

Dead End



**A BRIEFING DOCUMENT
ON THE CONSTRUCTION OF A GAME-PROOF
FENCE AROUND THE MAKGADIKGADI
NATIONAL PARK, BOTSWANA**



environmental investigation agency

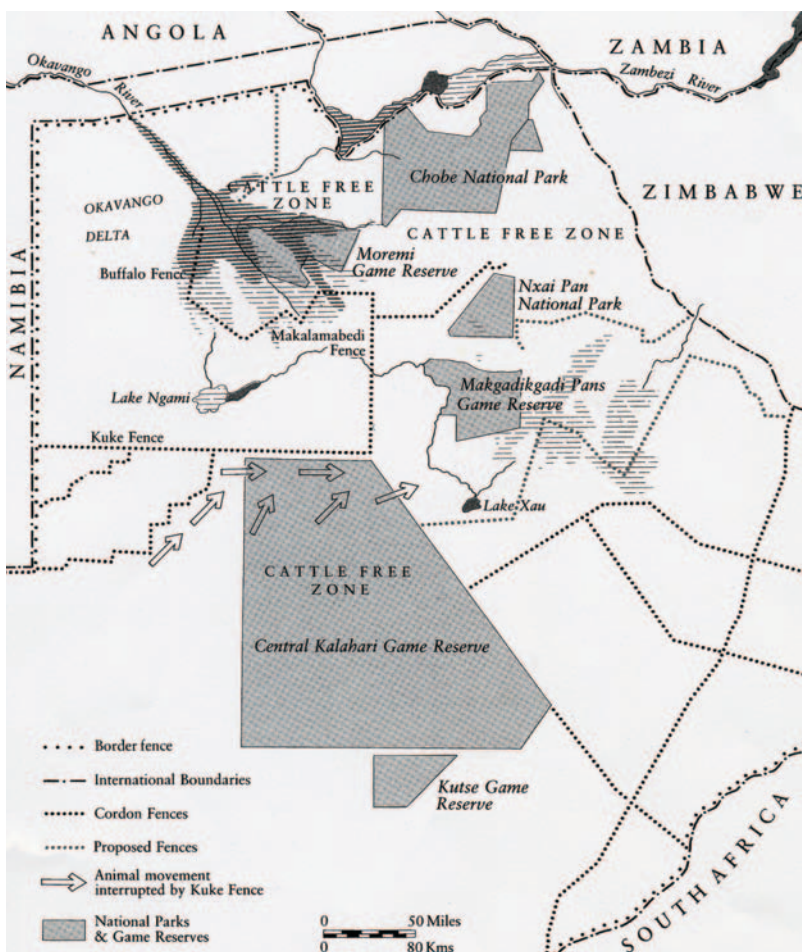
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Above:
Map of Botswana
Above right:

The fence has cut a swathe through pristine riverine forest inside the park.

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Acknowledgements

Many thanks to Brian Emmerson and all at Emmerson Press for printing this briefing.

Emmerson Press: +44 (0)1926 854400

This briefing was written and researched by Craig Gibson, Patricia Hadfield and Mary Rice. Picture research and report design by Joaquim Pereira.

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The Environmental Investigation Agency (EIA) is an independent, international campaigning organization committed to investigating and exposing environmental crime. Since 1984, EIA has used pioneering investigative techniques all over the world to expose the impact of environmental crime and to seek lasting solutions. EIA's aims are to:

- Stop illegal trade in endangered species
- Gain lasting protection for species under threat
- Protect the shared environment of man and wildlife.

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Stakeholders are extremely concerned that the necessary mitigation measures will not be implemented.

Left:
The electrified
cordon will extend
for 480km

Executive Summary

The Salt Pans complex of the Makgadikgadi National Park is the largest wetland habitat in Botswana, and has been proposed for protection under the international Ramsar Convention. Situated in north-central Botswana, the salt pans support some of the last truly migratory wildlife in northern Botswana, notably blue wildebeest (*Connochaetes taurinus*) and plains zebra (*Equus burchelli*). A significant number of bird species, including the endangered Wattled Crane (*Bugeranus carunculatus*) and seasonal breeding colonies of flamingoes (*Phoenicopterus sp.*), further enhance the ecological diversity of the area.

The government of Botswana's decision to erect an electrified disease control fence around the Makgadikgadi National Park is an attempt to address long-standing issues of problem animals, livestock encroachment and livestock disease control. The fence will extend for 480 kilometres and is intended to limit predator/livestock conflict that has beset local communities adjacent to the Park, but has significant implications for the future management of the Makgadikgadi ecosystem and National Park. In order to assess the impact of the construction and operation of the proposed fence, the Department of Wildlife and National Parks (DWNP) commissioned

independent consultants Scott Wilson Kirkpatrick and Partners to carry out an Environmental Appraisal (EA) of the proposed fence, which included a series of mitigation measures that would minimise the environmental impact of the project.

Fence construction began in 2003 and has largely disregarded the alignment and the mitigation measures as recommended by the EA. Consequently, the majority of the Boteti River now lies outside the boundaries of the National Park, which means that wildlife within the park has considerably less access to the river and its associated water and grazing resources. Local stakeholders are extremely concerned that the necessary mitigation measures will not be implemented and that the remaining construction phase will be similarly flawed.

The European Union (EU) provides financial and technical assistance to a wide range of government ministries and departments including the DWNP. In this instance, the EU co-finances a Wildlife Conservation and Management Program (WCMP) to the tune of 14 million (co-financed between the European Development Fund and the government of Botswana).

Expert Advice Disregarded

The Scott Wilson Kirkpatrick and Partners Environmental Appraisal (EA), submitted in February 2002, was essentially a desk-based study involving a limited fieldwork and consultation process. In addition, DWNP requested that Scott Wilson produce an Environmental Management Plan (EMP) to address all the mitigation measures proposed as part of the EA.

The Final Report considered it essential that the following management and mitigation measures be put in place prior to construction:

Water Resource Management

*"Viable dry season water provision for wildlife, particularly migratory species."*¹

The EA consultants specifically recommended a water management policy be developed and implemented as a priority, before the erection of the fence. The climate of the Makgadikgadi area is semi-arid, with water availability restricted in the dry season.² The alignment of the fence along the Boteti River has distorted the availability of viable dry season water for migratory wildlife in particular. The EA recommended that any plan should include provision of pumped water in areas adjacent to the dry season range for wildlife. It also stated that: *"Wildlife populations will be more concentrated around these fewer water points available to them, with correspondingly higher risks of predation and degradation of the areas around them."*³ The report indicates that the vegetation is unlikely to withstand the sustained pressure of resident populations of migratory species.

Fire Management

*"Outbreaks of fire...have been identified as one of the major risks of the proposal to erect the game-proof fence."*⁴

Fire is a key feature of the Makgadikgadi system. Fire management is particularly relevant given the generous rains of 2003/2004, which have produced a substantial fuel biomass. Unmanaged fire events have the potential to cause significant wildlife mortality and the destruction of dry season forage. Wildlife is likely to stampede into the fence in an attempt to flee a fire. Furthermore, the exclusion of cattle from the park is likely to

lead to an increase in grass biomass that is expected to increase the intensity of fires. The EA strongly recommends that a:

*"Comprehensive Fire Management Plan be developed, the necessary equipment purchased, the staff and local communities are trained, and the necessary preventive measures be put in place."*⁵ To date, no fire management plan has been developed.

Community Based Natural Resources Management (CBNRM) Development

*"If surrounding communities are excluded from wildlife and tourism ventures...then the viability of the National Park in the long term seems doubtful..."*⁶

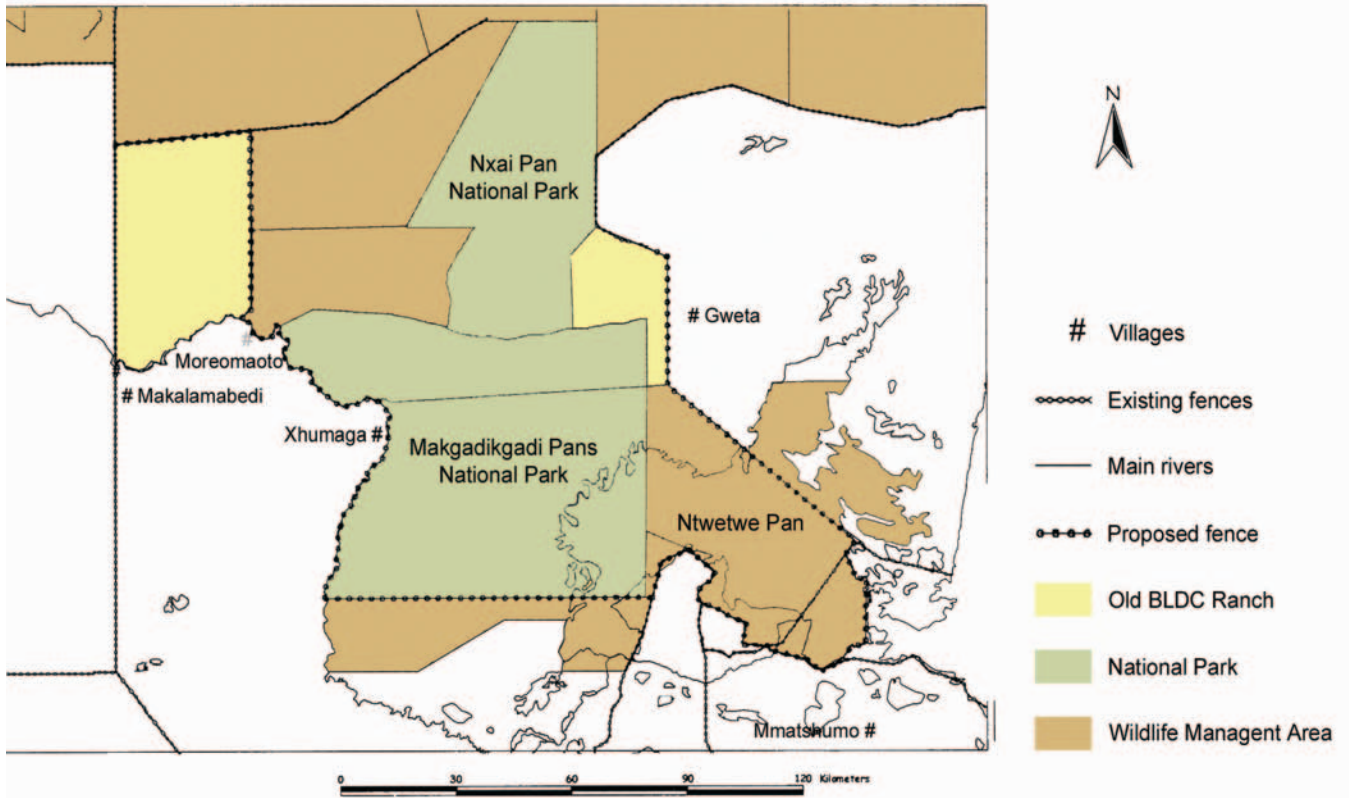
The future viability of tourism operations in the area in relation to the chosen alignment of the fence is an obvious deficiency of the project. This is particularly evident in the west, where insensitive alignment and the apparent omission of community interests are evident. In the east, contingency plans for resettlement and compensation does not appear to be at an advanced stage, considering the timeframes and complexity of the local politics surrounding the issue. The EA team recommended: *"In the interest of good relations between the Park and local communities, compensation should be made to all established settlements..."*⁷ Alternative routes regarding the alignment have been suggested by the EA team *"...in order to include potential CBNRM/tourism sites within the fenced area, so that their potential can be realised."*⁸ The EA also states that: *"Without enclosing them, their potential will be severely limited, if not lost."*⁹

Park Management Capacity

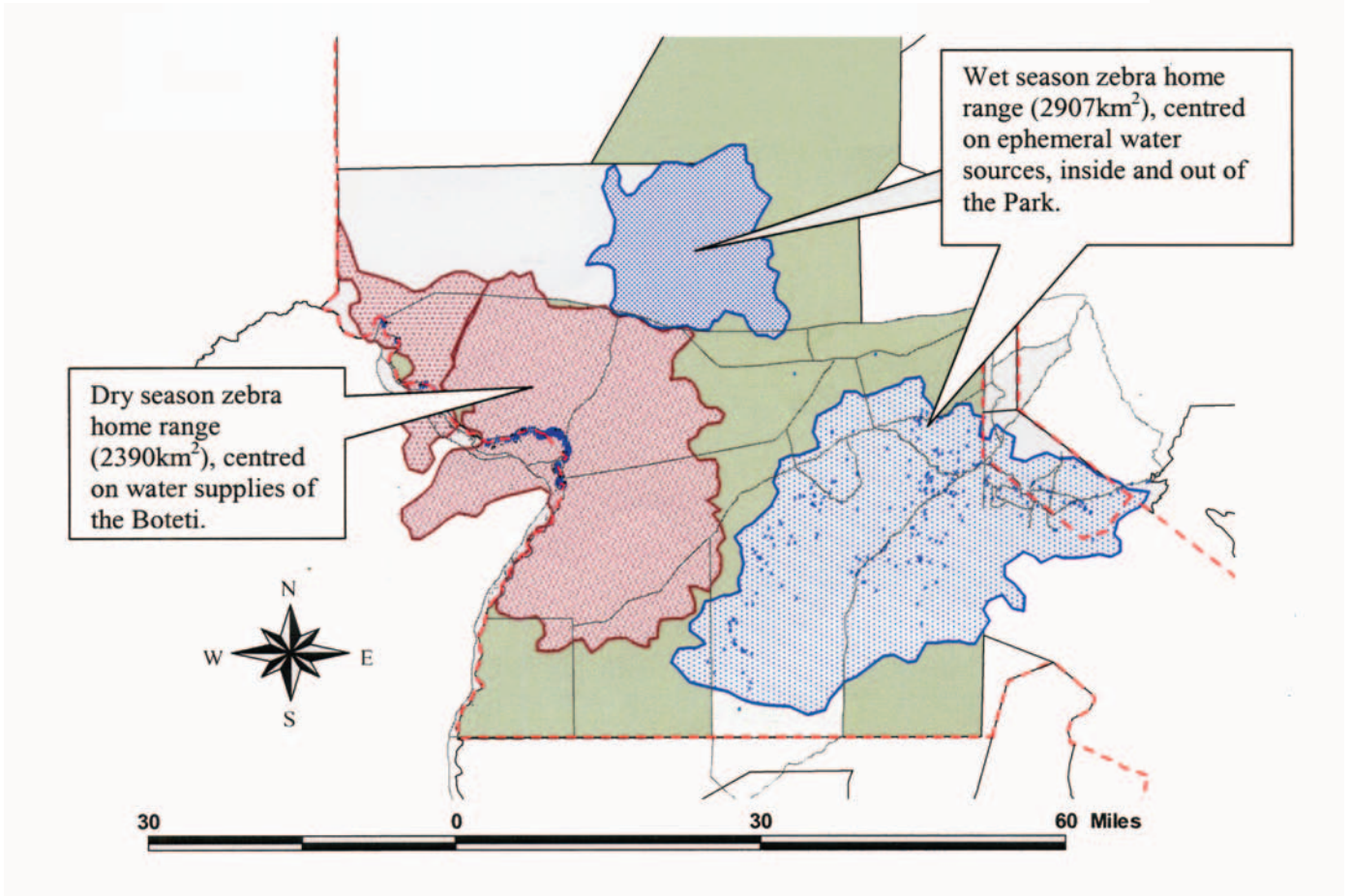
*"Fencing will require a substantial development in park management capacity."*¹⁰

The EA states explicitly that: *"Overall fencing will require a substantial development in park management capacity..."*¹¹ and that *"...dramatic changes in management need to be put in place prior to fence construction...the fence is likely to have a negative impact on wildlife unless management plans are put in place and rigorously implemented."*¹²

Below:
General context of the area with the recommended eastern alignment of the fence



Below:
Makgadikgadi zebra home ranges depicting the importance of the eastern 'wet' season range.





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Veterinary Fences: Shrouded in Controversy

Veterinary cordon fences are deemed a necessary facet of Botswana's disease control measures that serve the country's export-oriented beef industry. Due to the disruptive effect they have on the traditional migratory routes of wildlife, these artificial barriers are widely attributed with the decline in Botswana's contemporary wildlife populations.¹³

The Makgadikgadi area is already host to a number of veterinary fences, including the notorious Kuke cordon fence which accounted for the deaths of some 65,000 wildebeest in the early 1980's.¹⁴ Other fences in the area have

proved similarly fatal to seasonally resident colonies of Lesser and Greater Flamingos which breed on the saline salt flats in the east of the Pan complex. Recent reports indicate the western fenced portion is already impacting negatively, with wildlife becoming entangled and trapped between the two fences. As long as they remain intact, they pose a continued threat to migrating wildlife.¹⁵

People vs. Wildlife

The longstanding conflict between wildlife and livestock in the Makgadikgadi area began when the Boteti River dried up during the drought in the 1980's.¹⁶ Since then there has been no natural body of water to act as a barrier and as a result cattle have been able to encroach illegally into the National Park and wildlife have, in turn, been able to venture into the village areas. Cattle are found in particularly high concentrations along the Boteti where they compete with wildlife for grazing and water.¹⁷ In 1991 there were around 150,000 cattle in the Makgadikgadi area,¹⁸ with an estimated 32,000 head of cattle in the immediate vicinity of the park (representing just over one percent of the national cattle population).¹⁹ Predation of livestock, particularly by lions, has become a recurrent event and has estranged the local community from the potential benefits of conservation and associated wildlife-based ecotourism.

Above: Wildlife has had a major impact on the lives of local people
Right: The insensitive alignment of the fence has already led to significant wildlife mortality in the west.



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Conclusions

The principal concerns of stakeholders are those relating to the future management of the Makgadikgadi National Park. They are particularly concerned that the recommendations of the consultants as represented in the Scott Wilson Environmental Appraisal (EA) are implemented. They include:

- **The sensitive alignment of the southern and eastern boundary fence**
- **Water resource management**
- **Fire management**
- **CBNRM development**
- **Park administration and management**

The alignment favoured by DWNP in the south would bisect the Boteti River delta, having an enormous impact on the integrity of an element of the Makgadikgadi wetland intended for designation as Botswana's second Ramsar site. The eastern alignment is currently unresolved due to a claim by the local community relating to grazing access. However this area is crucial to the migratory zebra population's wet season range, as well as being home to a number of tourism operations. The community favours an alignment that follows the current park boundary, a scenario that would conflict significantly with the abovementioned land use interests. The EA favours an alternative route that follows the district boundary which would display a "marked increase in the viability of CBNRM activities"²⁰ but which would involve the relocation of existing settlements in the area.

Maintaining the 480 kilometres of electrified fencing has significant cost implications that are compounded by a number of practical considerations. The effectiveness of the electrified fence is untested, particularly with regard to elephant and lion who have repeatedly breached the cordon in recent months. This, in turn, will impact on the efficacy of disease control as well as the containment of predators in the park. In addition, the Boteti is likely to have flood events in the future, which will impact on the integrity of the fence in numerous locations. The decommissioning of the three existing sets of fences within the Makgadikgadi Pans area (Nxai Pan Buffalo Fence, Mokobaxane, BLDC ranch fencing in Odiakwe) is also considered a necessary requirement of the project. Reservations have been expressed by foreign donors as to the sustainability of DWNP despite the considerable investment of foreign governments: "In spite of the capacity that has been built up within the Wildlife department, it is still overly dependent on foreign technical expertise..."²¹

Recommendations

EIA urges the Delegation of the European Union in Botswana to take a more proactive stance in the fulfilment of their obligations inherent in the Botswana Wildlife Conservation and Management Program.

EIA urges European Union governments and the European Parliament to convey to the government of Botswana their concern over the construction and alignment of the fence.

EIA urges the Ramsar Convention to convey its concerns to the government of Botswana regarding the construction of the fence, with particular regard to sustaining the unique ecology of the Boteti River deltas and Makgadikgadi Pans complex.

EIA urges local stakeholders, including those working in the tourism industry and conservation organisations, to liaise with one another and to develop a unified approach in dealing with future negotiations relating to the issue.

EIA urges the Department of Wildlife and National Parks to:

- **ensure retroactive mitigation measures to remedy errors in the current construction are implemented as a matter of urgency.**
- **ensure that a post-construction audit is undertaken to review the overall success of the project.**
- **adopt a proactive stance in addressing concerns relating to the future capacity of the department to effectively manage the park.**
- **adopt an equitable compromise to future alignment, particularly with respect to the eastern boundary.**
- **develop and implement a sustainable CBNRM economy for communities in the area surrounding the Park.**

**Below:
The salt pans support a significant population of migratory plains zebra (*Equus Burchelli*).**



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