Connochaetes taurinus taurinus – Blue Wildebeest

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Regional Red List status (2016)	Least Concern
National Red List status (2004)	Least Concern
Reasons for change	No change
Global Red List status (2016)	Least Concern
TOPS listing (NEMBA)	None
CITES listing	None
Endemic	No

"A more whimsical compound than the Gnu could scarcely have been thrown together, or a monster imagined of a more fantastical and anomalous exterior" (W. Cornwallis Harris 1840).

Taxonomy

Connochaetes taurinus (Burchell 1823)

ANIMALIA - CHORDATA - MAMMALIA - CETARTIODACTYLA - BOVIDAE - *Connochaetes* - t*aurinus*

Synonyms: *albojubatus, babaulti, borlei, cooksoni, corniculatus, fasciatus, gorgon, hecki, henrici, johnstoni, lorenzi, mattosi, mearnsi, reichei, rufijianus, schulzi*

Common names: Blue Wildebeest, Blue and White-bearded Wildebeest, Brindled Gnu, Brindled Wildebeest, Common Wildebeest (English), Blouwildebees (Afrikaans), Inkonkoni (Ndebele, Xhosa, Zulu), Imbudumo, Imbuduma ehlaza (Ndebele), Kgôkông (Sepedi, Setswana), Kgokong, Kgaranyane (Sesotho), Ingongoni, Ngongoni (Swati), Khongoni, Khongoini (Venda), Hongonyi (Xitsonga), Inkonkoni enombala oluhlaza (Zulu)

Taxonomic status: Subspecies

Taxonomic notes: Generally, five subspecies are recognised (IUCN SSC Antelope Specialist Group 2016), including the Western White-bearded Wildebeest (*C. t. mearnsi*); the Eastern White-bearded Wildebeest (C*. t. albojubatus*); Nyassa Wildebeest (*C. t. johnstoni*); Cookson's Wildebeest (*C. t. cooksoni*); and the Blue Wildebeest (*C. t. taurinus*), which is from southern Africa and is the only subspecies within the assessment region (Ansell 1972; Grubb 2005).

Assessment Rationale

Listed as Least Concern as this species is numerous and occurs extensively throughout the assessment region, and is present within many protected areas across its range. In South African National Parks alone (six parks), there are an estimated 8,818–18,318 individuals and at least 44,689 animals in total (2013 counts), including 42,450 animals within the natural distribution range. This equates to 29,715 mature animals assuming a 70% mature population structure. Thus, we infer there are well over 10,000 mature individuals in the assessment region. There are no real threats to this subspecies, however, incidences of hybridisation with Black Wildebeest (*Connochaetes gnou*), with fertile offspring, do occur. Additionally, it is unknown whether any exotic subspecies have been introduced into the region with resultant reduction in the genetic integrity of *C. taurinus taurinus*. Selective breeding for colour variants is common practice in the wildlife industry. These threats should be monitored and translocation regulations enforced to prevent compromised individuals entering formally protected areas.

Regional population effects: There is migration of individuals across transfrontier parks and the border between South Africa and Botswana, and no rescue effect is necessary as this subspecies is widespread and common within the assessment region. The historical migrations that existed in the Kalahari have been reduced due to the decimation of the Kalahari population (Spinage 1992) through the erection of veterinary fences and competition with cattle ranching (Estes & East 2009). The population in the Limpopo National Park all originate from the Kruger National Park (Estes & East 2009) and currently this population will most likely be a sink outside of the Kruger National Park rather than generating rescue effects for the assessment area.

Distribution

Formerly distributed from southern Kenya southwards to northern and eastern Namibia, Botswana, the Orange River in South Africa, and Mozambique (East 1999; Estes 2013; IUCN SSC Antelope Specialist Group 2016). Blue Wildebeest have also been introduced to regions outside of their former range, such as the Eastern Highlands of Zimbabwe, private farmland in Namibia and private game ranches south of their historical range in South Africa (East 1999; Estes & East 2009). They have never occurred in Lesotho (Lynch 1994).

C. t. taurinus occurs naturally in Namibia, South Africa to Mozambique north of the Orange River, from Mozambique to Zambia south of the Zambezi River, and from southwest Zambia to southeast and southern Angola (IUCN SSC Antelope Specialist Group 2016). This species was the inhabitant of the northern Kalahari savannahs, which is

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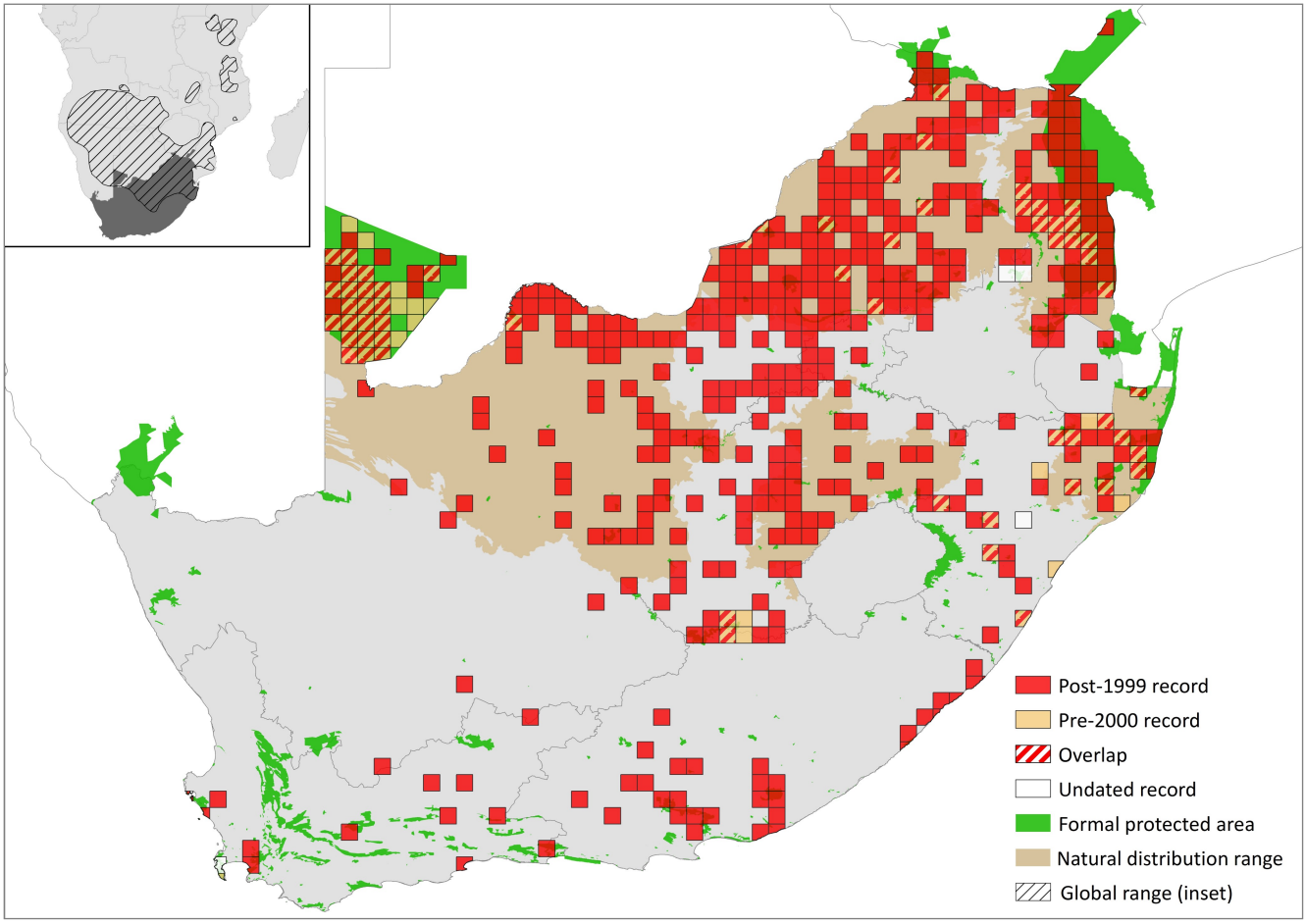

Figure 1. Distribution records for Blue Wildebeest (*Connochaetes taurinus taurinus*) within the assessment region

Table 1. Countries of occurrence within southern Africa

Country	Presence	Origin
Botswana	Extant	Native
Lesotho	Absent	-
Mozambique	Extant	Native
Namibia	Extant	Introduced
South Africa	Extant	Native
Swaziland	Extant	Reintroduced
Zimbabwe	Extant	Native

supported by naturally occurring populations in the Kgalagadi Transfontier Park (KTP) and Botswana's Central Kalahari Game Reserve to the north (Smithers 1971; Skinner & Chimimba 2005), as well as in bushveld regions in northern Botswana.

This species is migratory in the KTP between the three borders with Namibia and Botswana. There is also evidence of local migrations within the Kruger National Park (KNP). In South Africa, the species was largely confined to the northern parts of the country north of the Orange River (Estes & East 2009). They currently still occur throughout most of their historical range (Skinner & Chimimba 2005), although have been exterminated in large proportions of the Northern Cape where, historically, they occurred extensively in the Kalahari Thornveld, Lowveld and Bushveld habitats (Estes & East 2009). They have been widely introduced to all provinces, despite its natural range excluding the Western and Eastern Cape (Figure 1).

Population

A population estimate conducted during the late 1990s (mainly from aerial surveys) revealed an approximate global abundance of 1,298,000 *C. taurinus* (East 1999), with the Serengeti–Mara migratory population constituting 70% of that population (IUCN SSC Antelope Specialist Group 2016). Of these, 150,000 were estimated to be *C. t. taurinus*, half of which were in protected areas, and one quarter in conservancies or on private land (Estes 2013). More recently, however, the most current global population estimate of Common Wildebeest is approximately 1,550,000 individuals, largely attributed to the recovery of the Serengeti–Mara population to approximately 1,300,000 (Estes & East 2009). Recent subspecies estimates include 130,000 *C. t. taurinus*, 5,000–10,000 *C. t. cooksoni*, and 50,000–75,000 *C. t. johnstoni* (Estes 2013). A decline in the *C. t. albojubatus* population has revealed a current estimate of 6,000–8,000 individuals (Estes & East 2009).

East (1999) indicates that population densities estimated by aerial surveys range from less than 0.15 animals / km² in areas such as Kafue, Etosha, Hwange and the central and southern Kalahari, to 0.6–1.3 animals / km² in areas such as KNP, North Luangwa, Selous and Kajiado, and 3.6 animals / km² in Tarangire (IUCN SSC Antelope Specialist Group 2016). Recent total counts in areas where the species is abundant have produced population density estimates as high as 34–35 animals / km²; for example, in the Serengeti and Ngorongoro Crater (IUCN SSC Antelope Specialist Group 2016). Within the assessment region, the overall population is stable or increasing with an estimated population size of well over

10,000 mature individuals. In South African national parks (six areas) alone, there are an estimated 8,818–18,318 animals (2013 count; Ferreira et al. 2013). Across the country, on both formally protected areas and private lands, there were at least 44,689 animals in 2013 occurring on 648 protected areas of wildlife ranches (Endangered Wildlife Trust unpubl. data). This total is reduced to 42,450 on 552 properties by only including areas within the natural distribution (Figure 1), which equates to 29,715 mature animals assuming a 70% mature population structure. Our population estimate is similar to that estimated in 2005 of approximately 40,000 to 45,000 (Estes & East 2009). At the time of the 2005 assessment the South African population was deemed to be increasing (Estes & East 2009). The largest subpopulation occurs on KNP, with the most recent estimate being 6,058–10,896 animals in 2012 (Ferreira et al. 2013). The subspecies is especially numerous on private land: for example, while there are more than 3,600 individuals in North West Parks alone, there are a further 17,000 animals on private land in the province (Power 2014). Unfortunately, the numbers of both Black and Blue Wildebeest on all private properties is unknown. The occupancy of Blue Wildebeest as displayed by Figure 1 is suspected to be an under-estimate.

Generation length has been calculated as 8 years (Pacifici et al. 2013), which yields a 24 year three generation period (1991–2015). Most subpopulations on protected areas have increased over this period (for example; Nel 2015; Ferreira et al. 2016).

Historically, there have been substantial declines in private subpopulations (for example, in the Associated Private Nature Reserves, west of KNP), as well as in the western parts of the KNP due to fencing restricting movement during periods of drought (Walker et al. 1987), which may counterbalance increases in other subpopulations. The subpopulation in the KTP fluctuates considerably depending on local climatic variation and predation levels. Even so, the subpopulation is not expected to decline in the near future. Although most subpopulations in formally protected and private areas are fragmented and isolated due to fencing, the largest subpopulations (KTP and KNP) are free to follow local migrations, tracking recent rainfall. However, before the erection of fences these local migrations were much larger, with the KNP populations ranging to the foothills of the escarpment and those of KTP extending further into Botswana. Currently, many subpopulations are confined and forced to be sedentary, resulting in local declines in abundance (IUCN SSC Antelope Specialist Group 2016).

Current population trend: Increasing

Continuing decline in mature individuals: No

Number of mature individuals in population: Approximately 40,000–45,000

Number of mature individuals in largest subpopulation: 4,241–7,627 in KNP

Number of subpopulations: At least 60 on formally protected areas.

Severely fragmented: Yes. Most subpopulations are restricted to fenced reserves or ranches.

Habitats and Ecology

Blue Wildebeest are most predominantly associated with savannah woodland and short grasslands, with the availability of shade and drinking water being essential habitat requirements (Skinner & Chimimba 2005; Estes 2013). Blue Wildebeest are grazers, but 10–20% of their diet can consist of browse (Gagnon & Chew 2000). In general Blue Wildebeest prefer short grass areas with grass less than 100–150 mm in height (Skinner & Chimimba 2005). Blue Wildebeest tend to follow localized rainfall on shorter migrations (Skinner & Chimimba 2005). Bulls are territorial and will maintain the territory year round unless drought forces the territories to be abandoned. Breeding herds consisting of females and associated young will move around over the male's territories. Rutting takes place from April to June and births occur in November and December. The natural population growth rate is approximately 20% / annum. Long term population trends of wildebeest appear to be correlated negatively with minimum temperature and positively with dry season rainfall, an artefact of population trends being related to the forage quantity and quality (Seydack et al. 2012).

Blue Wildebeest are a preferred prey species of Lions (*Panthera leo*) and experience cyclical patterns in predation level depending on the current climatic conditions. Short grass areas (grazing lawns and recently burnt patches) are targeted for nutrients, but also appear to offer wildebeest protection from predators (Burkepile et al. 2013; Yoganand & Owen-Smith 2014). During wetter cycles, predation by Lions on Blue Wildebeest increases, whereas predation often declines during drier periods characterised by shorter grass (Mills et al. 1995). The increased predation on wildebeest during wet periods is expected to be the result of increased cover provided to stalking Lions and a fragmentation of the wildebeest herds (Smuts 1978).

With global temperature fluctuations becoming more apparent, understanding the implications that changing climate has on ungulates is important. In response to high temperatures Blue Wildebeest have a tendency to remain heat stressed throughout the year, which will influence their daily movement patterns (Shrestha et al. 2014). In

Table 2. Use and trade summary for the Blue Wildebeest (*Connochaetes taurinus taurinus*)

Category	Applicable?	Rationale	Proportion of total harvest	Trend
Subsistence use	Yes	Biltong hunting.	Minority	Stable
Commercial use	Yes	Trophy hunting, biltong hunting & live animal sales.	Majority	Increasing
Harvest from wild population	Yes	Live sales from protected areas.	Majority	Stable
Harvest from ranched population	Yes	Trophy hunting, biltong hunting & live animal sales.	Majority	Increasing
Harvest from captive population	No	-	-	-

addition, with the artificial southward spread of the species, individuals are being exposed to longer and colder winters which are considered sub-optimal for African antelopes (Shrestha et al. 2012). Although it is doubtful that these temperature-mediated impacts will influence wildebeest in their natural range, populations outside of their natural range may be compromised resulting in an artificial sink. However, within the assessment region, this is unlikely to have a severe impact on the local, wild population, and may only be a cause for concern for the long-term farming of this species.

Ecosystem and cultural services: The Blue Wildebeest is considered a keystone species in certain ecosystems such as the Serengeti where their migrations are the major draw-card for tourism revenue, as well as conserving the Serengeti ecosystem. Although large scale migrations occurred in the past, which included regions in the assessment areas, this aspect is not relevant for the assessment area. Within the assessment region, the Blue Wildebeest constitutes an important prey species for many large predators, including Spotted Hyaena (*Crocuta crocuta*), Lion (Hayward 2006), Leopard (*Panthera pardus*) (Hayward et al. 2006a), African Wild Dog (*Lycaon pictus*) (Hayward et al. 2006c) and Cheetah (*Acinonyx jubatus*) (Hayward et al. 2006b).

According to local folklore stories the wildebeest is a combination of the discarded parts of zebra, Common Warthog (*Phacochoerus africanus*), African Buffalo (*Syncerus caffer)* and Lion. The combination of the leftover stripes from the zebra, the Warthog shape to its head, the neck shaped like that of a Buffalo and the left over Lion's mane was used to create the wildebeest. Alternate stories suggest the wildebeest is composed of the face of a mule, the beard of a goat, the horns of a cow and the body of a horse. Despite the conglomeration of parts, legend has it that the wildebeest was happy to be in the new world and had a personality of its own.

Use and Trade

This species is utilised widely in trophy hunting, biltong hunting (both local subsistence and local commercial), and live animal sales. These uses are not considered to impact negatively on the population, as it is expected to be increasing in abundance on private lands (Estes & East 2009). As such, this is a candidate species on which to base rural wildlife economies and sustainable food production.

The proportion of off-take from the wild and game ranches is difficult to determine. Growth rate is estimated at approximately 20% per annum (Bothma 2002) so under optimal conditions (as experienced on numerous game farms where water and forage will not be limiting and predators are not present) offtake could be as high as the estimated growth rate.

The conversion from livestock to wildlife ranching is largely mitigating the decline in habitat quality caused by overgrazing. However, a number of threats associated with wildlife ranching have been specifically identified for Blue Wildebeest. These include bush encroachment, vulnerability to pathogens, and declines in genetic diversity and integrity, as a result of hybridisation, genetic isolation and inbreeding. Livestock farmers in the North West Province specifically have voiced concerns about the presence of this species on game farms owing to the harmful diseases they harbour (Bothma 2002), and the possibility of disease transmission between wildlife and cattle.

Golden wildebeest (a colour variant of the Blue

Table 3. Possible net effects of wildlife ranching on the Blue Wildebeest (*Connochaetes taurinus taurinus*) and subsequent management recommendations

Net effect	Unknown
Data quality	Anecdotal
Rationale	Private landowners have introduced this species into regions outside of its natural distribution, such as the Western and Eastern Cape provinces. This species is an economically valuable component of South Africa's game meat and biltong hunting industries, and is commonly sold on game auctions (Bothma et al. 2010). Recently, colour variants of Blue Wildebeest (e.g. golden wildebeest) have become high value game specimens in the wildlife ranching industry.
Management recommendation	Land owners should maintain ecologically viable populations of Blue Wildebeest by ensuring that the founding population size is sufficiently genetically diverse, and by periodically adding individuals and genetic material from an extensive source population. The movement of Blue Wildebeest between game ranches should be stringently controlled and animals should be tested for disease prior to relocation (similar to African Buffalo, as there is justified concern over the spread of diseases between wildebeest and other species of wildlife and/or livestock). In order to prevent any opportunity for hybridisation, Black and Blue Wildebeest should not be kept within the same enclosures. Additionally, the movement of existing putative hybrids should be rigorously controlled.

Wildebeest) are actively bred for on wildlife ranches, primarily for live sales. Although these animals are economically valuable for wildlife ranchers, they may impact negatively on the conservation of the species.

Additionally, a large number of hybridisation events have been recorded between Blue and Black Wildebeest as a result of the artificial confinement of these species within the same enclosures on private lands across the Free State, North West and KwaZulu-Natal provinces. The resulting movement restriction and lack of access to mates leads to species-specific reproductive isolation, and eventual hybridisation (Grobler et al. 2011). Although historically, the natural ranges of these species overlapped, no hybridisation events were documented, as the animals were not restricted by fences (Grobler et al. 2011). The hybrids are fertile and, if mated back to a pure-bred individual, are extremely difficult to identify (Patterson & Khosa 2005).

Threats

Blue Wildebeest once occurred in substantially large concentrations, migrating extensively in response to rainfall. Following the compounding anthropogenic impacts, such as landscape transformation, the erection of fences, elimination of natural water sources, poaching and the spread of disease, the historic global distribution and abundance of Blue Wildebeest has shown substantial decline (East 1999; Estes & East 2009). However, since the 1970s and 1980s, the establishment and management of conservation areas, privately owned game farms, as well as national and provincial protected areas, lead to an increase in the financial value and abundance of large antelope species in South Africa (Estes & East 2009). Thus, there are currently no major threats affecting the survival of this species. However, a number of threats, related predominantly to small fenced ranches and reserves have been identified, such as genetic isolation, inbreeding, possible cross-breeding with exotic subspecies, and hybridisation with Black Wildebeest (see **Use and Trade**).

The erection of fences, which restricted the natural movements and migrations of Blue Wildebeest between wet and dry season ranges, in association with periodic drought conditions and the provision of artificial waterholes, lead to significant mass mortality events in southern Africa (Owen & Owen 1980; Walker et al. 1987; Knight 1995). During a drought period in the 1980s, tens of thousands of Blue Wildebeest perished as a result of starvation in the Kalahari, due to veterinary cordon fences preventing their movement into areas of more substantial water and forage availability (Spinage 1992; Knight 1995). The provision of artificial waterholes attracts herbivores to areas of unsustainable forage resources, leading to a reduction in habitat quality and an increase in the risk of predation (Knight 1995).

The possible emerging threat of disease (especially Bovine tuberculosis) is a concern across the country, and thus authorities should be mindful of this concern when issuing such permits. Recent studies have shown the first confirmed infection of *Mycobacterium bovis* in Mpumalanga, a finding that suggested that Bovine tuberculosis was more widespread than previously believed in this province (Hlokwe et al. 2014). The wildebeest was infected with a novel strain of *M. bovis* which indicates the introduction of a new *M. bovis* genotype in the Greater Kruger National Park Complex ecosystem, which could be the result of repeated translocations of Blue Wildebeest (Hlokwe et al. 2014). Consistent with previous wildebeest infections of *M. bovis* in the Serengeti ecosystem in Tanzania (Cleaveland et al. 2005), the wildebeest did not have visible lesions and the *M. bovis* was isolated from the lung tissue (Hlokwe et al. 2014).

Droughts tend to favour the species, particularly in the lowveld (KNP) where high rainfall years result in increased predation levels (Mills et al. 1995) and could contribute to local declines during prolonged periods of above average rainfall. As such, climate change is not predicted to be as threatening to this species as other species, as this species is well-adapted to variable environmental conditions, as is seen through successful reintroduction and adaptation to extralimital provinces, such as the Western and Eastern Cape.

Poaching for bushmeat may also be a localised threat in some areas. For example, on Borakalalo National Park in North West Province, Blue Wildebeest are the most poached antelope (Nel 2015).

Current habitat trend: Stable

Table 4. Threats to the Blue Wildebeest (*Connochaetes taurinus taurinus*) ranked in order of severity with corresponding evidence (based on IUCN threat categories, with regional context)

Rank	Threat description	Evidence in the scientific literature	Data quality	Scale of study	Current trend
1	*7.3 Other Ecosystem Modifications*: fencing and the provision of artificial waterholes leading to restricted movement and a decline in habitat quality.	Knight 1995	Empirical	Local	Drought-related die-off of migrant wildebeest was exacerbated through the erection of fences and the provision of artificial waterholes.
2	*2.3.2 Small-holder Grazing, Ranching or Farming*: selection for colour variants, genetic isolation and increased contact with Black Wildebeest. Current stresses *2.3.1 Hybridisation* and *2.3.5 Inbreeding*.	Grobler et al. 2011	Indirect	National	Increasing with the economic incentives associated with maximising the number of wildlife species on one property for hunting and/or tourism.
3	*8.2.1 Problematic Native Species/ Diseases*: vulnerability to Bovine tuberculosis.	Hlokwe et al. 2014	Indirect	National	Infected, but undiagnosed Blue Wildebeest can potentially pay a significant role in the spread of Bovine tuberculosis when movement is uncontrolled.

Conservation

This species occurs widely across many protected areas, with the bulk of the formally protected population in the KNP, with over 3,000 individuals estimated to occur in the park (Grange et al. 2012). Reserves in the North West Province (primarily Pilanesberg National Park and Madikwe Game Reserve) are estimated to account for approximately 3,000 individuals as well (Power 2014). No direct interventions are necessary. However, the loss of range, the erection of fences and the provision of artificial waterholes has resulted in the replacement of large migratory Blue Wildebeest herds with smaller resident populations within protected areas. Continued establishment of transfrontier conservation areas is thus key to the long-term prosperity of this subspecies. Landowners are encouraged to drop fences to form conservancies and create conservation corridors, which will enable further migratory behaviour and establish resilient subpopulations within the assessment region. Landowners could also reduce the number of artificial water-points on their lands to improve habitat quality and encourage migratory behaviour.

Ranch managers should consider the importance of maintaining genetic diversity in isolated subpopulations of Blue Wildebeest, especially on game farms running breeding programmes selecting for particular traits or colour variants, such as the golden wildebeest. Genetic variability plays a vital role in continued reproductive success and fitness, which becomes principally important during adverse environmental conditions. Translocations of individuals should be adequately controlled and stringently recorded so as to maintain genetically viable populations, and prevent hybridisation. Additionally, due to the threats associated with hybridisation, this species should not be enclosed on the same property as the closely related Black Wildebeest, and furthermore, due to the threat of fence breakouts, ideally these species should not be kept on neighbouring properties (Grobler et al. 2011). Suspected hybrid individuals should be isolated, so as to prevent continued hybridisation with pure individuals (Grobler et al. 2011).

Recommendations for land managers and practitioners:

- Harvest and trade management, including the regulation of translocation is required to prevent the spread of disease and hybridisation with Black Wildebeest.
- The species is favoured by Lion (Hayward & Kerley 2005) and should be augmented as prey on all the parks with inflated free range Lion populations. To ensure the health of the Blue Wildebeest herds, one or two focal herds should be monitored in terms of herd size and proportion of juveniles during calving and at intervals following calving.
- Identification of colour variants through stud books and parentage verification.

Research priorities:

- Proportion of the population hybridised with Black Wildebeest, and assessment of areas where both species occur, whether on private or other properties. The distribution map of Blue Wildebeest is suspected to be an underestimate and although there are sufficient records of the population in protected areas, it is suspected that the true numbers and distribution on private lands is largely unknown.
- A multidisciplinary research project assessing hybridisation between these species is currently underway. This project is managed by managed by the National Zoological Gardens of South Africa, with collaborators from the University of the Free State, University of Pretoria, the Ecological Advice Division, Ezemvelo KwaZulu-Natal Wildlife, Florisbad Quaternary Research, National Museum, Free State Department of Economic Development, Tourism and Environmental Affairs, and the Tswane University of Technology.
- Possibility of incidences of extralimital subspecies crossing, due to the translocation of exotic subspecies.

Table 5. Conservation interventions for the Blue Wildebeest (*Connochaetes taurinus taurinus*) ranked in order of effectiveness with corresponding evidence (based on IUCN action categories, with regional context)

Rank	Intervention description	Evidence in the scientific literature	Data quality	Scale of evidence	Demonstrated impact	Current conservation projects
1	*1.1 Site/Area Protection*: drop fences to form conservancies and expand transfrontier protected areas.	-	Anecdotal	-	-	SANParks and provincial conservation authorities
2	*2.1 Site/Area Management*: reduce artificial water-point density.	-	Anecdotal	-	-	-
3	*4.2 Training*: educate land owners of negative management practices, and the risks associated with inbreeding, hybridisation and Bovine Tuberculosis in wildebeest.	-	Anecdotal	-	-	-
4	*5.3 Private Sector Standards & Codes*: sustaining genetic diversity and preventing the spread of disease through the control of wildebeest translocation, and by preventing the joint confinement of Black and Blue Wildebeest.	-	Anecdotal	-	-	-

- The geographical extent of anthropogenic translocation of this species into regions beyond its natural range, for example into the Western and Eastern Cape provinces.
- Assessment of colour variants (golden gnu, copper gnu, red gnu) and their impact on wild populations.
- Current population trends and distribution on private lands.
- Harvest and use of this species, and its value as a source of sustainable protein for local communities.

Encouraged citizen actions:

- Landowners should create conservancies for this species and engage local stakeholders to create sustainable, wildlife based rural economies.
- Report sightings on virtual museum platforms (for example, iSpot and MammalMAP), especially outside protected areas. Citizens should also report sightings of mixed Blue and Black Wildebeest subpopulations.

Data Sources and Quality

Table 6. Information and interpretation qualifiers for the Blue Wildebeest (*Connochaetes taurinus taurinus*) assessment

Data sources	Field study (unpublished)
Data quality (max)	Estimated
Data quality (min)	Estimated
Uncertainty resolution	Best estimate
Risk tolerance	Evidentiary

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Details of the methods used to make this assessment can be found in *Mammal Red List 2016: Introduction and Methodology.*