

The Kenya Story: 1977 - 2015

Background

In 1977 all sport hunting was banned in Kenya by Presidential Decree followed in 1978 by a ban on all consumptive utilisation of wildlife and wildlife products. Since then Kenya has lost ~70% of her wildlife and since then arguments have raged over the contribution of the ban to this loss.

KREMU/DRSRS

1977 saw the establishment of the Kenya Rangeland Ecological Monitoring Unit (KREMU), known today as the Department of Resource Surveys and Remote Sensing (DRSRS), a Government institution charged with monitoring the distribution and numbers of large mammals, domestic and wild, throughout the ~470,000 km² of Kenya's arid and semi-arid lands (ASAL).

Since 1977 KREMU/DRSRS has been carrying a rolling aerial sampling survey programme of livestock and wildlife based on the standard Systematic Reconnaissance Flight (SRF) methods.

The KREMU/DRSRS Data Base

The KREMU/DRSRS data base holds, for each census, population estimates and metadata for individual species of wildlife and livestock within each District, now Counties. Census effort has not been consistent, with Districts considered "important" for wildlife censused much more frequently, sometimes monthly, compared with those considered less important, some of which may have been censused perhaps only once every 3 or 4 years. Neither has census effort been consistent with respect to seasons.

Rates of Wildlife Loss

These inconsistencies in sampling effort across the rangelands makes it problematic to estimate the total number of any individual species in Kenya at any particular moment in time. However, population trends can be derived although difficult decisions must be made over appropriate trend models (linear, polynomial, ARIMA), different groupings of wildlife (individual species, grazers and browsers, total wildlife) and data weightings (by number of animals, by frequency of census, by "importance" of a species).

Given that the justification for any specific trend model will be no more or less supportable than the justification for any other, the strategy adopted here is to fit as many different models as possible to the data, all with different parameters and assumptions, and then carry out a meta analysis of the population of model outputs.

The meta analysis of 12 different trend models (Figure 1), each with different parameters and assumptions, for the period 1977 to 2000, suggests that the average rate of loss of wildlife over this period is ~-3.4% a⁻¹. The probability that the rate of loss is < -1 %a⁻¹, or even zero or positive, is p=0, an important result.

Figure 2 shows the mean trend line for the loss of wildlife in Kenya, along with the upper and lower 95% confidence bounds, and the projection to 2015 if "things remain the same".

Figure 1: Meta analysis of 12 trend models of wildlife population losses in Kenya, 1977 to 2000, with projection to 2015

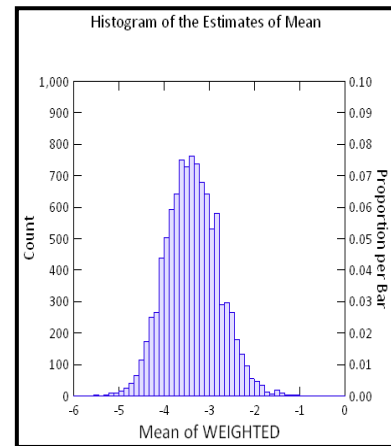
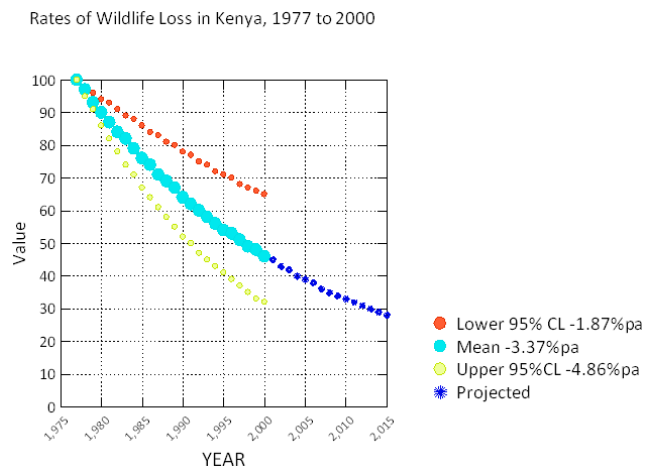


Figure 2: Rates of wildlife loss in Kenya, 1977 to 2000, with projection to 2015



Meanwhile, a definitive version of KREMU/DRSRS data base, from 1977 to 2015, is being finalised from which definitive trend estimates can be made.

Impacts of the Ban on Consumptive Use of Wildlife

- **Hunting and Tourism Areas:**

In 1977, hunting and other consumptive uses of wildlife took place in 12 of the ASAL Districts covering ~300,000 km², ~60% of the total wildlife range in Kenya. In contrast, wildlife based photo-tourism was carried out primarily within the 41,000 km² of Protected Areas and within perhaps a maximum of 35,000 km², mainly around the Protected Areas, where hunting and photo-tourism overlapped.

- **Security:**

The most immediate impact of the hunting ban was the withdrawal from the field of the anti-poaching patrols and game management personnel supported by hunting companies with long term concessions on hunting blocks. This undoubtedly led to much higher opportunities for illegal offtake in the short to medium term.

- **Removal of Revenue Streams:**

Revenues from hunting were distributed between Central Government, County Councils and landowners and landusers. While the absolute size of these flows are poorly documented, in at least two ASAL Districts, Narok and Kajiado, hunting concession fees

were the major source of District development funds. At the landowner/landuser scale, some Group Ranches were earning in excess of US\$40,000 per year in hunting fees.

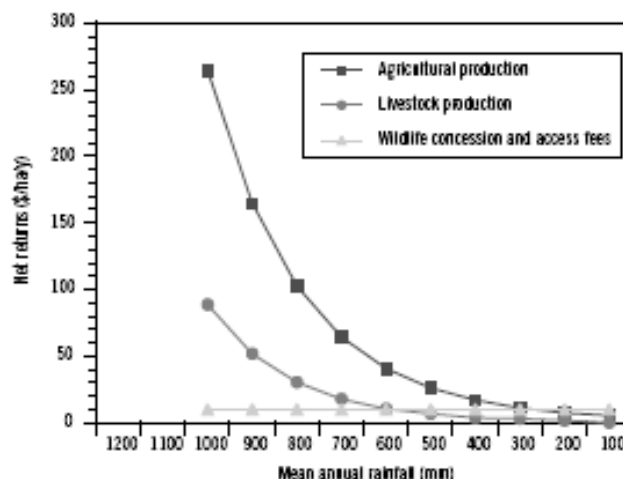
Once the ban was in place all these revenue flows ceased, abruptly, with no attempt made towards any compensation. However, photo-tourism fees still accrued within the Protected Areas and within the 35,000 km² surrounding them.

Unlike the consumptive use industry, revenue flows to landowners and landusers from photo-tourism were meagre, with powerful tourism cartels diverting the great majority (~90%) to the service side (travel and accommodation) rather than to the producer side (landowners and users) of the industry. Managers of Protected Areas were equally loath to share revenues with surrounding communities.

In summary, revenue streams to landowners and users from consumptive use across ~300,000 km² of wildlife range abruptly ceased, leaving only the revenues from photo-tourism in the Protected Areas and in a further ~ 35,000 km² of the wildlife range.

The medium- to long-term impact of these reduced revenues flows was to make wildlife production uneconomic compared with livestock and agricultural production (Figure 3).

Figure 3: Differential net returns to landowners (\$ ha⁻¹y⁻¹) from agricultural, livestock and wildlife production



- **Structural Changes to Rangeland Production Systems:**

Significant structural changes to rangeland production systems have occurred over the last decades in the face of a growth in the human population of +3.2% a⁻¹. While livestock populations have remained stable, going up and down in good or bad years, offtake for sales has increased at 4.4% a⁻¹. Agriculture has cascaded down the rainfall gradient growing in extent at 8.6% a⁻¹, while wildlife is being eliminated at -3.4% a⁻¹.

These structural changes signal the evolution from an extensive pastoral production system to a more settled agro-pastoralism with more intensive livestock management. While these structural changes have been driven undoubtedly by national, macro-economic forces, especially population growth and market growth for higher quantity and quality of production, the lack of economic competitiveness of wildlife has clearly been a contributory factor.

- **Is There Any Room for Optimism?**

It is very unlikely that any form of consumptive utilisation will ever be reintroduced into Kenya. The animal rights and welfare lobbies are too deeply entrenched in the body politic, to the extent that the new Wildlife Conservation and Management Act (2013) even banned bird shooting (and almost sport fishing).

But there are some very encouraging signs of change.

First, the Kenya Wildlife Service is slowly softening its deeply rooted, command-and-control, enforcement perspective for a more enabling outlook, especially towards revenue sharing and creating economic opportunities among communities living around the Protected Areas and among landowners and users in general.

Second, the growing Conservancy Movement on both private and communal land has to some extent broken the power of the tourism cartels so landowners and users can capture a much high proportion of wildlife rents than before.

Economic returns from wildlife outside the Protected Areas are improving and wildlife production is becoming economically more competitive with livestock and agricultural production. This should in turn slow down the rates of wildlife loss.

Evaluation of the definitive KREMU/DRSRS data base will reveal if this happening. Initial analyses do suggest that populations have at last stabilised in three important wildlife areas.

SUMMARY

The immediate impact of the ban on consumptive utilisation of wildlife in Kenya was reduced security in the former hunting blocks with an increase in poaching opportunities.

The longer term impact has been the reduction in the economic competitiveness of wildlife production compared with livestock and agricultural production. Structural changes in the rangeland production systems have therefore been at the expense of wildlife.

The economic competitiveness of wildlife production is improving, and there are indications that wildlife populations are now stabilising in some important wildlife areas in Kenya.

It is therefore quite possible that Kenya will achieve stable wildlife populations, including populations of charismatic and high profile species, without any consumptive use.

However, both the numbers of wildlife and the areas holding wildlife will remain substantially reduced in size. Wildlife populations will therefore remain at a higher level of risk than before.

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