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Capra aegagrus, Wild Goat

Assessment by: Weinberg, P. & Ambarli, H.



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Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Mammalia	Cetartiodactyla	Bovidae

Scientific Name: Capra aegagrus Erxleben, 1777

Regional Assessments:

• Mediterranean

Common Name(s):

English: Wild Goat, Bezoar
 French: Chèvre égagre
 Spanish; Castilian: Bezoar, Egagro
 German: Bezoarziege
 Mongolian: Suusar Bulga

Taxonomic Notes:

The Domestic Goat and the Wild Goat are treated here as separate species (following *inter alia* Shackleton 1997), named *Capra hircus* and *Capra aegagrus* respectively. These taxa are sometimes considered to be conspecific, in which case the name *Capra aegagrus* has generally been used to refer to the wild species and its domesticated form, although some authors use the name *Capra hircus* for both the wild species and its domestic descendants (see Gentry *et al.* 1996, BZN 2003, Gentry *et al.* 2004 and Wilson and Reeder 2005).

"Wild goats" and "wild sheep" found on Mediterranean islands are generally recognized to have been introduced by humans (Shackleton 1997, Wilson and Reeder 2005), and genetic and archaeozoological studies suggest that they are feral populations of ancient domestic stocks (e.g. Groves 1989, Vigne 1994, Hiendleder *et al.* 1998, Manceau *et al.* 1999, Kahila bar-Gal *et al.* 2002). Consequently, such taxa should be included in the respective domestic species (*Capra hircus, Ovis aries*) and not as subspecies of the wild taxa (as proposed by Gentry *et al.* 1996, Gentry *et al.* 2004, and Gippoliti and Amori 2004).

Assessment Information

Red List Category & Criteria: Near Threatened A2cd ver 3.1

Year Published: 2020

Date Assessed: March 22, 2020

Justification:

Wild Goat is listed as a precautionary Near Threatened because of past population decline, which had been estimated to be close to 30% over the last three generations (21 years), inferred from over-exploitation, shrinkage in distribution, and habitat destruction and degradation. Recent information suggests that the population in range states with the major numbers is stable or even increasing, but over large areas reliable information is lacking. Since the end of the 1990s, the population across most of the range looks at least stable and in many areas it has been increasing. It is likely that the Vulnerable

threshold for criterion A2 has not been met for at least five years; if the positive population trend continues, it may warrant this species being moved into Least Concern, however, applying the precautionary principle, for now we assess the species as Near Threatened.

Previously Published Red List Assessments

2008 – Vulnerable (VU) https://dx.doi.org/10.2305/IUCN.UK.2008.RLTS.T3786A10076632.en 1996 – Vulnerable (VU)

Geographic Range

Range Description:

The Wild Goat (*Capra aegagrus*) ranges discontinuously from central Afghanistan and southern Pakistan, west through Iran, southern and western Turkmenistan, northern Iraq, the Caucasus region (Armenia, Azerbaijan, northeastern Georgia, and southern Russia), as far as southwestern Turkey. It once occurred in Jordan, Lebanon and Syria, but is now extinct in these countries (Grubb 2005). It also occurred in Israel before 10,000 years ago (Dayan *et al.* 1986).

Afghanistan

It is probably confined to the Hazarajat and Uruzgan mountains in central Afghanistan, including the arid Feroz Koh and Siyah Koh in the headwaters of the Hari Rud, Farah Rud, Helmand and Arghandab rivers. However, no animals were observed by FAO or WWF survey teams in the 1970s, but horns and skulls were occasionally seen at shrines and grave sites. One captive animal seen in 1975 in a private zoo in Kandahar, was reputedly caught in the nearby mountains (Habibi 2003). Hassinger (1973) also reported hunting wild goat in Kandahar. The most recent record about wild goat in Afghanistan is limited to some skulls and horns recorded at a shrine (34°05' N 61°33' E) in Herat Province in northwestern Afghanistan in 2007 (Z. Moheb, pers. comm.). The species had probably been reduced to a small portion of its former range by the late 1970s (Habibi 2003). Its current distribution in the country is unknown, but it may stretch westwards along the mountain ranges to the border with Iran and northwards, closer to Turkmenistan.

Caucasus

The distribution of *C. a. aegagrus* is in two major separate parts. The first, consists of several locations in forested areas along northern slopes of the Greater Caucasus Mountains from the Upper Argun river, in Khevsureti, Georgia (approx. 42°37′ N 45°07′ E) and lower parts of the same river basin in Chechnya, Russia; in Andi Koisu River basin in Daghestan and Tusheti, Georgia; in Avar Koisu riverbasin in Daghestan, also in several isolated locations, up to the headwaters of Jurmut river (around 41°57′N, 46°31′E) (NACRES 2010, 2013; Ilia State University 2013; Lukarevsky 2018; Magomedov *et al.* 2014; Weinberg 1999) an isolated far away population in Chiraghchai River basin (approx. 41°43′ N 47°50′ E) (Babaev *et al.* 2017). Probably more thorough surveys will produce more locations in this latter area. Previously indicated population on the southern slopes of Mount Babadagh, Azerbaijan (Vereshchagin 1959) doesn't exist, and probably didn't exist in the nearest past. The second is in the Caucasus Minor mountains, where wild goat occurs in both Azerbaijan and Armenia, south and east of Sevang lake, namely the Gegam, Vardenis, Ayoydzor, Zangezur, Megri, Mrovdagh, Karabakh ranges, and on the Delidagh massif, in three main separate parts (39°45′N 45°09′E, 39°08′N 45° 46°09′E and 40°19′N 46°

01'E) (Ayrumyan and Gasparyan 1976; Dahl 1954; Guliyev 2013; Kuliyev 1981; Vereshchagin 1959; Khorozyan *et al.* 2009; Weinberg and Malkhasyan, 2011, 2013).

Iran

The Wild Goat is widely distributed throughout Iran wherever large areas of rocky terrain are available. This includes not only mountainous areas, but also cliffs along the seashore, deciduous forested areas of the north, and in areas of the central desert. Only several large depressions in the central part of the country and certain flat major river valleys lack it (Karami *et al.* 2016).

Iraq

Current data indicate occurrence of Wild Goat in several isolated patches in Sulaymanyah, Erbil and Nineveh in north-east Iraq along the border with Turkey and, mainly, with Iran where animals inhabit Zagros Mountains with oak forests (Raza *et al.* 2012, Raza 2013, Al-Barazengy *et al.* 2015, H. Raza, pers. comm. 2020, K. Ararat, pers. comm. 2020).

Lebanon

The Wild Goat used to be relatively common in Barouk, the Ammiq mountains and on Mount Harmon, northern Lebanon. However, by the early 1900s it was extinct in Lebanon (Kumerloeve 1975, Harrison 1968).

Pakistan

The present range of Sind wild goat (*C. a. blythi*) is the Baluchistan plateau and its foothills in south-western Pakistan. Populations are scattered on arid mountain ranges that are isolated by lowlands of southern Baluchistan and Sind. The range includes the low Mekran coastal range (District Gwadar), areas up to 3,250 m asl in the Koh-i-Maran range south of Quetta (District Kalat), and also the Kirthar range (Districts of Dadu and Las Bela) (Roberts 1977, Schaller 1977, Bollmann 1989). A second subspecies, the Chiltan goat (*C. a. chialtanensis*) was restricted in the early 1970s to four or five populations in the accessible mountain ranges (Chiltan, Murdar, Koh-i-Maran and Koh-i-Gishk ranges) south of Quetta (Roberts 1977, Schaller 1977). Today, these have been reduced, principally by uncontrolled hunting, to only one surviving population in the Hazarganji-Chiltan National Park (Districts of Quetta and Kalat).

Syria

Wild Goat was reported in northern Syria, in the mountains north of Dimasq, and must once have occurred in the western mountains as well. However, it is now believed to be extinct (Harrison 1968).

Turkey

The Wild Goat ranges widely in Turkey, east from the Datca peninsula, through the Taurus and Anti-Taurus mountains in the mountainous regions of southeastern, eastern and northeastern Anatolia up to Iranian border (Ambarlı 2016, Kence 1987).

Turkmenistan

The Turkmen Wild Goat (*C. a. blythi* [= turcmenica]), occurs in scattered populations in the central Kopet Dagh (38°32'N 45°09'E to 37°41'N 58° 49'E) and eastern Kopet Dagh (37°18'N, 59°27'E and 36°N, 39'E) along the border between Turkmenistan and Iran, in the Large Balkhan (Bolshye) north of Nebit Dagh about 39°38'N, 54°41'E. It is not known whether this subspecies still inhabits the Small Balkhan (Malye)

39°17'N 54° 53'E and Begarslan 39°11'N 55° 32'E, but both these locations are mentioned in The Red Data Book of Turkmenistan (Atayev and Gulbatyrov 2011). A small isolated population existed on Gyaz-Gedyk Range near the border with Iran (35°49'N, 61°18'E), but it isn't mentioned in latest publications (Atayev and Gulbatyrov 2011).

Country Occurrence:

Native, Extant (resident): Armenia; Azerbaijan; Georgia; Iran, Islamic Republic of; Iraq; Pakistan; Russian Federation; Turkey; Turkmenistan

Native, Extinct: Jordan; Lebanon; Syrian Arab Republic

Native, Presence Uncertain: Afghanistan

Distribution Map



Legend

EXTANT (RESIDENT)

POSSIBLY EXTANT (RESIDENT)

POSSIBLY EXTINCT

Compiled by:

Weinberg and IUCN (International Union for Conservation of Nature) 2020





The boundaries and names shown and the designations used on this map do not imply any official endorsement, acceptance or opinion by IUCN.



Population

The global population of wild goat is difficult to estimate, because there are no total data from Pakistan and any data from Afghanistan (see below). Although the species ranges very widely, it is probably extremely rare or absent in much of its mapped range. In some places it is clearly decreasing rapidly. However, there is also evidence of localised population recovery when adequate protection is in place. The population over most of the range looks at least stable and in many areas it has been increasing since the end of the 1990s. There is an urgent need for updated information on the status of this species. Specific information on country-level abundance is as follows:

Afghanistan

No estimate of numbers available, but the species is probably now very rare in this country.

Caucasus

It inhabits mainly forested habitat, so accurate censuses are difficult to make. The total population estimate for the Wild Goat was between 3,500 and 4,000 individuals in the late 1980s, with 1,500 in the Greater Caucasus (Arabuli 1989, Bathiyev 1989, Prilutskaya and Pishvanov 1989) and the rest in the Caucasus Minor, where more than half (1,000 to 1,250) lived in the southern half of the Zangezur range (Kuliyev 1981). At the end of 1990s, 2,500 animals were estimated for Daghestan alone, but numbers were declining rapidly, by 50% in three years (Magomedov, Omarov and Nasrulayev 2001, Magomedov et al. 2014). Latest estimates are 1,200-1,500 animals in Daghestan (Babaev et al. 2017). In Georgia, recent counts came up with 50 animals in Khevsureti and 250 in Tusheti, (NACRES 2011, Ilia State University 2013). Also, there might be more than 300 animals in Chechnya (Lukarevsky 2018). Thus, the overall numbers in the Greater Caucasus amount to 1,800, maybe 2,000. The general population trend for this subspecies is negative, and in recent years the rate of decline may have increased, at least in certain areas. In Nakhchivan, Azerbaijan, for the beginning of 2000s the population was estimated at 800-1,200 animals, again almost all of it in Nakhchivan (Guliyev 2013), and for 2006-2007, 1,000 goats were estimated for Nakhchivan (Talibov et al. 2009). More than 500 animals have been counted during latest surveys in 2018 in the south-eastern part of Nakhchivan. Results indicate definite growth of Wild Goat population in Nakhchivan if compared to 2006-2007, so there are undoubtedly more than 1,200 animals there (Weinberg 2019). In Armenia, there were 400-700 animals counted in the 1970s (Ayrumyan and Gasparyan 1976), which was definitely an underestimate. Surveys carried out in 2006-2007 showed much higher numbers and the total population was estimated at 1,000-1,500 animals (Khorozyan, Weinberg and Malkhasyan 2009). In 2009-2013, 1,134 goats have been counted in 10 areas (Weinberg and Malkhasyan 2011, 2013). These areas make just a small proportion of the whole Bezoar Goat range in Armenia, so total numbers definitely exceed 2,000 animals. In total, no less than 3,200 animals inhabit the Caucasus Minor, and thus about 5,000 occur in the whole of the Caucasian Isthmus.

Iran

Wild goat is the second most abundant wild ungulate in the country after wild sheep *Ovis* spp., but according to widespread opinion, it's numbers had declined significantly almost everywhere in the second part of the 20th century. Annual census is being carried out in 120 protected areas of different ranking and in no-hunting areas. And these data show stable growth of wild goat numbers: from 39,500 in 2010, to 52,800 in 2015, to 67,400 in 2018 (Department of Environment Reports 2010, 2015, 2018). Since no unmanaged areas are covered by census, total population may even be larger, though animal densities outside protected and no-hunting areas are probably much lower. Nevertheless, Iran

undoubtedly harbours the main share of wild goat world population.

Iraq

Population estimates are rather vague, but they suggest more than 2000 animals now (K. Ararat, pers. comment, 2019) and it looks like increasing since 1990s, at least in some locations (K. Ararat, pers. comment 2019; H.Raza, pers. comment 2019).

Pakistan

For Capra aegagrus blythi there is no overall population estimate. Most survive in small inaccessible areas in isolated populations (Virk 1991). However, reasonable numbers are reported for the Dhrun and Hingol areas (Ahmad and Beg 1989). Kirthar National Park probably contains the largest population of Sind wild goat in the country. In the Karchat Mountains, which are within Kirthar National Park, the population has increased from between 400 and 500 when the establishment park was established in 1973 (Schaller and Laurie 1974) to around 950 to 1,050 (Bollmann 1989). For the whole Park, Mirza and Asghar (1980) estimated a total of 1,480 goats, while Kermani and Khan (1985) gave an optimistic number of 4,000 animals. According to Bollmann's (unpubl. data) observations in 1987, the total population inhabiting the Park was between 1,500 and 2,000 goats. The adjacent Surjan-Sumbak-Eri-Hothiano Game Reserves contained another 900 to 1,100 (Mirza and Asghar 1980), resulting in a total estimate of 2,400 to 3,100 wild goat for Sind Province. Depending on the study area, densities ranged between 0.5 to 0.65 animals/km2 (over 3,087 km2 in Kirthar National Park; Bollmann, unpubl. data) and 11.8 to 16.3 animals/km² (over 60 km² in Karchat Mountains; Edge and Olsen-Edge 1990). Right now there is information just on 5 protected areas with exact year unknown, but presumably after 2015. Estimated numbers for Hingol NP are 2,500-3,000, in Dureji Community Game Reserve 2,000-2,500, in Shakh Noorani Community Game Reserve 1,000-1,500 and in Talo Band Community Game Reserve just 300-350 (Javed Ahmed Mahar, pers. comment). There are no recent data for the most important Khirthar Protected Areas Complex, but surveys carried out in 2010-2011 sighted just 1200 wild goats there (Khan et al. 2013). However, it was not a census. The overall density within the species' distribution area in Pakistan is probably well below 0.5 wild goat/km². For C. a. chialtanensis the single population totaled ca. 168 animals in 1975 (Mirza 1975), rose to 480 animals by 1990 due to strict protection (Baluchistan Forest Dept. Records, cited in Virk 1991), and is estimated at 1,500 animals now (J. Ahmed Mahar, pers. comment). However, these protected areas comprise just a small portion of the species distribution in Pakistan and the total numbers have not even been estimated. There is an urgent need to update information on the abundance of the wild goat in Pakistan.

Turkey

Official population size in Wildlife development areas is above 18,500 animals (Ministry of Agriculture and Forestry 2019) and some 15,000 more inhabit State hunting areas (Ambarlı 2016), so total numbers should be no less than 33,000. The last assessment (Weinberg *et al.* 2008) stated that the population is declining in Turkey throughout its range, and the total population is believed to be less than 10,000 mature individuals, with no subpopulation larger than 1,000 mature individuals. If these figures were correct the numbers might have at least stabilized since.

Turkmenistan

Korshunov (1986), whose data were the most reliable, estimated that the total population in central Kopet-Dagh was up to 7,000 animals and supposed that overall numbers in Turkmenistan might have been about 8,000 then. Earlier, in the 1970s, 30-40 animals had been counted on Small Balkhan, and

just singular animals were seen on Begarslan (Atayev and Gulbatyrov 2011). At the same time, 140 animals had been counted in one small site of the Large Balkhan (Zarkhidze 1980), which meant that at least several hundred could have occurred on the whole massive. No current data are available for Turkmenistan. Overall, the current population should be no less than 110,000, plus populations in Pakistan and Afghanistan.

Current Population Trend: Stable

Habitat and Ecology (see Appendix for additional information)

The wild goat inhabits mountainous areas, where there is a mixture of rocky outcrops (including scree slopes) and vegetation (shrubby thickets (maquis) or conifer forests). It is a mixed forest species in the Caucasus, especially in the Greater Caucasus (Magomedov et al. 2014; Weinberg 1999), though it usually inhabits relatively arid habitats in most of its range and may depend upon water sources there (Korshunov 1994, Morovati et al. 2014, Shams et al. 2010). Choice of topography, steepness and exposure of the slopes depend upon season, threats and peculiarities of climate and vegetation, but all sources underline principal importance of ruggedness and steepness of slopes at all elevations (Korshunov 1986; Magomedov et al. 2014; Shams et al. 2010; Weinberg 1999). However, in the Greater Caucasus, males tend to choose higher elevations than females outside the rut (Magomedov et al. 2014; Weinberg 1999). South slopes are avoided only in summer and preferred in winter and spring, even in Iran (Shams et al. 2010). In general, distinctive seasonal migrations are not typical for the animals in the Caucasus, except maybe males who can dwell rather far away from females outside the rut in the Caucasus Minor (Magomedov et al. 2014; Weinberg 1999; Weinberg and Malkhasyan 2011, 2017).

It is herbivorous, feeding on grasses, herbaceous plants and shrubs, and can climb not very tall trees like junipers and oaks and certainly surpass tur in this respect (Weinberg 1984, 1999). Diet varies geographically and seasonally, being greatly affected by precipitation and availability of green vegetation. In Turkmenistan, grasses and herbs dominate in the spring diet, but later significance of maple *Acer turcomanicum* increases and in winter juniper may dominate (Korshunov 1994).

In Turkmenistan, females reach maturity at the age of one year (more precisely 1.5 year) but most females mate only at the age of 2 years (Korshunov 1994), while in Daghestan most of yearling females mate (Magomedov et al. 2014). Yearling males may court females during the rut and at two-year age almost invariably leave female groups (Weinberg and Malkhasyan 2011). Rut lasts from early November to mid-December in Turkmenistan (Korshunov 1994), from mid-November to the second decade of December in Daghestan in the Greater Caucasus and is some two weeks late compared to that of sympatric tur (Magomedov et al. 2014, Weinberg 1999). First newborns have been observed in the beginning of June there (Magomedov et al. 2014). However, due to huge species range, reproductive periods vary in different areas. Thus in Karchat Mountains in southern Pakistan, rut may take place, in different years, from August until mid-October, and newborns appear from mid-January to April. Such variations in timing may depend upon precipitation influencing nutritional condition of the animals, primarily females (Edge and Olson-Edge 1990; Schaller 1977). Fecundity is high, twinning being frequent and triplets have been observed all over the range (Gunoglu and Ogurlu 2009, Magomedov et al. 2014, Roberts 1977, Weinberg and Malkhasyan 2011). Post-parturition period kid/female index varies from 0.46 in Pakistan (Edge and Olson-Edge 1990) to 0.5 in Turkmenistan (Korshunov 1994), to 1.0 in Armenia (Weinberg and Malkhasyan 2011) and to 1.26 in one year in Daghestan (Magomedov et al. 2014). Yearlings make 9.8% to 17.1% during the rut in different areas in Armenia (Weinberg and Malkhasyan 2011), and 16-18% in Daghestan (Magomedov *et al.* 2014), but probably the lower figure is more typical to the rest of the species range.

Wild goat is a principal prey for leopard *Panthera pardus* in Iran (Farhadinia *et al.* 2018) but also an important prey for Cheetah *Acinonyx jubatus* in central Iran (Farhadinia and Hemami 2010), while wolf *Canis lupus* rarely hunts wild goat in Iran (Hosseini-Zavarei *et al.* 2013). In the Greater Caucasus, impact of predators upon wild goat is generally considered non-significant (Magomadov *et al.* 2014, Weinberg 1999), though Eurasian lynx *Lynx lynx*, wolf and even brown bear *Ursus arctos* can catch, at least, juveniles (Weinberg, 2013) and golden eagles *Aquila chrysaetos* scan cliffs intermittently in summer and try to hunt kids (Weinberg 1999). Mortality caused by snow avalanches has not been recorded, even in the Greater Caucasus, unlike tur *Capra caucasica* and *Capra cylindricornis* (Magomedov *et al.* 2014). In Daghestan in the North Greater Caucasus, females may live up to 18 years but usually less, while males can reach the age of 14 (Magomedov *et al.* 2014). In Turkmenistan, males live up to 11 years (Korshunov 1994). Mortality among juveniles varies from 40% to 75% in different areas and years in Armenia (Weinberg and Malkhasyan 2011). In Daghestan, this index is about 35%, while among adults it is about 3-6%, higher in males (Magomedov *et al.* 2014).

In the Greater Caucasus in Daghestan and Chechnya, wild goat is sympatric with the Eastern tur *Capra cylindricornis* that dominates above timberline but may be less numerous than wild goat in the forest (Weinberg 1999). In Chechnya, wild goat is sympatric, but much less numerous, with Caucasian chamois *Rupicapra r. caucasica*, particularly on the limestone Rocky Range (Lukarevsky 2018). However, main wild goat distribution on the northern slope of the Eastern Greater Caucasus is on the Side Range, where chamois is very rare (Weinberg 1999). Where wild goat does occur on the north slope of the Main Range, it is a forest dweller as usual in the Greater Caucasus, while chamois mostly stays above timberline (Babaev *et al.* 2016). Roe deer *Capreolus capreolus* also shares habitat with the wild goat, not only in the Greater Caucasus (Weinberg 1999), but also in several locations in South-East Armenia (Weinberg, 2011). In the Caucasus Minor and the rest of the vast range, it often is sympatric with various wild sheep: mouflon *Ovis gmelini*, urial *Ovis vignei* etc. (sheep preferring less precipitous terrain). Thus, though being sympatric with several other ungulate species, wild goat is usually ecologically more or less separated from them.

Systems: Terrestrial

Use and Trade (see Appendix for additional information)

This species is hunted mostly for food and sport, though the hides and other body parts may also be used.

Threats (see Appendix for additional information)

The major threats to this species are poaching, competition for food with domestic livestock, and disturbance and habitat loss from logging and land clearing.

Afghanistan

Overhunting and colonisation of their habitat by livestock resulted in depleted numbers prior to 1979, with small bands of Wild Goats forced into the most inaccessible parts of the mountain ranges. Currently, hunting is legally banned, but poaching likely continues to be a threat.

Caucasus

Main threats in the Greater Caucasus are poaching and logging, since animals are mostly confined to forested areas. In the Caucasus Minor, there is also competition with livestock, but poaching is the worst. The state of war between Azerbaijan and Armenia has a negative impact upon the main local populations of the Wild Goat.

Iran

Poaching, competition for food with domestic livestock, and disturbance and habitat loss from logging and land clearing, are major threats.

Iraq

Poaching and habitat degradation (H. Raza, pers. comm. 2020) as well as intentional hybridizing with domestic goats in some areas (K. Ararat, pers. comm. 2020) are the main threats.

Lebanon

The extinction of wild goat in Lebanon was caused by large scale habitat destruction and the disregard of hunting regulations.

Pakistan

Within its range, the species is only locally abundant and under successful protection only in a few areas (e.g., in Sind Province). Most of the animals are in scattered populations on mountain ranges isolated from each other by lowlands. Consequently, they are at risk, especially because local people and nomadic tribes graze their domestic stock on most of the mountain ranges used by wild goats, and because hunting is still widespread.

Syria

Extinction of this species from Syria was probably caused by habitat destruction and hunting.

Turkey

Poaching is the principal threat, because it surpasses legal hunting by 10 times, about 500 animals annually but even such loss is insubstantial, considering total numbers in Turkey (less than 0.1% of the mature individuals).

Conservation Actions (see Appendix for additional information)

Afghanistan

Reconnaissance surveys were conducted to evaluate the species' distribution patterns in the mid 1970s. The work was discontinued after the start of the civil war. Surveys to determine the current status and distribution of the species in the country and to develop conservation strategies. Hunting is banned since 2006.

Former Soviet Union

Capra aegagrus aegagrus is protected by law, and was included in Category II in the Red Data Book of the USSR (Borodin 1984), and later as 'diminishing and being on the periphery of the distribution' in the Red Data Book of Russia (Danilov-Danilyan 2000). It is Vulnerable in the proposed latest version of the Red List of Russia. However, it doesn't occur in any strict nature reserve or national park in Russia, just in

one federal and two local sanctuaries (zakaznik) in Daghestan. Protected areas of higher ranking are definitely needed in Daghestan. Currently, a project was proposed of merging the existing three sanctuaries into a national park.

The species is listed in the Red List of Georgia as Critically Endangered (Ordinance of the Government of Georgia on Adoption of Georgian "Red List" 2014). Consequently hunting wild goat is totally prohibited in Georgia and it is being protected in Tusheti Protected Areas which encompass Tusheti Strict Nature Reserve, Tusheti National Park and Tusheti Protected Landscape probably harboring the majority of the species and its habitat in Georgia.

In the Caucasus Minor, it is listed Vulnerable VU B2ab; C2a in Red Book of Armenia (Malkhasyan, 2010a), where most of counted animals occur in Arevik National Park and Zangezur Sanctuary, in Community-governed Arpa Protected Landscape and in Khosrov Forest Nature Reserve, but also inhabit Shikakhokh Nature Reserve. There are also NGO-governed protected areas and private game reserves on Urts Range and in Gnishik. In Azerbaijan wild goat is listed Vulnerable VU A2cd in Red Book of Azerbaijan (Guliev, 2013d) where at least 50% of the whole Nakhchivan population is protected in Zangezur National Park and Ordubad Sanctuary. It also occurs in Geigel Nature Reserve. In general, most essential wild goat locations are being protected in the Caucasus Minor. Throughout its range in the former Soviet Union, more strict and effective measures are needed to control poaching. Most local people in the Caucasus consider wild goats and other species as a source of meat, hides and horns, so stricter prohibition measures alone will not be sufficient. Public awareness programmes are also needed. It is essential to protect the forest habitat of this species in Daghestan and elsewhere in the Caucasus.

Turkmen wild goat (*C. a. blythi* [= turcmenica]) is also protected. It is listed as Vulnerable in the Red Data Book of Turkmenistan but Kopet Dagh Nature Reserve is the only protected area with this subspecies (Atayev and Gulbatyrov 2011). Hunting is banned in Turkmenistan. The wild goat should be reintroduced into the Siunt-Khasardag Nature Reserve in the western Kopet Dagh, and into the Badkhyz Nature Reserve in the Gyaz-Gedyk range, and protected areas should be created in, at least, Large Balkhan. Also, probably artificial water sources are needed in the latter site.

Iran

The wild goat occurs in several protected areas where hunting is prohibited and livestock grazing is strictly controlled. It is found in 120 protected areas of different ranking and no-hunting areas (NHA). Areas with largest wild goat numbers are Taleqan NHA (>3,000), Kolahghazi National Park (3,000), Marakan Protected Area, Moute Wildlife Refuge, Kalmand va Bahadoran Protected Area and Dena National Park and Protected Area (about 2,500 each) (Department of Environment Report 2018). They can be hunted under licence outside protected areas between September and February each year, but more strict enforcement of hunting regulations is needed.

Iraq

Wild goat is protected by Kurdistan Region's Decree No.1 of 2015 on Hunting and Protection of Wild Animals and Birds and hunting is banned. The implementation is bad and completely reliant on the forest police awareness and capacity in each of those areas. Further surveys are needed to determine the status and distribution of this species more precisely.

Lebanon

A captive breeding plan and subsequent re-introduction program has been proposed, in conjunction with one in Syria.

Pakistan

Of 28 national parks in Pakistan, just 3 are located within wild goat range there: Hingol, Kirthar and Hazarganji, and quite numerous sanctuaries and community game reserves. The total area of protected territories may be quite large, but even national parks are used for livestock pasturing and other activities contradicting with wildlife conservation. Wild goats have to compete with livestock not just for pastures, but what is more serious, for freshwater sources (Khan 2013).

Syria

The proposed joint re-introduction project with Lebanon should be implemented.

Turkey

Much stricter conservation measures are needed to prevent poaching, and especially to secure the future of the larger populations.

Credits

Assessor(s): Weinberg, P. & Ambarli, H.

Reviewer(s): Michel, S. & Herrero, J.

Contributor(s): Mousavi, M., Raza, H., Ararat, K., Moheb, Z., Ahmed Mahar, J. &

Lortkipanidze, B.

Authority/Authorities: IUCN SSC Caprinae Specialist Group (wild sheep and goats)

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Appendix

Habitats

(http://www.iucnredlist.org/technical-documents/classification-schemes)

Habitat	Season	Suitability	Major Importance?
1. Forest -> 1.4. Forest - Temperate	-	Suitable	-
3. Shrubland -> 3.4. Shrubland - Temperate	-	Suitable	Yes
3. Shrubland -> 3.5. Shrubland - Subtropical/Tropical Dry	-	Suitable	-
3. Shrubland -> 3.8. Shrubland - Mediterranean-type Shrubby Vegetation	-	Suitable	Yes
4. Grassland -> 4.4. Grassland - Temperate	-	Suitable	-
8. Desert -> 8.1. Desert - Hot	-	Suitable	-

Threats

(http://www.iucnredlist.org/technical-documents/classification-schemes)

Threat	Timing	Scope	Severity	Impact Score	
2. Agriculture & aquaculture -> 2.1. Annual & perennial non-timber crops -> 2.1.4. Scale Unknown/Unrecorded	Ongoing	-	-	Low impact: 3	
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion			
		1. Ecosystem stre	esses -> 1.2. Ecosysten	n degradation	
2. Agriculture & aquaculture -> 2.3. Livestock farming & ranching -> 2.3.1. Nomadic grazing	Ongoing	Minority (50%)	Slow, significant declines	Low impact: 5	
	Stresses:	1. Ecosystem stre	1. Ecosystem stresses -> 1.1. Ecosystem conversion		
		1. Ecosystem stresses -> 1.2. Ecosystem degradation			
2. Agriculture & aquaculture -> 2.3. Livestock farming & ranching -> 2.3.2. Small-holder grazing, ranching or farming	Ongoing	Minority (50%)	Slow, significant declines	Low impact: 5	
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion			
		1. Ecosystem stresses -> 1.2. Ecosystem degradation			
5. Biological resource use -> 5.1. Hunting & trapping terrestrial animals -> 5.1.1. Intentional use (species is the target)	Ongoing	Majority (50- 90%)	Rapid declines	Medium impact: 7	
	Stresses: 2. Species Stresses		s -> 2.1. Species mortality		
5. Biological resource use -> 5.3. Logging & wood harvesting -> 5.3.5. Motivation Unknown/Unrecorded	Ongoing	Minority (50%)	Slow, significant declines	Low impact: 5	
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation			
6. Human intrusions & disturbance -> 6.1. Recreational activities	Ongoing	-	Negligible declines	Low impact: 3	
	Stresses:	2. Species Stress	2. Species Stresses -> 2.2. Species disturbance		

	Stresses:	2. Species Stress	es -> 2.2. Species distu	ırbance
6. Human intrusions & disturbance -> 6.2. War, civil unrest & military exercises	Ongoing	Minority (50%)	Causing/could cause fluctuations	Low impact: 5

Conservation Actions in Place

(http://www.iucnredlist.org/technical-documents/classification-schemes)

Conservation Action in Place	
In-place land/water protection	
Occurs in at least one protected area: Yes	
In-place species management	
Subject to ex-situ conservation: Yes	
In-place education	
Subject to recent education and awareness programmes: Yes	

Additional Data Fields

Distribution	
Estimated extent of occurrence (EOO) (km²): 3957793	
Continuing decline in number of locations: Yes	
Extreme fluctuations in the number of locations: No	
Lower elevation limit (m): 0	
Upper elevation limit (m): 3,250	
Population	
Number of mature individuals: 70,000	
Continuing decline of mature individuals: No	
Population severely fragmented: No	
Continuing decline in subpopulations: Yes	
Habitats and Ecology	
Generation Length (years): 7	
Movement patterns: Altitudinal Migrant	
Congregatory: Congregatory (year-round)	

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<u>Programme</u>, the <u>IUCN Species Survival Commission</u> (SSC) and <u>The IUCN Red List Partnership</u>.

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