CONVENTION ON THE CONSERVATION OF EUROPEAN WILDLIFE
AND NATURAL HABITATS

Large Carnivore in the Caucasus

Report of a Symposium
at the
19th International Conference on Bear Research and Management,
18 May 2010, Tbilisi (Georgia)
by

Urs Breitenmoser

17 September 2010

Agenda

1) Introduction (Eladio Fernández-Galiano)
2) Integrating large carnivores, their prey and ecological connectivity (Urs Breitenmoser)
3) Linking with of regional conservation initiatives
   a) Large carnivores in the IUCN programme for Southern Caucasus (Ramaz Gokhelas-vili)
   b) Integrating LC in the Ecoregional conservation Plan for the Caucasus (Nugzar Zazanashvili)
   c) LC needs in the building of the Emeral Network in the Caucasus (Levan Butkhusi)
4) Status and main conservation problems of large carnivores in the Caucasus
   a) Status of LC in Armenia by Ms Hasmik Ghalachyan, Head of Department. Ministry of Nature Protection of Armenia
   b) Status of LC in Azerbaijan by Mr Elsahd Askerov, Institute of Zoology, National Academy of Sciences of Azerbaijan
   c) Status of LC in Georgia by Mr Irakli Shavgulidze, Georgia
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The Caucasus ecological region – shared by Russian Federation, Georgia, Armenia, Azerbaijan, Turkey, and Iran (Fig. 1) – is recognised as a global hotspot for biodiversity conservation. Four of the countries are contracting parties of the Bern Convention: Armenia, Azerbaijan[1], Georgia, and Turkey. As a consequence of the political situation of the Caucasus countries and the imperative need for economic development in the whole region, biodiversity conservation faces considerable challenges in the entire ecoregion. A particular problem face species such as large carnivores, which require large areas to maintain viable populations and hence need a transboundary approach in conservation. Recent socio-economic transitions and changes in land use have partly increased the wildlife-human conflict. Large carnivores were special targets of this conflict, as they were suffering from decreasing availability of wild prey as a consequence of declining wild ungulate populations and from increased persecution when preying on (privatised) livestock herds. The Caucasus hosts four large carnivore species listed in the Bern Convention, namely brown bear *Ursus arctos*, wolf *Canis lupus*, leopard *Panthera pardus* (all listed in Appendix II), and Eurasian lynx *Lynx lynx* (Appendix III). As in western and central Europe, populations of these species are transboundary, and it is evident that only cooperation among the Caucasian country will allow conserving and sustainably managing viable population. The Secretariat of the Bern Convention has taken the opportunity of the 19th International Conference on Bear Research and Management, hold May 16–22, 2010, in Tbilisi (Georgia), to organize a symposium on the status and conservation need of large carnivores in the Caucasus. The goal of the symposium was to review the status of large carnivores in the Caucasus and to discuss conservation needs for large carnivores in the Caucasian ecoregion.

Fig. 1. Map of the Caucasus ecoregion (between red lines), with the Greater Caucasus in the north and the Lesser Caucasus in the south.

[1] Azerbijan is accession state.

Eladio Fernández-Galiano (Council of Europe) explained the goal of the symposium and present concepts for transboundary management and conservation earlier discussed in the frame of the Berne Convention.

Urs Breitenmoser (University of Bern, Switzerland) explored the relationship between (txonomic) conservation units, the spatial concept of protected area and the multi-use landscape, and the challenges to conserve viable large carnivore populations in a cultivated landscape, where wildlife conservation generally is not the highest priority.

Nugzar Zazanashvili (WWF Caucasus Programme Coordinator, Georgia) reviewed the direct and underlying threats to wildlife and large carnivore in particular. He explained the Ecoregional Conservation Plan for the Caucasus and the potential benefit to large carnivore populations. The ECP geographical approach has identified 56 priority conservation areas, covering 24 % of the area of the ecoregion, and 60 wildlife corridors, adding another 10 % of land cover (Fig. 2). The Caucasus Biodiversity Council, consisting of members of governmental and private institutions of all range states, is the steering committee for the implementation of the plan. Among the large carnivores, the leopard is the outstanding flagship species for conservation. Based on a ecoregional Conservation Strategy, national Action Plans for the conservation of this large cat are now being developed and implemented. Further conservation actions are focussing on the striped hyena *Hyaena hyaena*, brown bear and Eurasian lynx.

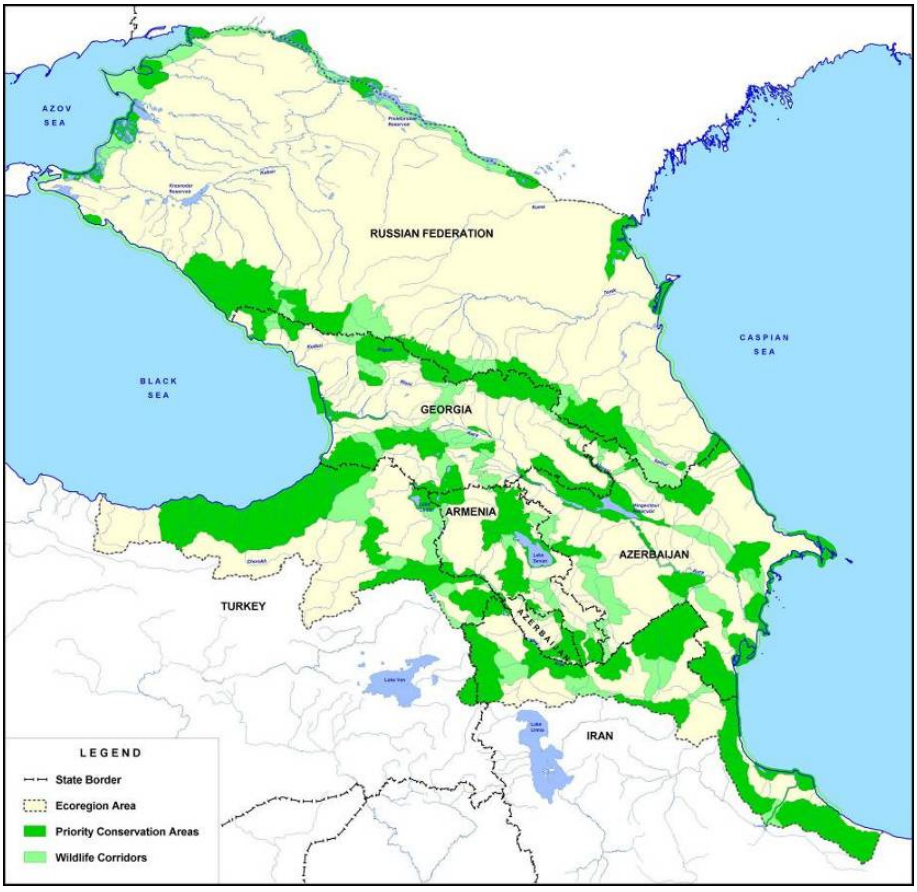

Fig. 2. Ecoregional Conservation Plan for the Caucasus geographical focus. Priority conservation areas (dark green) include 140,000 km², wildlife corridors (light green) 59,000 km², this is 34 % of the whole ecoregion.

Irakli Shavgulidze (NACRES, Georgia) reported on the status of large carnivores in Georgia. The country hosts presently five species of large carnivores (>17 kg), namely bear, wolf, lynx, leopard, and hyena, of which three (lynx, leopard, hyena) are considered Critically Endangered in the country, whereas the bear is listed as Endangered (Table 1). The wolf, however, is not legally protected.

Table 1. Status of large carnivores in Georgia. Status assessed according to IUCN Red List criteria.

	Area [km²]	Population size	Trend	Status	Threats
Bear	34,000	600-700	stable	EN	poaching
Wolf	whole country	1000-2000	expanding	-	prey declining, direct persecution
Lynx	?	?	?	CR	poaching, habitat deterioration
Leopard	SE Georgia	?	?	CR	prey declining, poaching, habitat deterioration
Hyena	SE Georgia	?	?	CR	prey declining, direct persecution, habitat deterioration

Elshad Askerov (Institute of Zoology, National Academy of Sciences, Azerbaijan) reported on the situation of large carnivores in Azerbaijan. A considerable threat to the predators is the fast decline of wild ungulates, especially of gazelles, which formed the staple prey e.g. for hyenas. The most important conservation measure in Azerbaijan is the creation of protected areas, which have increased from 4,780 km² in 2000 to a total area of almost 7,500 km² in 2008 (Fig. 3).

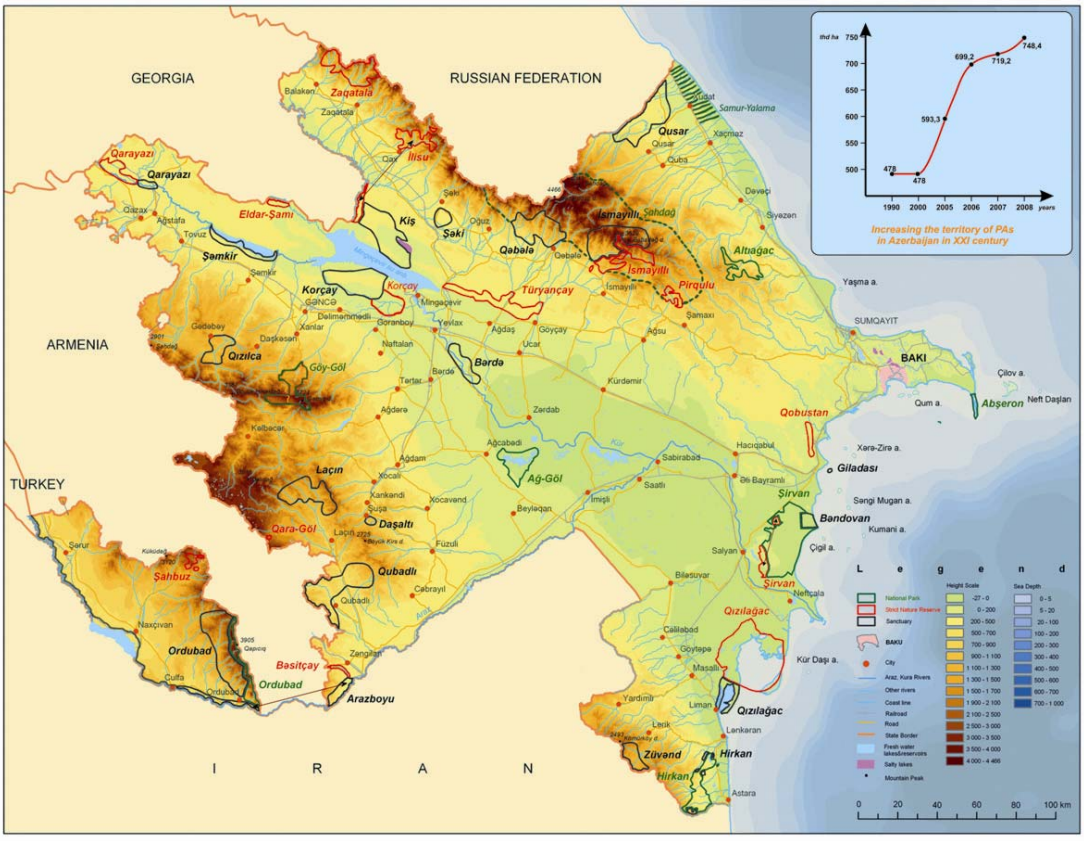

Fig. 3. Distribution and increase of protected areas in Azerbaijan.

Hasmik Ghalachyan (Ministry of Nature Protection, Armenia) reported on the status of large carnivores in Armenia, as it was assessed when the Red Data Book of Animals of Armenia was compiled. The bear is classified as VU B1 b(iii). It occurs in unknown numbers in Ararat, Vayots Dzor, Syunik, Tavush, Lori, Kotayq and Gegharqunik. Main threats are poaching, habitat deterioration, and disturbance through human activities. The leopards is the best studied of the large carnivores. It's area of occurrence is estimated to be 7,500 km², the occupancy = 2,857 km² in Khosrov and Khachadzor, Geghama, Zangezur, Vayots Dzor, Bargushat and Meghri. A maximum of 10 – 15 leopards live in Armenia. The species is CR C2a(i) classified, a consequence of threats such as fragmentation, poaching, development, forest fires, and unsustainable livestock grazing. Hyena are RE (regionally extinct). The species disappeared from the country around 1940. Lynx are widespread in Armenia, namely in Ararat, Alaverdi, Ijevan, Hrazdan, Ghapan, Meghri. Is is believed to feed mainly on hares and rodents. The wolf is considered a common species accross the country. Conservation activities for large carnivores have so far focussed on the leopard (see special report).

Can Bilgin (Middle East Technical University, Ankara, Turkey) presented the situation of the large carnivores in Turkey. Turkey, where once even tigers and lions roamed, has today five species of large carnivores left, of which four exist in the Caucasian part of the country. Brown bears number about 4,000 in Turkey and 1,000 in the Caucasus region. Bear is a protected species, but local trophy hunting is allowed every few years, and poaching and trapping is still common in areas with high conflicts. The METU started a radio-telemetry project, studied human-bear conflict and introduced electric fences to reduce damages to bee hives. The wolf occurs in most habitats, with a country population of some 6,000 and a regional population of 1,000 animals. It feeds mainly on wild boar and livestock, making it the most damaging species. Local retaliation killing and poisoning is common, though it is (nominally) protected. Leopards are sparsely distributed in the east, north-east, south and north-west of the country[2]. The total population may be 40–60, regionally 5–10. It was considered extinct, but there has been new evidence since the 1990s. It is practically unknown to local people, and there is little evidence of damage. Lynx are widely found in forested areas and even more open country. The national population may be 1,000, the regional 100 specimens. Main prey are hares. It is more widespread than believed, and, though there is little evidence for livestock depredation, lynx are poached and occasionally trapped. Conservation measures include protected areas, which sum up to about 10,000 km² or 1.3 % of the country. There has been little research on carnivores so far, but recently, studies on perception, local monitoring by means of camera trapping, and population and range modelling has been initiated.

Alistair Bath (Memorial University of Newfoundland, St. John's, Canada) introduced the concept of "human dimension research" and explained how important understanding public attitudes towards large carnivore are for their conservation.

[2] Reporter's remark: Turkey hosted two subspecies of leopards, *P. p. saxicolor* in the E and *P. p. tuliana* in the W and S. While – also considering the distribution in Iran – the persistence of *P. p. saxicolor* is likely, the long-lasting search for *P. p. tuliana* has so far not produced any hard evidence for its survival.

During the discussion, the participants concluded that though reliable numbers based on scientifically robust evidence for all large carnivores are lacking and capacity development both regarding research and survey concepts and conservation is needed throughout the region, there is a clear need for transboundary cooperation in large carnivore conservation and management. A promising first step towards improved cooperation might be to standardise and coordinate surveys and monitoring for the large carnivore populations, involving scientists, state agencies and private conservation institutions.

After the large carnivore symposium, the participants joined up for an informal discussion on the progress of the conservation of the leopard in the Caucasus. The report of this additional meeting is amended to this report.

19th International Conference on Bear Research and Management, May 16-22; Tbilisi, Georgia

Leopard conservation in the Caucasus

Minutes of an informal discussion on Tuesday, 18 May, 09:00–12:00

Urs Breitenmoser[1], Irakli Shavgulidze[2], Elshad Askerov[3], Igor Khorozyan[4], Mohammad Farhadinia[5], Emre Can[6], Can Bilgin[7], and Nugzar Zazanashvili[8]

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The leopard *Panthera pardus* is a Critically Endangered flagship species of the Caucasus. In 2007, conservation experts and institutions from all six Caucasian countries joined to develop a *Strategy for the Conservation of the Leopard in the Caucasus Ecoregion*[3], based on a review of the status of the leopard population and its prey (Cat News Special Issue 2, 2007). Now, three years later, the IUCN/SSC Cat Specialist Group, WWF and NACRES, organised a discussion group at the annual conference of the International Bear Association IBA in Tbilisi, Georgia. The meeting was part of the symposium "Large Carnivores in the Caucasus", organised and supported by the Secretariat of the *Convention on the Conservation of European Wildlife and Natural Habitats* (Bern Convention). The leopard is listed as a strictly protected species in Appendix II of the Bern Convention. The aim of the meeting was to discuss the status of the leopard, the implementation of the Strategy and next steps with wildlife conservationists from the Caucasian countries.

Fig. 1. Participants at the informal leopard conservation discussion during the IBA conference in Tbilisi, Georgia, 18 May 2010.

The *Strategy* has so far been endorsed by the relevant authorities of four countries, Georgia, Azerbaijan, Armenia, and Turkey. The Participants from the six counties presented a brief review of the situation of the leopard and leopard conservation activities:

[3] http://assets.panda.org/downloads/caucasus_leopard_conservation_strategy_1.pdf

Russia. No representative from Russia attended the Tbilisi meeting. Russia has both a National Strategy and a National Action Plan for the conservation of the Persian leopard (V. Krever, pers. comm.). According to recent information from Russian colleagues (V. Rozhnov, V. Lukarevski, V. Krever, pers. comm.), the breeding and rehabilitation facilities at the Sochi reintroduction site are ready, and four leopards (two males from Turkmenistan and two females from Iran) are at the site. However, the suitability of the specimens as founders for a captive bred population for future releases is questionable. More founder individuals either from the conservation breeding programme of EAZA or from the wild are needed. The participants of the Tbilisi meeting expressed the wish that Russian reintroduction programme should become a part of the common effort for the conservation of the leopard in the whole ecoregion. Without any doubt, the best source would be the population in NW Iran, which is at the same time the only source population for a natural recolonisation of the Caucasus.

In Daghestan, initial works by means of camera-trapping was conducted by colleagues from Daghestan Center of Russian Academy of Sciences (Yuri Yarovenko, pers. comm.). Obviously cross-border cooperation with Georgia could provide more precise information regarding leopard. Current political circumstances make cooperation on governmental level difficult, but technically coordinating the efforts of NGOs and scientists is realistic.

Georgia. Camera-trapping based monitoring started last year in Tusheti region of Georgia, Eastern Greater Caucasus – bordering to Daghestan, Russia Federation. This region (Tusheti, Khevsureti, Daghestan) was identified as an area of a leopard sub-population in the Caucasus (see Status Report). In Tusheti, NACRES conducts this work with support of WWF, the Agency of Protected Areas and Tusheti National Park staff. The male leopard “Noah”, pictured regularly for several years in Vashlovani NP, was not discovered during the past six months.

In April 2009, the WWF Caucasus Programme Office and NACRES organised a workshop to develop a national action plan, the Leopard Conservation Action Plan for Georgia. The meeting hold in Tbilisi united 20 participants representing the Agency for Protected Areas, National Park Administrations, Institute of Zoology, Biodiversity Protection Service of the Ministry of Environment, several NGOs, Ilia State University, IUCN South Caucasus Office, and various interest groups. The National Action Plan was submitted to the national authorities, but is not yet officially endorsed.

Azerbaijan. Azerbaijan has started to do opportunistic surveys in various known or expected leopard areas in the south and northwest of the country. The efforts have confirmed the presence of leopards, but the exact distribution, the number of specimens and the travel routes are not know. The capacity for a systematic surveillance is lacking. Azerbaijan’s ministry of environment has developed a National Action Plan for the conservation of the leopard (Ministerial Decree N 514/U from 14.09.2009). No scheme for compensation of livestock attacks by leopard has been established, because this task proved to be politically delicate. The most important advance has been made in establishing protected areas. Since 2000, the total area under protection has increased from 4780 km² to 8551 km².

Armenia. The National Action Plan for Leopard Conservation in Armenia, based on the ecoregional strategy, was developed in winter 2008 and endorsed by the Ministry of Nature Protection in spring 2009. One of the important issues is to improve the monitoring of leopards in Armenia, which is however hampered by methodological flaws and budget restrains (I. Khorozyan: A brief concept on how to bolster up the leopard monitoring in Armenia and adjacent countries of the Caucasus ecoregion, unpublished report 2010). As the survival of leopards in Armenia clearly depends on immigration of individuals from Iran, a close cooperation regarding monitoring and conservation between these two countries is ultimate.

Iran. Based on the IUCN Red List (www.iucnredlist.org), more than 65% of wild Persian leopards live in Iran. According to the last status assessment, at least 500 leopards exist in Iran, of which 10–20% in NW Iran. More than 10 areas are confirmed to hold leopards; most are officially conserved by the Iranian Department of Environment. Recent food habits surveys conducted by the Iranian Cheetah Society (ICS) in northern Iran revealed that predation on livestock leads to high conflict with local people and is the main cause of mortality for leopards even within protected areas. 75% of poached animals discovered are males, mainly young and old individuals, apparently occupying home ranges outside the area of the established population. Presently, genetic investigation is ongoing on the Persian leopards, and various research and educational efforts are aiming to conserve the species in Iran.

Turkey. The situation of the leopard in the Caucasian part of the country – or in all parts of the country that might have been part of the historic range of *P. p. saxicolor* – in Turkey is not known. Several published papers and reports over the past years indicated the presence of leopards, but indeed, hard evidence for its existence is still lacking. Considering the distribution of leopards in neighbouring Iran and the habitat on the Turkish side, the presence of leopard seems likely, and recent information suggest the reproducing nuclei remain in eastern Turkey, but again, scientific robust evidence is still lacking, and the number, extent and connectivity between these possible occurrences is not know. A joint survey effort involving scientists, GOs and NGOs and based on standardised and recognised methods would be urgently needed to gather baseline information on the status of the leopard in Turkey.

The presentation of the Range Countries reports revealed that the base of information on the leopard in the Caucasus since the compilation of the status report (Cat News Special Issue No. 2, 2007) has not improved. Very little field activities have been carried out since, and the scarce data available do not indicate an improvement of the situation of the leopard at all. All participants agreed that the implementation of conservation measures is urgent, that however generating reliable intelligence on the situation of the leopard is the most urgent requirement. The participants of the informal meeting recommend the following activities:

Caucasus Biodiversity Council. CBC Terms of Reference covers overseeing the implementation of the Ecoregional Conservation Plan (ECP) and all regional and/or transboundary programs/projects, including the regional program for leopard conservation. This informal meeting is important for the opinion exchange for developing the leopard conservation program in the Caucasus, but more detailed discussion is still needed for the final coordination of concrete next steps. Main topic of up-coming CBC meeting is final revision and approval of new version of ECP, and it was proposed to then organize a one day special leopard conservation meeting. In addition to CBC members (one Governmental and one NGO representative from Armenia, Azerbaijan, Georgia and Turkey; full representation of Iran and Russia is not yet granted), CBC secretariat will invite relevant persons from Iran and Russia and the IUCN/SSC Cat Specialist Group to participate in the discussion on leopard conservation.

Implementation of the Strategy. The conservation strategy proposes actions that need to be implemented on the international, but above all on the national level. The latter needs to be done by means of National Action Plans. So far, Georgia, Azerbaijan, and Armenia have developed NAPs (see above). These plans now need to be implemented. The situation of the adjacent three countries, Russia, Turkey, and Iran, is very different. While Russia has a reintroduction programme, Iran is the only country with a vital leopard population, which however needs to be protected much better. In Turkey, the most important task is to advance the surveys of the potential leopard areas. So far, the situation of the species in Turkey remains completely obscure.

Baseline survey and monitoring. The assessment of the situation of the leopard in the Caucasus ecoregion is hampered by the scarcity of scientifically robust information, but also by the lack of a common and agreed standard regarding the interpretation of "soft" data. To gain scientifically robust data ("hard facts") based on costly methods such as camera trapping or genetic analyses will always only be part of the monitoring of a rare and elusive species such as the leopard. Consequently, systematic expert observation (confirmed data) and opportunistic laymen information (unconfirmed data) must be integrated into a "stratified monitoring approach". However, the interpretation of such data and the assessment of the status of the leopard need to be standardised and applied by all range countries and institutions involved.

Certain conservation measures such as awareness building, mitigation of conflicts, anti-poaching measures, and recovery of prey populations are obvious and can be implemented without more detailed knowledge on the status of the leopard. Other conservation actions however require better baseline data. We therefore suggest that an urgent common activity of the institutions involved in leopard conservation in the Caucasus is to perform a systematic baseline survey, which should then be transferred into a long-term standardised monitoring of the leopard population. To achieve this, we first need to build the capacities needed in each of the six range countries, involving colleagues from scientific institutions, state agencies, and non-governmental conservation organisations.