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CONSERVATION OF THE CHEETAH (*ACINONYX JUBATUS*) AND AFRICAN WILD DOG (*LYCAON PICTUS*) UNDER THE JOINT CITES-CMS AFRICAN CARNIVORES INITIATIVE (ACI)

(Prepared by the CITES and CMS Secretariats)

Summary:

The Programme of Work (POW) of the ACI requests the development and implementation of conservation strategies for Cheetah, Lion, Leopard and African Wild Dog (Activity 1.4.5.). The ACI POW also requests to assess illegal trade in Lions, Leopards, and Cheetahs and bring it to the attention of the Range States. The Fifth Meeting of the CMS Sessional Committee of the Scientific Council (ScC-SC5, 2021, online) established an Intersessional Working Group with the mandate to consider options for the recovery of the Asiatic and North-East African Cheetah. CITES Decisions 19.104-19.106 *Illegal trade in cheetahs (*Acinonyx jubatus*)* request the Parties to address illegal trade in Cheetahs in their legislation.

Range States are requested to review the *Report on the Situation of the Cheetah* Acinonyx jubatus soemmeringii *in the Horn of Africa*, prepared by the IUCN Cat Specialist Group, to report to the Secretariat on activities that address illegal trade in Cheetahs in their legislation, and to formulate recommendations.

Range States are further requested to endorse the regional conservation strategy documents for the Cheetah and African Wild Dog, prepared by the IUCN Canid and Cat Specialist Groups.

This document is accompanied by five Annexes:

1. *Report on the Situation of the Cheetah* Acinonyx jubatus soemmeringii *in the Horn of Africa* (2023);
2. *Cheetah & African Wild Dog Conservation For Eastern Africa - Strategy Document*, adapted from the *Regional Conservation Strategy For The Cheetah And African Wild Dog In Eastern Africa* (CITES-CMS/ACI2/Inf.7);
3. *Regional Conservation Strategy for the Cheetah and African Wild Dog in West, North and Central Africa* (2012);
4. *Cheetah & African Wild Dog Conservation For North, West And Central Africa - Strategy Document*, adapted from the *Regional Conservation Strategy For The Cheetah And African Wild Dog In West, Central And North Africa* (2012; Annex 3); and
5. *Cheetah & African Wild Dog Conservation For Southern Africa - Strategy Document* adapted from the *Regional Conservation Strategy for the Cheetah and African Wild Dog in Southern Africa* (2015; CITES-CMS/ACI2/Inf.8).

CONSERVATION OF THE CHEETAH (*ACINONYX JUBATUS*) AND AFRICAN WILD DOG (*LYCAON PICTUS*) UNDER THE JOINT CITES-CMS AFRICAN CARNIVORES INITIATIVE (ACI)

Background

1. The Cheetah (*Acinonyx jubatus*) is included in Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) since 1975, and in Appendix I of the Convention on the Conservation of Migratory Species of Wild Animals (CMS) since 2009.

2. The African Wild Dog (*Lycaon pictus*) is not included in the CITES Appendices, but it is listed on CMS Appendix II since 2009.

3. The African Cheetah and the African Wild Dog are target species of the Joint CITES-CMS African Carnivores Initiative (ACI) since its launch at the First Range State Meeting of the Joint CMS-CITES African Carnivores Initiative (ACI1, Bonn, Germany, 2018), and are covered by the Programme of Work of the ACI (ACI POW) approved by the Standing Committees of both CITES and CMS in 2021.

Regional Strategies

4. Activity 1.4.5. of the ACI POW requests Range States and partner institutions to *review and update, where appropriate, the Regional Conservation Strategies for the Conservation of Cheetahs and African Wild Dogs and their implementation in the ACI Range States through existing or newly developed National Action Plans, including assistance with fundraising*.

5. In extensive and participatory workshop processes, the IUCN Canid and Cat Specialist Groups, in collaboration with the Africa Range-Wide Cheetah Conservation Initiative (CCI) prepared and published regional conservation strategy documents for the Cheetah and African Wild Dog. The workshops followed the now recognized IUCN strategic planning framework and produced a regional strategy, designed to foster the development of National Action Plans in each range state, for three regions:
   a. Eastern Africa: The *Cheetah & African Wild Dog Conservation For Eastern Africa - Strategy Document* (2022; Annex 2) is a revised and updated version of the first *Regional Conservation Strategy For The Cheetah And African Wild Dog In Eastern Africa* (2007; CITES-CMS/ACI2/Inf.7). The first Regional Conservation Strategy was developed at a workshop in Kenya in February 2007, and updated and revised in the recent workshop in 2022. Both workshops were attended by participants from key Cheetah and Wild Dog stakeholders from the region, including representatives from wildlife authorities of Range States, as well as NGOs, and species biologists;
   b. North, West and Central Africa: *Cheetah & African Wild Dog Conservation For North, West And Central Africa - Strategy Document (2012; Annex 4)*, taken from the *Regional Conservation Strategy For The Cheetah And African Wild Dog In West, Central And North Africa* (2012; Annex 3), developed at a regional workshop held in Niger, January 2012 with participants from key Cheetah and Wild Dog stakeholders from the region, including representatives from wildlife authorities of Range States, as well as NGOs, and species biologists; and
   c. Southern Africa: The *Cheetah & African Wild Dog Conservation For Southern Africa - Strategy Document* (Annex 5) was taken from the *Regional Conservation Strategy for the Cheetah and African Wild Dog in Southern Africa* (CITES-CMS/ACI2/Inf.8) and is a revised and updated version of the first strategy (IUCN/SSC, 2007). The first Regional Conservation Strategy was developed at a workshop in Botswana in December 2007, which was then updated and revised in a workshop in South Africa in August 2015. Both workshops were attended by participants from key Cheetah and Wild Dog stakeholders from the region, including representatives from wildlife authorities of Range States, as well as NGOs, and species biologists.

Addressing illegal trade

6. The ACI POW includes several objectives and result areas relating to the assessment of illegal trade in Lions, Leopards, and Cheetahs, including the following:

Result 6.3 The legal trade in Lions, Leopards and Cheetahs has been reviewed and communicated.

Indicator: (1) A report on legal trade in Lions, Leopards and Cheetahs is discussed at an ACI Range State Meeting and brought to the attention of other audiences, as appropriate.

Activity 6.3.1. Compile and analyse, in cooperation with the ACI Range States, information on legal trade in Lions, Leopards and Cheetahs across their range in a report, review the analysis at an ACI Range State Meeting, and formulate recommendations as needed.

Result 7.1. A study on illegal trade and illegal or incidental killing of the ACI species has been conducted and shared with all relevant stakeholders.

Indicators: (1) A report on the impact of illegal killing on the populations is available, and (2) a report on the trafficking routes is available.

Activity 7.1.1. Collect, in cooperation with the ACI Range States and other relevant partners, information on illegal trade and illegal or incidental killing of the ACI species, analyse the data with regard to the impact of illegal killing on the populations and submit the respective report to CITES bodies, the ACI Range States and any other relevant bodies.

Activity 7.1.2. Analyse the routes, i.e., origin, transition and destination countries, of illegal trade and trafficking in ACI species; and summarize the findings in a report to be submitted to CMS and CITES bodies, the ACI Range States and any other relevant bodies.

Result 7.2. Recommendations to mitigate illegal trade and illegal killing are developed in consultation with the CITES Big Cat Task Force and relevant institutions, and conclusions shared with the ACI Range States.

Indicators: (1) Recommendations have been formulated and submitted, and (2) information has been shared with relevant bodies.

Activity 7.2.1. Formulate recommendations to mitigate illegal offtake and trafficking based on the outcomes under Result 7.1, considering the findings and recommendation of other relevant bodies (e.g., CITES BIG Cat Task Force), submit them to the ACI Range States and the relevant CITES and CMS bodies, and integrate the recommendation into all conservation strategies and action plans relevant for ACI species, and into national policies and legislation where possible.

Activity 7.2.2. Share information and conclusions on the illegal trade in Lion, Leopard and Cheetah between the ACI and the CITES Big Cat Task Force and other relevant bodies.

7. In addition, at the 5th Meeting of the Sessional Committee of the CMS Scientific Council (July 2021, online), an Intersessional Working Group on the Asiatic Cheetah was established in line with activity 8.1 of the Programme of Work 2021-2026 for the Central Asian Mammals Initiative (8.1: *To support and contribute to an analysis of knowledge gaps based on scientific evidence, specifically: c) Provide robust evidence and information to stakeholders, particularly regarding status, distribution and threat*). The Working Group was mandated to consider options for the recovery of the Asiatic and North-East African Cheetah as set out in its Terms of Reference

(UNEP/CMS/ScC-SC5/Outcome 7), and to report to the Sessional Committee at its 6th meeting on its findings and to inform a decision at COP14. As per the Terms of Reference, a *Report on the Situation of the Cheetah in Iran* and a *Report on the Situation of the Cheetah* Acinonyx jubatus soemmeringii *in the Horn of Africa* (Annex 1) were prepared by the IUCN Cat Specialist Group. A meeting of this Working Group could not yet be held, but in order to advance the process, the report on the Cheetah from Northern Africa *A. j. soemmeringii* is provided for review and as basis for the discussion of illegal trade in *A. j. soemmeringii* as set out in the ACI POW and CITES COP19 decisions.

8. Furthermore, at the meeting of the 19th Conference of the Parties to CITES (CoP19, Panama, 2022), Decisions 19.104 to 19.106 on *Illegal trade in cheetahs (*Acinonyx jubatus*)* were adopted, requesting the Parties to review and revise their national legislation, as appropriate to ensure it adequately addresses illegal wildlife trade, including trade in Cheetahs and report to the Secretariat in advance of the 78th meeting of the Standing Committee :

19.104 Decision directed to: Parties affected by illegal trade in cheetahs

Parties affected by illegal trade in cheetahs are encouraged to: a) review their national legislation taking into consideration the provisions of paragraph 6 c), d), f), and g) in Resolution Conf. 11.3 (Rev.CoP19) on Compliance and enforcement, and where needed revise such legislation to ensure that it adequately addresses illegal wildlife trade, including illegal trade in cheetahs; b) make use of the secure communication channels provided by INTERPOL and the World Customs Organization to strengthen information and intelligence exchange, and the resources available through the Cheetahs webpage on the CITES website; c) scale up activities to address illegal online trade in cheetah specimens, including by drawing upon the support available through INTERPOL, the Wildlife Crime Linked to the Internet: Practical Guidelines for Law Enforcement Practitioners, and as appropriate, reviewing their implementation of the provisions under "Regarding wildlife crime linked to the Internet", in Resolution Conf. 11.3 (Rev. CoP19) on Compliance and enforcement, and pursue the full implementation of these provisions; and d) report to the Secretariat in advance of the 78th meeting of the Standing Committee on the implementation of this Decision.

19.105 Decision directed to: Secretariat

Subject to available resources and upon request from Parties, the Secretariat shall: a) work with INTERPOL and other ICCWC members to support source, transit and destination Parties to combat illegal trade in cheetahs; and b) report to the Standing Committee at its 78th meeting on implementation of Decisions 19.104 and 19.105, paragraph a).

19.106 Decision directed to: Standing Committee

The Standing Committee shall consider the report of the Secretariat on implementation of Decisions 19. 104 and 19.105, and any relevant outcomes from the CITES Big Cats Task Force specific to the conservation of and illegal trade in cheetahs and develop recommendations for consideration of the Conference of the Parties at its 20th meeting.

Recommended actions:

9. Range States are requested to review and endorse the *Report on the Situation of the Cheetah* Acinonyx jubatus soemmeringii *in the Horn of Africa*.

10. Range States are requested to review and endorse the regional conservation strategy documents for the Cheetah and African Wild Dog.

Annexes

11. This document is accompanied by five Annexes:

    1. *Report on the Situation of the Cheetah* Acinonyx jubatus soemmeringii *in the Horn of Africa* (2023);
    2. *Cheetah & African Wild Dog Conservation For Eastern Africa - Strategy Document*, adapted from the *Regional Conservation Strategy For The Cheetah And African Wild Dog In Eastern Africa* (revised in a participatory workshop in 2022);
    3. *Regional Conservation Strategy for the Cheetah and African Wild Dog in West, North and Central Africa* (2012);
    4. *Cheetah & African Wild Dog Conservation For North, West And Central Africa - Strategy Document*, adapted from the *Regional Conservation Strategy For The Cheetah And African Wild Dog In West, Central And North Africa* (2012); and
    5. *Cheetah & African Wild Dog Conservation For Southern Africa - Strategy Document* adapted from the *Regional Conservation Strategy for the Cheetah and African Wild Dog in Southern Africa* (2015).

ANNEX 1

SITUATION OF THE CHEETAH *ACINONYX JUBATUS SOEMMERINGII* IN THE HORN OF AFRICA

prepared by Sarah M. Durant, Urs Breitenmoser, Christine Breitenmoser, Patricia Tricorache

Executive Summary

The Cheetah (*Acinonyx jubatus*) is listed on Appendix I of both the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and the Convention on the Conservation of Migratory Species of Wild Animals (CMS), and the Cheetah in Africa is a target species of the Joint CITES-CMS African Carnivores Initiative (ACI). This report provides an overview of the status of Cheetah in the Horn of Africa (Ethiopia, Somalia, Djibouti and Eritrea), ssp. *Acinonyx jubatus soemmeringii,* and options for the recovery of this subspecies, as required under the Terms of Reference for the Intersessional Working Group on the Asiatic Cheetah established at the 5th Meeting of the Sessional Committee of the CMS Scientific Council (UNEP/CMS/ScC-SC5/Outcome 7[1]). The report also contributes to the Programme of Work of the Joint CITES-CMS African Carnivores Initiative (ACI). Cheetahs living in the Horn of Africa and neighbouring countries are of increasing concern, as they constitute a small and threatened population of a rare subspecies: *A. j. soemmeringii*, the North-East African Cheetah. The core Horn of Africa population of *A. j. soemmeringii* occurs in Ethiopia, with likely bordering populations in Somalia and Djibouti, and is thought to number fewer than 300 adult Cheetahs. A further 200 *A. j. soemmeringii* may persist in one or more neighbouring countries: South Sudan, Kenya, and Uganda. The remaining population of *A. j. soemmeringii* is highly fragmented, with some subpopulations reported as numbering fewer than 20 individuals. Cheetah face multiple threats in this region, including habitat loss, degradation and fragmentation; conflict with livestock keepers; and loss of prey due to unsustainable hunting and grazing competition with livestock. Illegal trade in Cheetah cubs into exotic pet markets poses an additional serious threat. Skins from adult Cheetahs are also traded, but at lower levels than the live trade. Evidence indicates that illegal trade in Cheetah continues with no sign of any systematic decline, despite measures taken since Cheetah trade was first identified as a problem at the Sixteenth Conference of the Parties to CITES (COP16, Thailand) in 2013. Wealthy markets in the Gulf states are reported as the likely final destination for the live trade. The lack of progress in combatting the trade to date indicates that more action is urgently needed to prevent further declines and local extinctions. This report provides a range of recommendations to improve the knowledge base on the distribution and status of Cheetahs across the region; deepen understanding of the drivers of trade; reduce demand; improve cooperation and information exchange between affected countries; and improve protection and conservation. The situation of the North-East African Cheetah *A. j. soemmeringii* is increasingly dire and urgent, and requires concerted action from all countries involved and across the conservation community.

[1] https://www.cms.int/sites/default/files/document/cms_scc-sc5_outcome-7_tor-wg-asiatic-Cheetah_e_0.pdf

Acronyms

ACI	Joint CITES-CMS African Carnivores Initiative
ASEAN	Association of Southeast Asian Nations
ASEAN-WEN	ASEAN Wildlife Enforcement Network
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CMS	Convention on the Conservation of Migratory Species of Wild Animals
COP	Conference of the Parties
CSU	Colorado State University
EWCA	Ethiopian Wildlife Conservation Authority
HAWEN	Horn of Africa Wildlife Enforcement Network
INTERPOL	The International Criminal Police Organization
ICCWC	International Consortium on Combating Wildlife Crime
IGAD	Intergovernmental Authority on Development
IUCN	International Union for Conservation of Nature and Natural Resources
NGO	Non-Governmental Organisation
NP	National Park
SC	Standing Committee
UAE	United Arab Emirates
USFWS	U.S. Fish and Wildlife Service
ZSL`	Zoological Society of London

Background

This report provides an overview of the status of Cheetah in the Horn of Africa (Ethiopia, Somalia, Djibouti and Eritrea), ssp. *Acinonyx jubatus soemmeringii,* and options for the recovery of this subspecies, as required under the Terms of Reference for the Intersessional Working Group on the Asiatic Cheetah established at the 5th Meeting of the Sessional Committee of the CMS Scientific Council (UNEP/CMS/ScC-SC5/Outcome 7[2]). The report contributes to three Results and five Activities in the POW[3].

The Cheetah is listed on Appendix I of CMS[4] since 2009, as it was assessed as facing a high risk of extinction in the wild in the near future. The Appendix I listing requires strict protection by CMS Parties, including prohibiting the taking of Cheetah (limited exceptions to this prohibition are set out in Article III, paragraph 5) and restoring habitats; preventing, removing or mitigating obstacles to Cheetah migration, and controlling other factors that might endanger Cheetah. The Cheetah is also listed on Appendix I of CITES since 1975, hence all international commercial trade in Cheetah specimens is prohibited, with the exception of annual export quotas for live specimens and hunting trophies granted as follows: Botswana: 5; Namibia: 150; Zimbabwe: 50. The trade in such specimens is subject to the provisions of Article III of CITES. The Cheetah in Africa is also a target species of the Joint CITES-CMS African Carnivores Initiative (ACI) and subject to the Programme of Work of the ACI as well as CMS Resolution 13.4 Joint CITES-CMS African Carnivores Initiative, which tasked the ACI with developing and implementing conservation strategies for Cheetah, Lion, Leopard and African Wild Dog that address all threats to their survival.

Illegal Cheetah trade threatens, in particular, Cheetah populations in the Horn of Africa, which are mainly comprised of the North-East African subspecies *A. j. soemmeringii*. Concerns about a rising threat due to growing illegal trade in live Cheetah from this region have been raised at meetings of relevant CITES bodies such as the CITES CoP (starting from CoP16 Doc. 51), Animals Committee, and Standing Committee (SC). These processes resulted in a series of relevant Decisions and recommendations, including, most recently, the Decisions 19.104-19.106 Illegal trade in cheetahs (*Acinonyx jubatus*) adopted at CoP19 (Panama, 2022)[5].

[2] https://www.cms.int/sites/default/files/document/cms_scc-sc5_outcome-7_tor-wg-asiatic-Cheetah_e_0.pdf

[3] From the Programme of Work for the Joint CITES-CMS African Carnivores Initiative:

Result 6.3 The legal trade in Lions, Leopards and Cheetahs has been reviewed and communicated.
Indicator: (1) A report on legal trade in Lions, Leopards and Cheetahs is discussed at an ACI Range State Meeting and brought to the attention of other audiences, as appropriate.
Activity 6.3.1. Compile and analyse, in cooperation with the ACI Range States, information on legal trade in Lions, Leopards and Cheetahs across their range in a report, review the analysis at an ACI Range State Meeting, and formulate recommendations as needed.
Result 7.1. A study on illegal trade and illegal or incidental killing of the ACI species has been conducted and shared with all relevant stakeholders.
Indicators: (1) A report on the impact of illegal killing on the populations is available, and (2) a report on the trafficking routes is available.
Activity 7.1.1. Collect, in cooperation with the ACI Range States and other relevant partners, information on illegal trade and illegal or incidental killing of the ACI species, analyse the data with regard to the impact of illegal killing on the populations and submit the respective report to CITES bodies, the ACI Range States and any other relevant bodies.
Activity 7.1.2. Analyse the routes, i.e., origin, transition and destination countries, of illegal trade and trafficking in ACI species; and summarize the findings in a report to be submitted to CMS and CITES bodies, the ACI Range States and any other relevant bodies.
Result 7.2. Recommendations to mitigate illegal trade and illegal killing are developed in consultation with the CITES Big Cat Task Force and relevant institutions, and conclusions shared with the ACI Range States.
Indicators: (1) Recommendations have been formulated and submitted, and (2) information has been shared with relevant bodies.
Activity 7.2.1. Formulate recommendations to mitigate illegal offtake and trafficking based on the outcomes under Result 7.1, considering the findings and recommendation of other relevant bodies (e.g., CITES BIG Cat Task Force), submit them to the ACI Range States and the relevant CITES and CMS bodies, and integrate the recommendation into all conservation strategies and action plans relevant for ACI species, and into national policies and legislation where possible.
Activity 7.2.2. Share information and conclusions on the illegal trade in Lion, Leopard and Cheetah between the ACI and the CITES Big Cat Task Force and other relevant bodies.

[4] https://www.cms.int/sites/default/files/basic_page_documents/appendices_cop13_e_0.pdf

[5] *Decisions 19.104-19.106 Illegal trade in cheetahs (Acinonyx jubatus) adopted at CoP19 (Panama, 2022)*
Decision directed to: Parties affected by illegal trade in Cheetahs
19.104 Parties affected by illegal trade in Cheetahs are encouraged to:

Distribution and status

The North-East African Cheetah subspecies, *A. j. soemmeringii*, is phenotypically similar to the Southern African subspecies *A. j. jubatus*, but genetically distinct (Charruau et al. 2011, Prost et al. 2022). The North-East African subspecies is also substantially smaller, with males averaging a body mass of 29.3 kg, compared to Southern African *A. j. jubatus* males of 44.8 kg (Botswana) and 42.8 (Namibia) (Meachen et al. 2019). In East Africa, the exact position of the boundary of transition from *A. j. jubatus* to *A. j. soemmeringii* is unknown; it is thought to roughly align with the border between Kenya and Ethiopia but may include some of the Cheetah population in the far North of Kenya and additional populations in South Sudan and Uganda (Fig. 1; Kitchener et al. 2017, Prost et al. 2022).

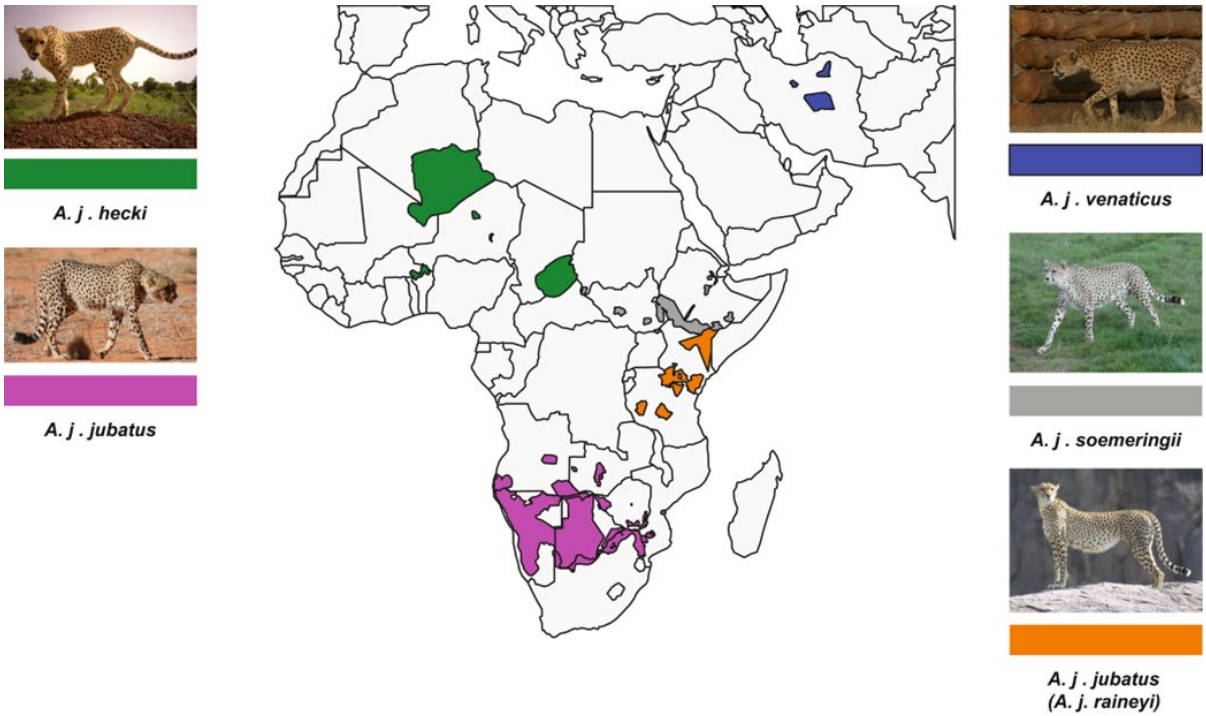


Fig. 1. Approximate delineation of subspecies of *Acinonyx jubatus*, taken from Prost et al. 2022

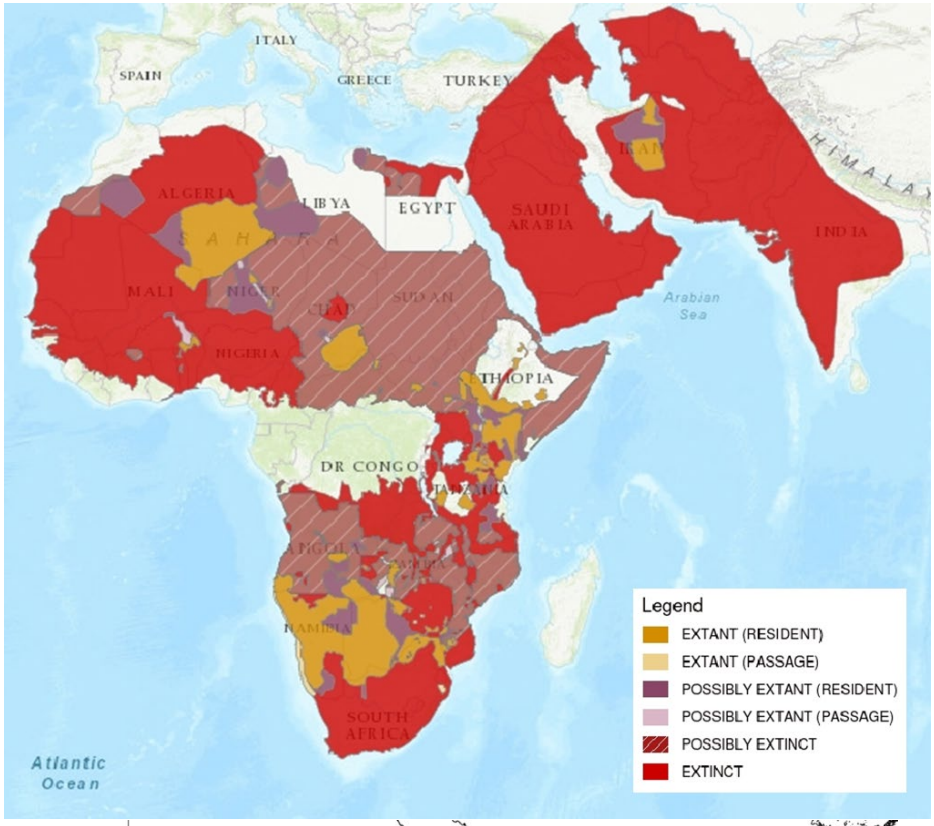
Thus, definite populations of *A. j. soemmeringii* (Table 1; Durant et al. 2022), although their sizes are estimated tentatively, include an estimated 239 Cheetahs in the Horn of Africa. Populations also may include 135 adults in neighbouring countries in South Sudan, Kenya and Uganda. In total, these populations constitute an estimated 531 adult North-East African Cheetahs.

a) review their national legislation taking into consideration the provisions of paragraph 6 c), d), f), and g) in Resolution Conf. 11.3 (Rev.CoP19) on Compliance and enforcement, and where needed revise such legislation to ensure that it adequately addresses illegal wildlife trade, including illegal trade in Cheetahs;
b) make use of the secure communication channels provided by INTERPOL and the World Customs Organization to strengthen information and intelligence exchange, and the resources available through the Cheetahs webpage on the CITES website; and
c) scale up activities to address illegal online trade in Cheetah specimens, including by drawing upon the support available through INTERPOL, the Wildlife Crime Linked to the Internet: Practical Guidelines for Law Enforcement Practitioners, and as appropriate, reviewing their implementation of the provisions under "Regarding wildlife crime linked to the Internet", in Resolution Conf. 11.3 (Rev. CoP19) on Compliance and enforcement, and pursue the full implementation of these provisions; and
d) report to the Secretariat in advance of the 78th meeting of the Standing Committee on the implementation of this Decision.
Decision directed to: Secretariat
19.105 Subject to available resources and upon request from Parties, the Secretariat shall
a) work with INTERPOL and other ICCWC members to support source, transit and destination Parties to combat illegal trade in Cheetahs; and
b) report to the Standing Committee at its 78th meeting on implementation of decisions 19.104 and 19.105, paragraph a).
Decision directed to: Standing Committee
19.106 The Standing Committee shall consider the report of the Secretariat on implementation of Decisions 19.104 and 19.105, and any relevant outcomes from the CITES Big Cats Task Force specific to the conservation of and illegal trade in Cheetahs and develop recommendations for consideration of the Conference of the Parties at its 20th meeting.

Table 1. Distributional range and estimated sizes for remaining known populations of *A. j. soemmeringii* (adapted from Durant et al. 2017, 2022). Please also refer to Figure 2b).

#	*Cheetah population name*	*No. of adults*	*Total area (km²)*	*Area inside PAs*	
				Total (km²)	*Relative (%)*
	Horn of Africa				
1	Afar (Ethiopia)	10	4,480	1,092	24
2	Blen-Afar (Ethiopia)	18	8,170	1,856	23
3	Ogaden (Ethiopia)	29	12,605	0	0
4	Yangudi Rassa (Ethiopia)	7	3,046	3,046	100
5	Transboundary (Ethiopia/Kenya/ South Sudan)	175	191,180	37,953	20
	Subtotal	239			
	Neighbouring countries				
6	Kidepo National Park (NP; Uganda) / bordering areas in southern South Sudan	17	6,694	1,422	21
7	Badingilo NP (South Sudan)	78	8,517	4,741	56
8	Radom NP (South Sudan)	62	6,821	0	0
9	Southern NP (South Sudan)	135	14,680	10,863	74
	Subtotal	292			
	Total	**531**	**256,193**	**60,973**	**24**

Widespread insecurity across this region makes surveys and monitoring of wild Cheetahs and their prey challenging. There are therefore large areas in this region that have not been surveyed for Cheetahs, and it is likely that there may be additional resident populations (Fig. 2). Thus, the estimates provided above are tentative, with a high degree of uncertainty. Recent questionnaires to gather local knowledge in order to assess distribution of Cheetah and other wildlife in the Somali region of Ethiopia and in the Somaliland region of Somalia indicate that Cheetahs may persist in these areas, although in low and declining densities (Ethiopian Wildlife Conservation Authority, EWCA, pers. comm.; Evangelista et al. 2018, Ibrahim et al. 2022, Marker et al. 2023). Cheetah have also recently been photographed in a camera trap survey in Djibouti, the first observation of Cheetah in the wild for several years (Murgatroyd et al. 2023). This recent information has not yet been incorporated in published distribution maps, which denotes the sites of these recent discoveries of Cheetah as probably extant in the Somali region of Ethiopia and in southern Djibouti and probably extinct in Somalia (Fig. 2; Durant et al. 2022). Cheetah distribution in Somalia is better described as completely unknown, in line with the regional mapping exercise (IUCN SSC 2007), given the lack of available information at the time of mapping. The discovery of all new populations of cheetah are important for the conservation of the subspecies, but the low densities of prey and the threats to wildlife across this region mean it is unlikely that these recent observations will uncover a population large enough to substantially change the population status of *A. j. soemmeringii*. However, an increase of as much as one hundred individuals to existing estimates is within the realms of possibility.



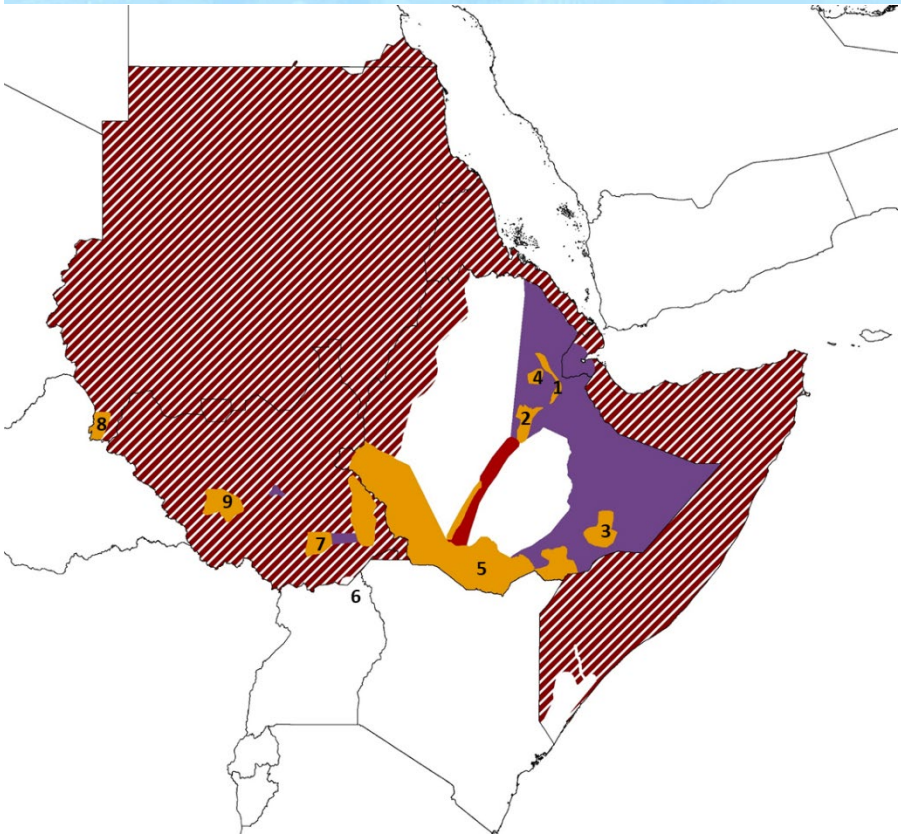


Fig. 2 a) Distribution of *Acinonyx jubatus* from the IUCN Red List of Threatened Species. Note the high level of uncertainty of occurrence in NE Africa. Map adapted from Durant et al. (2022). b) Distribution of A. j. soemmeringii; Reference numbers refer to known resident populations which are named in Table 1. The depiction and use of boundaries, geographic names and related data shown on maps and included in lists, tables and elsewhere in this document are not warranted to be error free nor do they necessarily imply official endorsement or acceptance by the United Nations.

Threats

In accordance with the global species distribution, a substantial proportion of the distributional range of *A. j. soemmeringii* (74%; Table 1) is outside protected areas, where Cheetahs live in shared landscapes with people, including pastoralist communities (Durant et al. 2017). Cheetahs outside protected areas face elevated threats from habitat loss and fragmentation. They may also be killed by livestock keepers, sometimes in direct response to depredation of livestock and sometimes as a preventative measure (Marker et al. 2003, Marker et al. 2023). Wild herbivore populations are also likely to be reduced due to unsustainable hunting and grazing competition with livestock (Tamrat et al. 2021), leading to further pressures on Cheetah populations, and possibly also increasing livestock depredation (due to a lack of wild prey), thereby exacerbating conflicts. Invasive species, particularly the shrub plant *Prosopis juliflora*, have been driving ecosystem change in many areas, leading to impacts on wildlife populations. In particular, the largest class of *Prosopis* significantly reduced understory basal cover for perennial grasses from 68% to 2%, increased soil surface exposure from 30% to 80%, and lowered the diversity of grass species (Kebede and Coppock, 2015). Where *P. juliflora* is abundant, a reduction in carrying capacity for Cheetah prey species is likely. Drought intensity has been exacerbated by climate change, with impacts on the movement of people and their livestock, and on wildlife populations. Past and ongoing political insecurity and conflicts have been a long-term issue across the region, and also likely contribute to wildlife declines and hamper conservation efforts (Durant et al. 2014, Brito et al. 2018).

In addition to these pressures, which occur across Cheetah distributional range, Cheetahs in the Horn of Africa face a substantial additional threat from illegal trade, particularly trade in live Cheetahs. Cheetahs are caught and traded illegally into the pet trade, and are also illegally taken for their skin and body parts (Tessema 2017, Tricorache et al. 2021, Torrents-Ticó et al. 2022). Capture and trade in live Cheetahs was a historical cause of decline for the species, and was a key cause of the disappearance of *A. j. venaticus* from much of its range in Asia. Today, rather than capture of adult Cheetahs for hunting, Cheetahs are under threat from trade because of the demand for cubs as pets (Tricorache et al. 2021).

Global concerns about a surge in an illegal international trade in live Cheetah were brought to the attention of CITES nearly a decade ago (CITES 2013, Mitchell and Durant 2017). Official government records demonstrated an ongoing trade, with a documented average of three confiscations of illegally traded live Cheetahs reported to CITES per year between 2002–2011 (Nowell 2014). An intersessional working group on Cheetah established at the 69th Meeting of the CITES Standing Committee (SC69) conducted an analysis of questionnaire responses received from 17 Parties, one Non-Party with a competent national authority, and two NGOs (see SC70 Doc. 43, Annex 2). This analysis indicated a number of positive developments, including Federal Law 22 issued on December 12, 2016 in the United Arab Emirates making private ownership, possession, trade or breeding dangerous animals, including Cheetahs, illegal. However, the report also indicated an ongoing illegal trade: “between 2015 and mid-2018, 13 live Cheetahs, 15 Cheetah skins, two Cheetah skulls, one small piece of a Cheetah specimen and two kilograms of unspecified Cheetah specimens were seized by authorities.” However, taken in isolation, these figures underestimate the full extent of the trade, since they only include confiscated animals appearing in official records and omit data from many countries, including key primary source countries for trafficked Cheetah. Of particular importance, Somalia does not include records of confiscations in the self-declared autonomous region of Somaliland in its official records, even though most confiscations occur there. Moreover, most traded Cheetah will not be intercepted by law enforcement authorities and will not be captured in official statistics.

The potential extent of the illegal trade in Cheetah has been highlighted in a recently published comprehensive study utilizing multiple sources, which found evidence of 1,884 incidents of trade over the decade between 2010-2019 (Tricorache *et al.* 2021). These incidents were estimated to have involved at least 4,184 Cheetah individuals, equivalent to nearly 200 incidents per year involving over 400 animals. The vast majority of these individuals were traded live (87%); most of the remaining trade was in skins. Trade was detected in 15 Cheetah range states, with the greatest number of traded Cheetahs recorded in *A. j. soemmeringii* countries: Somalia (42%), Kenya (13%),

and Ethiopia (10%). Trade was also detected in 41 non-Cheetah Range States, i.e., transit or destination countries, with the majority in the Gulf region, including Saudi Arabia (61%), Kuwait (14%), and the United Arab Emirates (UAE; 14%). These records indicate an illegal trade that is significantly higher than the official reports submitted to CITES.

The data also support previous work suggesting that Cheetah trade is dominated by a live trade from the Horn of Africa and surrounding regions into the Gulf States. The primary means of transport is by boat out of the Somali regions to the coast of Yemen, and then by vehicle across Yemeni borders (Nowell 2014). A high mortality rate (70%) has been reported from the known outcomes of confiscations of cubs in Somaliland and Ethiopia (Nowell 2014), and many more captured Cheetah cubs likely die undetected. Dozens of news articles and hundreds of social media images and videos indicate that private ownership of Cheetah (and other big cats) is popular throughout the Gulf region. However, many of these Cheetahs are likely to be kept in inappropriate conditions, and their survivorship is expected to be low. For instance, one study including 61 captive Cheetahs in the UAE showed that owners had little idea of a Cheetah dietary needs; diets of pure poultry were contributing to 'Cheetah myelopathy', i.e., ataxia, hind limb paralysis, and paresis due to degenerative lesions in the spinal cord (Kaiser *et al.* 2014). Gulf states (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the UAE) are Parties to CITES and prohibit wild Cheetah imports and, in some cases, also prohibit ownership of exotic pets. However, the proliferation of photographs of pet Cheetahs on social media demonstrates that many animals are successfully smuggled into these countries. The use of big cats for social media is reported to be a lucrative source of income, and may help to drive demand[6]. Cheetahs are extremely difficult to breed in captivity, and hence the proliferation of cubs in documented incidents of live trade (Tricorache et al. 2021) indicates an active ongoing illegal trade.

Because of the proximity of the Horn of Africa to the wealthy destination markets in the Gulf States, illegal trade in live Cheetah is likely to have the greatest negative impact on wild populations of *A. j. soemmeringii*. Countries in this region have registered their concerns about illegal trade in their national Cheetah conservation action plans, and continue to address the issue through CITES (e.g., CoP16 Doc. 51 (Rev. 1) Illegal trade in Cheetahs, submitted to CoP16 by Ethiopia, Kenya and Uganda, which formed the basis for CITES Decisions 16.71-16.75; CoP19 Doc. 59 Illegal trade in Cheetahs (*Acinonyx jubatus*), submitted to CITES CoP19 by Ethiopia, which formed the basis for the CoP19 Decisions 19.104-19.106 listed above). Although the exact origin of Cheetah traded in this region is unclear, information from interdictions and interviews with traders suggests that the animals are opportunistically collected from ethnic Somali regions, including parts of Ethiopia, Somalia, and Kenya, and occasionally beyond (N. Mitchell, pers. comm.). The remaining populations of *A. j. soemmeringii* are decreasing and becoming ever more isolated. The scale of the trade is clearly not sustainable, leading to continued decline in these already threatened populations.
It is important to note that Cheetah skins are also traded, often alongside Leopard skins, primarily within Africa and from Africa to Asia. As most Cheetah populations are small, even a low level of illegal trade in skins could be threatening wild populations, particularly as reproductively active adults are likely to be the main source for the skin trade. In Sudan, traditional men's shoes (*markoob*) made of spotted cat fur are sufficiently in demand as luxury items to be considered a threat to Cheetah populations in neighbouring countries (Nowell 2014).

Online advertisements for live Cheetah have decreased in some Gulf States in the last three years, possibly in response to growing regulations and enforcement, but possibly also reflecting a decline in wild populations that may make it more difficult to capture Cheetah (Tricorache et al., 2021, Durant et al. 2017). Declines in wild populations are likely to increase the harvesting rate (i.e., as a proportion of population size) and hence intensify overall pressure on the remaining free-ranging Cheetah populations.

[6] See https://www.bellingcat.com/news/mena/2021/02/08/how-instagram-celebrities-promote-dubais-underground-animal-trade/

Cheetah market price

The best information available on the market price for cheetah comes from a Black Market Brief for the Global Initiative against Transnational Organised Crime by Tricorache and Stiles (2021). These authors summarise information available on the trade in cheetahs. They identified several factors that influence pricing of Cheetah in the illegal trade, including location (origin, transit, destination), and the Cheetah's age, health condition and disposition. Very young cubs were considered risky investments due to their high mortality and therefore fetched lower prices than older cubs. Thus, a healthy cub was reported as more desirable than an unhealthy one, and a tame Chetah cub more desirable than an aggressive one. As such, prices at each level of the trade may vary greatly, with a small increase in maximum price over time (Table 2). Between 2010 and 2020, prices at the source were reported as between $80 and $500 USD per cub. At the importer level (Yemen, Saudi Arabia), prices were reported as ranging between $1,890 and $8,100 USD, whereas at the end buyer level (e.g., UAE, Kuwait), a sickly and aggressive Cheetah cub fetched as little as $2,500 USD, and a healthy, tame cub fetched as much as $30,000 USD (Tricorache & Stiles, 2021).

Between 2017 and 2019, a decrease in Cheetah trade activities was observed in Yemen, Saudi Arabia, Kuwait and the UAE (Tricorache and Stiles 2021). This decrease in trade could have been due to lower demand in the UAE and Kuwait, where restrictions were placed on the possession of dangerous animals, including cheetah (e.g., UAE's Federal Law 22 of 2016). These new restrictions and substantial media coverage on the issue, combined with ongoing difficulties of keeping cubs alive, may have led to a reduction in the number of wildlife dealers interested in smuggling and selling Cheetah in these countries, to the point that in 2019, only 10 Cheetah were reported as offered for sale in the UAE and none in Kuwait (Tricorache et al, 2021).

However, this decrease has not been sustained since, after the onset of COVID19 in early 2020, the same authors reported that between March 2020 and February 2021 Cheetah trafficking out of the Horn to Yemen increased by 58% over the 12 months immediately prior to March 2020 (Tricorache & Stiles, 2021). This recent increase in Cheetah trafficking may be related to a global reduction in flight availability to furnish the exotic pet trade, leading dealers to focus on sea routes, including those from the Horn of Africa. Preliminary reports suggest that end point prices for Cheetah have also increased during the COVID19 pandemic (Tricorache pers obs.).

Table 2: Average Cheetah prices in USD along trade levels. (Source: Tricorache P. and Stiles, D. Live Cheetah - Black Market Brief. Global Initiative Against Transnational Organized Crime (GITOC), 2021, and Tricorache P. pers. Comm. 2022.)

Period	**Poacher** ***Ethiopia/Somalia/ Somaliland***	**Middleman** ***Somalia/ Somaliland***	**Exporter** ***Somalia/ Somaliland***	**Importer selling** ***Yemen/Saudi Arabia***	**Middleman to consumer** ***Saudi Arabia/UAE***
2010–2015	80–500	700-1500	135-5,400	1,890-7,965	2,700-27,000
2016–2020	100–500	700–2,500	3 000–5 000	1 998–8 100	6 750–30 000

Sustainability of the illegal trade

The figures on trade provided by Tricorache et al. (2021) are high relative to the size of the Cheetah population. However, in the case of relatively long-lived mammal species like the Cheetah, harvesting of young animals has a much lower impact on population growth rates than harvesting of adults (Durant 1998). Research in the Serengeti indicates that if a mother adult Cheetah loses her cubs (in the Serengeti this is common because of high levels of predation in this environment), she can conceive again within three weeks (Laurenson et al. 1992). Gestation duration is three months; hence an adult female can produce a new litter within four months of her cub loss, with an average litter size of 3.5 cubs at birth (Laurenson et al. 1992). This high rate of reproduction observed in Cheetah in the wild means that a single female could potentially produce three litters per year of c. 12 cubs in total, if her cubs were lost or taken soon after birth. However, such high rates of reproduction are likely unachievable in practice, particularly in areas where conception rates may be

suppressed by low food availability. A production rate of 1-2 litters a year, or c. 6 cubs per female in one year on average, is more likely.

Data are lacking on the circumstances of cub capture, but there is one report of a Cheetah mother being killed (P. Tricorache, pers. obs.). However, Cheetah are timid and, outside of tourist areas, usually run away from people, and are unlikely to defend their cubs against humans. During their first two months of life, Cheetah females leave their cubs in a lair on most days in order to hunt (Laurenson 1993), and hence it is most likely that cubs are revealed when a Cheetah is seen leaving a den site. Cubs may be collected without harm to the mother after she has left her den. However, it Is possible that the mother Cheetah is also killed, perhaps when she returns to look for her cubs or if she is tracked and hunted from the den site, and her skin subsequently traded.

A total of 2179 Cheetah cubs over a 10-year period was documented in the Gulf States (Table 3; Tricorache et al.). This number amounts to 218 surviving cubs traded per year which, given documented mortality rates of 70%, would require 727 cubs sourced from the wild per year. This number of cubs, in turn, requires a population of at least 121 adult female Cheetah each producing 6 cubs per year. Although this level of offtake is possible, given that known wild *A. j. soemmeringii* populations are thought to total between 239 to 530 adult males and females, it is likely not sustainable, particularly given the range of other threats facing Cheetah in the region. This level of offtake would likely suppress recruitment in wild populations to a very low level, resulting in rapidly declining populations, particularly in those populations closest to the trade routes. Moreover, any adult mortality associated with cub capture, even at low levels, is likely to have a serious additional detrimental impact on population viability.

Table 3. Documented incidents of illegal trade in Cheetah and Cheetah cubs in Gulf states during the decade 2010-2019. Data taken from Tricorache et al. (2021).

Country	*Total number of Cheetahs on record*	*Total number of cubs*
Bahrain	12	9
Kuwait	310	205
Oman	13	12
Qatar	98	72
Saudi Arabia	1558	1298
UAE	482	313
Yemen	309	270
Grand Total	2782	2179

Conservation actions

As noted above, the low density of Cheetah throughout their range, usually well below 2 individuals per 100 km², means they require conservation action on a large scale, including transboundary cooperation, land use planning across large landscapes to maintain habitat connectivity, and human wildlife conflict mitigation (IUCN SSC 2007, Durant et al. 2022). Most *A. j. soemmeringii* range (74%) is on unprotected lands where their habitat is threatened, their prey populations suppressed, and where they are often persecuted in retaliation for livestock or game depredation (Durant et al. 2017).

The Eastern Africa Conservation Strategy for Cheetah and African Wild Dogs, updated in 2022 and to become available online on https://Cheetahconservationinitiative.com/regional-strategies/ soon, provides a framework for the conservation of *A. j. soemmeringii*, and for national conservation action planning. Participants at this workshop included representatives from the wildlife departments of *A. j. soemmeringii* range states of Kenya, Ethiopia, Djibouti, Somalia (including Somaliland) and South Sudan. National conservation action plans are in place for (dates of most recent planning workshop in brackets): Kenya (2007, https://Cheetahconservationinitiative.com/storage/2022/02/National-Action-Plan-For-Cheetah-And-African-Wild-Dogs_Kenya-2009.pdf), Ethiopia (2010, https://Cheetahconservationinitiative.com/storage/2022/02/Ethiopia_National_Action_Plan.pdf) and South Sudan (2009,

https://Cheetahconservationinitiative.com/storage/2022/02/South_Sudan_Wildlife_Service_2010_National_Action_Plan.pdf). In addition, Cheetahs are included in Uganda's Large Carnivore National Conservation Action Plan (2010, https://Cheetahconservationinitiative.com/storage/2022/03/Uganda_Large-Carnivore_Action_Plan.pdf). The strategy and action plans provide a road map for reversing ongoing declines in *A. j. soemmeringii* populations using a holistic approach that addresses both the proximate threats as well as the ultimate drivers of these threats (see Threats). Ethiopia, Kenya, and South Sudan have appointed National Carnivore Coordinators to coordinate the implementation of their national action plans.

The Joint CITES-CMS African Carnivores Initiative (ACI)[7] was adopted at CMS COP13 (Gandhinagar, India, 2020). Its Programme of Work[8], adopted in 2021 by the Standing Committees of both CITES and CMS, builds on a range of significant Decisions and Resolutions of the two Conventions including on legal and illegal trade in Cheetahs that, if implemented in range countries, would improve the conservation status of *A. j. soemmeringii*. The Horn of Africa Wildlife Enforcement Network (HAWEN)[9] was launched in November 2017 by members of the Intergovernmental Authority on Development (IGAD) – Djibouti, Ethiopia, Kenya, Somalia (including Somaliland), South Sudan, Sudan, and Uganda, to enable greater cooperation in combating wildlife trafficking in the region. It is based at the IGAD headquarters in Djibouti, and its Executive Committee is composed of focal points from Wildlife Conservation Authorities in the respective States. It is designed to have a strong public/private element. Principal partners include both regional and international NGOs and civil society organisations. The concept for the HAWEN draws upon the experience of the ASEAN countries in creating the ASEAN-WEN and the WEN toolkit prepared by the International Consortium on Combating Wildlife Crime (ICCWC).

The HAWEN activities such as wildlife law enforcement cooperation, capacity building for better wildlife enforcement and governance, public awareness and education, and engaging with international partners and consuming countries will all support implementation of the African Strategy on Combating Illegal Exploitation and Illegal Trade in Wild Fauna and Flora in Africa adopted by the African Union in 2015. Despite the great potential of HAWEN to unify counter wildlife trafficking activities in the region, it continues to struggle for sufficient funding to enable it to become fully operational.

Colorado State University (CSU) and Zoological Society of London (ZSL) are leading regional assessments for undocumented Cheetah sub-populations and available prey species throughout the Horn of Africa. With support from the U.S. Fish and Wildlife Service (USFWS)[10], the work also includes elements designed to strengthen conservation and management capacity of national wildlife agencies, better understand the drivers of Cheetah trafficking, and develop strategic public outreach activities for conservation. Assessments will take place in Ethiopia, Eritrea, Djibouti, Somalia (and Somaliland), and parts of South Sudan and Kenya, and continue through to 2025. Similarly, the USFWS supports projects proposed by the Africa Wildlife Foundation, the International Fund for Animal Welfare, and the Cheetah Conservation Fund. These projects include, among others, strengthening of the capacity of law enforcement and Cheetah monitoring, increasing capacity for Cheetah handling and care, addressing demand reduction, and establishing genetic structures of Cheetah populations in the Horn of Africa region.

[7] See https://www.cms.int/en/legalinstrument/african-carnivores-initiative.
[8] See https://www.cms.int/en/document/programme-work-joint-cites-cms-african-carnivores-initiative.
[9] See https://www.hawen.org/.
[10] USFWS has initiated the Species Conservation Catalyst Fund (SCCF) within its Combating Wildlife Trafficking Program, which specifically also addresses Cheetah trafficking from the Horn of Africa; see https://www.fws.gov/service/species-conservation-catalyst-fund and, for the call 05/09/2022 specifically https://www.fws.gov/sites/default/files/documents/Foa_Content_of_F22AS00253%20FINAL%203-10-22.pdf.

Recommendations

The urgency of the threats posed to *A. j. soemmeringii* requires conservation action, despite limited data and understanding, Thus, improving the knowledge base should be advanced in parallel with implementing recognised urgent conservation measures. The following actions are therefore recommended:

Improve knowledge base

1. Research to understand harvest patterns. This should include a) understanding the spatial harvesting patterns; b) understanding methods of Cheetah cub capture, and whether such captures lead to surplus killings of adult females; and c) assessment of the level of undetected trade, including estimation of the survival rate of captured animals at each stage of the trafficking process, and an estimation of the extent of unreported and undetected trade.
2. Research to understand drivers of demand in order to design interventions to change behaviour and suppress demand.
3. Research to understand the role of social media and encrypted messaging apps in the illegal trade in Cheetah at different stages of the trafficking process, in order to design interventions to combat the trade.
4. Identify, assess and monitor key indicators of habitat status for free-living cheetah populations in the Horn of Africa and identify priority areas for long-term monitoring.
5. Surveys to provide abundance estimates for vulnerable populations, and the establishment of long-term strategies for monitoring Cheetah population trends.
6. Genetic research to identify the limits to *A. j. soemmeringii* distributional range, including identifying whether populations in South Sudan, Northern Kenya and Uganda are comprised of members of this subspecies. A more limited distributional range of *A. j. soemmeringii* would substantially increase the urgency of addressing the decline in the North-East African Cheetah subspecies.

Reduce demand

7. Active engagement with social media companies to remove posts associated with Cheetah trade and to remove images that promote the use of Cheetahs as pets in order to reduce demand.
8. Interventions, such as raising awareness and targeted enforcement, to change behaviour and suppress demand.

Improve cooperation and information exchange

9. Put in place harmonized national databases of illegal Cheetah trade incidents to support counter trafficking efforts across the Horn of Africa region.
10. Create a centralized inventory of confiscated Cheetahs (and their offspring in captivity), which should be continuously updated/expanded in cooperation with HAWEN in all countries holding such Cheetahs and including all holders.
11. Improve international cooperation and transboundary conservation within the range of *A. j. soemmeringii*, including protection of prey species and habitats, under the auspices of international conservation conventions and consideration of the establishment of transboundary conservation areas.

Improve protection and conservation

12. Provide support to HAWEN to allow it to fulfil its function to combat illegal trade in *A. j. soemmeringii*.
13. Ensure that the ACI POW is implemented in full, particularly the three Results and five Activities relating to illegal trade in Cheetah under Objectives 6 and 7 (see footnote 3 on page 4).
14. Improve understanding of the anthropogenic drivers of poaching of cheetah and its prey and its impacts on population dynamics to inform meaningful management and conservation strategies.
15. Improve capacity in *A. j. soemmeringii* Range States for monitoring Cheetah, for wildlife protection in general, and for combatting illegal trade in Cheetah specifically.
16. Consider use of confiscated animals within a sustainable *ex situ* conservation Cheetah breeding population as a potential source population for future reintroductions or reinforcements. This could include, for example, allowing confiscated individuals to become part of an international *ex situ* breeding programme.

Conclusions

The status of the North-East African Cheetah *A. j. soemmeringii* is of serious concern, particularly given the level of threat posed by illegal trade. The magnitude of the trade cannot be sustained by the remaining populations. Despite a lack of information on Cheetah population status and trends across the region, it is reasonable to assume that trade on this scale is almost certainly leading to population declines and local extinctions, particularly for those populations closest to trading routes. An IUCN Red List status assessment to provide the threat status of this subspecies and to inform conservation action is under way. However, it is imperative that the issue of illegal trade in Cheetah cubs is addressed as a matter of urgency by CITES, and that countries work together to combat this trade. More broadly, the role of social media in promoting images of Cheetah as pets should be assessed in more detail and greater scope, and social media companies can do much more to remove such images from their platforms.

Many of the recommendations in this report are already included as proposed activities in the Programme of Work of the Joint CITES-CMS African Carnivores Initiative. The USFWS recently provided substantial support to address illegal trade and improved surveys in Cheetah that should start to address these recommendations. However, the situation of the North-East African Cheetah *A. j. soemmeringii* is increasingly dire and urgent, and requires a concerted approach from all countries involved and across the conservation community, in order to halt the ongoing decline in this highly threatened Cheetah subspecies.

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ANNEX 2

CHEETAH & AFRICAN WILD DOG CONSERVATION

FOR EASTERN AFRICA - STRATEGY DOCUMENT

adapted from the

STRATEGY FOR THE CONSERVATION OF

CHEETAH & AFRICAN WILD DOGS IN EASTERN AFRICA

(Revision via a participatory workshop in 2022)

Citation: *IUCN/SSC Forthcoming. Regional Strategy for the Conservation Cheetah and African Wild Dogs in Eastern Africa. IUCN, Gland, Switzerland.*

ZSL LET'S WORK FOR WILDLIFE

AFRICA RANGE WIDE CHEETAH CONSERVATION INITIATIVE

ASSOCIATION OF ZOOS & AQUARIUMS SAFE SAVING ANIMALS FROM EXTINCTION

CAT SPECIALIST GROUP

Canid Specialist Group

A workshop to revise the original 2007 Strategy for the Conservation of Cheetah and African Wild Dogs in Eastern Africa (IUCN/SSC 2007) was held in September 2022. This participatory planning process was conducted to bring the strategy up-to-date and to stimulate the process of revision of the respective national conservation action plans and to bring new impetus to their implementation.

Workshop participants were drawn from government and key universities and NGOs from across the region to provide a broad and balanced set of stakeholders appropriate to the revision of the regional strategy. Somali and Djiboutan representatives were included for the first time in this strategic planning process and this significantly extends the scope of the strategy northwards to the north-eastern coast of Africa.

The process of revision during the workshop followed the process conducted in 2015 for Southern African strategy (Groom *et al*. 2015) through which participants reviewed progress against the objectives of the original strategy. This provided the context against which the logical framework was jointly reviewed and revised during the workshop. This allowed, for instance, the fresh consideration of issues that have come into sharper focus in the years since the original strategy was devised; the illegal trade in cheetah is one such issue that has gained additional focus within the revised logical framework for Eastern Africa. The process of revising the distribution maps was begun during the workshop and is being completed through subsequent targeted focus group meetings.

One notable addition to the strategy was the inclusion of a revision process after 5 years and CCI will continue to work with national wildlife authorities to support the implementation of these plans.

The workshop process

The workshop process used in 2007, and largely followed again in 2015, included the following key components :

1. *Engagement of stakeholders*
   Key individuals and institutions best able to implement the plan – including government authorities, species specialists and relevant NGOs – were all involved in the strategic planning process.

2. *Summary of knowledge*
   The mapping process within the workshop established up-to-date information on the status and distribution of both species. This provided essential information for the development of the strategic plan.

3. *Problem analysis*
   A problem analysis was conducted to identify threats, gaps and constraints impacting participants' ability to conserve cheetah and wild dogs. The problem analysis provided information critical for the development of the objectives of the strategic plan.

4. *Strategic plan*
   A cascading plan was constructed, starting at a vision, then proceeding to a goal, a series of objectives devised to meet the goal, and finally to results and activities designed to address each objective (Figure 1). At the 2015 meeting, this plan was revised from the objectives level down.

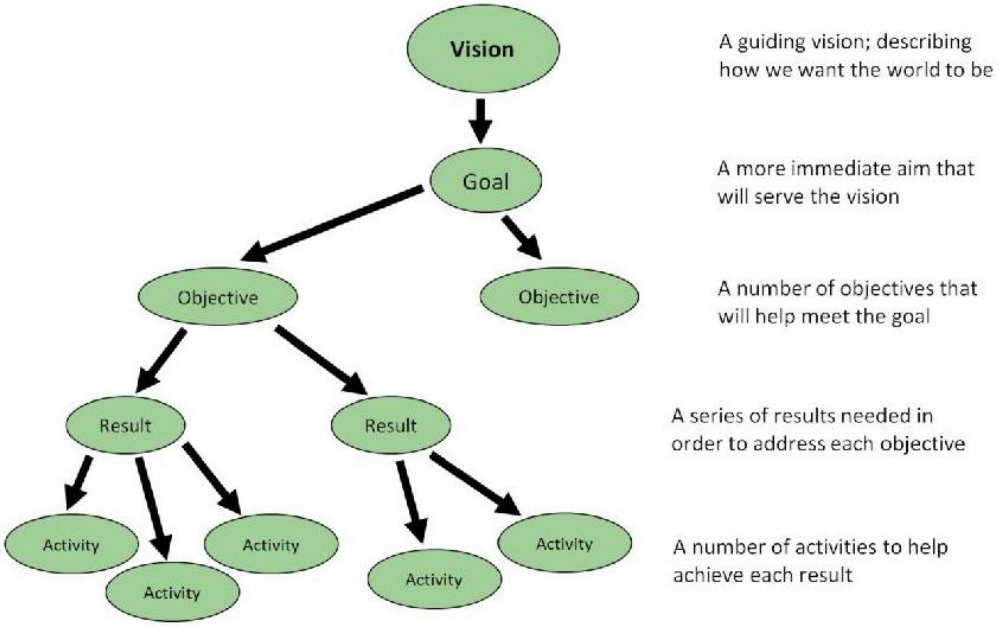

Figure 1. *The structure of a strategic plan.*

The strategic planning process

The planning process was made up of six key stages:

1. The development of a vision
2. The development of a goal
3. A problem analysis
4. The development of a number of objectives which address the problems identified by the problem analysis
5. The development of a number of results to address each objective
6. The development of a number of activities to address each result.

The strategic planning process, both in 2007 and 2022, was participatory and consensus driven, with all stakeholders engaged in the development of the plans. The process was conducted in this way to ensure that the expertise and knowledge of all participants informed the plans, and also to ensure that the plans were jointly owned by relevant institutions and individuals, facilitating their implementation. The plans were intended to be realistic and, because they are regional, to be sufficiently general to allow an easy transfer to national level planning.

The revision of the strategy was intermeshed with the mapping exercise (Figure 2) to update the information on the species' distribution, status and threats to influence its formulation.

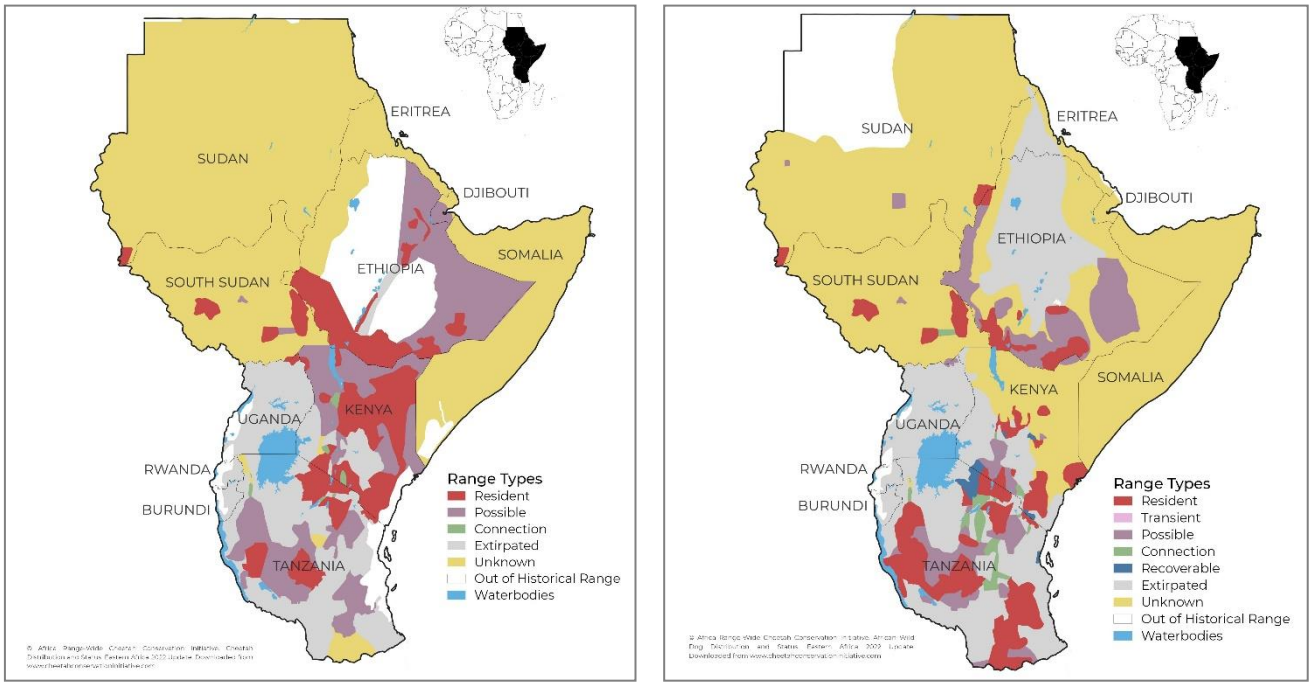

Figure 2. *Maps of cheetah (left) and wild dog (right) distribution and status in eastern Africa. The maps are being updated with information generated during the 2022 workshop, with data being gathered subsequently through focus group meetings.*

Revised Regional Strategy for the Conservation of Cheetah and African Wild Dogs in Eastern Africa - September 2022

VISION: To secure viable and ecologically functioning cheetah and wild dog populations as valued components of development in eastern Africa.			
GOAL: To reverse declines and improve the status of cheetah and wild dog populations and their habitats across eastern Africa.			
Theme	**Objective**	**Result**	**Activity**
Coexistence	1. Develop and implement strategies to promote coexistence of cheetahs and wild dogs with people and domestic animals.	1.1. Effective and locally appropriate tools to reduce wild dog and cheetah impacts on livestock identified, implemented and shared across the region within five years	1.1.1 Identify areas where cheetah and wild dog populations are significantly threatened by conflict with livestock farmers
			1.1.2 Identify the circumstances that contribute to livestock depredation by cheetah and wild dogs in the identified areas
			1.1.3 Work with communities in affected areas to identify and implement the most effective and locally appropriate livestock husbandry strategies to reduce depredation by cheetah and wild dogs
			1.1.4 Where appropriate, use real-time monitoring to inform efforts to reduce depredation by cheetah and wild dogs
			1.1.5 Where appropriate, establish local grazing management to augment wild prey populations
			1.1.6 Share monitoring and evaluation tools for assessing the effectiveness of methods to reduce livestock depredation by cheetah and wild dogs
			1.1.7 Establish mechanisms for sharing experiences of what has been effective and ineffective in reducing wild dog and cheetah impacts on livestock in different areas
			1.1.8 Develop guidelines and response plan for wild dogs and cheetah in areas with high conflict potential
		1.2. Programmes to reduce indiscriminate and illegal offtake of wildlife ungulates effective in affected areas within three to five years.	1.2.1 Where populations of wild dogs, cheetah, or their prey are directly threatened by snaring, establish measures to combat snaring
			1.2.2 Work with partners to address the threat of indiscriminate poisoning
			1.2.3 Support the implementation of measures to reduce illegal hunting of prey species of cheetah and wild dogs
			1.2.4 Ensure that hunting of prey species of cheetah and wild dogs is sustainable, where appropriate
		1.3 Programmes for local people to derive sustainable benefits from wildlife presence (including cheetah and wild dog) in place in selected areas within five years	1.3.1 Identify areas across eastern Africa where nature-based tourism could effectively assist cheetah and wild dog conservation through sustainable benefits for local communities, and hence improving tolerance of both species
			1.3.2 Encourage and maintain sustainable nature-based tourism programmes which include equitable distribution of revenue to appropriate parties in cheetah and wild dog range
			1.3.3 In areas of eastern Africa where nature-based tourism is unlikely to provide sufficient benefits, investigate alternative options for generating revenue or benefits which encourage cheetah and wild dog conservation
			1.3.4 Develop and disseminate locally appropriate guidelines for responsible tourist viewing of cheetah and wild dogs

Theme	Objective	Result	Activity
1. Coexistence (cont)	1. Develop and implement strategies to promote coexistence of cheetahs and wild dogs with people and domestic animals.	1.4 Awareness creation activities relevant to cheetah and wild dog conservation expanded locally and globally within ten years.	1.4.1 Identify target areas and audiences best placed to influence cheetah and wild dog conservation within five years
			1.4.2 Investigate and incorporate local traditions and knowledge plus religious and cultural values relevant to cheetah and wild dogs into outreach materials and strategies within five years
			1.4.3 Disseminate targeted information to key audiences (including: communities and landowners within wild dog and cheetah range, road users, rangers and wildlife management professionals, tour guides, tourists, policymakers), including social media ongoing
		1.5 Holistic carnivore disease management programmes operating in key areas within five years	1.5.1 Establish surveillance for carnivore disease, including response plans for when sick or dead animals are detected
			1.5.2 Work with veterinary and public health departments to encourage mass vaccination of domestic dogs against rabies, and responsible dog ownership, within and adjoining wild dog range in a One Health approach
			1.5.3 Consider rabies vaccination of African wild dogs, where risk assessment suggests that this would improve population viability
			1.5.4 Consider incorporating distemper vaccination into domestic dog vaccination efforts, informed by risk assessment
			1.5.5 Evaluate the conservation potential of vaccinating free ranging wild dogs against canine distemper virus
			1.5.6 Conduct research on the epidemiology and management of parvovirus in wild dogs
2. Surveys and information	2. Provide relevant stakeholders and managers with scientific and timely information on the status of and threats to cheetah and wild dog populations.	2.1. Surveys and monitoring to evaluate presence, trends and threats in all cheetah and wild dog ranges initiated and maintained.	2.1.1 Conduct surveys and undertake analyses to determine presence and status in areas identified as unknown, possible and connecting ranges in all the eastern African countries within five years
			2.1.2 Within known resident ranges, initiate and maintain monitoring activities to determine population trends and threats within the range. Continuous review every three years.
			2.1.3 Within known resident ranges, conduct research to establish demographic and threat status.
			2.1.4 Conduct research on population and landscape genetics within the historical and current known resident ranges of cheetah and wild dogs
			2.1.5 Conduct restoration feasibility assessments in identified recoverable range within five to ten years
		2.2. Strategies for disseminating information relevant to cheetah and wild dog conservation to all key stakeholders across eastern Africa developed and implemented every three years.	2.2.1 Each eastern African range state will use national workshops, publications, meetings and/or other media to disseminate information relevant to cheetah and wild dog conservation continuously.
			2.2.2 Liaise with database developer experts to develop a database
			2.2.3 Establish a standardised database format and a data sharing protocol to facilitate the collection and sharing of data within two years.
			2.2.4 Update the existing national and regional databases and disseminate resulting information every two years.
			2.2.5 Establish an alert mechanism for unforeseen threats (e.g., illegal trafficking, disease outbreak)
3. Capacity Development	3. Strengthen human, institutional and information resources for conserving cheetah and	3.1 Have extension, enforcement, and monitoring personnel trained and equipped to operate within 50% of the cheetah and wild dog	3.1.1 Identify individuals and institutions from each country and integrate a capacity development working group to explore opportunities to strengthen human and institutional resources within one year
			3.1.2 Conduct a Training and Resource Needs Assessment and action plan in each country (this could happen with national workshops) within one year.

	wild dogs in collaboration with stakeholders.	populations ranges within three to five years.	3.1.3 Identify opportunities and networking, as well as share relevant information and opportunities (e.g. training and resources for institutional development) [ongoing]
			3.1.4 Identify a Point of Contact who is a cheetah and wild dog specialist (including biologists, community-scouts, parabiologists, community liaisons) in each target population as recipients and disseminators of capacity development opportunities within one year.
			3.1.5 Facilitate the training in communication and outreach for the NCCs and PoCs within 2 years.
4. Policy and legislation	4. Review and harmonise existing policy and legislation, and where necessary, develop new policy and legislation, for conservation across cheetah and wild dog range at national, regional and international levels	4.1. Gaps in information on effects of activities related to cheetah and wild dog conservation which can assist in policy evaluation and development are identified within one to five years.	4.1.1 Collect information pertaining to cheetah and wild dog population trends and known threats across national, regional and international areas under different types of conservation policies within one to five years.
			4.1.2 Quantify the impacts of disruptive tourism on cheetah and wild dogs inside and outside of protected areas, and develop/influence policy to support cheetah and wild dog friendly tourism within one to three years.
			4.1.3 Review existing or develop new land use policy that addresses negative conservation issues regarding cheetah and wild dogs, such as land use change, human-wildlife conflict.
			4.1.4 Produce a review document on national protected species legislation within the region and its implications for cheetah and wild dog conservation within one year.
			4.1.5 In the absence of such legislation generate relevant national legislation for protected species within three to five years.
			4.1.6 Incorporate in policy and legislation strategies and measures to mitigate the impacts of climate change on cheetah and wild dog conservation within three to five years.
			4.1.7 Evaluate the impacts of infrastructure development, including dams, roads, rails, mines, and pipelines, on cheetah and wild dogs and assess mitigation measures to address impacts within cheetah and wild dog range within three to five years
		4.2. Information on the extent of illegal wildlife related activities within cheetah and wild dog range for relevant authorities to strengthen policy/law enforcement within three to five years	4.2.1 Develop standardised methodologies to collect and share information on illegal activities, including poaching, trade, snaring and poisoning, relevant to cheetah and wild dog conservation within three to five years.
			4.2.2 Collect and share spatially explicit information on the magnitude of illegal activities relevant to cheetah and wild dog conservation, including mapping, and include within national and regional databases in three to five years.
			4.2.3 Establish a communications network for sharing information on illegal cheetah and wild dog trade incidents with relevant authorities, agencies and researchers.

Theme	Objective	Result	Activity
4. Policy and legislation (Cont.)	4. Review and harmonise existing policy and legislation, and where necessary, develop new policy and legislation, for conservation across cheetah and wild dog range at national, regional and international levels	4.3. Explicit information provided to the management authorities to support identification, prioritisation and safeguarding of corridor and dispersal areas for improved connectivity of cheetah and wild dog range within one to three years.	4.3.1 Identify the spatial extent of corridor and dispersal areas between resident, possible and unknown ranges within three to five years.
			4.3.2 Address threats, habitat quality, and the extent of suitable habitat in, and surrounding, corridors and dispersal areas within three to five years
			4.3.3 Produce data on the effects of infrastructure development and its mitigation on cheetah and wild dogs, including transport infrastructure-related mortalities and blocking of corridors, to inform policy change within three to five years.
		4.4 Increased and formalized regional and international collaboration that coordinates cheetah and wild dog conservation, within one to three years	4.4.1 Organise and facilitate the formation of a representative team of species biologists/experts and wildlife management authorities to draft and execute a memorandum of understanding to represent the interests of cheetah and wild dogs in transboundary issues within one to three years.
			4.4.2 Utilize international groups and forums such as IGOs and NGOs to facilitate collaboration agreements and information sharing between countries or regions.
			4.4.3 Governments work together to engage with the Joint CMS-CITES African Carnivore Initiative and to ensure that illegal trade in cheetahs is addressed at CITES
			4.4.4 Support large scale transboundary landscape initiatives, e.g. TFCAs, that contribute to the conservation of cheetah and wild dogs.
		4.5 Guidelines are developed and adopted for the conservation translocations of cheetah and wild dogs within three years	4.5.1 Create a regional group (species experts, IUCN representatives, local authorities) for advising, planning and implementing conservation translocation and/or rehabilitation and release of cheetahs/wild dogs within two years
			4.5.2 Develop regional guidelines for conservation translocation/rehabilitation and release of cheetahs/wild dogs in line with the IUCN recommendations taking into account multiple factors (including genetics, health, welfare and chances of survival) within two years
			4.5.3 Develop or adapt MoU in line with guidelines to support transboundary translocations
5. Advocacy	5. Mainstream Cheetah and Wild Dog conservation in land use planning and its implementation.	5.1. Ensure that government authorities, local communities, and other stakeholders within cheetah and wild dog resident and connecting ranges are aware of the importance of cheetah and wild dog populations every two to three years or as needed	5.1.1 Initiate and implement visiting programme to regional and local government offices, tourist facilities and higher educational institutions to present and distribute summary of cheetah and wild dog conservation issues, promotional/educational materials and this strategic plan every two to three years
			5.1.2 Convene 'conservation-caucus' type bodies in each country (e.g., like the environmental conservation committee in Tanzania) within every two to three years.
			5.1.3 The government national carnivore coordinator introduces the Cheetah and Wild Dog conservation strategy to environmental conservation committee meetings or other planning platforms as an agenda item every two to three years

Theme	Objective	Result	Activity
5. Advocacy (Cont.)	5. Mainstream Cheetah and Wild Dog conservation in land use planning and its implementation.	5.2. Land use/spatial plans to be made compatible with the Regional Conservation Strategy for Cheetah and Wild Dogs every five years.	5.2.1 Identify priority areas to be incorporated into land use/spatial plans within two years
			5.2.2 Strongly encourage national and/or local governments to strengthen the legal mandate for community land use planning that addresses the conservation needs of cheetah and wild dogs within one year.
			5.2.3 Strongly encourage national and/or local governments to strengthen EIA and SEA procedures to address the conservation needs of cheetah and wild dogs within one year
			5.2.4 Advocate for completing village community or private landowner land use plans within two years
			5.2.5 Advocate for implementing village community or private landowner land use plans within five years
			5.2.6 Integrate village and community plans into cross-sectoral (and species) plans such as conservancy or wildlife management areas within five years
			5.2.7 Advise on the design of new, and modification of existing, transport infrastructure and mitigation (including wildlife passing places, speed bumps, signage) in cheetah and wild dog range.
		5.3. Awareness is raised among relevant donors and civil society about the effects of land use and climate change on cheetah and wild dog populations, and economic and conservation consequences within five years.	5.3.1 Develop and create awareness materials (including posters, booklets etc) on the impact of land use and climate change on cheetah and wild dog populations within their range within one year and ongoing.
			5.3.2 Continue promoting representation of cheetah and wild dog conservation issues in print, broadcast and social media in range countries within one year and ongoing.
			5.3.3 Develop and maintain cheetah and wild dog literature and information repositories (e.g. online and/or in country) within one year.
			5.3.4 Develop targeted information materials and awareness campaigns to engage with the donor community about the impact of land use and climate change on cheetah and wild dog populations within one year and ongoing
6. National plan and regional strategy	6. Promote the development or update, and implementation, of regional and national conservation programmes for cheetah and wild dogs, by appropriate government authorities and other stakeholders.	6.1 National action plans for cheetah and wild dog conservation developed or updated, and endorsed by appropriate government authorities in all eastern African range states every five years	6.1.1 Identify and appoint focal person to lead national planning processes within each range state in eastern Africa within three months.
			6.1.2 Organise stakeholder meeting(s) in every range state to identify or update national priorities for cheetah and wild dog conservation within two years.
			6.1.3 Develop or update, finalise and endorse national action plans for cheetah and wild dog conservation within every range state in eastern Africa compatible with the broader regional strategy within five years.
		6.2 A Monitoring and Evaluation framework for the implementation of the regional strategy is developed and implemented within five years	6.2.1 Coordinate and monitor the implementation of the national action plan and regional strategy for Cheetah and Wild dog conservation by focal person, ongoing
			6.2.2 Carry out national review and report on the implementation of the national action plan and regional strategy for Cheetah and Wild dog conservation by focal person, every year
			6.2.3 Report on the implementation of the regional strategy for Cheetah and Wild dog conservation by focal regional person and disseminate the strategy and report, every five years
		6.3 Secure financial resources in place to implement the national action plans - ongoing	6.3.1 Integrate a working group to share funding opportunities
			6.3.2 Mobilize financial resources for each country to implement their NAPs
			6.3.3 Identify international collaborative opportunities to access bilateral/multilateral funding sources for transboundary efforts

ANNEX 3

REGIONAL CONSERVATION STRATEGY FOR THE CHEETAH AND AFRICAN WILD DOG IN WEST, CENTRAL AND NORTH AFRICA

IUCN
Canid Specialist Group
ZSL LIVING CONSERVATION
THE HOWARD G. BUFFETT FOUNDATION
WILDLIFE CONSERVATION SOCIETY

REGIONAL CONSERVATION STRATEGY FOR THE CHEETAH AND AFRICAN WILD DOG IN WEST, NORTH AND CENTRAL AFRICA

IUCN/SSC

Citation: IUCN/SSC 2012, Regional Conservation Strategy for the Cheetah and African Wild Dog in West, North and Central Africa, IUCN, Gland, Switzerland

REGIONAL CONSERVATION STRATEGY FOR THE CHEETAH AND AFRICAN WILD DOG IN WESTERN, CENTRAL AND NORTHERN AFRICA

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– CHAPTER 1 –

SUMMARY

The African wild dog (*Lycaon pictus*) and the cheetah (*Acinonyx jubatus*) present major challenges for conservationists in the 21st Century. All large carnivores need large areas to survive; yet wild dogs and cheetah range more widely, and hence need larger areas, than almost any other terrestrial carnivore species anywhere in the world. Where human populations encroach on Africa's last wild areas, these two threatened species are often the first to disappear.

Western, central and northern Africa supports globally important populations of both cheetah and wild dogs. This regional plan is part of a programme to develop action plans for the species' conservation across their geographic range, conducted as a collaboration between national wildlife authorities across western, central and northern Africa and the Cat and Canid Specialist Groups of IUCN/SSC. Given wild dogs' and cheetah's similar ecological needs, it makes sense to plan their conservation together. Moreover, management enacted for these two species will also benefit other carnivore species such as lions, leopards, and hyaenas, though the converse is not necessarily the case given wild dogs' and cheetah's requirement for far more extensive areas of wildlife-friendly habitat. This report describes the outputs from a regional workshop held in Niger 2012 to develop a regional conservation strategy for cheetah and wild dog for western, central and northern Africa. Participants in the workshop were comprised of the key cheetah and wild dog stakeholders from the region, including representatives from wildlife authorities, NGOs and species biologists.

Both wild dogs and cheetah have experienced major contractions in their geographic range within western, central and northern Africa, with resident populations known to remain in just 9% (cheetah) and 4% (wild dogs) of their historical range within the region. Both species were known to be extirpated across much of the region, with cheetah considered irretrievably lost from 59% of the region and wild dogs from 73%.

Protected areas are very important for the conservation of both cheetah and wild dogs, but the majority of animals reside outside the protected areas which are the focus of most conservation efforts. In western, central and northern Africa three quarters of cheetah resident range and nearly two thirds of wild dog resident range are unprotected. Few populations inside protected areas are likely to be viable if isolated from unprotected lands, thus conservation activity outside protected areas is absolutely critical for the long-term survival of these two species both inside and outside reserves. Within this very large region, wild dogs and cheetah are more reliant on protected areas in western Africa than in central and northern Africa; these small, isolated populations are likely to be extremely vulnerable and require urgent conservation attention.

The main threats to the survival of cheetah and wild dogs in the region were identified as habitat loss and fragmentation, conflict with livestock farmers, loss of prey populations, accidental snaring, road kills, small population sizes, infectious diseases (wild dogs) and hunting for live trade and skins (cheetah). The strategic plan developed provides a framework to alleviate these threats and to ensure the survival of the two species in the region.

The region holds only five known cheetah populations and four known wild dog populations, most of which straddle international boundaries. Trans-boundary management is therefore likely to be needed for conserving both species over the long term. Participants identified areas where it would be possible to restore both

species; these focussed predominantly on protected areas that have been poorly managed in the past but which could support these species with improved management. These recoverable areas, although relatively small, could potentially contribute a further 2% to cheetah and 4% to wild dog range, representing a substantial increase in existing resident range. The strategic plan therefore focuses on securing remaining populations, identifying as yet unknown populations and, where possible, restoring populations.

The strategic plan for the species' conservation in western, central and northern Africa recognises the need to (i) develop capacity within the region in all fields related to the conservation of cheetah and wild dog, (ii) improve knowledge of the conservation biology of both species, (iii) sensitise decision makers and communities about the value of cheetah and wild dogs and their habitat, (iv) enable the recovery of cheetah and wild dog populations; (v) foster coexistence between cheetah, wild dogs and people; (vi) reduce illegal offtake of cheetah and wild dog and the overexploitation of their prey; (vii) improve the viability of cheetah and wild dog populations; and (viii) ensure the implementation of the cheetah and wild dog conservation strategy for western, central and northern Africa.

CHAPTER 2 –

BACKGROUND AND INTRODUCTION

2.1 Background

The African wild dog (*Lycaon pictus*) and the cheetah (*Acinonyx jubatus*) present major challenges for conservationists in the 21st Century. Both species were formerly widely distributed in Africa, but both have experienced dramatic reductions in numbers and geographic range in recent decades (IUCN/SSC, 2007a, 2007b). All large carnivores need large areas to survive; yet wild dogs and cheetah range more widely, and hence need larger areas, than almost any other terrestrial carnivore species anywhere in the world. As human populations encroach on Africa's last wild areas, wild dogs and cheetah – particularly susceptible to the destruction and fragmentation of habitat – are often the first species to disappear.

Despite their threatened status (wild dogs are listed as endangered and cheetah as vulnerable, IUCN, 2012), ecological importance as top carnivores (Woodroffe and Ginsberg, 2005), and value to Africa's tourism industry (Lindsey *et al.*, 2007), to date remarkably little conservation action has been implemented for these two species. The majority of Africa's protected areas are too small to conserve viable populations, and active conservation efforts on unprotected lands have hitherto been restricted to a handful of projects.

Three factors have hindered conservation activity for cheetah and wild dogs:

- The species' massive area requirements mean that conservation planning is needed on a daunting geographical scale, rarely seen before in terrestrial conservation.
- Information is lacking on the species' distribution and status, and on the tools most likely to achieve effective conservation.
- Capacity to conserve these species is lacking in most African countries; expertise in managing more high-profile species such as elephants and rhinos may not be transferable to wild dogs or cheetah because the threats and conservation challenges are different.

Recognising these concerns, in 2006 the Cat and Canid Specialist Groups of the IUCN/SSC, in partnership with the Wildlife Conservation Society (WCS) and the Zoological Society of London (ZSL), initiated a Rangewide Conservation Planning Process for wild dogs and cheetah (http://www.cheetahandwilddog.org). The two species were addressed together because, despite being taxonomically quite different, they are ecologically very similar and hence face similar threats.

The Rangewide Conservation Planning Process has six stated objectives:

(1) To foster appreciation for the need to conserve wild dogs and cheetah, particularly among conservation practitioners in range states.

(2) To collate information on wild dog and cheetah distribution and abundance on an ongoing basis, in order to direct conservation efforts and to evaluate the success or failure of these efforts in future years.

(3) To identify key sites for the conservation of wild dogs and cheetah, including corridors connecting important conservation areas.

(4) To prepare specific global, regional and national conservation action plans for both cheetah and wild dogs.

(5) To encourage policymakers to incorporate wild dogs' and cheetah's conservation requirements into land use planning at both national and regional scales.

(6) To develop local capacity to conserve cheetah and wild dogs by sharing knowledge of effective tools for planning and implementing conservation action.

A key component of this process is a series of workshops, that bring together specialists on the species' biology with conservation managers from governmental and non-governmental organisations. Close involvement of government representatives was considered absolutely critical since they represent the organisations with the authority to implement any recommendations at the management and policy levels. While the process was intended to cover the entire geographic range of both species, the large number of range states involved meant that productive discussion and interchange would have been very difficult to achieve at a single workshop covering the whole continent. Workshops have therefore been conducted at the regional level; this report presents the outcomes of the third and final regional workshop, covering western, central and northern Africa; the other two workshops, for eastern and southern Africa, were held in 2007 (IUCN/SSC, 2007a, 2007b). Details of the meeting's objectives and participants are presented in section 2.4 below.

Since wildlife conservation policy is formulated, authorised and enforced at the national level, it is critical that conservation planning be enacted at this level. The development of national plans, through national workshops, is thus a vital component of the Rangewide Conservation Planning Process. Each regional workshop has therefore been followed immediately by a national workshop in the host country, to which delegates from other countries in the region were invited as observers. This was intended to provide preparation for the organisation of national workshops in other range states, leading to national workshops and the development of national action plans for all range states. The western, central and northern Africa regional workshop described herein was followed by a Niger national workshop; outcomes from the Niger workshop will be published separately.

2.2 Biology and conservation needs of African wild dogs

African wild dogs are highly social members of the canid family. Packs cooperate to hunt their prey (Creel and Creel, 1995), which consists mainly of medium-sized ungulates (particularly impala, *Aepyceros melampus* in eastern and southern Africa, and kob (*Kobus kob*) in west and central Africa) but may range in size from hares (*Lepus* spp) and dik diks (*Madoqua* spp, Woodroffe *et al.*, 2007b) to kudu (*Tragelaphus strepsiceros*) and even, occasionally, eland (Taurotragus oryx, Van Dyk and Slotow, 2003). Packs also cooperate to breed, with usually only one female and one male being parents of the pups, but all pack members contributing to pup care (Malcolm and Marten, 1982). As females have never been observed to raise pups to adulthood without assistance from other pack members, packs, rather than individuals, are often used as the units of measuring wild dog population size.

Unlike most carnivore species (apart from cheetah), wild dogs tend to avoid areas of high prey density (Mills and Gorman, 1997), apparently because larger carnivores prefer such areas (Creel and Creel, 1996, Mills and Gorman, 1997). Lions (*Panthera leo*) and spotted hyaenas (*Crocuta crocuta*) both represent important causes of death for adult and juvenile wild dogs (Woodroffe *et al.*, 2007a).

Probably because of this tendency to avoid larger predators, wild dogs live at low population densities and range widely. Population densities average around 2.0 adults and yearlings per 100km^2 (Fuller *et al.*, 1992a) and home ranges average 450-800km^2 per pack in eastern and southern Africa (Woodroffe et al., 1997), with some packs ranging over areas in excess of 2,000km^2 (Fuller *et al.*, 1992a). Both

wild dogs and cheetah occupy home ranges larger than would be predicted on the basis of their energy needs (Figure 2.1).

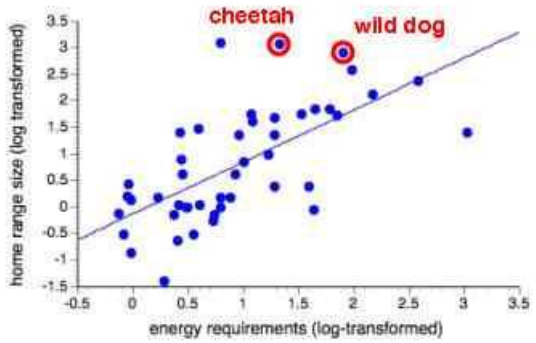


Figure 2.1 *The relationship between energy requirements and home range size in multiple carnivore species, showing the large home ranges occupied by cheetah and wild dogs in comparison with their energy needs. Wild dogs are recorded as having greater needs than cheetah because the social unit is a pack rather than an individual. Data are from Gittleman & Harvey (1982).*

Most new wild dog packs form when young animals (usually but not always in their second year, McNutt, 1996) leave their natal packs in same-sex dispersal groups, and seek new territories and members of the opposite sex. Such dispersal groups may travel hundreds of kilometres (Fuller *et al.*, 1992b), and have been recorded in areas very remote from resident populations (Fanshawe *et al.*, 1997). This dispersal behaviour can complicate the interpretation of distribution data, because sightings of small groups of wild dogs do not necessarily indicate the presence of a resident population. However, the behaviour does allow wild dogs to recolonise unoccupied space when opportunities arise.

Wild dog populations in different regions of Africa are morphologically and genetically different, but no subspecies are recognised (Girman and Wayne, 1997, Girman et al., 1993). Wild dogs are habitat generalists, and have been recorded in habitats as diverse as seasonally flooded savannah (McNutt and Boggs, 1996), short grasslands (Kuhme, 1965), montane forest (Dutson and Sillero-Zubiri, 2005), montane moorland (Thesiger, 1970) and mangroves.

The first status survey for wild dogs was conducted in 1985-8 (Frame and Fanshawe, 1990), and this was updated in 1997 (Fanshawe *et al.*, 1997) and 2004 (Woodroffe et al., 2004). These surveys revealed substantial loss and fragmentation of wild dog populations, with the species extirpated across most of western and central Africa, and greatly depleted in eastern and southern Africa. However distribution data, which were collated mainly by exhaustive postal correspondence, were somewhat biased towards protected areas with little information available from unprotected lands. By 1997, wild dogs had disappeared from most of Africa's protected areas, persisting only in the largest reserves (Woodroffe and Ginsberg, 1998). In 2008 the species was estimated to number fewer than 800 packs. The species is listed as 'endangered' by the IUCN (IUCN, 2011).

Wild dogs' decline has been related to their limited ability to inhabit human-dominated landscapes. Where human densities are high and habitat consequently fragmented, wild dogs encounter hostile farmers and ranchers, snares set to catch wild ungulates, high speed traffic, and domestic dogs harbouring potentially fatal diseases (Woodroffe and Ginsberg, 1997). While these threats are common among large carnivores, wild dogs' low population densities and wide-ranging behaviour mean that they are both more exposed to, and more susceptible to, these human impacts than are most other species (cheetah being a possible exception).

Despite these human impacts on their populations, wild dogs can coexist successfully with people under the right circumstances (Woodroffe *et al.*, 2007b). Wild dogs seldom kill livestock where wild prey remain at even comparatively low densities (Rasmussen, 1999, Woodroffe et al., 2005b), and traditional livestock husbandry is a highly effective deterrent (Woodroffe *et al.*, 2006). Tools have been developed to reduce the impacts of conflicts with game and livestock ranchers,

accidental snaring, and road accidents, although safe and effective tools to manage disease risks are still under development (Woodroffe *et al.*, 2005a).

2.3 Biology and conservation needs of cheetah

The cheetah is one of the most unique and specialised members of the cat family. It can reach speeds of 103km per hour (Sharp, 1997), making it the fastest creature on land. However, despite its specialised hunting strategy, cheetah are habitat generalists, ranging across a wide variety of habitats, from desert through grassland savannas to thick bush (Myers, 1975).

Cheetah have a social system unlike that of any other cat species. Cheetah females are tolerant of other females, and do not maintain territories, instead having large overlapping home ranges (Caro, 1994). Females are highly promiscuous, with high levels of multiple paternity within litters and no evidence of mate fidelity (Gottelli *et al.*, 2007). Cheetah males are often social, forming permanent coalitions of two or three, usually brothers, which stay together for life (Caro and Durant, 1991). Males in groups are more likely than single males to take and retain territories, which they defend against male intruders (Caro and Collins, 1987). In the Serengeti ecosystem in northern Tanzania, male territories average 50km^2, whilst females and males without territories move over 800km^2 every year (Caro, 1994). This system, where males are social and hold small territories, and females are solitary moving across several male territories annually, is known in no other mammal species (Gottelli *et al.*, 2007).

Cheetah females are able to give birth to their first litter at two years of age, after a three-month gestation (Caro, 1994). The cubs are kept in a lair for the first two months of their life, while their mother leaves them to hunt every morning and returns at dusk (Laurenson, 1993). Cheetah cub mortality can be high: In the Serengeti, mortality of cubs from birth to independence was 95% (Laurenson, 1994). There, cubs died mostly because they were killed by lions or hyaenas: mothers cannot defend cubs against these much larger predators (Laurenson, 1994). Cubs may also die from exposure or fire, or from abandonment if their mother is unable to find food. If they survive, the cubs will stay with their mother until they are 18 months old, after which they will roam with their littermates for another six months (Caro, 1994). The longest recorded longevity in the wild is 14 years for females and 11 years for males; however females have never been recorded as reproducing beyond 12 years (Durant et al. 2004, Chauvenet et al. 2011). Demographic parameters are available for only a small number of populations: mean and variance of birth and survival have been published from the long term study in the Serengeti National Park in Tanzania (Durant et al., 2004), whilst mean birth and survival rates are available from ranch lands in Namibia (Marker *et al.*, 2003b).

Cheetah are predominantly diurnal, although hunting at night is not uncommon (Caro, 1994). They hunt by a stealthy stalk followed by a fast chase. Because of their unrivalled speed and acceleration, cheetah can hunt successfully even if they start a chase at a much greater distance than bulkier and heavier large cats, such as lions and leopards (*Panthera pardus*). They take a wide variety of prey, depending on habitat and geographic location, but they prefer prey of 15-30kg: the size of a Thomson's (*Gazella thomsonii*) or Dorcas gazelle (*Gazella dorcas*).

As with wild dogs, and unlike most other large carnivore species, cheetah tend to avoid areas of high prey density, probably because other large carnivore species are found in these areas (Durant, 1998, Durant, 2000). Lions have been documented to be largely responsible for the high mortality of cheetah cubs observed in the Serengeti (Laurenson, 1994), and will also kill adults, whilst spotted hyaenas can kill cubs and will steal kills from cheetah.

Cheetah used to be widespread across Africa and across Asia as far east as India. However, today there are no cheetah left in Asia except for a small population in Iran, and only a few populations remain in north and west Africa. Most of the remaining cheetah are concentrated in sub-Saharan Africa. The first status survey for cheetah was in the early 1970s (Myers, 1975), later surveys of selected countries were conducted in the 1980s (Gros, 1996, Gros, 1998, Gros, 2002, Gros and Rejmanek, 1999), and a summary of global status was collated in 1998 (Marker, 1998). However accurate information on status and densities are extremely difficult to collect for this species, which is shy and rarely seen across most of its range. Furthermore, the ranging patterns of the species mean that it can cluster in areas that become temporarily favourable habitat (due to the absence of competitors and availability of prey), making estimating numbers additionally problematic (Durant *et al.*, 2007; Durant et al. 2010).

Cheetah, like wild dogs, live at low densities, probably because of similar tendencies to avoid larger predators. Densities recorded to date range between 0.05-3 adult cheetah/100km^2 (Burney, 1980, Gros, 1996, Marker, 2002, Mills and Biggs, 1993, Morsbach, 1986, Purchase, 1998, Belbachir et al. under review). Although markedly higher estimates have been documented in some areas, it is likely these estimates do not reflect true density, either because populations are fenced and intensively managed or because individuals counted may roam outside the survey area (highlighting a general problem with surveying cheetah, see Bashir *et al.*, 2004).

Home range size has been recorded as ranging from 50km^2 for territorial males in the Serengeti (Caro, 1994) to over 1,000km^2 in Namibia (Marker et al., 2008). Like wild dogs, cheetah home ranges are much larger than would be predicted from their energy needs (Figure 2.1). Because they can range across such large areas, cheetah can also disperse widely, having been recorded as moving over much more than one hundred kilometres (Durant unpublished data), making it difficult to determine whether occasional cheetah sightings in an area represent transient individuals or a resident population. However, this ability to disperse enables cheetah to recolonise new areas fairly easily if and when they become available.

Global population size has been 'guesstimated' at 14,000 (Myers, 1975) and 'less than 15,000' (Marker, 2002). The IUCN lists cheetah as vulnerable (IUCN, 2012), but the subspecies *A. j. hecki*, also known as the Saharan cheetah, found in the western, central and northern Africa region, is critically endangered (Belbachir 2008) . Although these population size estimates do not suggest a decline, the consensus view among the world's experts on the species is that there has been a decline, either because the 1970s estimate was too low or because the later figure was overestimated. Certainly the distribution of the species has contracted markedly from its historical range (IUCN/SSC, 2007a, 2007b). Declines have been largely attributed to habitat loss and fragmentation (Marker et al., 2003a, Marker et al., 2003b, Myers, 1975). The disappearance of the species from across nearly its entire Asian range was in part also due to the habit of the Asian aristocracy to capture and use cheetah for hunting (Divyabhanusinh, 1995). Today lethal control, a response to perceived or actual conflict with livestock or game ranching also plays a strong role in the decline of the species (Marker et al., 2003a, Marker et al., 2003b, Myers, 1975).

2.4 The regional workshop for western, central and northern Africa

The regional workshop on conservation planning for cheetah and wild dogs in western, central and northern Africa was held on 30th January-3rd February, 2012, at Hotel La Tapoa, in the Niger section of W National Park. It was attended by 33 participants including government and NGO representatives from Algeria,

Benin, Burkina Faso, Cameroon, Central African Republic, Chad, Egypt, Libya, Mali, Niger, Nigeria, Senegal, and Togo, as well as international specialists from Belgium, Gabon, India, Namibia, the Netherlands, Switzerland, the UK, USA and Zimbabwe (Figure 2.2); the delegates' names, affiliations and contact details are provided in Appendix 1. The participant from Guinea was unable to attend at the last minute.

Figure 2.2 *Delegates to the conservation planning workshop for African wild dogs and cheetah in western, central and northern Africa, held in W National Park, Niger, in January-February 2012 (a full list of participants is provided in Appendix I).*

The workshop had two principle objectives: to collate information on wild dog and cheetah status and distribution within the region, in a format that could be used to inform conservation planning, and to prepare a regional strategic plan for the species' conservation. The strategic plan was designed to form a template which could be used, with minor modifications, to develop national strategies for the species' conservation within the broader region.

Chapters 3 and 4 of this report present details on the status and distribution of cheetah and wild dogs, respectively, in western, central and northern Africa. Chapter 5 describes the threats to both species. Chapter 6 describes the conservation strategy developed for the region by workshop participants. The agenda for the workshop is presented in Appendix 2, the methods used to collate the data are outlined in Appendix 3, and a logical framework table of the strategic plan is provided in Appendix 4.

– CHAPTER 3 –

THE DISTRIBUTION AND STATUS OF CHEETAH WITHIN WESTERN, CENTRAL AND NORTHERN AFRICA

3.1 Historical distribution

In the past, cheetah were broadly distributed across western, central and northern Africa, absent only from the coastal regions of North Africa and the lowland forests of West and Central Africa. Cheetah are habitat generalists, able to persist in a wide array of environmental conditions ranging from the Sahara desert to thick bush, as long as prey are available. Before human activity modified substantial portions of the region's natural habitats, cheetah were presumed to have occupied nearly the entire region. The map of cheetah's historic distribution used in this process was updated by participants to the western, central and northern Africa conservation strategy for cheetah and wild dog workshop from a pre-existing map (Myers 1975) (Figure 3.1). Participants amended the published historic range, by using recent and historical sightings combined with updated evidence of cheetah habitat preferences (Figure 3.1). Areas where cheetah were historically absent were identified as such if there was no previous information of the species previously occurring there.

Cheetah were thought to have been absent from the coastal mountains in northern Algeria, and from the vast sand dune areas from north west Libya through to southern Egypt, with a remnant population in northern Egypt and north east Libya. It is possible cheetah could have crossed these sand dune areas, although they may have been unable to be resident there. This map suggests cheetah may have been more widespread than has been previously documented in some sources. They are now thought to have been historically widespread across the Sahara, extending into Guinean and northern Congolian forest-savannah mosaic habitats south of the Sahel. In these marginal forest-savanna habitats it is unlikely, however, that they ever reached high densities.

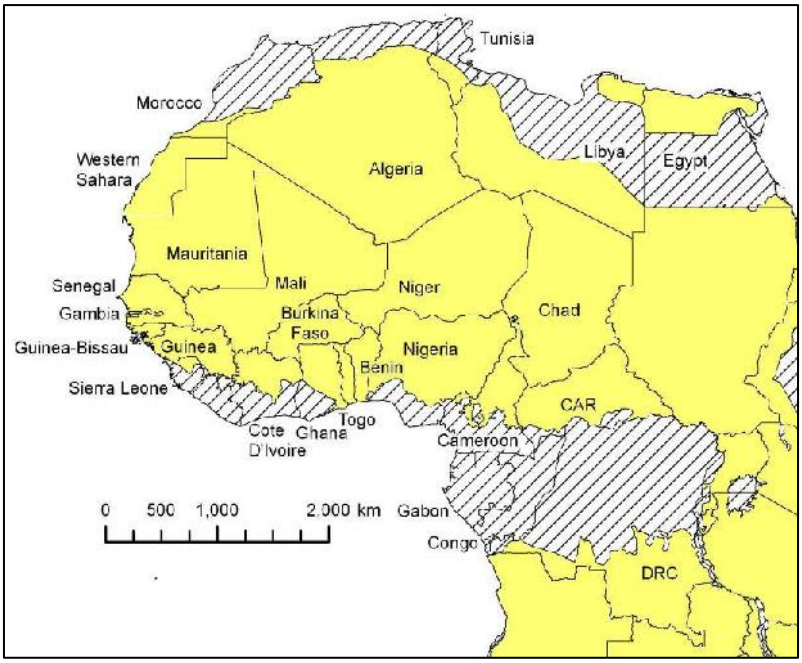


Figure 3.1 *Cheetah historical range, prior to the impact of human activity, as revised during the workshop. Hatching indicates areas estimated to fall outside cheetah historic range.*

3.2 Current distribution

3.2.1 Point location data

The first step in mapping cheetah's current distribution was to collate data on the locations of recent (i.e. during the past 10 years) confirmed records of cheetah presence, primarily, though not exclusively, sightings of live animals. The locations of these records are shown in Figure 3.2. These data are likely to be biased by observation effort and by reporting. The absence of sighting information in an area can mean one of two things: either there are no cheetah in the area, or cheetah in the area have not been recorded. Over the past decade extensive antelope surveys across the Sahara by the Sahelo-Sahara Conservation Fund have rarely found evidence of cheetah.

A sighting observation means that cheetah have definitely occurred in a particular area, but does not indicate whether it is a resident breeding population or transient individuals. Repeated sightings in a particular area are more likely to indicate a resident population. Despite the very uneven distribution of observation and reporting, the point locations shown in Figure 3.2 suggest that the current geographic distribution of cheetah, as estimated in 2012, is greatly reduced in comparison with the species' historical distribution.

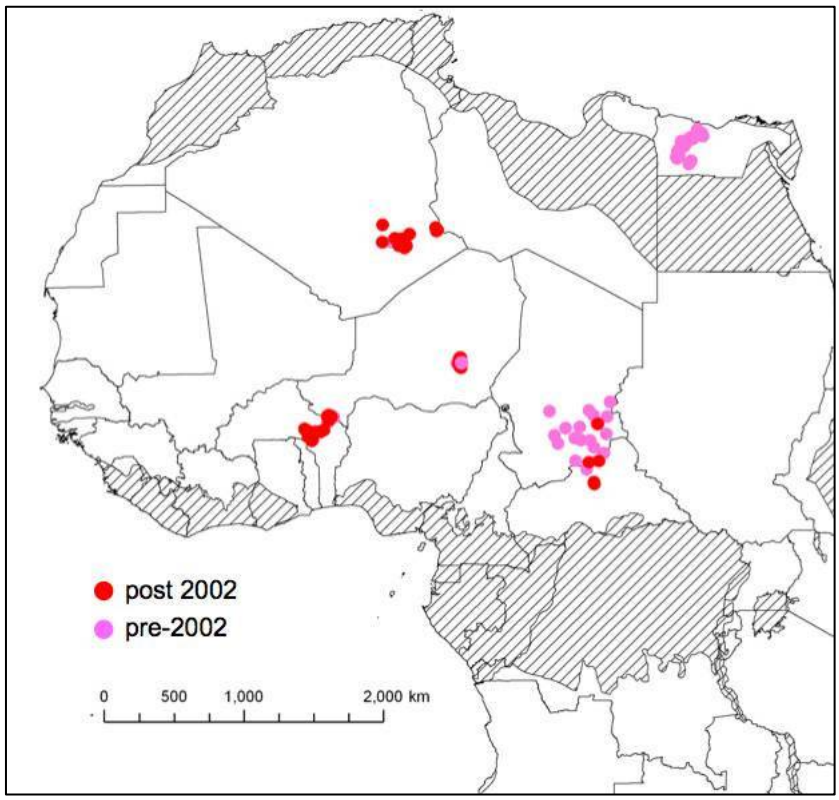


Figure 3.2 *Locations of confirmed cheetah sightings in within the last 10 years, and in previous years.*

3.2.2 Categories of current geographical range

Since cheetah distribution is imperfectly known across the region, the mapping process recognised six categories of current geographical range (Figure 3.3). These categories are more or less identical to those used for wild dogs (see chapter 4). Further details on range definitions are provided in Appendix 3.

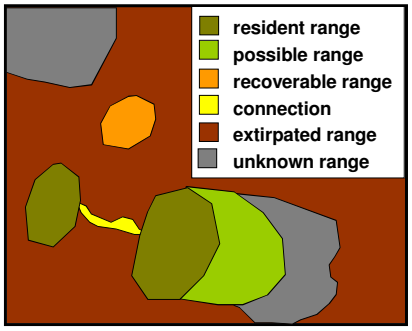


Figure 3.3 *Possible dispositions of different types of geographic range on an imaginary map*

(1) Resident range: land where cheetah are known to be still resident

(2) Possible range: land where cheetah may still be resident, but where residency has not been confirmed in the last 10 years.

(3) Connecting range: land where cheetah may not be resident, but which dispersing animals may use to move between occupied areas, or to recolonise extirpated range. Such connections might take the form of 'corridors' of continuous habitat or 'stepping stones' of habitat fragments.

(4) Unknown range: land where the species' status is currently unknown and cannot be inferred using knowledge of the local status of habitat and prey.

Extirpated range: land where the species has been extirpated. This can be further divided into:

(5) Unrecoverable range: land where habitat has been so heavily modified (e.g. by cultivation or urbanisation) or fragmented as to be uninhabitable by resident animals for the foreseeable future.

(6) Recoverable range: land where habitat and prey remain over sufficiently large areas that either natural or assisted recovery of cheetah might be possible within the next 10 years if reasonable conservation action were to be taken.

3.2.3 Current distribution across different range categories

Figure 3.4 shows cheetah geographic range judged, in 2012, to fall into the six categories above; Table 3.1 presents the same data in a quantitative format.

The current geographic distribution of cheetah is greatly reduced in comparison with their historical distribution. Cheetah are known to be resident in only about 9% of their historical range. Although cheetah might possibly still occur, or be recoverable, in other areas, they are considered to be irreversibly extirpated across 57% of their historical range. They are possibly present in another 8% of their historical range. Algeria, Niger and Libya contain sizeable areas of possible range for cheetah. In these areas, surveys to establish the status of the species are a clear priority. Even if all the areas where cheetah could possibly be present turn out to hold resident populations, this still represents an apparent loss of over 80% of historical range.

No information on distribution was available for nearly one quarter of the species' historical geographic range. If even a small proportion of this 'unknown' range still supports cheetah, the species' status could be more encouraging than the data on resident and possible range would imply. Most of the 'unknown' range falls in Libya, northern Niger, Chad and CAR; many of these regions have been subject to political instability over recent years. Chad and CAR are comprised almost entirely of unknown range. Southern Morocco, northern western Sahara; southern Burkina Faso; and western Egypt also contain notable areas of unknown range. All these areas may be important targets for survey work.

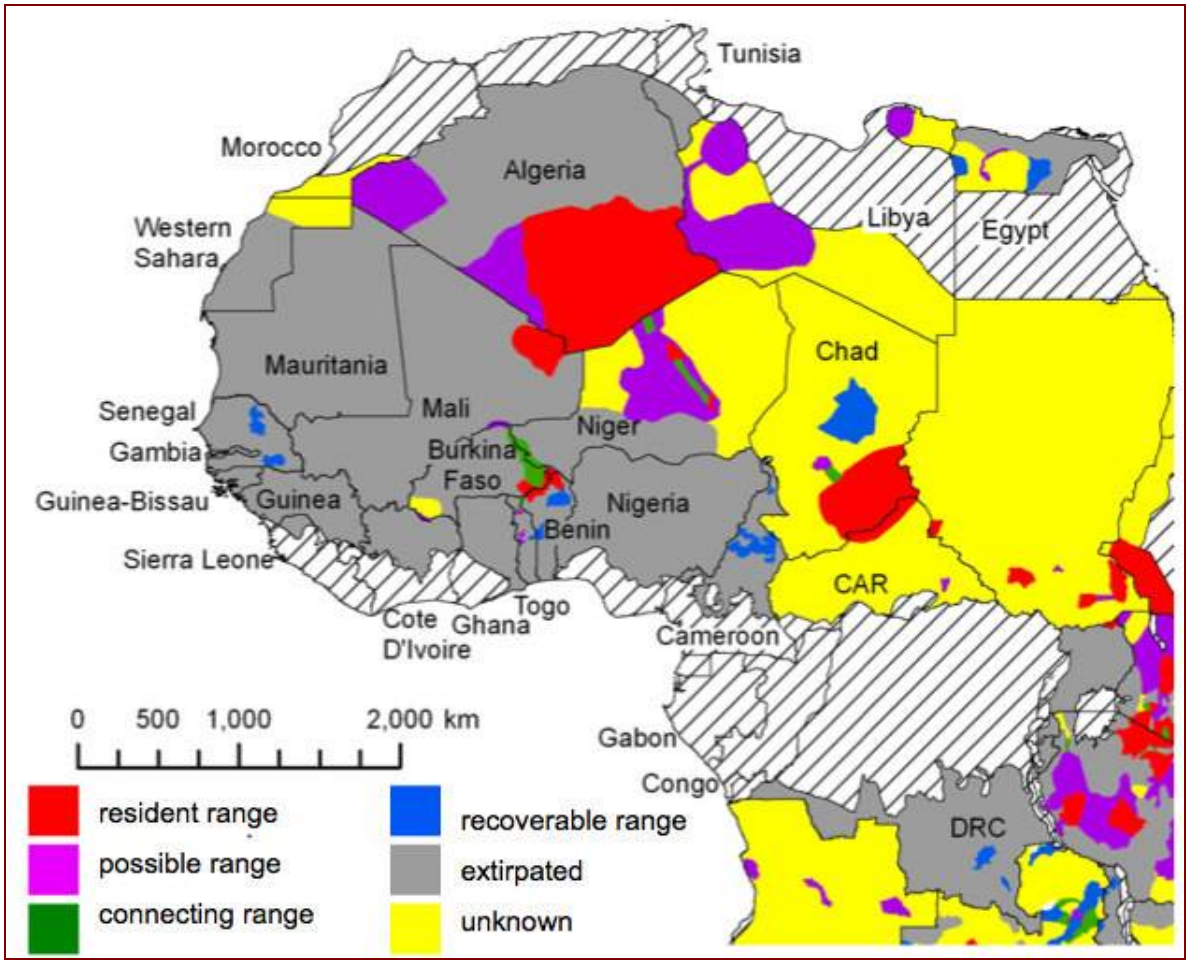


Figure 3.4 *Map of cheetah distribution and status in western, central and northern Africa, as assessed by workshop participants in 2012. Hatching indicates land considered to be outside cheetah historic range.*

Overall, participants agreed that cheetah have been extirpated across a minimum of 59% of their historical range. This is almost certainly an under-estimate for reasons similar to those described for the estimate of resident range. That is, it is likely that a high proportion of the 'unknown' range, and a proportion of the 'possible' range, no longer supports cheetah. Only a tiny portion of extirpated range, 1.6% of historical range, was considered recoverable, that is, able to support cheetah populations in future. This suggests that, once habitat is lost to cheetah, it may be gone forever. Key recoverable areas were identified in Senegal, Cameroon, Benin, Chad, DRC and Egypt.

While there are large areas of unknown range, the evidence from countries with relatively complete information (Mali, Algeria, Nigeria, Burkina Faso) suggests that a marked contraction in geographic range has occurred in this species. It is therefore likely that a similar pattern will emerge in countries with substantial areas of unknown range, once sufficient information becomes available.

Table 3.1 *Distribution of cheetah in range states within western, central and northern Africa Percentages are calculated as the total land area estimated to be in each category of cheetah range in 2012, divided by the total land area falling inside historic cheetah range.*

Country	Historical range	Area (km²) and % of historic range falling in each range category											
		Resident		*Possible*		*Extirpated*		*Recoverable*		*Connection*		*Unknown*	
	Km²	km²	%	km²	km²	km²	km²	km²	%	km²	%	km²	%
Countries represented at workshop													
Algeria	2,379,773	740,356	31.1%	311,281	13.1%	1,328,135	55.8%	0	0.0%	0	0.0%	0	0.0%
Benin	103,415	11,828	11.4%	0	0.0%	75,347	72.9%	16,239	15.7%	0	0.0%	0	0.0%
Burkina Faso	251,170	8,571	3.4%	3,944	1.6%	199,894	79.6%	0	0.0%	21,500	8.6%	17,262	6.9%
Cameroon	205,333	0	0.0%	0	0.0%	176,034	85.7%	29,299	14.3%	0	0.0%	0	0.0%
Central African Rep.	492,034	30,562	6.2%	3,121	0.6%	0	0.0%	0	0.0%	0	0.0%	458,351	93.2%
Chad	1,206,034	186,080	15.4%	7,420	0.6%	0	0.0%	79,401	6.6%	5,761	0.5%	927,372	76.9%
Egypt	324,543	0	0.0%	7,606	2.3%	159,086	49.0%	32,791	10.1%	0	0.0%	125,061	38.5%
Libya	999,156	0	0.0%	380,738	38.1%	0	0.0%	0	0.0%	0	0.0%	618,418	61.9%
Mali	1,214,767	62,841	5.2%	2,513	0.2%	1,149,413	94.6%	0	0.0%	0	0.0%	0	0.0%
Niger	1,148,443	13,507	1.2%	200,890	17.5%	281,277	24.5%	684	0.1%	27,255	2.4%	624,830	54.4%
Nigeria	700,206	0	0.0%	0	0.0%	700,206	100.0%	0	0.0%	0	0.0%	0	0.0%
Senegal	184,051	0	0.0%	0	0.0%	165,325	89.8%	18,726	10.2%	0	0.0%	0	0.0%
Togo	50,995	0	0.0%	3,007	5.9%	45,279	88.8%	1,355	2.7%	1,354	2.7%	0	0.0%
Sub-total	*9,259,920*	*1,053,746*	*11.4%*	*920,520*	*9.9%*	*4,279,996*	*46.2%*	*178,496*	*1.9%*	*55,870*	*0.6%*	*2,771,294*	*29.9%*
Countries not represented at workshop													
Cote d'Ivoire	155,028	0	0.0%	0	0.0%	155,028	100.0%	0	0.0%	0	0.0%	0	0.0%
Dem. Rep. Congo	638,861	0	0.0%	0	0.0%	626,956	98.1%	11,905	1.9%	0	0.0%	0	0.0%
Gambia	10,023	0	0.0%	0	0.0%	10,023	100.0%	0	0.0%	0	0.0%	0	0.0%
Ghana	143,800	0	0.0%	0	0.0%	143,800	100.0%	0	0.0%	0	0.0%	0	0.0%
Guinea	201,635	0	0.0%	0	0.0%	201,635	100.0%	0	0.0%	0	0.0%	0	0.0%
Guinea-Bissau	29,476	0	0.0%	0	0.0%	29,476	100.0%	0	0.0%	0	0.0%	0	0.0%
Mauritania	1,045,598	0	0.0%	0	0.0%	1,045,598	100.0%	0	0.0%	0	0.0%	0	0.0%
Morocco	66,260	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	66,260	100.0 %
Sierra Leone	16,733	0	0.0%	0	0.0%	16,733	100.0%	0	0.0%	0	0.0%	0	0.0%
Tunisia	76,142	0	0.0%	0	0.0%	76,142	100.0%	0	0.0%	0	0.0%	0	0.0%
Western Sahara	288,861	0	0.0%	0	0.0%	203,831	70.6%	0	0.0%	0	0.0%	85,030	29.4%
Sub-total	*2,672,419*	*0*	*0.0%*	*0*	*0.0%*	*2,509,223*	*93.9%*	*11,905*	*0.4%*	*0*	*0.0%*	*151,290*	*5.7%*
Grand total	11,932,339	1,053,746	**8.8%**	920,520	**7.7%**	6,789,219	**56.9%**	190,401	**1.6%**	55,870	**0.5%**	2,922,584	**24.5%**

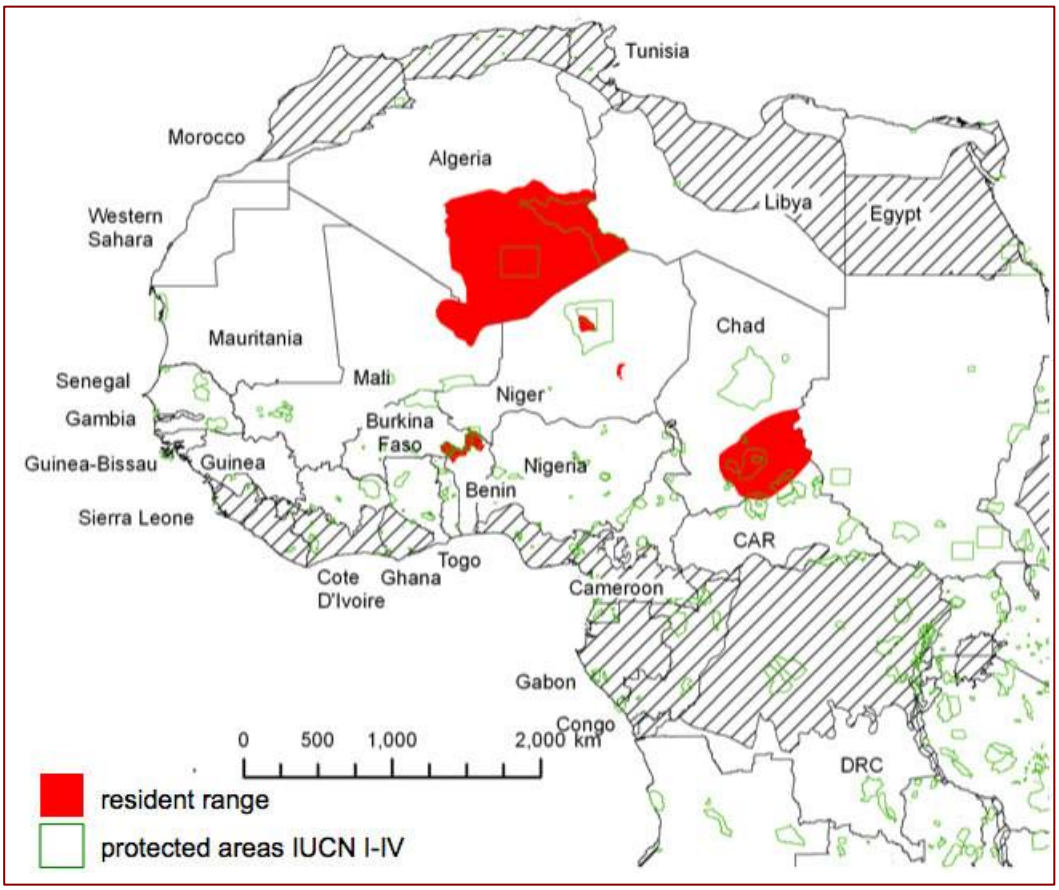


Figure 3.5 *Areas of resident cheetah range in western, central and northern Africa, as identified by workshop participants.*

A small, but important 0.5% of historical range (55,870km^2) is considered potentially significant for cheetah conservation because it connects areas of resident or possible range. Such connecting habitat was identified in Niger, Chad and around the W parc complex. This may reflect a better knowledge base available in these areas and does not mean that connecting range is not important elsewhere. Whilst connecting range is small in size, its importance cannot be overstated, as it can help prevent the regional cheetah population from becoming even more fragmented and genetically isolated. Connecting range, by definition (Section 3.3), is believed not to contain resident populations and hence is likely to be highly threatened.

Table 3.2 provides greater detail on the areas of resident range mapped by participants; locations of these areas are shown in Figure 3.5. Population estimates provided in Table 3.2 should be interpreted with great caution as they were derived on the basis of extremely sparse data; however, no alternative, more accurate data are available. These guesstimates suggest that there may be around 646 cheetah surviving in the region. The two largest areas of resident range currently identified, are the Adrar des Ifhogas/Ahaggar/Ajjar/Mali area and the Chad/CAR area. Given probable maximum densities of cheetah of no more than 1/1,000km^2 in these environments, these areas, although large in extent, are only likely to support small populations of cheetah, but they may still be viable. A handful of cheetahs also persist in the W complex, Air et Tenere and the Termit Massif. It is not yet known whether all these cheetahs are of the subspecies *A. j. hecki*, currently classified as critically endangered on the IUCN Red List (Belbachir 2008). Depending on genetic

analysis, the Algeria/Mali population may be the only remaining viable population of *A. j. hecki.* The remaining populations will depend, in the long term, on maintaining connectivity with other populations. Cheetah populations in the Air & Termit Massif areas, in particular, are unlikely to be large enough to be viable. Further surveys are urgently needed to better establish the extent of cheetah distribution and potential connectivity, as well as establishing the genetic identity of these remaining, threatened populations.

Table 3.2 *Areas in western, central and northern Africa considered by participants to support resident cheetah populations. Population estimates are calculated using a number of different methodologies and have a very wide margin of error. Protected areas are in IUCN categories I-IV. Locations are shown in Figure 3.5.*

Name	**Country**	**Trans-boundary?**	**Area (km²)**		**Population estimate (adults)**	
			Total	*Protected*	*Total*	*Protected*
Adrar des Ifhogas/ Ahaggar/Ajjar & Mali	Algeria/Mali	yes	803,202	153,464	401*	76‡
W Complex	Benin/Burkina Faso/Niger	yes	23,157	23,104	23†	23‡
Bahr Salamat	Chad/CAR	yes	216,643	42,772	217†	43‡
Air et Ténéré	Niger	possibly	8,052	5,059	4*	3‡
Termit Massif	Niger	possibly	2,693	0	1-2*	0
	Grand total:		1,053,746	224,399	**646**	**145**

*population sizes in desert habitats estimated from the size of the polygon using a conservative density of 0.5 adults per 1,000km² found in the Ti-n-haǧǧen region (Belbachir et al. under review); †population size in savannah habitats estimated by from the size of the polygon using a conservative density of 1/1000km²; ‡sizes of protected populations estimated by multiplying total population size by the proportion of total land area falling inside protected areas.

3.2.4 Distribution across protected areas

As is apparent from Figure 3.4, a comparatively small proportion of current geographical range of cheetah falls inside protected areas designated with IUCN categories I-IV (Table 3.3). Overall, only around 21% of total resident range occurs on protected land, with the remaining population, while 79% lies outside the region's protected area system. The cheetah populations in these areas are by no means secure, and most land outside protected areas is subjected to heavy pressures.

An even larger majority (96%) of possible range falls outside government-designated protected areas. Most connecting areas also fall outside protected areas (87%), and hence the future of these valuable corridors is unlikely to be secure. By contrast, the majority of identified recoverable range (59%), lies inside protected areas for cheetah, possibly because they contain sufficiently large tracts of habitats that could be maintained.

Table 3.3 *Occurrence of areas known or suspected to be important for cheetah in each category falling inside protected areas, divided by the total land area in that range category (from Table 3.1).*

	Area and % of each range category falling inside protected areas							
	Resident		*Possible*		*Recoverable*		*Connecting*	
Country	km²	%	km²	%	km²	%	km²	%
Countries represented at the workshop								
Algeria	153,464	20.7%	0	0.0%	0	–	0	0.0%
Benin	7,908	66.9%	0	–	0	0.0%	0	0.0%
Burkina Faso	8,527	99.5%	2,275	57.7%	0	–	2,342	10.9%
Cameroon	0	–	0	–	7,579	25.9%	0	–
Central African Rep.	12,865	42.1%	0	0.0%	0	–	0	–
Chad	29,907	16.1%	0	0.0%	78,727	99.2%	0	0.0%
Egypt	0	–	0	0.0%	0	0.0%	0	–
Libya	0	–	0	0.0%	0	0.0%	0	–
Mali	0	0.0%	0	0.0%	0	–	0	0.0%
Niger	11,728	86.8%	29,540	14.7%	631	92.2%	4,688	17.2%
Nigeria	0	–	0	–	0	–	0	–
Senegal	0	–	0	–	18,683	99.8%	0	–
Togo	0	–	3,007	100%	285	21.0%	0	0.0%
Sub-total	*224,399*	*21.3%*	*34,821*	*3.8%*	*105,904*	*59.3%*	*7,030*	*12.6%*
Countries not represented at the workshop								
Dem. Rep. Congo	0	–	0	–	11,905	100%	0	–
Sub-total	*0*	*–*	*0*	*–*	*11,905*	*100%*	*0*	*–*
Grand total	224,399	21.3%	34,821	3.8%	117,810	61.9%	7,030	12.6%

3.2.5 Distribution across international boundaries

As shown in Figure 3.5, several important resident cheetah populations are known or suspected to traverse international boundaries, either because the resident population spans the boundary, or because a polygon of known resident range abuts a polygon of possible range in a neighbouring country. Of the 5 resident populations listed in Table 3.2, all are known or strongly suspected to be trans-boundary. These populations span the borders between Algeria, Mali and Niger; Niger, Benin, Togo and Burkina Faso; and Chad and CAR. The large number of trans-boundary populations highlights the likely need for trans-frontier management of cheetah conservation across the region.

3.2.6 Distribution across ecoregions

If ecologically representative populations of cheetah are to be conserved, then efforts should be made to ensure that populations encompass a wide range of habitats. Cheetah range (resident, possible and connecting) was therefore mapped with regard to the ecoregions identified by the World Wide Fund for Nature (WWF, Olson *et al.*, 2001). The numbers of resident and possible range polygons falling entirely or partly within each ecoregion were estimated from the distribution data

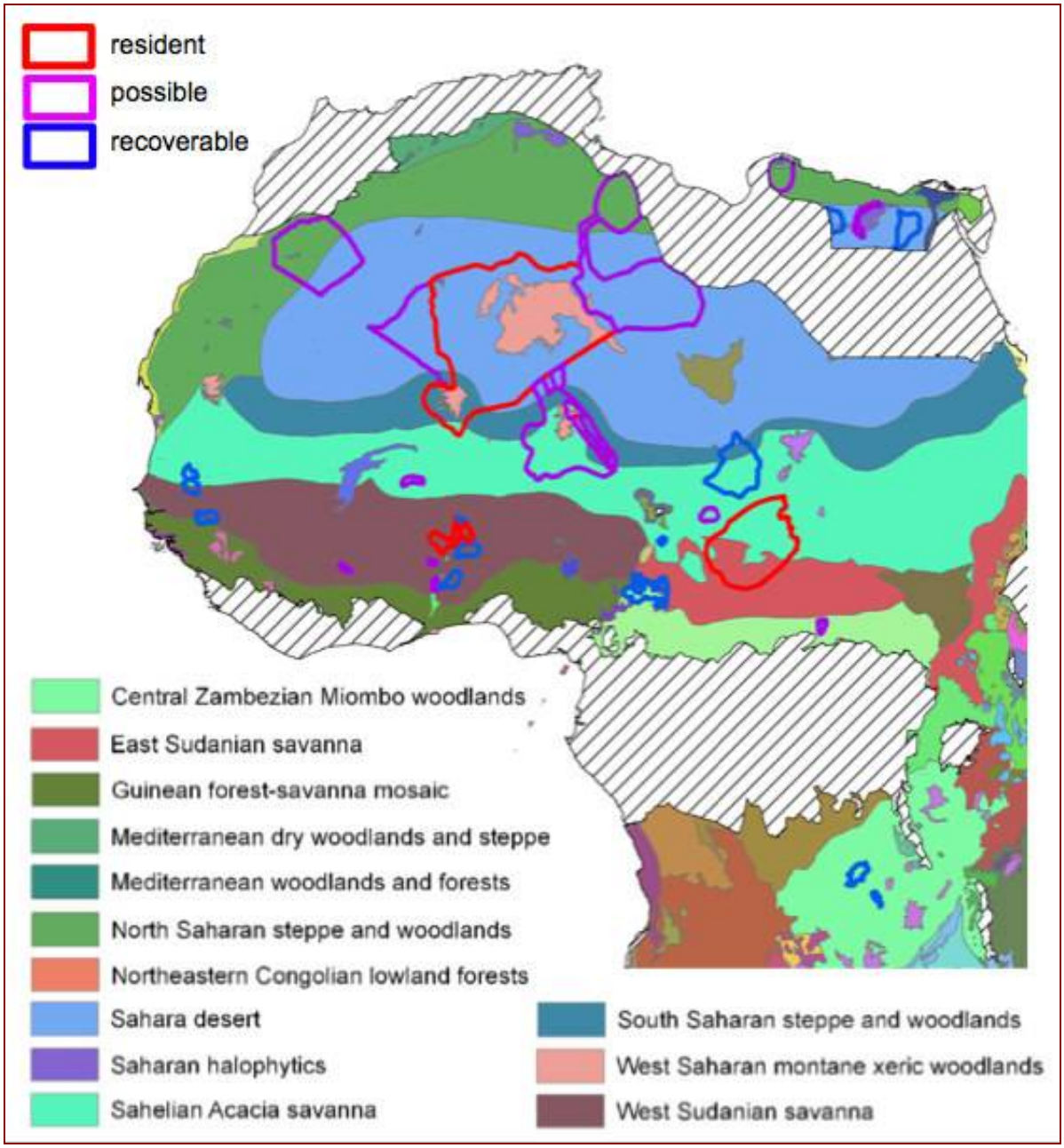


Figure 3.6 *Distribution of cheetah geographic range across WWF ecoregions. For simplicity, the legend shows only those ecoregions which overlap with cheetah range. Hatching indicates land outside cheetah's historical range.*

(Table 3.4). To account for inaccurate estimation of the boundaries of each ecoregion and range polygon, and to ensure interpretation on a spatial scale relevant to cheetah home range, this analysis excludes any part of a range polygon measuring <1,000km^2. The data presented in Table 3.4 are of potential interest for targeting conservation activities. The analysis shows that the Sahara desert ecoregion contains the greatest area of resident cheetah range (510,623km^2 or 48% of total resident range). Although covering a large area, it is likely that cheetah densities in this habitat are very low, due to low productivity and hence sparsely distributed prey in desert environments. Another four ecoregions – east Sudanian savanna, Sahelian Acacia savanna, south Saharan steppe and woodlands and west Saharan montane xeric woodlands – each cover more than 20,000km^2 of cheetah

resident range. The remaining ecoregion containing resident range, Saharan halophytics, covers only 2,700km^2.

The total number of resident range polygons, estimated at 5, is extremely small in this region. It is also worth noting that three ecoregions, East Sudanian savanna, Sahara desert, and Saharan halophytics are only represented in a single resident range polygon, while west Saharan montane xeric woodlands and west Sudanian savanna ecoregions are only represented in two resident range polygons (Table 3.5). However three ecoregions - central Zambezian miombo woodlands, east Sudanian savanna; and northern Congolian forest-savannah mosaic - are also represented in 1-5 range polygons in eastern and/or southern Africa (IUCN/SSC 2007a, 2007b).

The representation of possible range for cheetah across ecoregions largely follows the pattern of resident range, with those ecoregions well represented in resident range being the most common for possible range as well. However, there are four ecoregions represented in possible range for cheetah that are not represented in resident range. These are:

1. The Mediterranean dry woodlands and steppe which harbour two possible range polygons, in the Alhamada Alhamra Fezzan Oasis and the Altimim in Libya. However, possible range in this ecoregion only covers a relatively small total area, of 7,500km^2.
2. The Mediterranean woodlands and forests ecoregion may help to support a possible population over a relatively small area in the Altimim region of Libya.
3. The north Saharan steppe and woodlands ecoregion covers the most extensive area of possible range, covering 3 polygons and totalling more than 200,000km^2. These areas are in western Algeria, and the Alhamada Alhamra Fezzan Oasis and the Altimim in Libya
4. The northern Congolian forest-savanna mosaic in Diefoula region in Burkina Faso may be too small to support a viable poplation of cheetah, but is represented in resident range in a single polygon in South Sudan in eastern Africa (IUCN/SSC 2007a).

Populations within these ecoregions should be seen as priorities for surveys as they may harbour cheetah in rare ecosystems.

The largest areas of recoverable range were identified in the Sahara desert (65,000km^2, 3 polygons); Sahelian Acacia savanna (69,00km^2, 3 polygons); and west Sudanian savanna (27,500km^2; 4 polygons), of which the latter is least well represented in resident range. However substantial areas of central Zambezian miombo woodlands and northern Congolian forest-savannah mosaic were also identified as recoverable, and these are poorly represented in existing resident and possible range polygons in the west, north and central Africa region. Both these latter ecoregions are represented elsewhere in cheetah possible and resident range (IUCN/SSC 2007a, 2007b).

Table 3.4 *Distribution of cheetah range across WWF ecoregions within western, central and northern Africa. Data give the numbers of range polygons and combined area of land falling within each ecoregion. Land parcels ≤1,000km² are excluded.*

	Resident range		Possible range		Recoverable range	
Ecoregion	*number*	*area (km²)*	*number*	*area (km²)*	*number*	*area (km²)*
Central Zambezian Miombo woodlands	0	0	0	0	2	11,905
East Sudanian savanna	1	89,044	0	0	1	7,953
Guinean forest-savanna mosaic	0	0	0	0	1	1,428
Mediterranean dry woodlands and steppe	0	0	2	7,497	0	0
Mediterranean woodlands and forests	0	0	1	3,564	0	0
North Saharan steppe and woodlands	0	0	3	215,439	0	0
Northern Congolian forest-savanna mosaic	0	0	1	3,121	1	19,271
Sahara desert	1	510,623	5	470,304	3	34,884
Saharan halophytics	1	2,726	1	3,393	0	0
Sahelian Acacia savanna	3	136,833	3	136,605	3	69,026
South Saharan steppe and woodlands	3	62,014	2	56,051	1	15,533
West Saharan montane xeric woodlands	2	228,316	2	17,252	0	0
West Sudanian savanna	2	23,158	3	4,067	4	27,548

Table 3.5 *Polygons of <u>possible</u> range which cover ecoregions poorly represented by the resident range (using ≤2 areas of resident range within Africa each ≥1,000km² as a definition of 'poor' representation). Surveys of these areas could be potentially valuable for expanding cheetah conservation efforts to better represent the ecoregions formerly inhabited by cheetah.*

	Polygon name									
Country:	*Algeria*	*Algeria*	*Burkina Faso*	*CAR*	*Egypt*	*Libya*	*Libya*	*Niger*	*Togo*	*Togo*
Ecoregion	SW Algeria	W Algeria	Diefoula	Unit 41 Hunting Zone	Qatari depression	Alhamada Alhamra Fezzan Oasis	Altimim	Massif Air/Tadress	Fazao-Malfakassa	Kéran
Mediterranean dry woodlands and steppe						X	X			
Mediterranean woodlands and forests							X			
North Saharan steppe and woodlands		X				X	X			
Northern Congolian forest-savanna mosaic				X						
Sahara desert	X	X			X	X		X		
Saharan halophytics					X					
West Saharan montane xeric woodlands						X		X		
West Sudanian savanna			X						X	X

Table 3.6 *Polygons of potentially recoverable range which cover ecoregions poorly represented by the resident range (using ≤2 areas of resident range within Africa each ≥1,000km² as a definition of 'poor' representation). Successful recovery of cheetah populations in these areas could lead to a better representation of the ecoregions formerly inhabited by cheetah.*

	Polygon name							
Country:	*Benin*	*Cameroon*	*Chad*	*Egypt*	*Egypt*	*Sénégal*	*Sénégal*	*Togo*
	L'Alibori/Trois Rivieres	Benoué	Ouadi Rimé-Ouadi Achim	Libya border	West of Nile	Ferlo	Niokolo-Koba	Monts Koufe
Guinean forest-savanna mosaic							X	
Northern Congolian forest-savanna mosaic		X						
Sahara desert			X	X	X			
West Sudanian savanna	X					X	X	X

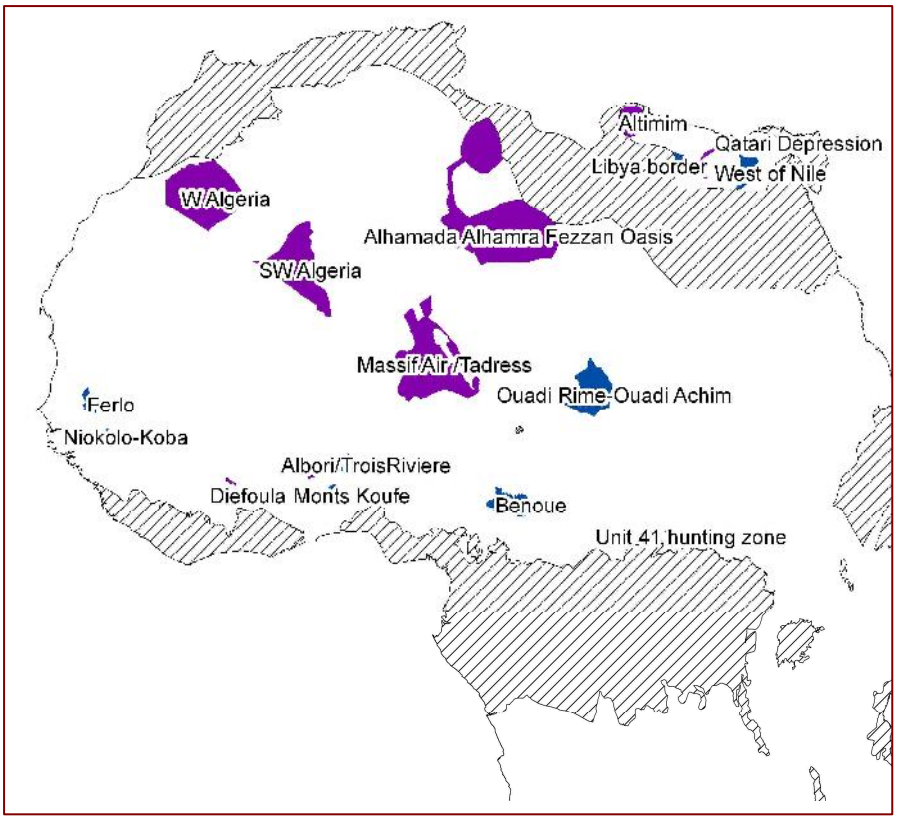


Figure 3.7 *– Areas of possible range (in purple) and potentially recoverable range (in blue) which fall in ecoregions that are poorly represented within cheetah's resident range.*

3.3 Conclusions

The geographical distribution of cheetah in western, central and northern Africa has contracted drastically over the past 100-200 years. From a historical distribution formerly covering nearly 12 million km^2, in 2012 only one million km^2 – 9% of the total – still appears to support resident cheetah populations. Only five populations are known to remain, and these are distributed across seven of the 25 countries in the region. Two of these countries, Algeria and Chad, support most of the surviving cheetah in the region, harbouring 88% of resident range. Furthermore, nearly 80% of the area inhabited by resident populations is unprotected. All populations are likely to span or connect across international boundaries and hence will depend on international cooperation for their survival.

Nonetheless, there are knowledge gaps in the region which could mean that additional populations exist. A small part of the region (8%) may possibly harbour resident populations, while the status of one quarter of cheetah historical range is completely unknown. These areas of unknown and unconfirmed range are priorities for surveys, since it is impossible to secure the survival of cheetah populations while they remain undiscovered. Many possible or unknown areas cross international boundaries. Several of them may serve as linkages between known resident populations and hence are potentially critical for maintaining connectivity between them. A large proportion of these areas is unprotected. The majority of Libya, CAR and Chad is classified as unknown range for cheetah, due to past or ongoing civil unrest, presenting clear priorities for surveys.

Nine areas were identified where recovery of extirpated cheetah populations might be possible, comprising 1.6% of historical range. Two of these areas are in Senegal; two in Benin; two in Egypt; one in Cameroon; one in Chad and one in DRC. Further work would need to be conducted to identify whether these areas are feasible for restoration. Are the areas sufficiently large, with enough habitat and prey? Would the surrounding communities adequately support restoration efforts? However, even if only half of these areas were suitable, this would nearly double the number of resident cheetah populations in the region. The majority of these areas

(62%) are protected. However, cheetah have been extirpated from 57% of their historical range, without any possibility of recovery, indicating a generally irreversible nature of the decline in the distribution of cheetah. Once the habitat is gone, it is very difficult to recover. This demonstrates the importance of ensuring that cheetah conservation planning be put in place as soon as possible, before further loss and fragmentation of cheetah habitat occurs.

– CHAPTER 4 –

THE DISTRIBUTION AND STATUS OF AFRICAN WILD DOGS WITHIN WESTERN, CENTRAL AND NORTHERN AFRICA

4.1 Historical distribution

In the past, wild dogs were broadly distributed across western, central and northern Africa. Wild dogs are habitat generalists, able to persist in a wide array of environmental conditions as long as prey are available. Although the highest wild dog densities have been recorded in wooded savannah (Creel *et al.*, 2002), populations have been recorded in habitats as diverse as short grasslands (Kuhme, 1965), montane forest (Dutson *et al.*, 2005), and semi-desert (Fanshawe, 1997). Before human activity modified substantial proportions of western, central and northern Africa's natural habitats, wild dogs would have occupied most of the region, bounded by the sand deserts of the Sahara to the north, lowland forests to the south, and the sea to the west.

Studies from other regions of Africa have revealed that wild dogs remain uncommon even in essentially pristine wilderness, apparently due to negative interactions with larger carnivores (Creel and Creel, 1996; Mills *et al.*, 1997). Hence, despite their formerly broad geographical distribution, wild dogs were probably never abundant.

The map of wild dogs' historic distribution used in this process was updated in the course of the workshop from a pre-existing map (Figure 4.1). Participants amended the published historic range, using a combination of evidence of wild dog sightings and habitat distribution.

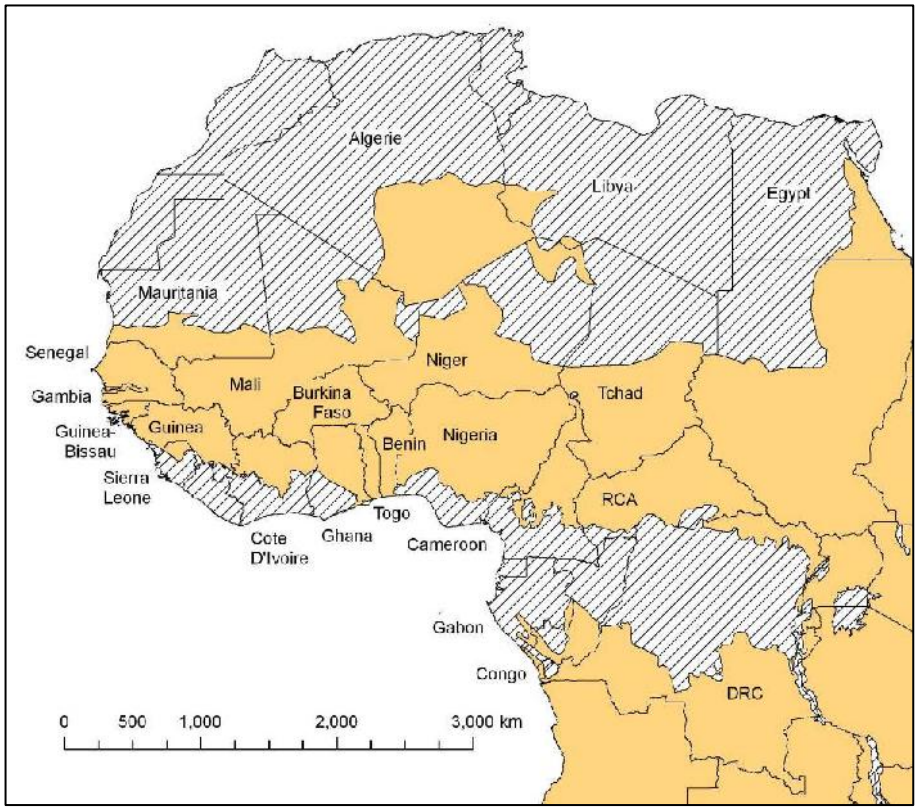


Figure 4.1 *Wild dog historical range, prior to the impact of human activity, as revised during the workshop. Hatching indicates areas estimated to fall outside wild dogs' historic range.*

4.2 Current distribution

4.2.1 Point locations

The first step in mapping wild dogs' current distribution was to collate data on the locations of recent (i.e. during the past 10 years) confirmed records of wild dogs' presence, primarily (though not exclusively) sightings of live animals. The locations of these records are shown in Figure 4.2. These data are likely to be biased by observation effort and by reporting. Despite the very uneven distribution of observation and reporting, the point locations shown in Figure 4.2 suggest that wild dogs' current geographic distribution, as estimated in 2012, is greatly reduced in comparison with their historical distribution.

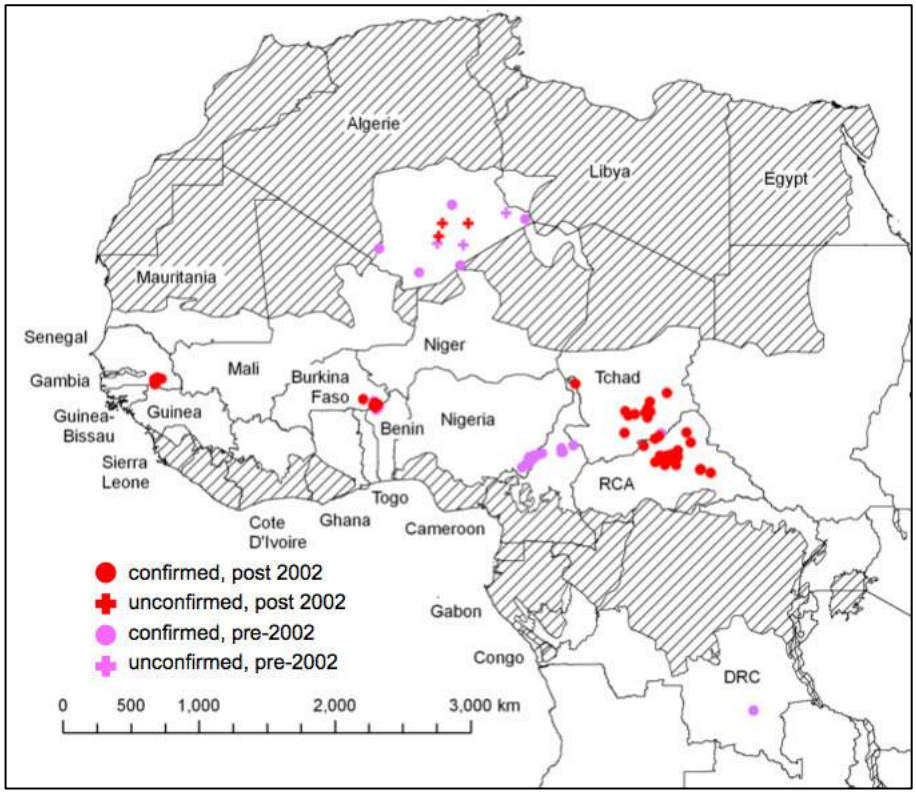


Figure 4.2 – *Locations of wild dog sightings used to map distribution.*

4.2.2 Categories of current geographical range

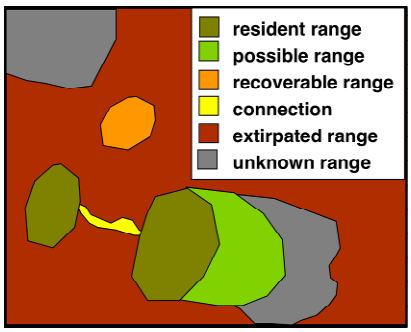


Figure 4.3 *Possible dispositions of different types of geographic range on an imaginary map*

Since wild dogs' distribution is imperfectly known across the region, the mapping process recognised six categories of current geographical range (Figure 4.3). Further details on range definitions are provided in Appendix 3.

(1) Resident range: land where wild dogs are known to be still resident

(2) Possible range: land where wild dogs may still be resident, but where residency has not been confirmed in the last 10 years.

Extirpated range: land where the species has been extirpated. This can be further divided into:

(3) unrecoverable range: land where habitat has been so heavily modified (e.g. by cultivation or urbanisation) or fragmented as to be uninhabitable by resident animals for the foreseeable future.

(4) recoverable range: land where habitat and prey remain over sufficiently large areas that either natural or assisted recovery of wild dogs might be possible within the next 10 years if reasonable conservation action were to be taken.
(5) connecting range: land where wild dogs may not be resident, but which dispersing animals may use to move between occupied areas, or to recolonise extirpated range. Such connections might take the form of 'corridors' of continuous habitat or 'stepping stones' of habitat fragments.
(6) unknown range: land where the species' status is currently unknown and cannot be inferred using knowledge of the local status of habitat and prey.

4.2.3 Current distribution across different range categories

Figure 4.4 shows the areas of wild dogs' historical geographic range judged, in 2012, to fall into these six categories; Table 4.1 presents the same data in a quantitative format.

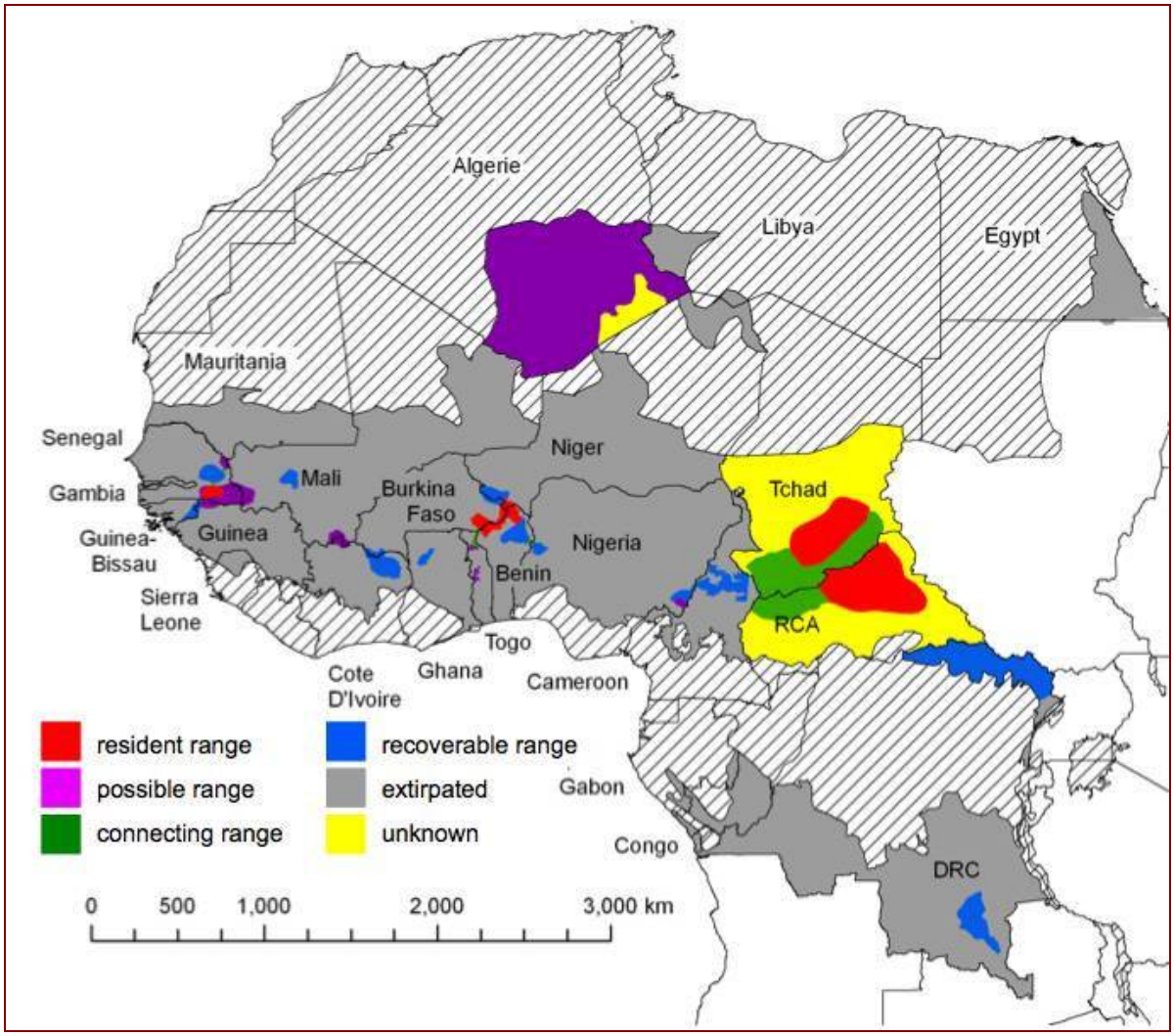


Figure 4.4 *Map of wild dog distribution and status in western, central and northern Africa, as judged by participants in 2012. Hatching indicates land considered to be outside wild dogs' historic range.*

Table 4.1 *Distribution of African wild dogs in range states within western, central and northern Africa. Percentages are calculated as the total land area estimated to be in each category of wild dog range in 2012, divided by the total land area falling inside historical wild dog range.*

	Historical range	**Area (km²) and % of historical range falling in each range category**											
		Resident		*Possible*		*Extirpated*		*Recoverable*		*Connection*		*Unknown*	
Country	km²	km²	%	km²	%	km²	%	km²	%	km²	%	km²	%
Countries represented at the workshop													
Algeria	681,498	0	0.0%	628,376	92.2%	0	0.0%	0	0.0%	0	0.0%	53,122	7.8%
Benin	114,801	12,960	11.3%	0	0.0%	87,210	76.0%	14,199	12.4%	431	0.4%	0	0.0%
Burkina Faso	273,374	9,382	3.4%	0	0.0%	256,764	93.9%	7,041	2.6%	187	0.1%	0	0.0%
Cameroon	230,851	0	0.0%	0	0.0%	199,110	86.3%	31,408	13.6%	332	0.1%	0	0.0%
Central African Rep.	555,549	158,394	28.5%	0	0.0%	0	0.0%	0	0.0%	55,601	10.0%	341,553	61.5%
Chad	654,829	101,505	15.5%	0	0.0%	112	0.0%	0	0.0%	131,779	20.1%	421,433	64.4%
Egypt	154,740	0	0.0%	0	0.0%	154,740	100.0%	0	0.0%	0	0.0%	0	0.0%
Libya	72,710	0	0.0%	0	0.0%	72,710	100.0%	0	0.0%	0	0.0%	0	0.0%
Mali	763,201	0	0.0%	14,107	1.8%	741,301	97.1%	7,793	1.0%	0	0.0%	0	0.0%
Niger	686,137	3,001	0.4%	0	0.0%	674,882	98.4%	8,254	1.2%	0	0.0%	0	0.0%
Nigeria	774,124	0	0.0%	2,846	0.4%	759,254	98.1%	11,535	1.5%	488	0.1%	0	0.0%
Senegal	196,738	7,493	3.8%	18,543	9.4%	157,994	80.3%	11,532	5.9%	1,176	0.6%	0	0.0%
Togo	57,039	0	0.0%	3,349	5.9%	51,976	91.1%	0	0.0%	1,713	3.0%	0	0.0%
Sub-total	*5,215,591*	*292,735*	*5.6%*	*667,222*	*12.8%*	*3,156,053*	*60.5%*	*91,764*	*1.8%*	*191,708*	*3.7%*	*816,109*	*15.6%*
Countries not represented at the workshop													
Congo	105,088	0	0.0%	0	0.0%	105,088	100.0%	0	0.0%	0	0.0%	0	0.0%
Cote d'Ivoire	173,218	0	0.0%	3,379	2.0%	149,816	86.5%	20,022	11.6%	0	0.0%	0	0.0%
Dem. Rep. Congo	1,100,342	0	0.0%	0	0.0%	935,959	85.1%	164,383	14.9%	0	0.0%	0	0.0%
Gabon	24,530	0	0.0%	0	0.0%	24,530	100.0%	0	0.0%	0	0.0%	0	0.0%
Gambia	10,801	0	0.0%	0	0.0%	10,801	100.0%	0	0.0%	0	0.0%	0	0.0%
Ghana	158,844	0	0.0%	0	0.0%	154,350	97.2%	4,494	2.8%	0	0.0%	0	0.0%
Guinea	222,373	191	0.1%	4,362	2.0%	216,320	97.3%	1,501	0.7%	0	0.0%	0	0.0%
Guinea-Bissau	32,157	0	0.0%	0	0.0%	27,924	86.8%	4,232	13.2%	0	0.0%	0	0.0%
Mauritania	243,054	0	0.0%	206	0.1%	242,848	99.9%	0	0.0%	0	0.0%	0	0.0%
Sierra Leone	18,617	0	0.0%	0	0.0%	18,617	100.0%	0	0.0%	0	0.0%	0	0.0%
Sub-total	*2,089,023*	*191*	*0.0%*	*7,947*	*0.4%*	*1,886,253*	*90.3%*	*194,632*	*9.3%*	*0*	*0.0%*	*0*	*0.0%*
Grand Total	7,304,613	292,926	**4.0%**	675,169	**9.2%**	5,042,306	**69.0%**	286,397	**3.9%**	191,708	**2.6%**	816,109	**11.2%**

Several important pieces of information are apparent. First, wild dogs are considered to be still resident in just 4% of their historical range. Although wild dogs might possibly still occur, or be recoverable, in other areas, they are considered to be irretrievably extirpated across 69% of their historical range. Population estimates in Table 4.2 indicate that this entire region may support fewer than 30 packs of wild dogs. Together, these figures indicate a major collapse of wild dog populations within this region.

Second, participants thought it possible that wild dogs might still persist in 9% of the species' historic range, with no information available on wild dogs' status in another 11%. If some of this 'possible' and 'unknown' range still supports wild dogs, the species' status could be more encouraging than the data on resident range would imply. Most of the 'possible' range falls in southern Algeria, and much of the 'unknown' range falls in Chad and the Central African Republic, highlighting the need for surveys in these countries. More information on promising survey areas is given in section 4.2.6 below.

Third, and more promisingly, participants identified over 250,000km^2 of land where wild dogs might be recoverable in future. Although some of this 'recoverable range' falls in relatively small and isolated pockets, there are also several very large tracts of land, including northern Cameroon (where wild dogs appear to have been extirpated only recently) and northern DRC, which might potentially support important wild dog populations if successful restoration efforts were to be implemented .

Despite supporting no known resident populations, a further 3% (191,708km^2) of historical range was considered potentially important for wild dog conservation because it connected areas of resident or possible range.

Table 4.2 *Areas in western, central and northern Africa considered by participants to support resident wild dog populations. Population estimates are calculated using a number of different methodologies and have a very wide margin of error. Protected areas are in IUCN categories I-IV. Locations are in Figure 4.5.*

		Area (km^2)		**Trans-boundary?**	**Population estimate**	
Name	**Country**	*total*	*protected*		*adults*	*packs*
Niokolo/Badiar	Sénégal/Guinea	7,684	7,020	yes	50	3†
W Complex	Benin/Burkina Faso/Niger	25,343	20,930	yes	20	4†
Bahr Salamat	Chad	101,505	32,822	possibly	100	8*
Bamingui-Bangoran-Manovo-Gounda-St Floris	Central African Republic	158,394	49,695	possibly	160	13*
	Grand total:	292,926	110,467		330	28

*population sizes estimated from the size of the polygon using a very conservative density of 1 adult per 1,000km^2 and 12 adults (including yearlings) per pack; †population sizes estimated by participants using a variety of methodologies.

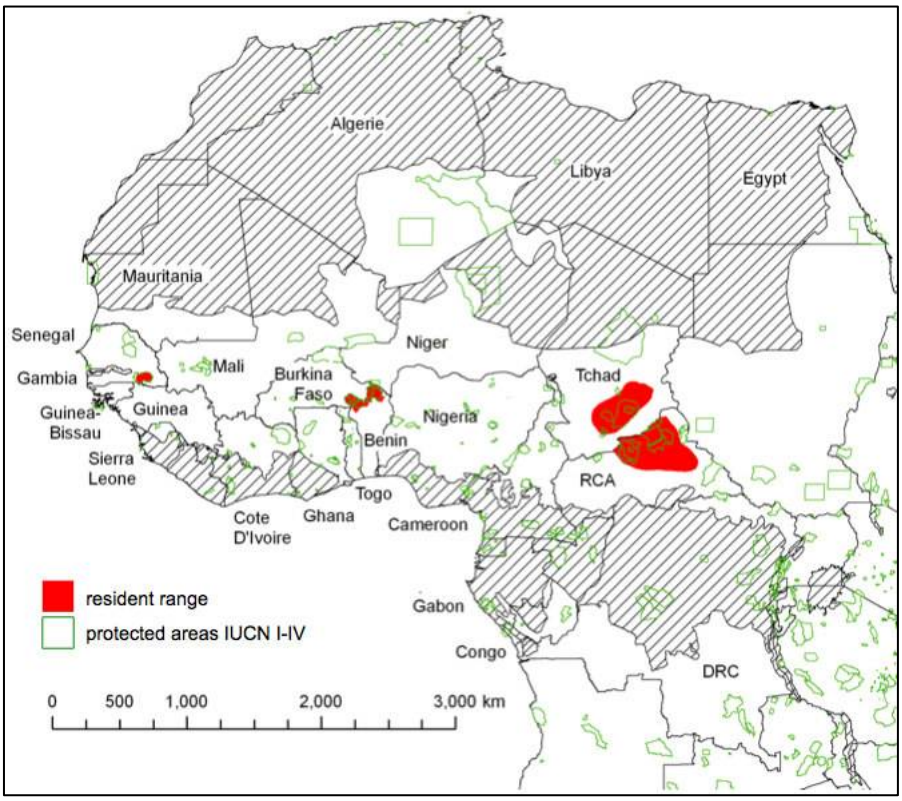


Figure 4.5 *Areas of resident wild dog range in western, central and northern Africa, as identified by workshop participants.*

4.2.4 Current status within resident range

Table 4.4 and Figure 4.5 provide information about the four areas of resident range identified by participants in this region. Both of the two populations remaining in West Africa are very small and highly threatened; indeed, there is some question as to whether the W Complex still supports a resident population, since recent sightings have involved only very small numbers of animals, and there have been no confirmed sightings of pups for several years. The two populations remaining in central Africa occupy much larger geographical areas, and may support substantially more animals. However, sighting frequency is low and data on these populations are very sparse. The size of these populations has therefore been estimated using a conservative density of 1 adult per 1,000 km^2 (which is nevertheless higher than the density in the W complex as estimated by participants). Systematic surveys are sorely needed in central Africa, and might lead to upward revision of these very conservative estimates.

4.2.5 Distribution across protected areas

Much of wild dogs' current geographical range falls outside protected areas. This is quantified in Table 4.3. Overall, 62% of resident range, 78% of possible range, 74% of recoverable range and 98% of connecting range is estimated to fall outside government-designated protected areas. However, these average figures conceal substantial variation between Central Africa (with 68% of resident range falling outside protected areas in Chad and CAR), and West Africa (with just 16% of resident range outside protected areas in Senegal, Guinea, Benin, Burkina Faso and Niger).

Table 4.3 *Occurrence of areas known or suspected to be important for wild dog conservation in IUCN Category I-IV protected areas. Percentages are calculated as the land area in each category falling inside protected areas, divided by the total land area in that range category (from Table 4.1).*

	Area and % of each range category falling inside protected areas							
	Resident		*Possible*		*Recoverable*		*Connecting*	
Country	km²	%	km²	%	km²	%	km²	%
Countries represented at the workshop								
Algeria	0	–	138,786	22.1%	0	–	0	–
Benin	8,635	66.6%	0	–	0	0.0%	0	0.0%
Burkina Faso	9,337	99.5%	0	–	0	0.0%	0	0.0%
Cameroon	0	–	0	–	7,056	22.5%	0	0.1%
Central African Rep.	49,695	31.4%	0	–	0	–	2,314	4.2%
Chad	32,822	32.3%	0	–	0	–	542	0.4%
Mali	0	–	0	0.0%	6,535	83.9%	0	–
Niger	2,907	96.9%	0	–	321	3.9%	0	–
Nigeria	0	–	2,461	86.5%	7,217	62.6%	0	0.0%
Senegal	6,862	91.6%	1,197	6.5%	0	0.0%	15	1.3%
Togo	0	–	3,349	100%	0	–	0	0.0%
Sub-total	*110,257*	*37.7%*	*145,793*	*21.9%*	*21,129*	*23.0%*	*2,871*	*1.5%*
Countries not represented at the workshop								
Cote d'Ivoire	0	–	0	0.0%	11,655	58.2%	0	–
Dem. Rep. Congo	0	–	0	–	36,837	22.4%	0	–
Ghana	0	–	0	–	4,494	100.0%	0	–
Guinea	158	83.1%	118	2.7%	0	0.0%	0	–
Sub-total	*158*	*83.1%*	*118*	*1.5%*	*52,986*	*27.8%*	*0*	–
Grand total	110,415	37.7%	145,911	21.6%	74,115	26.3%	2,871	1.5%

4.2.6 Distribution across international boundaries

As shown in Figure 4.4, several important areas for wild dog conservation traverse international boundaries. Although only two of the four resident populations listed in Table 4.2 are known to be trans-boundary, the other two are likely to be connected to one another across the Chad-CAR boundary. Important transfrontier linkages also occur across the Senegal/Mali and Guinea boundaries, as well as the Benin/Burkina Faso/Niger borders.

The importance of such transboundary linkages highlights the need for trans-frontier management of wild dog populations within this region.

4.2.7 Distribution across ecoregions

Figure 4.6 shows the locations of range polygons important for wild dog conservation (resident, possible and recoverable) across WWF's ecoregions (Olson *et al.*, 2001). Table 4.4 lists the numbers of resident, possible and recoverable range polygons falling entirely or partly within each ecoregion; to account for inaccurate estimation of the boundaries of each ecoregion and range polygon, and to ensure interpretation on a spatial scale relevant to wild dog ranging, this analysis excludes any part of a range polygon measuring <1,000km².

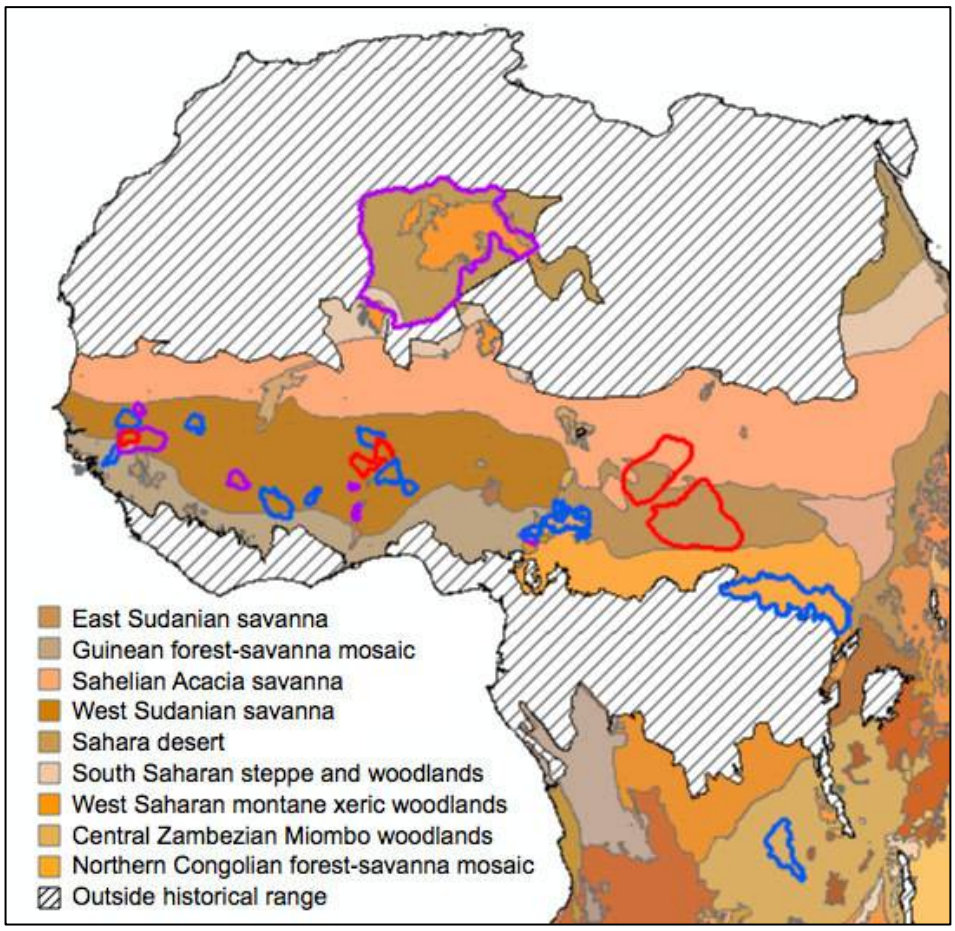


Figure 4.6 *Distribution of wild dog geographic range across WWF ecoregions. For simplicity, the legend shows only those ecoregions which overlap with wild dog range. Hatching indicates land outside wild dogs' historical range.*

Table 4.4 and Figure 4.6 show that the major ecoregions occupied by wild dogs in this region are West Sudanian savanna (in West Africa) and, in central Africa, East Sudanian savanna and Sahelian *Acacia* savanna. This pattern illustrates the ecological importance of wild dog populations in this region, because two of these three ecoregions are not represented in wild dogs' resident range elsewhere in Africa, and the third is represented only by a single resident range polygon (in South Sudan). Hence, the few wild dog populations known to remain in western and central Africa represent unusual ecological settings, suggesting high conservation importance despite their small size.

Tables 4.5 and 4.6 take this analysis of ecological representation a step further by comparing the distribution of possible (Table 4.5) and recoverable (Table 4.6) range across ecoregions with that in resident range. The possible and recoverable range identified by participants covers substantial areas (>1,000km^2 in each case) of six ecoregions which are either not represented at all by wild dogs' resident range (including resident range in eastern and southern Africa; these are Sahara desert, South Saharan steppe and woodlands, and West Saharan montane xeric woodlands) or are represented by fewer than three polygons of resident range (these are Guinean forest-savanna mosaic, West Sudanian savanna and Northern Congolian forest-savanna mosaic). These areas are shown in Figure 4.7. Conservation efforts aimed at maximising the ecological representation of wild dogs across ecoregions of Africa might consider prioritising surveys of these areas of possible range, or attempting restoration of wild dogs to some of these areas of recoverable range.

Table 4.4 *Distribution of wild dog range across WWF ecoregions within western, central and northern Africa. Data give the numbers of range polygons, and combined area of land, falling within each ecoregion. Land parcels ≤1,000km² are excluded.*

	Resident range		**Possible range**		**Recoverable range**	
Ecoregion	*number*	*area (km²)*	*number*	*area (km²)*	*number*	*area (km²)*
East Sudanian savanna	2	208,572			1	8,897
Guinean forest-savanna mosaic	1	1,548	2	8,746	3	14,213
Sahelian Acacia savanna	2	51,327				
West Sudanian savanna	2	31,479	5	36,773	7	75,251
Sahara desert			1	409,032		
South Saharan steppe and woodlands			1	26,197		
West Saharan montane xeric woodlands			1	192,420		
Central Zambezian Miombo woodlands					1	37,513
Northern Congolian forest-savanna mosaic					2	147,863

Table 4.5 *Polygons of <u>possible</u> range which cover ecoregions poorly represented by the resident range (using ≤2 areas of resident range within Africa, each ≥1,000km^2 as a definition of 'poor' representation). Surveys of these areas could be potentially valuable for expanding wild dog conservation efforts to better represent the ecoregions formerly inhabited by wild dogs.*

	Polygon name						
Country:	*Algeria*	*Mali/Cote D'Ivoire*	*Nigeria*	*Sénégal/Mali*	*Sénégal/ Mali/Guinea*	*Togo*	*Togo*
Ecoregion	Ahaggar/Ajjar	Faune Niemen Dougoli	Gashaka Gumti	Faleme	Niokolo-Bafing	Fazao Malfakassa	Kéran
Guinean forest-savanna mosaic			X		X		
West Sudanian savanna		X		X	X	X	X
Sahara desert	X						
South Saharan steppe and woodlands	X						
West Saharan montane xeric woodlands	X						

Table 4.6 *Polygons of potentially <u>recoverable</u> range which cover ecoregions poorly represented by the resident range (using ≤2 areas of resident range within Africa, each ≥1,000km^2 as a definition of 'poor' representation). Successful recovery of wild dog populations in these areas could lead to a better representation of the ecoregions formerly inhabited by wild dogs.*

	Polygon name										
Country:	*Benin*	*Cameroon*	*Cote D'Ivoire/ Burkina Faso*	*Dem R Congo*	*Ghana*	*Guinea/ Guinea Bissau*	*Mali*	*Niger/Burkina Faso*	*Nigeria*		*Sénégal*
Ecoregion	L'Alibori/La Sota/Trois Riviéres	Faro/Benoue /Bouba Ndjida	Comoé-Lebara	Bili-Garamba	Mole	Boé Dulombi	Boucle Baoule	Niger/Burkina Faso	Kainji Lake	SE Nigeria	Ferlo
Guinean forest-savanna mosaic			X			X				X	
West Sudanian savanna	X		X		X		X	X	X		X
Northern Congolian forest-savanna mosaic		X		X							

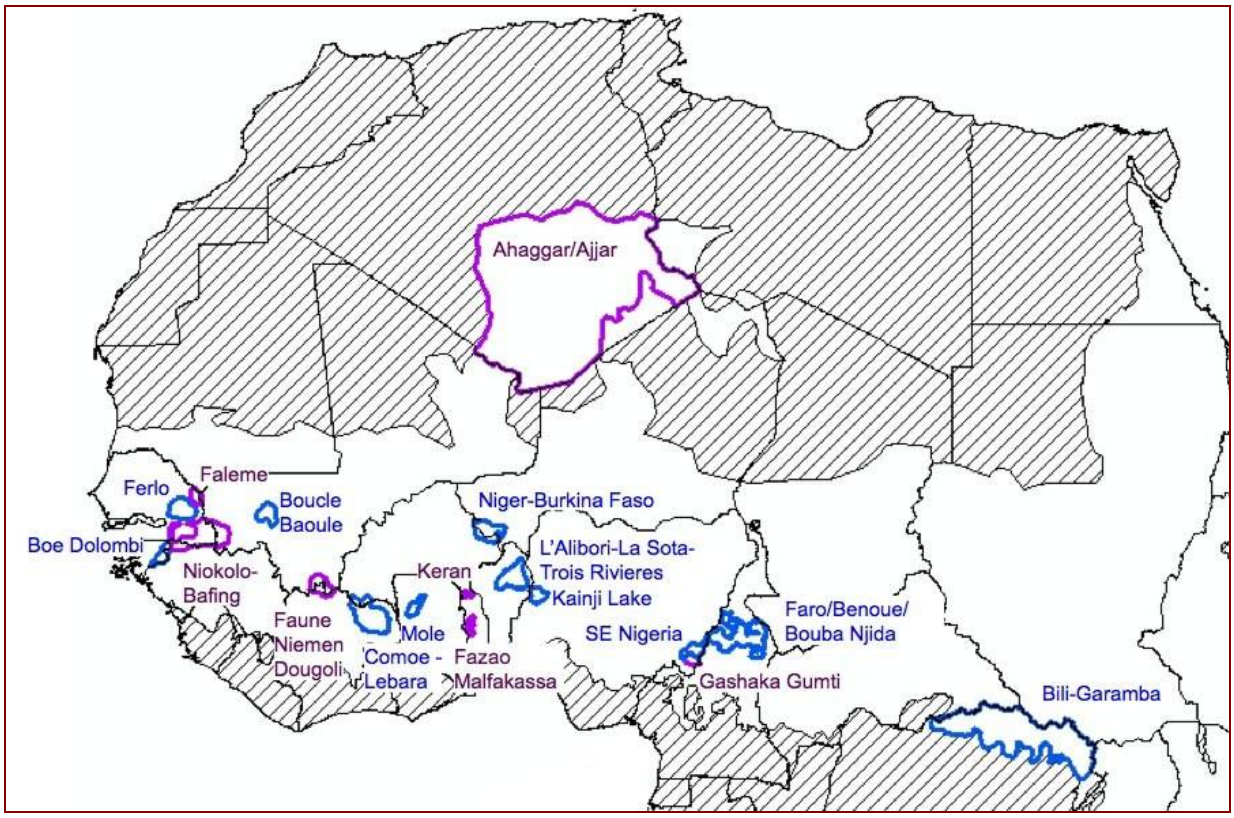


Figure 4.7 *– Areas of possible range (in purple) and potentially recoverable range (in blue) which fall in ecoregions that are poorly represented within wild dogs' resident range.*

4.3 Conclusions

The geographic range of wild dogs in western, central and northern Africa has experienced a dramatic contraction over the past one or two hundred years. From a historical distribution formerly covering over seven million km^2, in 2012 less than 300,000km^2 – 4% of the total – still appears to support resident wild dog populations. In the 25 former range states in the region, only four populations are known to remain, conservatively estimated at comprising as fewer than 30 packs in total. Although wild dogs have probably never occurred at high population densities anywhere in their geographic range, the tentative estimates of population density in West Africa are extremely low, possibly reflecting serious depletion of prey and degradation of habitat. Hence, although the species has experienced a dramatic collapse in this region, there is likely to be room for recovery even within existing resident range.

In addition to this resident range, there are several areas of possible range where wild dog populations may still persist. A very large area of possible range in southern Algeria may be specially important, not only because it might support reasonable numbers of wild dogs (albeit probably at extremely low population density) but also because it represents a number of ecological settings not found anywhere within wild dogs' resident range.

Participants also identified a number of areas of potentially recoverable range; however, the highly threatened status of the existing resident populations suggests that securing these remaining populations may be a higher priority at the current time than attempting reintroduction.

- CHAPTER 5 -

THREATS TO WILD DOG AND CHEETAH POPULATIONS IN WESTERN, CENTRAL AND NORTHERN AFRICA

5.1 Introduction

An evaluation of threats to wild dog and cheetah populations is a crucial component of strategic planning for the species' conservation. Understanding the nature of these threats is critical to identifying measures likely to mitigate the threats and hence achieve conservation objectives.

5.2 Proximate threats

Data on threats to known wild dog and cheetah populations were contributed by workshop participants. In addition to mapping known populations, participants were asked to list the factors most likely to threaten those populations, and to provide evidence that each factor represented a threat. This information was then reviewed and collated separately for wild dogs and cheetah (Figure 5.1). However, as the threats identified were almost identical for the two species, we shall discuss them together.

Figure 5.1 *Participants contributed information on threats to particular populations; these data were then collated to achieve an overview of threats to each species within western, central and northern Africa*

5.2.1 Habitat loss and fragmentation (both species)

Loss and fragmentation of habitat together represent the over-arching threat to both cheetah and wild dogs and contribute to several of the other proximate threats listed below. Because both species live at such low densities and range so widely, their populations require much larger areas of land to survive than do those of other carnivore species. For this reason, wild dogs and cheetah are more sensitive to habitat loss than are related species. In the long term, conserving viable populations of wild dogs and cheetah is likely to require land areas far in excess of 10,000km^2, unless very intensive management can be maintained. Both species have the ability to survive and breed in human-dominated landscapes under the right circumstances; hence in principle the large areas needed for wild dog and cheetah conservation might be protected, unprotected, or a combination of the two. Indeed, in southern and eastern Africa unprotected lands are vitally important, both for supporting a high proportion of resident populations and also for linking areas of resident range to maintain gene flow. A similar approach may be feasible in central and northern Africa where substantial areas of unprotected land still support cheetah and/or wild dogs. However, in west Africa the majority of wild dogs and cheetah survive inside a small number of protected area complexes which are remote from one another and not likely to be connected (see Chapters 3 and 4).

5.2.2 Conflict with livestock farmers (both species)

Both cheetah and wild dogs are threatened by conflict with livestock farmers in parts of their geographic range. While both species tend to prefer wild prey over livestock, both may kill livestock under some circumstances and are therefore killed by livestock owners. Such conflict may involve both subsistence pastoralists and commercial ranchers. As neither species regularly scavenges, they are less susceptible to poisoning than are other carnivores such as hyaenas and leopards, but may be shot or speared.

5.2.3 Prey loss (both species)

Both cheetah and wild dogs are highly efficient hunters, able to survive in areas of comparatively low prey density. Nevertheless, loss of prey from some areas, due to hunting, high livestock densities, and habitat conversion may directly impact cheetah and wild dog populations, essentially as a component of habitat degradation. Prey loss can also have serious indirect effects, since predation on livestock may become more frequent where wild prey are depleted (Woodroffe *et al.*, 2005b), intensifying conflict with livestock farmers.

5.2.4 Small population size (both species)

Participants identified small population size as a threat to the persistence of most wild dog and cheetah populations remaining in western, central and northern Africa. Indeed, the estimated sizes of several of these populations, some of which are geographically very isolated, falls within the range where stochastic effects may be sufficient to cause local extinction. Some areas (e.g. the Sahara) have naturally low prey densities and may never have supported substantial numbers of cheetah or wild dogs. However there are other areas (e.g. the W-Arly-Pendjari park complex) where cheetah and wild dog numbers appear to be exceptionally low, despite occurring in large protected areas. If such populations could be expanded in size, this would help to minimise genetic and demographic problems associated with prolonged “bottleneck” periods of very small population size.

5.2.5 Hunting for live trade and other uses (mainly cheetah)

Cheetah in this region are reported to be hunted for their fur, for cultural uses, and for the live animal trade. Although there are no data on the magnitude of this threat, the small sizes of the cheetah populations in this region, and the relatively large proportion of participants who considered this factor a likely threat to cheetah, suggest that such hunting may well raisue serious concerns. There were no reports of wild dogs being deliberately hunted for these purposes.

5.2.6 Sport hunting

Participants did not consider sport hunting a threat to extant populations of wild dogs or cheetah within this region. However, sport hunting appears to have contributed to the extinction of wild dogs in Cameroon, and continued negative perceptions by hunting guides in this area could be a barrier to wild dog recovery.

5.2.7 Accidental snaring (both species)

Although neither species is regularly targeted by snaring, both species may become captured accidentally in snares set for other species. In this region, such accidental snaring was thought to threaten at least one remaining cheetah population, and was considered a possible threat to wild dogs. Experience from elsewhere in Africa indicates that wild dogs are especially sensitive to this threat; hence the widespread use of snares to capture bushmeat in this region contributes to concern about likely impacts on the few remaining wild dogs.

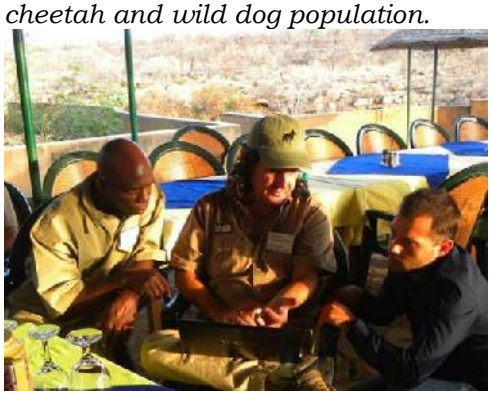
5.2.8 Road accidents (both species)

High speed roads represent a potential threat to both cheetah and wild dog populations. Wild dogs in particular use roads to travel and rest, and are therefore especially vulnerable to road accidents. This is a particular concern where the N7 highway crosses Niokolo-Koba National Park in Senegal.

5.2.9 Infectious disease (mainly wild dogs)

There are no data on the impacts of infectious diseases on cheetahs or wild dogs in western, central or northern Africa, although there is photographic evidence of a wild dog with probable rabies in CAR in the past. Data from other parts of Africa show that diseases can have major impacts on wild dog populations. For example, rabies contributed to the extinction of the wild dog population in the Serengeti-Mara ecosystem in 1991 (Gascoyne et al., 1993, Kat et al., 1995), and canine distemper has caused whole-pack deaths in Botswana (Alexander *et al.*, 1996) and Tanzania (Goller et al., 2010). Disease risks are likely to be particularly high for wild dogs living outside protected areas, which may be more likely to come into contact with domestic dogs. Disease probably represents a smaller threat to cheetahs, although in southern Africa anthrax has been reported as a cause of significant mortality (Lindeque et al., 1996).

Figure 5.3 *– Participants worked together to identify constraints on alleviating threats to cheetah and wild dog population.*



5.3 Constraints on alleviating threats

Conserving cheetah and wild dog populations requires mitigating the threats listed above, often on very large spatial scales. Workshop participants therefore identified the barriers to achieving this outcome. Results for cheetah and wild dogs were identical.

Identified constraints included the low priority attached to wildlife in political decision-making, poor governance, weak law enforcement, lack of strategic conservation planning, lack of international coordination, armed conflict in some key areas, lack of land use planning, negative perceptions of cheetah and wild dogs in various sectors of society, insufficient funding, lack of capacity, and lack of awareness by both governments and the public. Such constraints were also influenced by factors beyond the capacity of conservationists to mitigate, such as human population growth, economic development, and climate change. These potentially mutable human constraints contrast with biological constraints, which are characteristic of wild dogs and cheetah and cannot be changed, such as the species' negative interactions with other large carnivores.

This summary of the problems facing wild dog and cheetah conservation was used to inform a problem analysis which was critical for the development of the strategic plan (see Chapter 6). In recent years, tools have been developed to address many of the proximate threats to wild dog and cheetah populations (e.g. Woodroffe

et al., 2005a), but the ultimate causes of these threats include problems such as human encroachment on wildlife areas, and lack of conservation capacity, which are common to many species in the region.

5.4 Conclusions

Both the proximate and ultimate threats faced by cheetah and wild dogs are very similar. Indeed, these threats are similar to those faced by all large carnivores in Africa; however wild dogs' and cheetah's extremely wide-ranging behaviour makes them acutely sensitive to these threats and means that the threats need to be addressed over extremely large areas. The similarity in threats faced by the two species also means that, with a few exceptions, conservation activities implemented for either species are likely to benefit both.

– CHAPTER 6 –

STRATEGIC PLAN FOR CHEETAH AND WILD DOG CONSERVATION IN WESTERN, CENTRAL AND NORTHERN AFRICA

6.1 Background

The Western, Central and Northern Africa Cheetah and Wild Dog Conservation Strategy was constructed during participatory planning exercises which were intermeshed with the review of distribution and status discussed in Chapters 3-5. It was particularly critical that there was high-level governmental representation from the wildlife sector within cheetah and wild dog ranges during this part of the workshop (participants are listed in Appendix 1).

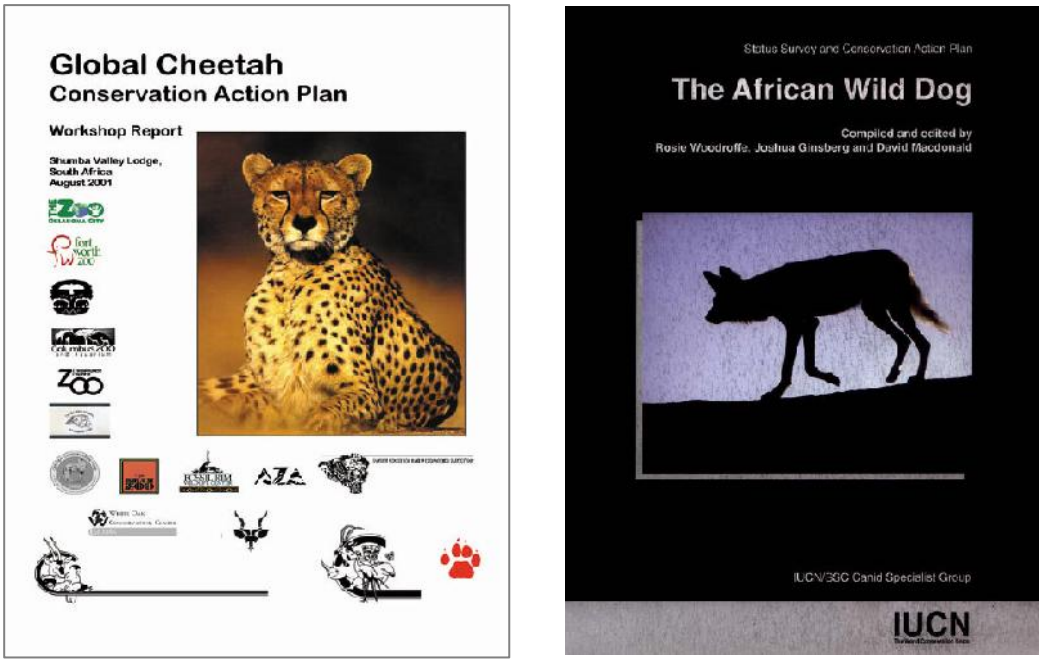


Figure 6.1 *Previous species action plans for cheetah and wild dogs (Bartels et al., 2001; Woodroffe, Ginsberg & Macdonald, 1997b).*

The structure and development of the strategic plan followed a process recently developed by IUCN, which is clearly illustrated by two the two regional plans for cheetah and wild dogs in eastern and southern Africa (IUCN/SSC 2007a; 2007b). These, in turn, were informed by plans for the West African Elephant (IUCN, 2005) and the African Lion (IUCN, 2006). Information from previous action plans for cheetah and wild dogs – the Global Cheetah Conservation Action Plan (Bartels *et al.*, 2001, 2002) and the African Wild Dog Status Survey and Conservation Action Plans (Woodroffe *et al.*, 1997b; Woodroffe *et al.*, 2004) – were also critical to the process (Figure 6.1).

The workshop process used here included the following key components:

1. *Engagement of stakeholders*
   Key individuals and institutions best able to implement the plan – including government authorities, species specialists and relevant NGOs – were all involved in the strategic planning process

2. *Summary of knowledge*
   The mapping process within the workshop established up-to-date information on the status and distribution of both species (see Chapters 3-4). This provided essential information for the development of the strategic plan.
3. *Problem analysis*
   A problem analysis was conducted to identify threats, gaps and constraints impacting participants' ability to conserve cheetah and wild dogs. The problem analysis provided information critical for the development of the objectives of the strategic plan.
4. *Strategic plan*
   A cascading plan was constructed, starting at a vision, then proceeding to a goal, a series of objectives devised to meet the goal, and finally to results and activities designed to address each objective (Figure 6.2).

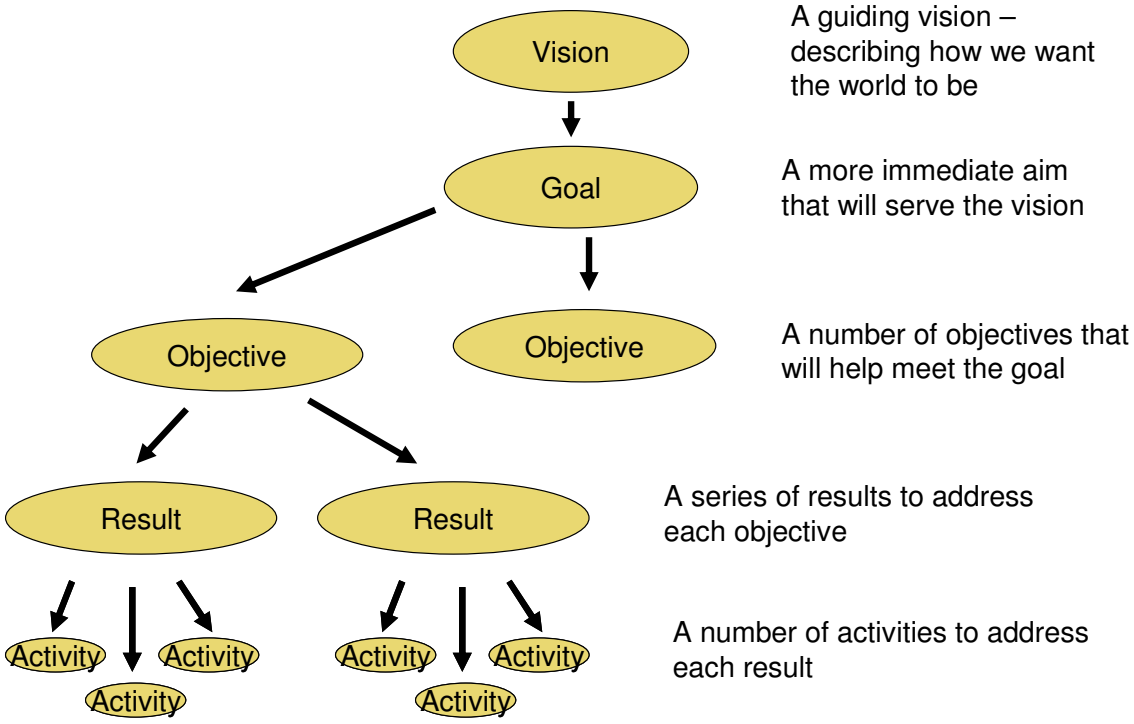


Figure 6.2 *The structure of a strategic plan.*

The strategic planning process was participatory and consensus driven, with all stakeholders engaged in the development of the strategy. The process was conducted in this way to ensure that the expertise and knowledge of all participants informed the strategy, and also to ensure that the strategy was jointly owned by relevant institutions and individuals, facilitating its implementation. The strategy was intended to be realistic and, because it was regional, to be sufficiently general to allow easy transferral to national level planning. The specifics of the strategy and its development are described below.

6.2 The strategic planning process

The planning process was made up of six key stages:

1. The development of a vision
2. The development of a goal
3. A problem analysis

4. The development of a number of objectives which address the problems identified by the problem analysis
5. The development of a number of results to address each objective
6. The development of a number of activities to address each result

The developing of the strategy was intermeshed with the mapping exercise to allow the information on the species' distribution, status and threats to influence its formulation. This approach had the added benefit that it provided the mapping team more time for digitising maps. The beginning of the workshop, emphasised the mapping, whilst the vision and goal were developed (see Appendix 2 for workshop agenda). Draft maps were thus available by the time the group conducted the problem analysis. In the final phase of the workshop, the emphasis was entirely on developing the strategy.

6.2.1 The Vision

A long term vision was developed to form the guiding purpose for the strategy over the next 25-50 years. It was intended to reflect an optimistic, but realistic, view of the future of cheetah and wild dog conservation and to provide a source of inspiration.

The vision was developed by a separate working group (in parallel with the mapping exercise) which reported back in plenary to allow substantial discussion and debate. The draft vision was sent back to the working group twice for redrafting after discussion, and many individuals temporarily joined the drafting group when they were not needed in the mapping process. The final draft was then agreed in plenary.

The agreed vision was:

Vision:

A West, Central and North Africa with restored populations of cheetah and wild dog, achieved through managing its biodiversity and natural resources in a sustainable and concerted manner for human well-being

This vision was carefully worded to reflect the following points:

- 'Restored' populations was chosen to indicate that the group would like to not only maintain the remaining populations of cheetah and wild dogs, but would also like to see cheetah and wild dogs brought back to areas where they have been eradicated.
- 'managing its biodiversity and resources in a sustainable and concerted manner' was phrased in this way to indicate that the group agreed that conservation of cheetah and wild dogs could be best achieved through a holistic approach to conservation, focused on sustainable management of biodiversity and natural resources.
- 'for human well-being' was included to indicate that conservation of natural resources and biodiversity is ultimately for people. The word 'well-being' reflects the range of different types of benefits that can be obtained from biodiversity and natural resources, including economic, cultural and ecological.

6.2.2 The Goal

The goal was developed in a manner similar to that used for the vision, coincident with the mapping process. The goal was intended to reflect what the group wanted to accomplish in a shorter time period than that identified for the

vision – around 10-20 years. The goal was thus intended to be realistic and achievable. It was also intended to be broadly measurable, so that it would be possible to know when it had been achieved. The goal therefore needed to be more clearly defined than the vision, although it should also support the vision statement. The goal was finalised as:

Goal:

Cheetah and African wild dog populations that are well understood, viable and valued in West, Central and North Africa

As with the vision, the wording of the goal was carefully and deliberately chosen and reflects the following:

- 'well understood' reflects the groups opinion that there is very little known about cheetah and wild dog in the region.
- 'viable' indicates that populations of cheetah and wild dog should be sustainable, in relatively large populations that are able to persist in the long term.
- 'valued' was left deliberately ambiguous to reflect different types of value, including economic, cultural and ecological values.

6.2.3 The problem analysis

The next major step in the strategic planning process was the development of the problem analysis. Participants were split into four working groups and asked to write out cards to define the main barriers to the conservation of each species. The first two groups identified the main *threats* to the species, i.e. the drivers of extinction such as habitat fragmentation and conflict with livestock farmers. The other two groups identified the main *gaps* and *constraints* hindering mitigation of

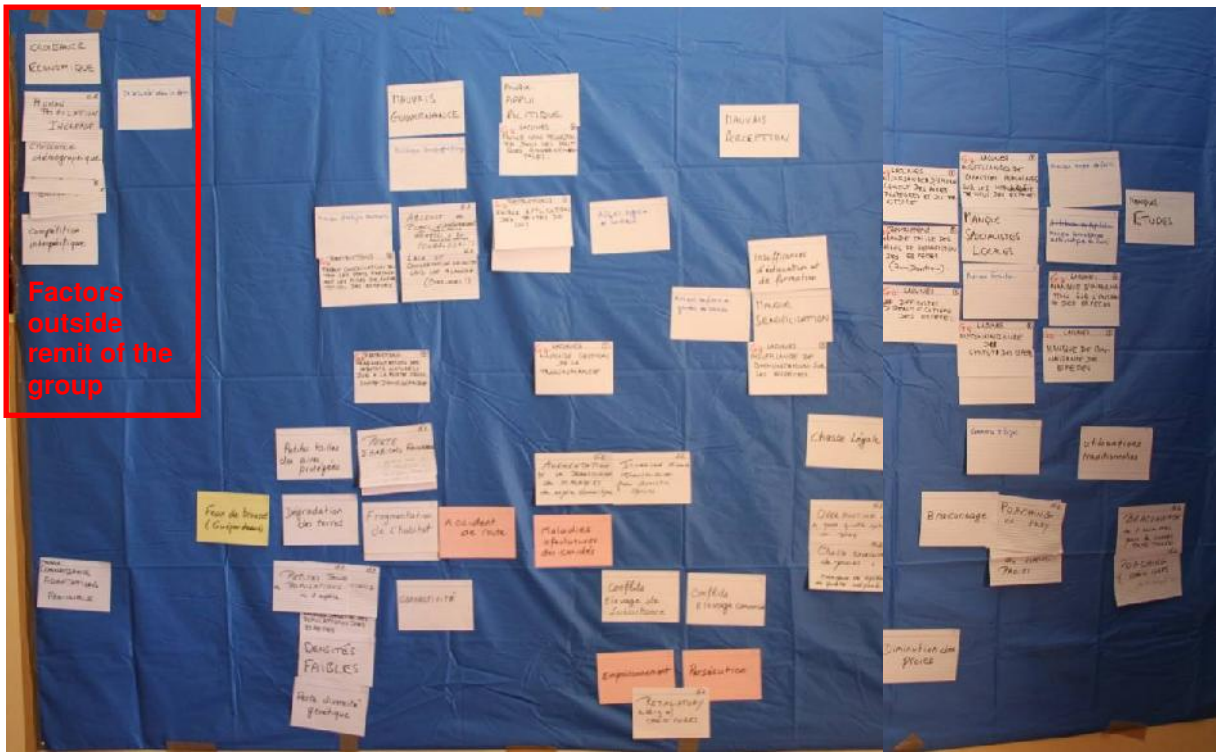


Figure 6.3 *The results of the problem analysis. These are provided again in a more readable format in Figure 6.4.*

direct threats, such as resource constraints, political frameworks, gaps in knowledge, and lack of capacity. The groups were asked to specify whether the threat, gap or constraint applied to either or both species by writing on a yellow card for a cheetah-specific problem, a pink card for a wild dog-specific problem, or a white card for a problem affecting both species. The cards were then collected together and used to develop a problem tree (Figure 6.3).

Where there was overlap in problems (i.e., different cards described roughly the same problem), cards were superimposed on top of each other. Some problems, such as climate change and human population growth, were considered beyond the remit of the group's influence, although their importance was emphasised. These issues were put to the side while the participants concentrated on issues which could be addressed directly or indirectly by the stakeholder group.

Few problems were judged to be cheetah- or wild dog-specific (Figure 6.4). Disease was listed as a threat that could impact wild dog populations but which was not known to have serious impacts on wild cheetah populations. Likewise, the captive trade and hunting for skins for cultural use were listed as threats that could impact cheetah populations but which were not known to have any impact on wild dog populations within west, central or northern Africa. Overall, the problem analysis clearly demonstrated that very few threats, gaps or constraints applied to only one of the two species. For this reason, the group decided to develop a single strategy for both species rather than a separate strategy for each. The advantages of a single strategy include greater simplicity and higher conservation leverage due to increased conservation benefits for two species rather than one.

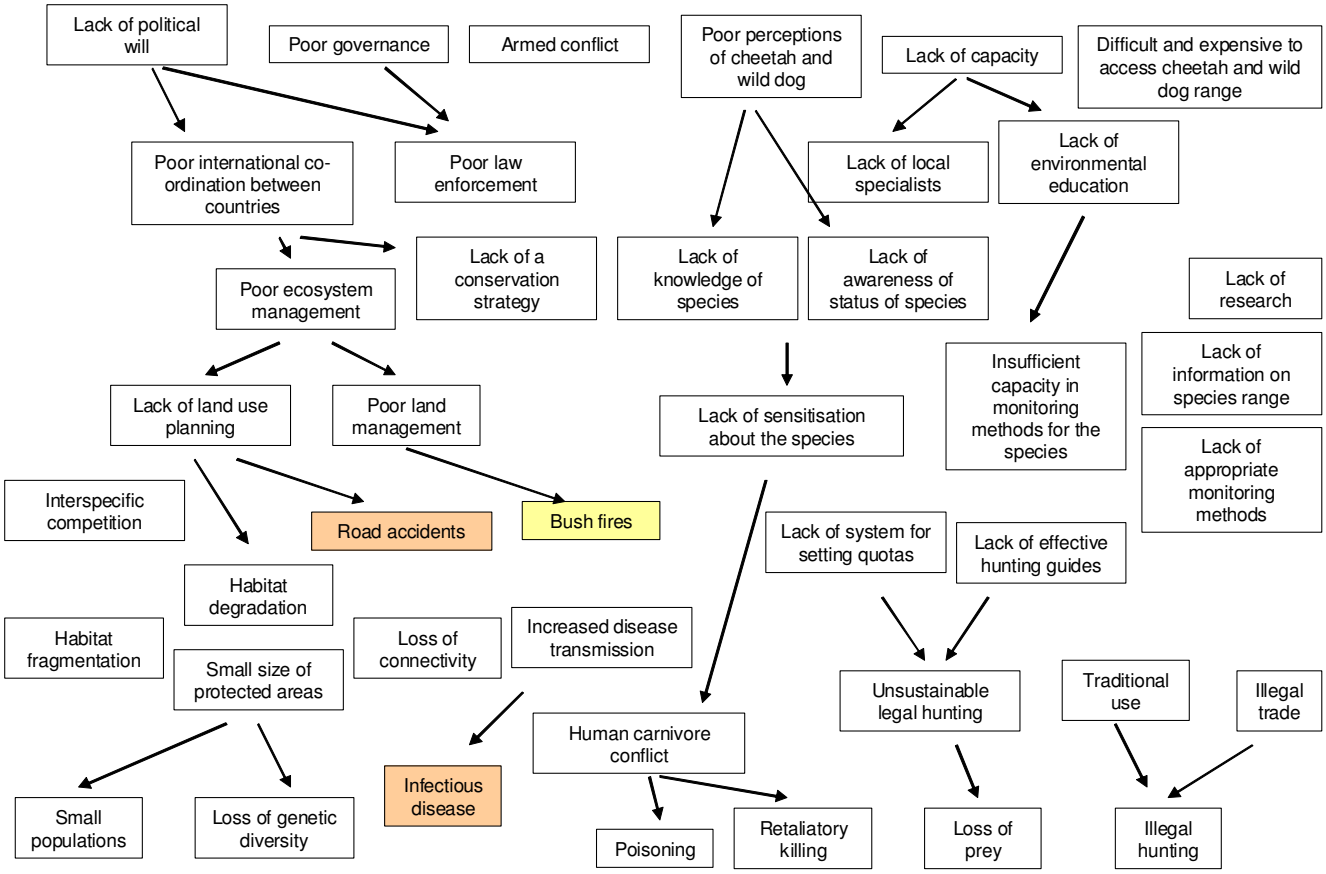


Figure 6.4 *A diagrammatic representation of the problem tree. This is summarised from the original tree shown in Figure 6.3, for greater readability.*

6.2.4 The objectives

The problem analysis was essential to developing the objectives of the strategic plan, as the problems identified could be inverted into solutions to those problems. The objectives fell into eight themes, which encompassed all aspects of the problem tree:

Capacity development

This theme concerns problems arising from insufficient capacity such as a lack of manpower, resources, training and equipment.

Objective 1:
Establish the necessary skills, tools and adequate means for conservation of the cheetah and wild dogs.

Surveys and information

This theme addresses problems arising from a lack of information about cheetah and wild dogs, including information on range, population status, habitat and management.

Objective 2:
Improve knowledge of cheetah and wild dogs based on reliable and coordinated data collection

Sensitisation

This theme addresses problems arising from a lack of awareness within local communities and policy makers about ecosystem management, and the conservation needs and conservation status of cheetah and wild dogs.

Objective 3:
Sensitize politicians and public, as to the socio-economic, ecological and intrinsic value of wildlife and ecosystems, including cheetah and wild dog

Policy and legislation

This theme addresses problems arising from inappropriate, policies and legal frameworks for the conservation of cheetah and wild dog, and a lack of enforcement.

Objective 4:
Promote implementation of ecosystem-friendly policies and legislation, adapted, where necessary, to optimise the recovery of cheetah and wild dog populations

Coexistence:

This theme covers problems relating to coexistence of people and domestic animals with cheetah, wild dogs, and their prey.

Objective 5:
Foster coexistence between cheetah, wild dog, people and their domestic animals by reducing conflicts

Utilisation

This theme addresses problems arising from a unsustainable offtake of the prey on which cheetah and wild dog depend, and from illegal and incidental direct killing of cheetah and wild dog.

Objective 6:
Reduce the pressure of illegal offtake and incidental killings of cheetah and wild dog and of the overexploitation of their prey.

Habitat management

This theme tackles problems arising from insufficient or inappropriate habitat management, such as poor rangeland and ecosystem management and loss of connectivity and fragmentation.

Objective 7:
Maintain, improve and restore the viability of cheetah and wild dog populations through habitat management and other appropriate measures.

Implementation of this strategy

This theme targets the implementation of this strategy. It was included as it was deemed that there was a need to ensure follow up of the strategy, and to stipulate activities required to ensure its implementation.

Objective 8:
Ensure the implementation of the cheetah and wild dog conservation strategy for West, Central and North Africa.

The eight objectives were developed carefully so that all problems identified through the problem analysis were addressed. Furthermore, no objective addressed issues that were not identified by the problem analysis.

6.2.5 The results

Once the objectives were in place, and their wording agreed upon, results were developed to meet the objectives. Results were more specific than objectives, and described how the objectives should be met. Each objective was associated with 1-6 results, and the results were devised to ensure that, if all results under an objective were met, then that objective would be achieved. In other words, each result was necessary to meet the objective, and if all the results were met then the objective would be achieved. Results were carefully designed to be 'SMART', that is, they were specific, measurable, achievable, realistic and time-lined. A total of 19 results were developed for the final plan:

Capacity development:

Objective 1:
Establish the necessary skills, tools and adequate means for conservation of the cheetah and wild dogs.
Results:

1.1 A regional mechanism for access to reliable funds in place before 2015
1.2 Capacity for implementing the regional strategy for cheetah and wild dog developed within 5 years.

Surveys and information:

Objective 2:
Improve knowledge of cheetah and wild dogs based on reliable and coordinated data collection
Result:
2.1 Ensure data on the status and ecology of cheetah and wild dog across their range (see distribution map) are available, analyzed and disseminated through diverse mechanisms within 5 years.

Sensitisation:

Objective 3:
Sensitize politicians and public, as to the socio-economic, ecological and intrinsic value of wildlife and ecosystems, including cheetah and wild dog
Results:
3.1 Identify all relevant authorities (decision-makers, wildlife authorities, appropriate ministries involved in land-use planning, administrations) and make them aware of the conservation status and needs, as well as the importance and value of cheetahs and wild dogs within 5 years.
3.2 Sensitize 80% of all stakeholders in areas where wild dogs and cheetahs could occur, to their unfavourable conservation status, so that they have a significantly increased positive perception of the value of the species and the importance of conserving these species and their habitat. Within 5 years.

Policy and legislation:

Objective 4:
Promote implementation of ecosystem-friendly policies and legislation, adapted, where necessary, to optimise the recovery of cheetah and wild dog populations.
Results:
4.1 Identify and implement all relevant policy and legislation for the recovery of cheetah and wild dog populations within 5 years.
4.2 Adapt all appropriate policy and legislation to the conservation needs of cheetah and wild dog, and harmonize across the region (e.g. trans-boundary agreements, CMS), within 10 years.

Coexistence:

Objective 5:
Foster coexistence between cheetah, wild dog, people and their domestic animals by reducing conflicts
Results:
5.1 Assess levels of human-carnivore (cheetah, wild dog) conflict, including direct persecution, poisoning and disease, in the region, with primary focus on the resident ranges, within two years
5.2 Significantly reduce the number of incidents of human-carnivore conflict in and around resident range within 5 years.
5.3 Ensure cheetah and wild dog are more valued, as a result of benefits to local communities, in and around resident ranges within 5 years.

Utilisation:

Objective 6:
Reduce the pressure of illegal offtake and incidental killings of cheetah and wild dog and of the overexploitation of their prey.
Results:
6.1 Assess and significantly reduce illegal offtake of cheetah and wild dog in and around resident range within 5 years.
6.2 Effectively manage the wild prey base for cheetah and wild dog in protected areas across their range within 5 years.
6.3 Develop and plan implementation for wild prey enhancement in areas of possible and recoverable range within 5 years.

Habitat management:

Objective 7:
Maintain, improve and restore the viability of cheetah and wild dog populations through habitat management and other appropriate measures within 10 years.
Results:
7.1 Restore resident populations of cheetahs and wild dogs and their habitats within 10 years.
7.2 Increase and make viable current resident cheetah and wild dog populations by at least 50% within 10 years.
7.3 Manage and restore favourable areas (possible range, recoverable range and corridors) to ensure the survival of cheetah and wild dog populations, within 7 years.

Implementation of this strategy:

Objective 8:
Ensure the implementation of the cheetah and wild dog conservation strategy for West, Central and North Africa, and establish sufficient capacity and adequate resources.
Results:
8.1 The regional conservation strategy for cheetah and wild dog is accepted and endorsed in the range countries within 2 years.
8.2 Develop and implement a sustainable mechanism for funding of the regional conservation strategy within 5 years.
8.3 A structure for implementation of the strategy is in place within 2 years.

6.2.6 Activities

The activities formed the final step in the plan, and were even more specific than the result, listing actions that needed to be carried out to meet each result. As with the result and their respective objectives, each set of activities was designed to be necessary and sufficient to meet the associated result, and to be 'SMART'. However activities were also sufficiently general to cover the entire western, central and northern African region so that they could be interpreted appropriately within national action planning workshops. A total of 64 activities were developed within the strategic plan; they are listed below.

Capacity development

Objective 1:
Establish the necessary skills, tools and adequate means for conservation of cheetah and wild dog.

Result 1.1 Develop **c**apacity for implementing the regional strategy for cheetah and wild dog within 5 years

- **Activity 1.1.1** Conduct capacity assessment specific to cheetah and wild dog within 2 years.
- **Activity 1.1.2** Identify institutions, researchers and other stakeholders to develop capacity of personnel responsible for the management of cheetah and wild dogs within 1 year.
- **Activity 1.1.3** Develop training modules for personnel responsible for the management of both species within 3 years.
- **Activity 1.1.4** Implement, evaluate and update training modules after completion of activities (1.1.1-1.1.3).

Surveys and information

Objective 2:
Improve knowledge of cheetah and wild dogs based on reliable and coordinated data collection

Result 2.1 Ensure data on the status and ecology of cheetah and wild dog across their range (see distribution map) are available, analyzed and disseminated through diverse mechanisms within 5 years

- **Activity 2.1.1** Conduct a status assessment of cheetah and wild dog populations within 2 years
- **Activity 2.1.2** Prioritise conservation research and monitoring actions in the zones identified (see map) following the status assessment (2.1.1)
- **Activity 2.1.3** Create an accessible and centralised database within 3 years
- **Activity 2.1.4** Organise periodic meetings for the dissemination of data within 3 years
- **Activity 2.1.5** Produce a bi-annual bulletin within 1 year
- **Activity 2.1.6** Create a web page relevant to this conservation strategy for both species on the website www.cheetahandwilddog.org within 1 year
- **Activity 2.1.7** Conduct studies on the impacts of habitat management (e.g. water points, fire, salt licks) on populations of cheetah and wild dog in order to better manage habitat for the conservation of these species
- **Activity 2.1.8** Identify methods most appropriate for research, monitoring and management of cheetah and wild dog across different habitats throughout their range

Sensitisation

Objective 3: Sensitize politicians and public, as to the socio-economic, ecological and intrinsic value of wildlife and ecosystems, including cheetah and wild dog

Result 3.1 Identify all relevant authorities (decision-makers, wildlife authorities, appropriate ministries involved in land-use planning, administrations) and make them aware of the conservation status and needs, as well as the importance and value of cheetahs and wild dogs within 5 years.

Activity 3.1.1 Identify all relevant authorities, and the appropriate method (e.g. national workshops) of delivering to them the core information relevant to cheetah and wild dog conservation within 1 year

Activity 3.1.2: Prepare and implement the appropriate method to disseminate the core information relevant to cheetah and wild dog conservation to those authorities within 2 years

Result 3.2 Sensitize 80% of all stakeholders in areas where wild dogs and cheetahs could occur, to their unfavourable conservation status, so that they have a significantly increased positive perception of the value of the species and the importance of conserving these species and their habitat. Within 5 years.

Activity 3.2.1 Identify all relevant stakeholders in areas where wild dogs and cheetahs could occur within 1 year

Activity 3.2.2 Develop literature and relevant media, and implement an awareness campaign in all areas where wild dogs and cheetahs could occur, from the 2nd to the 5th year

Activity 3.2.3 Evaluate change in stakeholder perception towards cheetah and wild dog and the importance of conservation of both species and their habitat from the beginning to the end of the awareness campaign, on the 1st and 5th year.

Policy and legislation

Objective 4: Promote implementation of ecosystem-friendly policies and legislation, adapted, where necessary, to optimise the recovery of cheetah and wild dog populations.

Result 4.1 Identify and implement all relevant policy and legislation for the recovery of cheetah and wild dog populations within 5 years.

- **Activity 4.1.1** Identify all policy and legislation relevant to recovery of wild dog and cheetah populations within 1 year
- **Activity 4.1.2** Lobby and assist where possible with the implementation of identified relevant policy and legislation, from 2nd to 4th year
- **Activity 4.1.3** Measure and evaluate change following implementation of identified policies and legislation after activities 4.1.1 and 4.1.2, from the 2nd to 5th year

Result 4.2 Adapt all appropriate policy and legislation to the conservation needs of cheetah and wild dog, and harmonize across the region (e.g. trans-boundary agreements, CMS), within 10 years

- **Activity 4.2.1:** Identify all appropriate policy and legislation to be adapted for the conservation needs of wild dog and cheetah within 2 years
- **Activity 4.2.2:** Lobby for change in relevant policy and legislation with the appropriate authorities, from 2nd to 4th year
- **Activity 4.2.3:** Monitor number of changes made in relevant policy and legislation, and evaluate their implementation after activities 4.2.1 and 4.2.2, from 7th to 10th year.

Coexistence

bjective 5: Foster coexistence between cheetah, wild dog, people and their domestic animals by reducing conflicts.

Result 5.1 Assess levels of human-carnivore (cheetah, wild dog) conflict, including direct persecution, poisoning and disease, in the region, with primary focus on the resident ranges, within two years

- **Activity 5.1.1** Conduct needs assessments (questionnaire and rapid surveys) to determine perceived or actual livestock losses to predators, retaliatory killings, poisoning events, and occurrence of canid-related diseases in and around resident ranges, within 18 months
- **Activity 5.1.2** Map (and rank) areas of real and potential conflict that require conflict mitigation measures, within 2 years

Result 5.2 Significantly reduce the number of incidents of human-carnivore conflict in and around resident range within 5 years

- **Activity 5.2.1** Target a number of conflict hotspots and implement local awareness campaigns, aimed at improving livestock protection and reducing antagonism with cheetah and wild dog, after completion of activity 5.1.2
- **Activity 5.2.2** Wherever appropriate, develop mitigation measures to improve livestock husbandry practices that effectively reduce livestock losses to cheetah and wild dogs, from 3rd to 5th year
- **Activity 5.2.3** Identify and promote methods that reduce disease transmission to wild dogs, such as vaccination of domestic dogs against rabies.

Result 5.3 Ensure cheetah and wild dog are more valued, as a result of benefits to local communities, in and around resident ranges within 5 years

Activity 5.3.1 Develop ecotourism based-activities using cheetah and wild dog as flagship species to enhance the ecotourism potential in the region, from 2nd to 5th year

Activity 5.3.2 Develop eco-friendly income generating activities for the profit of local communities in resident range of cheetah and wild dog.

Utilisation

Objective 6: Reduce the pressure of illegal offtake and incidental killings of cheetah and wild dog and of the overexploitation of their prey.

Result 6.1 Assess and significantly reduce illegal offtake of cheetah and wild dog in and around resident range within 5 years

Activity 6.1.1 Through interviews with stakeholders such as local people, traditional practitioners, traders, protected area personnel, customs and other relevant stakeholders, assess the occurrence and magnitude of use of cheetah and wild dog parts, capture of live animals and incidental killings in all resident range, within 3 years

Activity 6.1.2 Where illegal offtake and incidental killings do occur, implement public awareness campaigns and lobby law enforcement authorities to reduce, or if possible eliminate such practices, from 2nd to 5th year

Activity 6.1.3 Reinforce anti-poaching activities in protected areas to prevent illegal offtake and incidental killing of cheetah and wild dog, ongoing and long term

Result 6.2 Effectively manage the wild prey base for cheetah and wild dog in protected areas across their range within 5 years

Activity 6.2.1 Support protected area management in ways that enable better anti-poaching activities to significantly reduce offtake of prey species, within 5 years

Activity 6.2.2 Liaise with projects and funding organizations supporting protected areas with resident populations of cheetah and wild dog to increase the capacity of protected area managers to combat poaching for prey species, within 5 years

Activity 6.2.3 Support range countries to establish and implement sustainable hunting quotas for prey species in hunting zones, from 1st to 3rd year

Result 6.3 Develop and plan implementation for wild prey enhancement in areas of possible and recoverable range within 5 years

Activity 6.3.1 Work with range countries to identify key areas for cheetah and wild dog outside current resident range to implement conservation activities leading to the recovery of habitat, prey base and predator populations, from 2nd to 5th year

Activity 6.3.2 Seek financial support and prepare plans to enable the recovery of cheetah and/or wild dog populations in selected areas of possible range, and their reintroduction to recoverable range, from 3rd to 5th year.

Habitat management

Objective 7: Maintain, improve and restore the viability of cheetah and wild dog populations through habitat management and other appropriate measures within 10 years.

Result 7.1 Restore resident populations of cheetahs and wild dogs and their habitats within 10 years

- **Activity 7.1.1** Develop and adopt conservation management plans for protected areas with populations of cheetah and wild dog within 2 years
- **Activity 7.1.2** Implement conservation management plans within 10 years
- **Activity 7.1.3** Evaluate and revise conservation management plans within 5 years
- **Activity 7.1.4** Involve local communities in the management of areas of resident range of cheetah and wild dog within 10 years

Result 7.2 Increase and make viable current resident cheetah and wild dog populations by at least 50% within 10 years

- **Activity 7.2.1** Harmonize legislation for the conservation of cheetah and wild dog within two years.
- **Activity 7.2.2** Monitor and evaluate the increase in cheetah and wild dog populations and their prey, ongoing
- **Activity 7.2.3** Reduce human-carnivore conflict by developing eco-friendly revenue-generating activities in neighbouring areas, ongoing from 2nd year
- **Activity 7.2.4** Evaluate the feasibility of re-introduction of cheetah and wild dog into viable habitat (e.g. assessment of genetics, habitat etc.), from the 3rd year onwards

Result 7.3 Manage and restore favourable areas (possible range, recoverable range and corridors) to ensure the survival of cheetah and wild dog populations, within 7 years

- **Activity 7.3.1** Confirm the zones of possible range, recoverable range and dispersal corridors for cheetah and wild dog in the subregion, within 2 years
- **Activity 7.3.2** Develop and adopt conservation management plans for the zones of recoverable range and dispersal corridors, within 2 years, after activity 7.3.1
- **Activity 7.3.3** Implement conservation management plans, within 10 years, after activity 7.3.2
- **Activity 7.3.4** Evaluate and revise conservation management plans, within 2 years after activity 7.3.3
- **Activity 7.3.5** Involve local communities in the management of dispersal corridors of cheetah and wild dog, within 10 years.

Implementation of this plan

Objective 8: Ensure the implementation of the cheetah and wild dog conservation strategy for West, Central and North Africa, and establish sufficient capacity and adequate resources.

Result 8.1 The regional conservation strategy for cheetah and wild dog is accepted and endorsed in the range countries within 2 years.

- **Activity 8.1.1** Organize regional workshops with relevant government authorities and other stakeholders for the endorsement and adoption of the strategy within 1 year

Activity 8.1.2 Develop and adopt a memorandum of understanding (MOU) in the region for the implementation for the strategy within 2 years

Activity 8.1.3 Identify financial resources for the development of national action plans to implement the regional strategy within 2 years

Result 8.2 Develop and implement a sustainable mechanism for funding of the regional conservation strategy within 5 years.

Activity 8.2.1 Identify financial needs for implementing the regional conservation strategy, within 1 year

Activity 8.2.2 Conduct a feasibility study to raise sufficient funds to implement the regional conservation strategy within 3 years

Activity 8.2.3 Develop a financial plan for implementation of the regional strategy within 2 years

Activity 8.2.4 Develop capacity for raising sufficient funds to implement the regional strategy within 2 years

Activity 8.2.5 Identify potential sources of funding, ongoing

Activity 8.2.6 Lobby potential donors for financial support, ongoing

Result 8.3 A structure for implementation of the strategy is in place within 2 years.

Activity 8.3.1 Recruit a regional coordinator and develop a network of regional experts, within 1 year

Activity 8.3.2 Organize periodic meetings (annual) to review and evaluate the strategy, ongoing.

6.3 Conclusions and national planning

The regional strategic plan was developed in a format that could be readily adapted for national implementation, through a national participatory workshop process engaging all national stakeholders including those who attended the regional strategic workshop. Such a workshop would be expected to take about two days. The principal steps in translating the regional strategy into a national strategy are as follows:

- Present the regional strategy, along with background information, and request the mandate to use the regional strategy as a template for a national strategy.
- Add comments on the national interpretation of the vision, goal and objectives.
- Within each objective, take each result and activity, and decide whether to adopt or drop it, bearing in mind that some results and activities may not be relevant to all countries.
- If the target or activity is adopted, then the wording may need to be adjusted where appropriate.
- Timelines, actors and verifiable indicators should be added to each activity.

Great care was taken to ensure that the western, central and northern Africa regional strategic plan was well structured, particularly in its vision, goal and objectives, to facilitate its use in developing national strategies. This regional strategic plan translated very well into the Niger national strategy developed in a subsequent workshop (Division de la faune et du chasse, in prep), which suggests that the participants in the western, central and northern Africa regional workshop did their ground-work well (Figure 6.5).

Figure 6.5 *The involvement of participants from Niger in the western, central and northern Africa regional conservation planning workshop ensured that the regional strategy could be readily translated into a Niger national strategy at a subsequent workshop. Participants from all other key range states in the region were also present, and it is anticipated that they will be closely involved in developing a coordinated suite of national strategies across the western, central and northern Africa region.*

– CHAPTER 7 –

IMPLEMENTATION OF THE REGIONAL STRATEGIC PLAN

Once the regional strategy was finalised, consideration was given towards how best to implement it. The national action planning process was seen as providing an important mechanism towards national implementation, and this process was incorporated into the plan itself. International mechanisms and agreements are also important, such as the Convention on Migratory Species, represented at the workshop. Making use of synergies between cheetah, wild dogs and other species is also important. Participants considered it critical that the plan should not sit on a shelf gathering dust but should be relevant and actively used to direct conservation action within western, central and northern African cheetah and wild dog range states.

The following process was agreed:

- First draft to participants to review and comment
- Participants' comments incorporated
- Second draft to participants for final acceptance and request endorsement from relevant government ministries

Governmental representatives present at the regional workshop agreed to assist with obtaining ministry support for the strategy. The report would then be submitted to IUCN for formal endorsement from the SSC.

Immediately after the regional workshop, a Niger national action planning workshop for cheetah and wild dogs was held in Parc W (Division de la Faune et la chasse, in prep). This workshop demonstrated that the regional strategy could be effectively transferred to a national setting, and enabled the swift development of a national action plan with the full participation of a wide range of national delegates.

Implementing the plan will require some financial support. Where possible, this may be provided by national government, but where this is not possible it is envisaged that NGO, bilateral and multilateral donors will prioritise conservation activities undertaken as part of the strategic plan and assist with additional support.

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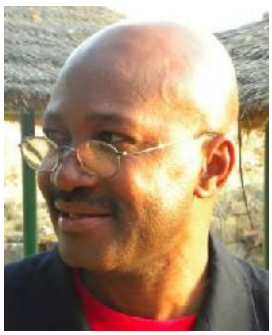

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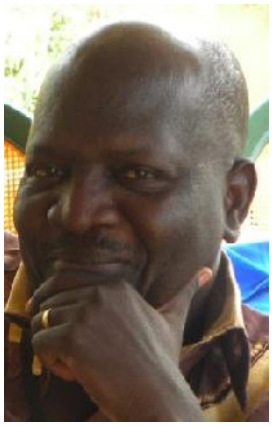

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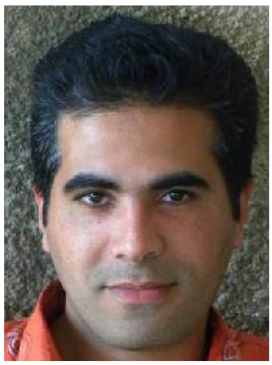

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APPENDIX 2 AGENDA



Planification de la conservation des guépards et des lycaons en Afrique
Rangewide Conservation Planning for Cheetahs and African Wild Dogs

Atelier régional pour le Nord-Ouest de l'Afrique
West, Central and North Africa Regional Workshop

Parc National du W, 30 janvier – 3 février 2012
W National Park, 30th January – 3rd February 2012

– PROGRAMME–
–AGENDA –

Dimanche 29 janvier / Sunday, 29th January

Arrivée à l'Hotel de La Tapoa, Parc National du W, Niger
Arrive Hotel La Tapoa, W National Park, Niger

18:30 Mot de bienvenue et arrangements logistiques / Unofficial welcome and logistical arrangements
Abdoul Karim Samna (DFC/AP), Samaïla Sahailou (W NP), Sarah Durant & Rosie Woodroffe (ZSL)

18:35 Reception informelle, suivie d'un diner / Icebreaker: drinks followed by dinner
Tout les participants

Lundi 30 janvier

9:00 Mot de bienevue à Parc W / Welcome to W National Park
Samaïla Sahailou, Conservateur du Parc W

9:05 Mot de bienvenue à l'atelier de la conservation des guépards et des lycaons en Afrique / Welcome to the Rangewide Conservation Planning workshop
Sarah Durant & Rosie Woodroffe, Zoological Society of London

9:10 Cérémonie officielle de bienvenue / Official welcome and opening remarks
Madame Issa Mariama Ali, Directrice de la Faune, de la Chasse, et des Aires Protégées, République du Niger.

9:30 Présentation des participants / Introductions
Tous les participants / All participants

9:40 Biologie et conservation des guépards – synthèse /
Biology and conservation of cheetahs – an overview
Sarah Durant, Zoological Society of London

10 :00 Biologie et conservation des lycaons – synthèse /
Biology and conservation of African wild dogs – an overview
Rosie Woodroffe, Zoological Society of London

10:20 Comment développer une stratégie de conservation des espèces /
Developing Species Conservation Strategies
Christine Breitenmoser, UICN/SSC Cat Specialist Group

10:50 Présentation du programme et objectifs des ateliers /
Presentation of the agenda, goals and outputs for this meeting
Sultana Bashir, UICN/SSC Cat Specialist Group

11:00 PAUSE CAFÉ / COFFEE BREAK

11:30 Présentation du premier jet de la carte de distribution et de statuts des guépards et des lycaons /
Presentation of draft maps of cheetah and wild dog status and distribution
Karen Minkowski

11:45 Discussion autour de la vision et buts pour la conservation des guépards et des lycaons en Afrique du Nord-Ouest /
Discussion of vision and goals for cheetah and wild dog conservation in southern Africa
Tous les participants / All participants

12:45 Instructions pour modifier les cartes de distribution et statuts des guépards et des lycaons /
How to revise maps of cheetah and wild dog status and distribution
Karen Minkowski

13:00 DEJEUNER / LUNCH

14:00 Plusieurs groupes de discussion / Several working groups:

Groupe 1 / Group 1	*Groupes 2+ / Groups 2+*
Révise la vision et les buts pour la stratégie de conservation régionale	Révise la distribution et le statut des guépards et des lycaons
Refine vision and goals for regional conservation strategy	Revise information on distribution and status of cheetahs and wild dogs

17:30 Fin de la journée / End of day's working

Mardi 31 janvier / Tuesday, 31st January

9:00 Présentation de la vision et des buts retravaillés /
Presentation of revised vision and goals
Groupe 1 / Working Group 1

9:10 Discussion autour de la nouvelle vision et des nouveaux buts /
Discussion of revised vision and goals
Tous les participants / All participants

9:30 Plusieurs groupes de discussion (leur composition peut changer)
Working groups reconvene (group membership can vary within & between sessions)

Groupe 1 / Group 1	*Groupes 2+ / Groups 2+*
Finalise la vision et les buts	Continue à faire des cartes, à synthétiser les données et à réviser les cartes de distribution des guépards et des lycaons
Finalise statements of vision and goals	Continue mapping, synthesis of data, and review of maps for cheetahs and wild dogs

10:45 PAUSE CAFE / COFFEE

11:15 Plusieurs groupes de discussion (leur composition peut changer)

Groupe 1 / Group 1	*Groupes 2+ / Groups 2+*
Discute et développe une liste des dangers qui menacent les guépards et lycaons, à partir des données produites par les participants	Finalise les cartes et la synthèse des données pour les guépards et les lycaons
Discuss and develop list of threats to cheetahs and wild dogs drawing on threat data contributed by participants	Finalise mapping, synthesis of data, and review of maps for cheetahs

13:00 DEJEUNER / LUNCH

14:00 Présentation de l'analyse préliminaire des dangers menacent les guépards et lycaons en Afrique du Nord Ouest /
Presentation on preliminary analysis of threats to cheetahs and wild dogs in West, Central and North Africa
Groupe 1 / Working Group 1

14:15 Discussion autour des dangers menacent les guépards et lycaons en Afrique du Nord Ouest /
Discussion of threats to cheetahs and wild dogs in West, Central and North Africa
Tous les participants / All participants

15:00 Présentation de la vision et des objectifs finaux en français et en anglais /
Presentation of finalised goal and vision statements in French and English
Groupe 1 / Working Group 1

15:15 Etude d'un problème: Quels sont les obstacles a la réalisation de ces buts? /
Problem analysis: what hinders achieving these goals?
Tous les participants / All participants

17:30 Fin de la journée
End of day's working

Mercredi 1er février / Wednesday, 1st February

09:00 Présentation et discussion autour des cartes finales de distribution /
Presentation, review and discussion of finalised distribution maps.
Karen Minkowski

09:45 Présentation de l'arbre de problèmes et discussion autour de l'analyse préliminaire des problèmes /
Presentation of problem tree and preliminary problem analysis for discussion and revision
Tous les participants / All participants

10:30 PAUSE CAFÉ / COFFEE

11:00 Présentation de l'analyse finale de l'arbre de problèmes et explication de comment utiliser cette analyse pour formuler des objectifs /
Presentation of final problem tree analysis and explanation of how to use the problem analysis to formulate objectives
Equipe en charge de la stratégie / Strategy drafting team

12:00 Trois groupes de discussion / Three working groups

Groupes 1 à 3 / Groups 1-3
Les groups développent des objectifs
Working groups develop first drafts of objectives

13:00 DEJEUNER / LUNCH

14:00 Discussion autour du protocole pour utiliser, présenter et publier les cartes et données associées /
Discussion of protocols for using, presenting and publishing maps and associated data
Tous les participants / All participants

14:30 Présentation et discussion autour des objectifs préliminaires /
Presentation and discussion of first drafts of objectives
Tous les participants / All participants

15:30 PAUSE CAFE / TEA

16:00 Trois groupes de discussion

Groupes 1 à 3 / Groups 1-3
Les groupes modifient les objectifs, focalisant particulièrement sur la rédaction (en français et en anglais), les lacunes et les répétitions
Working groups revise draft objectives, addressing wording (in both languages), gaps and overlap

17:30 Fin de la journée
End of day's working

Jeudi 2 février

9:00 Présentation du deuxième jet des objectifs /
Presentation of second draft objectives
L'équipe chargée de la stratégie / Strategy drafting team

9:10 Discussion autour et modification des objectifs /
Discussion and modification of draft objectives
Tous les participants / All participants

9:20 Chaque groupe se concentre sur la définition des objectifs et développe une liste de mesures pour chaque objectif /
Working group for each objective improves objective definition and develops list of objective targets
Groupes de discussion / Working groups

10:20 PAUSE CAFE / COFFEE

10:40 Présentation des objectifs et de leur mesures, et discussion /
Presentation of revised objectives and objective targets, and discussion
Tous les participants / All participants

12:10 Les groupes de discussion revisent les objectifs et leurs mesures /
Working groups revise objectives and objective targets
Tous les participants / All participants

12:40 Présentation des objectifs et de leurs mesures /
Presentation of revised objectives and objective targets
Groupes de discussion / Working groups

12:55 Décision finale: les groupes se mettent d'accord sur les objectifs et leurs mesures
Decision: Group accepts finalised objectives and objective targets
Tous les participants / All participants

13:00 DEJEUNER / LUNCH

14:00 Identification et développement d'activités pour chaque mesure de chaque objectif /
Identify and develop activities for each objective target in objective-based working groups
Groupes de discussion / Working groups

16:00 PAUSE CAFE / TEA

16:30 Les groupes présentent les activités /
Working groups present activities
Tous les participants / All participants

Vendredi 3 février

9:00 Les groupes revisitent et retravaillent les activités, en ajoutant les acteurs et un calendrier d'implémentation si besoin /
Working groups revisit and redraft activities informed by discussion, adding actors and timelines if and when appropriate
Groupes de discussion / Working groups

10:30 PAUSE CAFE / COFFEE

11:00 Les groupes finalisent les activités, acteurs et calendriers /

Working groups finalise activities, including actors and timelines if and when appropriate
Groupes de discussion / Working groups

13:00 DEJEUNER / LUNCH

14:00 Présentation de la stratégie finalisée, suivie d'une discussion /
Presentation of completed strategy, followed by discussion
Equipe chargée de la stratégie / *Strategy drafting team*

14:45 Discussion autour de la planification du futur, y compris le plan d'action national /
Discussion of plans for moving forward, including national action planning
Tous les participants / All participants

15:00 Cérémonie officielle de clôture /
Official close of regional meeting
Madame Issa Mariama Ali, Directrice de la Faune, de la Chasse, et des Aires Protégées, République du Niger.

15:30 PAUSE CAFE / TEA

16:00 Les participants qui ne restent pas pour l'atelier national repartent à Niamey –Horaire à confirmer /
Regional participants not staying for national meeting depart for Niamey

APPENDIX 3 MAPPING METHODOLOGY

A3.1 Assessing the species' distribution and status

A3.1.1 Participants in the mapping process

Participants in the conservation planning process contributed data on the species' distribution and status, drawing upon their own and their colleagues' data and experience. Participants – some of whom were unable to attend the workshop in person – were contacted in advance of the workshop and asked to provide data from their own geographical area of expertise.

A3.1.2 Point locations (mostly mapped before the workshop)

Point locations provided the primary data on which distribution maps were based. A point location is a site where wild dog or cheetah presence has been confirmed. Such records included sightings of live or dead animals, field signs such as tracks or scats, attacks on livestock, and telemetry locations. Data associated with each point location included the number of animals seen (if any), their age (adult or juvenile), and information on the experience of the person who made the observation (to allow accounting for data reliability). Participants were asked to map locations from the last 10 years, although older data were also informative for areas that had received little recent survey or monitoring effort, and to confirm historic range.

A3.1.3 Range polygons (mostly mapped before the workshop)

Point locations and other data were used to delineate geographic range polygons. All land formerly occupied by the species was considered to fall inside the historical range. For some areas, detailed historical data on distribution were available; elsewhere, historical distribution was estimated based on the species' broad habitat requirements.

Neither cheetah nor wild dogs still occupy all parts of their historical range. Hence, present-day data can be used to divide the historical range for each species into several range categories (Figure A3.1):

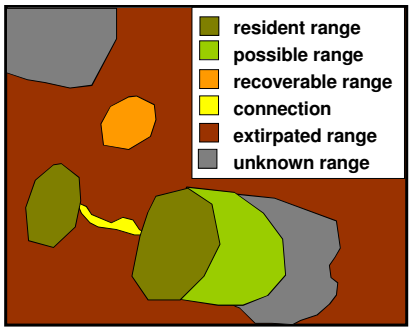


Figure A3.1 *Possible dispositions of different types of geographic range on an imaginary map*

- resident range: land where the species was known to be still resident. Because both cheetah and wild dogs have excellent dispersal abilities, not every point location indicates the presence of a resident population; some may indicate transient dispersing animals. Resident range was recognised by (i) regular detection of the species in an area, over a period of several years; (ii) evidence of breeding (e.g. young cheetah cubs sighted, or wild dog pups or dens recorded); and (iii) for wild dogs, sightings of complete packs (groups containing members of both sexes, usually >3 animals) rather than small groups (≤3 animals), or single-sex groups, which are likely to be dispersal groups.
- possible range: land where the species may still be resident, but where the species' residency had not been confirmed in the last 10 years. Usually these would be areas which contain suitable habitat and prey, but which have had little or no ground-based surveying in recent years (aerial surveys are unlikely to detect either species). Some areas were considered to constitute possible range because only unconfirmed reports were available (e.g. reports

from inexperienced observers) or for which there were only reports of transient individuals or groups.

- extirpated range: land where the species has been extirpated. This can be further divided into:
  - unrecoverable range: land where habitat has been so heavily modified (e.g. by cultivation or urbanisation) or fragmented as to be uninhabitable by resident animals for the foreseeable future.
  - recoverable range: land where habitat and prey remain over sufficiently large areas that either natural or assisted recovery of the species might be possible within the next 10 years if reasonable conservation action were to be taken. In designating areas of recoverable range, participants were asked to bear in mind that both species live at low densities and travel very widely, so would rarely be recoverable in small areas (<3,000km^2) unless very intensive management (e.g. predator-proof fencing and active population management) could be implemented.
- connecting range: land where the species may not be resident, but which dispersing animals may use to move between occupied areas, or to recolonise extirpated range. Such connections might take the form of 'corridors' of continuous habitat or 'stepping stones' of habitat fragments.
- unknown range: land where the species' status is currently unknown and cannot be inferred using knowledge of the local status of habitat and prey.

In principle, conservation activities for these species (e.g. management interventions, surveys, monitoring) might be conducted in any of these types of geographic range. Even in unrecoverable range, outreach and education activities may be vital for long-term conservation efforts in neighbouring lands.

In addition to mapping each range polygon, participants also provided information on land use within the polygon, the size and status of the cheetah or wild dog population it contained (if sufficient data were available), prey availability, and potential threats.

A3.1.4 Collating data from multiple participants

Participants provided data on their geographic areas of expertise prior to the workshop; these were then collated into draft maps for the entire region. At the workshop itself, these maps were reviewed and modified through discussion among participants (Figure A3.2).

Figure A3.2 *Participants updating distribution maps.*

The process of collating data from multiple participants led, in some cases, to substantial changes in the range polygons. In particular, a number of polygons were merged when it became clear that populations mapped by participants from

different areas (frequently in different countries) constituted single populations. In such cases, updated data on population size and status, land uses, and threats for the new (merged) polygon were agreed by participants.

By this process, participants produced a digital map of the two species' distribution and status within western, central and northern Africa.

A3.1.5Analyses of data on status and distribution (conducted 2nd-3rd February)

Once the distribution maps were finalised and agreed by participants, these were used to evaluate the proportions of each species' geographic range that fell inside *vs.* outside protected areas. This information helped to direct the strategic planning process by highlighting the importance of both protected and unprotected lands for the future conservation of both wild dogs and cheetah.

Distribution data were also compared with national boundaries and hence used to evaluate the likely importance of trans-boundary management; once again, this informed the development of the strategic plan.

Participants also used the data on likely threats to each wild dog or cheetah population to identify key threats to each species. To do this, working groups (one convened for cheetah, and one for wild dogs) discussed and evaluated the evidence that each nominated threat was truly having – or likely to have – an impact on the current or future viability of the population in question. They then collated this information across all populations in the region and identified key threats that affected multiple populations. Results from the two species-specific working groups were very similar and were therefore subsequently combined.

APPENDIX 4 APPENDIX 4: STRATEGIC PLAN LOGICAL FRAMEWORK

Vision			
A West, Central and North Africa with restored populations of cheetah and wild dog, achieved through managing its biodiversity and natural resources in a sustainable and concerted manner for human well-being			
Goal			
Cheetah and African wild dog populations that are well understood, viable and valued in West, Central and North Africa			
Theme	**Objective**	**Result**	**Activity**
Capacity development	1. Establish the necessary skills, tools and adequate means for conservation of cheetah and wild dog	1.1 Develop capacity for implementing the regional strategy for cheetah and wild dog within 5 years	1.1.1 Conduct capacity assessment specific to cheetah and wild dog within 2 years.
			1.1.2 Identify institutions, researchers and other stakeholders to develop capacity of personnel responsible for the management of cheetah and wild dogs within 1 year.
			1.1.3 Develop training modules for personnel responsible for the management of both species within 3 years.
			1.1.4 Implement, evaluate and update training modules after completion of activities (1.1.1-1.1.3).
Surveys and information	2. Improve knowledge of cheetah and wild dogs based on reliable and coordinated data collection	2.1 Ensure data on the status and ecology of cheetah and wild dog across their range (see distribution map) are available, analyzed and disseminated through diverse mechanisms within 5 years	2.1.1 Conduct a status assessment of cheetah and wild dog populations within 2 years
			2.1.2 Prioritise conservation research and monitoring actions in the zones identified (see map) following the status assessment (2.1.1)
			2.1.3 Create an accessible and centralised database within 3 years
			2.1.4 Organise periodic meetings for the dissemination of data within 3 years
			2.1.5 Produce a bi-annual bulletin within 1 year
			2.1.6 Create a web page relevant to this conservation strategy for both species on the website www.cheetahandwilddog.org within 1 year
			2.1.7 Conduct studies on the impacts of habitat management (e.g. water points, fire, salt licks) on populations of cheetah and wild dog in order to better manage habitat for the conservation of these species
			2.1.8 Identify methods most appropriate for research, monitoring and management of cheetah and wild dog across different habitats throughout their range

Theme	Objective	Result	Activity
Sensitisation	3. Sensitize politicians and public, as to the socio-economic, ecological and intrinsic value of wildlife and ecosystems, including cheetah and wild dog Strengthen human, financial and information resources for conserving cheetah and wild dogs in collaboration with stakeholders	3.1 Identify all relevant authorities (decision-makers, wildlife authorities, appropriate ministries involved in land-use planning, administrations) and make them aware of the conservation status and needs, as well as the importance and value of cheetahs and wild dogs within 5 years.	3.1.1 Identify all relevant authorities, and the appropriate method (e.g. national workshops) of delivering to them the core information relevant to cheetah and wild dog conservation within 1 year
			3.1.2 Prepare and implement the appropriate method to disseminate the core information relevant to cheetah and wild dog conservation to those authorities within 2 years
		3.2 Sensitize 80% of all stakeholders in areas where wild dogs and cheetahs could occur, to their unfavourable conservation status, so that they have a significantly increased positive perception of the value of the species and the importance of conserving these species and their habitat. Within 5 years.	3.2.1 Identify all relevant stakeholders in areas where wild dogs and cheetahs could occur within 1
			3.2.2 Develop literature and relevant media, and implement an awareness campaign in all areas where wild dogs and cheetahs could occur, from the 2nd to the 5th year
			3.2.3 Evaluate change in stakeholder perception towards cheetah and wild dog and the importance of conservation of both species and their habitat from the beginning to the end of the awareness campaign, on the 1st and 5th year
4. Policy and legislation	4. Promote implementation of ecosystem-friendly policies and legislation, adapted, where necessary, to optimise the recovery of cheetah and wild dog populations.	4.1. Identify and implement all relevant policy and legislation for the recovery of cheetah and wild dog populations within 5 years.	4.1.1 Identify all policy and legislation relevant to recovery of wild dog and cheetah populations within 1 year
			4.1.2 Lobby and assist where possible with the implementation of identified relevant policy and legislation, from 2nd to 4th year
			4.1.3 Measure and evaluate change following implementation of identified policies and legislation after activities 4.1.1 and 4.1.2, from the 2nd to 5th year
		4.2. Adapt all appropriate policy and legislation to the conservation needs of cheetah and wild dog, and harmonize across the region (e.g. trans-boundary agreements, CMS), within 10 years	4.2.1 Identify all appropriate policy and legislation to be adapted for the conservation needs of wild dog and cheetah within 2 years
			4.2.2 Lobby for change in relevant policy and legislation with the appropriate authorities, from 2nd to 4th year
			4.2.3 Monitor number of changes made in relevant policy and legislation, and evaluate their implementation after activities 4.2.1 and 4.2.2, from 7th to 10th year

Theme	Objective	Result	Activity
Coexistence	5. Foster coexistence between cheetah, wild dog, people and their domestic animals by reducing conflicts.	5.1. Assess levels of human-carnivore (cheetah, wild dog) conflict, including direct persecution, poisoning and disease, in the region, with primary focus on the resident ranges, within two years	5.1.1 Conduct needs assessments (questionnaire and rapid surveys) to determine perceived or actual livestock losses to predators, retaliatory killings, poisoning events, and occurrence of canid-related diseases in and around resident ranges, within 18 months
			5.1.2 Map (and rank) areas of real and potential conflict that require conflict mitigation measures, within 2 years
		5.2. Significantly reduce the number of incidents of human-carnivore conflict in and around resident range within 5 years	5.2.1 Target a number of conflict hotspots and implement local awareness campaigns, aimed at improving livestock protection and reducing antagonism with cheetah and wild dog, after completion of activity 5.1.2
			5.2.2 Wherever appropriate, develop mitigation measures to improve livestock husbandry practices that effectively reduce livestock losses to cheetah and wild dogs, from 3rd to 5th year
			5.2.3 Identify and promote methods that reduce disease transmission to wild dogs, such as vaccination of domestic dogs against rabies.
		5.3. Ensure cheetah and wild dog are more valued, as a result of benefits to local communities, in and around resident ranges within 5 years	5.3.1 Develop ecotourism based-activities using cheetah and wild dog as flagship species to enhance the ecotourism potential in the region, from 2nd to 5th year
			5.3.2 Develop eco-friendly income generating activities for the profit of local communities in resident range of cheetah and wild dog
Utilisation	6. Reduce the pressure of illegal offtake and incidental killings of cheetah and wild dog and of the overexploitation of their prey.	6.1 Assess and significantly reduce illegal offtake of cheetah and wild dog in and around resident range within 5 years	6.1.1 Through interviews with stakeholders such as local people, traditional practitioners, traders, protected area personnel, customs and other relevant stakeholders, assess the occurrence and magnitude of use of cheetah and wild dog parts, capture of live animals and incidental killings in all resident range, within 3 years
			6.1.2 Where illegal offtake and incidental killings do occur, implement public awareness campaigns and lobby law enforcement authorities to reduce, or if possible eliminate such practices, from 2nd to 5th year
			6.1.3 Reinforce anti-poaching activities in protected areas to prevent illegal offtake and incidental killing of cheetah and wild dog, ongoing and long term
		6.2 Effectively manage the wild prey base for cheetah and wild dog in protected areas across their range within 5 years	6.2.1 Support protected area management in ways that enable better anti-poaching activities to significantly reduce offtake of prey species, within 5 years
			6.2.2 Liaise with projects and funding organizations supporting protected areas with resident populations of cheetah and wild dog to increase the capacity of protected area managers to combat poaching for prey species, within 5 years
			6.2.3 Support range countries to establish and implement sustainable hunting quotas for prey species in hunting zones, from 1st to 3rd year

Theme	Objective	Result	Activity
Utilisation (cont)		6.3 Develop and plan implementation for wild prey enhancement in areas of possible and recoverable range within 5 years	6.3.1 Work with range countries to identify key areas for cheetah and wild dog outside current resident range to implement conservation activities leading to the recovery of habitat, prey base and predator populations, from 2nd to 5th year
			6.3.2 Seek financial support and prepare plans to enable the recovery of cheetah and/or wild dog populations in selected areas of possible range, and their reintroduction to recoverable range, from 3rd to 5th year
Habitat management	7 Maintain, improve and restore the viability of cheetah and wild dog populations through habitat management and other appropriate measures within 10 years.	7.1 Restore resident populations of cheetahs and wild dogs and their habitats within 10 years	7.1.1 Develop and adopt conservation management plans for protected areas with populations of cheetah and wild dog within 2 years
			7.1.2 Implement conservation management plans within 10 years
			7.1.3 Evaluate and revise conservation management plans within 5 years
			7.1.4 Involve local communities in the management of areas of resident range of cheetah and wild dog within 10 years
		7.2 Increase and make viable current resident cheetah and wild dog populations by at least 50% within 10 years	7.2.1 Harmonize legislation for the conservation of cheetah and wild dog within two years.
			7.2.2 Monitor and evaluate the increase in cheetah and wild dog populations and their prey, ongoing
			7.2.3 Reduce human-carnivore conflict by developing eco-friendly revenue-generating activities in neighbouring areas, ongoing from 2nd year
			7.2.4 Evaluate the feasibility of re-introduction of cheetah and wild dog into viable habitat (e.g. assessment of genetics, habitat etc.), from the 3rd year onwards
		7.3 Manage and restore favourable areas (possible range, recoverable range and corridors) to ensure the survival of cheetah and wild dog populations, within 7 years	7.3.1 Confirm the zones of possible range, recoverable range and dispersal corridors for cheetah and wild dog in the subregion, within 2 years
			7.3.2 Develop and adopt conservation management plans for the zones of recoverable range and dispersal corridors, within 2 years, after activity 7.3.1
			7.3.3 Implement conservation management plans, within 10 years, after activity 7.3.2
			7.3.4 Evaluate and revise conservation management plans, within 2 years after activity 7.3.3
			7.3.5 Involve local communities in the management of dispersal corridors of cheetah and wild dog, within 10 years

Theme	Objective	Result	Activity
Implementation of this strategy	8 Ensure the implementation of the cheetah and wild dog conservation strategy for West, Central and North Africa, and establish sufficient capacity and adequate resources	8.1 The regional conservation strategy for cheetah and wild dog is accepted and endorsed in the range countries within 2 years.	8.1.1 Organize regional workshops with relevant government authorities and other stakeholders for the endorsement and adoption of the strategy within 1 year.
			8.1.2 Develop and adopt a memorandum of understanding (MOU) in the region for the implementation for the strategy within 2 years
			8.1.3 Identify financial resources for the development of national action plans to implement the regional strategy within 2 years
		8.2 Develop and implement a sustainable mechanism for funding of the regional conservation strategy within 5 years.	8.2.1 Identify financial needs for implementing the regional conservation strategy, within 1 year
			8.2.2 Conduct a feasibility study to raise sufficient funds to implement the regional conservation strategy within 3 years
			8.2.3 Develop a financial plan for implementation of the regional strategy within 2 years
			8.2.4 Develop capacity for raising sufficient funds to implement the regional strategy within 2 years
			8.2.5 Identify potential sources of funding, ongoing
			8.2.6 Lobby potential donors for financial support, ongoing
		8.3 A structure for implementation of the strategy is in place within 2 years.	8.3.1 Recruit a regional coordinator and develop a network of regional experts, within 1 year
			8.3.2 Organize periodic meetings (annual) to review and evaluate the strategy , ongoing

APPENDIX 5 ACKNOWLEDGEMENTS

We are very grateful to the Howard G. Buffett Foundation and the Wildlife Conservation Society for providing the funding to make this workshop possible, and for continuing to support it, despite its logistical challenges. We thank Alienor Chauvenet for her patient help and support in the organisation of the workshop and Giannetta Purchase for providing additional logistical and administrative support during the workshop. The workshop benefitted from additional advice and support from Thomas Rabeil and it was a source of disappointment that a snapped Achilles tendon prevented him from attending. The mapping exercise benefited from information provided by a number of people who were not able to be present at the workshop, and we particularly thank Farid Belbachir, Thomas Rabeil and Philippe Chardonney, whose detailed knowledge of the region was critical.

The planning for the workshop was led by Sarah Durant and Rosie Woodroffe, and the workshop was facilitated by Christine Breitenmoser co-chair of the IUCN/SSC Cat Specialist Group, Sultana Bashir and Sarah Durant. The mapping was facilitated by Karen Minkowski and Andrew Jacobson, who worked tirelessly to ensure that the maps were digitised and updated as rapidly as possible. We thank Roseline Beudels for additional support, particularly with translation. The English version of the report was edited by Sarah Durant, Rosie Woodroffe, Sultana Bashir and Karen Minkowski, and the French version by Alienor Chauvenet and Clémentine Didier.

We are particularly indebted to the Division de la Faune, de la Chasse, et des Aires Protégées, Niger, for hosting the workshop. Karim Samna deserves particular mention for his enthusiasm and support, and for working tirelessly to make the workshop a success. Sahailou Samaïla, gave us a great welcome and hosted us and looked after us in the Parc W. Lastly, we thank Madame Issa Mariama Ali, la Directrice, for welcoming us to Niger, and providing the workshop the full support of the Division de la Faune, de la Chasse, et des Aires Protégées.

ANNEX 4

CHEETAH & AFRICAN WILD DOG CONSERVATION

FOR NORTH, WEST AND CENTRAL AFRICA - STRATEGY DOCUMENT

adapted from the

REGIONAL CONSERVATION STRATEGY FOR THE CHEETAH AND

AFRICAN WILD DOG IN WEST, CENTRAL AND NORTH AFRICA

Citation: IUCN/SSC 2012, Regional Conservation Strategy for the Cheetah and African Wild Dog in West, North and Central Africa, IUCN, Gland, Switzerland

The Western, Central and Northern Africa Cheetah and Wild Dog Conservation Strategy was constructed during participatory planning exercises which were intermeshed with the review of distribution and status, with the participation of high-level governmental representation from the wildlife sector within cheetah and wild dog ranges.

The structure and development of the strategic plan followed a process recently developed by IUCN, which is clearly illustrated by two the two regional plans for cheetah and wild dogs in eastern and southern Africa (IUCN/SSC 2007a; 2007b). These, in turn, were informed by plans for the West African Elephant (IUCN, 2005) and the African Lion (IUCN, 2006). Information from previous action plans for cheetah and wild dogs – the Global Cheetah Conservation Action Plan (Bartels *et al.*, 2001, 2002) and the African Wild Dog Status Survey and Conservation Action Plans (Woodroffe *et al.*, 1997b; Woodroffe *et al.*, 2004) – were also critical to the process.

The workshop process

The workshop process used here included the following key components:

1. *Engagement of stakeholders*
   Key individuals and institutions best able to implement the plan – including government authorities, species specialists and relevant NGOs – were all involved in the strategic planning process
2. *Summary of knowledge*
   The mapping process within the workshop established up-to-date information on the status and distribution of both species. This provided essential information for the development of the strategic plan.
3. *Problem analysis*
   A problem analysis was conducted to identify threats, gaps and constraints impacting participants' ability to conserve cheetah and wild dogs. The problem analysis provided information critical for the development of the objectives of the strategic plan.
4. *Strategic plan*
   A cascading plan was constructed, starting at a vision, then proceeding to a goal, a series of objectives devised to meet the goal, and finally to results and activities designed to address each objective (Figure 1).

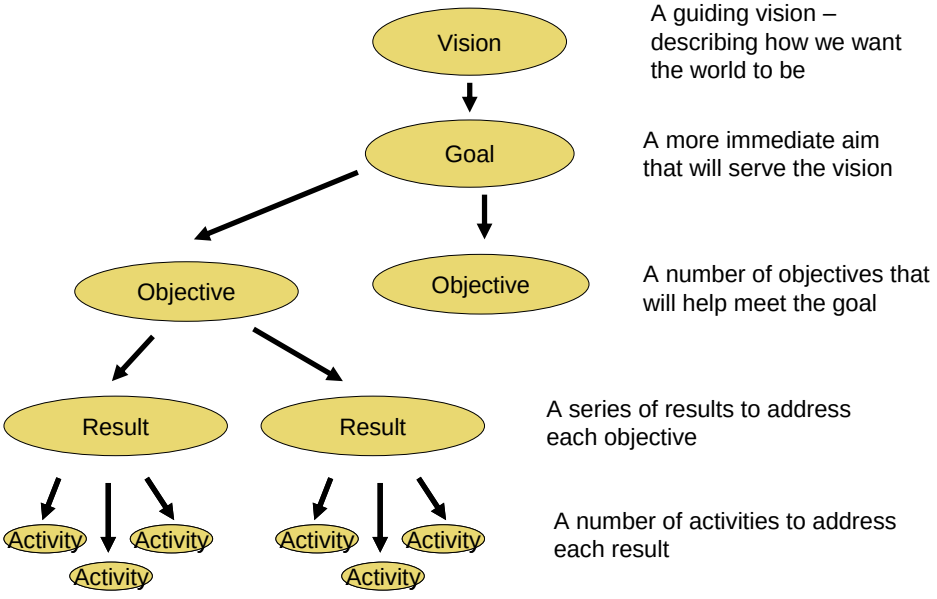


Figure 1. *The structure of a strategic plan.*

The strategic planning process

The strategic planning process was participatory and consensus driven, with all stakeholders engaged in the development of the strategy. The process was conducted in this way to ensure that the expertise and knowledge of all participants informed the strategy, and also to ensure that the strategy was jointly owned by relevant institutions and individuals, facilitating its implementation. The strategy was intended to be realistic and, because it was regional, to be sufficiently general to allow easy transferral to national level planning. The specifics of the strategy and its development are described below.

The planning process was made up of six key stages:

1. The development of a vision
2. The development of a goal
3. A problem analysis
4. The development of a number of objectives which address the problems identified by the problem analysis
5. The development of a number of results to address each objective
6. The development of a number of activities to address each result.

The developing of the strategy was intermeshed with the mapping exercise (Figure 2) to allow the information on the species' distribution, status and threats to influence its formulation. This approach had the added benefit that it provided the mapping team more time for digitising maps. The beginning of the workshop, emphasised the mapping, whilst the vision and goal were developed. Draft maps were thus available by the time the group conducted the problem analysis. In the final phase of the workshop, the emphasis was entirely on developing the strategy.

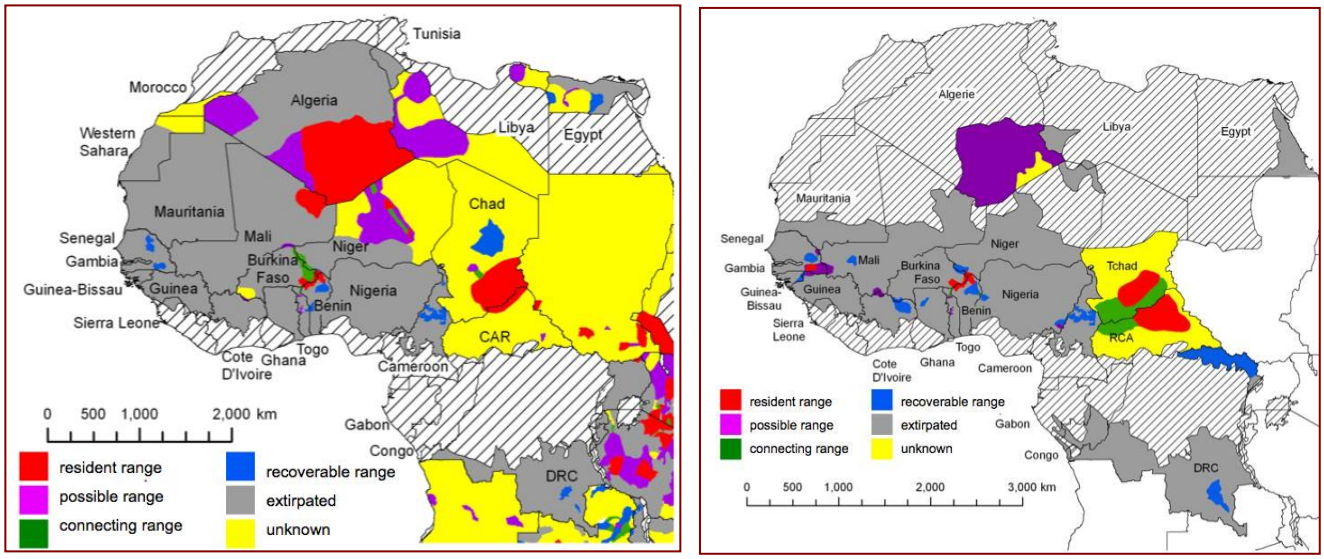


Figure 2. *Maps of cheetah (left) and wild dog (right) distribution and status in western, central and northern Africa, as judged by participants in 2012. Hatching indicates land considered to be outside species' historic range.*

Vision, goal, objective, results and activities

A long-term vision was developed to form the guiding purpose for the strategy over the next 25-50 years. It was intended to reflect an optimistic, but realistic, view of the future of cheetah and wild dog conservation and to provide a source of inspiration.

The goal was developed in a manner similar to that used for the vision, coincident with the mapping process. The goal was intended to reflect what the group wanted to accomplish in a shorter time period than that identified for the vision – around 10-20 years. The goal was thus intended to be realistic and achievable.

The problem analysis was essential to developing the objectives of the strategic plan, as the problems identified could be inverted into solutions to those problems. The objectives fell into eight themes, which encompassed all aspects of the problem tree.

Once the objectives were in place, and their wording agreed upon, results were developed to meet the objectives. Results were more specific than objectives, and described how the objectives should be met. Each objective was associated with 1-6 results, and the results were devised to ensure that, if all results under an objective were met, then that objective would be achieved. In other words, each result was necessary to meet the objective, and if all the results were met then the objective would be achieved. Results were carefully designed to be 'SMART', that is, they were specific, measurable, achievable, realistic and time-lined. A total of 19 results were developed for the final plan.

The activities formed the final step in the plan, and were even more specific than the result, listing actions that needed to be carried out to meet each result. As with the result and their respective objectives, each set of activities was designed to be necessary and sufficient to meet the associated result, and to be 'SMART'. However, activities were also sufficiently general to cover the entire western, central and northern African region so that they could be interpreted appropriately within national action planning workshops. A total of 62 activities were developed within the strategic plan; they are listed below.

Regional Conservation Strategy for the Cheetah and African Wild Dog in Northern, Western and Central Africa.

VISION

A West, Central and North Africa with restored populations of cheetah and wild dog, achieved through managing its biodiversity and natural resources in a sustainable and concerted manner for human well-being

GOAL

Cheetah and African wild dog populations that are well understood, viable and valued in West, Central and North Africa

Theme	Objective	Result	Activity
Capacity development	1. Establish the necessary skills, tools and adequate means for conservation of cheetah and wild dog	1.1 Develop capacity for implementing the regional strategy for cheetah and wild dog within 5 years	1.1.1 Conduct capacity assessment specific to cheetah and wild dog within 2 years.
			1.1.2 Identify institutions, researchers and other stakeholders to develop capacity of personnel responsible for the management of cheetah and wild dogs within 1 year.
			1.1.3 Develop training modules for personnel responsible for the management of both species within 3 years.
			1.1.4 Implement, evaluate and update training modules after completion of activities (1.1.1-1.1.3).
Surveys and information	2. Improve knowledge of cheetah and wild dogs based on reliable and coordinated data collection	2.1 Ensure data on the status and ecology of cheetah and wild dog across their range (see distribution map) are available, analyzed and disseminated through diverse mechanisms within 5 years	2.1.1 Conduct a status assessment of cheetah and wild dog populations within 2 years
			2.1.2 Prioritise conservation research and monitoring actions in the zones identified (see map) following the status assessment (2.1.1)
			2.1.3 Create an accessible and centralised database within 3 years
			2.1.4 Organise periodic meetings for the dissemination of data within 3 years
			2.1.5 Produce a bi-annual bulletin within 1 year
			2.1.6 Create a web page relevant to this conservation strategy for both species on the website www.cheetahandwilddog.org within 1 year
			2.1.7 Conduct studies on the impacts of habitat management (e.g. water points, fire, salt licks) on populations of cheetah and wild dog in order to better manage habitat for the conservation of these species
			2.1.8 Identify methods most appropriate for research, monitoring and management of cheetah and wild dog across different habitats throughout their range

Theme	Objective	Result	Activity
Sensitisation	3. Sensitize politicians and public, as to the socio-economic, ecological and intrinsic value of wildlife and ecosystems, including cheetah and wild dog Strengthen human, financial and information resources for conserving cheetah and wild dogs in collaboration with stakeholders	3.1 Identify all relevant authorities (decision-makers, wildlife authorities, appropriate ministries involved in land-use planning, administrations) and make them aware of the conservation status and needs, as well as the importance and value of cheetahs and wild dogs within 5 years.	3.1.1 Identify all relevant authorities, and the appropriate method (e.g. national workshops) of delivering to them the core information relevant to cheetah and wild dog conservation within 1 year
			3.1.2 Prepare and implement the appropriate method to disseminate the core information relevant to cheetah and wild dog conservation to those authorities within 2 years
		3.2 Sensitize 80% of all stakeholders in areas where wild dogs and cheetahs could occur, to their unfavourable conservation status, so that they have a significantly increased positive perception of the value of the species and the importance of conserving these species and their habitat. Within 5 years.	3.2.1 Identify all relevant stakeholders in areas where wild dogs and cheetahs could occur within 1 year
			3.2.2 Develop literature and relevant media, and implement an awareness campaign in all areas where wild dogs and cheetahs could occur, from the 2nd to the 5th year
			3.2.3 Evaluate change in stakeholder perception towards cheetah and wild dog and the importance of conservation of both species and their habitat from the beginning to the end of the awareness campaign, on the 1st and 5th year
4. Policy and legislation	4. Promote implementation of ecosystem-friendly policies and legislation, adapted, where necessary, to optimise the recovery of cheetah and wild dog populations.	Identify and implement all relevant policy and legislation for the recovery of cheetah and wild dog populations within 5 years.	4.1.1 Identify all policy and legislation relevant to recovery of wild dog and cheetah populations within 1 year
			4.1.2 Lobby and assist where possible with the implementation of identified relevant policy and legislation, from 2nd to 4th year
			4.1.3 Measure and evaluate change following implementation of identified policies and legislation after activities 4.1.1 and 4.1.2, from the 2nd to 5th year
		Adapt all appropriate policy and legislation to the conservation needs of cheetah and wild dog, and harmonize across the region (e.g. trans-boundary agreements, CMS), within 10 years	4.2.1 Identify all appropriate policy and legislation to be adapted for the conservation needs of wild dog and cheetah within 2 years
			4.2.2 Lobby for change in relevant policy and legislation with the appropriate authorities, from 2nd to 4th year
			4.2.3 Monitor number of changes made in relevant policy and legislation, and evaluate their implementation after activities 4.2.1 and 4.2.2, from 7th to 10th year

Theme	Objective	Result	Activity
Coexistence	5. Foster coexistence between cheetah, wild dog, people and their domestic animals by reducing conflicts.	5.1. Assess levels of human-carnivore (cheetah, wild dog) conflict, including direct persecution, poisoning and disease, in the region, with primary focus on the resident ranges, within two years	5.1.1 Conduct needs assessments (questionnaire and rapid surveys) to determine perceived or actual livestock losses to predators, retaliatory killings, poisoning events, and occurrence of canid-related diseases in and around resident ranges, within 18 months
			5.1.2 Map (and rank) areas of real and potential conflict that require conflict mitigation measures, within 2 years
		5.2. Significantly reduce the number of incidents of human-carnivore conflict in and around resident range within 5 years	5.2.1 Target a number of conflict hotspots and implement local awareness campaigns, aimed at improving livestock protection and reducing antagonism with cheetah and wild dog, after completion of activity 5.1.2
			5.2.2 Wherever appropriate, develop mitigation measures to improve livestock husbandry practices that effectively reduce livestock losses to cheetah and wild dogs, from 3rd to 5th year
			5.2.3 Identify and promote methods that reduce disease transmission to wild dogs, such as vaccination of domestic dogs against rabies.
		5.3. Ensure cheetah and wild dog are more valued, as a result of benefits to local communities, in and around resident ranges within 5 years	5.3.1 Develop ecotourism based-activities using cheetah and wild dog as flagship species to enhance the ecotourism potential in the region, from 2nd to 5th year
			5.3.2 Develop eco-friendly income generating activities for the profit of local communities in resident range of cheetah and wild dog
Utilisation	6. Reduce the pressure of illegal offtake and incidental killings of cheetah and wild dog and of the overexploitation of their prey.	6.1 Assess and significantly reduce illegal offtake of cheetah and wild dog in and around resident range within 5 years	6.1.1 Through interviews with stakeholders such as local people, traditional practitioners, traders, protected area personnel, customs and other relevant stakeholders, assess the occurrence and magnitude of use of cheetah and wild dog parts, capture of live animals and incidental killings in all resident range, within 3 years
			6.1.2 Where illegal offtake and incidental killings do occur, implement public awareness campaigns and lobby law enforcement authorities to reduce, or if possible, eliminate such practices, from 2nd to 5th year
			6.1.3 Reinforce anti-poaching activities in protected areas to prevent illegal offtake and incidental killing of cheetah and wild dog, ongoing and long term
		6.2 Effectively manage the wild prey base for cheetah and wild dog in protected areas across their range within 5 years	6.2.1 Support protected area management in ways that enable better anti-poaching activities to significantly reduce offtake of prey species, within 5 years
			6.2.2 Liaise with projects and funding organizations supporting protected areas with resident populations of cheetah and wild dog to increase the capacity of protected area managers to combat poaching for prey species, within 5 years
			6.2.3 Support range countries to establish and implement sustainable hunting quotas for prey species in hunting zones, from 1st to 3rd year

Theme	Objective	Result	Activity
Utilisation (cont)		6.3 Develop and plan implementation for wild prey enhancement in areas of possible and recoverable range within 5 years	6.3.1 Work with range countries to identify key areas for cheetah and wild dog outside current resident range to implement conservation activities leading to the recovery of habitat, prey base and predator populations, from 2nd to 5th year
			6.3.2 Seek financial support and prepare plans to enable the recovery of cheetah and/or wild dog populations in selected areas of possible range, and their reintroduction to recoverable range, from 3rd to 5th year
Habitat management	7 Maintain, improve and restore the viability of cheetah and wild dog populations through habitat management and other appropriate measures within 10 years.	7.1 Restore resident populations of cheetahs and wild dogs and their habitats within 10 years	7.1.1 Develop and adopt conservation management plans for protected areas with populations of cheetah and wild dog within 2 years
			7.1.2 Implement conservation management plans within 10 years
			7.1.3 Evaluate and revise conservation management plans within 5 years
			7.1.4 Involve local communities in the management of areas of resident range of cheetah and wild dog within 10 years
		7.2 Increase and make viable current resident cheetah and wild dog populations by at least 50% within 10 years	7.2.1 Harmonize legislation for the conservation of cheetah and wild dog within two years.
			7.2.2 Monitor and evaluate the increase in cheetah and wild dog populations and their prey, ongoing
			7.2.3 Reduce human-carnivore conflict by developing eco-friendly revenue-generating activities in neighbouring areas, ongoing from 2nd year
			7.2.4 Evaluate the feasibility of re-introduction of cheetah and wild dog into viable habitat (e.g. assessment of genetics, habitat etc.), from the 3rd year onwards
		7.3 Manage and restore favourable areas (possible range, recoverable range and corridors) to ensure the survival of cheetah and wild dog populations, within 7 years	7.3.1 Confirm the zones of possible range, recoverable range and dispersal corridors for cheetah and wild dog in the subregion, within 2 years
			7.3.2 Develop and adopt conservation management plans for the zones of recoverable range and dispersal corridors, within 2 years, after activity 7.3.1
			7.3.3 Implement conservation management plans, within 10 years, after activity 7.3.2
			7.3.4 Evaluate and revise conservation management plans, within 2 years after activity 7.3.3
			7.3.5 Involve local communities in the management of dispersal corridors of cheetah and wild dog, within 10 years

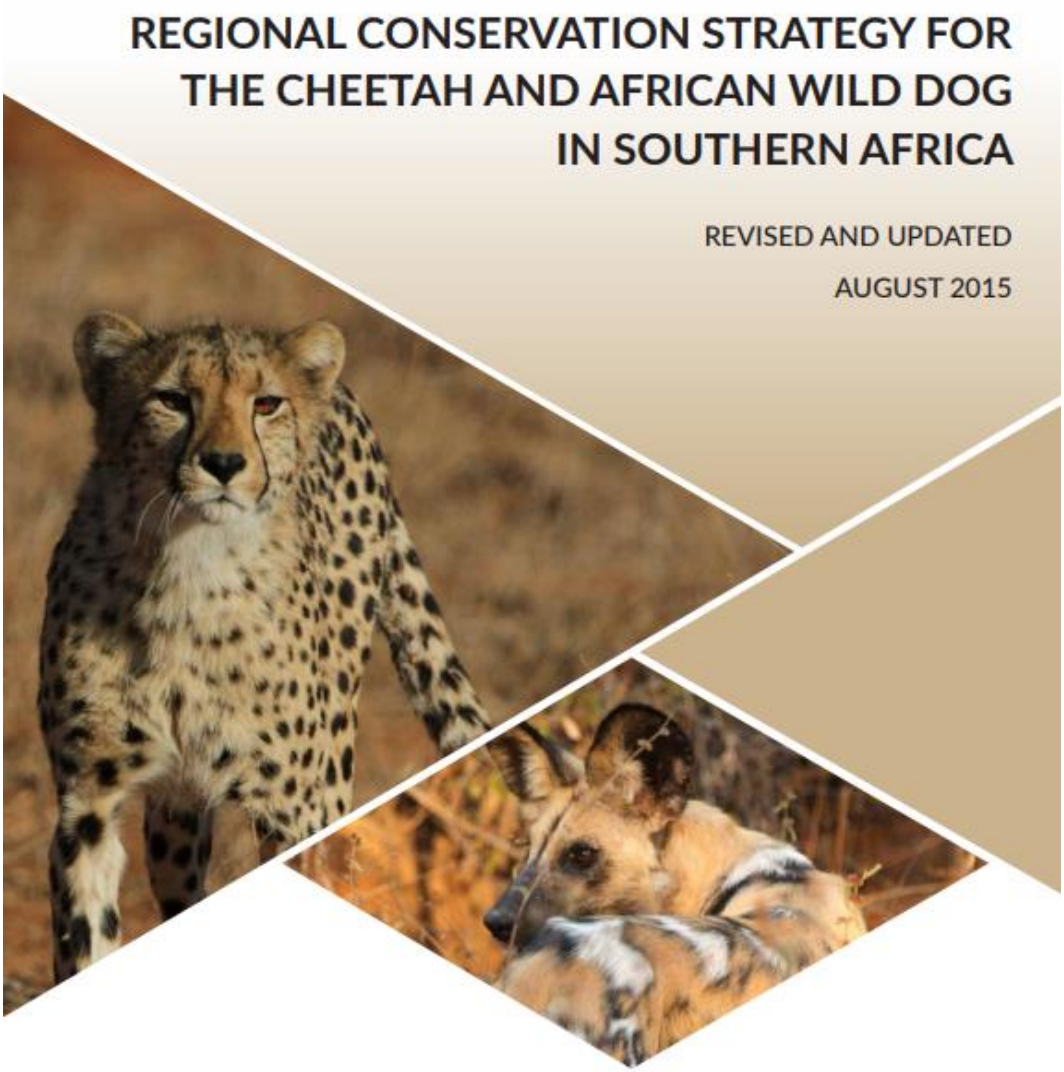
Theme	Objective	Result	Activity
Implementation of this strategy	8 Ensure the implementation of the cheetah and wild dog conservation strategy for West, Central and North Africa, and establish sufficient capacity and adequate resources	8.1 The regional conservation strategy for cheetah and wild dog is accepted and endorsed in the range countries within 2 years.	8.1.1 Organize regional workshops with relevant government authorities and other stakeholders for the endorsement and adoption of the strategy within 1 year.
			8.1.2 Develop and adopt a memorandum of understanding (MOU) in the region for the implementation for the strategy within 2 years
			8.1.3 Identify financial resources for the development of national action plans to implement the regional strategy within 2 years
		8.2 Develop and implement a sustainable mechanism for funding implementation of the regional conservation strategy within 5 years.	8.2.1 Identify financial needs for implementing the regional conservation strategy, within 1 year
			8.2.2 Conduct a feasibility study to raise sufficient funds to implement the regional conservation strategy within 3 years
			8.2.3 Develop a financial plan for implementation of the regional strategy within 2 years
			8.2.4 Develop capacity for raising sufficient funds to implement the regional strategy within 2 years
			8.2.5 Identify potential sources of funding, ongoing
			8.2.6 Lobby potential donors for financial support, ongoing
		8.3 A structure for implementation of the strategy is in place within 2 years.	8.3.1 Recruit a regional coordinator and develop a network of regional experts, within 1 year
			8.3.2 Organize periodic meetings (annual) to review and evaluate the strategy, ongoing

ANNEX 5

CHEETAH & AFRICAN WILD DOG CONSERVATION

FOR SOUTHERN AFRICA - STRATEGY DOCUMENT

adapted from the



Range Wide Conservation Program for Cheetah & African Wild Dogs

Canid Specialist Group

WCS ZSL LET'S WORK FOR WILDLIFE

IUCN

ASSOCIATION OF ZOOS & AQUARIUMS SAFE SAVING ANIMALS FROM EXTINCTION

THE HOWARD G. BUFFETT FOUNDATION

CAT SPECIALIST GROUP

Citation: IUCN/SSC (2015). Review of the Regional Conservation Strategy for the Cheetah and African Wild Dogs in Southern Africa. IUCN/SSC Gland, Switzerland and Range Wide Conservation Program for Cheetah and African Wild Dogs,

The first Southern Africa Cheetah and Wild Dog Conservation Strategy was produced in 2007 then revised in 2015. The structure and development of the strategic plan followed a process that had recently been developed by IUCN/SSC, and implemented in a similar planning exercise for cheetah and wild dogs in eastern Africa in 2007 (IUCN/SSC, 2008). This process was also illustrated by two previous species strategic plans in Africa: that for the West African Elephant (IUCN, 2005) and the African Lion (IUCN, 2006). Information from previous action plans for cheetah and wild dogs – the Global Cheetah Conservation Action Plan (Bartels et al., 2001, 2002) and the African Wild Dog Status Survey and Conservation Action Plan (Woodroffe et al., 1997; Woodroffe, McNutt & Mills, 2004) – were also critical to the development of the process.

The workshop process

The workshop process used in 2007, and largely followed again in 2015, included the following key components :

1. *Engagement of stakeholders*
   Key individuals and institutions best able to implement the plan – including government authorities, species specialists and relevant NGOs – were all involved in the strategic planning process
2. *Summary of knowledge*
   The mapping process within the workshop established up-to-date information on the status and distribution of both species. This provided essential information for the development of the strategic plan.
3. *Problem analysis*
   A problem analysis was conducted to identify threats, gaps and constraints impacting participants' ability to conserve cheetah and wild dogs. The problem analysis provided information critical for the development of the objectives of the strategic plan.
4. *Strategic plan*
   A cascading plan was constructed, starting at a vision, then proceeding to a goal, a series of objectives devised to meet the goal, and finally to results and activities designed to address each objective (Figure 1). At the 2015 meeting, this plan was revised from the objectives level down.

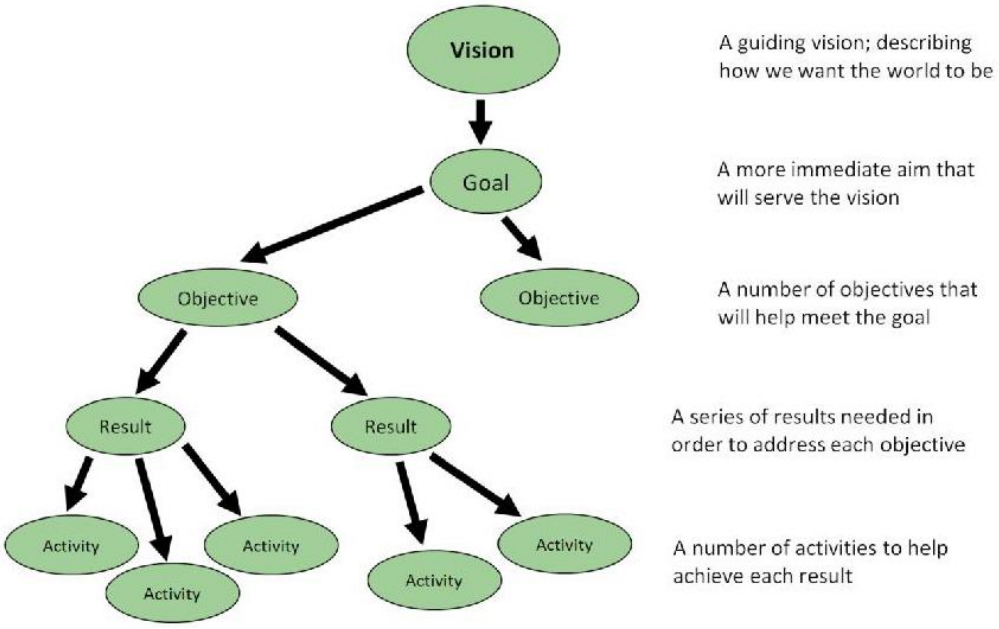


Figure 1. *The structure of a strategic plan.*

The strategic planning process

The planning process was made up of six key stages:

1. The development of a vision
2. The development of a goal
3. A problem analysis
4. The development of a number of objectives which address the problems identified by the problem analysis
5. The development of a number of results to address each objective
6. The development of a number of activities to address each result.

The strategic planning process, both in 2007 and 2015, was participatory and consensus driven, with all stakeholders engaged in the development of the plans. The process was conducted in this way to ensure that the expertise and knowledge of all participants informed the plans, and also to ensure that the plans were jointly owned by relevant institutions and individuals, facilitating their implementation. The plans were intended to be realistic and, because they are regional, to be sufficiently general to allow an easy transfer to national level planning.

The original strategic plan was revised from objective level down in 2015. It included a revision of the problem tree and several more problems were identified and added.

The revision of the strategy was intermeshed with the mapping exercise (Figure 2) to update the information on the species' distribution, status and threats to influence its formulation.

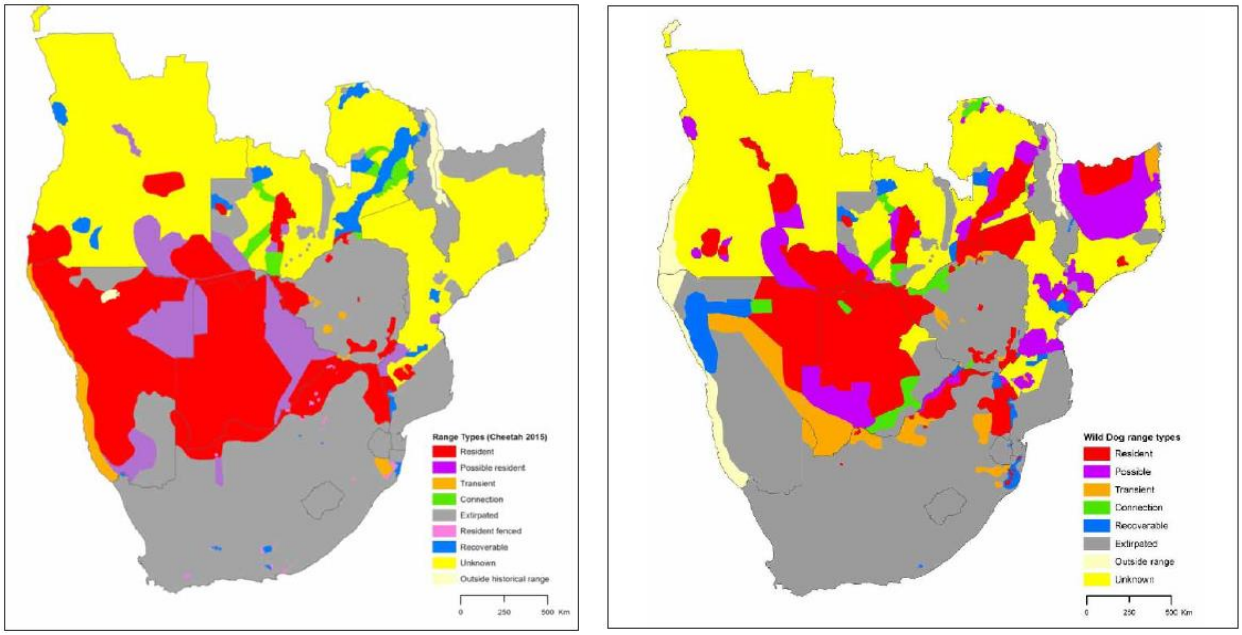


Figure 2. *Maps of cheetah (left) and wild dog (right) distribution and status in southern Africa, as mapped by participants at the 2015 workshop (and updated for Angola December 2016).*

Revised Regional Strategy for the Conservation of Cheetah and African Wild Dogs in Southern Africa - August 2015

VISION: *Secure, viable cheetah and wild dog populations across a range of ecosystems that successfully coexist with, and are valued by, the people of southern Africa*			
GOAL: *Improve the status of cheetah and wild dogs, and secure additional viable populations across their range in southern Africa*			
Theme	**Objective**	**Results**	**Activities**
Capacity Development	1. To develop capacity in all aspects of cheetah and wild dog conservation in southern Africa.	1.1 National gaps in capacity in all areas of cheetah and wild dog conservation in the region are identified and documented.	1.1.1 Establish current situation and identify gaps for all capacity components (law enforcement, monitoring and research, education outreach, protected area management, political, etc.) in each country
			1.1.2 Integrate national reports into a regional synthesis
		1.2 A regional strategy is developed for capacity development (based on the regional synthesis report) across all levels	1.2.1 Identify a committee member from each country to develop the regional capacity development strategy
			1.2.2 Develop the results and activities required for capacity development at the national and regional level, aligned where possible with international initiatives
			1.2.3 Identify and engage with appropriate training institutions
			1.2.4 Activate and source funds to implement the capacity development strategy at the national or regional level, wherever appropriate
		1.3 The Regional Capacity Development Strategy is implemented and evaluated	1.3.1 Implement the activities identified by the Regional Capacity Development Strategy (in 1.2.2 above)
			1.3.2 Make use of the RWCP website to disseminate the Regional Capacity Development Strategy and relevant resources, and facilitate networking
			1.3.3 Establish mechanisms for evaluating effectiveness of Regional Capacity Development Strategy
			1.3.4 Evaluate the effectiveness of the Regional Capacity Development Strategy using the mechanisms established in 1.3.3.
Knowledge and Information	2. To improve knowledge and generate information for the conservation of cheetah and wild dogs across southern Africa.	2.1 A better understanding of the status, distribution, biology and ecology of African wild dogs and cheetahs is acquired	2.1.1 Continue field studies on dispersal in both species, including factors influencing dispersal success.
			2.1.2 Continue studies on cheetah and wild dogs feeding ecology in different areas in relation to potential range.
			2.1.3 Assess viability and connectivity of small wild dog and cheetah populations.
			2.1.4 Continue to contribute to the ongoing cheetah and wild dog atlas
			2.1.5 Continue to conduct surveys in unknown and possible range to assess population status and distribution for cheetah and wild dogs.
			2.1.6 Assess recoverable range for factors likely to influence recolonization (natural or artificial) within 2 years.
			2.1.7 Maintain and expand long term monitoring programmes of cheetah and wild dog populations in resident range; ongoing.

			2.1.8 Research, collate and make available best practice guidelines and ethical considerations for cheetah and wild dog research, conservation, tourism and reintroduction.
			2.1.9 Continue research into new and improved ways to survey and monitor cheetah and wild dogs
		2.2 Standardised, quantitative knowledge of threats and their mitigation are generated and disseminated across southern Africa, including on poaching for bush-meat, habitat loss and fragmentation, illegal trade, captive management, climate change and irresponsible tourism, within two years.	2.2.1 Gather and disseminate information on the best practice for captive management of wild dog and cheetahs to prevent illegal offtake from the wild and the associated illegal trade.
			2.2.2 Gather and disseminate information on present and emerging threats to cheetah and wild dog conservation from the bush-meat trade.
			2.2.3 Gather and disseminate information on present and emerging threats to cheetah and wild dog conservation from irresponsible tourism activities.
			2.2.4 Gather and disseminate information on threats caused by game farming/ranching.
			2.2.5 Gather and disseminate information on loss and fragmentation of cheetah and / or wild dog habitat.
			2.2.6 Gather and disseminate information on conservancy models and illustrate the potential benefits
		2.3 Standardised, quantitative knowledge of human-carnivore conflict mitigation across southern Africa is generated and disseminated within two years.	of conservancies as an alternative to game farming/ranching.
			2.2.7 Gather and disseminate information on meta-population management.
			2.3.1 Establish a technical working group incorporating all range states.
			2.3.2 Technical working group to address all relevant regional NGO's, researchers and governments to ask for involvement and data/information to contribute to best practice manual for conflict mitigation for predators (by October 2015).
			2.3.3 Regional NGO's, researchers and governments to compile available data and information on conflict issues and their mitigation solutions.
			2.3.4 Technical working group to develop an interactive online database where information can be uploaded and compiled.
			2.3.5 NGO's, researchers and governments to nationally collate their information and upload onto interactive database/or make it available to the technical working group (by March 2016).
			2.3.6 Technical working group to work through information provided and create a practical, useful 'living' document to be delivered to the wider public (by June 2017). This will be completed through a workshop if funding can be sourced.
			2.3.7 Technical working group to develop a strategy for delivery of the document to the wider public.
			2.3.8 Technical working group to obtain letters of support from key stakeholders.
			2.3.9 Market and deliver the document to the wider public (to be completed two years after start date).
Information transfer	3. To increase active commitment of stakeholders and awareness of the	3.1 Information about relevant benefits of cheetah and wild dogs to local communities, governments and landowners continues to be shared	3.1.1 Hold meetings and workshops with communities, landowners and government, to exchange knowledge and information regarding relevant incentives and benefits; ongoing.

	wider public by transferring information relevant to cheetah and wild dog conservation	3.2 Multimedia projects continue to be developed across all regional range states, building on the best existing material.	3.2.1 Continue to develop web-based, interactive reporting mechanisms for sightings, data, findings and activities relevant to cheetah and wild dog conservation.
			3.2.2 Continue to develop and use posters, leaflets, radio, TV, video, pictures and theatre groups to disseminate information locally.
			3.2.3 Ensure a minimum standard of data collection throughout the region, especially in areas where information gaps occur.
		3.3 Increased national awareness of local threats to cheetah and wild dogs across range states.	3.3.1 Continue to establish competitions, essays, etc. in schools and groups to enhance and highlight conservation education.
			3.3.2 Continue to develop curricula regarding cheetah and wild dogs and integrate with activities of youth conservation clubs.
			3.3.3 Continue to encourage sponsorship of sports teams, clubs and groups named after cheetah and wild dogs at all levels.
		3.4 National research symposiums promoted in all regional range states.	3.4.1 Promote workshops on cheetah and wild dogs at annual scientific symposiums.
			3.4.2 Continue to participate in a wider range of meetings and stakeholder interest groups (i.e. those not directly concerned with conservation) to disseminate information about cheetah and wild dog conservation
		3.5 A greater awareness of issues related to cheetah and wild dog conservation among relevant stakeholders in all range states.	3.5.1 Continue to develop and disseminate education and awareness material, building on best existing material, for both adults and children in all range states.
			3.5.2 Continue to create and implement multimedia programmes to raise awareness and understanding of cheetah and wild dog conservation in all range states.
			3.5.3 Sensitise leaders to the value of cheetah and wild dog conservation; ongoing.
			3.5.4 Link with existing initiatives and provide relevant information and interpretive materials to support judicial and law enforcement agencies.
Coexistence	4. To promote coexistence of people with cheetah and wild dogs across southern Africa	4.1 The deliberate killing of cheetah and wild dogs is reduced	4.1.1 Continue monitoring the extent of deliberate killing of cheetah and wild dogs in all range states, and collate data annually on a national level, and every three years for the region.
			4.1.2 Clarify and advocate for enforcement of laws pertinent to killing of cheetah and wild dogs across range states, on an ongoing basis.
			4.1.3 Identify conflict areas and clarify extent of actual versus perceived losses caused by cheetah and wild dogs, on an ongoing basis.
			4.1.4 Sensitize relevant stakeholders about livestock husbandry practices proven to reduce depredation, on an ongoing basis.
			4.1.5 Develop and implement national standard operating procedures on acceptable responses to conflict situations within one year and encourage exchange between range states (e.g. procedures on captures, translocation, lethal control etc).
			4.1.6 Implement human-wildlife conflict rapid response teams to react quickly and effectively to conflict situations, across all range states within two years.
			4.1.7 Initiate and continue programmes to combat negative perceptions of cheetah and wild dogs in all range states within one year.

		4.2 The levels of incidental mortality in cheetah and wild dogs are reduced in all range states as appropriate within five years.	4.2.1 Continue monitoring the extent of incidental mortality of cheetah and wild dogs in all range states, and collate data annually on a national level, and every three years for the region.
			4.2.2 Reduce snaring mortality of cheetah and wild dogs through initiatives such as anti-poaching efforts, removal of snare wires, and integrated community-based population, health and environment initiatives, on an ongoing basis.
			4.2.3 Initiate programmes known to be effective at managing diseases that threaten cheetah and wild dog population viability, on an ongoing basis.
			4.2.4 Implement targeted, enforceable programmes which reduce road mortality of cheetah and wild dog on an ongoing basis.
			4.2.5 Substantially reduce poisoning mortality of cheetah and wild dogs through law enforcement and awareness campaigns.
		4.3 The perceived intrinsic and economic value of cheetah and wild dogs to all stakeholders are measurably increased within five years.	4.3.1 Quantify and monitor the perceived intrinsic and economic value of cheetah and wild dogs to all stakeholders; ongoing.
			4.3.2 Promote wildlife based economic activities that promote cheetah and wild dog conservation and directly benefit communities and other stakeholders, in all range states within five years.
			4.3.3 Investigate and highlight the cultural significance of cheetah and wild dogs across all range states; ongoing.
			4.3.4 Develop self-sustaining community schemes that offset the costs of, and internalise the responsibilities for, conflict on an ongoing basis. 4.3.5 Develop income generation and capacity development projects linked to cheetah and wild dog conservation, on an ongoing basis.
		4.4 Socio-economic drivers to foster co- existence of land users with cheetah and wild dogs are addressed.	4.4.1 Identify and engage key stakeholders and experts to address socio economic threats to cheetah and wild dogs within 5 years.
			4.4.2 Identify socio-economic factors relevant to cheetah and wild dog conservation within two years.
			4.4.3 Develop strategies to address socio economic threats to cheetah and wild dogs within five years.
			4.4.4 Encourage range states to develop a bio-economic strategy that promotes co-existence with cheetah and wild dogs.
Land Use	5. To promote best land use practice for cheetah and wild dog conservation and minimise adverse effects of land development	5.1 Current, proposed and trends in land use are evaluated against the conservation needs of cheetah and wild dog	5.1.1 Build and maintain relationships with key regional stakeholders responsible for determining current and future land use strategies, within one year.
			5.1.2 Collate guidelines based on case studies of land-use strategies associated with successful cheetah and wild dog conservation from each country in the region, within two years.
			5.1.3 Engage constructively with industry, provide support in the form of best management practices and seek opportunity that will benefit cheetah and wild dog
		5.2 Integrated and innovative land-use management, planning and development aligned with cheetah and wild dog conservation is facilitated.	5.2.1 Identify and recommend guidelines in collaboration with government and private sector for social and environmental responsibility aligned with cheetah and wild dog conservation, e.g. IUCN Global Business and Biodiversity Programme.
			5.2.2 Coordinate cross sectorial communication among all key players including private sector to facilitate cooperation and collaborative initiatives that address cheetah and wild dog
			5.2.3 Promote cross sectorial participation in the Range Wide Conservation Program

		5.3 The formation of landscape scale wildlife management units (e.g. conservancies, community parks etc.) is promoted by increasing awareness of the potential benefits of such land uses within two years.	5.3.1 Promote awareness of opportunities for partnerships for management of wildlife areas that benefit cheetah and wild dogs
			5.3.2 Monitor the development of landscape scale wildlife management units (e.g. large, multiple use areas that could encompass conservancies, parks and community grazing areas) and their influence on cheetah and wild dog conservation, to enable adaptive management
			5.3.3 Optimise current resident range, maintain and recover corridors and connectivity and secure at least 20% of recoverable and possible range within five years to facilitate the expansion of cheetah and wild dog populations.
			5.3.4 Promote wild dogs and cheetah as the flagship species of large landscape level habitat conservation initiatives, for protected area networks and corridors, including TFCA's.
		5.4 Cheetah and wild dog range is expanded within southern Africa through reintroductions of the species to appropriate areas of recoverable range	5.4.1 Identify appropriate range.
			5.4.2 Engage partner organisations and relevant government authority personnel in establishing reintroduction plans.
			5.4.3 Ensure reintroduction plans follow IUCN Reintroduction guidelines.
			5.4.4 Identify source populations of cheetah or wild dogs, including, where possible, through regional and international studbooks to identify populations of sound genetic viability.
			5.4.5 Monitor reintroduction efforts and individual animals for at least five years post release.
		5.5 Wildlife based land uses and community participation in natural resource management are promoted in areas with potential for cheetah and wild dog conservation.	5.5.1 Identify and prioritize areas with potential for natural resource based land uses conducive to cheetah and wild dog conservation for each country annually.
			5.5.2 Linking local capacity, resources, services and expertise to maximise partnership opportunities to enhance areas with potential for cheetah and wild dogs.
			5.5.3 Evaluate the effectiveness of wildlife based land uses and their outcomes for cheetah and wild dog conservation to enable adaptive management.
			5.5.4 Strengthen and increase (by 20%) buffer zones around areas with potential for cheetah and wild dog conservation through promoting community participation and partnership opportunities.
		5.6 Effective and appropriate livestock husbandry, range management and agriculture that is consistent with cheetah and wild dog conservation is promoted.	5.6.1 Promote and link agriculture and range management programmes to relevant areas.
			5.6.2 Coordinate with the providers of training programmes to increase the capacity of agricultural communities to practice sustainable range management. 5.6.3 Assess the effectiveness of new and existing livestock husbandry and range management programmes against the conservation needs of cheetah and wild dogs and disseminate results annually to inform adaptive management strategies.
Political Commitment	6. To advocate for increased political commitment to the conservation of cheetah and wild dogs	6.1 A regional agreement to collaborate in conserving cheetah and wild dogs across southern Africa is approved by all governments	6.1.1 Link with local and international advocacy organisations, such as International Conservation Caucus Foundation ICCF, to achieve results outlined in this strategy
			6.1.2 Draw up an agreement, in collaboration with these advocacy organisations, for range state governments regarding commitment to conserve cheetah and wild dogs.
			6.1.3 Present agreement to national agencies who will then take it to ministers, within six months of the agreement being drawn up.
			6.1.4 Organise a regional state meeting where the agreement will be formally signed by the eight countries.

		6.2 Relevant transboundary agreements that will benefit the conservation of cheetah and wild dogs are promoted.	6.2.1 Develop and promote further agreements and strategies that will benefit cheetah and wild dog.
			6.2.2 Link and partner with local and international advocacy organisations, for example the ICCF, to achieve effective transboundary conservation efforts.
Policy and Legislation	7. To advocate for stronger international, national and local legislation, policies and protocols to support cheetah and wild dog conservation	7.1 The relevance and efficacy of current national, regional and international policies, protocols and legislation pertaining to the conservation of cheetah and wild dogs is assessed.	7.1.1 Identify existing international and national legislative frameworks that could help promote the conservation of cheetah and wild dog.
			7.1.2 Range Wide Conservation Program to employ a consultant to carry out an assessment of the efficacy and suitability of these frameworks (identified in 7.1.1), and compile recommendations.
		7.2 Cheetah and wild dog conservation actions are aligned to existing national and international policies, protocols and legislation, and revision is lobbied for where appropriate.	7.2.1 Make use of consultant recommendations (7.1.2) to align regional actions to national and international initiatives
			7.2.2 Implement and enact these new and/or aligned policies, protocols and legislation
			7.2.3 Identify policies, protocols and legislation that will imminently be undergoing revision, and send representatives of the Range Wide Conservation Program to advocate for revision at these meetings
			7.2.4 For legislation that does not adequately address cheetah and wild dog conservation needs, and for which there is no planned revision, advocate for changes, including by making use of existing networks (e.g. IUCN SA members etc).
		7.3 Cheetah and wild dog range states encouraged to actively participate in biodiversity-related multilateral environmental agreements (MEAs, e.g. CMS, CBD, CITES, SADC protocols, WENSA) and other international processes.	7.3.1 Investigate how existing MEAs can facilitate cheetah and wild dog conservation, and make recommendations for action.
			7.3.2 Adopt the recommendations identified in 7.3.1
			7.3.3 Advocate for range states to become parties to the Convention on Migratory Species and other relevant conventions.
			7.3.4 Investigate and obtain support for this strategy from CMS and other MEAs.
			7.3.5 Develop and/or identify existing relevant motions for submission to the IUCN World Conservation Congress.
		7.4 This revised strategy for the conservation of cheetah and African wild dogs in southern Africa is incorporated into both the National and SADC Regional conservation plans by 2017	7.4.1 At a regional level, to request that the Chair of SADC take the lead in ensuring that the Revised Strategy for the Conservation of Cheetah and African wild dog is incorporated in the SADC Regional Biodiversity Strategy and Action Plan (RBSAP), by 2016
			7.4.2 At a national level, each SADC member state to incorporate their national conservation action plan for cheetah and African wild dogs into their respective National Biodiversity Strategies and Action plan (NBSAP) by 2017
			7.4.3 Encourage SADC countries to prioritize the conservation of cheetah and wild dogs in the implementation of the Programme of Work for Protected Areas (POWPA)
			7.4.4 Encourage SADC member states to prioritise the conservation of cheetah and wild dogs in their Global Environmental Facility (GEF) allocations

		7.5 The capacity of law enforcement and judicial agencies to implement legislation, policies and protocols relevant to cheetah and wild dog conservation is improved.	7.5.1 National agencies to identify and align with existing law enforcement networks, and prioritise capacity needs to enforce legislation, policies and protocols relevant to cheetah and wild dog conservation.
			7.5.2 Secure resources required to improve capacity.
			7.5.3 Develop capacity according to priorities set by national agencies (in 7.4.1).
			7.5.4 Maintain ongoing engagement with existing networks dealing with, *inter alia*, issues of bushmeat poaching, law enforcement, illegal trade, problem animal control relevant to cheetah and wild dog conservation
National Planning	8. To maintain and implement up to date national action plans and utilise other relevant frameworks for the conservation of cheetah and wild dogs in all range states.	8.1 National Action Plans for each country are revised (or where necessary developed) to be S.M.A.R.T and in line with this strategy, within two years	8.1.1 Identify key stakeholders to facilitate the revision process in each country within 6 months.
			8.1.2 Revise the action plans in each state within two years.
		8.2 The implementation of the revised national action plans is facilitated within two years of the revision.	8.2.1 Identify appropriate mechanisms within each country for driving the implementation process within 6 months.
			8.2.2 Identify constraints and where possible provide the means to ensure implementation of the revised national strategy within one year.
			8.2.3 Encourage all stakeholders to use the revised national action plan to guide their conservation actions at all times.
			8.2.4 Arrange a workshop between governments to exchange information on the implementation process of national action plan.