

MORTEZA ESLAMI¹, NAVID GHOLIKHANI¹ AND EHSAN M. MOQANAKI^{*}

Time to get real about the Asiatic cheetah conservation

The global distribution of the Asiatic cheetah *Acinonyx jubatus venaticus*, with as few as 50 individuals left in the wild, is now restricted to two habitat patches of over 140,000 km² in Iran's central plateau. Already Critically Endangered, in 2001 an international initiative entitled Conservation of the Asiatic Cheetah, Its Natural Habitat, and Associated Biota in the I. R. of Iran CACP was put together to halt the imminent cheetah extinction. Efforts associated with CACP have successfully

1. Promoted establishment of new protected areas across the cheetah range (known as cheetah reserves CRs);
2. Strengthened law enforcement in CRs;
3. Recovered CRs' ungulate prey populations;
4. Raised awareness of the public and stakeholders about the cheetah conservation; and
5. developed research and conservation capacity.

However, conservationists are now divided on whether these achievements have been sufficient to reverse the Asiatic cheetah's extinction trajectory.

With the cooperation of CACP, the Iranian Department of Environment DoE and several local partners, the Iranian Cheetah Society ICS set up a large-scale monitoring effort across multiple CRs in 2011 to update the conservation status of the Asiatic cheetah population. Through five years of intensive camera-trapping surveys with the total effort of over 28,500 trap-nights at 467 stations in 11 sites across 13,000 km² core of the cheetah range, only 17 adult cheetahs (10 males, 5 females and 2 of unknown sex)

were identified. Disturbingly, no verifiable evidence of female cheetahs was obtained across two-third of the subspecies' presumed range. No new cheetah individuals were recorded since 2012. In addition, human-related deaths of two photo-captured cheetahs (one male and one female) are already confirmed (Fig. 1). ICS' surveys strongly suggest that viable cheetah subpopulations with reproducing females are now limited to the northern habitat patch.

The Asiatic cheetah conservation is entangled with the subspecies' extremely low population size, but more importantly that this population is fractured into smaller subpopulations across two landscapes with little to no connectivity. ICS findings show that cheetahs of different sex and age groups disperse widely across multiple CRs in an unpredictable movement pattern. On the one hand, this nomadic lifestyle can be imperative for persistence of the Iranian cheetah population by reversing local extinctions. On the other hand, the complex life history and social behaviour of Asiatic cheetahs in combination with the weak enforcement capacity outside the current CRs make their effective conservation extremely difficult. Additionally, the apparent male-skewed sex ratio of cheetah subpopulations turns them into declining sink populations.

The inadequate political will to mitigate continuing external threats to the Asiatic cheetah survival has been partly responsible for the failure of current conservation activities:

1. Traditional pastoralism within CRs continues to bring tens of thousands of livestock, guarding dogs and herders

to the core of cheetah habitat and has resulted in direct killing of at least 21 cheetahs since 2001. This herding practice also poses indirect threats to cheetahs by disturbing the habitat and through competition with the wild prey over food and water sources.

2. Hotspots of cheetah-vehicle collisions are not mitigated and the habitat fragmentation is continuing and increasing. Road mortalities of cheetahs include at least 15 individuals of both sexes since 2001.
3. Unsustainable mining development and its associated secondary impacts, such as habitat alteration, infrastructure expansion, human migration and illegal hunting, remains one of the biggest threats to the cheetah habitat, and new exploration plans are even threatening CRs as the decline in cheetah numbers weakens DoE's position in relation to extractive ministries and industries.

CACP has been a collaborative effort of numerous national and international partner organisations and conservationists during the past 16 years. The extinction of the Asiatic cheetah would be a conservation failure not only for Iran, but also for the entire initiative. All partners must admit the urgency of the situation, and play an active role in the decision-making process to safeguard the future of Asiatic cheetahs. What Asiatic cheetah conservation urgently requires is negotiations at high levels to encourage the Iranian government to take a clear responsibility about the fate of the Asiatic cheetah. If the Iranian government really wants to save cheetahs, it must be ready for huge investments and large-scale conservation interventions. Simultaneously, the current initiative needs to prioritise pragmatic solutions, and seriously consider manipulative management actions for subpopulations with no evidence of female cheetah presence. Delaying immediate measures for the sake of gaining more data on the cheetah status will only lead to monitoring cheetahs to extinction. Without a country-scale rigorous conservation effort that puts its goal to solely, and urgently, preserve the cheetah population and its habitat, the Asiatic cheetah will soon be a conservation failure story.



Fig. 1. Camera-trap photograph of a female cheetah with three cubs at Miandasht Wildlife Refuge, North Khorasan Province, in 2012. The female cheetah was killed in a road accident in May 2016, and the human-induced death of one of the cubs has been confirmed in February 2016 (Photo Iranian Cheetah Society/Iran DoE/CACP).

¹ Iranian Cheetah Society ICS, P.O. Box 14155-8549, Tehran, Iran

*<ehsan.moqanaki@gmail.com>