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Leopard conservation in the Caucasus

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, 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.

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

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 the 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, Russian 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 in 2001. 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 held 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, Iliia 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 known. 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 restraints (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.iucn-redlist.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.



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

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* – 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 that 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 known. 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.

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