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International Experts Workshop
“Conservation of the Leopard in the Caucasus”
- Caucasus Leopard Working Group -

FINDINGS AND RECOMMENDATIONS FROM THE
WORKSHOP ON THE CONTEMPORARY STATUS OF
LEOPARDS AND PREY IN THE CAUCASUS
ECOREGION

Tbilisi, Georgia, 9–10 October 2014



Document prepared by
Urs Breitenmoser, Batur Avgan, Fridolin Zimmermann and Christine Breitenmoser-Würsten

**INTERNATIONAL EXPERTS WORKSHOP
“CONSERVATION OF THE LEOPARD IN THE CAUCASUS”**

9-10 October 2014, Tbilisi, Georgia

- Workshop Report -

Report prepared by

Urs Breitenmoser, Christine Breitenmoser-Würsten, Nugzar Zazanashvili & Aurel Heidelberg



1. INTRODUCTION

In 2007, conservation experts of the six countries sharing the Caucasus Ecoregion – Armenia, Azerbaijan, Georgia, Iran, Russia, and Turkey – and representatives of international conservation organisations developed the *Strategy for the Conservation of the Leopard in the Caucasus Ecoregion* (Breitenmoser et al. 2007). The *Strategy* formed the basis for the development of National Action Plans (NAPs) and guided the international and inter-sectoral cooperation. The *Strategy* and the NAPs of Armenia, Azerbaijan, and Georgia need now to be revised and updated, Iran is prepared to develop a NAP for the leopard supporting the conservation of the species in the Caucasus, Russia is ready to reintroduce leopards in the north-western regions of the Greater Caucasus, and Turkey needs to prepare the ground for the recovery of the leopard in the north-east of the country. In order to review the progress in restoring the Caucasian leopard population and to prepare the revision of the *Strategy*, a group of experts from all range countries and international organisations (see Appendix I) met in October 2014 in Tbilisi, Georgia. The main objectives of the workshop were:

- (1) *Discuss and agree on contemporary status of leopard and its prey species in the Caucasus and around:* Review and discussion of available leopard and prey species data from the entire region, based on standardised national Status Reports. National reports have been prepared by the national experts based on a template provided by the organisers. The national reports should compile and summarise ongoing studies, surveys, conservation activities, mythologies and assessments of leopard and prey species.
- (2) *Develop Expert Recommendations on monitoring and research:* Identify gaps within the existing monitoring systems, propose standards for the monitoring, and identification of research needs on regionally and national scale and give recommendations for improvement.
- (3) *Review the implementation of the Caucasus Leopard Strategy and the National Action Plans:* Discuss the implementation and effectiveness of the *Strategy for the Conservation of the Leopard in the Caucasus Ecoregion* (2007) and the subsequently developed National Action Plans.
- (4) *Develop expert recommendations for the up-coming workshop on revision of regional strategy for leopard conservation in the Caucasus and further national action plans:* Identify main shortcomings of the current *Caucasus Leopard Strategy* (2007) and the National Action Plans, make recommendation for the long-term recovery of the leopard in the Caucasus and for improvement on the regional strategy and national scale.

The findings of the workshop will be submitted to the ministries of the range countries in charge of nature conservation and to the Standing Committee of the Bern Convention, and it will be made available to all interested experts and institutions. The report summarises the joint assessment of the situation of the leopard, its prey and critical habitats in the Caucasus and the recommendations of the workshop participants for the further activities needed to recover the leopard population across the Caucasian ranges.

The workshop was co-organised by WWF Caucasus Programme and IUCN/SSC Cat Specialist Group and supported by the Secretariat of the Bern Convention of the Council of Europe, WWF-Germany and IUCN/SSC Cat Specialist Group.

2. STATUS OF LEOPARD AND PREY SPECIES IN THE CAUCASUS ECOREGION

All country delegations had filled in a questionnaire summarising leopard conservation progress since the workshop held in Istanbul, 7–8 march 2011, and presented these progress reports at the workshop.

The number of confirmed leopard observations in recent years is rather small (Table 1, Fig. 1). For the first time, the observations were formally categorised: C1 = hard facts (photos, genetic samples, carcasses...); C2 = observations confirmed by trained person; C3 = unconfirmed observations or observations that cannot be confirmed.

Table 1. Number of confirmed (C1 + C2) leopard observations 2007–14 according to the questionnaire. For details see separate document with questionnaires.

	AR	AZ	GE	IR	RU	TR ¹
2007		2	1	7	-	-
2008		1	5	5	-	(1)
2009		1	-	5	1	(2)
2010	6	1	-	4	-	-
2011	-	-	-	3	-	-
2012	4	2	-	3	-	-
2013	6	5 ²	-	3	1	-
2014	13 ³	5 ²	-	6		-

¹C1 (mortalities) 2010, 2013 further south in TR. ²Hyrkan NP 2012-14: 41 photos, 8 videos of 2 individuals, Zangezur NP 2012-14: 170 photos, 20 videos of 3 individuals. ³C1 observations from Zangezur Range. Based on those 3 different individuals have been identified (the same individuals as from Nakhchyvan side)

In Armenia, one male and two females were confirmed in Syunik province (southern Armenia). Additionally, one male was confirmed, with a potential second male still to be confirmed, in Khosrov State Reserve in Ararat province. The confirmed leopard group in Azerbaijan consisted of two females and one male in NakhchyvanAR (the same individuals observed in southern Armenia), and one male and one individual of unknown sex in the Tallish Mountains. A further male was confirmed in Bozdagh corridor PA, but it disappeared again. The leopard abundance and distribution in the Iranian Caucasus was stated as decreasing, but no estimation of number of animals was available. There were a couple of confirmed observations in Russia (Dagestan and North Osetia), but the number of animals and whether they were residents remained unknown. In Georgia, no confirmed observations have been made since the disappearance of “Noah”, the male leopard repeatedly pictured in Vashlovani NP. However, there was about one C3 observation per year. Although the five C3 observations in Georgia since 2010 have come from three different regions, three observations were reported from the National Parks in the northeast of the country. No observations of leopards in the Caucasus ecoregion in Turkey were reported, only from the south, near the border with Iraq.

The status of the main prey species of leopard was reported to have improved or to be at least stable in the majority of the regions. However, there are exceptions: prey abundance in general has decreased in Iran; wild boar has suffered from African distemper in Armenia; roe deer abundance has decreased in the Tallish Mountains, Azerbaijan; the abundance of bezoar goat and red deer has decreased in the Russian regions of Dagestan and Kabardino-Balkaria, respectively; in Turkey only the abundance of wild boar and small mammals has increased, while the abundance of bezoar goat and fox have decreased, and the status of chamois, roe deer and red deer is unclear (the prey surveys in Turkey are done to set hunting quotas and performed by doing point counts, which are unreliable).

3. ADVANCES AND FURTHER NEEDS FOR SURVEYS, MONITORING, AND RESEARCH

Permanent Leopard and prey species monitoring and surveys have been completed in the promising areas of Southern Armenia (Syunik Region) inside protected areas and migration corridors and in Khosrov State Reserve (Ararat Province) and as a pilot study in the buffer zone of the latter. Apart from camera trapping also scats were sent to genetically identify the species to different laboratories (e.g. Conservation Genetics Group Senckenberg Research Institute/Germany). The surveys in the promising areas were completed in Azerbaijan in Nakhchyvan and Hyrkan NP (Tallish-Mountain), no monitoring/surveys were conducted in the Greater Caucasus, but a monitoring system

was only partially established (no interview surveys). In Georgia, surveys were done in high priority areas. Camera traps had been mounted in areas where interview surveys revealed C3 observations. Further surveys are planned close to the border with Russia, where there are leopard signs on the Russian side, and also near the border with Turkey. The surveys in Iran have also been completed in the promising areas, but no monitoring system was established. Surveys were not yet performed in Russia and Turkey and no monitoring system was yet established. However, prey surveys are regularly performed in Russia and Turkey by the government. There is a general lack of information in conflict zones.

The participants recommended further camera trapping efforts in the Armenian corridor from North to South: Khosrov state reserve to Arevik NP; in Turkey in the border areas with Iran; and in Khevsureti, Tusheti and Adjara in Georgia. The camera trapping in Azerbaijan should also be extended, and the presence of the leopard in Russia investigated. The participants recommended surveying neighbouring populations as well.

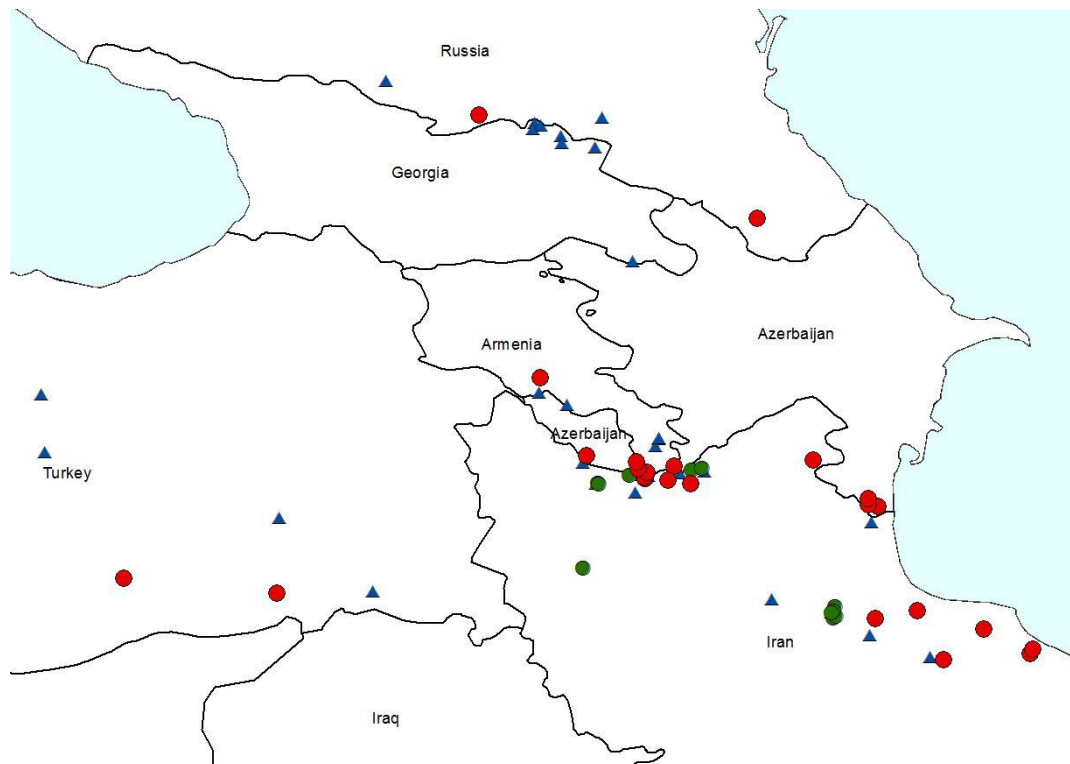


Fig. 1. Distribution of leopard records in the six range countries. Red dots= C1, green dots= C2, and blue triangles= C3 observations.

The participants have identified the following gaps/challenges:

1. Lack of funding & equipment;
2. Lack of holistic approach of authorities;
3. Lack of scientific research (systematic camera-trapping, telemetry);
4. Lack of capacity, no specialists dedicated to leopard (future specialists, too);
5. Unreliable and incomplete prey surveys and unclear methodology;
6. Lack of information from conflict zones.

The participants recommend forming national study groups to identify gaps and to do surveys. This would also include public awareness surveys. Additionally the regional cooperation on monitoring, common standards, database, and common reporting should be improved. They also recommend intensifying anti-poaching activities (especially in Georgia and Russia); conducting more community based programs, e.g. educational programs or awareness raising (especially in Armenia

and Russia); and the identification of potential habitats, e.g. by habitat analysis/modelling (especially in Georgia and Turkey).

4. IMPLEMENTATION AND VALUE OF THE *STRATEGY* AND NATIONAL ACTION PLANS

The degree of implementation of the *Strategy* and the NAPs (or equivalent documents) was assessed to be 50% in Azerbaijan, 60% in Armenia and Georgia, and 80% in Russia. For Iran and Turkey a NAP needs to be prepared.

It was also assessed which objectives and targets of the *Strategy* were implemented and to what degree (Table 2).

Table 2. Evaluation of the implementation of the *Strategy's* targets. Green = Target achieved, yellow = target partly achieved, red = target not achieved.

Target	Evaluation
Objective 1. Increase the viability of the known leopard and prey populations in the ecoregion	
Target 1.1. Existing leopard and its wild prey populations are secured and stabilized by 2014 in the ecoregion	Leopard populations not stabilised but there are some promising signs, e.g. Nakhchyvan, South AR, IR (SE Lesser Caucasus). Despite tendency of increasing populations of prey in the same countries the decrease in Iran is critical.
1.2. Corridors and stepping stones for leopards are secured by 2014 in the ecoregion	Not fulfilled.
1.3. The existing leopard population in the Caucasus is expanding significantly – by least 1/3 – by 2017	Not fulfilled.
Objective 2. Complete survey for leopards and wild prey of the entire ecoregion and establish a joint, standardized monitoring system and research programme and central database	
Target 2.1. Survey of leopards in the ecoregion is completed by 2010	Surveys completed by 75%.
2.2 A joint, standardized monitoring system is completed and launched by 2010	Not fulfilled.
2.3. A joint research programme on leopards and its wild prey is launched by 2010	Not fulfilled – except for few exceptions, e.g. bilateral cooperation between AR/GE. A systematic / programmatic approach is needed.
Objective 3. Promote the creation of new leopard populations through reintroduction where feasible	
Target 3.1. The feasibility of reintroducing leopards is assessed according to IUCN standards by 2010	Being done by RU; discussions in AZ for initiation of reintroduction.
Objective 4. Establish an effectively managed network of protected areas and corridors for the conservation of leopard throughout the ecoregion	
Target 4.1. Regional plan of PA and corridors network for leopard conservation is prepared and adopted by relevant governmental organisations of ecoregion countries by the end of 2009	Not fulfilled, but...(see Target 4.2)
4.2. At least one new PA per ecoregion country for leopard conservation is established or expanded by 2010	Fulfilled, except in TR
4.3. At least one corridor per ecoregion country for the leopard conservation is legally protected by 2010	Not fulfilled.

4.4. Key Protected Areas in leopard habitats are effectively managed by 2010	Level of effectiveness: 75% (according to Management Effective Tracking Tool METT).
Objective 5. Improve management of leopard habitats outside of protected areas	
Target 5.1. Most important areas of leopard distribution outside Protected Areas are sustainably managed by the end of 2010	Not fulfilled.
5.2. Knowledge of local communities and officials on leopard and its habitats are increased for sustainable use of natural resources in their surroundings in collaboration with relevant stakeholders by 2010	Fulfilled (AR, AZ, GE, IR), except in TR & RU (but will start in December).
5.3. Model projects for sustainable use of natural resources and alternative income generation are in action by 2009.	Fulfilled (AR, AZ, GE), except in IR, RU & TR.
Objective 6. Ensure long term support to and from local communities for the leopard and wildlife conservation	
Target 6.1. By 2012 social-economic programmes elaborated and implemented at least in 50% of groups of communities in and around leopard habitats	Fulfilled, programs targeting special villages around specific Protected areas, but: Not fulfilled, no governmental programmes.
Objective 7. Endogenous conservation of natural resources and sustainable livelihoods are complementing each other	
Target 7.1. Vibrant and effective customary institutions are capable of conserving natural resources and supporting sustainable livelihoods	Partly fulfilled.
7.2. Traditional knowledge for biodiversity conservation is revived in at least 50% of the community clusters identified in 6.1.1. and in the service of conservation and sustainable livelihoods by 2012	Seems like a long term goal, not easy to assess in the short term.
7.3. Sustainable livelihoods ensured for at least 30% of the clusters of communities defined in 6.1.1. in and around leopard habitats by 2012	Partly fulfilled, incl. good examples from AZ and IR.
7.4. Equitable compensation mechanisms for loss of livelihood due to human-leopard conflict for the communities in and around the key habitat of the leopard are in place by 2012	Not fulfilled, except in IR.
Objective 8. Awareness on the conservation of the leopard in the Caucasus is improved in all stakeholder / rightholder groups at all levels	
Target 8.1. By 2011 at least 80% of decision makers and authorities are aware and actively supporting the conservation of the leopard in each country of the Caucasus	Mostly fulfilled, but there is still room for improvement.
8.2. By 2011 at least 50% of communities in the leopard habitat area identified in 6.1.1. are aware and actively supporting the conservation of the leopard in each country of the Caucasus	Fulfilled, except in RU and parts of IR.

8.3. By 2011 at least 30% of mass media representatives, NGOs, scientific institutions, universities and other groups of civil society are aware and actively supporting the conservation of the leopard in each country of the Caucasus	Fulfilled.
Objective 9. Strengthen international cooperation in leopard conservation	
Target 9.1. Illegal trans-border trade of leopards and derivatives is stopped	Not fulfilled.
9.2. International memorandum(s) on leopard conservation in the Caucasus ecoregion is signed as feasible considering current political situations	Not fulfilled (leopard, not biodiversity). Does not seem feasible in the short term. Explore / Try to make use of existing frameworks (International conventions, Bern Convention, Bonne Convention). There are some bilateral agreements.
9.3. Expert group for coordination of conservation and research work on leopards in the Caucasus formed	Not fulfilled.
Objective 10. Optimize existing legislation and if necessary develop new legislation	
Target 10.1. Existing legal frameworks analysed by 2010	Mostly fulfilled, but there is still room for improvement.
Objective 11. Secure funding for all conservation activities for the leopard in the Caucasus	
Target 11.1. Funds secured from international and national organizations for financing work on the conservation of the leopard	Partly fulfilled (20%).

The main obstacles for a more successful implementation of the *Strategy*, the NAPs or equivalent documents have been identified by the participants as:

1. Lack of financial resources;
2. Underestimation of environmental concerns on national level ;
3. Large development projects (mining, hydropower, roads, etc.);
4. Lack of capacity and professional (skilled) human resources;
5. Lack of trans-boundary cooperation (incl. communications among experts) & (geo-) political conflicts;
6. Lack of inter-sectoral communication/cooperation;
7. TR: lack of clarity/initiative about the presence of resident leopard populations which would generate the need for development of a national strategy/action plan.

5. RECOMMENDATIONS FOR THE REVISION OF THE CAUCASUS LEOPARD STRATEGY

- Make the *Strategy* and NAPs more realistic for implementation in identified time frame;
- Formulate Targets in a fully SMART fashion (e.g. make them measurable);
- Exclude generic/vague/unclear Targets from the *Strategy* and NAPs;
- Identify geographical priorities to be focussed on;
- Explore feasibility of international cooperation in the region under the hospice of international conventions and treaties.

A realistic budget should be included in each NAP. It would be recommendable to also include a budget in the new, revised version of the *Strategy* and then (e.g. a steering committee) start to search for funding. That would also allow measuring the success for fundraising and implementation of the *Strategy*. As an alternative or complementary funding plan for the *Strategy*, a budget for international cooperation and tasks could be included in each NAP, which would at least cover the work in the frame of the *Strategy* for the country representatives.

REFERENCES

Breitenmoser-Würsten Ch., Breitenmoser U., Mallon D. & Zazanashvili N. 2007. Strategy for the conservation of the leopard in the Caucasus. Tbilisi, Georgia. 26 pp.

Appendix I: List of Participants

	Country	Name	Affiliation	E-Mail
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Appendix II Workshop Programme

Agenda		
8 October, Wednesday: Travel day		
	Arrival in Tbilisi	
9 October, Thursday, Day 1		
Opening and regional presentations: 9:00-10:30 Moderator: N. Zazanashvili		
9:00	Registration and Welcome Coffee	Sofia Mgeladze
9:30	Welcome	Giorgi Sanadiradze, Host Organization/WWF-Caucasus Urs Breitenmoser, IUCN/SSG CSG Eladio Fernandez-Galiano, Bern Convention
9:45	Approval of agenda and logistics	Moderator
10:00	Workshop objectives and expected outputs	Urs Breitenmoser and Christine Breitenmoser-Würsten
10:15	Looking back and forward: Regional Strategy for Leopard Conservation in the Caucasus	Urs Breitenmoser
10:45	Ecoregion Conservation Plan for the Caucasus and Leopard Conservation	Nugzar Zazanashvili
11:00	<i>Coffee break</i>	
Country presentations: 11:30-18:00 Moderators: U. Breitenmoser & Ch. Breitenmoser-Würsten		
11:30	Status of Leopard and its prey species, Implementation status of National Action Plan, Armenia	Karen Manvelyan (Presenter), Alexander Malkhasyan, WWF Armenia
12:00	Q&A	
12:15	Status of Leopard and its prey species, and Implementation status of National Action Plan, Azerbaijan	Elshad Askerov (Presenter), WWF Azerbaijan; Tariel Talibov (Co-presenter)
12:45	Q&A	
13:00	<i>Lunch</i>	
14:00	Status of Leopard and its prey species, and implementation status of National Action Plan, Georgia	Bejan Lortkipanidze, NACRES on behalf of Georgian experts
14:20	Q&A	
14:30	Leopard and its prey species conservation in Iran	Marzieh Mussavi, Department of Environment
15:00	Brief additional information of Iranian experts	Arezo Saneii, Asian Leopard Specialist Society; Amirhossein Kh.Hamidi, Persian Wildlife Heritage Foundation; Mohammadreza Masoud, Kiamaky
15:30	Q&A	

Agenda		
15:40	Coffee break	
16:00	Leopard and its prey species conservation in Russian part of the Caucasus, incl. leopard reintroduction program	Natalia Dronova, WWF-Russia
16:30	Brief additional information from Russian experts	Yuri Yarovenko, Alim Pkhitikov, Academy of Sciences
16:50	Q&A	
17:00	Leopard and its prey species in Turkey	Batur Avgan
17:20	Brief additional information from Turkish experts	Sedat Kalem, WWF-Turkey, Ahmet Emre Kutukcu, University of Istanbul
17:40	Q&A	
17:50	Day 1 Wrap Up	Moderators
18:00	<i>End of working day</i>	
19:00	<i>Joint Dinner</i>	
10 October, Friday, Day 2: Moderated Thematic Discussions Moderators: U. Breitenmoser & Ch. Breitenmoser-Würsten		
17:50	Day 1 Wrap Up	
10:30	<i>Coffee break</i>	
11:00	Monitoring and Research	
12:30	<i>Lunch</i>	
13:30	Implementation of the Caucasus Leopard Strategy and the National Action Plans	
15:00	<i>Coffee break</i>	
15:30	Up-coming workshop on revision of regional strategy for leopard conservation in the Caucasus and further national action plans	
17:00	Final discussion and drafting the recommendations	
18:00	<i>End of the Workshop</i>	