

# Fences and Consequences

Exploring the borders between wilderness and civilisation in Africa



## 🌍 Africa is not an untouched wilderness anymore !

For more than two centuries, the black continent has attracted Europeans magically. During this time, numerous pioneers, conquerors and missionaries have visited this part of the earth and have deeply changed it. But still, the „African Dream“ does not seem to be broken.

Within the **research project „migrations“**, the contemporary relationship between humans and animals in Botswana has been investigated. From an interdisciplinary point of view, various aspects about the long-known conflicts along cattle fences have been collected during the journey in order to enable a better understanding of the country's ecological and cultural background.



Botswana's National Parks and game reserves rank among the last unspoilt places on earth. More than 20 percent of the national range is protected as a refuge for wildlife. At the same time, humans need more and more space for their survival, which is based particularly on cattle breeding. Since the 1960s, **„Veterinary cordon fences“** have been constructed throughout the unaffected landscapes of Botswana. These massive fence-lines stretch along hundreds of kilometres in order to separate cattle breeding and conservation areas and to prevent the transmission of diseases. Cattle breeders shift their herds ever more into protected zones of precious ecosystems. Conflicts between man and nature are unavoidable.

In drought periods, the fences stop the natural migrations of wildlife and become deadly traps for great herbivores like Wildebeest (*Connochaetes taurinus*) and several other species.



Examples of fences and their consequences throughout Botswana will be given in the lecture. Moreover, and despite many negative aspects, the historico-cultural meaning of the fence and its potential as a means of conservation and dialogue will be mentioned as well. A selection of **interdisciplinary art projects** integrating conservation and ecology will be presented.

Concerning the **implementation of „Natura 2000“**, experiences with wildlife management in Africa might provide additional inspiration for European conservation issues. Only by professional wildlife management, natural landscapes can be preserved in the long run and offer an image of untamed wilderness to the visitors.

Today, the welfare of wildlife is irrevocably attached to human responsibility. Creative skills and new attitudes towards our relationship with nature are highly in demand: such as stating **„wilderness as usual“** as a basic principle for ecology and conservation.



Daniel Kufner \_ Conservation Agency, Munich

## Fences and Consequences

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Dear Ladies and Gentlemen ...



... thank you very much for your invitation to „Hortobagy National Park“. I admit that I was a bit surprised to be asked for a lecture, because my status as an artist usually working within the creative field appears to be quite uncommon in this context of a „Natura 2000 workshop“.

However, this ecological perspective is exactly covering the topics of my artwork, and I am glad about getting the chance to tell about my ideas and specific projects at the intersection of conservation and art. Moreover, I hope to mention interesting aspects for traditional conservationists as well.



As we all know, the „Puszta“ is the biggest European savanna. It is one of the view places where the **Great Bustard** (*Otis tarda*) or the **Aquatic Warbler** (*Acrocephalus paludicola*) and several other critically endangered species can still be found. It is a cultural landscape that has also been partly created by humans and their agricultural habits during many centuries.

Sustainable forms of land use and the existence of **great herbivores and domestic livestock** (like cattle and horses) are an important prerequisite for this precious ecosystem and its successful conservation management.

The image of traditional Hungarian cattle breeds is well-known in this respect and is building an ideal contextual bridge towards the favorite eco-topics within my work: the relationship between humans and animals.



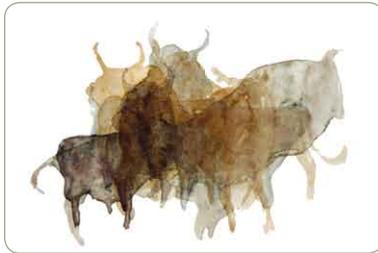
### artfarming \_ cows connect continents

Within the project „artfarming“, I have been collecting information about the cultural history of humans and cattle: beginning with the cave-paintings of aurochs in Lascaux, followed by long domestication efforts before finally leading to our more than 450 different cattle stocks today.

A process of cultural development has occurred since the original wild cattle - the **Aurox** (*Bos primigenius*) - was tamed. Expressions of cattle culture can be found literally in every part of our planet, like the Massai cattle tradition in Kenya or the holy cows in India.



Within my artwork, this idea of a close dialogue with nature has become the major principle and defines the starting point of the sculptural process. These collections of historico-cultural and scientific data are usually transformed into artworks, like drawings, sculptures, installations or objects. To give you an impression of what „artfarming“ can mean, I will show three examples:



**1) Drawings and Lithographies:** these works marked the beginning of my examination of cattle-history, when I started as an art student at the Academy of Fine Arts in Munich more than ten years ago. Inspired by early stoneage-culture, I used traditional and simple graphic media like ink, charcoal, watercolour or lithography, a printing-technique on natural stone.

Over the years, and during the development of the „artfarming“-project, my interest in fences and their role within cultural history became more and more important. So I began using the fence as a sculptural medium in installations and exhibitions. **The fence is a perforation of nature.** It symbolizes the borderline between humans and animals - or in an abstract meaning - between civilisation and wilderness. Every fence marks a transition between nature and culture. And - last but not least - the invention of the fence refers directly to the development of agriculture and cattle breeding.



**2) Fence fragment** - found as a relic of a pasture and reconstructed in its former position. Metal stands keep the fence in position and provide a detailed perception of form, surface and meaning. The former electric wire of the cattle fence becomes a three-dimensional drawing.



**3) Silent Homerun** - A small isolator of a traditional bavarian cattle fence was enlarged in scale and then transformed into a design object. Thus, a well-known detail of our landscape appears in a new form as the flow of energy becomes visible. Seven pieces that have been produced in an edition of 12 have already found their new owners and are meanwhile shining at different places in Germany, Switzerland and Italy. Every light object marks a cornerstone of a virtual fence structure stretching across Europe ... a shining example that combines traditional culture and contemporary lifestyle !



These are just a few samples of my artistic research. You can find more information on [www.artfarming.de](http://www.artfarming.de) ! Concerning the following African experiences, these projects have defined the „artistic base“.

When I heard about the so-called „Veterinary cordon fences“ that stretch along hundreds of kilometres in order to separate cattle breeding and conservation areas, I knew that I had to find out for myself what these borders exactly mean for the relationship of humans and animals. And I wanted to know more about their consequences for the future of wildlife in Africa. The research project „migrations“ was born.



However, travelling into Africa because of research is nothing new. For more than two centuries, the black continent has attracted Europeans magically - during this time, numerous pioneers, conquerors and missionaries have visited this part of the earth and have deeply changed it. Africa is not an untouched wilderness anymore ! But still, the „African Dream“ does not seem to be broken - and it usually begins long before you get in touch with this wonderful continent.



Before my expedition could begin, several preparations had to be made: so I applied for a travel scholarship supported by the German Academic Exchange Service (DAAD), where I had to describe the aims of my project and to convince the jury. Before the departure, I read scientific articles about fences and found several investigations that had been made so far. My first question was whether I could find out more details about the long-known **conflicts along „Veterinary cordon fences“** - and as I supposed to look at the scenery neither as a cattle breeder nor as a traditional conservationist, I hoped to discover additional and yet unknown aspects by concentrating on an artistic and interdisciplinary point of view. This implicated especially an in-depth understanding of the different forms of land-use in Botswana as well as getting an insight into traditional habits of the local Botswana people and their cultural heritage.



In the mood for „Safari“, I rediscovered an important memory of my childhood: it was this image of a plane with black and white stripes flying above endless herds of African wildlife: a scene that is attached to Bernhard Grzimek, the great pioneer of conservation in Africa.



He called his plane **„the flying Zebra“**. In 1957, he started out from Frankfurt to Tanzania joined by his son Michael. Together, they counted the animals and analyzed the migrations of great herbivores in the Serengeti. Only due to their work, the park's boundaries could be set in analogy to the migration patterns of wildlife. As a consequence, today the Serengeti National Park is roamed by more animals than ever before (roughly about 1.5 million zebras, wildebeest and various antelope species).



In dedication to the passionate life and conservation efforts of Prof. Grzimek, I created an individual working suit for the „migrations“-project, reacting on a well-known and original African surface: the zebra pattern of Grzimek's vehicles and planes that is still used today by the „Frankfurt Zoological Society“. In striking black and white colours, I performed on an exhibition in Munich in order to create awareness for my research project. For a symbolic donation of 5 Euros, visitors could buy an edition of zebra balloons as well as information about the life of Bernhard Grzimek.

This performance, called **„on Grzimek's traces“**, became a kind of symbolic initiation for my first African journey; although I must admit that wearing the suit was the first borderline - or mental fence - I had to cross for myself !



There are two other notes to be made in consideration to zebras:

- 1) Some scientists argue that the zebra stripes are an adaption to protect the animal from the tse-tse-fly. These small insects prefer solid surfaces of only one colour. What appears striking to us, might in fact be camouflage ?!
- 2) **„Zebras for Life“** is the slogan of the national Botswana Soccer Team.

Now let's go on Safari\*... !

\* a word that originates from KiSwaheli and means journey.

## Safari Spirit \_ travelling through Botswana



When I got up in the plane to Johannesburg after a night-flight from Munich and looked out from the small window - discovering the Okavango delta from 10.000 metres above - I already knew that this journey could not go wrong. The Okavango river originates in the Angolan mountains and then spreads up to a huge delta in Northern Botswana. Before the yearly flood of the Okavango disappears in the Kalahari sands, it provides vital water for people, animals and plants and creates an incredible variety of life. Surprisingly, this fascinating and unique water wilderness is formed by a river that will never reach the ocean ...



From „Joburg“ I took a bus to Gaborone - the capital city of Botswana - where I could stay for the first few days. All the rest of the two-month expedition I lived the life of a „modern nomad“, travelling in a small Toyota car and only with a small tent, my camera and my sketch book.

I had a wonderful time, discovering the friendly mentality of the Batswana people, their sense for humour and simple lifestyle. Day after day, I discovered patches of a beautiful country, always **following the fences** and thereby finding people, animals and situations that could tell their individual stories. Some of them I will present in this context ...



### The basic situation

Botswana's national parks and game reserves rank among the last unspoilt places on earth. More than 20 percent of the national range is protected as a refuge for wildlife. At the same time, humans need more and more space for their survival, which is based particularly on cattle breeding.

Botswana is a „**cattle country**“: there are about 3 million cows. This is why 60 percent of the country is used as pastureland. This means that each of the 1.7 million inhabitants of Botswana is in the company of two cows. Cattle are also an important part of Batswana culture: they serve as a bride price, were used as sacrificial animal in the rain making ceremony and have become a status symbol, showing the financial power of the farmer.



In order to prevent the transmission of cattle diseases from wildlife, more than **3,000 kilometres of fencing** has been built in the past decades across the unaffected landscapes of Botswana. Cattle breeders shift their herds ever more into protected zones of precious ecosystems. Conflicts between man and nature are unavoidable. In drought periods, these fences stop the natural migrations of wildlife and become deadly traps for great herbivores.



The species that has suffered most by the fences is the **Wildebeest** (*Connochaetes taurinus*). It can be described as the wild counterpart of the domestic cow: the english expression „Wildebeest“ originates from Afrikaans language and means wild cattle.

Wildebeest are able to live in different habitats. Although neither their senses, nor speed and power are overwhelming, they survive through a balance of all these skills. They are a migratory species, following the rain-falls and rich feeding grounds year by year. Wildebeest can smell rain from a distance of 50 kilometres and are capable to run in a light gallop for hours.



Because of this adaptation to a huge and dry environment they became one of the most successful antelope in Africa. Millions of Wildebeest have roamed the savannas before the arrival of the European pioneers. After they had directly been shot by the millions during centuries, today the dynamic development of humans - with cities, streets, agriculture and fences - cause severe consequences ... !

### 1st example - the Kuke Fence

The „Kuke Fence“ has become a well-known symbol for the destruction of wildlife in Botswana. Stretching along the northern border of the Central Kalahari Game Reserve, it caused the starvation of some hundred-thousands of animals, especially ungulates like wildebeest that traditionally migrate to the north and east in dry seasons to reach the last remaining waterholes. During two severe drought periods in the 1980's, an estimated 60.000 Wildebeest died in each period along the fence. They were simply trapped inside their range. From an original population of more than 300.000 in the Central Kalahari, less than 10 percent have survived the suffering. Although the herds showed signs of recovery by the year 2005, they will probably never reach their former numbers. Annual migratory movements have mostly been stopped by the fence.

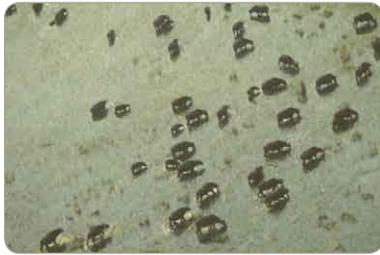
### 2nd example: the Makgadikgadi Fence

The latest fence project along the western border of the „Makgadikgadi National Park“ has been erected to minimize conflicts between farmers and lions that regularly killed cattle in this area. Nevertheless, this new electrified fence prevents the wildlife inside the park from access to water along the Boteti River. Camp owners and park officials try to solve the problem by digging waterholes within the Park. But still, great herbivores starve along the border, easily get trapped beside the fence and killed by lions. They even have been observed to commit suicide by running into the wires when trying to break through. Why did nobody think about constructing this fence in a „zigzag“ line and so allow both sides to reach the water ...?

David Dugmore, who runs a Safari camp inside the Makgadikgadi National Park, regularly describes his experiences along the veterinary fences on his website ([www.kalaharikavango.com](http://www.kalaharikavango.com)) ... this is a short quotation from his latest diary:

#### LION FAMILY SHOT BY FARMERS

*Bitter sweet. I ... received a rather distressing message from Jeff in camp that lions were being shot by farmers somewhere near camp along the Boteti: "... two lionesses found their way under the fence close to the village and apparently killed one horse and one donkey. A shooting party was dispatched and both lions were shot. The lion carcasses were then brought to the kgotla in the village. This attracted widespread attention and it was heard that numerous people from the village took part in photo sessions with the carcasses. As I came close to the village I then noticed a lioness running west between the fence. She was exhausted and highly stressed, bumping into both fences every few steps. I immediately drove away from the fence, out of sight of the lion in a big arc so as to try and get ahead of her. I then found the hunting party of 4 men, being led by the tribal policeman. He was in uniform then but now has apparently retired. Two men were armed,*



one with a 12 gauge pump action shotgun, one with a 30-06 hunting rifle ... I encountered a cavalcade of cars and pick-ups all with armed men aboard. I tried to stop them from proceeding but they all sped by, not paying any attention ...

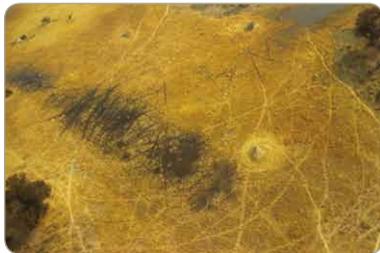
This was last light. I proceeded to camp as we had guests. The next morning I heard that one of the three lions had been shot. The lioness between the fences had escaped. The other lioness outside the fences had escaped too. Nothing further has been heard about them. We patrolled the fence between camp and Moreomaoto and repaired numerous holes ..."

It has to be added that for every dead cow, farmers get compensations from the Government. Nevertheless, predators - like lions or wild dogs - are still killed or poisoned.



### 3rd example - the Buffalo Fence

Built in 1991, the „Northern Buffalo Fence“ was constructed to separate wild game from cattle breeding areas in order to prevent the spread of Foot and Mouth Disease, that might be infecting domestic livestock from **Cape Buffalo** (*Syncerus caffer*). However, cows have also infected wildlife with tuberculosis and rinderpest in the past and the spread of diseases between wildlife and cattle is still a matter of dispute in animal research. Running through the whole southern part of the Okavango delta, this fence opened up two totally different areas of use: wildlife-management and farming.



### Encounters at the fence

The construction of fences has led to a network of „Veterinary check points“ throughout Botswana. Every time you cross a gate along the road, you are stopped by an officer and asked if there is any fresh meat or milk in the car. If so, you cannot cross the fence-line and enter the neighbouring district, as the products might be infected with Foot and Mouth Disease. Shoes and car tyres have to be disinfected at some places before you are allowed to continue the journey. This check point system has been developed to find a compromise for both cattle and wildlife. During my visit - and whenever possible - I asked to take photographs of the fence officers when passing the gates and to get in dialogue with them ...



### A positive example: fences as a means of conservation

Usually, as a safari tourist you get in touch with the public side of a park, watching various types of African animals in a considerably natural environment with open plains, pans and waterholes. You might get the impression of an untouched wilderness that has still survived in Africa. But in most cases, this is not true anymore !

Due to the friendly staff at the „Khama Rhino Sanctuary“ and the permission to join the rangers on their patrols, I got the chance to look behind the scenes and to learn more about their daily conservation work.

The „**Khama Rhino Sanctuary**“ was founded in 1989 to save the last rhinos of Botswana. At this time, only five animals were left in the Chobe District. So they were captured and trans-located to the Sanctuary. Since then, the population has grown again to more than 30 rhinos. The whole area of about 4,000 hectares is surrounded by an electrified fence and constantly guarded.





To maintain this successful conservation project, the fence has to be checked every day and repaired in case of damage. Only by observing the perimeter 24 hours a day, can the animals be protected.

By using big engines that have been installed in the bush, water is regularly pumped into the pans and waterholes to attract wildlife and safeguard their survival in a dry ecosystem where migrations are no longer possible. Population and vegetation dynamics are studied and carefully monitored to reach an ideal „ecological carrying capacity“ within the area. 4x4-vehicles, fuel and salaries are all financial issues in the maintaining of the sanctuary. Roads, campsites and chalets need a lot of care. Only by professional wildlife management, these projects can be preserved in the long run and offer an image of untamed wilderness to the visitors. Today, and even in Africa, the welfare of wildlife is irrevocably attached to human responsibility.



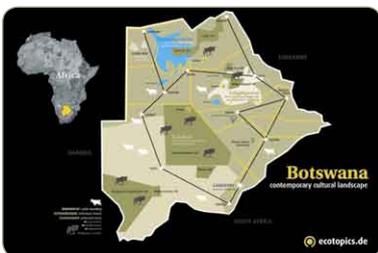
### Conclusion

The construction of „Veterinary cordon fences“ throughout Botswana has undoubtedly destroyed most of the former migratory movement of wildlife, and severely reduced wildlife populations over the past decades.

As human mobility has rapidly increased, migrations of wildlife have become more and more fragmented. Despite all negative facts, the question has to be raised if there is a real alternative to fencing today in a country that is still economically dependant on cattle breeding (which is subsidised by the European Community). A combination of cattle and wildlife in the same areas would most probably have serious consequences for the wild animals, as cattle heavily claim their natural resources and cause permanent damage by overgrazing and consuming enormous amounts of water. In the long run, and together with a growing human population, roads and development, this might deplete wildlife even more than the creation of huge reserves within fences.



Not to forget: about 20 percent of Botswana is protected by National Parks, Game Reserves and sanctuaries. Together with the hunting concession areas (that influence wildlife populations in a positive way), this leads to a much higher amount of conservation space than we ever set aside in Europe. More and more Africans are aware of the need for conservation and its positive economic influences.



Obviously, there is a different philosophy towards fences in Africa and Europe, as we basically use fences to mark our individual properties. In Botswana, fences have ever been used to protect and manage livestock. Today, fences are a suitable means to define different areas of economical interest (like cattle breeding, wildlife, hunting or mining). As a basic structure, set into the landscape, fences allow a high amount of specialisation inside the given territory. Different use can be optimised to maximum value. Considering wildlife conservation, fences appear to be a bad compromise at first, but they are possibly the only chance for coexistence between man and nature in the future.



### Tsodilo Hills

For thousands of years, the natural environment could sustain the coexistence of humans, wildlife and cattle. The Tsodilo Hills - declared as a „World heritage“ in the year 2000 - are famous due to more than 4.500 rock art paintings. The three hills in the middle of the Kalahari have become a holy place for the San hunters and also the Hambukushu cattle breeders.



They believe that their cattle originated on one of the hills, literally falling from the sky. Their traces can still be found imprinted into several stones. The rock art painting at Site No. 10 (age about 3.000 to 4.000 years) shows wildlife (Rhinos, Zebras, Antelope) and domestic livestock living in harmony together. Again, a fence structure is visible on the stone.



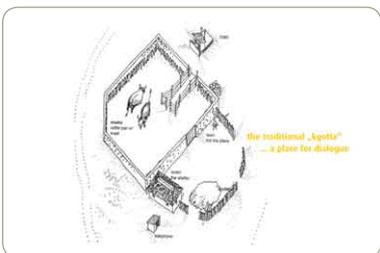
The fence is a typical human trace. In the past, the domination of nature became the strongest motivation for the construction of fences. Today, this context has changed and humans build fences in order to protect nature from themselves.

### The fence as a medium of dialogue

The „Kgotla“ can be found in every village throughout Botswana. It developed out of agricultural daily life and is, in fact, a relic of a former fence. A kgotla consists of an open circular wooden structure, a fireplace, some chairs and a tree to provide shadow. The kgotla serves as a useful means of basic democracy: inside its borders, everyone can speak out freely his opinion. Difficult decisions are discussed in this open forum.



The example of this fence structure, influencing daily-life and cultural habits, shows that borderlines can also become a site of communication. Two opposite forms of behaviour - separation and dialogue - have found an expression at the same place and serve as a proof for the ambiguous interpretation of fences.



## Conservation Agency \_ wilderness as usual



From a personal point of view, this African experience was an important step. More than ever before, I realized that I want to take responsibility for the conservation of nature by the means of creative spirit, art and communication. This is why I founded the „Conservation Agency“ in April 2006 - emphasizing the original meaning of the word „Agency“ as a generator for communication across borderlines and a medium of dialogue on the interdisciplinary field.

The „Conservation Agency“ is a partner that works in service for humans and nature and concentrates on creative issues in ecology and conservation. An open-minded and artistic working method is combined with the needs of species and habitat protection.

By integrating perception and knowledge, individual and site-specific solutions are developed. The dialogue between humans and nature becomes an essential part of the creative process.

Creative skills and a new attitude towards our relationship with nature are highly in demand: such as stating the slogan „wilderness as usual“ as a basic principle for ecology and conservation.

Thank you very much for your attention !



### Literature:

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### Short Biography

Daniel Kufner, born in 1973 in Zwiesel (Bavaria),

studied architecture and art in Munich. From 2003 and 2006,

he worked as an assistant at the Academy of Fine Arts Munich.

In 2006 he founded the „Conservation Agency“ ([www.ecotopics.de](http://www.ecotopics.de)).

### Internet:

[www.artfarming.de/migrations.html](http://www.artfarming.de/migrations.html)

[www.ecotopics.de](http://www.ecotopics.de)