ISSN 1027-2992

N° 66 | Autumn 2017







CATnews is the newsletter of the Cat Specialist Group, a component of the Species Survival Commission SSC of the International Union for Conservation of Nature (IUCN). It is published twice a year, and is available to members and the Friends of the Cat Group.

For joining the Friends of the Cat Group please contact Christine Breitenmoser at ch.breitenmoser@kora.ch

Original contributions and short notes about wild cats are welcome Send contributions and observations to ch.breitenmoser@kora.ch.

Guidelines for authors are available at www.catsg.org/catnews

CATnews is produced with financial assistance from the Friends of the Cat Group.

Design: barbara surber, werk'sdesign gmbh Layout: Christine Breitenmoser and Tabea Lanz Print: Stämpfli Publikationen AG, Bern, Switzerland

ISSN 1027-2992 © IUCN/SSC Cat Specialist Group



Editors: Christine & Urs Breitenmoser Co-chairs IUCN/SSC Cat Specialist Group KORA, Thunstrasse 31, 3074 Muri, Switzerland Tel ++41(31) 951 90 20 Fax ++41(31) 951 90 40 <urs.breitenmoser@vetsuisse.unibe.ch> <ch.breitenmoser@kora.ch>

Associate Editors: Keith Richmond Brian Bertram Sultana Bashir Juan Reppucci

> **Cover Photo**: Asiatic cheetah, Iran Photo Houman Jowkar

The designation of the geographical entities in this publication, and the representation of the material, do not imply the expression of any opinion whatsoever on the part of the IUCN concerning the legal status of any country, territory, or area, or its authorities, or concerning the delimitation of its frontiers or boundaries.

STÉPHANE OSTROWSKI1

An evaluation of the achievements of the Conservation of Asiatic Cheetah Project in Iran

The Conservation of the Asiatic Cheetah Project CACP in Iran has reached by 2016 some degree of achievements for 63% of the activities proposed in the 2010-2014 Action Plan. The objectives related to capacity building, protection and law enforcement could be considered reached, whereas those linked to policy, economics, monitoring and land use planning were in general less achieved. CACP operation suffered from low and unstable funding, frequently changing leadership at the Department of Environment DoE level, weakly responsive administrations, a lack of collaboration between national partners and a rather complex and sometimes confusing Action Plan. Despite a reasonably high level of achievement of activities proposed by the 2010-2014 Action Plan, the Asiatic cheetah *Acinonyx jubatus venaticus* remains Critically Endangered. A review of threats and actions should be considered for the next Action Plan.

The Asiatic cheetah has lost most of its historic distribution range and is considered as Critically Endangered according to the IUCN Red List of Threatened Species (Jowkar et al. 2008). It is speculated that as few as 50 cheetahs may persist in a fragmented habitat of the Dasht-e Kavir, the central arid plateau of Iran (Farhadinia et al. 2016). From 2001 to 2008 (Phase I), a medium-sized Global Environment Facility GEF project advanced the conservation of the Asiatic cheetah, its critical habitats and prey populations (UNDP 2001). The Conservation of the Asiatic Cheetah Project CACP was implemented by the DoE of the Islamic Republic of Iran (later Iran) and supervised by the United Nations Development Programme UNDP. International conservation organisations such as the Wildlife Conservation Society WCS, Panthera, the Cheetah Conservation Fund CCF, and several IUCN bodies provided expert input.

Between 2008 and 2017 CACP continued operating thanks to the continuing support of the DoE (in-kind), UNDP, the Persian Wild-life Heritage Foundation PWHF (a national non-governmental organisation registered in 2008), WCS, and Dana Insurance Company.

The lack of a consistent work plan was one of the shortcomings of the Phase I of the project, as identified in the terminal evaluation report (Breitenmoser et al. 2009). Institutions and organisations involved in the continuous conservation of the Asiatic cheetah agreed that Phase II should base on an Action Plan developed as a logical framework (LogFrame) in a participatory workshop. The IUCN/SSC Cat Specialist Group, with the support of the Federal Office for the Environment FOEN of Switzerland, organised and facilitated an international meeting to develop an Action Plan for the period 2010-2014 (CACP II). This workshop took place in Saanen in the Swiss Alps from 28 March to 1 April 2010 with the participation of representatives from DoE, CACP, WCS, Panthera, and CCF.

Although CACP had to commit to a set of new conservation actions requisite by the UNDP funding, this Action Plan was effectively used by the two successive project managers, as a guide to most important research questions, monitoring requirements, needs in capacity development, and information and education. In 2016, CACP asked WCS to undertake an evaluation of the project's achievements based on the Action Plan elaborated in 2010. The following report presents the main findings of this assessment and also includes results of activities developed after 2014.

Methods

I took the opportunity of four missions in Iran to interview in Tehran and provinces a variety of stakeholders of cheetah conservation (Fig.1, Supporting Online Material SOM Figure F1, SOM Table T1). Following each mission I took notes specific to the 54 activities itemised in the Action Plan 2010-2014 LogFrame (SOM T2). In April 2017 | evaluated the level of achievement of each activity using the indicators of the tabulated LogFrame and the notes compiled during the successive missions. I categorised activities qualitatively as "achieved", "partially achieved", or "not achieved". Further, I developed an adaptive rating scale of achievements for the 20 targets of the Action Plan. A target achievement was considered highly satisfactory, satisfactory or moderately satisfactory when 100% of relating activities were achieved, when 75% or more of the activities were achieved or partially achieved, or when more than 50% (but less than 75%) of the activities were achieved or partially achieved, respectively. Similarly a target achievement was considered highly unsatisfactory, unsatisfactory, or moderately unsatisfactory when 0% of the relating activities were achieved, when 25% or less of the activities were achieved or partially achieved, or when 50% or less (but more than 25%) of the activities were achieved or partially achieved, respectively. Although the Action Plan applied to the period 2010-2014, results were evaluated until December 2016. Final results were reviewed and discussed with the CACP manager in March 2017.

Results

CACP reached some degree of achievements for 63% of the activities proposed in



Fig. 1. Discussion at the headquarter of the Department of Environment of Yazd Province with CACP staff, the deputy head of DoE Yazd, and the protected area managers of 4 Cheetah Priority Areas, January 2016. Meetings in several provinces were useful to improve data sharing with CACP (Photo WCS / Stephane Ostrowski).



the Action Plan (Fig. 2). Two targets (10%) were highly satisfactorily achieved, 6 (30%) were satisfactorily achieved, 2 (10%) moderately satisfactorily achieved, 7 (35%) moderately unsatisfactorily achieved, 1 (5%) unsatisfactorily achieved and 2 (10%) highly unsatisfactorily achieved (SOM T3). Overall the level of achievement was moderately to highly satisfactory for half of the proposed targets.

Based on the level of achievement of targets, Objectives 1 (Capacity), 3 (Protection), and 4 (Law Enforcement) were considered satisfactorily achieved as all targets were ranked between moderately unsatisfactorily achieved and highly satisfactorily achieved.

Objectives 2 (Policy), 6 (Economic), 7 (Monitoring) were considered moderately unsatisfactorily achieved as none of the relevant targets were ranked higher than moderately unsatisfactory. Finally Objective 5 (Land use) was considered unsatisfactory in its achievement because two of the targets were highly unsatisfactorily achieved and the third one only moderately satisfactorily achieved (SOM T3).

06

Objective 1. To enhance the technical and scientific capacity and the motivation of the DoE and relevant partners

This is one of the most successful achievements of CACP and partners during the period covered by the plan and beyond. Game guards in the 10 Cheetah Priority Areas (CPA; Touran Biosphere Reserve, Miandasht Wildlife Refuge WR and Zamen e Ahoo National Park NP; Naybandan WR; Darban e Ravar WR; Bafgh Protected Area PA; Dareh Anjir WR; Kalmand PA; Sia Kooh NP and PA; Abbas Abad WR; and Kavir NP and PA, see also Fig. 1 in Khalatbari et al. 2017) have benefitted from higher quality equipment and effective incentive programmes (e.g. health insurance coverage for all rangers and their families by Dana Insurance Company), and have been better and more regularly trained compared to



those in other protected areas (Fig. 3). Training also benefitted provincial managers of DoE, veterinarians, and students.

CACP created and populated a database for cheetah records. Its format provides a simple and friendly-user access to cheetah records in the country since 2001 but does not allow a powerful management of data. Unfortunately other useful databases (e.g. prey) were not created, because of limited and variable level of funding which did not allow planning for the development of a more powerful platform of databases and the support of a permanent data administrator. The long-term management of the cheetah database has not been secured beyond CACP operation and a lasting system with a central repository location, administration and accessibility mechanisms is still lacking.

Objective 2. To convey accurate information and recommendations to relevant audiences to influence policy in support of cheetah conservation

Several activities outlined in the 2010-2014 plan could not be achieved because of limited funding for staff salaries (e.g. maintaining a dynamic website) or became rapidly obsolete (e.g. quarterly newsletters) after 2012 as a result of the fast and significant changes in information technology methods and tools. These changes contributed at decreasing the exposure of the project internationally. During the past three years DoE and CACP had to transition, sometimes with difficulties, to social media communication. Information on cheetah conservation activities supported by CACP was also disseminated by collaborating local NGOs, unfortunately sometimes with little acknowledgement. Fortunately, CACP and collaborating NGOs were successful at scalingup public awareness campaigns to reach the broadest possible national audience, including significant actors of the civil society and influential policy and decision makers. Finally, CACP collaborated with the Ministry of Education to include a paragraph on cheetahs in the textbook of first-year high schools (nationally) and in textbooks of secondary classes in the seven provinces of the cheetah distribution range.

Objective 3. To effectively control threats and manage cheetah, its habitat and associated fauna

The number of game guards in CPAs was increased from 101 in 2010 to 126 in 2016, their employment contracts secured, the monitoring and anti-poaching equipment globally improved. Through an agreement brokered by CACP, Dana Insurance Company compensated at market rate any livestock killed by cheetahs (Fig. 4).

Miandasht WR succeeded to improve rangeland conditions through a participatory land-management effort developed by the protected area manager. These efforts consisted at removing illegal grazers and controlling tightly the number of livestock in authorised groups (max. allowance of 4,600 sheep and goats). As a result, the sand gazelle population has apparently tripled during the last 6 years (H. Harati, Director Miandasht, pers comm.; SOM F2). In 2016-2017 CACP also achieved better monitoring and control of livestock in Touran Biosphere Reserve BR by contracting a semi-governmental consulting company to implement controls over authorised numbers of livestock. The grazing patterns in Touran BR could be changed durably if the participatory model tested successfully in Miandasht is adopted and a solid monitoring and control mechanism continues to operate.

Buying grazing and water rights within CPA has been initiated thanks to the effort of the Iranian Cheetah Society ICS, a national NGO. The process is ongoing for the eight grazing areas in the national park NP of Touran BR and four in Miandasht WR. Part of the funds for this acquisition has been secured by a donation of IUCN Netherlands currently administered by ICS. DoE/CACP have convinced the government to top-up on this donation to finalise the acquisition, which is hoped to happen soon.

Advised by CACP, the Central DoE has successfully blocked or obstructed through legal means intrusive development across the CPAs (e.g. secondary road in Bafgh PA, mining expansion into Darre Anjir WR). In 2016 the Ministry of Roads and Urban Development committed to fence 5 km of the most dangerous stretch of the highway 44

(including funnelling of cheetahs to secured underpasses) north of Touran BR (Fig. 5).

Objective 4. To effectively apply existing laws by all departments and stakeholders in order to preserve habitat for both wildlife and livestock

The core zone of Miandasht was elevated to a National Park in 2014 and Ravar/Darband to a WR in 2011. Advised by CACP, the DoE increased in 2015 the penalty for voluntary cheetah destruction to ca. 28,000 \$US per case, the highest fine for any wildlife destruction in the country. In 2014-2015 CACP engaged provincial judges to promote a more effective law enforcement of cheetah-related violations. Judges around the 10 CPAs were informed of the regulation on cheetah protection and asked to implement them accordingly. Finally Dana Insurance compensated ca. 15,000 \$US for any cheetah killed accidentally (within the limitation of five events per year). The fund is administered by the UNDP and put back to CACP for cheetah conservation.

Objective 5. To develop and implement a comprehensive land-use plan that supports cheetah conservation for the entire cheetah landscape

A cheetah suitable habitat and connectivity model based on presence records was completed only in 2015 (Ahmadi et al. 2017). It is currently presented by CACP to relevant government organisations but its endorsement to support an implementation agreement for the National Land Use Plan may prove to be beyond the power of DoE.

Objective 6. To improve livelihoods of communities, with appropriate partners and in a manner that supports cheetah conservation

Relatively limited efforts have been dedicated to improve understanding of the value and importance of conservation of cheetah and its prey specifically among relevant stakeholders in/around the 10 CPAs. However, CACP and national partners have devoted most of their efforts at national public awareness campaigns, celebration of the Cheetah Day and various high-profile promotional and educational efforts at provincial level. These efforts have ramped up after 2014. It is likely that local stakeholders have also benefitted from these national awareness campaigns but a thorough assessment is needed to evaluate how and to which extent this positive comprehension has diffused in local societies (Fig. 6).

In partnership with PWHF, CACP has supported a community-based ecotourism project (Semnan Province) and initiated in 2014, with the help of WCS, a sustainable trophyhunting conservancy (Yazd Province). The first results are promising for livelihood support, but the projects still lack robust monitoring to evaluate their conservation effectiveness.

Objective 7. To consistently monitor cheetah and prey populations and enhance the understanding of Asiatic cheetah and prey ecology and epidemiology

A quantitative monitoring of cheetah and a semi-quantitative monitoring of prey have not been established in the 10 CPAs. Provincial DoEs have been reporting irregularly to

CACP and their reports varied in quality and quantity according to their willingness to share information. The situation has slightly improved from the time CACP committed to contact DoE managers in provinces on a daily basis.

ICS and PWHF have carried out camera-trap studies, through contracts passed with CACP or directly with provincial DoEs, explaining why CACP has failed to become the central repository for cheetah camera trap information. Also implementing partners only delivered to CACP processed results at the end of the surveys and not raw data, which did not allow evaluating the quality of their surveys. According to protected area managers, several CPAs have not been surveyed for at least the last 3 years (e.g. Kavir NP, Abbas Abad PA), whereas others have been incompletely surveyed (e.g. Naybandan and Ravar WRs).

Cheetah monitoring results have been delivered in unpublished reports in Farsi and only as fragments and very occasionally in peerreviewed publications (e.g. Farhadinia et al. 2016). Reliable trends in cheetah (and prey) population size and distribution could not be measured. Habitat suitability and connectivity, long-distance movements, road accident risk have been researched (Farhadinia et al. 2013, Mohammedi & Kaboli 2016, Ahmadi et al. 2017, Moganaki & Cushman 2017) but still little is known on other aspects of the cheetah biology such as prey selection (e.g. Farhadinia et al. 2012), as no study has used molecular methods to determine without failure the identity of the scat depositors.

Concerning prey monitoring, the DoE conducted total count estimates of wild ungu-



Fig. 3. The CACP manager with game guards in Kharou Hunting Prohibited Area, Esfahan Province, a recognised cheetah corridor in the north-west of the Dasht-e-Kavir, January 2016. Researches have emphasised the importance to protect suitable habitat to cheetahs and corridors outside protected areas (WCS/S. Ostrowski).



Fig. 4. Game guards of Cheetah Priority Areas have received significant incentive support from Dana Insurance Company, a private Iranian corporate. Discussions have been initiated with CACP to extend this support beyond 2017 (WCS/S. Ostrowski).

lates in cheetah areas as part of a national ungulate census effort in 2015/2016. CACP contributed staff and expertise to this census operation. Because of the method the precision of the estimate is unknown.

The risk posed by diseases to cheetahs and prey is better appreciated (e.g. Marashi et al. 2017) but the importance of this threat is still under-valued and under-reported by DoE staff in several provinces. For example systematic necropsy by accredited veterinarians to determine the cause of death of cheetahs have been rarely undertaken and provincial DoEs did not send dead specimens to Tehran for thorough examination, unless summoned. Conclusions on causes of death of cheetahs were often questionable, as usually only inferred from observations made by local game guards or taxidermists.

Discussion

Despite some success on many activities, the conservation program was not successful, as the Asiatic cheetah remains Critically Endangered. The roots of this lack of success are to be sought in the mismatch between the scale of the task and the extent of commitments, failure to address the key threats, administrative hurdles, a high variability in funding and the relatively limited support of international conservation organisations.

The five-year Action Plan developed in 2010, which was structured in six main objectives, 20 targets and 54 activities, expected results that went far beyond the possibilities of CACP. The resources available to CACP and DoE were largely insufficient in regard of the scale of threats on wildlife in Iran (e.g. Jowkat et al. 2016). The conservation of an estimated 5 million hectares of remaining cheetah core habitat, half of it under formal protection (Ahmadi et al. 2017), with no more than 50 game guards deployed simultaneously, the 3-4 full time CACP employees, and half a dozen highly dedicated but often weakly supported local conservationists, proved a Sisyphean task. Despite these shortcomings the CACP has achieved (generally after the deadlines set by the Action Plan) satisfactory results on improved legal protection of sites and law enforcement, on education and training of professionals and national public awareness campaigns.

The Action Plan suffered some defaults in its logical flow and pertinence. For example activities under target 3.1 (see SOM T2) were satisfactorily achieved but did not result into reaching the target of cheetah numbers being increased. This target misjudged the extent of required activities to be achieved to address main threats and was wrongly phrased. For example road-kill threat, which was responsible of 15 cheetah casualties between 2001 and 2016, was not specifically addressed in the plan. Several other targets lacked pertinence, such as 3.2 that aimed for the effective livestock management in the 10 CPAs, whereas livestock management is only relevant to 2 CPAs (see SOM T2). A few activities that related to the project communication (e.g. 1.1.5, 2.1.3) proved obsolete because of the fast changing information technologies. Objective 5 that called for implementation of a land use plan supporting cheetah conservation within 3 years was unrealistic. For the continuation of the CACP, I recommend developing an action plan that is more straightforward, with fewer but betterdefined pragmatic tasks, addressing the key threats allowing adaptive management, and based on a flexible prioritisation.

The lack of an operating national monitoring framework and the insufficient data centralisation effort from CACP in the context of several provincial DoE administrations and national partner organisations reluctant to share information and results led to the failure of establishing a reliable and long-lasting national monitoring system for cheetah populations, an indispensable instrument for the continuing and long-term evaluation of the success of CACP activities. Although a robust quantitative approach might have proved technically difficult to develop, estimators of population trends in a number of key CPAs could have been established. Part of this failure is also related to the administrative difficulties encountered by international and national partner organisations to import camera traps in large numbers to support monitoring activities. Improving collaboration between key partners and committing international organisations into increased support is essential to establish an efficient monitoring system for cheetahs in Iran.

Throughout its implementation the project has also struggled with a number of administrative and financial issues and constraints. These included frequent changes in management at senior levels. Between 2010 and 2017 there have been five successive DoE deputy heads for Natural Environment and Biodiversity NEB Division, with different managerial skills and understanding of the cheetah conservation, and two successive managers for CACP (A. Jourabchian 2010-2011 and H. Jowkar 2012-2017), with



Fig. 5. Signage installed a segment of highway 44 cutting a main cheetah corridor between Touran Biosphere Reserve and Miandasht WR. It warns the road users about the possibility of cheetahs crossing the highway. October 2016 (Photo WCS/S. Ostrowski).



Fig. 6. Street-art featuring a cheetah, small town near Miandasht NP and WR, March 2017. Local communities seem to have a better knowledge and a positive attitude about cheetahs thanks to the national public awareness campaigns organised by the DoE/CACP and project partners (Photo WCS/S. Ostrowski).

Ostrowski

different managerial styles. Each change of leadership over the NEB division resulted for CACP in delays at implementing activities that required senior approval. The budgets of CACP were also affected by considerable inter-annual variations (Fig. 7; CV = 52%), including a very serious contraction in 2011-2013, in the middle of the implementation of the Action Plan. International organisations contributed to the implementation of CACP activities albeit to a lesser extent than expected. The Wildlife Conservation Society provided funding for expertise throughout the project's duration, and also for activities after 2013. PWHF and Dana Insurance Company contributed financially after 2013 and 2014, respectively (Fig. 7).

The level of support provided by the DoE to cheetah conservation was also affected by macro-economic problems of Iran resulting in part from international sanctions. Following expansion of international sanctions related to Iran's nuclear program, the Iranian currency fell to a record low to the US dollar in September 2012, the inflation skyrocketed and reached more than 40% in 2013 which led to a considerable decrease in national revenues. Governmental budgets were directly affected by this situation, which led to decreased effective budgets for protected areas. The effects were particularly noticeable on the protection efforts. Inflation combined to recent economic reforms aimed to decrease subsidised commodities led to constrictions of petrol allocations to protected areas with a recorded 2-5 times reduction in patrolling activities in 2016 compared to 2010 (H. Jowkar, pers. comm.).

The conservation and recovery of the Asiatic cheetah in an immense environment like the Dasht-e-Kavir in Iran is a complex and longlasting endeavour. In the final evaluation of CACPI the assessors stated that "a mere budget of about 1.5 million \$US (ca 380,000 \$US per annum) can only be considered a start" (Breitenmoser et al. 2009). By 2016 the CACP was able to achieve some level of success on approximately two-thirds of the activities proposed in the 2010-2014 Action Plan with merely half this amount and contributed to save the Asiatic cheetah from extinction. The CACP has gained enough knowledge, experience, and credibility to be the appropriate platform to save the cheetah in Iran: but it will not succeed in this task without focusing its strategy in the future, a strong and long-lasting international support and a very significant increase of its funding resources.



Fig. 7. Annual budgets (in \$US) of the Conservation of the Asiatic Cheetah Project between 2010 and 2016 showing the contribution of the main donors. WCS expert cost between 2010 and 2016 is not included (Courtesy: CACP).

Acknowledgements

I thank the Department of Environment of Iran for its outstanding hospitality. I am especially grateful to Houman Jowkar, the current CACP manager, who applies transparency and accountability in his management, and has shared with me all the information relevant to this evaluation. I also thank Rajab Kariar, Nasrin Afshari and Javad Najafi at CACP for their collaboration, help and after-hours efforts to gather information used for this evaluation. Finally the work of WCS in Iran would not have been possible without the long-standing support of the Flora Family Foundation.

References

- Ahmadi M., Balouchi B. N., Jowkar H., Hemami M-. R., Fadakar D., Malakouti-Kha S. & Ostrowski S. 2017. Combining landscape suitability and habitat connectivity to conserve the last surviving population of cheetah in Asia. Diversity and Distributions 23, 592-603.
- Breintenmoser U., Alizadeh A. & Breintenmoser-Würsten C. 2009. Conservation of the Asiatic cheetah, its natural habitat and associated biota in the I. R. of Iran. Terminal Evaluation Report. Project Number IRA/00/G35. 73 pp.
- Farhadinia M. S, Hosseini F., Nezami B., Harati H., Marker L. & Fabiano F. 2012. Feeding ecology of the Asiatic cheetah *Acynonyx jubatus venaticus* in low prey habitats in northeastern Iran: Implication for effective conservation. Journal of Arid Environment 87, 206-211.
- Farhadinia M. S., Akbari H., Musavi S. J., Eslami M., Azizi M., Shokouhi J., Gholikhani N. & Hosseini-Zavarei F. 2013. Movements of Asiatic cheetahs *Acinonyx jubatus venaticus* across multiple arid reserves in central Iran. Oryx 47, 427-430.
- Farhadinia M. S., Akbari H., Eslami M. & Adibi M. A. 2016. A review of ecology and

conservation status of Asiatic cheetah in Iran. Cat News Special Issue 10, 18-26.

- Jowkar H., Hunter L., Ziaie H., Marker L., Breitenmoser-Wursten C. & Durant S. 2008. Acinonyx jubatus ssp. venaticus. The IUCN Red List of Threatened Species 2008: e.T220A13035342. http://dx.doi.org/10.2305/IUCN.UK.2008.RLTS. T220A13035342.en. Downloaded on 13 July 2017.
- Jowkar H., Ostrowski S., Tahbaz M. & Zahler P. 2016. The conservation of biodiversity in Iran: threats, challenges and hopes. Iranian Studies 49, 1065-1077.

09

- Khalatbari L., Jowkar H., Yusefi, G. H., Brito J. C. & Ostrowski S. 2017. The current status of Asiatic cheetah in Iran. Cat News 66, 10-13.
- Marashi M., Masoudi S., Moghadam M. K., Modirrousta H., Marashi M., Parvizifar M., Dargi M., Saljooghian M., Homan F., Hoffmann B., Schulz C., Starick E., Beer M. & Fereidouni S. 2017. Peste des Petits Ruminants Virus in vulnerable wild small ruminants, Iran, 2014-2016. Emerging Infectious Diseases 23, 704-706.
- Mohammadi A. & Kaboli M. 2016. Evaluating wildlife-vehicle collision hotspots using kernelbased estimation: a focus on the endangered Asiatic cheetah in central Iran. Human-Wildlife Interactions 10, 103-109.
- Moqanaki E. M. & Cushman S. A. 2017. All roads lead to Iran: Predicting landscape connectivity of the last stronghold for the critically endangered Asiatic cheetah. Animal Conservation 20, 29-41.
- UNDP 2001. CACP Project Document. September 2001. Unpublished, Tehran, Iran.

Supporting Online Material SOM Figures F1 & F2 and Tables T1-T3 are available at www.catsg.org.

¹ Wildlife Conservation Society, 2300 Southern Blvd, Bronx, 10460 NY, USA *<sostrowski@wcs.org> Ostrowski S. 2017. An evaluation of the achievements of the Conservation of Asiatic Cheetah Project in Iran. Cat News 66, 5-9. Supporting Online Material.



SOM F1. A meeting with the CACP manager and staff of the Wildlife Bureau at the headquarter of the Department of Environment (DoE), Tehran, January 2016. Recently the DoE has had considerable difficulties at allocating enough resources to the cheetah priority areas because of the economic crisis (WCS/S. Ostrowski).



SOM F2. A discussion in the field with the CACP manager, the senior staff of the North-Khorasan Department of Environment and the manager of Miandasht National Park and Wildlife refuge. Miandasht succeeded to improve its rangeland conditions through a participatory land-management effort implemented by the protected area manager, March 2017 (WCS/S. Ostrowski).

SOM T1. Summary of the main institutions and entities visited and interviewed in the course of the evaluation of the second phase of the Conservation of the Asiatic Cheetah Project (CACP) in Iran.

Date	CACP	Central DoE Tehran	Provincial DoE	Protected Area and Hunting Prohibited Area	NGO	UNDP	Others
Jan 2016	Yes	Leadership, Wildlife Bureau	Ardestan, Yazd, Ardakan, Semnan	Ariz, Bafgh, Darre Anjir, Kalmand, Kharou, Kamki, Sia Kuh	ICS, PWHF	Yes	Cheetah Rehabilitation Center, Qale Bala eco-tourism, Kalout hunting conservancy, Tehran Zoo, private donors
May 2016	Yes	Wildlife Bureau, experts	Veterinarians of all cheetah provinces, Semnan	Kavir, Touran	-	-	Cheetah Rehabilitation Center, Pardisan Park
October 2016	Yes	-	-	-	ICS, PWHF	Yes	Dana Insurance Company, Kalout hunting conservancy, private donors
March 2017	Yes	Leadership, Wildlife Bureau	North-Khorasan, Shahrud	Touran, Miandasht	ICS, PWHF	Yes	Cheetah Rehabilitation Center

SOM T2. Tabulated LogFrame of the Conservation of the Asiatic Cheetah Project (CACP) Action Plan 2010–2014

Activity	Actors	Indicators	Methods	Time frame	
Objective 1. To enhance the technical and scientific capacity	and the motivation of the	DoE and relevant partners.			
Target 1.1. All Game Guards in the ten protected areas have within 2 years sufficient continued training, feedback and equipment to perform their basic protection functions and to reliably collect ecological data, while effectively communicating with the local communities. (Reviewed as additional cheetah areas are delineated.)					
<i>1.1.1.</i> Inventory and assessment of game guard equipment and assure that game guards in Cheetah areas have necessary transport, fuel, GPS, etc.	CACP/DoE	Inventory of equipment	Physical inventory	Ongoing	
1.1.2. Provide training/mentoring for game guards and DoE experts to assure that all can reliably capture relevant data. Provide an additional trainer for one session per year around topics suggested by CACP/DoE.	CACP/DoE, UNDP, WCS, CCF	# trainings, trainers, and # trainees, 1 training manual	Adjust Dari Manual (WCS) theoretical and field courses, "train the trainers"	Ongoing, WCS: Apr 2010, 8 months	
<i>1.1.3.</i> Continue a program of recognition for outstanding game guards in each of the areas.	DoE/CACP, UNDP	# certificates	CACP/DoE Administration deliver certificate	Ongoing	
<i>1.1.4.</i> Assure all game guards have long-term contracts where possible.	DoE/CACP	Proportion # contracts/# guards	DoE Administration	2010, continued	
1.1.5. Create and disseminate to project personnel a quarterly newsletter of cheetah and prey activities, and any other pertinent information. (CR 1.3.1., 2.1.1.)	DoE/CACP, UNDP	# newsletter issued and copies	Prepare, print and distribute newsletter	Ongoing, continued	
Target 1.2. There is a central set of databases that is reliable, reviewed, available, current, and adaptive, which can be used for land-use planning established within 5 years.					
1.2.1. Advise on database structure.	wcs	Functioning database	Review, training and recommendations	2010, 1 week, 2011, 2 weeks 2012, 1 week	
1.2.2. Merge existing databases into the new structure.	CACP and DoE	Database structure		2011, 1 year	

Activity	Actors	Indicators	Methods	Time frame
<i>1.2.3.</i> Maintain a central, up-to-date database in a universally accepted format that allows for easy search and retrieval. A database administrator will be appointed.	DoE/CACP, UNDP	Database, # records, database administrator	Assign administrator, maintain database	2010, continued
<i>1.2.4.</i> Review existing GIS capacities within CACP/DoE, assess needs, and actively collaborate with DoE staff on the production of relevant outputs. (see 5.5.1.)	WCS, CACP/DoE	Landscape scale GIS model available	Review conception, recommend and train	2010, 2011, 2 x 2 weeks
Target 1.3. There is a mechanism within the DoE (also fostered integration of relevant expertise within 5 years.	d within relevant academia	a and NGOs) that encourages	networking and identificati	on and
<i>1.3.1.</i> Continue to create and distribute a newsletter to relevant parties. (CR 1.1.5.)	САСР	# newsletter issues and copies distributed	Produce, print, distribute newsletters	Ongoing
<i>1.3.2.</i> Convene every two years symposia, inviting relevant ministries, academics, NGOs, and other partners to facilitate the exchange of information on all aspects of predator and prey biology. (CR 5.1.1.)	CACP/DoE	# symposia # papers/lectures	Symposia	2010, continued
<i>1.3.3.</i> Provide lectures at the universities across the country to raise awareness among students and promote research opportunities.	CACP and partner personnel	# lectures hold	Coordination with universities and lecturers	2010, continued
Target 1.4. Increase the veterinarians', non-veterinarians' and 3 years.	game guards' recognition	and understanding of the po	otential diseases that can aff	ect wildlife within
<i>1.4.1.</i> A concise field guide of diseases in Farsi is available and disseminated in central and provincial DoE staff.	WCS staff, Iranian vet., DoE guards, CCF	Printed field guide available and distributed	Review and compile lit., produce Guide	Apr 2010, 36 months
<i>1.4.2.</i> Education on wildlife health issues is included into the curriculum of veterinarian students and into the continuous training of veterinarians working for/with the DoE.	DoE/CACP, Veterinary Faculties, WCS, international partners	Curriculum for basic and continuous wildlife health training established	Organise courses in wildlife disease/health for Iranian veterinarians	2011, 3 years
<i>1.4.3.</i> Education on animal disease recognition and reporting will be included in game guard training courses.	DoE/CACP, CCF, WCS	# trained people and reports provided	Training courses, newsletters, websites	Jan 2011, continued

Activity	Actors	Indicators	Methods	Time frame			
Objective 2. To convey accurate information and recommend	lations to relevant audien	ices to influence policy in su	pport of cheetah conservati	on.			
Target 2.1. Appropriate tools are in place that assure relevant information is relayed to appropriate influential audiences in an efficient and systematic manner within 5 years.							
<i>2.1.1.</i> Disseminate the quarterly newsletter to appropriate audiences. (CR 1.1.5.)	DoE/CACP, UNDP	# copies distributed	Electronic and physical distribution	Ongoing, all project duration			
<i>2.1.2.</i> Educate and inform the media of all potentially interesting activities.	DoE/CACP, UNDP	# press releases	Press releases	Ongoing, all project duration			
2.1.3. Create and maintain dynamic website in both Farsi and English.	CACP, UNDP, partners	Functioning bilingual website	Hire contractor/website administrator	2010, continued			
Objective 3. To effectively control threats and manage c	heetah, its habitat and	associated fauna.	•	•			
Target 3.1. Cheetah numbers are increased and the other Goal.	r fauna maintained and	increased in the 10 priorit	y sites within 5 years acco	rding to the			
3.1.1. Increase game guards by up to 20%	CACP/DoE	# guards	Hire local staff	2010, 2 years			
3.1.2. Increase and improve necessary equipment (CR 1.1.1)	CACP/DoE, UNDP	Equipment available	Buy equipment	2010, 2 years			
<i>3.1.3.</i> Secure jobs for game guards	CACP/DoE	# game guards secured	Lobby deputy of Planning/President	2010, 2 years			
3.1.4. Develop programs for prey reintroduction/restocking	CACP/DoE and WCS	Prey recovery plans	Feasibility studies	2010, 2 years			
Target 3.2. Habitat conditions are improved by effective livest	Target 3.2. Habitat conditions are improved by effective livestock management in the 10 priority sites within 5 years						
<i>3.2.1.</i> Enforce grazing laws and regulations within the 10 priority areas. (CR 6.2.1.)	CACP/DoE, FRWO	# livestock & grazing area reduced	Coordination DoE/FRWO	2010, 2 years			
<i>3.2.2.</i> Change grazing patterns in 10 cheetah areas (CR 6.2.1.)	CACP/DoE, FRWO, UNDP	# animals/herds reduced, grazing pattern changed	Coordination DoE, FRWO, Governor, locals, banks	2010, 3 years			
3.2.3. Buy grazing and water rights within the PAs	CACP/DoE	# areas/ha purchased	Pay stakeholder	2010, continued			

Activity	Actors	Indicators	Methods	Time frame	
<i>3.2.4</i> . Develop programs for prey reintroduction/restocking in at least 2 priority sites	CACP, DoE, WCS and Iranian NGOS	Releasing at least 200 goitered gazelles to at least 2 sites (e.g. Miandasht and Turan)	Capturing gazelles from Shirahmad, translocation, keeping in quarantine and releasing in the wild	2010, 5 years	
Target 3.3. The development in cheetah habitat is managed ef	fectively and no further (p	private) development is allow	ved within the priority areas	within 5 years.	
<i>3.3.1.</i> Permits for development issued only on selective basis in 10 cheetah areas	CACP/DoE	# permits # permits denied	Applicant applies to DoE which decides	2010, continued	
Objective 4. To effectively apply existing laws by all departme	ents and stakeholders in o	order to preserve habitat for	both wildlife and livestock		
Target 4.1. Coordination of land use practices between releval	nt departments and stake	holders is improved in the ne	ext 5 years.		
<i>4.1.1.</i> Use existing mechanism of Land Use Change Commission (CR 5.1.2.)	CACP/DoE, relevant departments etc.	<pre># meetings # information exchanged</pre>	Continuous communication	Asap, continuous	
<i>4.1.2.</i> Use provincial Council for Planning and Development in Governor-General Office (CR 5.1.2.)	CACP/DoE, Planning Council	# meetings both working groups of Council	Meetings, continuous communication	Asap, continuous	
<i>4.1.3.</i> Provide information on human-wildlife-livestock to relevant committees and working groups (CR 6.1.1., 6.2.1.)	CACP/DoE, Land-Use Committee/Council, working groups	Amount of information compiled and exchanged	Cont. communication, provide relevant information	2010, 3 years	
Target 4.2. The core zone of Naybandan, Abbas Abad, and Miandasht are elevated to National Parks and the whole of Ravar to Wildlife Refuge within 5 years.					
4.2.1. Submit DoE proposal to High Council of Environment	CACP/DoE	# areas upgraded	Compile report to Council	2010, 3 years	
Target 4.3. The punishment for breaking law by killing cheetah	and its prey species is inc	reased within 2 years.			
<i>4.3.1.</i> Generate proposals for Deputy of Natural Environment and Biodiversity to review current regulation. (CR "2.2.")	CACP/DoE	Change in law/regulation	Compile and submit report	2010, 2 years	

Activity	Actors	Indicators	Methods	Time frame			
Target 4.4. Livestock numbers are reduced down to grazing pe	Target 4.4. Livestock numbers are reduced down to grazing permissions issued by FRWO in Touran and Miandasht within the next 3 years.						
<i>4.4.1.</i> The Director Generals of DoE and of FRWO meet and agree and instigate an updated audit of rangeland is done, and results go to judiciary for possible action. (CR 6.2.1.)	CACP/DoE , FRWO	Livestock numbers reduced	Coordination DoE / FRWO / Provincial government	2010, 3 years			
Objective 5. To develop and implement a comprehensive lan	d-use plan that supports o	cheetah conservation for the	e entire cheetah landscape.				
Target 5.1. A detailed, overlapping map (GIS project) of the enyears.	tire cheetah landscape inc	corporating all relevant biolo	gical and human factors is av	vailable within 3			
<i>5.1.1.</i> To assess and compile current information and capacity, identify gaps therein,	CACP/DoE GIS division, WCS (GIS), university, graduate student(s)	Report to compile gaps	Data compile/GIS	May 2010, 6 months			
<i>5.1.2.</i> Conduct a series of Provincial workshops with relevant organizations (Min. Industry and Mine, Min. Agriculture, Council for Planning and Development) to refine the data and fill in the gaps.	CACP/DoE, FRWO	# working meetings and data retrieved, minutes	Provincial level working groups compiling and sharing data	Nov 2010, 10 months			
<i>5.1.3.</i> Identify cheetah ranging behaviour and corridors through cheetah research techniques, including socioeconomic questionnaires, radio-telemetry, etc., starting field projects in southern core areas. (CR 7.2.1.)	CACP, Panthera, WCS, CCF, CSG, (local NGOs), university	Radio-tagged cheetahs, graduate projects, reports and publications	Detailed research plans (CR 7.2.1)	Nov/Dec 2010, continued			
Target 5.2. A comprehensive land-use plan based on robust da	ata for the cheetah areas i	n central Iran is developed w	ithin 3 years and propagated	J.			
<i>5.2.1</i> . DoE/CACP commissions a consultant to develop in the year 2010 a land-use plan supporting long-term conservation in the cheetah areas in central Iran.	CACP/DoE, consultant	Land-Use Plan available	Compile plan based on information gained under Target 5.1.	Start Jan 2012, 12 months			
<i>5.2.2.</i> DoE/CACP seeks support for the endorsement and implementation of the Land-Use Plan through informing relevant authorities and stake holders and integrating them into the development of the plan.	DoE/CACP	Land-Use Plan endorsed	Information and lobbying	Jan 2012, continued			

Activity	Actors	Indicators	Methods	Time frame
Target 5.3. Endorsement by relevant Government Organizatio	ns and an implementation	agreement for the Land Use	Plan is achieved within 3 ye	ears.
<i>5.3.1.</i> Building on Targets 5.1. and 5.2., national workshops with relevant organizations to present and develop the implementation agreement.	CACP/DoE, UNDP, relevant GOs	Agreement document developed and signed	National workshop	Dec 2012, 6 months
Objective 6. To improve livelihoods of communities, with app	propriate partners and in a	a manner that supports chee	etah conservation.	
Target 6.1. All relevant stakeholders in/around the 10 priority habitat within 3 years.	areas have improved unde	erstanding of the value and i	mportance of conservation o	of cheetah and its
<i>6.1.1.</i> Identify and train small groups (2-6 people) from key communities in and around the 10 priority areas to conduct public awareness campaigns (train the trainers).	CACP, CBOs, NGOs, CCF, university , UNDP, MoE	# people trained # communities with trained people	Workshops, CACP small grants	Jun 2010, 3 years
<i>6.1.2.</i> Produce and distribute educational materials (site specific) by partners in the target communities.	CACP, MoE, UNDP, CBOs, NGOs, CCF, university	# materials produced and distributed	School materials, videos, farmer materials,	Jun 2010, 3 years
<i>6.1.3.</i> Propagate implementation using existing or creating new opportunities (e. g. Cheetah Day).	CACP, NGOs, CBOs, UNDP	# events created/used	(see 6.1.4.)	Jun 2010, continued
6.1.4. Conduct an annual assessment of progress.	CACP, NGO, CCF, university	Reports	Conduct exit interviews	2011, annually
Target 6.2. Pilot projects to improve livelihoods are identified	and initiated in 2 commun	ities in cheetah range within	3 years.	
<i>6.2.1.</i> Hold participatory workshops in Turan and Miandasht communities to identify and implement incentives that centralize livestock husbandry outside of the entire area. (CR 4.2.)	CACP, NGOs, UNDP, CCF, WCS, Panthera, university, DoAg, FRWO	# workshops, minutes	Questionnaires (CR 5.1.3), "train "rainers", research/monitoring plan	Nov/Dec 2010, 3 years
<i>6.2.2.</i> Host DoE and conservation professionals to present CBNRM process and how Namibian conservancies are working towards integrated livestock and wildlife management and protection.	CCF, UNDP, DoE/CACP,	# participants	Site based intensive training	State Date – Feb 2011

Activity	Actors	Indicators	Methods	Time frame	
Objective 7. To consistently monitor cheetah and prey popul	ations and enhance the u	nderstanding of Asiatic chee	tah and prey ecology and e	pidemiology	
Target 7.1. A quantitative monitoring of cheetah (estimation of areas within 3 years.	of numbers) and a semi-qu	iantitative monitoring of pre-	y (trends) is established in th	e 10 CACP priority	
7.1.1. Develop and apply a protocol for an extensive monitoring of cheetah across central and eastern Iran.	CACP/DoE, WCS, Panthera	Protocol, database , # records collected and enter in database	Develop protocol for kills, mortalities, scats, etc.	Apr 2010, 6 months, cont.	
7.1.2. Develop and apply protocols for quantitative monitoring of cheetah in reference areas in the following sites: (1) Naybandan, (2) Kavir, (3) Touran, (4) Dare Anjir and Bafq, (5) Abbas Abad and Siah Kouh, (6) Ravar, and (7) Miandasht.	CACP/DoE, WCS, Panthera	Protocol, # camera trapping sessions performed and analysed	Perform camera trapping according to standards used for other species	Apr 2010, 3 months, cont.	
7.1.3. Develop and apply protocols for a semi-quantitative monitoring of prey species (gazelle, wild sheep, wild goat) in the following sites: (1) Naybandan, (2) Kavir, (3) Touran, (4) Dare Anjir, Bafq and Kalmand, and (5) Abbas Abad and Siah Kouh.	CACP/DoE, WCS, Panthera	Protocols developed, # of surveys of prey performed and analysed	Perform semi- quantitative monitoring according to protocol developed	Apr 2010, 3 months, cont.	
<i>7.1.4.</i> Compile and distribute the results of the monitoring efforts in yearly monitoring reports and peer reviewed papers.	CACP/DoE, Panthera, WCS, CCF	Yearly monitoring reports for prey and cheetah published, publications	Develop reporting template, analyse data, report and publish	Apr 2010, 3 months, annually	
Target 7.2. The most relevant aspects of cheetah biology and ecology to support conservation and land use planning are understood within 5 years.					
<i>7.2.1.</i> Research plan developed on cheetah, other predators and prey, and human-wildlife conflicts.	CACP/DoE, Panthera, CCF and WCS	Detailed research plan developed and available	Consultation, workshop, draft and review plan	Nov/Dec 2010, 2 months	
7.2.2. Implement the research plan developed under 7.2.1. and assure that findings from the field studies are properly published and integrated into the cheetah conservation.	CACP/DoE, Panthera, CCF and WCS, universities	Research projects done, information gathered and published	See research plan; coordination and supervision	2010/2011, 5 years	

Activity	Actors	Indicators	Methods	Time frame
Target 7.3. The most relevant aspects of health issues and epi	demiology on wildlife to su	upport conservation of cheet	ah are understood within 5	years.
<i>7.3.1.</i> A literature compilation of animal diseases present in the 5 provinces with cheetah conservation projects.	CACP/DoE, Iranian vet.; WCS vet., CCF	Bibliography, Report	Literature and informed sources review	6 months May 2010
<i>7.3.2.</i> Develop and distribute a comprehensive database on diseases relevant to cheetah and prey and present in the ten priority areas.	CACP/DoE, Iranian vet., WCS vet., CCF	Database file available in PAs	Compile and distribute database file	Sep 2010, 2 years
7.3.3. Disease screening investigations will be carried out in the two PAs with the highest livestock densities (Turan and Miandasht) and the two PAs with the lowest livestock densities (Kavir, Naybandan).	CACP/DoE, Iranian and WCS vet., CCF, MoAg, Veterinarian Authority	# animals screened Scientific publication	Clinical investigations, sampling, analyses	Sep 2010, 2 years, continued

SOM T3. Results of the evaluation of achievement of targets and activities of the Conservation of the Asiatic Cheetah Project (CACP) until December 2016, based on the CACP Action Plan 2010-2014.

Objective	Targets	Target achievement	Activities	Activity achievement
1	Target 1.1. All game guards in the 10 protected areas have within 2 years sufficient continuing training, feedback and equipment to perform	Satisfactory	1.1.1. Inventory and assessment of game guard equipment and assure that game guards in Cheetah areas have necessary transport, fuel, GPS, etc.	Achieved
	their basic protection functions and to reliably collect ecological data, while effectively communicating with the local communities.		1.1.2. Provide training/mentoring for game guards and DoE experts to assure that all can reliably capture relevant data. Provide an additional trainer for one session per year around topics suggested by CACP/DoE.	Achieved
			1.1.3. Continue a program of recognition for outstanding game guards in each of the areas.	Achieved
			1.1.4. Assure all game guards have long-term contracts where possible.	Achieved
			1.1.5. Create and disseminate to project personnel a quarterly newsletter of cheetah and prey activities, and any other pertinent information. (CR 1.3.1., 2.1.1.)	Not Achieved
	Target 1.2. There is a central set of databases	Satisfactory	1.2.1. Advise on database structure.	Achieved
	that is reliable, reviewed, available, current, and adaptive, which can be used for land-use planning established within 5 years.		1.2.2. Merge existing databases into the new structure.	Partially Achieved
			1.2.3. Maintain a central, up-to-date database in a universally accepted format that allows for easy search and retrieval. A database administrator will be appointed.	Partially Achieved
			1.2.4. Review existing GIS capacities within CACP/DoE, assess	Partially

Objective	Targets	Target achievement	Activities	Activity achievement
			needs, and actively collaborate with DoE staff on the production of relevant outputs. (see 5.5.1.)	Achieved
	Target 1.3. There is a mechanism within the DoE (also fostered within relevant academia and	Moderately Unsatisfactory	1.3.1. Continue to create and distribute a newsletter to relevant parties. (CR 1.1.5.)	Not Achieved
	NGOs) that encourages networking and identification and integration of relevant expertise within 5 years.		1.3.2. Convene every two years symposia, inviting relevant ministries, academics, NGOs, and other partners to facilitate the exchange of information on all aspects of predator and prey biology. (CR 5.1.1.)	Not Achieved
			1.3.3. Provide lectures at the universities across the country to raise awareness among students and promote research opportunities.	Partially Achieved
	Target 1.4. Increase the veterinarians', non- veterinarians' and game guards' recognition and understanding of the potential diseases	Moderately Satisfactory	1.4.1. A concise field guide of diseases in Farsi is available and disseminated in central and provincial DoE staff.	Partially Achieved
	and understanding of the potential diseases that can affect wildlife.		1.4.2. Education on wildlife health issues is included into the curriculum of veterinarian students and into the continuous training of veterinarians working for/with the DoE.	Not Achieved
			1.4.3. Education on animal disease recognition and reporting will be included in game guard training courses.	Partially Achieved
2	Target 2.1. Appropriate tools are in place to assure relevant information is relayed to appropriate influential audiences in an efficient	Moderately Unsatisfactory	2.1.1. Disseminate the quarterly newsletter to appropriate audiences. (CR 1.1.5.)	Not Achieved
	and systematic manner within 5 years.	Ĩ	2.1.2. Educate and inform the media of all potentially interesting activities.	Achieved

Objective	Targets	Target achievement	Activities	Activity achievement
			2.1.3. Create and maintain dynamic website in both Farsi and English.	Not Achieved
3	Target 3.1. Cheetah numbers are increased and the other fauna maintained and increased in the	Satisfactory ²	3.1.1. Increase game guards by up to 20%.	Achieved
	10 priority sites within 5 years according to the		3.1.2. Increase and improve necessary equipment. (CR 1.1.1)	Achieved
	Goal.		3.1.3. Secure jobs for game guards.	Achieved
			<i>3.1.4. Develop programs for prey reintroduction/restocking.</i>	Partially Achieved
	Target 3.2. Habitat conditions are improved by effective livestock management in the 10	Satisfactory ²	3.2.1. Enforce grazing laws and regulations within the 10 priority areas. (CR 6.2.1.)	Partially Achieved
F	priority sites within 5 years.		3.2.2. Change grazing patterns in 10 cheetah areas. (CR 6.2.1.)	Partially Achieved
			3.2.3. Buy grazing and water rights within the Pas.	Partially Achieved
			<i>3.2.4. Develop programs for prey reintroduction/restocking in at least 2 priority sites.</i>	Partially Achieved
	Target 3.3. The development in cheetah habitat is managed effectively and no further (private) development is allowed with the priority areas within 5 years.	Highly Satisfactory	3.3.1. Permits for development issued only on selective basis in 10 cheetah areas.	Achieved
4	Target 4.1. Coordination of land use practices between relevant departments and	Moderately Unsatisfactory	4.1.1. Use existing mechanism of Land Use Change Commission (CR 5.1.2.)	Not Achieved

Objective	Targets	Target achievement	Activities	Activity achievement
	stakeholders is improved in the next 5 years.		4.1.2. Use provincial Council for Planning and Development in Governor-General Office (CR 5.1.2.)	Partially Achieved
			4.1.3. Provide information on human-wildlife-livestock to relevant committees and working groups (CR 6.1.1., 6.2.1.)	Not Achieved
	Target 4.2. The core zone of Naybandan, Abbas Abad, and Miandasht are elevated to National Parks and the whole of Ravar to Wildlife Refuge within 5 years.	Satisfactory	<i>4.2.1. Submit DoE proposal to High Council of Environment</i>	Partially Achieved
	Target 4.3. The punishment for breaking law by killing cheetah and its prey is increased within 2 years.	Highly Satisfactory	4.3.1. Generate proposals for Deputy of Natural Environment and Biodiversity to review current regulation. (CR "2.2.")	Achieved
	Target 4.4. Livestock numbers are reduced down to grazing permissions issued by FRWO in Touran and Miandasht within the next 3 years.	Satisfactory	4.4.1. The Director Generals of DoE and of FRWO meet and agree and instigate an updated audit of rangeland is done, and results go to judiciary for possible action. (CR 6.2.1.)	Partially Achieved
5	Target 5.1 A detailed, overlapping map (GIS project) of the entire cheetah landscape incorporating all relevant biological and human	Moderately Satisfactory	5.1.1. To assess and compile current information and capacity, identify gaps therein,	Achieved
	factors is available within 3 years.		5.1.2. Conduct a series of Provincial workshops with relevant organizations (Min. Industry and Mine, Min. Agriculture, Council for Planning and Development) to refine the data and fill in the gaps.	Not Achieved
			5.1.3. Identify cheetah ranging behaviour and corridors through cheetah research techniques, including socio- economic questionnaires, radio-telemetry, etc., starting field projects in southern core areas. (CR 7.2.1.)	Achieved

Objective	Targets	Target achievement	Activities	Activity achievement
	Target 5.2. A comprehensive land-use plan based on robust data for the cheetah areas in central Iran is developed within 3 years and propagated and Target 5.3. Endorsement by	Highly Unsatisfactory	5.2.1. DoE/CACP commissions a consultant to develop in the year 2010 a land-use plan supporting long-term conservation in the cheetah areas in central Iran.	Not Achieved
	relevant Government Organizations and an implementation agreement for the Land Use Plan is achieved within 3 years.		5.2.2. DoE/CACP seeks support for the endorsement and implementation of the Land-Use Plan through informing relevant authorities and stakeholders and integrating them into the development of the plan.	Not Achieved
	Target 5.3. Endorsement by relevant Government Organizations and an implementation agreement for the Land Use Plan is achieved within 3 years.	Highly Unsatisfactory	5.3.1. Building on Targets 5.1. and 5.2., national workshops with relevant organizations to present and develop the implementation agreement.	Not Achieved
6	Target 6.1. All relevant stakeholders in/around the 10 priority areas have improved understanding of the value and importance of conservation of cheetah and its prey within 3	Moderately Unsatisfactory	6.1.1. Identify and train small groups (2-6 people) from key communities in and around the 10 priority areas to conduct public awareness campaigns (train the trainers).	Not Achieved
	years.		6.1.2. Produce and distribute educational materials (site specific) by partners in the target communities.	Achieved
			6.1.3. Propagate implementation using existing or creating new opportunities (e.g. Cheetah Day).	Achieved
			6.1.4. Conduct an annual assessment of progress.	Not Achieved
	Target 6.2. Pilot projects to improve livelihoods are identified and initiated in 2 communities in cheetah range within 3 years.	Moderately Unsatisfactory	6.2.1. Hold participatory workshops in Touran and Miandasht communities to identify and implement incentives that centralize livestock husbandry outside of the entire area. (CR 4.2.)	Achieved

Objective	Targets	Target achievement	Activities	Activity achievement
			6.2.2. Host DoE and conservation professionals to present CBNRM process and how Namibian conservancies are working towards integrated livestock and wildlife management and protection.	Not Achieved
7	Target 7.1. A quantitative monitoring of cheetah (estimation of numbers) and a semi- quantitative monitoring of prey (trends) is established in the 10 CACP priority areas within 3 years.	Moderately Unsatisfactory	7.1.1. Develop and apply a protocol for an extensive monitoring of cheetah across central and eastern Iran.	Not Achieved
			7.1.2. Develop and apply protocols for quantitative monitoring of cheetah in reference areas in the following sites: (1) Naybandan, (2) Kavir, (3) Touran, (4) Dare Anjir and Bafq, (5) Abbas Abad and Siah Kouh, (6) Ravar, and (7) Miandasht.	Not Achieved
			7.1.3. Develop and apply protocols for a semi-quantitative monitoring of prey species (gazelle, wild sheep, wild goat) in the following sites: (1) Naybandan, (2) Kavir, (3) Touran, (4) Dare Anjir, Bafq and Kalmand, and (5) Abbas Abad and Siah Kouh.	Partially Achieved
			7.1.4. Compile and distribute the results of the monitoring efforts in yearly monitoring reports and peer reviewed papers.	Partially Achieved
	Target 7.2. The most relevant aspects of cheetah biology and ecology to support conservation and land use planning are understood within 5 years.	Moderately Unsatisfactory	7.2.1. Research plan developed on cheetah, other predators and prey, and human-wildlife conflicts.	Not Achieved
			7.2.2. Implement the research plan developed under 7.2.1. and assure that findings from the field studies are properly published and integrated into the cheetah conservation.	Partially Achieved

Objective	Targets	Target achievement	Activities	Activity achievement
	Target 7.3. The most relevant aspects of health issues and epidemiology on wildlife to support	Unsatisfactory	7.3.1. A literature compilation of animal diseases present in the 5 provinces with cheetah conservation projects.	Partially Achieved
	conservation of cheetah are understood within 5 years.		7.3.2. Develop and distribute a comprehensive database on diseases relevant to cheetah and prey and present in the ten priority areas.	Not Achieved
			7.3.3. Disease screening investigations will be carried out in the two PAs with the highest livestock densities (Turan and Miandasht) and the two PAs with the lowest livestock densities (Kavir, Naybandan).	Not Achieved