Examining The Current Status Of Elephant Poaching And Challenges Facing Implementation Process Of The Three-Prong Initiative, Narok County

Kipkosgei Meshack Lagat, Peter Kamau

Abstract: The rise in wildlife trafficking and trade is an alarming issue which has seen poaching of endangered species escalate. The black market in consumer countries like China, Japan and Thailand require urgent and immediate intervention since with the current levels of trade attracting lucrative prizes the local people will endeavor to do much illegality or abet the indiscriminately killing of the elephants and rhinos. Insecurity has thus heightened the challenges facing wildlife with militia groups like Al-Shabaab and al-Qaida taking control of the trade to fund their agendas. The study sought to examine the current status of elephant poaching and challenges facing implementation process of the three-prong initiative. The study adopted a survey research design technique. Hereby the population was divided into several strata based on the existing political boundaries and the administrative locations of the respondents. For each location, respondents were sampled randomly. The number of respondents selected were 102. For non-probability sample, purposive sampling was used to select conservation officer that were interviewed. The research used questionnaires, interviews and observations as tools of extracting primary information. Quantitative data were analyzed using the Statistical Package for Social Sciences (SPSS Version 20) and presented through bar charts, pie charts and tables. From the findings ,30.4% supported the use of increased surveillance has the most effective strategy towards the elephant conservation. However, more is needed to include the local people in implementation process. 31% also suggested that wildlife and livestock were having unfavorable competition. The study concludes that since elephants are keystone species, their conservation is imperative to all sectors of the economy more so to tourism industry. It therefore recommends that, the NGOs and other conservation agencies to do more in empowering communities' socio-economically through development projects, more collaboration between Kenya and Tanzania within the Mara-Serengeti ecosystem that harbors transboundary resources, firm implementation of international conservation treaties, and enforcement relevant articles the Wildlife Conservation and management Act 2013.

Index Terms: Conservation Challenges, Endangered species, Human-wildlife conflict, Elephants status, Maasai Mara, Narok County, Strategies

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Introduction

According to [1] , up to 25000 elephants are been killed every year in Africa with 60% of the Congo Basin declining by 60% in the last 10 years due to poaching. While Human Elephant Conflict (HEC) continue to level challenges to managers and the local community [2] ,human beings due to their expanding population have increasingly encroached into protected areas in search of economic benefits and thus leading to undermining and overexploitation of wildlife resources[3]. The Mau forest for instance have been continually cleared for settlement and agricultural practices yet it acts as a catchment area for the Maasai Mara National Reserve (MMNR) and Lake Nakuru National Park. Another threat to conservation is fragmentation of the elephant's home range which reduces their areas of undisturbed lands and subsequently habitat loss which creates a sharp decline in elephants' numbers as humans expand their activities. This becomes ingredients for conflicts and thus illegal hunting [4].

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Poaching have for a long time adversely undermined the spirit of wildlife conservation and management and renders difficult the conservation of endangered species. The animals which have mostly been affected by this problem are the rhinos and the elephants because of the demand of their products across the world. For instance, the black market value of illegal trade is estimated to be between $ 5-20 billion[5],[1],[6]. The estimated poaching rate in 2012 stood at 7.4% which was devastatingly high and in the same year it was recorded about 650 elephants killed in Cameroon's Bouba N'Djida park by heavily armed poachers [6]. The same case apply to Democratic Republic of Congo (DRC) during the conflicts along Sudan border of 1995 and 2006, the elephants remained vulnerable to organized crime [6]. Incidentally, the rises of insecurity in the East Africa region of both ethnic and civil nature especially posed by Al-Shabaab have tremendously created avenues for wildlife crime to increase [7]. This has been occasioned by the trade and the demand for ivory and other wildlife products which is alive in Asian countries like China and Japan and has forced those many unemployed youths to contemplate to poach as an alternative source of livelihood[8] [5]. Japan still has strong demand for ivory emanating from Central African region [9]. Generally wildlife crime in Kenya has been linked with the escalating poverty levels, Human Wildlife Conflicts (HWC) and a growing demand for the wildlife products [10].The 2011 report further revealed that 82% of elephant poaching happened outside KWS areas. People living around the protected areas have resorted to using the poisoned arrows to eliminate the endangered species of wildlife and traps which are laid along the elephant's path [7]. Studies shows that in the last few years there have been very large and frequent ivory seizures in Africa and Asia, and the

combination of seizure data analyzed by the Elephant Trade Information System (ETIS) and of elephant carcass data documented and analyzed by the Monitoring the Illegal Killing of Elephants (MIKE) programmed clearly reveal that the illegal trade is highly on the rise [11]. Therefore, wildlife crime has compromised the international security through organized groups such as involvement of militias and transnational crime networks in poaching of wildlife and has created huge concerns in the conservation issue in the global security and foreign policy issue [1]. The border of Kenya along Somalia and Sudan continue to expose the wildlife resources of the country especially when the forces are committed in fighting the militia at Somalia which could jeopardize the efficiency of security man power. The 2012 report prepared by Kenya Wildlife Service indicates that wildlife crime is no longer a local irritant but a scourge promoted and maintained by highly organized syndicates which particularly targets rhino horn and ivory [7]. [3] has argued that, the HWC takes two dimensions; illegal infringement in wildlife areas and wildlife infringement in human areas. The increase in wildlife population have been met with corresponding pressure from human beings. Poverty has allowed human beings to try incompatible economic practices with wildlife conservation across the world [4]. As a strategy towards sustainable conservation of the African elephants, in September 2013 the Clinton Foundation led big conservation organizations to join African states in a commitment to protect the African elephants. The partners included; African Parks Network, Association of Zoos and Aquariums, Frankfurt Zoological Society, Freeland Foundation, International Conservation Caucus Foundation, National Geographic, Save the Elephants, TRAFFIC, WildAid, WildLifeDirect and Howard Buffett Foundation [12]. This is a three-year initiative which is expected to come to an end in 2016.The commitment is supported with a $80 million action plan to strengthen security for elephants in their range which meant to invest more in intelligence networks, customs inspection and consumer education. The initiative has an objective of stopping the killing, the trafficking and the demand of wildlife [13]. This study examines this strategy in terms of its challenges implementation in Kenya especially the perceptions of the local communities on whether there has been concerted efforts to conserve the elephants has borne any fruit.

STUDY AREA

Study Area description
The study will be carried out in Narok County which covers an approximate area of 17,921.2 km^2. Narok County is located between latitude 1° S   and   1°15′S and longitude 35°E   and 35°37′E. Narok County has a total population of 792426 [14] representing a population density of 44 people per Km^2 .The Male represents 50% of the population while the female too has the same proportion of 50% of the population. The Population growth rate is 3.3% with age distribution: 0-14 Years being 53%, 15-64 Years making 45% while 2 % are of over 65 years. The altitude of Narok County is about 1800 m above sea level with several undulating hills. The main rivers are River Amalo and Enkare Narok which later join to form Mara river. The temperature range is 12^0 to 28^0 C and the average rainfall

range is 500 to 1,800 mm per annum with long rains from March to June while short rains come at October and December. The soil in Narok County is suitable for farming of wheat and maize in large scale.
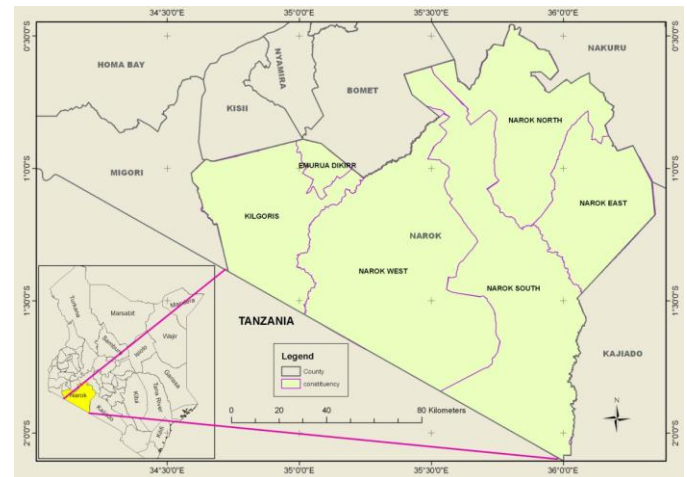

Fig. 1: *Location of Narok County in Kenya*

Research design and methodology
The study used a survey research design. In this study, residents living in Narok County and conservation officers were the key respondents for the study. Two types of data that were used are both primary and secondary data. The primary data was collected from the field through use of household questionnaires, structured interviews and observation checklists. Secondary data was collected from government reports, development and strategic plans, sessional papers, Wildlife Management and Conservation Act (2013), previous studies reports on related topics and magazines on wildlife conservation and management.

Target population
The study targeted a population of 792426 of Narok county[14], NGOs, CBOs, Conservation officers from Narok County and National Government.

Sample size and sampling techniques
Sampling is the process by which a researcher selects a sample of participants for a study from the population of interest. From the population of 792426 and using [15] the sample size was determined as;

$$n= \frac{NCv^2}{(Cv^2 + (N-1) e^2)}$$

Where n= sample size
N=population
Cv= Coefficient of variation (take 0.5)
e=Tolerance of desired level of confidence taken as 0.05 % at 95 % confidence level
Since Narok has a population of 792426 as per 2009 National Housing and Population Census, the formula was applied as follows;

$$n= \frac{792426\ (0.5)^2}{0.5^2 + (792426) * 0.05}$$

This gives a total of 102 respondents as the sample size.

Sampling Procedure
Narok County has six constituencies [16]; Narok south, Narok North, Narok west, Narok East, Kilgoris and Emurua

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Dikkir Constituencies. Every constituency was treated as a stratum and in each of them the study used simple random sampling to administer 17 questionnaires. Structured interviews were administered to NGOs, CBOs, Environment Officers, Chief Officers of Environment and Wildlife Management, Kenya Wildlife Service in Narok County using purposive sampling.

Data collection
The research used questionnaires as the main tool of collecting data. House hold questionnaires were administered and also structured interviews were conducted. for residents of Narok and interview schedules for conservation officer. Observation were also used to collect data from the field.

Data Analysis
Data were edited, coded and entered in to the Statistical Packages for Social Sciences (SPSS version 20) tool of data analysis to generate descriptive statistics, that is, frequencies and percentages.

Research findings and discussion
Elephant poaching and distribution of elephant carcasses
From the study, 73% of the interviewee noted that the numbers of elephants may have dropped owing to the many elephant carcasses they have seen while either looking after livestock in the fields or known from the Kenya Wildlife Service (KWS) and Narok County rangers. While 27% % acknowledged that that the elephants are increasing but facing a lot of challenges from perceived poachers. However according to the report published in August 2014 by WWF on Aerial Total Count of Elephants and Buffaloes in the Serengeti-Mara Ecosystem a total of 192 carcasses were counted in the entire ecosystem, of which 117 were in the northern part and 75 in the south (Mduma H *et al.,* 2014).
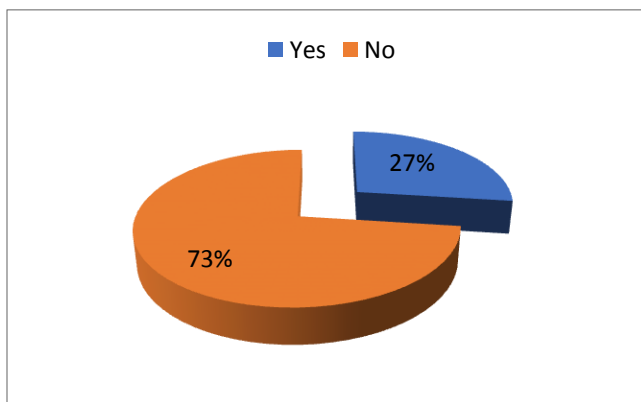

Fig. 2:
Challenges facing the African elephant's conservation

The African elephant faces a lot of challenges in a bid to adequately conserve them. 31 % of the residents noted that competition between wildlife and livestock for space is a major challenge that bedeviled the conservation of elephants in Narok County. 24% of the respondents attributed poor conservation strategies to several deaths that the elephants cause to the people and their livestock (23 %) which occasionally are not compensated adequately. Failure to allow the pastoralists to use the reserve to graze livestock during the dry season is also creating animosity between the reserve management and the Maasai community living around Maasai Mara National Reserve (MMNR) a fact which was acknowledged by 7 % of the respondents. Farmers also complained of the damages rendered to them by the presence of elephants in their community and 15 % said that the elephants over time have been trampling on their crops thus not able to harvest enough produce. The conflicts between the African elephants and the community in Narok County is attributed to poor strategies of compensation and failure to adequately share revenue so as to encourage the residents that the elephants too deserve to be conserved and brings money in terms of tourism.
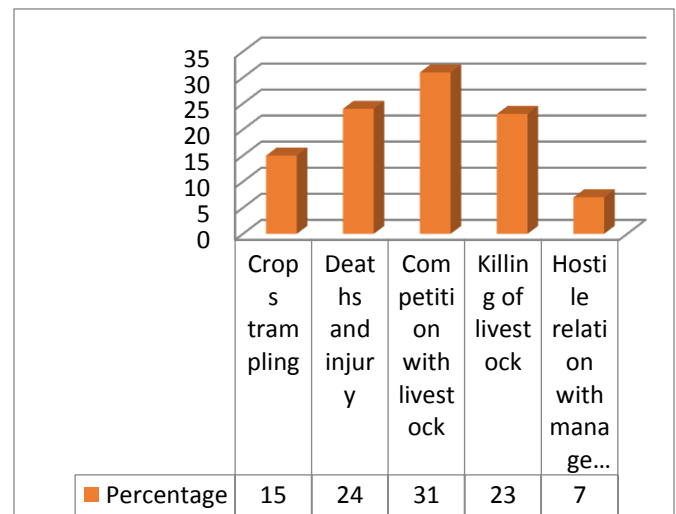

	Crops trampling	Deaths and injury	Competition with livestock	Killing of livestock	Hostile relation with manage…
Percentage	15	24	31	23	7

Fig 3:
Strategies towards inclusive conservation of the African elephant

The study revealed that when all stakeholders work together to conserve and manage the African elephant especially if they agree on a common course of action poaching can be totally eliminated from Narok County. It was suggested by 30.4 % of the respondents that ranger surveillance is key to security of the elephants from poachers. Community policing (12.7 %) helps in involving communities to take stoke and care of the elephants found within their community in this case it was noted that most people do not report cases of poaching since they think it is the work of the employed rangers and the management. It was also found out that monitoring gadgets (20.6 %) play a crucial role in determining the pattern of movement of the old and matured tusks elephants so as to keep them safe. Community awareness (7.8 %), benefit sharing (16.7%) and electric fences (6.9 %) are aspects of the community that were found to be useful in addressing perennial elephant-human conflicts. The study also noted that transboundary resources like the one shared by Kenya and Tanzania require common strategies for conservation and management thus in Serengeti-Mara ecosystem, collaboration (4.9 %) is important for the survival of the African elephants.

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Table 1: Strategies towards inclusive conservation of the African elephant

Table 1

Strategy	Frequency	Percentage (%)
Community policing	13	12.7
Ranger surveillance	31	30.4
Community awareness	8	7.8
Monitoring gadgets	21	20.6
Electric fences	7	6.9
Benefit sharing	17	16.7
Collaboration measures	5	4.9
Total	102	100

Conclusion

Findings of this study revealed that to effectively stop the killing, the demand and trade in elephants' products, a lot of resources and technology should be deployed in surveillance including training and equipping security personnel within protected areas. The local community requires empowerment socio-economically so as to change their perceptions towards wildlife conservation especially as a strategy of reducing human-wildlife conflicts. The local people's participation in decision making among other matters involving wildlife resources emerged to be vital in the conservation initiatives within the Maasai Mara ecosystem

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