

## The proposed use of 'CyberTracker' within the Nossob section of the Kgalagadi Transfrontier Park

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### About the Kgalagadi Transfrontier Park and the Nossob Section

The Kgalagadi Transfrontier Park lies in the southern Kalahari, an arid region where annual average temperatures range from 4 - 32°C, but extreme temperatures of -11°C and up to 45°C have been recorded. It measures 37 256 km<sup>2</sup> and represents a large ecosystem relatively free of human interference – an increasingly rare phenomenon in Africa. The name Kgalagadi is derived from the San language and means "place of thirst".



The Nossob and Auob rivers cross the area. While these riverbeds are normally dry, they do flow once or twice a century after heavy rains. A good variety of game is supported by the three large pans in the Mabuashehube area of the park. Spectacular parallel dunes of both red and white sand, separated by dune valleys, characterise the area.

Shrubby Kalahari dune bushveld predominates and is characterised by scattered shrubs of grey camel thorn (*Acacia haematoxylon*) and grasses such as dune bushman grass (*Stipagrostis amabilis*), gha grass (*Centropodia glauca*) and giant three-awn (*Aristida meridionalis*).

A second component of vegetation, the thorny Kalahari dune bushveld, is characterised by sparsely scattered trees of camel thorn (*Acacia erioloba*), shepherd's tree (*Boscia albitrunca*) and false umbrella thorn (*Acacia luderitzii*).

The vastness of the Kgalagadi Transfrontier Park allows the nomadic ungulate populations and their predators to maintain themselves in balance with their environment, consequently there is little need for extensive management intervention. The 60 species of mammals recorded include large herds of ungulates, mainly gemsbok, springbok, blue wildebeest, eland and to a lesser extent red hartebeest. These ungulates and an abundance of rodents support many carnivores.

The Kgalagadi Transfrontier Park has built up a deserved reputation as one of the few ecosystems in southern Africa where a variety of large predators can be maintained, with leopard, brown and spotted hyena, lion and cheetah all being well represented. Other carnivores include the caracal, black-backed jackal, bat-eared fox and Cape fox. The endangered wild dog is also occasionally sighted. Other threatened mammals include the pangolin, the honey badger and Woosnam's desert rat. 307 bird species have been recorded, including many species endemic to the arid southwest region of southern Africa.



Large nests of the sociable weavers are also characteristic of the region and can contain colonies of up to 300 birds. Wild ostrich are frequently seen, as well as the world's heaviest flying bird, the Kori bustard. Of the 80 raptor species recorded in South Africa, 52 have been recorded in the Kgalagadi.

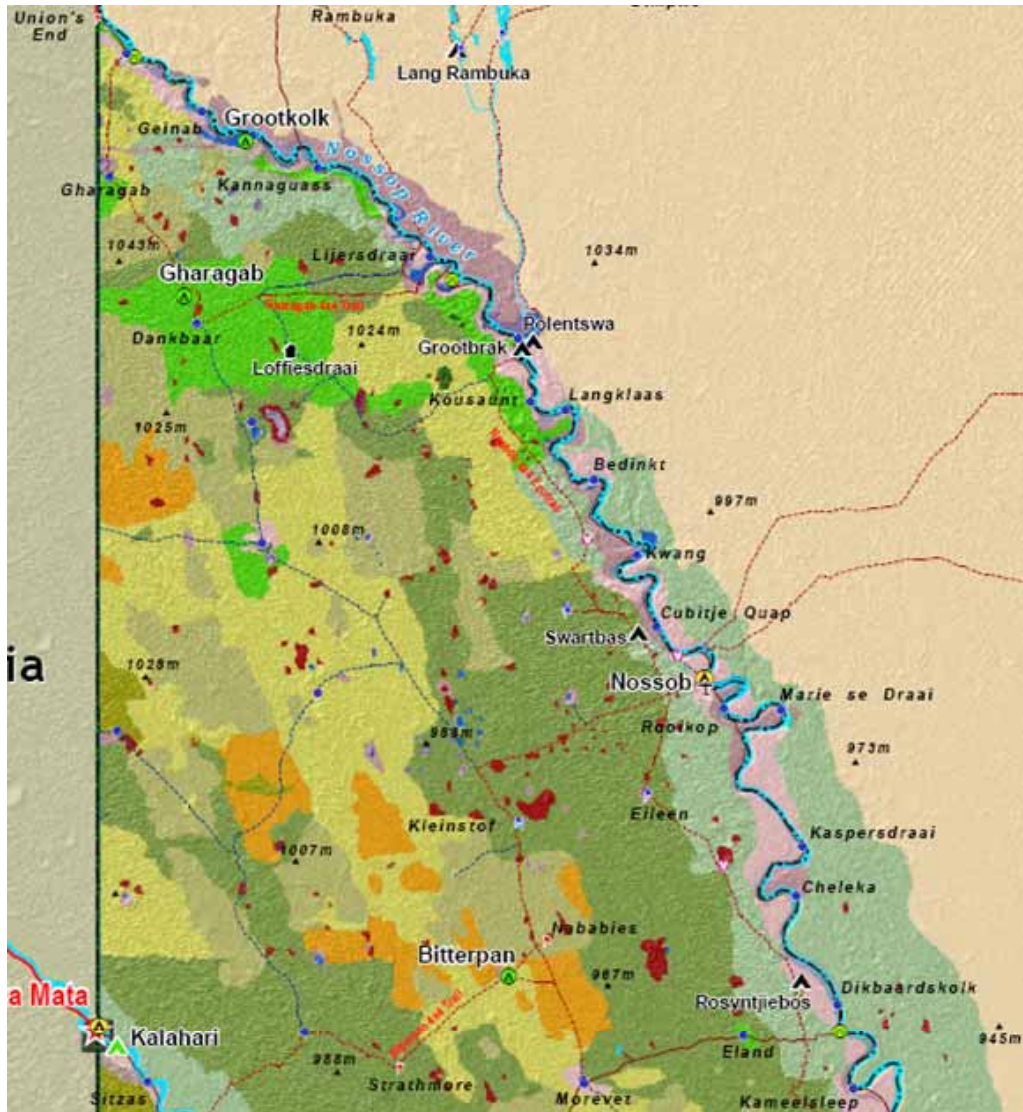
The park is divided into three management sections, namely Twee Rivieren, Mata Mata and Nossob sections; Nossob being the largest at 336 000ha. It is 165km north of the Twee Rivieren main camp and 400km from the nearest town at Upington.

The Nossob section has the Nossob camp as its administrative centre and services two Wilderness camps at Grootkolk and Gharagab, which are located at distances of 105km and 256km respectively. The section is responsible for maintaining three picnic sites at Dikbaardskolk, Lijersdraai and Union' End (the most north-westerly point of South Africa), a research camp at

Loffiesdraai, 27 watering points and 80km of International boundary fence with Namibia. There are also 500km of sand tracks and 200km of gravel road along the Nossob River. Only 5 staff (1 Section Ranger and 4 Field Rangers) are responsible for all Conservation related activities within the Nossob section.

### Priority areas within the Nossob section

- Nossob camp
- Grootkolk and Gharagab wilderness camps
- Dikbaardskolk, Lijersdraai and Union's End picnic areas
- 80km of international boundary (South African – Namibian border fence) from Driefendas to Union's End
- Lijersdraai, Polentswa, Mabuasehube Wilderness and Kannaguass / Kaa 4x4 exits (access points to Park for visitors from Botswana)
- Tourist road from Dikbaardskolk picnic site to Union's End
- Gharagab 4x4 trail (61km)
- Bitterpan 4x4 trail (53km)
- Nossob 4x4 trail (northern section of 200km trail)
- 7 Rainfall stations (Nossob, Dikbaardskolk, Grootbrak, Sewe Panne, O'Kiep, Bayip and Unions End).



## Background

Section Rangers working in all of the South African National Parks (SANParks) are evaluated on a yearly basis in terms of their Key Performance Areas (KPA's). These KPA's are the core business of each Section Ranger and guide him in his work routine, which ultimately forms an integral part of the Annual Plan of Operations. One of these is *Monitoring*.

1. Monitoring ecological, social and economic sustainability in the management of the park.
2. Monitoring the change in water quality and rate of water recharge at boreholes.
3. Monitoring the effectiveness and efficiency of electrified fences.
4. Monitor the movements of faunal species: especially large carnivores and large herds of herbivores.
5. Engage any occurrences of unlawful behavior within the Park and undertake to limit transgressions.

Modern technology has made huge progress regarding all aspects of everyday life, including that of the Nature Conservation field. There are various software packages available, not to mention the hardware associated with these programs. '*CyberTracker*' is such a program which enables field staff to collect data and then allows managers to download the data and view it in a clear and sorted manner. This then allows for the interpretation of the data into a logical process, empowering Section Rangers to make informed decisions about biotic aspects of their sections. Currently there are no '*CyberTracker*' units available in the Park and as a result, very little monitoring takes place.

### Detail of the proposed use of '*CyberTracker*' within the Nossob section

In order for the 4 Field Rangers to assist the Section ranger in effective management of the Nossob Section in terms of accurate data collection, it is imperative that a suitable data collection medium be found. This medium should be able to record data accurately and should be readily available to field staff. The storage medium must also then be able to be interpreted in a useful manner. The '*CyberTracker*' system has been identified as the most effective data collection tool for this purpose.

Comprehensive conversations with Research professionals and Rangers in the Kruger National Park have shown that '*CyberTrackers*' are the most advanced way of recording field data, which can be interpreted later and used as an effective management tool. The Nossob section would require three such units.

It should be remembered that these units will empower the Field Rangers to collect data on their own and allow them the opportunity to get to some of the remote areas of the Park in order to carry out effective research.

Benefits of this project include:

- Accurate record keeping of all biological data.
- Effective time and budget management.
- Staff skills development and empowerment through new skill acquisition.
- Having data available in a digital format for easy interpretation and storage.
- Easy and efficient use of data.

The successful procurement of even one of these units will go a long way to ensure the effective management of the section. Substantial time and money will be saved and effective data gathering will be ensured. Arguably the best trackers in the world are the San people, also known as Bushmen. These people were not only skilled trackers and hunters, but also masters at understanding their environment and living in harmony with it. Wouldn't it be fitting if another expert 'tracker', the '*CyberTracker*', could play a role in conservation efforts within the Kgalagadi, as the San once did?