Country Profile

Republic of Angola

Giraffe Conservation Status Report

May 2020

General statistics

Size of country: 1,246,700 km²

Size of protected areas / percentage protected area coverage: 12.58%

Species and subspecies

In 2016 the International Union for the Conservation of Nature (IUCN) completed the first detailed assessment of the conservation status of giraffe, revealing that their numbers are in peril. This was further emphasised when the majority of the IUCN recognised subspecies where assessed in 2018 – some as *Critically Endangered*. While this update further confirms the real threat to one of Africa's most charismatic megafauna, it also highlights a rather confusing aspect of giraffe conservation: how many species/subspecies of giraffe are there? The IUCN currently recognises one species (*Giraffa camelopardalis*) and nine subspecies of giraffe (Muller *et al*. 2016) historically based on outdated assessments of their morphological features and geographic ranges. The subspecies are thus divided: Angolan giraffe *(G. c. angolensis),* Kordofan giraffe *(G. c. antiquorum),* Masai giraffe (*G. c. tippleskirchi*), Nubian giraffe *(G. c. camelopardalis),* reticulated giraffe *(G. c. reticulata),* Rothschild's giraffe *(G. c. rothschildi),* South African giraffe (*G. c. giraffa),* Thornicroft's (*G. c. thornicrofti*) and West African giraffe *(G. c. peralta).*

However, over the past decade GCF together with their partner Senckenberg Biodiversity and Climate Research Centre (BiK-F) have performed the first-ever comprehensive DNA sampling and analysis (genomic, nuclear and mitochondrial) from all major natural populations of giraffe throughout their range in Africa. As a result, an update to the traditional taxonomy now exists. This study revealed that there are four distinct species of giraffe and likely six subspecies (Fennessy *et al.* 2016; Winter *et al.* 2018). The four species are Masai giraffe (*G. tippelskirchi*), northern giraffe (*G. camelopardalis*), reticulated giraffe (*G. reticulata*) and southern giraffe (*G. giraffa*). Nubian giraffe (*G. c. camelopardalis*), Kordofan giraffe (*G. c. antiquorum*), West African giraffe (*G. c. peralta*) are the three subspecies of the northern giraffe, while Angolan giraffe (*G. g. angolensis*) and South African giraffe (*G. g. giraffa*) fall under the southern giraffe. Rothschild's giraffe is genetically identical to the Nubian giraffe, and thus subsumed into it. Similarly, Thornicroft's giraffe is genetically similar to the Masai giraffe, and as such considered a separate subspecies of the Masai giraffe (*G. t. thornicrofti*) (Winter *et al.* 2018). Based on this research, GCF in all publications refers to the updated giraffe taxonomy of four species, while a taxonomy review by the IUCN is ongoing.

The following species and subspecies of giraffe occur in Angola:

Species: Southern giraffe *Giraffa giraffa*

Subspecies: Angolan giraffe *Giraffa giraffa angolensis,* (formerly *Giraffa camelopardalis angolensis*)

South African giraffe *Giraffa giraffa giraffa,* (formerly *Giraffa camelopardalis giraffa*)

Conservation Status

IUCN Red List (IUCN 2018):

Giraffa camelopardalis (as a species) – Vulnerable (Muller *et al.* 2016)

Giraffa giraffa (as a species) – Not Assessed

Giraffa giraffa angolensis – Least Concern (Marais *et al.* 2018) – assessed as *G. c. angolensis*

Giraffa giraffa giraffa – Not Assessed

In the Republic of Angola:

Giraffe in the Republic of Angola (referred to as Angola in the rest of this report) are awarded full protection by the Combined Executive Decree No. 201/16 of 26 April 2016 (Governo de Angola 2016) issued by the Ministry of Agriculture and the Ministry of Finances. This decree was approved to provide an updated list of species (including giraffe) that cannot be hunted in the country and those that can be hunted during the hunting season and require an appropriate license. The Angolan Red List published in 2018 considers the Angolan giraffe as an Endangered species (Ministério do Ambiente 2018).

Issues/threats

Angola was ravaged by protracted armed conflicts for more than four decades: 14 years of liberation struggle (1961-1974) were followed by 27 years of civil war (1975-2002; The World Factbook - Central Intelligence Agency 2019; Russo *et al.* 2003). These extended periods of war have not only caused great suffering to people, but also severely impacted wildlife (The Wild Foundation 2013; Kumleben 1996). The widespread presence of land-mines caused injury and death to humans and wildlife alike and inhibited access to land throughout much of the country (Russo *et al.* 2003). National parks were abandoned and, without adequate administration and management, infrastructure lapsed into a state of degradation (Kuedikuenda & Xavier 2009; NFRA 2009). During this time, national parks were invaded and occupied by local people from the surrounding areas (Kuedikuenda & Xavier 2009; NFRA 2009). Bush meat provided a critical source of food for the poor and illegal hunting reached alarming proportions (The Wild Foundation 2013; NFRA 2009; NBSAP 2007). Although most of Angola's natural habitats remained relatively intact, wildlife populations were severely overexploited to the point of depletion, especially in the Cuando Cubango Province (Kuedikuenda & Xavier 2009; NFRA 2009; USAID 2008; Russo *et al.* 2003; Kumleben 1996), and giraffe were assumed to have gone extinct in the country (East 1999).

The overexploitation of resources and loss of habitat remain major threats to biodiversity in Angola (Kuedikuenda & Xavier 2009; Russo *et al.* 2003). There is excessive human pressure on natural resources in areas where large numbers of internally displaced people have settled (Russo *et al.* 2003). Most of the population lives below the poverty line and depends on natural resources for their livelihoods (NBSAP 2007). Logging for firewood, charcoal, wood production, uncontrolled bush burning, and illegal hunting have and continue to lead to biodiversity loss and environmental degradation (Sheeman & Yong 2010; Kuedikuenda & Xavier 2009; NBSAP 2007). Diamond and oil exploitation pose additional threats to the Angolan environment (Kuedikuenda & Xavier 2009; Russo *et al*. 2003).

Today, the impact of anthropogenic activities is notable in all national parks (Kuedikuenda & Xavier 2009; USAID 2008). Although the level of destruction remains unclear, wildlife populations are in dire condition and

there is an urgent need for collecting data on the status of the country's biodiversity (Kuedikuenda & Xavier 2009; NFRA 2009; USAID 2008; NBSAP 2007).

Since the war has ended, the Government of Angola has made a concerted effort to re-invigorate some of the national parks through infrastructure renovation, re-introduction of wildlife populations and the training of managers and game guards (Kuedikuenda & Xavier. 2009). In 2000, Kissama (synonymous Quiçama) National Park was re-established as the first, post-civil war national park and eco-tourism destination in Angola (The Wild Foundation 2013; Goertz 2012). Since illegal hunting left the park largely devoid of wildlife, large scale re-introductions of wildlife occurred in 2002 (The Wild Foundation 2013; Goertz 2012). Initially, South African giraffe were translocated from South Africa and re-introduced (extra-limital) into Kissama National Park (R. Goertz pers. comm.). More recently, South African giraffe have naturally re-populated areas in the country's southeast from Namibia's Bwabwata National Park. Additionally, Angolan giraffe have been (re-)introduced from Namibia to private conservation land, however no detailed and comprehensive records of these movements are available (Marais *et al.* 2018).

The greatest threat to Kissama National Park and its wildlife continues to be poor institutional capacity (NBSAP 2007). A lack of financial, human and logistical resources and infrastructure, as well as authority to safeguard Kissama National Park hinder efficient management (Goertz 2010; Kuedikuenda & Xavier 2009; NBSAP 2007). Although environmental control over the park has improved over the last decade, there is still a lack of trained field rangers (Goertz 2012). The construction of two national roads through the park has resulted in habitat fragmentation (Kuedikuenda & Xavier 2009) and developments such as shrimp farming, cultivation, oil production, charcoal production, livestock grazing, and human encroachment all pose additional threats to the environmental integrity of the Park (USAID 2008). Iona National Park, located in the southwest region of Angola and is Angola's third largest national park, faces similar problems due to overall lack of infrastructure and finances to support well trained personnel (Torchia 2017).

In Angola's southeast Cuando Cubango Province, giraffe have relatively recently and naturally, re-populated the Luengue-Luiana and Mavinga National Parks from Namibia (Funston *et al.* 2017). These two parks form a part of the Angolan portion of the Kavango Zambezi (KAZA) Transfrontier Conservation Area (TFCA) (NBSAP 2020), a valuable conservation regional network encompassing the regions of Namibia, Botswana, Zambia, and Zimbabwe in addition to Angola (Torchia 2017). The largest threat posed to wildlife conservation within both parks, more so Mavinga National Park, is the illegal bushmeat market and rampant elephant poaching (Funston *et al.* 2017). Combined with a high percentage of human encroachment, illegal diamond mining and logging operations, both parks face a significant uphill battle for wildlife populations and the general ecosystems (Funston *et al.* 2017; Torchia 2017).

Tourism remains an emerging prospect for both parks following the end of the conflict in 2002. Multiple areas within Luengue-Luiana National Park have been identified for potential tourism markets (such as lodges, campsites, off road activities) (Funston *et al.* 2017). Mavinga National Park has a higher density of human settlements, making for limited opportunities, but still multiple sites have been proposed for possible tourist venues (Funston *et* al. 2017). However, the land in and around both parks is still riddled with explosives left over from the civil war, requiring continued de-mining operations to make the parks safe before serious tourism options can be explored (Torchia 2017).

Estimate population abundance and trends

Historic

Giraffe formerly occurred in the mopane and acacia savannas of southern Angola (East 1999). According to Crawford-Cabral & Verissimo (2005), the historic distribution of the species presented a discontinuous range with two, reputedly separated, populations. Initially Crawford-Cabral & Verissimo (2005) documented one of these populations, the eastern-most, to possibly represent the (sub)species *G. c. infumata*. However, Dagg's (1971) review of giraffe (sub)speciation showed that *G. c. infum*ata was in fact synonymous with the Angolan giraffe, *G. g. angolensis*. Based on the recent genetic findings of Fennessy et al. (2016) and Winter et al. (2018), it is likely that Crawford-Cabral & Verissimo (2005) and Dagg's (1971) review were both inaccurate in such that the giraffe in eastern Angola were actually the South African giraffe subspecies (*G. g. giraffa*) which naturally move into and out of the area from neighbouring Namibia and Botswana. This new study further supports that it is likely both subspecies (Angolan and South African) historically existed in Angola (Fennessy *et al*. 2016). The Okavango, Cuito and Kwando Rivers all acted as barriers for east-west movements of giraffe within Angola and the neighbouring countries.

The western-most population extended from the upper course of the Curoca River through Otchinjau to the banks of the Kunene (synonymous Cunene) River, and through Cuamato and the Mupa area further north (Crawford-Cabral & Verissimo 2005). The intention of protecting this western population of Angolan giraffe, which was located 240km south-west of Humbe (Lydekker 1904), led to the proclamation of Mupa National Park (P. Vaz Pinto pers. comm.; Crawford-Cabral & Verissimo 2005). The eastern population occurred between the Cuito and Cuando Rivers, with larger numbers of records from the southeast corner of the former Mucusso Game Reserve (Crawford-Cabral & Verissimo 2005).

Dagg (1962) reported that giraffe were relatively abundant in the Mupa and Cafima areas in the south-west, and between Mucusso and Luiana in the south-east. In the late 1960s, a few hundred giraffe reportedly survived in the Mupa National Park/Cafima area in the south-west and the Mucosso area in the south-east (East 1999). By the mid-1970s, giraffe populations had severely declined in numbers, with only approx. 50 individuals remaining in the Mucusso Game Reserve, 30 in the Chimporo/Cafima area and seven in Mupa National Park (Crawford-Cabral & Verissimo 2005). By the early 1980s giraffe had largely disappeared from these areas and by the late 1990s giraffe were assumed to be extinct in Angola (East 1999). In 2001, four South African giraffe were translocated from Madikwe National Park in South Africa and introduced into Angola's Kissama National Park, south of the capital Luanda (R. Goetz pers. comm.). This extra-limital population increased to 11 individuals by 2008 (The Wild Foundation 2013.)

According to Kuedikuenda & Xavier (2009), a small population of Angolan giraffe still occurred in Mupa National Park. However, no census data exist to substantiate this claim and as the park was ravaged by poachers and refugees, it is generally accepted that giraffe became extinct there (Kissama Foundation 2013; East 1999; P. Vaz Pinto pers. comm.).

Current

South African giraffe numbers in Kissama National Park have increased to 44 individuals in 2018 (Groom *et al.* 2018). A study conducted by Panthera in 2017 on the distribution of large carnivores throughout the Luengue-Luiana and Mavinga National Parks revealed evidence of regular trans-boundary movements of South African giraffe between Namibia's Bwabwata National Park and Angola's Cuando Cubango Province (Funston *et al.* 2017). There is also several South African giraffe in the Luengue-Luiana National Park which re-populated the area naturally. This population is closely monitored by the Angolan Ministry of Environment

(Angola Press 2018). The South African giraffe population is currently estimated at <200 individuals throughout the country, including those in their extra-limital range in Kissama National Park (Marias *et al.* 2018; Funston *et al.* 2017).

With respect to Angolan giraffe, several private game farms have (re-)introduced them into Angola from Namibia. As an example, one private game farm just south of Bicuar National Park (re-)introduced eight giraffe from Namibia in 2003 and the population has increased marginally, though the current number of individuals is unknown (M. Finckh pers. comm.) Some anecdotal reports suggest that Angolan giraffe may still survive in the eastern part of Mupa National Park, while others familiar with the area seem certain that there are no giraffe remaining (P. Vaz Pinto pers. comm.). The Angolan giraffe population is currently estimated at <50 individuals throughout the country (Marais *et al.* 2018).

While there is still uncertainty on the prevalence of giraffe in the rest of the country, recent surveys focusing on other species in the southern part of the country have opened avenues for pursuing further research on giraffe populations in Angola.

Future Conservation Management

The following are proposed conservation management options for giraffe in Angola:

- Greater understanding of southern giraffe population numbers, range and conservation status across the country;
- Continued population (re-)introduction and/or supplementation of southern giraffe to areas within the country;
- Anti-poaching efforts to conserve the current populations in country;
- GPS satellite tagging of giraffe in south-east Angola to better understand movements and spatial ecology;
- Support for dedicated giraffe conservation, habitat protection, education and awareness initiatives in country (government, NGO and academic);
- Development of a National Giraffe Conservation Strategy and Action Plan for Angola; and
- Development of a Kavango Zambezi (KAZA) Transfrontier Giraffe Conservation Strategy and Action Plan for the region.

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Map


Southern giraffe (Giraffa giraffa)
Angolan giraffe (G. g. angolensis)
South African giraffe (G. g. giraffa)
Protected areas
Democratic Republic of Congo
M'banza Congo
Chitato
Atlantic Ocean
Luanda
Milando
N'dalatando
Malanje
Kissama
Luando
Kamela
Luena
Lobito
Kuito
Benguela
Huambo
Angola
Lubango
Namibe
Chiume
Zambia
Bicuar
Mavinga
Namibe
Mupa
Iona
Luengue-Luiana
Namibia
Botswana
Angola
GCF
Giraffe Conservation Foundation
Kilometres
0
145
290
580