

Black Rhino Conservation and Translocations in Namibia

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Namibia is the driest country in Africa, south of the Sahara, with an area of 824,268 km². Tourism is as important for us in Namibia as it is here in Florida. The 1995 estimated population was 1,688,000, giving the country an overall population density of 2 persons per km². Florida in 1990 had an average population density of 83 persons per km². The only city of significant size is Windhoek (population for greater city 125,000). 70% of Namibians are living in rural areas.

Namibia has 700 black rhinos in formal conservation areas, communal land and on private farming land. This makes Namibia one of the four important range states for black rhino together with South Africa, Kenya and Zimbabwe. Etosha National Park is roughly 1/7 the size of Florida or a little bigger than New Jersey. It's our important conservation area in terms of size, wildlife and economic importance. Roughly 150,000 tourists visit Etosha per year. Population sizes for some of the wildlife are: Elephant, 1200; Black rhino, 450; Lion, 180 (FIV free); Burchell's zebra, 9000; Wildebeest, 3000; and Springbok, 30,000. Other species include roan and sable antelope, giraffe, Red hartebeest, Black-faced impala, Brown and Spotted hyaena, leopard and cheetah.

The rhino conservation goals in Namibia are:

- A. To establish a long-term, viable population of at least 2000 black rhino in suitable habitat and similarly, 500 white rhino.
- B. To institute an utilisation scheme for black and white rhino to achieve and justify the above-mentioned goal in accordance with CITES regulations.
- C. To investigate and institute a National Rhino Conservation Plan, an annual Action Plan and research projects to cover actions such as de-horning, vaccination, translocation and sale of live animals; in cooperation with regional and international organisations as far as possible.

The black rhino population in Etosha national Park currently represents the largest black rhino population in a single conservation area and 70% of all *Diceros bicornis bicornis*, the subspecies that occurred

formerly in the Cape Province of South Africa, Namibia and southwestern Angola. In 1966, a start was made to consolidate the population in Etosha with rhinos caught on commercial farmland and communal land. Rhino captures in 1966-1968 were largely experimental captures, these being the first rhino captures in Namibia and some of the first involving drug immobilisation, using various chemicals in Africa. In total, 6 rhino were caught, of which 3 died during the capture and a further one after translocation and recapture. In the years 1970-1977, sixty-two black rhino were caught and resettled in Etosha. These translocations were far more successful in that 53 of 62 rhino were resettled successfully. Since 1993, forty-two rhino have been translocated onto commercial farmland, with only one mortality being recorded during capture and the post-release period.

Translocation within Etosha 57 rhinos have to date been translocated within Etosha, from concentrations in the west to sparsely populated areas in the east. 18 rhino were, for example, translocated to the Chudop waterhole between 1978-1981. Rhino translocated within Etosha normally settled down in the general release area (30 km radius) and did not wander back to their original home ranges. The translocations were over a distance of 200 km or more. One rhino released 50 km away from his capture site returned to his home range.

Translocations out of Etosha In recent years, Etosha has been the prime donor reserve for rhino. 99 rhino have been located out of Etosha since 1973 for the establishment of new populations both in Namibia and South Africa. Peripheral rhino especially have been removed from danger zones to safer areas.

Censusing and monitoring Early estimates of Etosha's rhino population were based on appraisals of ground sightings, 24 and 48-hour waterhole counts or from data accumulated from aerial surveys, designed primarily for elephant and plains ungulates. Waterhole counts undertaken initially could have been very misleading as individuals are known to visit a waterhole more than once per night and different waterholes within a 72-hour period, especially in the east where springs are generally spaced 1 km apart. Based on drawings alone, many of these duplications could not be recognized.

A monitoring and censusing program designed to overcome these shortcomings was instituted in 1986 in western Etosha and extended during the next two years to the remainder of the Park. The methodology of these improved waterhole counts essentially entails that individual rhino are photographed at close distance at night when coming to drink. Individual waterholes are monitored by one or two observers, during the full moon period for two to three nights. A frontal and lateral picture is taken, the photos together with the relevant notes are then compared to the photo file of the different rhino in order to try and identify the individual rhino. In the last couple of years, we have started to put all the rhino data and the photos into a computer database. This works well and simplified the process of finding the photos for particular rhino or comparing different rhino with similar characteristics. Data relating to different aspects of rhino biology and behaviour can be summarised efficiently.

Present distribution Today, rhino inhabit the majority of the available habitat in Etosha N.P., this is made possible through the provision of artificial water points. In some areas, rhino are still limited by the restricted availability of surface water. Additional bore-holes in southeastern Etosha will, for example, render a further 3800 km² suitable for black and white rhino. With the exception of the saline pans, which cover approximately 25% of the Park's area and possible areas further than 15 km from a permanent water source, the remaining 12,360 km² of Etosha seem to be good rhino habitat with a very conservative estimated carrying capacity of 0.05 rhinos/km² (618 on 12,360 km²). Sub-population density reaches 0.2 rhinos/km². Up until 1985, this subspecies of black rhino occurred in only two populations in Namibia. Since then, rhino have been re-introduced into their former range in South Africa and into conservation areas and private land in Namibia. In Namibia, 10 new populations have been established since 1989.

Several farms exist in Namibia which are suitable for rhino with regard to habitat, security and size. The Ministry of Environment and Tourism started with this initiative to let private land owners share in the responsibility of looking after the country's black rhino. A group of six rhino is given on loan to selected farmers to look after. We consider six animals a reasonable compromise between having a big founder population and not stocking these relatively small properties with too many animals initially. These farms vary in size between 60 and 400 km². The animals and their offspring remain government property. The

farmer benefits from the rhino as these are a big tourist attraction and the status associated with being selected as a rhino custodian. Criteria to rank potential farms according to their suitability as recipients of founder populations of rhino were decided on by the national Rhino Advisory Committee. Potential farms are inspected, evaluated and ranked by a team of Ministry officials. In 1993, the first two groups of custodianship rhinos were resettled on private farmland. Today there are seven groups and these have increased from initially 42 to 52 rhino.

Translocation in general Establishing black rhino in their former range is an important aspect of our national rhino conservation strategy. While rhino captures were initially hazardous to both animal and capture crew, rhino translocations, if planned and executed properly have become very safe for both parties involved over the years. During the capture operation, it is very important to have the right equipment and a well-trained team. Rhino are tracked down or spotted from a fixed-wing aircraft, before being immobilized from a helicopter. The rhino are then loaded into a crate and transported to a holding pen or directly to the release pen (boma). In the boma, rhino are kept for 3-4 weeks to let them settle down and get used to their new surroundings and the local browse. Initially, we had some mortalities from translocating different age groups together and sub-adult males being killed in fights subsequently. Weaned calves are also difficult to translocate, as they are very inexperienced as rhino and seem to be much more affected by the changes associated with a translocation facing the animals. In general, the best age group to translocate seems to be the young adults. We try and avoid translocating cows with unweaned calves.