

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



Seventeenth meeting of the Conference of the Parties
Johannesburg (South Africa), 24 September – 5 October 2016

CONSIDERATION OF PROPOSALS FOR AMENDMENT OF APPENDICES I AND II

A. Proposal

Inclusion of ***Capra caucasica*** in Appendix II, in accordance with Article II, paragraph 2 of the Convention and satisfying Criterion B in Annex 2a of Resolution Conf. 9.24 (Rev. CoP16), with a zero quota for wild-taken *Capra caucasica caucasica* exported for commercial purposes or as hunting trophies.

B. Proponent

The European Union and Georgia *

C. Supporting statement

1. Taxonomy

- | | |
|--|---|
| 1.1 Class: | Mammalia |
| 1.2 Order: | Artiodactyla |
| 1.3 Family: | Bovidae |
| 1.4 Genus, species or subspecies, including author and year: | <i>Capra caucasica</i> (Güldenstädt & Pallas, 1783). Three subspecies are recognised: <i>Capra caucasica caucasica</i> Güldenstädt & Pallas, 1783), <i>Capra caucasica cylindricornis</i> (Blyth 1841), <i>Capra caucasica severtzovi</i> (Menzbier, 1887). |

The CITES standard nomenclature (Wilson and Reeder, 2005), follows Sokolov and Tembotov's (1993) classification of three subspecies within *Capra caucasica*, although there is considerable debate regarding the taxonomy of this species. Wilson and Reeder (1993) recognised *Capra caucasica* and *Capra cylindricornis* as separate species, noting that *Capra caucasica* may be a prior name for *Capra cylindricornis*, in which case *Capra caucasica* should be termed *severtzovi*.

Two separate taxa are widely referred to in the literature; *Capra caucasica* (Western Tur) and *Capra cylindricornis* (Eastern Tur). According to Weinberg (*in litt.* to UNEP-WCMC, 2016a) there are only two taxa according to traditional opinion, East Caucasian Tur (*Capra cylindricornis*) and West Caucasian Tur (*Capra caucasica* or *Capra severtzovi*). There is still uncertainty as to whether or not *Capra caucasica* and *Capra cylindricornis* are two separate species, or are a single species with geographically dependent

* *The geographical designations employed in this document do not imply the expression of any opinion whatsoever on the part of the CITES Secretariat (or the United Nations Environment Programme) concerning the legal status of any country, territory, or area, or concerning the delimitation of its frontiers or boundaries. The responsibility for the contents of the document rests exclusively with its author.*

variability (Weinberg, 2008a, 2008b). A hybridization zone between the subspecies may occur where their ranges overlap between Mt. Elbrus and Mt. Kazbegi in the Russian Federation (Gavashelishvili, 2004).

This proposal does not refer further to *Capra caucasica severtzovi*, which is regarded a synonym of *C. c. caucasica*. The taxonomy used within the reference sources referred to hereafter is denoted within square brackets.

1.5 Scientific synonyms:

- 1.6 Common names:
- | | |
|----------|---|
| English: | <i>Capra caucasica caucasica</i> : Western Tur/Kuban Tur.
<i>Capra caucasica cylindricornis</i> : Eastern Tur /Daghestan Tur |
| French: | <i>Capra caucasica caucasica</i> : Bouquetin de Caucase
<i>Capra caucasica cylindricornis</i> : Bouquetin du Daghestan |
| Spanish: | <i>Capra caucasica caucasica</i> : Tur del Cáucaso occidental
<i>Capra caucasica cylindricornis</i> : Tur del Cáucaso oriental |
| German: | <i>Capra caucasica caucasica</i> : Westkaukasischer Steinbock
<i>Capra caucasica cylindricornis</i> : Dagestan-Tur |

1.7 Code numbers:

2. Overview

Capra caucasica is a wild goat endemic to the Caucasus Mountains in Azerbaijan, Georgia and the Russian Federation.

C. c. caucasica [*C. caucasica*] is assessed by the IUCN as Endangered and *C. c. cylindricornis* [*C. cylindricornis*] is assessed as Near Threatened (Weinberg, 2008a, 2008b). Both subspecies are reported to have undergone population declines, with the decline most pronounced for *C. c. caucasica* (over 50% in the last three generations). The estimated population of *C. c. caucasica* remains low (c. 5000 individuals) compared to an estimated 12,000 individuals in the 1980's. Whilst the population of *C. c. cylindricornis* declined by over 30% from the late 1970's to the late 1980's, there has been some recovery.

Trophy hunting of *C. caucasica* occurs in the Russian Federation and Azerbaijan and hunting by local groups is reported to occur in Georgia despite prohibition of hunting of the species in the country. The scale of hunting and illegal trade of the species across its range is unknown. The species has a low productivity rate (males reach sexual maturity at 4 or 5 years with females at 3 years; gestation is 165-175 days; usually a single kid is produced, a large number of females are barren every year, and mortality of offspring is 50% in the first year) and is therefore vulnerable to the impacts of trade.

The species may be affected by trade according to the definition in Annex 5 ii), and qualifies for inclusion in Appendix II by satisfying the following criteria of Annex 2a of Resolution Conf. 9.24 (Rev. CoP16):

- B. It is known, or can be inferred or projected, that regulation of trade in the species is required to ensure that the harvest of specimens from the wild is not reducing the wild population to a level at which its survival might be threatened by continued harvesting or other influences.

A zero quota is proposed for wild populations of the Endangered subspecies *C. c. caucasica* for commercial purposes or hunting trophies to ensure that international trade does not further threaten the survival of this subspecies.

3. Species characteristics

3.1 Distribution

Capra caucasica caucasica [*Capra caucasica*] is endemic to the western Caucasus Mountains, in the north west of Georgia and the south west of the Russian Federation, occurring in high montane forests between the Chugish Mountain and the upper Baksan River (Weinberg *et al.*, 1997). The total range of *C. c. caucasica* [*C. caucasica*] is estimated to be 250 km in length and up to 70 km in width (Wilson and Mittermeier, 2011). The range of *C. c. cylindricornis* [*C. cylindricornis*] is restricted to the eastern part of the Great Caucasus, from Mt. Shkhara in Georgia to around 10km east of Mt. Babadagh in Azerbaijan (Gavashelishvili, 2004; Weinberg *et al.*, 1997). According to Weinberg

(2008b), the range of *C. c. cylindricornis* [*C. cylindricornis*] begins around the headwaters of the Baksan River east of Mt. Elbrus (Russian Federation) and extends 600 km eastward along the slopes of the Greater Caucasus to Babadagh, with a distribution width of up to 70 km in Daghestan (Russian Federation) and around 12 km at its narrowest in North Ossetia (Russian Federation).

Within the Russian Federation, *C. c caucasica* [*C. caucasica*] occurs in several protected areas and hunting reserves (Avaliani *et al.*, 2007), including Prielbrusye National Park (Pkhitikov and Tembotova, 2014), Teberda Nature Reserve (Weinberg, 2008a), Kabardin-Balkarian Nature Reserve, and the Caucasus [Kavkazsky] Nature Reserve (Wild Russia, 2012). *C. c. cylindricornis* [*C. cylindricornis*] was reported to occur in the Kabardin-Balkarian [Kabardino-Balkarsky] and North-Ossetian Nature Reserves (Weinberg, 2008b).

In Georgia, *C. c. caucasica* [*C. caucasica*] was reported to occur in Svaneti in the northwest of the country, and was considered likely to occur in Racha in the west (near its border with Svaneti) and in Abkhazia (Ritsa Nature Reserve) in the north-west (Kopaliani and Gurielidze, 2009). Over a third of the range for *C. c. caucasica* [*C. caucasica*] was reported to occur in Georgia (Avaliani *et al.*, 2007). Baskin and Danell (2003) reported that *C. c. caucasica* [*C. caucasica*] occurred almost exclusively within nature reserves.

C. c. cylindricornis [*C. cylindricornis*] was reported to occur in the eastern region of Kakheti at Lagodekhi (Strict Nature Reserve) and in the Tusheti Protected Areas (north-eastern Georgia) (Kopaliani and Gurielidze, 2009; Gurielidze *in litt.* to UNEP-WCMC, 2016c). It was also reported from the Mtskheta-Mtianeti region, in Pshavi, Khevsureti, and Khevi (Kopaliani and Gurielidze, 2009) as well as within Kazbegi Nature Reserve (Weinberg, 2008b). Gurielidze (*in litt.* to UNEP-WCMC, 2016b) reported that the overall area of occurrence within Georgia was 200,000 ha.

In Azerbaijan, *C. c. cylindricornis* [*C. cylindricornis*] was reported to occur in a number of protected areas including the Zaqatala Nature Reserve, the Ilisu Nature Reserve with Kakh sanctuary and Ismailly Nature Reserve and Ismailly Sanctuary, and the newly founded Shakhdagh National Park (Weinberg, 2008b).

3.2 Habitat

Weinberg (2008a) reported that the habitat and ecology of *C. c. caucasica* [*C. caucasica*] and *C. c. cylindricornis* [*C. cylindricornis*] “do not differ noticeably”. *C. c. caucasica* [*C. caucasica*] has been reported to occur within “forest-covered slopes, often near rocky crags” (Weinberg, 2004 in Huffman, 2006) between altitudes of 800 and 4000 m in subalpine and alpine regions (Heptner *et al.*, 1989). The permanent snow line was reported to limit the species distribution above 3,000 m (Gurielidze *in litt.* to UNEP-WCMC, 2016). In winter, *C. c. caucasica* [*C. caucasica*] were reported to descend to altitudes below 250 m to forests in the lower alpine zone (Heptner *et al.*, 1989). Outside of the snowy season, *C. c. caucasica* [*C. caucasica*] were reported to rarely live in forests predominantly comprised of fir and spruce (Weinberg, 2008a). Bobyr (2002) reported that *C. c. caucasica* [*C. caucasica*] are more likely to stay in forests where pine is more abundant. During harsh winters, *C. c. caucasica* [*C. caucasica*] has been reported to keep to open slopes, with 30-80% of animals reported to stay below the timberline (Weinberg, 2004 in Huffman, 2006). Adult males have been found at higher altitudes and in less accessible locations than females and juveniles (Avaliani *et al.*, 2007; Weinberg, 2004 in Huffman, 2006). Some herds were reported to travel between 10 and 12 km between mountains (Wilson and Mittermeier, 2011).

3.3 Biological characteristics

Heptner *et al.* (1989) reported that female *C. c. caucasica* [*C. caucasica*] reach sexual maturity at two years but may not breed at that age, while males do not breed until aged four or five. Wilson and Mittermeier (2011) reported that females of *C. c. caucasica* [*C. caucasica*] and *C. c. cylindricornis* [*C. cylindricornis*] usually first give birth at three or four years of age, although Heptner *et al.* (1989) noted that a “fairly large number” of adult female *C. caucasica* [*C. caucasica* and *C. cylindricornis*] “remain barren every year”. Male *C. c. caucasica* [*C. caucasica*] are reported to rut from November to early January (Heptner *et al.*, 1989) and defend a single oestrous female (Wilson and Mittermeier, 2011). Length of gestation was reported to vary between 150-160 days (Heptner *et al.*, 1989) to 165-175 days (Wilson and Mittermeier, 2011), with births of a single kid in May-July (Weinberg, 2008a; Wilson and Mittermeier, 2011). Heptner *et al.* (1989) reported that females give birth in accessible areas and are secluded for the first 10 days after birth. Kotov (1968 in Baskin and Danell, 2003) reported that mortality of kids was around 50% in their first month. The mean life span of

C. c. caucasica [*C. caucasica*] was reported to be 14-15 years, although individuals may live more than 20 years (Sokolov and Tembotov, 1993 in Onipchenko, 2004); however, Heptner *et al.* (1989), reported that in the wild, most individuals of *C. caucasica* [*C. caucasica* and *C. cylindricornis*] die before the age of 10-12 years.

In the winter, *C. c. caucasica* [*C. caucasica*] feeding was reported to take place mainly during the day, but in the summer feeding begins earlier in the day, with the first peak feeding time from 3am and the last peak feeding time ending at 9pm (Wilson and Mittermeier, 2011).

3.4 Morphological characteristics

C. caucasica (including *C. c. caucasica* and *C. c. cylindricornis*) is sexually dimorphic, with males having a larger body size than females (Avaliani *et al.*, 2007; Castelló, 2016).

Weinberg *et al.* (2010) compared specimens of *Capra* spp. from different geographic locations and found almost all traits studied displayed clineal east-west variation, including the index of spiralling of male horns and the cross section of the base of the horns. Descriptions of *C. c. caucasica* [*C. caucasica*] and *C. c. cylindricornis* [*C. c. cylindricornis*] showing features that differ between the subspecies are provided in Table 1.

Table 1. Morphological differences between *C. c. caucasica* and *C. c. cylindricornis*

	<i>C. c. caucasica</i>	<i>C. c. cylindricornis</i>
Male weight	65-80 kg and up to 100 kg ^(1,2)	100-143 kg ⁽²⁾
Male body length	150-165 cm ^(1,2)	178-192 cm ⁽²⁾
Female weight	50-60 kg ^(1,2)	48-64 kg ⁽¹⁾
Female body length	120-140 cm ^(1,2)	135-141 cm ⁽²⁾
Horns	“Horns grow upwards and backwards” ⁽³⁾ Male horns “diverge in a wide V from their base”, with deep ridges on the front and weighing up to 1.8 kg ⁽¹⁾ Females have thinner horns that are generally less than 30 cm in length and 10 cm circumference at the base ^(1,4)	Horns grow upwards and sideways ⁽³⁾ Horns are smooth, rounded, and spiralled and are larger than the horns of <i>C. c. caucasica</i> [<i>C. caucasica</i>] ^(1,2) The skull of <i>C. c. cylindricornis</i> [<i>C. cylindricornis</i>] does not have a bulge below the horns ⁽²⁾
Coat	Varies between the seasons, moulting in March to mid-June ⁽¹⁾ . The summer coat is described as varying between dirty yellow, rusty grey and reddish-brown, with the legs dark brown on the front and white on the back ^(1,3) . Males have a darker forehead than rest of their body ⁽³⁾ . The winter coat is darker than the summer coat, described as greyish brown, and males have long curly hair on their forehead ^(1,4)	The coat of males varies between seasons, from chestnut brown in the winter with light underparts to a light rusty brown colour in summer ⁽²⁾ . The coat of females and juveniles remains the same year round, described as ‘sandy yellow with a whitish ventral body’ and a dark brown stripe on the front of the legs ⁽²⁾ .
Beard	Both males and females have beards which are longer and denser in the winter than the summer ⁽⁴⁾ . The beard is longer than in <i>C. c. cylindricornis</i> ⁽³⁾	Males have a short beard ‘directed slightly forward’ which is denser in the winter ⁽²⁾ .

1. Heptener *et al.* 1989; 2. Castelló, 2016; 3. Weinberg *et al.*, 2010; 4. Avaliani *et al.*, 2007.

Wilson and Mittermeier (2011) reported that *C. c. caucasica* [*C. caucasica*] and *C. c. cylindricornis* [*C. cylindricornis*] are morphologically distinct and are easily recognisable in the field.

3.5 Role of the species in its ecosystem

C. caucasica [*C. caucasica*] are herbivorous (Heptner *et al.*, 1989); they graze in summer and browse in winter and have been reported to feed on over a hundred species of plants (Weinberg, 2008a). Heptner *et al.* (1989) reported that *C. c. caucasica* [*C. caucasica*] were preyed upon by wolf (*Canis lupus*) and lynx (*Lynx lynx*) and leopard (*Panthera pardus*), which has become rare in the Caucasus while *C. c. cylindricornis* [*C. cylindricornis*] is also reportedly hunted by golden eagle (*Aquila chrysaetos*) (Magomedov *et al.*, 2001 in Gavashelishvili, 2004) and bearded vulture (*Gypaetus barbatus*) (Veinberg *et al.*, 1983 and Gavashelishvili and McGrady, 2000 in Gavashelishvili, 2004).

4. Status and trends

4.1 Habitat trends

Avaliani *et al.* (2007) reported that habitats for *C. c. caucasica* [*C. caucasica*] were degraded. Excessive grazing by livestock has been cited as a threat to *C. caucasica* (*C. c. caucasica* and *C. c. cylindricornis*) as it leads to a decrease in biomass of the pastures, as well as causing erosion that can lead to landslides and avalanches (Kopaliani and Gurielidze, 2009). The species was reported to have migrated to higher altitude in response to the expansion of human populations and to climate change (Avaliani *et al.*, 2007).

4.2 Population size

The population of *C. c. caucasica* [*C. caucasica*] was estimated in 2004 at 5000-6000 individuals across the range (Weinberg, 2004 in Weinberg, 2008a). The IUCN assessment in 2008 considered that the population may be lower; 4000-6000 mature individuals were estimated (Weinberg, 2008a). Whilst the population of *C. c. cylindricornis* [*C. cylindricornis*] was estimated at 18,000-38,000 mature individuals in 2008 based on published data (Weinberg, 2008b), these figures are now regarded as an overestimate (Weinberg *in litt.* to UNEP-WCMC, 2016b).

The current total population was estimated by Weinberg (*in litt.* to UNEP-WCMC, 2016a) to be no less than 5000 for *C. c. caucasica* [*C. caucasica*] and around 39,000-40,000 for *C. c. cylindricornis* [*C. cylindricornis*].

In Georgia, Weinberg (*in litt.* to UNEP-WCMC, 2016a) estimated 5000 individuals within the country, comprising 4000 *C. c. cylindricornis* [*C. cylindricornis*] and 1000 *C. c. caucasica* [*C. caucasica*]. Gurielidze (2016a; 2016b, *in litt.* to UNEP-WCMC) provided a population estimate of 100-150 individuals for *C. c. caucasica* and reported that the population of *C. c. cylindricornis* [*C. cylindricornis*] was 3316 individuals in 2014.

Within the Russian Federation, the population of *C. caucasica* was estimated to be around 32,000 individuals, with the majority (around 28,000) comprising the subspecies *C. c. cylindricornis* [*C. cylindricornis*] (Weinberg, *in litt.* to UNEP-WCMC, 2016a). This figure includes 11,000 in Daghestan, not less than 3000 in North Ossetia, around 12,000-13,000 in Kabardin-Balkaria (where the population was considered “abundant”), and an estimate of around 1500 for Chechnya and Ingushetia. For *C. c. caucasica*, the population in Karachay-Cherkessia, Adygeya and Krasnoar Kray, which includes Caucasus Nature Reserve and Teberda Nature Reserve, was estimated to be around 4000 (Weinberg, *in litt.* to UNEP-WCMC 2016a). Few *C. c. caucasica* [*Capra caucasica*] were reported to occur in areas outside of the Caucasus Nature Reserve (Weinberg, *in litt.* to UNEP-WCMC 2016a).

The population of Azerbaijan (*C. c. cylindricornis*) was estimated to be 7,000-8,000 individuals (Weinberg, *in litt.* to UNEP-WCMC, 2016a).

4.3 Population structure

Heptner *et al.* (1989) and Veinberg (1984 in Weinberg, 2008b) reported that adult male and female *C. caucasica* [*C. c. caucasica* and *C. c. cylindricornis*] live separately, but form mixed herds at the time of the rut and for one to two months afterwards. Seasonal-migrations of *C. c. cylindricornis* [*C. cylindricornis*] were reported ‘to rarely exceed 5km’ (Veinberg, 1984 in Weinberg, 2008b), but can be up to 15 km in heavy snows (Wilson and Mittermeier, 2011). Seasonal migrations between higher summer ranges and lower winter ranges were also reported for *C. c. caucasica* [*C. caucasica*] and

C. c. cylindricornis [*C. cylindricornis*], with a change in altitude of 1,500-2,000 m (Heptner *et al.*, 1989).

The average group size of *C. c. caucasica* [*C. caucasica*] was reported to be 11-20 individuals, where populations consisted of several thousand (Wilson and Mittermeier, 2011), with the maximum group size reported to be 300 individuals (Baskin and Danell, 2003; Wilson and Mittermeier, 2011) in high-density populations (Wilson and Mittermeier, 2011). In 1963, the average group size of *C. c. caucasica* [*C. caucasica*] in the winter was reported to be 12, increasing to 20 individuals in the summer (Kotov, 1968 in Baskin and Danell, 2003). The composition of herds is variable (Baskin 1976, in Baskin and Danell, 2003) and individuals may interchange between groups (Wilson and Mittermeier, 2011). In populations of 1300-2700 individuals of *C. c. caucasica* [*C. caucasica*], population densities of three to six individuals/km² were reported (Wilson and Mittermeier, 2011). In the early 1960s, in the Caucasus Nature Reserve, population densities were reported as 13 individuals/km² in the summer and greater than 44 individuals/km² in the winter (Wilson and Mittermeier, 2011).

Population densities of *C. c. cylindricornis* [*C. cylindricornis*] were reported to vary between 1.5-1.7 individuals/km² up to 66 individuals/km² in wintering areas (Wilson and Mittermeier, 2011), although the latter was considered abnormally high (Veinburg, 1984 in Weinburg, 2002). The average group size of *C. c. cylindricornis* [*C. cylindricornis*] was reported to be 7.4 individuals, but may vary from 5.8 in winter to 9.5 in summer, with herds of up to 300 individuals in high-density populations (Wilson and Mittermeier, 2011). Gurielidze (2016b, *in litt.* to UNEP-WCMC) reported that in Georgia, the average sex ratio was 1 male: 2.94 females. According to Weinburg (2002), four social groups of *C. c. cylindricornis* [*C. cylindricornis*] can be distinguished: adult male groups; young male groups; female groups, which may include young males; and mixed groups with at least one adult male and female.

4.4 Population trends

Capra c. caucasica

C. c. caucasica [*Capra caucasica*] was listed as Endangered by the IUCN Red List in 2008 as a result of a "serious population decline" (Weinberg, 2008a). The Red List assessment inferred a decline of over 50% of the population over three generations due to the reduction in the number of mature adults in the population, especially due to over-harvesting (Weinberg, 2008a). Wilson and Mittermeier (2011) reported a "catastrophic decline" in the late 1980s and 1990s.

C. c. caucasica [*Capra caucasica*] was also listed on the Karachay-Cherkessia Red Data Book in the Russian Federation in 1998 (Weinberg, 2008a), and was classified as Critically Endangered on the National Red List of Georgia (Kopaliani and Gurielidze, 2009).

In the late 1980's, the total population of *C. c. caucasica* [*Capra caucasica*] was estimated at 12,000 individuals, although significant declines were reported in the mid-1990s - particularly due to poaching (Weinberg *et al.*, 1997). By 2001, estimates had declined to 6000-10,000 individuals (Krever *et al.*, 2001 in Weinberg, 2008a), and in 2004, to 5000-6000 (Weinberg, 2008a), with numbers suspected to be lower in 2008 (Weinberg, 2008a).

In the Russian Federation, the population of the Caucasus Nature Reserve was reported to have declined from 10,000-12,000 individuals in the early 1970's to 4000-6000 in the 1980's (Wilson and Mittermeier, 2011). It had further declined in the Caucasus Nature Reserve to 2500 (Romashin, 2001 in Weinberg, 2008a) and continued to decline, although the population reportedly grew from 600 in 2002 to 2000 in 2013 (Trepets, 2014 in Weinberg, *in litt.* to UNEP-WCMC, 2016a). Variation exists in estimates of population sizes; the figures estimated for the Caucasus Nature Reserve in the 1960's of 10,000-12,000 were re-calculated as around 7000 by Trepets (2014 in Weinberg, *in litt.* to UNEP-WCMC, 2016a) using the same counts.

The estimated population within Teberda Nature Reserve declined from 1750 individuals in 1982 to 1000 individuals in 2000 (Wilson and Mittermeier, 2011; Bobyr, 2002), but has since increased to an estimated 1500 in 2015 (J. Tekeyev, pers. comm. in Weinberg, *in litt.* to UNEP-WCMC 2016a).

In Georgia, the national population was reported to be around 2500 individuals in the late 1980's (Kopaliani and Gurielidze, 2009). In 2007, 1000 individuals were estimated in the Svaneti region

(Avaliani *et al.*, 2007; Weinberg, 2008a). Gurielidze (*in litt.* to UNEP-WCMC, 2016a) reported that the population of *C. c. caucasica* [*C. caucasica*] does not exceed 100-150 individuals.

Capra c. cylindricornis

C. c. cylindricornis [*C. cylindricornis*] was assessed as Near Threatened by the IUCN Red List in 2008, with a decreasing population trend (Weinberg, 2008b), however full details of the justification for Near Threatened were not available at the time of writing (April, 2016). It was previously assessed as Vulnerable in 1996, on the basis that the population was considered to be around 10,000 mature individuals and a decline of more than 10% over the following three generations was considered possible (Weinberg, 2008b). *C. c. cylindricornis* [*C. cylindricornis*] was listed as “Vulnerable” in the Georgian Red List (Flousek, *et al.*, 2013).

The total population of the subspecies *C. c. cylindricornis* [*C. cylindricornis*] was reported to have increased from the 1940's to 1960's, but it has subsequently declined (Weinberg, 2008b). In the late 1960's to early 1970's, the population was estimated to be 25,000-30,000 individuals (Kuliyev, 1981; Ravkin, 1975 in Weinberg, 2008b). By the late 1980's, the population had declined by more than 30% to an estimated 18,000-20,000 individuals (Weinberg *et al.*, 1997).

In Georgia, the population of *C. c. cylindricornis* [*C. cylindricornis*] was estimated to be 2000 in the late 1980's (Weinberg *et al.*, 1997). By 2006, the combined population within the Kazbegi, Tusheti and Lagodekhi Nature Reserves was estimated to be no less than 4000 individuals (NACRES, 2006 in Weinberg, 2008b) with few individuals outside these reserves (Weinberg, 2008b).

Surveys of *C. c. cylindricornis* in Tusheti in 2010 combined field surveys and GIS analysis to develop range maps for the species (Centre for Biodiversity Conservation and Research, 2010). Based on this range, direct counts, and a previously estimated density of 2.26 individuals/km² in Tusheti, the population in Tusheti was estimated to be 750 individuals (Centre for Biodiversity Conservation and Research, 2010). Kopaliani and Gurielidze (2009) also reported populations of 3000 individuals in in Khevi and around 1000 individuals in Khevsureti.

Gurielidze (2016b, *in litt.* to UNEP-WCMC) carried out aerial surveys of *C. c. cylindricornis* [*C. cylindricornis*] in Georgia in 2012, 2013 and 2014. It was found that the populations of Kazbegi, and Khevsureti appeared to be declining; the populations of Tusheti and the Lagodekhi Strict Nature Reserve appeared to fluctuate (Table 2).

Table 2. Results of aerial population surveys of *C. c. cylindricornis* [*C. cylindricornis*] in Georgia, based on Gurielidze (2016b, *in litt.* to UNEP-WCMC). Total survey length was 542 km (2013), 919 km (2014), and unspecified for 2012.

District and approx. species distribution area (ha).	Number of individuals surveyed / year		
	2012	2013	2014
Kazbegi (72,400)	1400	1134	802
Khevsureti (17,700)	230	192	100
Tusheti (99,600)	1400	3584	2135
Lagodekhi Strict Nature Reserve and surrounding area (7,350)	218	492	279
Totals	3248	5402	3316

In the Russian Federation, the population of *C. c. cylindricornis* [*C. cylindricornis*] in Daghestan was estimated to be 20,000 individuals in 2001 (Magomedov *et al.*, 2001 in Weinberg 2008b). However, based on the same data, one of the authors revised the population estimate in the Russian Federation to 11,000-13,000 (Yarovenko, pers. comm. in Weinberg *in litt.* to UNEP-WCMC, 2016a).

Despite a lack of protected areas, the population was considered to appear stable in Daghestan (Weinberg, *in litt.* to UNEP-WCMC 2016a).

A population of around 800 individuals was reported in the North-Ossetian Nature Reserve (Mallon *et al.*, 2007). This increased to 1000, with numbers in the North Ossetia-Alania Republic growing steadily since the 1990s, to not less than 3000 at present (Weinberg, *in litt.* to UNEP-WCMC 2016a).

An estimated 7000 individuals were reported from Kabardin-Balkaria Republic at the beginning of the 2000s (Akkiyev and Pkhitikov, 2007) although the taxonomic status of this population was unconfirmed (Weinberg, 2008b). Population growth has been apparent; the current population of *C. c. cylindricornis* [*C. cylindricornis*] in Kabardin-Balkaria was estimated to be 12,000-13,000 (Weinberg, *in litt.* to UNEP-WCMC 2016), although Akkiyev (pers. comm. to Weinberg, *in litt.* to UNEP-WCMC 2016a) suggested that over 16,000 were present (5000 in the Kabardin-Balkarian Nature Reserve, around 4500 in Prielbrusye National Park and over 5000 in State Game Economy).

In Azerbaijan, a population of 5301 *C. c. cylindricornis* [*C. cylindricornis*] was recorded in 2006-2007 on the south slope of the Greater Caucasus in Azerbaijan (Guliev *et al.*, 2009). The population within Zaqatala and Ilisu Nature Reserves collectively, was estimated to be around 4000 individuals (A. Muradov, pers. comm. in Weinberg, *in litt.* to UNEP-WCMC 2016a) and around 500 were reported from a partial survey of Shakdagh National Park in 2013 (Yarovenko, 2013, in Weinberg, *in litt.* to UNEP-WCMC 2016a). Current estimates of the species of 7000-8000 in Azerbaijan indicate an increase in population size, mostly outside of the Zaqatala and Ilisu Nature Reserves compared with the 2006-2007 estimates (Weinberg, *in litt.* to UNEP-WCMC 2016a).

4.5 Geographic trends

Wilson and Mittermeier (2011) and Weinberg (2008a) reported that *C. c. caucasica* [*C. caucasica*] was likely to have been extirpated from the Pskhu-Gumista and Ritsa Nature Reserves in Georgia. *C. c. cylindricornis* was reported to have been extirpated from the gorges of Intsoba, Chelti, Duruji, Bursa and Mtsidziri Rivers, all in Georgia (Gavashelishvili, 2004).

5. Threats

Poaching and illegal hunting of *C. caucasica* (including *C. c. caucasica* and *C. c. cylindricornis*) have been considered a threat by several authors (Weinberg *et al.*, 1997; Weinberg, 2002, 2008a, 2008b; Wilson and Mittermeier, 2011; Pkhitikov and Tembotova, 2014). Wilson and Mittermeier (2011) reported that this was due to poor enforcement of game laws. Weinberg (2008a, 2008b) considered that poaching was probably “the most significant cause of the recently observed serious declines” of the species [*C. caucasica* and *C. cylindricornis*]. Hunting was reported to affect over half of the range of *C. c. caucasica* and *C. c. cylindricornis* in Georgia (Kopaliani and Gurielidze, 2009). *C. c. cylindricornis* [*C. cylindricornis*] was reported to be heavily hunted for food by local communities (Weinberg, 2008b).

Hunting for *C. caucasica* [including *C. caucasica* and *C. cylindricornis*] is considered part of the cultural heritage in Svaneti, Tusheti and Khevsureti in Georgia, although this is primarily for domestic use (Kopaliani and Gurielidze, 2009; Avaliani *et al.*, 2007). Trophy hunting for *C. caucasica* is illegal and considered “disorganized” in Georgia, but was reported to be “very popular” in the Russian Federation (Avaliani *et al.*, 2007).

Other reported threats include loss and degradation of habitat (Kopaliani and Gurielidze, 2009), severe winters (Weinberg *et al.*, 1997), livestock grazing (Weinberg 2008a, 2008b) as well as disturbance from tourism (Kopaliani and Gurielidze, 2009).

6. Utilization and trade

6.1 National utilization

C. c. caucasica [*C. caucasica*] is hunted by local communities in Svaneti in Georgia for meat, horns and skin, and hunting of the species was historically considered a rite of passage for young men in Svaneti (Avaliani *et al.*, 2007). Meat is considered a delicacy and is either eaten by the hunters and their families or sold (Avaliani *et al.*, 2007). The horns and skins may also be sold; horns are made into drinking vessels which are popular in Georgia and other countries. (Avaliani *et al.*, 2007). According to Weinberg (*in litt.* to UNEP-WCMC, 2016a) hunting is a “national tradition” in the North

Caucasus, although it had reduced since the early 2000s, however it was not a tradition in Azerbaijan.

6.2 Legal trade

Legal hunting of *C. c. caucasica* [*C. caucasica*] was reported to be limited (Wilson and Mittermeier, 2011). Trophy hunting trips to hunt *C. caucasica* have been advertised on U.S and Russian sites at prices around 10,000-12,500 USD/trophy, including a US company advertising hunting trips for 12,500 USD in Karachaevsk, West Caucasian Reserve and 11,500 USD in Kabardin-Balkaria including hunting permits. Other trophy hunting trips have been advertised in Nalchik and Karachay-Cherkessia. In the Russian Federation, around 300-320 permits were reported to be issued annually to hunt *C. c. cylindricornis* [*C. cylindricornis*] in Daghestan (Yarovenko pers. comm. in Weinberg, *in litt.* to UNEP-WCMC 2016a) and around 20 in North Osetia, with possibly more in Kabardin-Balkaria, however only around half of the permits were reportedly used (Weinberg, *in litt.* to UNEP-WCMC 2016a).

6.3 Parts and derivatives in trade

C. caucasica are mainly traded internationally for horns. The species was also reported to be hunted and consumed locally (Avaliani *et al.*, 2007).

6.4 Illegal trade

There is no legal trade of *C. caucasica* hunted in Georgia as hunting of the species is prohibited in the country. However, by questioning hunters in Sventi region of Georgia, Avaliani *et al.*, (2007) reported that local hunters kill two individuals per hunting trip and that each hunter kills 70 individuals on average during a 40-year hunting career. It is not clear what proportion of hunted animals, if any, are exported. Weinberg (*in litt.* to UNEP-WCMC. 2016a) considered illegal trade to be negligible.

6.5 Actual or potential trade impacts

Avaliani *et al.* (2007) reported that large males that have an important breeding function are targeted by hunters, which results in changes to the population age structure and the viability of the species.

Wilson and Mittermeier (2011) reported that mortality due to illegal hunting of *C. c. caucasica* [*C. caucasica*] rose from 1.4% of all animals found dead in 1986-1990 to 21.6% in 1996-2000.

7. Legal instruments

7.1 National

Gavashelishvili (2004) reported that most of the population of *C. c. cylindricornis* [*C. cylindricornis*] remained outside of protected areas, however, the majority of the population of both *C. c. caucasica* [*C. caucasica*] and *C. c. cylindricornis* was reported to occur within protected areas by Wilson and Mittermeier (2011), with most populations of *C. c. cylindricornis* [*C. cylindricornis*] reportedly concentrated in small protected areas (Wilson and Mittermeier, 2011).

In the Russian Federation, *C. c. caucasica* [*C. caucasica*] occurs in Prielbrusye National Park, (Pkhitikov and Tembotova, 2014), Kabardin-Balkarian Nature Reserve [Kabardino-Balkarsky Nature Reserve], Caucasus [Kavkazsky] Nature Reserve (Wild Russia, 2012), and Teberda Nature reserve (Weinberg, 2008a). *C. c. cylindricornis* [*C. cylindricornis*] occurs in the Kabardin-Balkarian and North-Ossetian Nature Reserves (Weinberg, 2008b). Prielbrusye National Park is divided into three zones, one of which is not open to the public (Wild Russia, 2012). Pkhitikov and Tembotova (2014) reported that hunting is not permitted in Prielbrusye National Park, and that reduced illegal hunting had contributed to an observed population increase in the Baksan section of the park between 2003 and 2012 from 60 to 485 individuals.

Under the Soviet Union, all activities except scientific research were prohibited in Nature Reserves (Zapovedniks) but, since 1991, the Zapovedniks were reported to have received less funding, which reduced the numbers of wardens and researchers present (Webster, 2003). Management of the Zapovedniks is overseen by the Ministry of Natural Resources, and Webster (2003) reported that buffer zones of Zapovedniks have been used for financial gain including ecotourism and logging.

Poaching within the Caucasus [Kavkazsky] Nature Reserve has been reported as rangers lack sufficient communication and transportation to prevent it (Wild Russia, 2012; Riley and Riley, 2005).

TRAFFIC reported that legislation had been proposed in the Russian Federation to prohibit the trade, transportation and possession of endangered species (TRAFFIC, 2012). Hunting of *C. caucasica* is prohibited in Georgia (Avaliani *et al.*, 2007; Kopaliani and Gurielidze, 2009).

In Azerbaijan, *C. c. cylindricornis* [*C. cylindricornis*] was reported to occur in Zaqatala, Ilisu Nature Reserve, Shakhdagh National Park, Kakh Sanctuary and Ismailly Nature Reserve (Weinberg, 2008b).

7.2 International

None.

8. Species management

8.1 Management measures

In Georgia, *C. caucasica* is included in the Georgian National Biodiversity Strategy and Action Plan (Kopaliani and Gurielidze, 2009). The Ministry of Environmental Protection and Natural Resources of Georgia (2010) included both *C. c. caucasica* and *C. c. cylindricornis* [*C. caucasica* and *C. cylindricornis*] in a list of species for which a management plan has been or is being prepared, but due to a lack of financial resources, few measures outlined in the management plan had been implemented. Both *C. c. caucasica* and *C. c. cylindricornis* were listed in the Red List of Georgia in 2006.

The regions of Racha, Lechkhumi and Svaneti are designated as planned protected areas. Territories in which *C. c. caucasica* occurs are being considered as Planned Protected areas in the country.

C. c. cylindricornis occurs in the Lagodekhi Strict Nature Reserve and the Tusheti and Pshav-Khevsureti Protected Areas, which are candidate sites for the Emerald Network under the Berne Convention on the Conservation of European Wildlife and Natural Habitats (or Berne Convention), however, *C. caucasica* is not currently listed in its Appendices or Resolutions.

8.2 Population monitoring

In Georgia, monitoring of the species is conducted under the National Biodiversity Monitoring System, indicator S3: Abundance and distribution of selected species (change and abundance and distribution of selected threatened and economic valuable plant and animal species). Surveys for *C. c. cylindricornis* took place in 2012, 2013 and 2014 (Gurielidze 2016b, *in litt.* to UNEP-WCMC) (see section 4.4). During aerial surveys to assess the population of *C. c. caucasica* in Georgia, two individuals (one male and one female) were seen in 2012, and only footprints in the snow were observed in 2013 (Gurielidze 2016c, *in litt.* to UNEP-WCMC).

No details relating to population monitoring were located for Azerbaijan or the Russian Federation

8.3 Control measures

None located.

8.3.1 International

8.3.2 Domestic

8.4 Captive breeding and artificial propagation

European Studbooks for *C. caucasica* [*C. c. caucasica*] and *C. c. cylindricornis* are maintained separately (Jelinkova *in litt.* to UNEP-WCMC, 2016). According to the European Studbook for *C. c. caucasica*, the average age of females giving birth for the first time is four years and the mean litter size is 1:1, with a gestation period of approximately five months and with young born primarily from May-July (Vokurkova, 2014).

According to the Zoological Information Management System (ZIMS), 20 institutions in three regions, including Europe, hold 107 males and 158 females of *C. caucasica*, of which 68 are juveniles [15 in total were reported as *C. caucasica*, 122 total reported as *C. c. caucasica*, 126 total reported as *C. c. cylindricornis*, and two in total were reported as *C. c. severtzovi*] (Jelinkova *in litt.* to UNEP-WCMC, 2016).

8.5 Habitat conservation

C. c. caucasica [*C. caucasica*] occurs mainly in protected areas, outside of which they are killed for their meat and horns (Baskin and Danell 2003). No specific management measures for the reserves were located. Most populations of *C. c. cylindricornis* [*C. cylindricornis*] are concentrated in small protected areas according to Wilson and Mittermeier (2011).

8.6 Safeguards

The proposal includes a zero quota for wild populations of *C. c. caucasica* for commercial purposes or as hunting trophies to ensure that international trade does not further threaten the survival of this subspecies.

9. Information on similar species

10. Consultations

A consultation was launched by the European Union and its Member States to all range States. The Russian Federation indicated that they did not intend to co-sponsor the proposal. Azerbaijan indicated that they believe it is necessary to include the species in Appendix II and that they support the proposal.

11. Additional remarks

12. References

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