

# IT'S NOT JUST THE HUMAN-WILDLIFE CONFLICT

## THERE'S WILDLIFE-WILDLIFE TOO



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**M**anaging wildlife is not easy. There is much publicity given to Human-Wildlife conflicts, especially those which involve elephants and lions, but these two species are equally a problem with the rarely reported Wildlife-Wildlife conflict.

A fully enclosed reserve with no opportunity for wildlife to flow in and out is, perhaps, the most ideal natural environment for wildlife to breed. But breeding success brings with it management problems as and when the populations of wildlife exceed their natural levels.

A prime example of such success and of the problem with Wildlife-Wildlife conflict is Solio Game Reserve in Kenya. This was the first fully fenced reserve in Kenya, established in 1970, whose

Mission became “to breed rhinos for translocation to other safe areas”. Since its inception, Solio has moved 105 black rhinos to other reserves in Kenya, mostly recently 12 have been sent to form part of the founder population of the new Ruma National Park.

Some 47 years on, the reserve is teeming with wildlife including buffalo, lions and giraffe – three species that challenge Solio’s population of critically endangered black rhino.

Humans apart, the only important predator of rhinos are lions who will kill rhino calves up to the age of around four months. After this the growing calf and mother can usually fend off an attack. Lions may also gang up and kill old or injured adult male rhinos.



There are now at least 26 lions in the reserve, vastly more than the 3-5 there were in the 1990s. A general rule of thumb is to have no more than one lion for each 10 sq km of land which, for the 69 sq km reserve area, would mean a maximum of 7 lions.



**TOP:** Solio fence  
**BELOW:** Sleeping rhino mother and calf



**TOP:** Lion with kill

**BOTTOM:** Buffalo capture for relocation

**TOP RIGHT:** Buffalo browsing

Lion attacks on rhino calves are considered “opportunistic” and not for food. This means that when lions come across a small rhino calf, they will kill it for no apparent reason. Since 2009, Solio have recorded at least seven black rhino calf deaths and four white rhino calf deaths thought to be due to lions.

What can be done to manage the lion population? As the law stands today,

nothing. It is generally accepted by lion experts that moving lions to other areas does not work. Natural instinct or illegal human intervention prevents lions inhabiting unsuitable areas. Areas which already have a lion population will see introduced individuals being killed or killing resident animals. The only solution, accepted by lion experts, is euthanasia but this will require a change to current wildlife legislation.

If the rhinos’ competitor species are not killing them, they deprive them of their food source. Black rhinos are browsers who feed on bushes,

shrubs and herbs. The browsing of other large mammal species at certain densities can reduce the food supply to black rhinos and can contribute to inducing vegetation changes (mainly by destroying the habitat) which will affect black rhino carrying capacity.

Most enclosed rhino reserves suffer an over-abundance of buffalo, not the least of which are Lake Nakuru National Park and Solio Game Reserve. Buffalo feed a lot on herbs and also take woody browse in the dry season. In large numbers they will compete with black rhino. Specialist ecologists have determined a method of converting the metabolic biomass of a browsing species into a “rhino equivalent” biomass – put in simple terms, the number of a competitor species that equates to one black rhino in terms of food requirement. The table shows that 8.57 buffaloes are equivalent to one black rhino. The latest buffalo census at Solio estimated over 1000 buffaloes, an equivalent to 117 browsing black rhinos!

In addition to feeding competition, the thousand or more buffalo crash around the bush tearing off twigs and snapping branches – killing the rhinos’ food source and preventing regeneration.

In early 2008, Kenya Wildlife Service (KWS) research scientists undertook a study of the Solio buffalo problem and recommended the population should be reduced to 365 so as not to impact on the rhinos. Euthanasia, otherwise





Giraffe and phone pole

known as culling, is not allowed under the existing wildlife regulations. The only management option open to KWS was to translocate individuals to larger wildlife areas such as Aberdare or Meru National Parks. To capture and transport a large animal such as a buffalo, which can weigh 1000kg each, is a hugely costly exercise.

Buffalo numbers were reduced by 200 between May and December 2008 from death due to a major drought and, as funding has become available, KWS have moved 252 buffalo out of Solio. Although together it seems the population has been reduced

substantially since early 2008, the time lag between movements has allowed the remaining females to breed prodigiously and the buffalo population is still around 1000.

The other key black rhino competitor browsing species is giraffe. Solio has 96 giraffe, equivalent to 13 black rhino. The 2008 KWS study recommended a two thirds reduction of the population to 32. Again, euthanasia, (culling), is not allowed and the only management option open is to translocate individuals to other wildlife areas. However, it is almost impossible to move giraffe by road, the problem being the need to

avoid the electricity and telephone wires that overhang the roads. The towering height of the adult giraffe means that only sub-adults can be moved and these represent less than 10% of the Solio population, whose lions have a particular preference for young giraffe such that very few survive.

Solio is fortunate in not having any resident or transient elephants – the main destroyer of rhino habitat pushing over trees, destroying tree bark and snapping off branches. It is also the main competitor browser with a “rhino equivalent” of 1.8 elephants to one black rhino. So, while probably the main



Elephant browsing

protagonist of Human-Wildlife conflict, the elephant is also the scourge of the rhinoceros in Wildlife-Wildlife conflict.

Even the “minor” browsing species of impala, oryx and eland, swelled to abundance by the safety of the fence and with nowhere to go, have an impact on the black rhinos. In Solio, these three species amount to 41 rhino equivalents.

Altogether, the competitor rhino species at Solio are equivalent to an additional 171 black rhinos which is over three times the current black rhino population. With current legislation, there is no practical means of reducing their impact – extended calving intervals, delayed age at first calving, reduced carrying capacity – with the result that the reserve is slowly being strangled by its success. In September, the Kenya Wildlife Service published

their new comprehensive five year “Conservation and Management Strategy for the Black Rhino in Kenya” which states that in secure, well established and productively managed populations, a 6.5-9% rate of rhino population increase should be achievable. The document states two major activities to meet this aim as “assess the impact of lions and hyenas on rhino populations for appropriate interventions” and “reduce densities of competing browsers to recommended levels without significant delay, where there is a demonstrated need”.

Current legislation restricts KWS to what are “appropriate interventions” or ways to reduce browsers. As the new strategy states, rhinos are one of the “big five” which constitute the core of the tourism industry. KWS further state

that there is a shortage of available new rhino conservation areas and that it is vital to maximize the black rhino carrying capacity of those that exist today. The enclosed sanctuaries of the private sector, which house 45% of Kenya’s black rhino population, are fundamental to the future. As such it is imperative that KWS and the conservation areas that hold rhinos should be able to manage wildlife to the specific benefit of the rhino. This ‘focused’ management approach is not unique as it is already in action in support of the hirola and bongo populations in Kenya.

Solio is not alone in suffering from Wildlife-Wildlife conflict. The reserve has been in existence longer than other fenced reserves and its experience serves as a warning of what is to come for others. New legislation that allows for greater management options is essential and euthanasia/culling must be part of it. Animal welfare charities who are important donors in Kenya such as the International Fund for Animal Welfare, Born Free and Tusk Trust must recognise, if they don’t already, that when humans, by necessity, interfere with natural wildlife behaviour by fencing in animals, humans must be allowed all practical measures to manage the wildlife therein to achieve the benefits due to the enclosure. KWS needs to reward private sanctuaries for managing wildlife on their behalf by enabling ownership and free trade to raise the finance necessary to do the work efficiently and effectively. ●

Species	Rhino Equivalent
Black Rhino	1.00
Elephant	1.80
Eland	4.04
Giraffe	7.57
Buffalo	8.57
Oryx	25.97
Impala	35.88