20%	8%	20%	0%	52%	100%
Donkeys	7.8%	12.2%	0%	62.2%	17.8%	100%
Guns	44.8%	27.6%	13.8%	6.9%	6.9%	100%
Weapons	82.5%	16.5%	0%	0%	1%	100%
Honey.co	4.1%	8.3%	29.2%	29.2%	29.2%	100%
Car. Tress	0%	0%	0%	0%	0%	100%
Poaching	36.6%	30%	26.7%	6.7%	0%	100%
Charocal	0%	0%	0%	0%	0%	100%
Cut trees	0%	0%	100%	0%	0%	100%
Entrance	14.3%	0%	0%	0%	85.7%	100%
Fishing	40%	0%	35%	15%	10%	100%
Cultivation	0%	0%	0%	0%	100%	100%
Gum arab	0%	0%	0%	0%	0%	100%
Over graze	13.8%	5%	36.6%	44.6%	0%	100%
Saaf .colle.	33.3%	0%	33.3%	16.7%	0%	100%
Sheep	15.8%	35.2%	0%	32.8%	16.2%	100%

Table 3.Trespass arrested for illegal activities in DNP from(2001-2005)

Year	2001	2002	2003	2004	2005	Total
Animals						
Sheep	19.3%	7.5%	6.6%	14.4%	58.9%	100%
Goat	17.2%	20.4%	3.1%	10.2%	49.1%	100%
Cattle	4.8%	0.1%	61.8%	33.3%	0.00%	100%
Camels	6%	4.8%	8.3%	13.1%	67.9%	100%
Donkeys	13.7%	1.3%	10%	10%	65%	100%
Guns	3%	11%	14%	23%	49%	100%
Weapons	11%	0%	87%	1%	1%	100%
Honey.co	25%	25%	25%	25%	0%	100%
Car. Tress	0%	0%	69.2%	7.7%	23.1%	100%
Poaching	30%	10%	10%	40%	10%	100%
Charocal	0%	0%	66.7%	33.3%	0%	100%
Cut trees	0%	10.5%	73.7%	0%	15.8%	100%
Entrance	0%	0%	36.4%	45.5%	18.2%	100%
Fishing	0%	0%	0%	0%	0%	100%
Cultivation	0%	0%	0%	0%	0%	100%
Gum arab	0%	0%	0%	0%	100%	100%
Over graze	0%	75%	0%	25%	0%	100%
Saaf .coll	0%	0%	0%	0%	0%	100%

Table 4.Trespass arrested for illegal activities in DNP from(2006-2010)

Year	2006	2007	2008	2009	2010	Total
Animals						
Sheep	17.2%	11.7%	14.9%	39%	17.2%	100%
Goat	23.6%	12.6%	13.3%	29.2%	21.3%	100%
Cattle	23.2%	6.7%	10%	43.3%	16.7%	100%
Camels	10.1%	5.7%	9.5%	69.6%	5.1%	100%
Donkeys	23.6%	17.65	15.8%	26.1%	17%	100%
Guns	20.8%	4.3%	33.3%	20.8%	20.8%	100%
Weapons	0.2%	0.2%	99.2%	0.1%	0.3%	100%
Honey.co	100%	0%	0%	0%	0%	100%
Car. Tress	9.1%	90.9%	0%	0%	0%	100%
Poaching	22.2%	5.6%	33.3%	33.3%	5.6%	100%
Charocal	75%	0%	0%	25%	0%	100%
Cut trees	21.5%	14.3%	0%	57.1%	7.1%	100%
Entrance	50%	0%	0%	0%	50%	100%
Fishing	0%	0%	0%	100%	0%	100%
Cultivation	100%	0%	0%	0%	0%	100%
Gum arab	0%	0%	100%	0%	0%	100%
Over graze	0%	0%	0%	0%	0%	100%
Saaf .colle.	0%	0%	0%	0%	0%	100%

DISCUSSION

(Ali and Nimir, 2006) reported that the main threats facing the Dinder National park could be summarized as; the absence of proper land use surrounding the park, ever increasing size of human population in the Dinder area; and the trespassing of pastoralists, the pastoralists are forced to enter the park in spite of number of any herd caught inside the park.

Management activities serve to improve the status of the wildlife resources and address the needs of people who utilize this resource to the benefit of all. Changes in demographics and economic conditions need to be addressed and new foundations laid down. The management of natural resources can be adjusted towards improved balance between man and nature, in and around the Dinder National Park. This balance will create new solutions for the needs for domestic energy, creation of jobs in rural areas, sustainable use of natural resources, improving and modernizing agricultural production methods and setting up stable forms of co-existence with animals production (Flandez and Quedrago, 1994).

The issue of distribution costs and benefits is a critical one in helping to resolve conflicts in protected areas. Winter (1998) suggested that any successful realistic wildlife policy in Africa should be based on the philosophy; of using the welfare and security of the people as a focal point for conservation. Natural resources can contribute efficiently in answering the needs for domestic energy, creating rural jobs, regulating the use of natural resources, quickening the pace of changes in agricultural production methods, setting stable forms of co-existence with animal production, and preserving a natural environment (Flandez and Quedrago, 1994).

Many wild animals migrate outside the park during the wet season. The wet season habitats have been destroyed by mechanized farming. The migrant animals are subject to increasing harassment and killing. Both poachers and honey collectors greatly affect the ecology of the area by lighting fires throughout the park. Felling

of trees is observed near the villages and had greatly accelerated the erosion and sedimentation process (Abdel Hameed et al., 1999).

To respond to such uncertainties some shift, sale of assets or either borrowing, selling wood, hunting of wild animals, using of wild food, and migrating to town or to another village with better potentials. The number of the villages, surrounding the park, are now 36 villages instead of 26 that are reported by Awad (1995). There are regular, uncontrollable, continuous migrations, that becomes chronic in years of drought.

Comments made by respondents who gave negative answers suggest that the apparent antagonist towards the government wildlife management authorities stems from the perceptions that department of wildlife employees are unfairly privileged in terms of their access to the wildlife resources which villagers are denied, and that the Department Game Scout are over-zealous in terms of harassing local people unnecessarily, while failing to catch the real poachers.

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