
THE CURRENT STATUS OF HUMAN-ELEPHANT CONFLICT IN KENYA

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INTRODUCTION

Conflict between people and elephants in Kenya exists throughout most of the country's elephant range. In the local newspapers, headlines such as, "Elephants a threat to human life", "Woman and baby killed by elephant", are becoming disturbingly common. Occurrence books in Kenya Wildlife Service (KWS) field offices contain numerous reports of crop depredation, livestock deaths and injuries as well as damage to farm installations. The intervention column in the occurrence book typically reads, "...arrived at 9.00 am, inspected the damage, half an acre of maize completely destroyed". Frustrated wardens, usually unable to arrive on time to prevent the damage, refer to themselves as "damage inspectors". Peasant farmers in the affected areas are equally frustrated. Their efforts to keep the animals out of the "shambas" are often futile, sometimes resulting in fatalities. "Ndovu wa siku hizi ni jeuri (Elephants of today are full of spite)", they say.

Kenya's elephant population is currently estimated at about 24,000 individuals, a fraction of what it was 20 years ago. However, with an expanding human population and the commensurate demand for land, the elephant range has been greatly diminished, resulting in the perception that there are "too many" elephants in some pocketed populations. Land-use changes in areas such as Laikipia District, where large-scale ranches have been subdivided into small-scale farms, have led to compression of the elephant range and intense conflict as people and elephants compete for space. In other parts of the country, people who formerly practised pastoralism have been encouraged to turn to agriculture, thus creating conflict in places where elephants and people formerly co-existed. Examples include the Maasai in Kajiado and Narok Districts, the Pokot and Turkana near Nasalot and South Turkana Reserves, the Samburu near Isiolo and Maralal towns, and the Rendille and Borana around the Marsabit Reserve.

In many of the densely settled agricultural areas around forest reserves, excision of forest to provide land for the landless has led to the creation of "island farms" within elephant habitat or "forest peninsulas" surrounded by farms. These make perfect sites for crop-raiding because the elephants can hide in the forests during the day and come out to raid crops during the night. The Mount Kenya, Aberdare and Mau forests are examples of such areas.

The Elephant Programme of KWS has accumulated useful information on the conflict situation in Kenya, as a result of field surveys, and reviews and analysis of data from field stations. This presentation summarises some of this information in an attempt to give an insight on the status of human-elephant conflict in Kenya.

What constitutes conflict?

Conflict between people and elephants takes several forms. Crop depredation is probably the most common type of conflict. Encounters between people and elephants can lead to deaths and injuries of both people and elephants. Elephants are also known to cause damage to property such as farm installations, water reservoirs, fences and houses. All these forms of conflict are reported to occur in Kenya with varying severity.

Where does human-elephant conflict occur in Kenya?

Figure 1 illustrates the main areas of human-elephant conflict in Kenya. Efforts to categorise these areas according to severity of conflict has proved very difficult because most information on crop depredation is not quantified. Data on human deaths and injuries as well as elephant mortality data indicate that Laikipia and Narok Districts are the most affected regions.

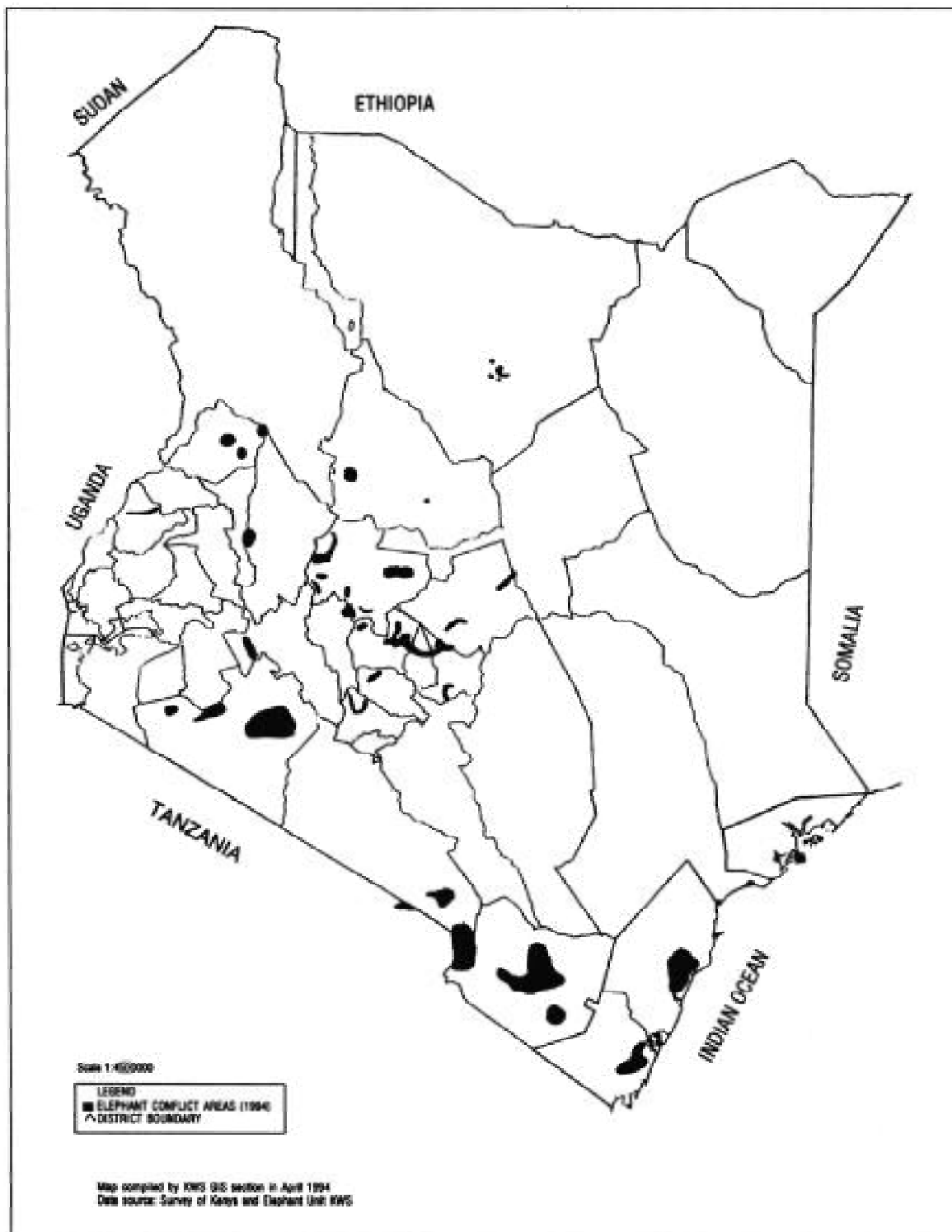


Figure 1. The main areas of human-elephant conflict in Kenya.

Crop depredation

Crop depredation is a major cause of conflict in Kenya. Farmers living in the fertile agricultural areas which frequently border forests, such as Mount Kenya and the Aberdare forest complex, report high incidences of crop-raiding. Farming communities which have settled near the boundaries of national parks, for example Tsavo and Amboseli, also experience severe crop-raiding. Elephants living outside the parks and reserve system, in the districts of Laikipia, Meru, Narok and Taita-Taveta, cause extensive crop damage in the cultivated areas within their range (Poole *et al.*, 1992, Ngure, 1992, Mwangi *et al.*, 1993, Thouless, 1994). Elephants are known to eat a wide variety of food crops which include maize, bananas, cashewnuts, pumpkins, sugarcane, cabbages, carrots, onions, etc. Maize ranks high on the list of preferred food crops. The main crop-raiding season parallels the crop-growing season in many parts of the country, which begins in July and continues through October. Mound forest reserves and irrigation schemes, however, raiding continues throughout most of the year. Crop damage assessment carried out by Irigia (1990) and Mulama (1990) in Laikipia District, as well as work by Ngure (1992) in Taita-Taveta District, indicate that farmers experience serious economic losses through crop damage by elephants. Occurrence books and annual reports from KWS stations such as Meru, Kiambu and Nyeri, as well as personal encounters with farmers from the affected areas around the country, attest to this fact. Better quantitative data on crop damage is required as very little is currently known about the extent of damage in specific areas. There is also a real need for scientific data on crops consumed, quantities and patterns of feeding, frequency and seasonality of raiding, characteristics of crop-raiding elephants (size and sex composition of raiding groups, raiding patterns), and causes of crop-raiding. Since crop depredation is a major cause of conflict, it is imperative that any meaningful categorisation of conflict areas incorporates data on the severity of crop damage.

Human deaths and injuries caused by elephants

KWS records show that between 1990 and 1993, at least 108 people were killed by elephants while 34 people were injured in different parts of the country. It is important to note that some deaths and injuries go unreported, often because they occur in remote areas.

Most incidents of death and injury are reported from Laikipia, Narok, Taita-Taveta and Kwale Districts, as shown in Table 1. Thouless (1994), speculated that the high number of human deaths recorded in Laikipia District in 1992 may have been partly an indirect result of drought, which in turn kept elephants in well-watered areas close to human settlements. Laikipia and Narok have maintained a higher rate of human mortality and injury relative to other districts, from 1990 to 1993. In Narok District, the influx of immigrants from agricultural communities in the densely settled central highlands, coupled with the recent change from pastoralism to agriculture by the Maasai, has led to compression of the elephant range. In the agricultural settlements of Ntulele and Seyabei near Narok town, human-elephant conflict has escalated in recent years with the increasing isolation of an elephant population of about 200 individuals (Litoroh, 1993).

Table 1. Human deaths caused by elephants in Kenya, 1990 to 1993, ranked by District.

District	1990	1991	1992	1993	Total
Narok	3	6	5	13	27
Laikipia	1	3	17	5	26
Taita-Taveta	2	6	5	6	19
Kwale	-	3	2	4	9
Marsabit	-	-	5	-	5
Meru	2	2	-	-	4
Nakuru	-	-	3	1	4
Isiolo	1	1	1	1	4
Kajiado	-	-	-	3	3
Samburu	-	-	2	1	3
Kiambu	-	2	-	-	2
Turkana	-	-	-	1	1
Nyeri	-	1	-	-	1
Total	9	24	40	35	108

The information kept at KWS is essentially maintained for administrative purposes. The data do not describe the circumstances surrounding death of a victim, such as time of day, activity during encounter, causes of aggression and characteristics of the attacking elephants. An interesting observation however, is that more men are killed by elephants than women. Out of the 74 entries where the sex of the victim was clearly indicated, 58 (78%) were male.

Elephant deaths and injuries

Elephant deaths and injuries also serve as indicators of levels of human-elephant conflict. The elephant mortality database maintained at KWS keeps records of "cause of death" whenever possible. Analysis of this data reveals the following categories:

1. Control

Elephants shot by KWS rangers or land owners in defence of human life or property.

2. Poaching

Elephants found dead with tusks missing.

3. Unknown

Cause of death not established.

4. Conflict

Elephants found dead, with spear, gunshot or snare wounds. This is differentiated from poaching when tusks are found intact.

5. Accidents

Drowning etc.

6. Natural

Includes sickness, death during a fight, death caused by predators.

KWS records indicate that 119 elephants were killed on control between 1990 and 1993. Further analysis reveals that the number of elephants shot on control has increased with every subsequent year since 1990. It is important to note that the control policy in KWS evolved from one of strictness, where field staff were required to seek permission from headquarters before shooting an elephant in 1990, to a more relaxed mode where field officers have the authority to make their own decisions. However, they often consult headquarters for advice. This evolution of policy has had a direct effect on the numbers of elephants shot.

Another notable point is that in 1993, a total of 15 elephants were shot during a Problem Animal Control (PAC) training exercise conducted in Laikipia and Samburu Districts between July and October of that year. The total number of elephants shot on control in these Districts may therefore have been distorted by this exercise. Overall, Laikipia District records the highest number of elephants shot on control, followed by Taita-Taveta, as seen in Table 2.

Table 2 Elephant mortality from problem animal control and conflict, 1990 to 1993.

District	1990		1991		1992		1993	
	CT	CF	CT	CF	CT	CF	CT	CF
Bungoma								
Isiolo								1
Kajiado								1
Kericho					2			
Kiambu	1				4			1
Kilifi	1							
Kwale	1		2		2			2
Laikipia	5		5		16			20
Meru								
Muranga								1
Nakuru								4
Narok			1		3	1	14	6
Nyahururu	1		1			1		
Nyeri	1				3			
Samburu					1	1	7	1
Taita-Taveta			2		11	2	2	
W. Pokot						1		
Total	10	1142	656	8				

CT- Control shooting

CF- Conflict deaths i.e. animals killed by non-K WS personnel, tusks recovered

Gaps in the data-set make it difficult to analyse factors such as sex of animal shot and activity of elephant at time of shooting. Seasonal patterns of control are also difficult to ascertain. In 1992, the KWS Elephant Programme designed PAC forms, which field staff are now required to fill after control shooting. The response has been encouraging and an analysis of these data will certainly be useful.

Other causes of conflict

These include damage to farm installations e.g. fences, dams, stores, water pipes and houses. Elephants in Laikipia have been known to raid grain stores in search of maize, totally destroying them in the process (Irigia, 1990; Litoroh, 1993). Elephants are also known to damage the most sophisticated electric fences (Thouless, 1993).

Disruption of social activity is a major cost incurred by communities living in close proximity to elephants. In areas such as Shimba Hills, Taita-Taveta and Narok, children are often unable to attend school because elephants block all possible routes. Parents are forced to escort children to school while teachers have to shorten the school day to give pupils time to select safer routes home. Sleepless nights are spent chasing elephants out of the fields, which affect the ability to work during the day.

CONCLUSIONS

From the above summary, it is clear that the human-elephant conflict situation in Kenya is real and worsening. It is also clear that there is a need for further research and quantitative data collection of various aspects of conflict. The survival of elephant populations in Kenya may depend upon the ability to minimise conflict between people and elephants. This can only be achieved with a clear understanding of the problem and a well-informed approach towards conflict management.

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Photo credit: Steve Njumbi



Cutting up the meat from an elephant shot on control.