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The Persian Leopard





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Original contributions and short notes about wild cats are welcome

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Cover Photo: Persian Leopard in Kazakhstan © USNR/CADI/ACBK, camera trap picture taken 1 January 2020, photo was provided by Tatjana Rosen

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Range-wide cooperation for the conservation of the Persian leopard – an introduction

The Persian leopard *Panthera pardus tulliana* (Kitchener et al. 2017) is a subspecies of leopard inhabiting Central and Southwest Asia (Bleyhl et al. 2022, Rosen & Mengülluğlu 2022). The Persian leopard is currently listed as Endangered (EN C2a(i)) on the IUCN Red List of Endangered Species (Khorozyan 2008). Its distribution range has been reduced substantially (Jacobson et al. 2016), and is fragmented into several isolated, mostly small populations, of which many are transboundary (Bleyhl et al. 2022, Farhadinia et al. 2022b). There is an urgent need for a concerted conservation approach across its entire range and hence international cooperation to address transboundary and range-wide conservation needs of the Persian leopard, its prey species and their habitats.

In 2002, a wildlife conservation programme with the Persian leopard as flagship was launched and is ongoing with remarkable successes (e.g. Khorozyan et al. 2022). Implementation of the long-term leopard conservation and monitoring programmes

mainly by WWF teams of Armenia, Azerbaijan and Georgia in cooperation with national governments and NGOs for the restoration of the leopard's wild prey base in these countries has facilitated the Persian leopard recovery in the South Caucasus, specifically in the Zangezur triangle (Khorozyan et al. 2022). In the Caucasus Ecoregion, a Strategy for the Conservation of the Persian Leopard developed in 2007 and revised in 2017 (Breitenmoser-Würsten et al. 2007, Caucasus Leopard Working Group 2017) is guiding these efforts. This Strategy informed the development of the National Action Plans NAPs for the Persian Leopard in Armenia, Azerbaijan and Georgia in 2009 (Caucasus Leopard Working Group 2017) and 2019 (WWF Armenia 2019). However, the autochthonous populations outside the Caucasus region are continue to dwindle.

The Persian leopard is included in the Bern Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and in the Central Asian Mammals

Initiative (CAMI) of the Convention on the Conservation of Migratory Species of Wild Animals (CMS; see [UNEP/CMS/CAMI/Outcomes](#)), and these international conventions offer the platform for a coordinated range-wide conservation effort. At the 13th meeting of the Conference of Parties to CMS in 2020, CMS Parties adopted the Resolution and Programme of Work (PoW) ([UNEP/CMS/Resolution 11.24 \(Rev.COP13\)](#)) of the CAMI. Eleven specific points concerning the Persian leopard have been included in the CAMI PoW (Supporting Online Material SOM Table T1). One Activity of high priority is the development of a Range-wide Strategy for the Conservation of the Persian leopard, including also non-CAMI Range States i. e. Armenia, Azerbaijan, Georgia, Iraq and Turkey) and the subsequent update of national conservation action plans.

The IUCN SSC Cat Specialist Group was invited by the CMS Secretariat to facilitate the development of the range-wide Strategy (Rosen 2020). As the Covid-19 pandemic prevented

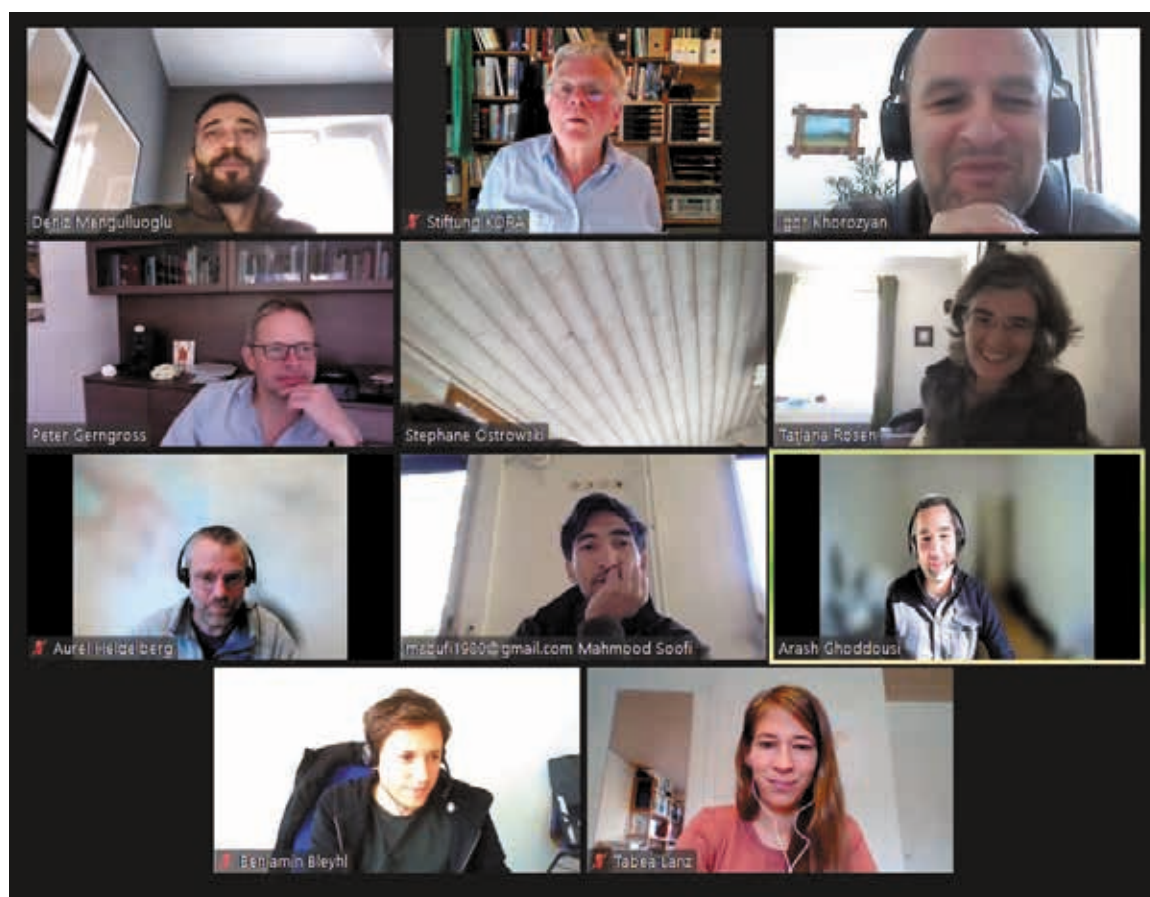


Fig. 1. Screenshot of some participants during one of the many online meetings that took place to discuss the progress of this Special Issue (Photo U. Breitenmoser).

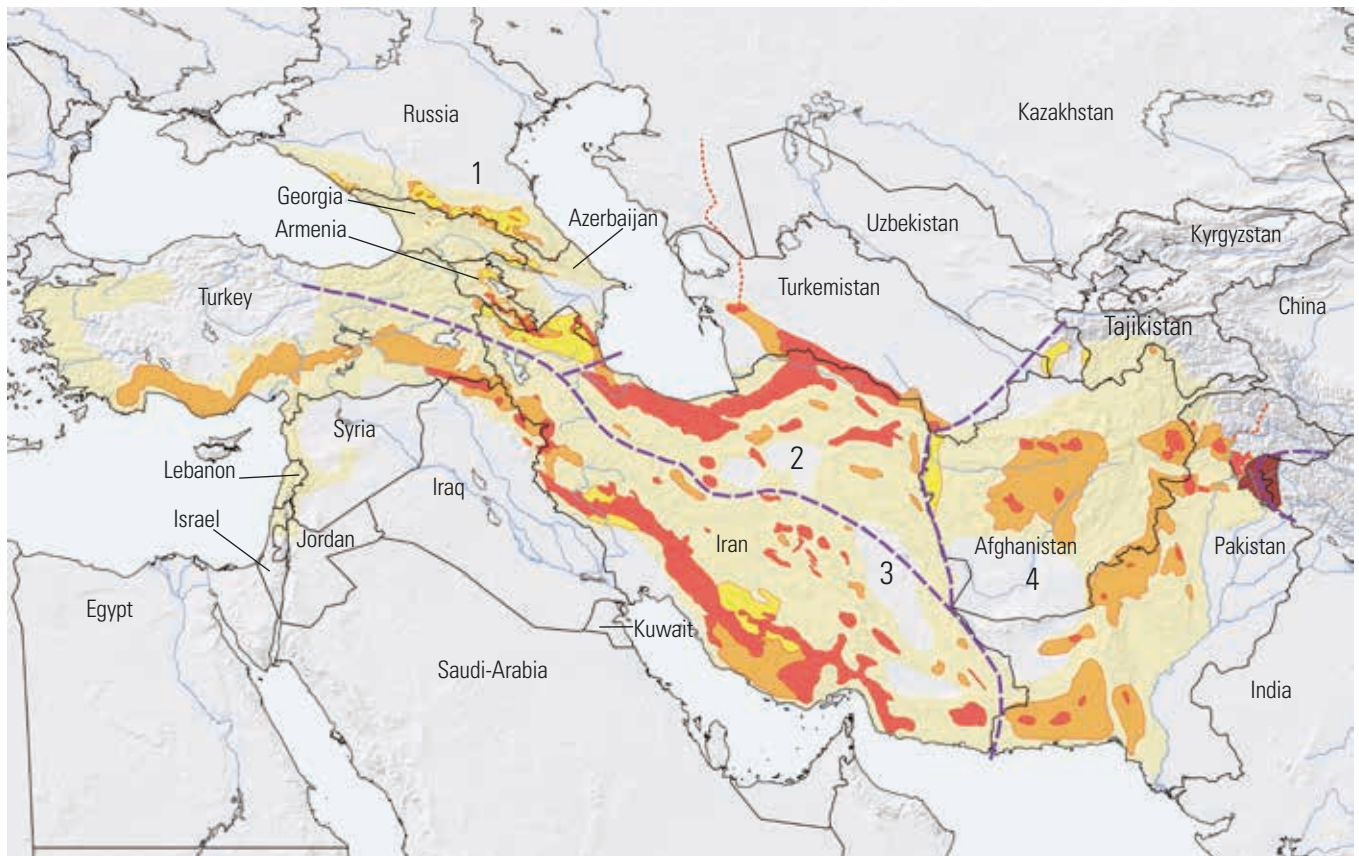


Fig. 2. Distribution of the Persian leopard in past and present times according to IUCN Red List distribution categories (red = extant; orange = possibly extant; yellow = possibly extinct; light yellow = extinct) and delineation of regions for the Persian leopard status review reports (1 = Caucasus, 2 = Alborz-Kopet Dagh, 3 = Zagros, 4 = Eastern Range (Pakistan, Afghanistan, historic distribution in Uzbekistan and Tajikistan)). The delineation of subspecies ranges follows the proposal of Kitchener et al. (2017), but there is evidence of intermixing of *P. p. tulliana* and *P. p. fusca* in northern Pakistan east of the Indus River. Map courtesy to Peter Gemgross, based on Bleyhl et al. (2022), Farhadinia et al. (2022a), Ghoddousi et al. (2022a), Khorozyan et al. (2022), and Ostrowski et al. (2022).

physical meetings, the Strategy was drafted by a group of experts on behalf of CMS and the Persian leopard Range States (see Strategy and related documents to be published on the CMS CAMI website) in several online workshops. Prior to the strategic planning workshops, the experts worked together to compile and review all information relevant for the conservation of the Persian leopard, its prey and their habitats (Fig. 1). The articles compiled in this Special Issue formed the knowledge base for drafting the Conservation Strategy, but they will also inform an updated IUCN Red List Assessment for the Persian leopard and can support the development of National Action Plans.

In a first step, the conservation status and the state of knowledge on Persian leopard was reviewed by experts from all Range States. The distribution range of the Persian leopard was divided into four regions/metapopulations, and status reports were produced for all region (Fig. 2; Chapters 4–7). Additionally, topical chapters addressing background information or specific approaches have been

produced (Chapters 2, 3, 8–12). These status reports and topical chapters provide an overall view on the knowledge available on Persian leopard across its range and up-to-date information on its distribution and status.

The approach to Persian leopard conservation follows the IUCN recommendations for strategic planning for species conservation (IUCN SSC Species Conservation Planning Sub-Committee 2017). According to the IUCN SSC, strategic planning for species conservation should be participatory, transparent, and informed by the best available science. The first step in the Strategic Planning Cycle (Fig. 3) is “preparing the ground”: defining the conservation unit, building partnerships, identifying stakeholders, securing political support and agreeing on the process and procedures. In a second step, all information available is compiled in a status review, which serves as an input document for the development of the Conservation Strategy. This Special Issue covers these first two steps in the planning cycle. The goal was to compile and critically review data and information relevant to Per-

sian leopard conservation, identify gaps of knowledge, prioritise research questions and conservation needs.

Step 3 of the Strategic Planning Cycle – development of the range-wide Conservation Strategy – is done in a cooperation of the Persian leopard Range States and conservation experts under the auspice of CMS CAMI. Steps 4 (development or update of National Action Plans) and 5 (implementation of conservation measures) will then be mainly the responsibility of the national conservation organisations and national experts, however in transboundary and international cooperation wherever needed. However, the effectiveness of the Conservation Strategy and related NAPs need to be continuously evaluated against progress made in reality. This requires monitoring, reporting, and, as needed, revision of the Strategy or NAPs. Several Range Countries already have developed NAPs for the Persian leopard (e.g. Armenia, Azerbaijan and Georgia) and are invited to review and if needed revise their NAPs based on the new available information and the up-to-date

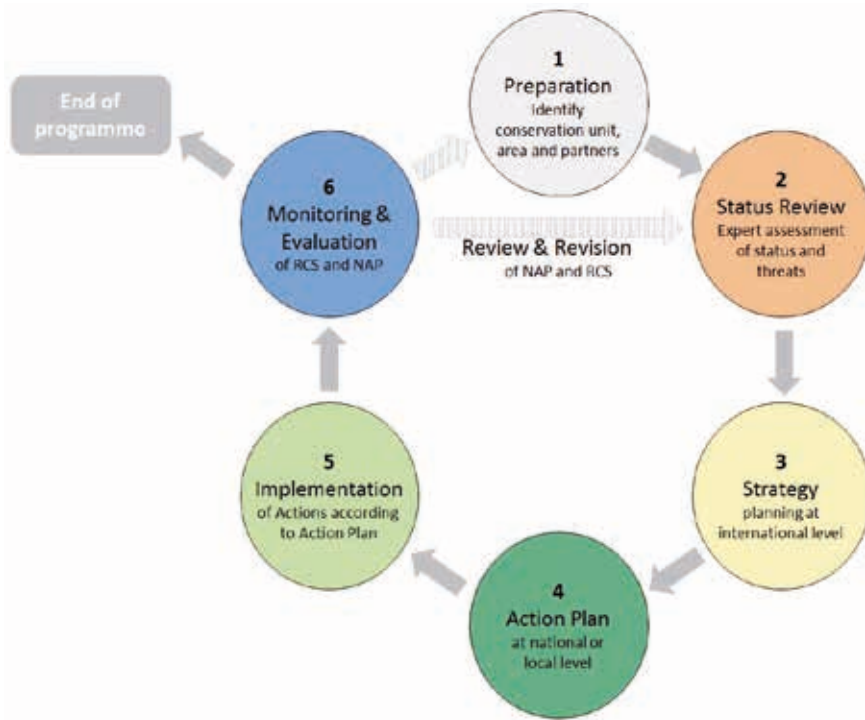


Fig. 3. Strategic Planning Cycle. The preparatory steps (Point 1 and 2) are important for sensible planning, which is the first step to successful conservation. The actual planning process (done in participatory workshops) is covered by Points 3 and 4. The ultimate goal of the whole procedure is the implementation of conservation actions (Point 5), but these will only be successful if properly planned and subsequently monitored and evaluated (Point 6). The purpose of the whole participatory process is not to have a plan but to implement effective conservation measures. The circle implies that conservation is an adaptive process (Breitenmoser et al. 2015).

range-wide Strategy. Countries with no NAP are encouraged to develop one. A step-by-step guidance for the development of a NAP in a participatory approach is provided by Breitenmoser et al. (2015). The regular CAMI Range States meetings will be used to review the implementation of the Persian Leopard Conservation Strategy and to decide about possible revision and adaptation of the Strategy.

The CMS CAMI POW, the Conservation Strategy and the information compiled in this Cat News Special Issue provide a comprehensive framework for the conservation not only of the Persian Leopard, but also of its habitat and prey species and enabling its coexistence with local communities.

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Supporting Online Material SOM Tab T1 is available at www.catsg.org.

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