

CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES
OF WILD FAUNA AND FLORA



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Colombo (Sri Lanka), 23 May-03 June 2019

Interpretation and implementation matters

Regulation of trade

BLACK RHINOCEROS HUNTING TROPHIES:
EXPORT QUOTA FOR SOUTH AFRICA

1. This document has been submitted by South Africa.*

COMMENTS OF THE SECRETARIAT

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CONSIDERATION OF PROPOSALS FOR AMENDMENT OF APPENDICES I AND II

A. Proposal

To increase South Africa's export quota for black rhinoceros hunting trophies from five adult male black rhinoceros (*Diceros bicornis*), as approved in Resolution Conf. 13.5 (Rev. CoP 14), to a total number of adult male black rhinoceros not exceeding 0.5% of the total black rhinoceros population in South Africa in the year of export (equally applied to all three subspecies, i.e. 0.5% of the total population of each of the three subspecies), in accordance with Resolution Conf. 9.21 (Rev. CoP13) on "Interpretation and application of quotas for species included in Appendix I" and Resolution Conf. 17.9 on "Trade in hunting trophies of species listed in Appendix I or II".

Rationale

A key feature of the recovery of black rhinoceros in South Africa has been the sound biological management of the species to promote rapid population growth, complemented by translocations to seed new founder populations on both state and private land. Source populations are kept below ecological carrying capacity since a failure to reduce densities of populations that are approaching or above zero growth densities by at least 5% per annum is likely to negatively impact on habitat and ultimately reduce population growth rates to below minimum target levels. High breeding rates are maintained in populations by actively managing the sex ratio in favour of breeding females, while new founder groups are female-biased. The carrying capacity of territorial adult males is furthermore behaviourally restricted within many of the small, fenced areas of provincial reserves and private game farms, limiting the populations of resident males. This all leaves the problem of how best to dispose of surplus males. The Biodiversity Management Plan (BMP) for the Black Rhinoceros (*Diceros bicornis*) (Government Gazette vol. 571 no. 36096) suggests that surplus males should either be translocated to establish male-only groups or be hunted. However, most private reserves do not have additional land capacity for this growing male population.

Well managed and secure land for black rhinoceros is currently scarce, and the Black Rhinoceros Range Expansion Programme (BRREP) is limited by a lack of properties in South Africa of a sufficient size (usually greater than 200 km²) that have the capacity to host rhinoceros populations of over 50 animals. While suitable habitat may be available, there is insufficient infrastructure and resourcing to effectively protect and secure the species against the current poaching threat, and due to the risk and cost, currently little to no incentive for the private sector to own black rhinoceros. It is anticipated that the increased availability of hunting trophies would create incentives for additional communal and private land owners to keep the species, thereby contributing to the species' range expansion. The revenue that would be generated from a black rhinoceros hunt could be used to fund anti-poaching measures, secure land and provide for the ecological management of these animals.

Currently an average of 2.4% of South Africa's black rhinoceros population is poached annually (c. 45 individuals), and on average only 0.2% of the current national population is removed through trophy hunting, effectively together representing approximately 43% of the potential annual population increment. Increasing the annual export quota to 0.5% of the national population will effectively increase total offtake to approximately 48% of the potential annual population increment. An increase to 0.5% is therefore conservative and is also much lower than the often quoted sustainable figure of 1% (Leader-Williams et al., 2005).

Thus the objectives for a cautious/conservative increase in the export quota are to:

- 1) Expand the species' range in South Africa through incentivizing the keeping and protection of viable populations of black rhinoceroses.
- 2) Increase / maintain productive population growth rates through the offtake of surplus males.

Management of the export quota

Adult male black rhinoceroses will only be hunted on conservation management grounds in accordance with a set of strict criteria to ensure that demographic and/or genetic conservation is enhanced, as stipulated in the black rhinoceros BMP. The BMP specifies that any hunting and permit allocation system should:

- a) ensure that any off-takes are biologically sustainable;
- b) be based on good monitoring;
- c) ensure that incentives from any hunting opportunities are maximized;
- d) not discriminate between state agencies and the private sector;
- e) reward and encourage good biological management to meet demographic and genetic goals;
- f) reward long-term commitments to black rhinoceros conservation;
- g) ensure that appropriate internal and external controls are in place;
- h) seek to ensure that the welfare of individual animals being hunted was duly considered; and
- i) ensure that any black rhinoceros hunting is ethical and involves the fair chase of wild animals.

Monitoring

In accordance with an adaptive management approach, the following indicators will be monitored to assess achievement of objectives:

- a) annual utilization of the quota;
- b) size of the population on both private and state land;
- c) area of the conservation estate (both private and state) conserving black rhinoceros;
- d) population trend on both private and state land;
- e) live sale prices of black rhinoceros;
- f) trophy prices for black rhinoceros.

B. Proponent

South Africa*

C. Supporting statement

1. Taxonomy

- | | |
|-------------|----------------|
| 1.1 Class: | Mammalia |
| 1.2 Order: | Perissodactyla |
| 1.3 Family: | Rhinocerotidae |

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1.4 Genus, species or subspecies, including author and year: *Diceros bicornis* (Linnaeus 1758)

1.5 Scientific synonyms: *Rhinoceros bicornis* (Linnaeus 1758)

1.6 Common names: English: Hook-lipped rhinoceros, black rhinoceros, browse rhinoceros
French: Rhinocéros noir
Spanish: Rinoceronte negro

1.7 Code numbers: No code provided in CITES Identification Manual

2. Overview

The South African population of *Diceros bicornis* has recently been assessed as Endangered C2a(i). As all subpopulations exist in fenced protected areas or on private/community game farms or reserves, the distribution of the black rhinoceros in South Africa is fragmented. The total area occupied by black rhinoceros is estimated at close to 33,000 km². The species is widespread, occurring in more than 69 state, private and communal reserves and game farms across seven out of the nine provinces. At the end of 2015, the total South African black rhinoceros population comprised approximately 1,893 individuals, of which 1,382 (73%) and 511 (27%) occur on state-owned and private land respectively. While black rhinoceros populations in most range States have declined over the last three generations, the numbers of black rhinoceroses within South Africa have increased from only 110 individuals in 1930. Ongoing loss of rhinoceroses to poaching for their horn is currently the most immediate threat to South Africa's black rhinoceros population.

A high percentage (73%) of the black rhinoceros population is generally well managed within protected areas, with offtakes managed in terms of species-specific or ecological management plans. In 2013, a Biodiversity Management Plan (BMP) for the Black Rhinoceros (*Diceros bicornis*) was gazetted for implementation (Government Gazette vol. 571 no. 36096) in terms of section 43 of the National Environmental Management: Biodiversity Act (NEMBA). The BMP recommends an annual minimum harvesting of 5% for established populations that are showing a zero growth population density. Harvesting is considered to be beneficial to the species because it maintains or enhances population vigour in the harvested population whilst also promoting overall meta-population growth through the establishment of new populations. The management of black rhinoceros populations, notably smaller ones, may however result in the demographic skewing of the population sex ratio in favour of males. This can have a negative impact on the population's breeding performance and genetic status. The BMP suggests that these surplus males should either be translocated to establish male-only groups or be hunted.

Trophy hunting of black rhinoceroses is sustainably managed in South Africa, though the current low levels of trophy offtakes do not sufficiently incentivize the conservation of the species or its habitat. A conservative increase of the annual export quota to 0.5% of the total black rhinoceros population may well promote the further expansion of the current range of the species in South Africa through incentivising the keeping and protection of viable populations of black rhinoceros.

A suite of decision-making mechanisms and a robust permitting system are currently in place to manage and monitor the harvest of black rhinoceroses. *Diceros bicornis* is listed as endangered in terms of section 56 of NEMBA and various provincial Ordinances and Acts provide further legislative protection. Permits are therefore required to undertake a variety of activities, e.g. hunting, keeping, selling and other forms of direct use. The amended Norms and Standards for the Marking of Rhinoceros and Rhinoceros Horn and for the Hunting of Rhinoceros for Trophy Hunting Purposes (published in April 2012, Gazette No. 35248) require that all rhinoceros hunts are attended by conservation officials. The regulations further require that a DNA sample must be collected from each animal, as well as from both horns. A possession permit as well as a DNA certificate is issued to the owner of the rhinoceros horn and all DNA samples are stored on the RHODIS database to ensure traceability. Animals to be hunted are selected based upon a strict set of criteria (see Appendix 4 of the black rhinoceros BMP). Given the strict approval criteria and approval process, there is a high confidence in these control measures to ensure a sustainable harvest.

3. Species characteristics

The South African population of *Diceros bicornis* is widespread and fragmented, occurring solely in protected areas, game reserves and on game farms. A long-lived species characterized by a low reproductive rate, the black rhinoceros is a relatively adaptable, generalist browser that naturally occurs in a wide variety of habitats, though dispersal to colonise new areas is slow. Black rhinoceroses are somewhat sensitive to

general human presence and activity, but do become habituated to regular human presence and activity when no overt threats arise therefrom.

3.1 Distribution

The South African population of *Diceros bicornis* is widespread and fragmented. The total area occupied by the species in South Africa is estimated at close to 33,000 km², which is less than 3% of the total land surface of the country. Black rhinoceroses occur in more than 69 state, private and communal reserves and game farms across seven out of the nine provinces in the country. There are currently three remaining ecotypes/subspecies of black rhinoceros in East and southern African countries (Emslie & Brooks, 1999), all of which occur in South Africa. According to data gathered by the IUCN SSC African Rhinoceros Specialist Group (AfRSG), the area of occupancy of *D. b. bicornis* (south-western black rhinoceros) is estimated at 4,075 km², with 11 breeding sites in western and south-eastern South Africa (Adcock, 2016). The southern-central black rhinoceros (*D. b. minor*) occurs within the eastern Lowveld in Limpopo, Mpumalanga and KwaZulu-Natal. In the province of Limpopo, its range extends westwards to the North West Province. There are 57 breeding locations within the region and the estimated area of occupancy of *D. b. minor* is 28,469 km² (Adcock, 2016). The eastern black rhinoceros (*D. b. michaeli*) currently exists in a single population on private land which is estimated at 349 km² (Adcock, 2016).

3.2 Habitat

Black rhinoceroses are generalist browsers and can occur in a wide variety of habitats from deserts to wetter forested montane areas. Their achievable population density is correlated with the interacting factors of actual standing browse availability and suitability in the 0 – 2 m black rhinoceros feeding height range, soil nutrient status, average annual rainfall, and the densities of competing herbivores. Highest densities are found at 350 – 700 mm rainfall sites with rainfall well spread throughout the seasons, where low thicket, scrublands, or understory forbs predominate, and on more nutrient-rich soils (Emslie & Adcock, 2016; Adcock, 2014). Diet studies across Africa show that black rhinoceroses feed on a wide range of plant genera. Important diet types include most African *Acacias* (now called *Vachellia* and *Senegalia*), *Grewia*, certain *Gymnosporia* and *Combretum* species, and many Euphorbiaceae (including *Spirostachys africana*), forbs and dwarf shrubs such as *Justicia*, *Indigofera*, *Tephrosia*, *Monechma*, *Lycium*, *Rhigozum*, and *Zygophyllum*. Black rhinoceroses require a permanent water source, except in areas with high palatable succulent plant availability.

3.3 Biological characteristics

The black rhinoceros is long-lived, with both sexes living to approximately 30 – 40 years in the wild. Black rhinoceroses are generally solitary, and cohesive groups consist mostly of mother-offspring associations (Owen-Smith, 1988). Females produce their first calves at 7 years on average (median 6.8, range 4 – 14), while males mate effectively only at 7 to 12 years of age depending on social dominance of other males. The intercalving interval on average is 2.7 (range 1.7 – 4) years after a gestation period of approximately 15 – 16 months (Adcock *et al.*, 2010).

3.4 Morphological characteristics

The black rhinoceros is distinguishable from the white rhinoceros (*Ceratotherium simum simum*) by its protruding prehensile upper lip and smaller size. The black rhinoceros has a slightly shorter front horn and longer second horn compared to the white rhinoceros, meaning that its two horns are more similar in length.

3.5 Role of the species in its ecosystem

Black rhinoceroses function as ecosystem engineers by opening up thick understory and thereby increasing landscape heterogeneity. Removing rhinoceroses from the ecosystem may thus lead to trophic cascades (Everatt *et al.*, 2016). Black rhinoceroses also help to create and maintain wallows that can be used by many other species, while their dung middens create nutrient hot spots and germination sites for some species. As a browser, the black rhinoceros has less of an ecological impact in savanna ecosystems than grazers (specifically selective grazers), and by diversifying the species composition through stocking the species, the impact on the herbaceous layer can be reduced and soil erosion prevented.

4. Status and trends

4.1 Habitat trends

The translocation of black rhinoceroses to maintain high underlying population growth rates underpins the meta-population management plan for *D. bicornis*, which aims to maintain genetic transfer to future rhinoceros generations, while mitigating poaching losses. However, the current scarcity of available and suitably secure land limits the effectiveness of this conservation strategy. Suitable habitat within the historical distribution of the south-western black rhinoceros (Skead 1980) occurs within several South African national parks, such as Augrabies, Cambedoo, Kalahari, Karoo, Namaqua, Richtersveld, and Tankwa National Parks, but these national parks currently do not have adequate security measures in place or do not have adequate fencing. Due to the prohibitive financial and security pressures associated with the current levels of poaching, some private landowners (it is estimated that the private game industry manages about 23% of the national black rhinoceros herd) are disinvesting in rhinoceros. This does not only constrain range expansion, but also reduces growth rates of current populations that are near carrying capacity. Due to the very low number of black rhinoceros hunted per annum, there is currently no benefit derived for habitat conservation through trophy hunting.

Nevertheless, between 2003 and 2015, approximately 2,320 km² of habitat have been added to the conservation estate nationally, and 178 individual rhinoceros founders have been translocated to new reserves (Balfour, pers. comm.). From 2003, the WWF Black Rhinoceros Range Expansion Project (BRREP), working in partnership with Ezemvelo KwaZulu-Natal (EKZN) Wildlife and more recently the Eastern Cape Parks and Tourism Agency (ECPTA), has helped create eleven new large areas for the conservation of black rhinoceros, totalling 214 animals on over 1,800 km² of private and communal land in South Africa.

4.2 Population size

South Africa conserves approximately 36% of the continental black rhinoceros population, which is currently estimated at approximately 5,250 (Emslie *et al.*, 2016). According to data gathered from a survey of rhinoceros on private and state land by the IUCN SSC AfRSG, the total South African black rhinoceros population consists of approximately 1,893 individuals (as at the end of 2015) (Figure 1), of which 1,382 (1,319 – 1,444) and 511 (488 – 534) occur on state-owned and private land respectively. The estimated number of south-western black rhinoceroses (*D. b. bicornis*) in South Africa at the end of 2015 was 254. By the end of 2015 the southern-central black rhinoceros (*D. b. minor*) was estimated at 2,164 individuals throughout Africa with 1,560 in South Africa (Figure 1), and 20 in Swaziland. The single *D. b. michaeli* population in South Africa numbered 79 at the end of 2015.

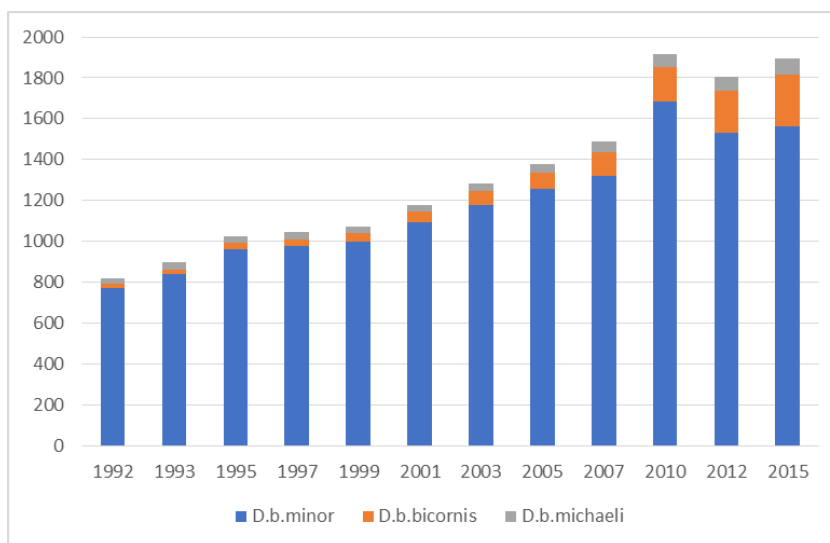


Figure 1: The estimated number of black rhinoceroses in South Africa from 1992 to 2015 (Source: IUCN SSC AfRSG).

4.3 Population structure

The management of black rhinoceros populations, notably smaller ones, may result in the demographic skewing of the population sex ratio in favour of males, and there is some anecdotal evidence to suggest that aggression amongst black rhinoceros bulls increases under these circumstances. This can have a negative impact on the population's breeding performance and genetic status. At the end of 2017, the adult (> 7yr) sex ratio in the black rhinoceros population in KwaZulu-Natal (a total of approximately 500 individuals at the end of 2016, comprising nine subpopulations in protected areas and nine subpopulations on private land), was 120 males:152 females.

4.4 Population trends

While black rhinoceros populations in most range States have declined over the last three generations, the numbers of black rhinoceroses within South Africa have been increasing for many years. From only 110 individuals in 1930, by the end of 2015 there were an estimated 1,893 black rhinoceroses in South Africa. Both the eastern black rhinoceros (*D. b. michaeli*) and the south-western black rhinoceros (*D. b. bicornis*) numbers are showing an increase with long-term average population growth rates of around or over 7% (Emslie & Adcock, 2016). South-western black rhinoceros (*D. b. bicornis*) populations within Addo Elephant, Karoo, Mountain Zebra, and Mokala National Parks, as well as the population of southern-central black rhinoceros (*D. b. minor*) in Marakele National Park, increased significantly over the past 5 years (2011-2015) (Ferreira *et al.*, 2017). The overall high growth rates can be explained by a population skewed in favour of females due to the initial introductions and a high female calving rate in the initial years after introduction (Ferreira *et al.*, 2017). The southern-central black rhinoceros (*D. b. minor*) meta-population has performed less well. At present it appears when including Kruger National Park (KNP) data that the subspecies may be declining at 1.35% per annum (Emslie & Adcock, 2016). However, when KNP data for this subspecies are excluded, the meta-population shows a growth rate of 3.17% per annum (2012 – 2014). Black rhinoceros subpopulations within the Eastern Cape and North West provinces are stable to increasing, while in KwaZulu-Natal the black rhinoceros subpopulation increased to approximately 500 individuals in 2013 and has remained stable since then.

4.5 Geographic trends

Since the 1990s, national and provincial conservation agencies have sold black rhinoceroses to private landowners. These sales generate revenue for state conservation agencies, increase rhinoceros numbers through the establishment of new populations, and also contribute to the expansion of the species range within South Africa. From 2004, the Black Rhinoceros Range Expansion Project (BRREP) – managed by WWF in partnership with EKZN Wildlife and more recently the ECPTA – has helped create several new large areas for black rhinoceros on private and communal land in South Africa. These management relocations are making a significant contribution to the recovery of the species.

5. Threats

The current major threat to South Africa's black rhinoceros population is the continuing loss of individuals to poaching for their horn (Knight, 2017). Before the onset of poaching in 2008, black rhinoceroses were performing well in KNP (Ferreira *et al.*, 2011), but this subpopulation is now most likely declining (although this is difficult to demonstrate due to sampling error) (Ferreira *et al.*, 2017). The number of black rhinoceroses poached increased each year from 2010 (when 12 were poached) and reached a peak in 2015 when 62 were poached in the country (an estimated 3.3% of the wild population). Poaching incidents have since declined slightly (Table 1), likely indicative of a positive response to the anti-poaching interventions employed nationally and specifically in KNP. It has been suggested that poaching of black rhinoceroses may be a by-catch of white rhinoceros poaching – white rhinoceroses are preferentially poached because they are easier to find (on account of their preference for more open habitats and more frequent occurrence in larger groups) and because of the greater average horn weights. Poaching rates are nevertheless still at sustainable levels (total births still exceed total deaths) and poaching is not causing a population decline at the national scale.

Table 1: The number of black rhinoceroses per subspecies poached annually from 2010 to 2016 (Source: IUCN SSC AfRSG).

	2010	2011	2012	2013	2014	2015	2016	Total
<i>D. b. minor</i>	12	34	25	38	54	62	45	270
<i>D. b. bicornis</i>	0	0	0	0	0	0	0	0
<i>D. b. michaeli</i>	0	0	0	0	0	0	0	0
Black rhinoceros total	12	34	25	38	54	62	45	270

6. Utilization and trade

6.1 National utilization

The black rhinoceros population in South Africa is generally subjected to two forms of legal offtake, namely management removals of animals for ecological or biodiversity reasons and offtakes for trophy hunts and live sales, the majority of which (excepting for international exports of live animals and trophy hunts) do not result in the permanent removal of animals from the national population. These offtakes generate a conservation benefit through enabling effective conservation management (resulting in rapid growth in numbers and expansion of the species' range), while at the same time generating conservation revenue. An estimated 2.7% of the national herd across state and private protected areas is translocated annually, and between 2003 and 2015 a total of 178 individual rhinoceros founders have been translocated to new reserves, adding approximately 2,320 km² of habitat to the national conservation estate.

Trophy hunting of black rhinoceroses is sustainably managed in South Africa (see Fig 2) (Cooney *et al.*, 2017; Emslie *et al.*, 2016), and aims to generate a conservation benefit through incentivizing the private sector to keep rhinoceroses and to purchase land in order to stock rhinoceroses. Strict criteria have been established in order to ensure that only specific males are hunted, those whose hunting can enhance demographic or genetic conservation (see Knight *et al.*, 2012). Only about 0.2% per annum (on average 3-4 bulls) of the national population was trophy hunted during the period 2002 to 2015. Trophy hunting removes surplus adult males, whilst generating important revenue for private and state conservation.

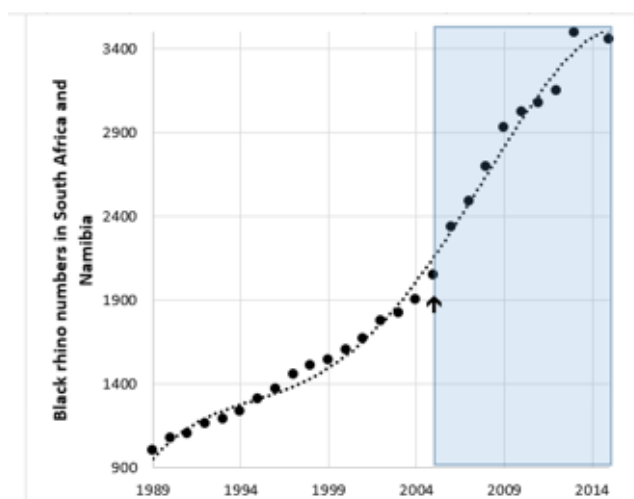


Figure 2: Growth of black rhinoceros population in South Africa and Namibia including over the period (shaded) during which trophy hunting has been allowed (Emslie *et al.*, 2016).

6.2 Legal trade

South Africa is allowed an annual export quota of five hunting trophies of adult male black rhinoceroses (Resolution Conf. 13.5 (Rev. CoP14)). For the period 2005 – 2015, a total of 40 hunting trophies (0.2% per annum of the current national population and on average 75% of the annual export quota) have

been exported from South Africa (Figure 3). The main destination countries included the Russian Federation (16%), Germany (14%), France (12%), Spain (12%), Malaysia (9%) and Poland (9%).

Exports of live rhinoceroses are driven by conservation objectives in line with the longer term vision encapsulated in South Africa's black rhinoceros Biodiversity Management Plan – facilitating range expansion and managing black rhinoceroses both within South Africa and regionally, as part of an expanding meta-population. The international export of black rhinoceroses to found or augment wild populations in other African range States is also in line with the African Rhinoceros Conservation Plan, which calls for countries “to cooperatively manage and expand rhinoceros populations across the African landscape”, and the SADC Regional Rhinoceros Conservation Strategy. A total of 45 live black rhinoceroses were exported from South Africa between 2005 and 2015, this constituting 50% of the total exports of the species from South Africa during this time period (CITES Trade Database, UNEP World Conservation Monitoring Centre, Cambridge, UK). Live animals were exported primarily for re-introduction purposes (44 out of the 45 live exports). To date, South Africa has donated and sold founder black rhinoceroses to Botswana, Malawi, Swaziland, Tanzania, Zambia, Rwanda and Zimbabwe (Emslie & Adcock, 2016) with plans for Chad ongoing.

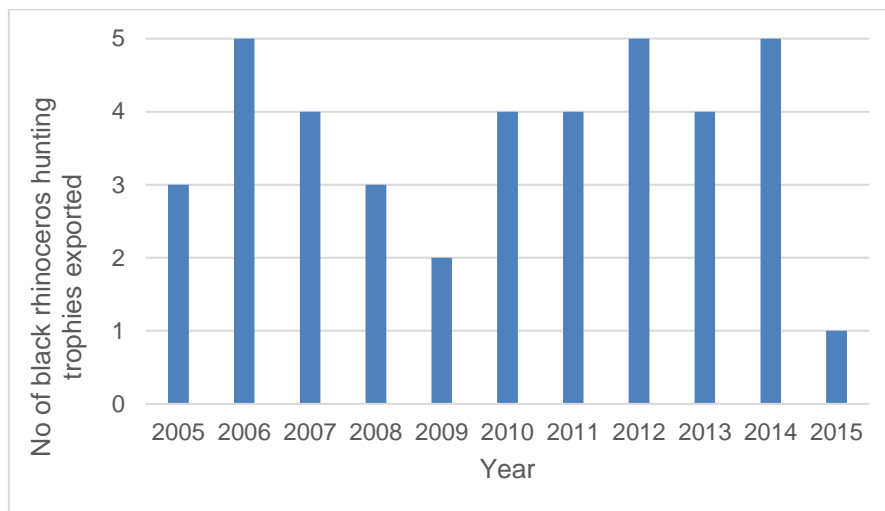


Figure 3: South Africa's utilization of the export quota for black rhinoceros hunting trophies for personal use (five), as reported between 2005 and 2015 (CITES Trade Database, UNEP World Conservation Monitoring Centre, Cambridge, UK).

6.3 Parts and derivatives in trade

Other than hunting trophies, no parts or derivatives of black rhinoceros are in the legal trade.

6.4 Illegal trade

In recent years there has been an upsurge in black market prices for rhinoceros horn, which has caused an increase in poaching in some range States including South Africa (Thomas, 2010). In South Africa, approximately 2.4% of the black rhinoceros population is currently poached annually (averaging 45 individuals), effectively representing 40% of the potential annual population increment (2.4% poached vs the 6% annual underlying biological growth between 2012 and 2014). Neither the eastern black rhinoceros (*D. b. michaeli*) nor the south-western black rhinoceros (*D. b. bicornis*) had experienced loss from poaching up to the end of 2016. The more numerous southern-central black rhinoceros (*D. b. minor*) has borne the brunt of the poaching, with the KNP *D. b. minor* population being especially impacted. The poaching rate in KwaZulu-Natal, which was on average below 1% of the population annually between 2003 and 2012, has increased to above 1%. The current poaching rate in the province is 2.4% of the population annually.

It is anticipated that the additional revenue that would be generated from an increased export quota for hunting trophies, could be used to secure suitable habitat and fund anti-poaching measures.

6.5 Actual or potential trade impacts

Trophy hunting of black rhinoceroses in South Africa has positively impacted on the population through incentivizing landowners to stock the species. However, due to the annual export quota being limited to only five hunting trophies, the current overall conservation benefit derived through trophy hunting is low. Private game farms and reserves contribute significantly to the conservation estate in South Africa, and it is estimated that the private game industry manages about 23% of the national black rhinoceros herd. A conservative increase of the annual export quota to 0.5% of the total black rhinoceros population (equally applied to all three subspecies), may well promote the expansion of the range of the species in South Africa through incentivising the keeping and protection of viable populations of black rhinoceros. The strict approval criteria and approval process (see section 8.6) will ensure that black rhinoceros trophy hunting will continue to be sustainably managed.

7. Legal instruments

7.1 National

The black rhinoceros is listed as endangered in terms of section 56 of the National Environmental Management: Biodiversity Act (NEMBA) 2004, and various provincial Ordinances and Acts provide further legislative protection. Permits are therefore required to undertake a variety of activities, e.g. hunting, keeping, selling and other forms of direct use. The amended Norms and Standards for the Marking of Rhinoceros and Rhinoceros Horn and for the Hunting of Rhinoceros for Trophy Hunting Purposes (published in April 2012, Gazette No. 35248) require that all rhinoceros hunts are attended by conservation officials, and provinces have indicated that these norms and standards are being implemented effectively. The regulations further require that a DNA sample must be collected from each animal, as well as from both horns. A possession permit as well as a DNA certificate is issued to the owner of the rhinoceros horn and all DNA samples are stored on the RHODIS database to ensure traceability.

7.2 International

The South African population of *D. bicornis* (black rhinoceros) is included in Appendix I of CITES, and South Africa is allowed an annual export quota of five hunting trophies of adult male black rhinoceroses in accordance with Resolution Conf. 13.5 (Rev. CoP14).

A SADC Regional Rhinoceros Conservation Strategy for white rhinoceros (as well as black rhinoceros) was adopted in 2005. The strategy sets out a long-term goal of maintaining “Southern African rhinoceros [...] as flagship species for biodiversity conservation and wildlife-based economic development, within viable and well distributed populations” (Janssens & Trouwborst 2018). In addition to this, the 2016 African rhino Range States’ conservation plan was developed and endorsed by almost all African rhinoceros range States including South Africa.

8. Species management

8.1 Management measures

In January 2013 a Biodiversity Management Plan (BMP) for the Black Rhinoceros (*Diceros bicornis*) was gazetted for implementation (Government Gazette vol. 571 no. 36096) in terms of section 43 of NEMBA. This plan will form the basis for greater coordination between existing and future plans, and aims for a growth rate of the black rhinoceros population of at least 5% per annum, with 2,800 south-central and 260 south-western black rhinoceroses by the end of 2020. In addition, the BMP recommends an annual minimum harvesting rate of 5% for established populations with a zero growth population density. The management of black rhinoceros populations, notably smaller ones, may result in the demographic skewing of the population sex ratio in favour of males. This can have a negative impact on the population’s breeding performance and genetic status. The BMP recommends that these surplus males should either be translocated to establish male-only groups or be hunted.

In KwaZulu-Natal, black rhinoceroses on state and private land are managed strictly according to the KZN Black Rhino Management Strategy, and a status reporting framework currently supports live harvest management for the species. Private properties in KwaZulu-Natal and the Eastern Cape that form part of the BRREP have individual site specific management plans, while in most provinces, all private properties with black rhinoceroses are subject to management plans.

8.2 Population monitoring

Detailed data exist on black rhinoceros numbers, poaching incidences and population performances for most subpopulations over time. This is thanks to a process of confidential annual black rhinoceros status reporting to the Southern African Development Community (SADC) Rhinoceros Management Group (RMG) that has been ongoing since 1989, and regular reporting to the IUCN SSC AfRSG. The size of many black rhinoceros subpopulations in South Africa, which are monitored using individual identification methods, is known exactly or to within a few individuals. In KNP, where individual based monitoring over the whole area is not feasible, black rhinoceros numbers are monitored using intensive helicopter block counts, which have wider confidence levels (Ferreira *et al.*, 2017). Individual identification methods are however beginning to form part of the overall black rhinoceros monitoring in the park.

8.3 Control measures

8.3.1 International

The South African population of *D. bicornis* (black rhinoceros) is included in Appendix I of CITES. In accordance with Resolution Conf. 13.5 (Rev. CoP14), the export of hunting trophies is currently limited to five adult male black rhinoceroses. The amended Norms and Standards for the Marking of Rhinoceros and Rhinoceros Horn and for the Hunting of Rhinoceros for Trophy Hunting Purposes (published in April 2012, Gazette No. 35248) require that all rhinoceros trophies be microchipped and DNA samples submitted to the RHODIS DNA database.

8.3.2 Domestic

Any form of utilization of black rhinoceros is controlled through national and provincial legislation. In terms of the Threatened or Protected Species (TOPS) Regulations (2007), permits are required for all restricted activities involving black rhinoceros (including hunting). Permit holders are required to submit annual feedback to the Issuing Authority on compliance with permit conditions, this providing for an additional mechanism to monitor offtakes. The black rhinoceros BMP also contains a set of assessment criteria developed by an RMG working group to ensure that only hunts of benefit to population demographics and/or genetics be approved (see Knight *et al.*, 2012). Given the strict approval criteria and approval process, there is a high confidence in these control measures to ensure a sustainable harvest.

8.4 Captive breeding and artificial propagation

Very few operations exist for the breeding of black rhinoceros in South Africa.

8.5 Habitat conservation

Two thirds of the national population (73%) of *D. bicornis* is conserved within state protected areas (1,382 individuals). National parks, under the management of South African National Parks (SANParks), are custodian to 31% of the country's black rhinoceroses, while the private game industry manages about 23% of the national black rhinoceros herd. From 2003, BRREP has helped create eleven new large areas for the conservation of black rhinoceros, totalling 214 black rhinoceroses on over 1,800 km² of private and communal land in South Africa.

8.6 Safeguards

In accordance with the black rhinoceros BMP, adult male black rhinoceroses will only be hunted on conservation management grounds. To qualify for hunting, the animal must meet every one of the following criteria (for full details see Appendix 4 of the BMP):

- a) It has been deemed necessary on wildlife management grounds to remove the animal from its breeding population (either now or at an earlier stage in the past if already translocated to a male-only population).
- b) The animal is male (primarily of the subspecies *D. b. minor*). Other subspecies of black rhinoceros can be considered on well-motivated conservation grounds.

- c) The animal is not sick or severely injured with no chance of full recovery.
- d) The breeding population must consist of at least 10 animals (with a minimum of at least 7 adult F class animals) and an estimated natural carrying capacity of at least 13 animals (as determined by recognised experts or RMG carrying capacity models).
- e) If being hunted in a male only area, in order to facilitate fair chase ethical hunting, the animal would have to have been present in the area for at least three months and the area must be a minimum of 500 ha and be big enough that its carrying capacity can support the number of males present without supplementary feeding.
- f) At the time of being removed from a breeding population, the animal has to have been present in that population for at least three years.
- g) The breeding population must formally subscribe to being part of the effort to breed up animals rapidly in order to help meet national meta-population growth targets.
- h) The breeding population (and any recipient male-only population) has to have been a willing participant in annual RMG status reporting.
- i) The specific animal can be individually identified and full details of how the animal can be recognised are reflected in the permit application and the specific animal can be recognised via microchips and/or DNA samples if it has been translocated to a male-only population. In some cases where one of a number of different rhinoceroses could qualify under the same criteria (such as improving a male biased sex ratio) consideration can be given to hunting one of a specified number of individually identified rhinoceroses. In the latter case, details of how all the potential rhinoceroses are recognised must be supplied, motivating why a single specific animal has not been nominated.

9. Information on similar species

The black rhinoceros is distinguishable from the white rhinoceros by its protruding prehensile upper lip and smaller size. The white rhinoceros can also be distinguished from the black rhinoceros by its longer skull, less sharply defined forehead and more pronounced shoulder hump. The black rhinoceros has a slightly shorter front horn and longer second horn compared to the white rhinoceros, meaning that its two horns are more similar in length.

10. Consultations

South Africa consulted the following range states by electronic mail dated 11/12/2018

Chad, Zimbabwe, Zambia, Botswana, Mozambique, Angola, Tanzania, Eswatini, Namibia, Democratic Republic of Congo, Rwanda, Uganda, Malawi, and Kenya

11. Additional remarks

None

12. References

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TENTATIVE BUDGET AND SOURCE OF FUNDING
FOR THE IMPLEMENTATION OF DRAFT RESOLUTIONS OR DECISIONS

According to Resolution Conf. 4.6 (Rev. CoP16) on *Submission of draft resolutions, draft decisions and other documents for meetings of the Conference of the Parties*, the Conference of the Parties decided that any draft resolutions or decisions submitted for consideration at a meeting of the Conference of the Parties that have budgetary and workload implications for the Secretariat or permanent committees must contain or be accompanied by a budget for the work involved and an indication of the source of funding.