South African Action Plan for the Conservation of Cheetahs and African Wild Dogs

17-19 June 2009
Bela Bela, Limpopo Province
South Africa

Report from a workshop to develop a National Conservation Action Plan for Cheetahs and Wild Dogs in South Africa

THE HOWARD G. BUFFETT FOUNDATION

SSC Species Survival Commission

ENDANGERED WILDLIFE TRUST
carnivore conservation group
conservation in action

IUCN/SSC Canid Specialist Group

SPECIES SURVIVAL COMMISSION
CAT SPECIALIST GROUP

Action Plan for the Conservation of Cheetahs and African Wild Dogs in South Africa

Final Workshop Report

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Action Plan for the Conservation of Cheetahs and African Wild Dogs in South Africa

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BMP-S	Biodiversity Management Plan for Species
CAG-SA	Cheetah Advisory Group
CBSG	Conservation Breeding Specialist Group
CCG	Carnivore Conservation Group
Chog(s)	Cheetahs and Wild Dogs
DEA	Department of Water and Environmental Affairs
EC	Eastern Cape province
EMI	Environmental Management Inspector
EWT	Endangered Wildlife Trust
GP	Gauteng province
FS	Free State province
ITFCWG	Information Technology For Conservation Working Group
IUCN	International Union for the Conservation of Nature and Natural Resources
KTP	Kgalagadi Transfrontier Park
KZN	KwaZulu-Natal
LP	Limpopo province
MOU	Memorandum of Understanding
MP	Mpumalanga province
NC	Northern Cape province
NCAP	National Conservation Action Planning
NEMBA	National Environmental Management Biodiversity Act
NGO	Non-governmental organisation
NW	North West
NP	National Park
NZG	National Zoological Gardens
PAAZAB	African Association of Zoos and Aquaria
PHVA	Population Habitat Viability Assessment
SA	South Africa
SAWC	South African Wildlife College
TOPS	Threatened and Protected Species regulations
TUT	Tshwane University of Technology
UCT	University of Cape Town
UKZN	University of KwaZulu-Natal
UP	University of Pretoria
WAG-SA	Wild Dog Advisory Group
WCPG	Wildlife Conflict Prevention Group
WC	Western Cape
WCS	Wildlife Conservation Society
WWF	World Wildlife Fund for nature
ZSL	Zoological Society of London

Glossary

IUCN Red Data List	A list providing information on a species risk of extinction (usually by taxonomic group) published by the International Union for the Conservation of Nature
Metapopulation	A metapopulation can be defined as series of unstable, local subpopulations inhabiting discrete habitat patches, connected by migration (Levins 1969; Hanski 1998)
Sub-species	A taxonomic subdivision of a species consisting of an interbreeding, usually geographically isolated population of organisms
Species	A kind of animal, plant or other organism that does not normally interbreed with individuals of another kind, and includes any sub-species, cultivar, variety, geographic race, strain, hybrid or geographically separate population
Stakeholder	A natural or juristic person(s) or organisation(s) that has an interest in a particular decision, either as individuals or representatives of a group
Stochastic events	Those with a random, unpredictable element without pattern or order
Threat	Any human action that causes a decline and comprises the future survival of a species or anything that has a detrimental effect on a species.

SECTION 1. Executive summary

Cheetahs are considered to be 'Vulnerable' by the IUCN and are listed on CITES Appendix I. Wild Dogs are listed as 'Endangered' by the IUCN, but are not listed by CITES. The management and utilization of Cheetahs and Wild Dogs is governed by the National Environmental Management Biodiversity Act (NEMBA) and by the Threatened and Protected Species (TOPS) regulations, on which Cheetahs and Wild Dogs are 'listed large predator species'. Cheetahs and Wild Dogs share a number of ecological similarities and face similar threats. Both species are wide ranging and occur at naturally low densities, even in protected areas. Cheetahs and Wild Dogs are both adversely affected by competition with other large predators, and both are declining in number, primarily due to persecution by humans. Due to the wide-ranging nature of Cheetahs and Wild Dogs, effective conservation requires cooperation among neighbouring countries, as was recognized recently with the inclusion of both species on the United Nations Environment Programme's Convention on the Conservation of Migratory Species of Wild Animals. In recognition of these factors, the IUCN, Wildlife Conservation Society and Zoological Society of London hosted a series of regional workshops to develop formal, coordinated conservation strategies (commencing in February 2007). Following the development of and agreement on a southern African conservation strategy (regional meeting held in December 2007), national conservation action planning meetings for Cheetahs and Wild Dogs will be held in each range state. Following the national meetings, national conservation action plans will be developed in line with the regional strategy while addressing the circumstances specific to each country. In June 2009, the national conservation action planning workshop for South Africa was held in Bela Bela, Limpopo. During the workshop, a diverse group of stakeholders assembled, including representatives from, *inter alia*: national and provincial government, SANParks; provincial reserves; private reserves; Wildlife Ranching South Africa; PAAZAB; Endangered Wildlife Trust; De Wildt Wild Cheetah Project; Cheetah Outreach; various local and international universities.

At the meeting, stakeholders present developed a vision, goal, and a series of eight objectives for the conservation of Cheetahs and Wild Dogs in South Africa, each of which have a series of targets and activities with specific timelines, aims and requirements. Together these form the basis for the coordinated National Conservation Action Plan for Cheetahs and Wild Dogs in South Africa, presented in this document. The vision, goal and objectives for the conservation of Cheetahs and Wild Dogs in South Africa (which were developed following adjustment of the regional vision, goals and objectives) are as follows:

Vision: Secure, viable populations of Cheetahs and Wild Dogs within a matrix of land uses, that contribute to ecosystem integrity, which coexist with, and are valued by, the people of South Africa

Goal: Improve the status of Cheetahs and Wild Dogs across a matrix of land uses of suitable habitat within their historical range in South Africa

Objectives:

- Develop capacity in all aspects of the conservation of Cheetahs and Wild Dogs in South Africa.
- Improve knowledge of the conservation biology of Cheetahs and Wild Dogs across South Africa.

- Develop and implement mechanisms for the transfer of information relevant to the conservation of Cheetahs and Wild Dogs and ensure active commitment of stakeholders.
- Minimise and manage conflict and promote coexistence between Cheetahs, Wild Dogs and people across South Africa.
- Minimise adverse effects of existing patterns in land use and promote practices conducive to the conservation of Cheetahs and Wild Dogs.
- Improve national and provincial governmental commitment to the conservation of Cheetahs and Wild Dogs in South Africa.
- Review, and where necessary amend international, regional and local legislation, norms and standards, policies and protocols affecting the conservation of Cheetahs and Wild Dogs, and promote the compliance thereof**.**
- Establish viable populations of Cheetahs and Wild Dogs within a matrix of land uses using a metapopulation approach in these species' extirpated and resident distributions.

SECTION 2. Introduction

2.1 Why Cheetahs and Wild Dogs require a National Conservation Action Plan

Cheetahs are considered to be 'Vulnerable' by the IUCN and are listed on CITES Appendix I. South Africa does not have an export quota for Cheetah hunting trophies. Wild Dogs are listed as 'Endangered' by the IUCN, but are not listed on CITES, as trade in products from Wild Dogs is not considered to be a threat to the species. The management and exploitation of Cheetahs and Wild Dogs is governed by the National Environmental Management Biodiversity Act (NEMBA) and by the Threatened and Protected Species (TOPS) regulations. Cheetahs are identified as Vulnerable, and Wild Dogs are listed as Endangered in the TOPS regulations, and both are recognized as 'listed large predator species' in those regulations.

Cheetahs and Wild Dogs presently face a number of conservation threats in South Africa, of which persecution and (in the case of Cheetahs) illegal trade in live animals are probably the most severe. However, the lack of coordinated management of the two species also represents a significant conservation threat. For example, Cheetahs have been reintroduced into at least 37 reserves without always considering the genetic origin of the animals being introduced, adequate management to prevent inbreeding, or consideration of the impacts of sourcing Cheetahs from the free-ranging populations for reintroductions. This action plan presents a strategy for the coordinated management and conservation of Cheetahs and Wild Dogs in South Africa.

2.2 National planning within a rangewide context

This national action plan was developed as part of a Rangewide Conservation Planning Process for Cheetahs and Wild Dogs. Both species face serious conservation issues, many of which are overlapping. As a result 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 process to plan for the species' conservation across their combined geographic range. This process, conducted in close partnership with government conservation authorities, aimed to develop a coordinated array of national conservation action plans for all range states, nested within broader regional strategies. The process has six stated objectives:

(1) To foster appreciation for the need to conserve Wild Dogs and Cheetahs, 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 Cheetahs, including corridors connecting important conservation areas.

(4) To prepare specific global, regional and national conservation action plans for both Cheetahs and Wild Dogs.

(5) To encourage policymakers to incorporate Wild Dogs' and Cheetahs' conservation requirements into land use planning at both national and regional scales.

(6) To develop local capacity to conserve Cheetahs and Wild Dogs by sharing knowledge on effective tools for planning and implementing conservation action.

A key component of this process is a series of workshops, bringing together specialists on the species' biology with conservation managers from governmental and non-governmental conservation organisations. Close involvement of government representatives was considered absolutely critical since these are the organisations with the authority to implement any recommendations at the management and policy levels. While the process will eventually cover the entire geographic range of both species, the large number of range states involved means that productive discussion and interchange would be very difficult to achieve at a single workshop covering all regions. Workshops are therefore being conducted at the regional level, covering eastern, southern, and west-central Africa for Cheetahs and Wild Dogs together, and North Africa and Asia for Cheetahs only (Wild Dogs being absent from this last region).

2.3 Biodiversity justification

The biodiversity justification of the action plan is that Cheetahs and Wild Dogs are recognized by the NEMBA as a "threatened species in need of national protection". The development of a coordinated action plan for the conservation and management of Cheetahs and Wild Dogs would contribute significantly to such protection.

2.4 Aims, objectives and anticipated outcomes

- The coordination and supervision of the conservation and management of Cheetahs and Wild Dogs in South Africa by advisory bodies of experts.
- Active development of increased capacity for managing and conserving Cheetahs and Wild Dogs.
- Enhancement of knowledge of the biology, ecology and socio-economic issues relating to Cheetahs and Wild Dogs through coordinated research.
- Coordination of management and monitoring of populations of Cheetahs and Wild Dogs occurring in large protected areas.
- Coordination of efforts to conserve free-ranging populations of Cheetahs and Wild Dogs occurring outside of protected areas through strategies to minimize human-predator conflict.
- Management of reintroduced populations of Cheetahs and Wild Dogs as coordinated metapopulations with clear protocols for reintroductions and subsequent management.
- Minimization of adverse effects of land development, and influencing of trends in land use to the benefit of Cheetahs and Wild Dogs.
- Attainment of political commitment to and support for the conservation of Cheetahs and Wild Dogs.

- Review of existing legislation pertaining to Cheetahs and Wild dogs, and revision of it where necessary.
- Effective enforcement of existing legislation related to criminal acts involving Cheetahs and Wild Dogs.
- Regulation of captive populations of Cheetahs and Wild Dogs such that their creation, maintenance and use does not cause genetic or other conservation problems, and that benefits for conservation are maximized.

2.5 Overview of the legal mandate

To be effective, the National Conservation Action Plan requires a legal mandate such that compliance with the recommendations outlined is required by law and are enforced by the Department of Water and Environmental Affairs and provincial nature conservation authorities.

SECTION 3. Background information

3.1 Taxonomic status

The taxonomic status of Cheetahs and Wild Dogs in southern Africa is summarized in Table 1.

Table 1: The taxonomic status of Cheetahs and Wild Dogs in southern Africa

	Cheetahs	**Wild Dogs**
Kingdom	*Animalia*	*Animalia*
Phylum	*Chordata*	*Chordata*
Class	*Mammalia*	*Mammalia*
Order	*Carnivora*	*Carnivora*
Family	*Felidae*	*Canidae*
Genus	*Acinonyx*	*Lycaon*
Species	*Acinonyx jubatus*	*Lycaon pictus*
Sub-species	*Acinonyx jubatus jubatus* [a]	*N/A*

[a] (Schreber, 1775)

3.2 Summary of the distribution and status of Cheetahs and Wild Dogs in South Africa

3.2.1 Cheetahs

Continental and regional status of Cheetahs

Cheetahs occur in North Africa, the Sahel, eastern and southern Africa, with population strongholds in Tanzania and Kenya, and Namibia and Botswana (Marker 1998). The known global wild population of Cheetahs numbers 7,500, and though the status of populations is poorly understood in some regions, elucidation of their sizes in such areas would probably not raise the total over 10,000 (IUCN 2008). During the regional conservation action planning meeting, the southern African distribution of Cheetahs was mapped (Figure 1). The population of Cheetahs is believed to have declined by 30% during the last 18 years, due primarily to habitat loss and fragmentation, killings due to conflict with livestock, and killings for skins for the fur trade (IUCN 2008).

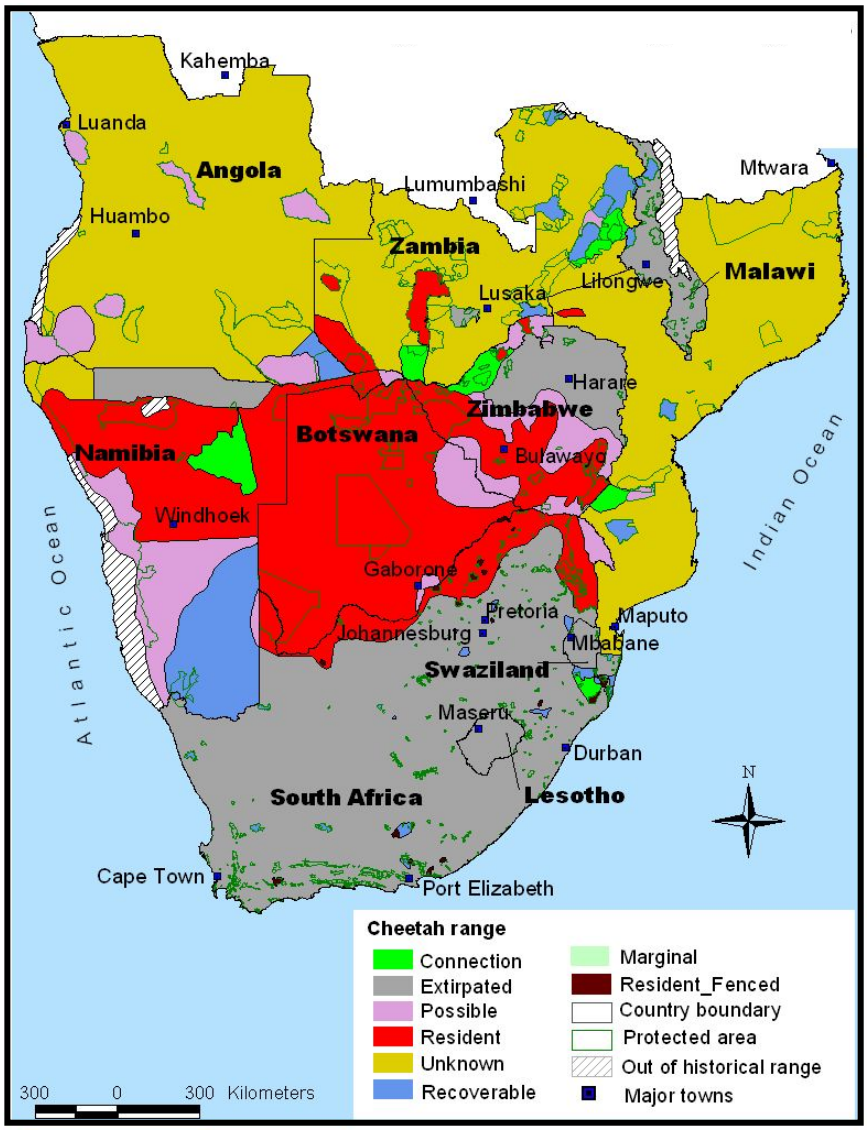

Figure 1: Southern African distribution of Cheetahs (Source: regional strategy for the conservation of Cheetahs and Wild Dogs)

South African status and distribution of Cheetahs

In South Africa, Cheetahs were historically widely distributed throughout the country in all suitable habitats (Marker 1998). Presently, approximately 125,150 km^2 of suitable habitat for Cheetahs exists in South Africa, of which 44.5% is comprised of formally protected areas (Marnewick *et al.* 2007). South Africa's *in situ* population of Cheetahs is estimated to be approximately 550 individuals (IUCN 2008). Recently, Marnewick *et al.* (2007) conducted an assessment of the distribution and status of Cheetahs in South Africa, from which the following information was drawn (unless otherwise stated). The South African population of Cheetahs comprises three components:

Naturally occurring Cheetahs in large protected areas

The two largest protected areas in South Africa, Kruger National Park and the South African portion of the Kgalagadi Transfrontier Park (KTP), contain significant populations of Cheetahs. Several estimates of the number of Cheetahs in Kruger have been made, including: 219 individuals (Pienaar 1963); 172 (Bowland & Mills 1994); and, 103 (Kemp & Mills 2005). The 2009 population census from Kruger suggests that ~135 individuals occur in the park (Davies-Mostert pers. comm.). A photographic survey conducted during the late 1990s suggested that approximately 80 Cheetahs occur in the South African portion of the KTP (Knight 1999). Recent indications suggest that the population of Cheetahs in Kgalagadi is still ~80 individuals (Gus Mills, pers. comm.).

Cheetahs occurring outside state protected areas

The greater part of the South African population of Cheetahs occurs outside of protected areas (Figure 2). The extent of the distribution of Cheetahs appears to have increased during recent years due to the shift from livestock to wildlife ranching and an increase in tolerance of Cheetahs among wildlife ranchers. For example, sightings of Cheetahs are now regular in Limpopo and North West provinces, where such sightings were rare during the 1960s and 1970s.

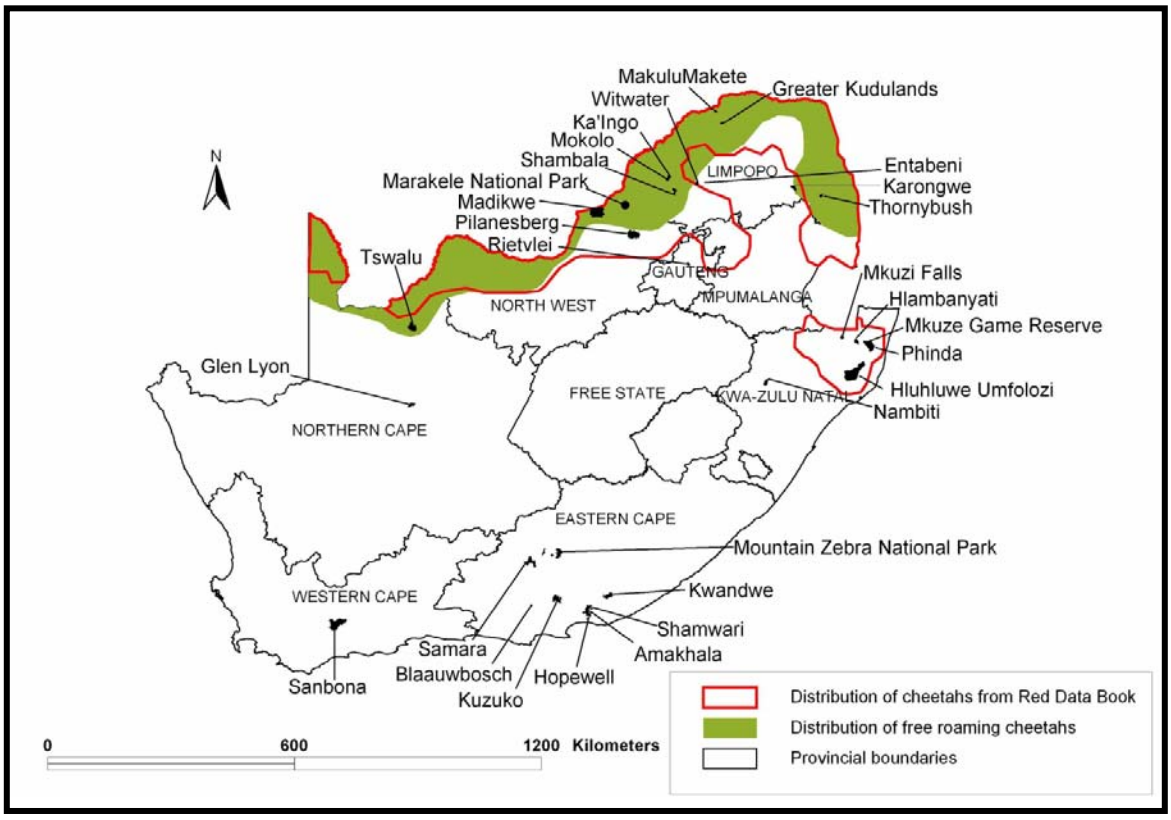

Figure 2: Free-ranging Cheetahs in South Africa (Marnewick *et al.* 2007)

Cheetahs in small to medium sized fenced reserves

Cheetahs have been reintroduced into 37 reserves, including five state-owned parks and 32 privately owned parks. In addition, Cheetahs occur naturally in two state owned parks (Marakele National Park and Hluhluwe-iMfolozi Park) and one private reserve (Thaba Tholo) which are now surrounded by predator-proof fencing (Appendix 2). Together, a population of ~281 Cheetahs occurs in fenced small to medium sized reserves in South Africa.

Cheetahs in captivity

An estimated 524 Cheetahs occur in 44 captive breeding institutions in South Africa (Marnewick *et al.* 2007).

Table 2: Captive Cheetah breeding facilities in South Africa (Marnewick *et al.* 2007)

Province	Number of facilities	Number of known breeding facilities	Number of Cheetahs present
North West	10	2	193
Limpopo	6	1	116
Mpumalanga	0	0	0
Gauteng	6	1	32
KwaZulu-Natal	0	0	0
Free State	11	4	79
Northern Cape	0	0	0
Eastern Cape	3	1	30
Western Cape	8	2	74
Total	**44**	**11**	**524**

3.2.2 Wild Dogs

Continental and regional status of Wild Dogs

African Wild Dogs are endangered, having been extirpated from 25 of the 39 countries in which they once occurred (Fanshawe *et al.* 1997). As few as 5,750 individuals and 600-1000 packs persist *in situ,* and viable populations are limited to seven of the 39 countries in which they once occurred (Woodroffe *et al.* 2004). During the regional conservation action planning meeting, the southern African distribution of Wild Dogs was mapped (Figure 3).

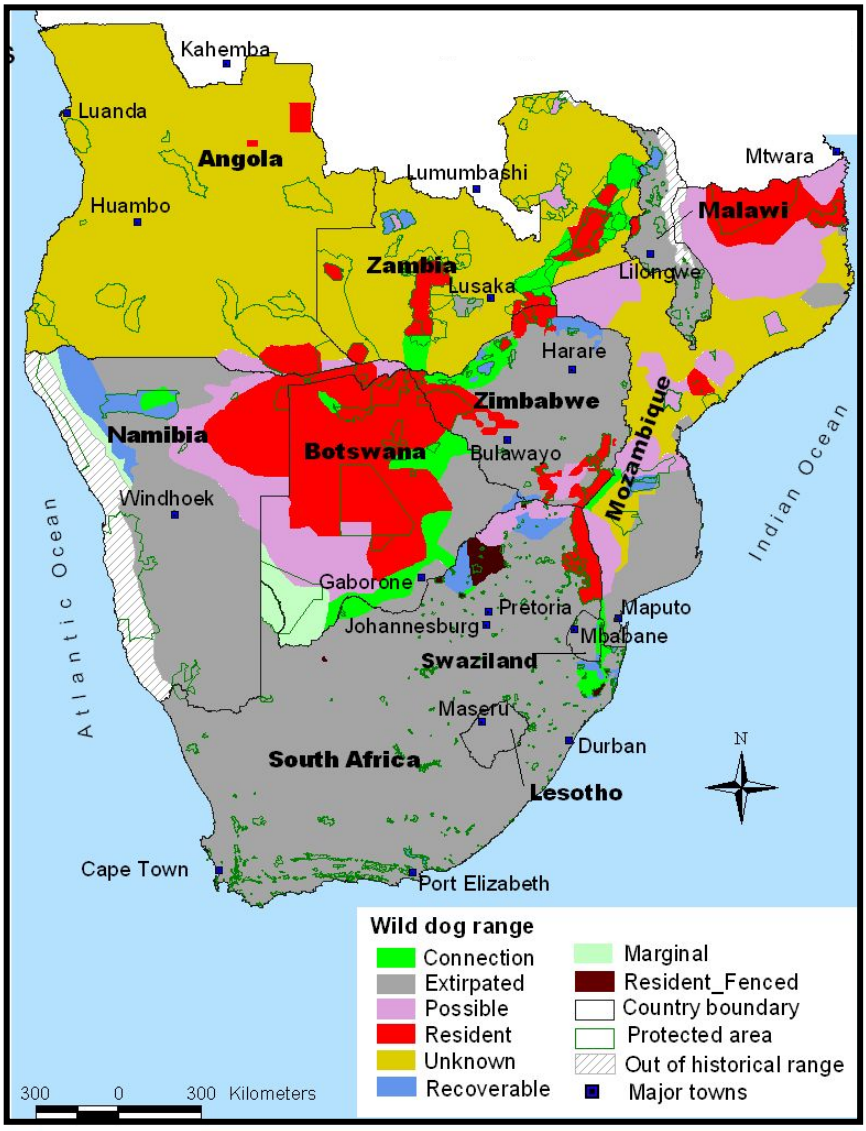

Figure 3: Regional distribution of Wild Dogs (Source: regional strategy for the conservation of Cheetahs and Wild Dogs)

South African status and distribution of Wild Dogs

The South African population of Wild Dogs is currently comprised of approximately 369 individuals in 50 packs and dispersing groups, and is comprised of three components:

<u>The Kruger National Park population</u>

The Kruger population has fluctuated widely, from 357 in 26 packs in 1989 (Maddock & Mills 1994), to 434 in 36 packs in 1995 (Wilkinson 1995), 177 in 25 packs in 2000 (Davies 2000), 140 in 20 packs in 2005 (Kemp & Mills 2005). Preliminary results from the latest Kruger census suggest that there are presently 144 Wild Dogs in 19 packs in the park (Davies-Mostert, pers. comm.).

The managed metapopulation

The metapopulation of Wild Dogs currently comprises 14 packs and ~121 individuals in six reserves, comprising ~33.1% of the national population. Metapopulation reserves encompass an area of 3,062 km^2, which represents ~7.7% of the geographic range of Wild Dogs in South Africa (~39,970 km^2).

Outside of protected areas

Between 1996 and 2008, the number of Wild Dogs has varied from 42 to 104 individuals in 7 to 21 packs and dispersing groups (Lindsey, unpublished data). There are currently ~104 individuals in nine resident packs and eight dispersing groups occurring outside of protected areas, comprising ~28.2% of the national population. Wild Dogs outside of protected areas occur primarily on game ranches in areas of low human density, intact natural habitat, close to source populations, in areas with ≥203 ml of rainfall/year (Figure 4). Primary foci of activity of Wild Dogs outside of protected areas include: the Central Lowveld (Hoedspruit area); Limpopo Valley; and the Waterberg (Figure 4). The area of occupancy of Wild Dogs outside of protected areas is ~14,910 km^2, comprising 37.3% of the geographic range of the species in South Africa.

Wild Dogs in captivity

There are nine institutions belonging to the African Association of Zoos and Aquaria (PAAZAB) with captive Wild Dogs, which collectively house 168 individuals (Tracy Rehse, National Zoological Gardens of South Africa, pers. comm.). In addition, there are at least 15 other captive breeding institutions in South Africa which are not members of PAAZAB housing at least 100 more Wild Dogs.

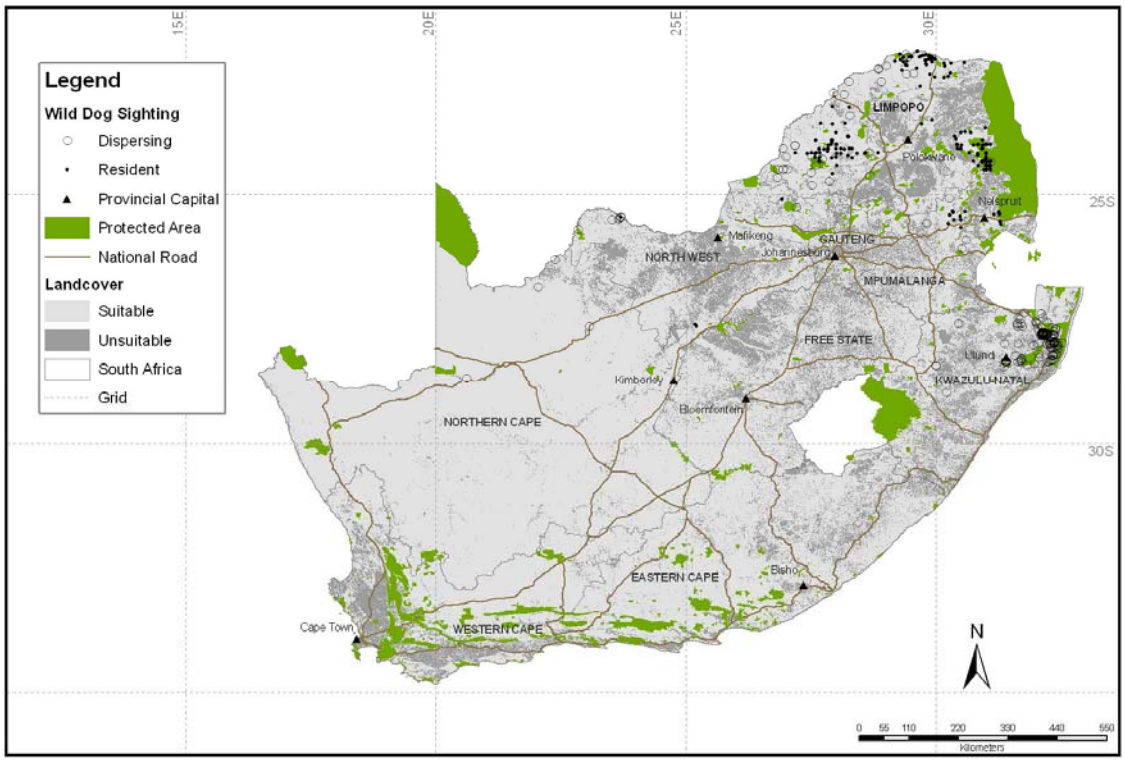

Figure 4: Distribution of Wild Dogs outside of protected areas in South Africa (Lindsey unpublished data)

3.3 Threats facing Cheetahs and Wild Dogs in South Africa

3.3.1 Cheetahs

Persecution

Persecution of Cheetahs on ranch lands due to conflict over livestock or 'game' represents a severe threat to populations of Cheetahs occurring outside protected areas. A questionnaire survey in the Thabazimbi district of South Africa suggested that at least 26 Cheetahs were killed by ranchers in the area during 1999-2005 (Marnewick *et. al.* 2007). In the Lephalale (Limpopo), Vhembe (Limpopo), and Bray (North West) areas, 48.6%, 34.4%, and 88% of ranchers consider Cheetahs to be a liability, respectively (Marnewick *et. al.* 2007). In the Bray area 50% of ranchers admitted to having removed Cheetahs from their property.

Illegal trade in Cheetahs

The illegal capture of free ranging Cheetahs on ranch lands, for sale to captive breeding institutions represents another serious threat to the species in South Africa (Marnewick *et. al.* 2007). The presence of a microchip is the only proof required for Cheetahs to be considered 'captive-bred' for export (Marnewick *et. al.* 2007). Wild Cheetahs are frequently captured, micro-chipped and claimed to be captive bred animals, enabling the 'owner' to obtain a CITES permit for the sale and export of the animals to overseas captive breeding facilities

(Marnewick *et. al.* 2007). Cheetahs are also captured in neighbouring Botswana and Namibia and illegally imported into South Africa for sale to captive breeding facilities, or re-export to overseas zoos and safari parks. Conversely, free ranging Cheetahs are also captured in South Africa, sold and exported illegally to Namibia to 'canned hunting' facilities where they are hunted in small fenced camps, taking advantage of Namibia's CITES quota for trophy-hunted Cheetahs (Marnewick *et. al.* 2007). Approximately 60 wild Cheetahs are illegally captured from ranch land in South Africa each year (Marnewick *et. al.* 2007). During 1996-2005, 428 Cheetahs were exported from South Africa, 93% of which were listed as being of 'captive' origin (Marnewick *et. al.* 2007). The rate export appears to be increasing, and now approximately 50 Cheetahs are exported from South Africa per year (Marnewick *et. al.* 2007).

Uncoordinated reintroduction of Cheetahs

Lack of coordinated management of reintroduced populations limits their conservation value and introduces the risk of genetic problems and potentially threatens free-ranging Cheetahs occurring on ranch land. Most reserves into which Cheetahs have been reintroduced are relatively small (mean 221 ± 35 km^2, range 10-1,000 km^2) and house small populations of Cheetahs (mean – 7.2 ± 1.27 individuals, range 1-42) which are generally not viable in isolation (De Wildt unpublished data). As a result without active and coordinated management, there is a risk that inbreeding will occur, or that animals from outside of the southern African region of different sub-species will be reintroduced, thus compromising local genotypes.

To date, relocating Cheetahs from ranch land to fenced protected areas has been seen as a means of resolving conflict between Cheetahs and landowners. However, modelling indicates that such removals of Cheetahs may prevent populations occurring outside of protected areas from expanding to fill vacant habitat (Lindsey *et al.* 2009). Due to the large numbers of Cheetahs available within the metapopulation, there is no need to use wild-sourced Cheetahs for reintroduction (Lindsey *et al.* 2009).

In addition, the reintroduction of Cheetahs into areas in which free-ranging Cheetahs occur (without associated outreach and awareness programmes) may instil a perception that the presence of naturally occurring Cheetahs is due to reintroductions and that they are an introduced, unnatural phenomenon. Such a perception arose among some local land owners following the reintroduction of Wild Dogs into (and subsequent escape from) Marakele NP.

3.3.2 Wild Dogs

Persecution

The primary threat to Wild Dogs in South Africa is from persecution by land owners. Since 1996, at least 81 Wild Dogs are known to have been killed by landowners in South Africa, comprising as much as 84% of local populations occurring outside of protected areas (Lindsey unpublished data). Persecution by farmers is probably largely responsible for the failure of Wild Dogs to expand to fill vacant potentially suitable habitat on game ranches. Furthermore, levels of persecution are such that game ranch land may represent sinks for populations occurring inside protected areas and in neighbouring countries. To date, no farmers have been successfully prosecuted for illegal killing of Wild Dogs, despite the protected status of the species in most provinces. Consequently, there is no effective deterrent to discourage ranchers from destroying Wild Dogs occurring on their property.

Capture and removal of Wild Dogs occurring on ranch land

Since 1996, at least 127 Wild Dogs have been captured and removed from ranch land in South Africa, both by Nature Conservation authorities and (often illegally) by landowners. In some cases, entire local populations of Wild Dogs have been removed, severely affecting the prospects for persistence outside of protected areas and preventing expansion of the species to fill potentially suitable habitats. Due to the size of the metapopulation and the success of using captive-bred individuals for reintroductions following bonding with wild caught animals, Wild Dogs captured from ranch land are not necessary for reintroductions. In some cases, Wild Dogs captured from ranch land have entered captive populations, resulting in their effective loss to the national free-ranging population. In some cases, the capture and removal of Wild Dogs is unavoidable, but in other cases, following outreach work, landowners may be persuaded to tolerate Wild Dogs on their land. A clear policy on the circumstances in which capture and removal of Wild Dogs from ranch land is acceptable is required.

Snaring

Wild Dogs are extremely susceptible to incidental capture in snares set by poachers who usually set them with the intention of catching ungulates. In parts of Africa, and notably Zimbabwe, snaring has had a significant impact on populations of Wild Dogs. In South Africa, the impacts of snaring are localized. Snaring has had a significant impact on Wild Dogs reintroduced into Mkhuze Game Reserve in KwaZulu-Natal, and also on Wild Dogs occurring in Mthetomusha Game Reserve bordering Kruger National Park.

3.4 Legislation governing Cheetahs and Wild Dogs in South Africa

3.4.1 International legislation

Cheetahs are listed as 'Vulnerable' in the IUCN Red Data Book (IUCN 2008). The Asiatic Cheetah, however, is considered to be Critically Endangered. Cheetahs are listed on CITES Appendix I but South Africa does not have an export quota for Cheetah hunting trophies, though some animals are exported illegally. Wild Dogs are considered to be 'Endangered' by the IUCN (IUCN 2008), but are not listed on CITES because trade in products from, Wild Dogs is not considered to be a conservation threat to the species. Cheetahs (Appendix I) and Wild Dogs (Appendix II) were listed on the United Nations Environment Programme's (UNEP) Convention on the Conservation of Migratory Species of Wild Animals (CMS) during the latest meeting, held in Rome in December 2008. South Africa is a signatory to both conventions.

3.4.2 National and provincial legislation

The management and utilization of Cheetahs and Wild Dogs is governed by the National Environmental Management: Biodiversity Act (Act No. 10 of 2004) (NEMBA) and by the Threatened or Protected Species (TOPS) regulations. According to the TOPS regulations, Cheetahs are listed as being 'Vulnerable' and Wild Dogs as 'Endangered'. TOPS regulations control hunting and captive breeding of species listed as threatened or endangered, including Cheetahs and Wild Dogs.

3.4.3 Provincial legislation

Provincial legislation relating to Cheetahs and Wild Dogs is summarized in Tables 3 and 4.

Table 3: South African national and provincial legislation pertaining to Cheetahs

Region	Legislation
National	Listed as a Vulnerable species in terms of the TOPS regulations.
Eastern Cape	Listed as an Endangered Wild Animal in terms of the Cape Nature and Environmental Conservation Ordinance, 19 of 1974
Free State	Not listed in terms of the Nature Conservation Ordinance, 8 of 1969
Gauteng	Listed as a Protected Wild animals (Schedule 4) Section 15 (1)(c)) in terms of the Nature Conservation Ordinance, 12 of 1983
KwaZulu-Natal	Listed as Specially Protected Game in terms of the Nature Conservation Ordinance, 15 of 1974
Limpopo	Listed as a Protected Wild Animal, as well as an animal to which section 31 (1) (f) applies, in terms of the Limpopo Environmental Management Act, 7 of 2003
Mpumalanga	Listed as a Protected Wild Animals (Schedule 4) Section 4 (1) (d) in terms of the Mpumalanga Nature Conservation Act, 10 of 1998
North West	Listed as a Protected Wild animals (Schedule 4) Section 15 (1) (c))
Northern Cape	Listed as an Endangered Wild Animal in terms of the Nature and Environmental Conservation Ordinance, 19 of 1974
Western Cape	Listed as an Endangered Wild Animal in terms of the Western Cape Nature Conservation Laws Amendment Act, 3 of 2000

Table 4: South African national and provincial legislation pertaining to Wild Dogs

Region	Legislation
National	Listed as an Endangered species in terms of the TOPS regulations
Eastern Cape	Not listed in terms of the Cape Nature and Environmental Conservation Ordinance, 19 of 1974
Free State	Not listed in terms of the Nature Conservation Ordinance, 8 of 1969
Gauteng	Listed as a Protected Wild animal (Schedule 4) Section 15 (1)(c)) in terms of the Nature Conservation Ordinance, 12 of 1983
KwaZulu-Natal	Listed as Specially Protected Game (Schedule 3) in terms of the Nature Conservation Ordinance, 15 of 1974
Limpopo	Listed as a Specially Protected Wild Animals (Schedule 2) and Schedule 5 (Section 31 (1) (f), in terms of the Limpopo Environmental Management Act, 7 of 2003
Mpumalanga	Listed as Protected Game (Schedule 2) Section 4 (1) (b), in terms of the Mpumalanga Nature Conservation Act, 10 of 1998
North West	Listed as a Protected Wild animals (Schedule 4) Section 15 (1) (c)) in terms of the Transvaal Nature Conservation Ordinance 12 of 1983
Northern Cape	Listed as an Endangered Wild Animal (Schedule 1) in terms of the Nature and Environmental Conservation Ordinance, 19 of 1974
Western Cape	Not listed as in terms of the Western Cape Nature Conservation Laws Amendment Act, 3 of 2000

North West Province has issued guidelines on the minimum fencing specifications to hold wild predators in a captive scenario. The Northern Cape has developed a strategy document entitled: *The transportation, keeping, capture, destroying and hunting of large predators in the Northern Cape Province*. In addition, the Northern Cape has published guidelines on the minimum fencing specifications required to hold wild large predators in reserves. Mpumalanga Nature Conservation is currently re-drafting a strategy document for large predators in the province (G. Camacho, pers. comm.). KwaZulu-Natal has published guidelines for the reintroduction of large predators, and for the necessary fencing specifications, and has established norms and standards for the management of Wild Dogs. The Free State has published guidelines on minimum fencing specifications required to hold predators.

3.5 Overview of conservation strategies to date involving Cheetahs and Wild Dogs

3.5.1 Cheetahs

The National Cheetah Conservation Forum of South Africa (NCCF-SA) was developed as a consultative forum consisting of varied stakeholders, including conservationists, landowners, Government officials and hunters to discuss matters related to the conservation of Cheetahs in South Africa (Secretariat: Rachael Barlow-Steenkamp: Wildlife Ranching South Africa). The NCCF-SA has a number of sub-committees, each focussing on specific aspects of the conservation of Cheetahs, including: the captive breeding; education; relocation and, gene flow sub-committees.

Large protected areas

The population of Cheetahs in KNP is assessed by the Endangered Wildlife Trust with the use of a five-yearly photographic census (Bowland & Mills, 1994; Kemp & Mills, 2005). The Kgalagadi Cheetah Project, run by Dr Gus Mills is focussing on the Behavioural ecology and conservation biology of Cheetahs in the Kgalagadi Transfrontier Park.

Free-ranging Cheetahs

The De Wildt Wild Cheetah programme developed a conflict resolution programme involving landowners in focal areas of the distribution of Cheetahs outside of protected areas. These efforts have resulted in a significant increase in the tolerance of ranchers towards Cheetahs in some areas (Marnewick *et al.* 2007). At the same time, De Wildt has been conducting documenting the distribution, density and status of Cheetahs occurring outside of protected areas. De Wildt has embarked on a programme to relocate Cheetahs captured by farmers on ranch land to fenced reserves. De Wildt, in partnership with Cheetah Outreach have been involved in developing strategy of using Anatolian guard dogs to protect livestock from predation by Cheetahs and thus reduce human-Cheetah conflict outside of protected areas.

Cheetahs occurring in fenced reserves

The Endangered Wildlife Trust has been involved in a project aimed at assessing the ecological impact of Cheetahs in small fenced reserves, using Jubatus Game Reserve as a case-study. The Kwandwe Cheetah Project (Charlene Bissett) has focussed on assessing the ecology of Cheetahs reintroduced into small fenced reserves. Kenneth Buk is starting a PhD at Tshwane University of Technology (in collaboration with De Wildt) on Cheetahs relocated into metapopulation reserves. De Wildt run a project with Monate Game Lodge to 're-wild' wild born cubs that have been taken from the wild for a variety of reasons (e.g. if their mother was killed, or if the cubs were captured by farmers, etc).

During April 2009, a population and habitat viability assessment (PHVA) was conducted for Cheetahs in South Africa, hosted by the Endangered Wildlife Trust in conjunction with the Conservation Breeding Specialist Group of the IUCN. The primary focus of the PHVA workshop was to provide the technical basis for coordinating the reintroduction of Cheetahs and management of reintroduced subpopulations such that they form a managed metapopulation.

A metapopulation management strategy for Cheetahs has since been drafted as part of the PHVA workshop report (Lindsey *et al.* 2009 in Daly *et al*. 2009). An advisory group has been established to coordinate the establishment and management of the metapopulation.

Captive Cheetahs

The University of Pretoria, in conjunction with De Wildt is conducting a project aimed at assessing correlations between fitness and genomic diversity in captive populations of Cheetahs. The University of the Free State (Antoinette Kotze) is developing a National Genetic Database (DNA profiling), which involves microsatellite genotyping with 16 markers for wild and captive animals. Nkabeng Maruping has just completed the field work phase of her MSc at the Centre for Wildlife Management, University of Pretoria on a project designed to assess the potential for captive bred Cheetahs to be released into the wild (in collaboration with De Wildt and Makulu-Makete Game Reserve).

General education and outreach

Several efforts have been made to educate the public and raise awareness of conservation issues involving Cheetahs through the use of various methods, including ambassador Cheetahs (e.g. Cheetah Outreach; Cango Wildlife Ranch; Moholoholo Education Programme, De Wildt Education Outreach).

3.5.2 Wild Dogs

Metapopulation

The focus of conservation activity involving Wild Dogs during the last ten years has been the development of a national managed metapopulation. In 1998 following a PHVA workshop in Pretoria, a metapopulation management plan was developed with the objective of establishing at least nine packs of Wild Dogs in a network of fenced reserves, linked by management (Mills *et al.* 1998, Davies-Mostert *et al.* 2009). The Wild Dog Advisory Group South Africa (WAG-SA), comprising a body of experts, national and provincial government representatives, and reserve owners and managers, oversees the management of the metapopulation of Wild Dogs (Chairperson: Harriet Davies-Mostert). The target size for the metapopulation of Wild Dogs was exceeded in 2002 (Lindsey *et al.* 2005, Davies-Mostert *et al.* 2009). Wild Dogs are actively monitored in at least three of the metapopulation reserves, including the De Beers Venetia Limpopo Game Reserve, Hluhluwe-iMfolozi GR and Mkhuze GR.

Kruger NP

Wild Dogs in Kruger National Park (KNP) were studied intensively during the 1990s by Dr Gus Mills (Creel, Mills & McNutt 2004) and are monitored with the use of a photographic survey conducted by the Endangered Wildlife Trust every five years (Maddock 1989; Maddock & Mills 1994; Wilkinson 1995; Davies 2000; Kemp & Mills 2005).

Free-ranging Wild Dogs occurring outside of protected areas

The Endangered Wildlife Trust is in the process of conducting a census of the population of Wild Dogs occurring outside of protected areas, to replicate that conducted by Lindsey *et al.* (2004) five years ago. In addition, an education and outreach programme has been developed by the Endangered Wildlife Trust with project partners Ezemvelo KZN Wildlife and the Smithsonian Institution, in northern KwaZulu-Natal to raise awareness among communities and ranchers concerning the conservation status of Wild Dogs (Coordinator; Brendan Whittington-Jones). The objective of that project to is to increase tolerance of land holders towards Wild Dogs and improve the prospects for conserving Wild Dogs outside of protected areas.

SECTION 4. Conservation planning methodology

4.1 Developing the regional conservation strategy

Cheetahs and Wild Dogs share a number of ecological similarities and face similar threats. Both species are wide ranging and occur at naturally low densities, even in protected areas. Cheetahs and Wild Dogs are both adversely affected by competition with other large predators, and both are declining in number, primarily due to persecution by humans. Due to the wide-ranging nature of Cheetahs and Wild Dogs, effective conservation requires cooperation among neighbouring countries. In recognition of these factors, the IUCN, Wildlife Conservation Society and Zoological Society of London hosted a series of regional workshops to develop coordinated conservation strategies. Following the development of and agreement on a regional conservation strategy, national conservation action planning meetings for Cheetahs and Wild Dogs will be held in each range state. Following the national meetings, national conservation strategies will be developed in line with the regional strategy while addressing the circumstances specific to each country.

The southern African conservation action planning meeting was held in Jwaneng in Botswana during December 2007, at which the regional conservation strategy was developed (Annex 1). The regional workshop and development of the conservation strategy involved the following key components:

- *Engagement of stakeholders:* key individuals and institutions including government authorities, species specialists and relevant NGOs were involved in the strategic planning process.
- *Summary of knowledge:* a mapping process during the workshop established up-to-date information on the status and distribution of both species, providing essential information for the development of the strategic plan.
- *Problem analysis:* a problem analysis was conducted to identify threats, gaps and constraints impacting participants' ability to conserve Cheetahs and Wild Dogs, providing information critical for the development of the objectives of the strategic plan.
- *Strategic plan:* a cascading plan was constructed, commencing with a vision, a goal, a series of objectives devised to meet the goal, and finally a number of targets and activities designed to address each objective (Annex 1).

4.1.1 The strategic planning process for developing the regional strategy

The regional strategic planning process was made up of six key stages:

The development of a vision

A long term vision was developed to form the guiding purpose for the strategic plan over the next 25-50 years. It was intended to reflect an optimistic, but realistic, view of the future of the conservation of Cheetahs and Wild Dogs and to provide a source of inspiration. The agreed vision was:

Secure viable populations of Cheetahs and Wild Dogs across a range of ecosystems, that successfully coexist with, and are valued by, the people of southern Africa

The development of a goal

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, achievable and measurable. The goal was finalised as:

Improve the status of Cheetahs and Wild Dogs, and secure additional viable populations across their range in southern Africa

A problem analysis

There were very few problems judged to be specific to Cheetahs or Wild Dogs. Disease was listed as a threat that could impact populations of Wild Dogs but which was not known to have serious impacts on wild populations of Cheetahs. Conversely, the captive trade and hunting for the skin trade were listed as threats that could impact populations of Cheetahs but which were not known to have any impact on populations of Wild Dogs. Overall, the problem analysis clearly demonstrated that there were few threats, gaps or constraints which 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 influence due to the potential for achieving conservation benefits for two species rather than one.

The development of objectives

The objectives fell into eight themes (Annex 1):

- *Capacity development*: to address lack of capacity within the region to permit the effective conservation of the two species, their habitat and prey base.
- *Knowledge and information*: to address the need for information regarding the conservation of the two species to guide effective management and policy.
- *Information transfer*: to ensure that all information available is effectively disseminated among stakeholders, and made available to all levels of management.
- *Coexistence*: to address problems relating to coexistence of people and domestic animals with Cheetahs, Wild Dogs, and their prey.
- *Land use*: to address and understand the impacts (positive and negative) of different land uses on the survival of Cheetahs and Wild Dogs.
- *Political commitment*: to address problems arising from a lack of political awareness and commitment to the conservation of Cheetahs and Wild Dogs.
- *Policy and legislation*: to address problems arising from non-existent, inadequate or inappropriate policies and legal frameworks to enable effective conservation of Cheetahs and Wild Dogs.

- *National planning*: to ensure that the regional strategy objectives are achieved and are translated into national management plans to enable each country to introduce measures to conserve Cheetahs and Wild Dogs.

The development of a number of targets to address each objective

Each objective was associated with 1-4 targets (Annex 1). The targets were designed such that the objective would be met if all of the targets were achieved. Targets were carefully designed to be specific, measurable, achievable, realistic and time-lined.

The development of a number of activities to address each target

The activities formed the final step in the plan, and were even more specific than the targets, listing actions that needed to be carried out to meet each target (Annex 1). Activities were designed to be sufficiently general to cover the entire southern African region such that they could be applied locally at national action planning workshops.

SECTION 5. Developing the National Conservation Action Plan

In June 2009, a National Conservation Action Planning (NCAP) meeting was convened at Bela Bela in Limpopo involving stakeholders from national government, SANParks, provincial nature conservation authorities, relevant non-governmental organisations, Wildlife Ranching South Africa, and private reserves involved in the conservation of Cheetahs and Wild Dogs. The purpose of the NCAP meeting was to develop a coordinated strategy for the conservation of Cheetahs and Wild Dogs in South Africa following input from relevant stakeholders, aligned with the regional conservation strategy.

5.1 National vision

During the meeting, participants discussed the regional vision and debated necessary adjustments required to tailor it to the South African context. Key among these discussions were: the need to emphasize the diversity of land uses existing in South Africa; the need to conserve or re-establish the ecological role and relationships of Cheetahs and Wild Dogs; and, the importance of achieving successful (harmonious) co-existence between people and Cheetahs / Wild Dogs, related in part to value attributed to Cheetahs / Wild Dogs.

> *Secure, viable populations of Cheetahs and Wild Dogs within a matrix of land uses, that contribute to ecosystem integrity, which coexist with, and are valued by, the people of South Africa.*

5.2 National goal

Participants discussed the regional goal in the context of South Africa, and once again the discussion centred on the diversity of land uses within Cheetah and Wild Dog distribution ranges, and the need to improve the status of Cheetahs and Wild Dogs across all suitable areas. In this context the term "status" was assumed to incorporate principles such as coexistence, viable population size, the importance of these species for ecosystem functioning, and their ability to contribute economically. Participants felt strongly that there was a need to promote the development of free-ranging populations with a move towards less intensive management systems wherever possible. The regional goal was revised to capture the matrix of land uses unique to South Africa.

> *Improve the status[1] of Cheetahs and Wild Dogs across a matrix of land uses of suitable habitat within their historical range in South Africa.*

5.3 Objectives, targets and activities

Objectives, targets and activities are listed in the tables below. Please see the list of abbreviations used in the tables, at the beginning of this document.

[1] Incorporating population size viability and ecological functionality.

Objective 1. Capacity building

Develop capacity in all aspects of the conservation of Cheetahs and Wild Dogs in South Africa

Target	Activity	Rank	Responsible party	Time Frame (Years)	Impacts	Resource required	Incentives	Verifiable indicators
1.1 Identify gaps in capacity within key areas for the conservation of CHOGs in SA [2]	1.1.1 Employ someone to identify and quantify gaps in key areas and establish their effects on the conservation of CHOGs	1	Research institutions (TUT, UP, Rhodes, UCT, UKZN, Wits)	2	Understanding and ability to address short comings in conserving CHOGs	Funding for salary for consultant or researcher, vehicle and general operating costs	Addressing lack of capacity for achieving conservation of CHOGs	Research report with recommendations
	1.1.2 Prioritise and address the identified gaps	2	EWT, WWF	2	Accelerated impact of efforts to conserve CHOGs	Funding for salary for consultant or researcher to compile report and complete priority listing	Priority-directed research/action with maximum conservation impact	Priority list and report

[2] To reduce wordage in these activity tables CHOGs was chosen as the abbreviated form for Cheetahs and Wild Dogs

Target	Activity	Rank	Responsible party	Time Frame (Years)	Impacts	Resource required	Incentives	Verifiable indicators
1.2 Create awareness and develop skills in conflict resolution within relevant government departments and affected landowners	1.2.1 Hold one workshop in each province on conflict resolution (perhaps through the SAWC wildlife conflict management course)	1	EWT / WCPG in collaboration with SAWC short course programme. Provincial authority participation to carry this forward. Cheetah Outreach.	1	Increase in trained staff in conflict resolution in government departments	Funding for workshops	Improved service delivery, increased confidence in work place, more effective conflict resolution	1) Number of people graduating from training course, 2) measured differences in ability to handle conflict management before and after the course
	1.2.2 Hold a course to develop regional training capacity (training of trainers) in each province	2	EWT / WCPG in collaboration with SAWC short course programme. Provincial authority participation to carry this forward.	2	Cascade effect of transfer of knowledge	Funding for training	Improved service delivery, increased confidence in work place, more effective conflict resolution, empower departments to develop internal capacity	1) Number of people graduating from training courses, 2) measured differences in ability to handle conflict management before and after the course

Target	Activity	Rank	Responsible party	Time Frame (Years)	Impacts	Resource required	Incentives	Verifiable indicators
1.3 A network of programmes and institutions to develop capacity in: 1) research and monitoring, 2) education and outreach and 3) policy and advocacy	1.3.1 Create and locate a domain for a database of all relevant programmes, organisations, institutions, etc involved in 1) research and monitoring, 2) education and outreach and 3) policy and advocacy that are relevant to conservation of CHOGs	1	EWT ITFCWG, Cheetah Outreach	1	Increased communication and co-ordination positively influencing conservation planning and increasing management effectiveness	Funding for database housing, domain, maintenance, etc. Funding salary for personnel to develop database.	Improved networking, communication and streamlining conservation efforts for CHOGs	Number of database members
	1.3.2 Mobilise database members to actively participate in the network	2	EWT ITFCWG	1	Increased communication and co-ordination positively influencing conservation planning and increasing management effectiveness	Funding for database housing, domain, maintenance, etc. Funding salary for personnel to maintain database.	Improved networking, communication and streamlining conservation efforts for CHOGs	Number of database members
	1.3.3 Enable public access by creation of a blog site	3	EWT ITFCWG	1	Increased public awareness and contributions towards conservation of CHOGs	Funding for database housing, domain, maintenance, etc. Funding salary for personnel to maintain database	Improved networking, communication and streamlining conservation efforts for CHOGs	1) Number of site visits by public (i.e. non-members), 2) number of contributions to the blog

Target	Activity	Rank	Responsible party	Time Frame (Years)	Impacts	Resource required	Incentives	Verifiable indicators
1.4 Promote responsible land use through influencing relevant retailers and consumers to support environmentally and sustainable, responsible producers	1.4.1 Inform consumers (hunters, eco-tourists, public, etc) through appropriate media on environmentally responsible consumption	1	EWT CCG, EWT WCPG, Cheetah Outreach, WWF	2 and ongoing	More responsible land use improves range conditions for CHOGs	Funding for publication in magazines, TV, etc. Salary for marketing person to develop a marketing strategy.	Informed, concerned public	1) Attitude changes over time, 2) reduced conflict, 3) sales figures of predator-friendly products
	1.4.2 Provide information to existing structures (e.g. Green Choice programme) on relevant issues relating to environmentally responsible land use practices that affect conservation of CHOGs	2	EWT CCG, EWT WCPG, Cheetah Outreach, WWF as primary driver	2 and ongoing	More responsible land use improves range conditions for CHOGs	Funding for individual (salary, computer, travel subsistence etc) to initiate and facilitate effective communication between NGO's and the programmes.	Informed, concerned public and continually informed programmes (e.g. Green Choice), more effective incentives	1) Attitude changes over time, 2) reduced conflict, 3) sales figures of predator-friendly products

Objective 2. Research

Improve knowledge of the conservation biology of Cheetahs and Wild Dogs across South Africa

Target	Activity	Rank	Responsible party	Time Frame (Years)	Impacts	Resource required	Incentives	Verifiable indicators
2.1 Generate and disseminate regionally standardised, quantitative knowledge of conflict, threats and their drivers and mitigation across South Africa	2.1.1 Compile available data into a national database on conflict, threats and their mitigation and, where possible, collate in standardised formats	1	EWT-WCPG	1, ongoing	Direct future knowledge generation for the conservation of CHOGs to improve cost efficiency of mitigation	6-month position to develop the database	To have up-to-date data available at all times	Database created and summary data published annually
	2.1.2 Organise and hold a workshop to review national information and identify shortfalls in existing knowledge about conflict, threats and their mitigation	2	EWT-WCPG	1.5	As above	Workshop costs including production of workshop report	To ensure data are correct and what are needed	Workshop held and report produced
	2.1.3 Initiate studies (field studies, surveys, questionnaires and existing data) to quantify conflict, threats, their drivers and mitigation (including cost-benefit ratios), and effects on population	3	EWT-CCG, universities	2, ongoing	Pre and post-graduate capacity building and knowledge generation	Project costs as necessary	Higher degree training and possible publications	Studies initiated and completed. Knowledge gaps filled (identified through annual summary data – see 2.1.1)

Target	Activity	Rank	Responsible party	Time Frame (Years)	Impacts	Resource required	Incentives	Verifiable indicators
	2.1.4 Disseminate knowledge and liaise with stakeholders regarding conflict, threats, their drivers and mitigation to all relevant stakeholders	5	All contributors, EWT-WPCG	Ongoing	Broader understanding of conservation issues relating to CHOGs, resulting in better management and added value to people	Printing costs for publications; workshop and meeting costs	As above	Peer-reviewed publications and popular articles in public domain; farmer's days and workshops held
2.2 Acquire information about spatial and feeding ecology of resident and dispersing CHOGs	2.2.1 Initiate and continue field studies on natural dispersal mechanisms in both species, including factors influencing dispersal success and patterns	1	EWT-CCG, CWM, WRMRG, SI	1	Post-graduate capacity building and knowledge generation	Project costs including transport, stipends / salaries, remote tracking. Estimate: R400-500K per project per year.	As above	At least 3 projects initiated by 2010 and completed by 2014
	2.2.2 Compile available data and where necessary initiate studies on spatial and feeding ecology of CHOGs in different areas	2	(compile) **TUT, WAG**; (initiate) TUT, WRMRG, others	Compile (1); initiate studies (2)	As above	3-month position to compile data for each species (or student posts); project costs (see above for examples)	As above	Database completed by end of 2010; studies initiated and completed by 2014

Target	Activity	Rank	Responsible party	Time Frame (Years)	Impacts	Resource required	Incentives	Verifiable indicators
2.3 Acquire information about the status and distribution of Cheetahs and Wild Dogs across South Africa	2.3.1 Create and contribute to a national Cheetah and Wild Dog atlas; ongoing [3]	1	(create) **EWT-CCG**, WAG, CAG; (contribute)	Create (2010); contribute (ongoing)	Broader awareness of the conservation issues facing CHOGs	6-month position to develop Atlas (component of broader carnivore atlas programme); part-time position to maintain atlas	Exposure for participants through competitions (e.g. best photo)	Atlas database structure developed and existing data entered by 2010
	2.3.2 Contribute to the development of regionally standardised monitoring and field techniques for studies on CHOGs	2	**WAG, CAG** and participating institutions	2011	Knowledge that is regionally comparable in order to gain insight into the underlying processes affecting the conservation of CHOGs	Voluntary contributions from WAG and CAG members and other parties		Monitoring report prepared
	2.3.3 Assess and identify recoverable range for factors likely to influence recolonisation (natural or artificial)	3	**WAG**, **TUT**, CAG and participating institutions	2011	Post-graduate capacity building and knowledge generation	Costs of workshops involving specialists for each species		Recoverable range mapped and assessed by 2011

[3] NOTE FOR THE INFORMATION TRANSFER OBJECTIVE: Need to encourage sighting reports.

Target	Activity	Rank	Responsible party	Time Frame (Years)	Impacts	Resource required	Incentives	Verifiable indicators
	2.3.4 Maintain and expand long term monitoring programmes of populations of CHOGs in resident range	4	All	Ongoing	Post-graduate capacity building and knowledge generation	Project costs associated with monitoring programmes. Estimated at R400-500K per project per year	Higher degree training and possible publications	Monitoring reports produced with recommendations
2.4 Acquire information necessary for the effective establishment and management of CHOGs in fenced reserves in South Africa	2.4.1 Compile available data on populations of CHOGs on fenced reserves and where necessary initiate studies directed at determining the suitability of subpopulation sites, including: a. Predator-prey dynamics; b. Socio-ecological studies; c. Physical characteristics such as size, topography and vegetation; d. Metapopulation viability studies	1	(compile) **TUT**, **WAG**, CAG; (initiate) all	Compile (end 2010); initiate (as necessary)	Post-graduate capacity building and knowledge generation	Post-graduate student posts; field costs to set up projects	Higher degree training and possible publications	PhD study on Cheetahs completed; knowledge gaps for CHOGs identified; relevant studies initiated and completed; recommendations available

Target	Activity	Rank	Responsible party	Time Frame (Years)	Impacts	Resource required	Incentives	Verifiable indicators
	2.4.2 Initiate and update cost-benefit analyses for the reintroduction of Cheetahs and Wild Dogs in fenced reserves	2	TUT, EWT-CCG	2011	Post-graduate capacity building and knowledge generation	Post-graduate student posts; academic collaboration	Higher degree training and possible publications	PhD study on Cheetahs completed; publications produced for both species

Objective 3. Information transfer

Develop and implement mechanisms for the transfer of information relevant to the conservation of Cheetahs and Wild Dogs and ensure active commitment of stakeholders

Target	Activity	Rank	Responsible party	Time Frame (Years)	Impacts	Resource required	Incentives	Verifiable indicators
3.1 Identify relevant costs and benefits to general public, local communities, governments, and landowners	3.1.1 Hold meetings, workshops and face-to-face interactions with communities, landowners and government to share information to identify relevant benefits and cost mitigation	1	EWT	1, ongoing	Awareness of costs and benefits associated with conservation of CHOGs	Transport, accommodation, visual aids, trained staff	Resolve lack of awareness of costs and benefits associated with conserving CHOGs	Meetings and workshops held

Target	Activity	Rank	Responsible party	Time Frame (Years)	Impacts	Resource required	Incentives	Verifiable indicators
	3.1.2 Conduct literature review to consolidate information on the potential costs and benefits of conserving CHOGs across the region	2	EWT	1	Consolidation of available information	Access to internet, libraries	Resolve lack of consolidated information on the costs and benefits of conserving CHOGs	Report produced
3.2. Promote increased national awareness of the status of CHOGs across SA	3.2.1 Establish teacher competitions using CHOGs as learning tools at local and national levels to enhance and highlight conservation	1	EWT / Cheetah Outreach / Ministry of Education / ECO Schools	2, ongoing	Increased awareness	Qualified educators	Resolve lack of awareness of conservation issues relating to CHOGs	Teacher competitions established
	3.2.2 Enhance and share curricula regarding CHOGs via zoos and teacher training partnerships	2	PAAZAB / EWT / Cheetah Outreach / Ministry of Education / ECO Schools	2, ongoing	Increased awareness	Trained educators	Resolve the lack of educators trained in teaching issues related to conservation of CHOGs	Educators trained
	3.2.3 Develop activity materials that utilise national establishments targeted at families with children	3	EWT / Cheetah Outreach	Ongoing	Increased awareness of conservation issues relating to CHOGs	Salary for someone to develop materials, production of materials thereafter	Lack of awareness of issues relating to conservation of CHOGs	Activity materials produced and distributed

Target	Activity	Rank	Responsible party	Time Frame (Years)	Impacts	Resource required	Incentives	Verifiable indicators
	3.2.4 Encourage twining of sports teams, clubs and groups named after CHOGs at all levels	4	All stakeholders	Ongoing	Increased awareness of conservation issues relating to CHOGs	Opportunities	Lack of awareness of issues relating to conservation of CHOGs	Teams named after CHOGs
3.3 Develop multimedia projects addressing issues gathered from previous target across SA, building on the best existing material	3.3.1 Develop web based interactive reporting of sightings, data, findings and activities relevant to conservation of CHOGs	1	EWT	1, ongoing	Interactive media produced enabling greater participation of public in conservation of CHOGs	Salary for IT expert and for ongoing maintenance of database	Lack of means for public to engage and contribute to conservation of CHOGs	Multi-media projects developed and functioning
	3.3.2 Develop and use posters, leaflets, radio, TV, video and theatre groups to disseminate information locally	2	All stakeholders	Ongoing	Increased awareness among public of issues relating to conservation of CHOGs	Salary for person to develop media, production of materials	To resolve current lack of publicity of conservation issues relating to CHOGs	Media produced

Objective 4. Mitigating conflict

Minimise and manage conflict, and promote coexistence between Cheetahs, Wild Dogs and people across South Africa.

Target	Activity	Rank	Responsible party	Time Frame (Years)	Impacts	Resource required	Incentives	Verifiable indicators
4.1 Measurably increase perceived intrinsic and economic value of CHOGs to all stakeholders	4.1.1 Quantify and monitor the perceived intrinsic and economic value of CHOGs to all stakeholders	1	EWT, Universities	3	Baseline information to eliminate misconceptions	Funding, student, vehicle etc	Such knowledge is a crucial precursor to mitigation efforts	Report produced
	4.1.2 Develop value-added activities appropriate to SA	2	EWT, Wildlife and Farming Associations, Cheetah Outreach and National tourism body	5	Land owners motivated to conserve CHOGs	Funding, coordinator	Easier to motivate for protection of the species if financial benefits associated	Increased incomes generated, increase in tourist numbers to specific locations
	4.1.3 Where relevant, develop self-sustaining community schemes that offset the costs of, and internalise the responsibilities for conflict	2	Provincial conservation authorities, EWT.	3	Community benefit, positive image for the species, positive link with conservation initiatives, proactive not reactive management	Funding, coordinator, vehicle	Reduced losses to predators mitigation of other reason for losses	Number of local projects initiated and progressing. Reduction in livestock losses and conflict situations without reduction predator numbers

Target	Activity	Rank	Responsible party	Time Frame (Years)	Impacts	Resource required	Incentives	Verifiable indicators
	4.1.4 Where appropriate, develop income generation and capacity development projects linked to conservation of CHOGs	3	Provincial conservation authorities with community levies, local entrepreneurs.	3	Community benefit, positive image for the species, positive link with conservation initiatives, proactive not reactive management	Funding, coordinator, vehicle	Easier to motivate for protection of the species if financial benefits associated	Increased employment and sustainable initiatives started
4.2 Continuously inform stakeholders of amended legislation related to CHOGs and promote feedback on non-compliance from stakeholders in SA	4.2.1 Disseminate information regarding amended legislation through structures, organizations and associations	1	National and Provincial conservation authorities, EWT, Wildlife and Farming Associations,	Ongoing	Allows stakeholders to adjust behaviour in line with changes in legislation, minimising conflict with authorities to the benefit of species	Funding for logistical support, media including handouts and radio, coordinator	Reduce conflict situations with law enforcement	Record of amendments to legislation, and media used to disseminate information
	4.2.2 Source and encourage feedback of information on non-compliance to legislation through structures, organisations and associations	1	National and Provincial conservation authorities, EWT, Wildlife and Farming Associations,	Ongoing	Enables authorities to investigate non-compliance; forces land owners to be more reticent about non-compliance, encourages those already compliant	Funding for logistical support, informer fees/rewards	Discourage non compliance	Informer fees paid out, reports received, convictions for non-compliance

Target	Activity	Rank	Responsible party	Time Frame (Years)	Impacts	Resource required	Incentives	Verifiable indicators
	4.2.3 Encourage compliance to legislation through existing agricultural and wildlife structures, organisations and associations	2	National and Provincial conservation authorities, EWT, Wildlife and Farming Associations	Ongoing	Will make sure organisations aware of legislation, the need to adhere to it and promote cooperation between landowners and authorities	Funding for management of memberships and screening for compliance	Additional benefits associated with membership of productive structures	Number of organisations committed to ensuring compliance
	4.2.4 Implement a reward initiative for predator-friendly farming practises (e.g. land tax benefits, green labelling, floating trophies etc)	2	National and Provincial conservation authorities, EWT, Wildlife and Farming Associations, Cheetah Outreach	3	Those carrying out predator friend initiatives get rewarded, thus encouraging others to also act in a manner conducive to conservation of CHOGs	Funding for logistical support, legal fees to develop and promote tax incentives, coordinator to drive and audit green labelling, a trophy, media support	To resolve lack of incentives for farming practices conducive to conservation of CHOGs	Incentive schemes initiated and legislated. Farms receiving benefits, farms audited and proven "predator friendly", rewarded.
4.3 Strictly regulate and monitor legal lethal control of CHOGs, and stop all illegal lethal control of, CHOGs in SA	4.3.1 Determine the scale of lethal control of CHOGs in SA	1	National conservation authority, EWT, and Universities.	3	Baseline information to understand scale of and impact of legal killing	Funding for logistical support, student, additional training for law enforcement officers and court officials	Knowledge of facts is a precursor to mitigation efforts	Final report, documentation of permits issued

Target	Activity	Rank	Responsible party	Time Frame (Years)	Impacts	Resource required	Incentives	Verifiable indicators
	4.3.2 Strictly regulate and monitor legal killing on a national level and cease legal killing of IUCN "endangered" and "critically endangered" species	1	National and Provincial conservation authorities, EWT, Wildlife and Farming Associations	3	Ensure that any permitted hunting is done legally and to the overall benefit of the species provincially and nationally	Funding for logistical support, additional training for law enforcement officers and court officials, additional officers	Reduction in numbers of CHOGs killed	Documentation of rate of legal killing, number of perpetrators of illegal killing prosecuted
	4.3.3 Clarify and lobby for comprehensive enforcement of laws pertinent to killing of CHOGs across SA	1	Provincial authority, EWT, and Universities	Ongoing	Avoid legal loopholes which encourage lethal control, ensuring prosecution of those contravening legislation	Funding for logistical support and legal team	Standardized laws easier to enforce hopefully requiring less bureaucracy	Amendment of laws provincially or nationally if required, successful conviction of individuals contravening legislation
	4.3.4 Clarify extent of actual versus perceived losses caused by CHOGs	2	Provincial authority, EWT, and Universities	2	Baseline information of eliminate misconceptions and allow conservation agencies to focus on key conflict areas with facts at hand	Funding, student, vehicle etc	Knowledge of facts, precursor to mitigation efforts	Final report

Target	Activity	Rank	Responsible party	Time Frame (Years)	Impacts	Resource required	Incentives	Verifiable indicators
	4.3.5 Educate relevant stakeholders about livestock husbandry practices proven to reduce depredation	2	Provincial authority, EWT, Universities, Cheetah Outreach	Ongoing	Benefits stakeholders and reduces stock loss and persecution of CHOGs	Funding for logistical support, vehicle, field workers, coordinator, materials/animals proven to provide non-lethal alternatives	Poor husbandry and resultant stock losses currently motivate lethal control of CHOGs	Number of stakeholders visit/educated; number of stakeholders who have actively changed husbandry practices
	4.3.6 Implement human-wildlife conflict rapid response teams to react quickly and effectively to conflict situations in SA	2	Provincial authority, EWT, Cheetah Outreach	1	Shows commitment to stakeholders from conservation NGOs and authorities; minimises further negative interaction between humans and predators	Funding for logistical support, staff, vehicles, access to veterinarians if required, quick access to compensation fund if mandated by local authority	Lack of response to incidents of human-wildlife conflict currently incites lethal control of CHOGs	Conflict situations investigated
4.4 Substantially reduce levels of incidental mortality in CHOGs in SA	4.4.1 Clarify and monitor extent of incidental mortality of CHOGs across SA	1	Provincial authority, EWT, and Universities	2	Baseline information to gauge actual versus perceived impact	Funding, student, vehicle etc	Knowledge of facts, precursor to mitigation efforts	Final report

Target	Activity	Rank	Responsible party	Time Frame (Years)	Impacts	Resource required	Incentives	Verifiable indicators
	4.4.2 Substantially reduce snaring mortality of CHOGs through initiatives such as anti-poaching and community education	2	Provincial Authority, and private reserves/conservancies	2	Reduction in losses of individual animals and reduces pack splitting in some circumstances	Funding for logistical support and increased training of anti-poaching units	Snaring is currently a significant threat to Wild Dogs and potentially Cheetahs in parts of SA	Snares removed, number of poaching incidents shown to decline, effective anti-snare collars developed, communities visited and educated
	4.4.3 Identify and remove where possible, sources of snare-wire	3	National and Provincial conservation authorities, and EWT, Wildlife and Farming Associations,	Ongoing	Reduced impact on CHOGs and other wildlife	Funding for logistical support	Reduction in CHOGs killed in snares	Wire removed, agricultural and industry representatives educated on significance of wire as a threat to wildlife

Target	Activity	Rank	Responsible party	Time Frame (Years)	Impacts	Resource required	Incentives	Verifiable indicators
	4.4.4 Initiate programmes effective at managing diseases that threaten the population viability of CHOGs	3	Provincial conservation authority veterinarians, State veterinarians, EWT, and Universities	2	Reduces likelihood of catastrophic events linked to disease	Funding for logistical support, vaccines, student to monitor threats	Diseases are a significant threat to Wild Dogs	Identification of hotspots for disease, number of domestic animals vaccinated, number of wild species vaccinated, losses to disease monitored
	4.4.5 Implement targeted, enforceable programmes which reduce mortalities of CHOGs on roads	3	Provincial Conservation Authorities, Department of Roads and Transport, EWT	3	Reduces impact of a significant anthropogenic source of mortality for CHOGs	Funding for logistical support to identify mortality hotspots and lobby government agencies accordingly, and to pay a coordinator	Road kills are a significant cause of mortality for CHOGs	Current losses quantified, and compared to the situation when mitigation measures have been established
	4.4.6 Encourage land use practices conducive to the conservation of CHOGs (see objective 5)	4						

Objective 5. Land use planning

Minimise the adverse effects of existing patterns in land use and promote practices conducive to the conservation of Cheetahs and Wild dogs

Target	Activity	Rank	Responsible party	Time Frame (Years)	Impacts	Resource required	Incentives	Verifiable indicators
5.1 Evaluate current land use patterns and assess how these relate to the conservation of CHOGs by identifying determinants of success	5.1.1 Implement research on current trends in land use and their relationship to the conservation of CHOGs	1	Universities / EWT	2	Increased awareness of stakeholders of relationship between land uses and tolerance	Funds for research, salary, transport, communications	Lack of understanding of impact of land uses on human tolerance to CHOGs inhibits effective conservation	Report produced
	5.1.2 Gain consensus on minimum required size of reserves, conservancies, community parks, biosphere reserves, or stewardship programmes, for effective conservation of CHOGs	2	EWT	1	Understanding and consensus on scale issues related to effective conservation of CHOGs	Salaries, transport, communications	Lack of understanding of impact of land uses on human tolerance to CHOGs inhibits effective conservation	Management recommendation produced and endorsed by key stakeholders
	5.1.3 Increase awareness of the influence of land uses on the prospects for conserving CHOGs among key stakeholders	3	EWT	2.5	Increased awareness of stakeholders of relationship between land uses and tolerance	Funds for salary, transport and communications	Lack of understanding of impact of land uses on human tolerance to CHOGs inhibits effective conservation	Workshops held, popular articles produced

Target	Activity	Rank	Responsible party	Time Frame (Years)	Impacts	Resource required	Incentives	Verifiable indicators
5.2 Promote the formation of conservancies, biosphere reserves and stewardship programmes on private and community land by increasing awareness of the associated benefits	5.2.1 Develop an information booklet detailing conservancy models and illustrating the potential benefits of multi-owner wildlife management units to commercial and communal landholders	1	EWT	1	Increased awareness of benefits of conservancies among stakeholders	Salary, printing	Lack of understanding of the benefits of multi-owner wildlife management units stifles their formation	booklet produced
	5.2.2 Publicise benefits associated with multi-owner wildlife management units through workshops, popular media	2	EWT	2	Increased awareness of benefits of conservancies among stakeholders (including landowners, communities and government)	Salary, communications, transport, printing	Lack of understanding of the benefits of multi-owner wildlife management units stifles their formation	Workshops held, popular articles written
	5.2.3 Identify key role players in each province able to drive development of multi-owner management units	3	EWT	1	Role players co-opted	Salary, communications	Lack of role players stifles the formation of multi-owner wildlife management units	Role players identified and co-opted, will responsibilities outlined and agreed on

Target	Activity	Rank	Responsible party	Time Frame (Years)	Impacts	Resource required	Incentives	Verifiable indicators
	5.2.4 Identify realistic strategies for promoting multi-owner wildlife management unit formation (e.g. tax breaks and other financial incentives, green labelling, floating trophies, etc)	4	EWT	1	Barriers to the formation of multi-owner wildlife management units removed	Salaries, communications	There are currently barriers which discourage the formation of multi-owner wildlife management units (e.g. start-up costs, lack of knowledge of their benefits)	Drafted strategy documents
	5.2.5 Lobby government to accept and support tax incentives to incentivize the formation of multi-owner wildlife management units	5	EWT	2	Tax incentive schemes accepted and implemented	Salaries, communications, printing, transport	Start-up costs currently act as a barrier to the formation of multi-owner wildlife management units, which may be off-set by tax breaks	Tax incentive schemes initiated
	5.2.6 Monitor the development of multi owner wildlife management units and their influence on the conservation, of CHOGs	6	EWT	Ongoing	Increased understanding of trends in development of multi-owner wildlife management units	Salaries, transport, communications	Trends in the development of multi-owner wildlife management units are not known, so prospects for conservation of CHOGs outside of protected areas are poorly understood	Status reports produced

Target	Activity	Rank	Responsible party	Time Frame (Years)	Impacts	Resource required	Incentives	Verifiable indicators
5.3 Promote wildlife based land uses on community land in areas with potential for the conservation of CHOGs	5.3.1 Identify areas with the greatest potential for and interest in wildlife based land uses conducive to the conservation of CHOGs in each province	1	Resource Africa?	5	Increased understanding of the areas with greatest potential for the development of wildlife-based land uses	Salaries, transport, communications	Wildlife-based land uses are more conducive to the conservation of CHOGs than those based on livestock	Document produced which can act as a basis for the development of wildlife-based land uses on community land in target areas
	5.3.2 Develop business plans in the areas of communal land with greatest potential for and interest in wildlife-based land uses conducive to the conservation, of CHOGs in each province	2	Resource Africa?	2	Basis provided for entry of communities into wildlife-based land uses	Salaries, transport, communications	Wildlife-based land uses are more conducive to the conservation of CHOGs than those based on livestock	Business plans produced
	5.3.3 Assist with preparing funding proposals to implement the business plans	3	Resource Africa?	3	Basis provided for entry of communities into wildlife-based land uses	Salaries	Wildlife-based land uses are more conducive to the conservation of CHOGs than those based on livestock	Funding obtained

Target	Activity	Rank	Responsible party	Time Frame (Years)	Impacts	Resource required	Incentives	Verifiable indicators
	5.3.4 Achieve a 20% increase in the area of community land used for wildlife-based land uses	4	Resource Africa??	10	Increased habitat availability, improved tolerance	Salaries, transport, communications	Wildlife-based land uses are more conducive to the conservation of CHOGs than those based on livestock	Land converted
	5.3.5 Monitor the development of wildlife-based land uses, and their influence on the conservation of CHOGs	5	EWT	Ongoing	Feedback for land use policy / programmes	Salaries, transport, communications	Understanding of land use trends is important for conservation planning for CHOGs	Reports produced
5.4 Encourage the retention of wildlife-based land uses during the process of land reform	5.4.1 Develop a strategy document detailing options for achieving land reform objectives while retaining wildlife-based land uses	1	EWT / Resource Africa / Government	2	Strategy for land reform related to wildlife-based land uses developed	Salaries, transport, communications	New land owners may require assistance and encouragement to adopt wildlife-based land uses, otherwise they opt to convert game farms to livestock	Strategy document written
	5.4.2 Lobby government to ensure that the retention of wildlife-based land uses is considered to be a key component of land reform	2	EWT / Resource Africa	2	Government awareness of options for land reform	Salaries, transport, communications		

Target	Activity	Rank	Responsible party	Time Frame (Years)	Impacts	Resource required	Incentives	Verifiable indicators
5.5 Encourage the retention of wildlife-based land uses during the process of land reform	5.5.1 Develop a strategy document detailing options for achieving land reform objectives while retaining wildlife-based land uses	1	EWT / Resource Africa / Government	2	Strategy for land reform related to wildlife-based land uses developed	Salaries, transport, communications	Without pro-active intervention, land reform may result in a shift from wildlife-based land uses to livestock, to the potential detriment of CHOGs	Strategy document written
	5.5.2 Lobby government to ensure that the retention of wildlife-based land uses is considered to be a key component of land reform	2	EWT / Resource Africa	2	Government support obtained for the retention of wildlife-based land uses in suitable areas during the process of land reform	Salaries, transport, communications	Without pro-active intervention, land reform may result in a shift from wildlife-based land uses to livestock, to the potential detriment of CHOGs	
5.6 Promote effective husbandry and range management to enable coexistence between people and CHOGs on livestock farms and intensive game farms	5.6.1 Develop and expand current training programmes to promote best husbandry practices throughout the country	1	Cheetah Outreach / EWT	1	Improved livestock husbandry may reduce lethal control of CHOGs	Salaries for personnel, funds for transport and communications	Conflict (and perceived conflicted) over livestock causes lethal control of CHOGs	Programmes established, and expanded geographically
	5.6.2 Promote such programmes through existing agricultural, game ranching and community organisations	2	NGOs who run the programmes	1.5	Farming techniques become more conducive to the conservation of CHOGs	Salaries, transport, communications, accommodation	Conflict (and perceived conflicted) over livestock causes lethal control of CHOGs	Programmes implemented and accepted by agricultural, farming and community organisations

Target	Activity	Rank	Responsible party	Time Frame (Years)	Impacts	Resource required	Incentives	Verifiable indicators
	5.6.3 Assess the effectiveness of new and existing livestock husbandry and range management programmes, and disseminate results	3	NGOs who run the programmes	Every 3 years	Ongoing improvement of livestock husbandry programmes	Salaries, transport, communications, accommodation	Conflict (and perceived conflicted) over livestock causes lethal control of CHOGs	Updated training manuals produced
5.7 Promote consideration of potential impacts of industrial, agricultural and residential land development on the conservation of CHOGs	5.7.1 Assess potential impacts of proposed land development on the conservation of CHOGs, identify potential mitigation strategies	1	EWT / Resource Africa	Ongoing	Understanding of current and future threats to conservation of CHOGs improved	Salaries, transport, communications	Lack of awareness of impacts of development on the conservation of CHOGs prevents consideration of such impacts during development planning	Document on threats produced

Objective 6. Political support

Improve national and provincial governmental commitment to the conservation of Cheetahs and Wild Dogs in South Africa.

Target	Activity	Rank	Responsible party	Time Frame (Years)	Impacts	Resource required	Incentives	Verifiable indicators
6.1. Ensure that SA is a signatory to existing trans-boundary agreements, including conventions, breeding programs, and species exchange. Lobby for new agreements where necessary.	6.1.1 Identify all relevant agreements with potential to promote conservation of CHOGs	1	EWT / WCS / ZSL chog coordinator (Netty Purchase)	0.08	SA becomes obliged to comply with international agreements with potentially positive impacts for the conservation of CHOGs	NBSAP Country study South Africa The Environmental Handbook	If SA is currently not a signatory on relevant transboundary agreements, this may undermine efforts to coordinate efforts to conserve CHOGs with neighbour states	Transboundary agreements identified and signed by government
	6.1.2 Lobby for signed agreements to be implemented	2	EWT	0.5	Requirements of transboundary agreements implemented	Salary, communications	Transboundary agreements will not be effective unless they are implemented	Requirements of transboundary agreements implemented
6.2. Finalize a national action plan for the conservation of CHOGs in South Africa	6.2.1 Ensure a 1st draft is submitted to attendees of the NCAP meeting by 15July 2009	1	EWT	0.08	Action Plan reviewed and views of stakeholders incorporated	Salary	Stakeholder input is required for the action plan to be accepted	Draft submitted by 15 July 2009
	6.2.2 Incorporate comments by end of July 2009	2	EWT / DEA	0.16	Final draft (pending governmental review) produced	Salary		Final draft produced 31 July 2009

Target	Activity	Rank	Responsible party	Time Frame (Years)	Impacts	Resource required	Incentives	Verifiable indicators
6.3 Convert the action plan into a biodiversity management plan for species (BMPS)	6.3.1 Develop draft BMPS by January 1 2010	1	Convert the action plan into a BMPS	0.5	BMPS for CHOGs produced	Salary	A BMPS, if endorsed by government would make compliance with the recommendations obligatory	BMPS produced
	6.3.2 Submit the BMPS to DEA for approval	2	EWT	1	Ministerial support obtained	Salary	Governmental participation is a pre-requisite for achieving government endorsement BMPS	BMPS accepted by government and signed by the minister
	6.3.3 Ensure that representatives from all relevant government departments are part of the public participation process for the BMPS	3	Identified government ambassador: NW: Vastie Jacobs NC: Eric Hermann LP: Christian Blignaut MP: Gerrie Camacho WC: Annie Beckhelling KZN: Chris Kelly GP: Rynette Coetzee FS: To be identified EC: Dan Parker	1	Governmental participation in development of the action plan	Salary	Governmental participation is a pre-requisite for achieving government endorsement BMPS	Comments from governmental representatives incorporated into the report

Target	Activity	Rank	Responsible party	Time Frame (Years)	Impacts	Resource required	Incentives	Verifiable indicators
	6.3.4 Appoint an ambassador for each province to proactively liaise with the government departments to explain the provisions and goals of the BMPS	4	Identified government ambassador: NW: Vastie Jacobs NC: Eric Hermann LP: Christian Blignaut MP: Gerrie Camacho WC: Annie Beckhelling KZN: Chris Kelly GP: Rynette Coetzee FS: To be identified EC: Dan Parker	1 year, ongoing	National and government departments understand the provisions and goals of the BMPS	Salary, communications, printing	The BMPS will not be implemented correctly unless its provisions are understood	Evidence of liaison between government champions and appropriate governmental contacts
	6.3.5 Ambassadors provide feedback on liaison with government departments to the body(ies) coordinating development of the BMPS	5	Ambassadors outlined above, NCAP coordinating body EWT / WAG-SA / CAG-SA / NCCF	Ongoing	Coordinating body(ies) kept informed of the progress achieved with increasing awareness of government of the provisions of the BMPS	Salary, communications, printing	The BMPS will not be implemented correctly unless its provisions are understood	Correspondence between ambassadors and implementing body(ies)

Target	Activity	Rank	Responsible party	Time Frame (Years)	Impacts	Resource required	Incentives	Verifiable indicators
6.4. Ensure communication among different government departments regarding planning for the implementation of the BMPS, through existing structures within provincial government (e.g. parliamentary portfolio committees)	6.4.1 Identify appropriate government structures where the provisions of the BMPS can be disseminated	1	Magdel Boshoff Anique Greyling for National departments. For the different provinces, see list of provincial ambassadors above.	0.5	Planning for the implementation of the BMPS standardized among government departments	Salary, communications	Implementation of the BMPS will be more effective given coordination among government departments	Evidence of communication and coordination among government departments
	6.4.2 Where required, solicit invitation to relevant government forums, attend forums and present basis for and provisions of the BMPS	2	Magdel Boshoff Anique Greyling for National departments. For the different provinces, see provincial ambassadors identified above	0.5	Invitations to forums obtained	Salary, communications	The provisions of the BMPS will be more effectively implemented following efforts to raise awareness at government forums	Invitations to forums obtained

Objective 7. Legislation

Review, and where necessary amend international, regional and local legislation, norms and standards, policies and protocols affecting the conservation of Cheetahs and Wild Dogs and promote the compliance thereof.

Target	Activity	Rank	Responsible party	Time Frame (Years)	Impacts	Resource required	Incentives	Verifiable indicators
7.1 Assess the relevance and efficacy of the current legislative framework pertaining to the conservation of and trade CHOGs	7.1.1 Identify and review any previous studies on the relevance and efficacy of the current legislative framework	1	EWT	2	Informed approach to possible amendments and development of legislative framework	Budget to appoint a dedicated individual to conduct a literary review and contact government and other relevant organisations to ascertain availability of relevant research/reports	Improving legislation requires a thorough understanding of the shortcoming of existing laws	Report produced
	7.1.2 Identify means to amend existing legislation, or develop new legislation following recommendations outlined in 7.1.1	2	Government and in co-operation with EWT	3	Informed basis for amendments and development of legislative framework	Time and input from expert, NGOs and government	Amendments to legislation are more likely to be accepted if preceded by thorough research	Report and/or minutes
7.2 Amendment and development of the legislative framework, if necessary	7.2.1 Convince government of the need to amend existing and legislation / or develop new legislative measures	1	EWT	3	Gain buy-in to the process of improving legislation for the conservation of CHOGs	Salaries, communications, printing, transport	Government buy-in is a crucial prerequisite for adjusting legislation	Meetings with government held

Target	Activity	Rank	Responsible party	Time Frame (Years)	Impacts	Resource required	Incentives	Verifiable indicators
	7.2.2 Participate in the process to amend and/or develop legislative measures	2	Any interested and affected party	5	Effective legislative framework regulating conservation of CHOGs in SA	Salaries, communications, printing, transport	Ensure that legislation is kept relevant and effective and that it is influenced by experts	Amended or newly developed legislation
	7.2.3Monitor the implementation of amended and / or new and/or amended legislation	3	NGOs in conjunction with government	Ongoing	Effective implementation of revised legislative framework governing the conservation of CHOGs in SA	Salaries, communications, printing	To ensure that new legislation is implemented optimally	Progress reports from government, written assessments by NGOs
7.3 Improve the capacity of issuing authorities to effectively and uniformly implement legislation relating to CHOGs	7.3.1 Undertake a study to identify and prioritise shortcomings in capacity	1	Government or NGOs	5	Capacity shortcomings identified and prioritized	Salary, communications, printing	Implementation of legislation cannot be improved without a needs analysis	Report produced
	7.3.2 Increase knowledge of legislation among enforcing agencies via information sessions and guideline documents	2	Government and in co-operation with NGOs		Capacity of government to implement legislation enhanced	Funds for holding workshops, salaries, communications	Education of enforcing agencies is required to achieve effective implementation	Successful meetings, workshops and updates on developed guideline document
	7.3.3 Increase human and technical capacity by means of appointing more personal and purchasing equipment	3	Government	3	Capacity of enforcing authorities to implement the legislative framework optimized	Dependant on the outcomes of 7.3.1. Budget to appoint more personal and purchase equipment	Ability of government departments to implement legislation is currently limited by lack of resources	Expanded Government personnel component and sufficient equipment

Target	Activity	Rank	Responsible party	Time Frame (Years)	Impacts	Resource required	Incentives	Verifiable indicators
	7.3.4 Secure funding for a formal Environmental Management Inspector (EMI) course	1	Government	3	Capacity of enforcing authorities to implement the legislative framework optimized	Budget to sponsor officials to attend EMI course	Capacity of government departments to implement legislation is hampered by a lack of specific training	Funds secured and available
	7.3.5 Motivate departments to prioritise attendance of the EMI basic and specialized courses.	2	Government and NGOs	3	Capacity of enforcing authorities to implement the legislative framework optimized	Time of relevant NGOs and government	Capacity of government departments to implement legislation is hampered by a lack of specific training	EMIs attended
7.4 Improve the capacity of judicial agencies to effectively prosecute cases of non compliance with legislation	7.4.1 Raise awareness of court officials in the nature, scope and impacts of environmental crimes	1	Government (DEA)	5	Capacity of judiciary to administer punishment in cases of non-compliance enhanced	Budget for possible awareness raising initiatives	Capacity of judiciary to implement penal code is limited by lack of awareness of the severity of impacts of environmental crimes	Workshops conducted, database with trained court officials

Target	Activity	Rank	Responsible party	Time Frame (Years)	Impacts	Resource required	Incentives	Verifiable indicators
7.5 Establish channels for effective communication and collaboration among all relevant law enforcement and conservation agencies across South Africa	7.5.1 Identify existing forums, e.g. the National Biodiversity Investigators Forum, the Coalition Against Wildlife Trafficking on a regional level and the Wildlife Forum on a national level, to increase information exchange between relevant stakeholders, including other range countries, and to monitor trafficking in CHOGs	1	EWT	5	Optimal communication and collaboration between relevant stakeholders	Budget to appoint a dedicated individual to conduct a literary review and contact government and other relevant organisations to ascertain availability of relevant research/reports	Effective law enforcement is dependent on communication among responsible agencies	Communication channels developed
	7.5.2 Establish a regional forum of law enforcement agencies and NGOs to meet annually	2	EWT in co-operation with government		Optimal communication and collaboration between relevant stakeholders	Time of NGOs and Government to attend meeting	Effective law enforcement is dependent on communication among responsible agencies	Forum established
	7.5.3 Hold national workshops, with all relevant NGOs and national agencies involved in law enforcement present	3	EWT in co-operation with government		Optimal communication and collaboration between relevant stakeholders	Time of NGOs and Government to attend meeting. Budget for workshop and travel costs.	Effective law enforcement is dependent on communication among responsible agencies	Minutes and workshop reports

Target	Activity	Rank	Responsible party	Time Frame (Years)	Impacts	Resource required	Incentives	Verifiable indicators
	7.5.4 Develop and maintain a national database of illegal activities involving CHOGs	4	Government (as per TOPS regulations)		Effective recording and dissemination of statistics on wildlife crimes	Time, IT / database expertise	Effective law enforcement is dependent on communication among responsible agencies	Operational database

Objective 8. Metapopulation management

To establish viable populations of Cheetahs and Wild Dogs within a matrix of land uses using a metapopulation approach in these species' extirpated and resident distributions

Target	Activity	Rank	Responsible party	Time Frame (Years)	Impacts	Resource required	Incentives	Verifiable indicators
8.1 A national committee to develop, coordinate and implement metapopulation management approaches	8.1.1 Support the existing WAG-SA committee	1	EWT	Ongoing	Ongoing coordination of the metapopulation of Wild Dogs ensured	Funding for meeting	Effective metapopulation management requires coordination	WAG-SA Minutes
	8.1.2 Identify terms of reference for, and prospective members of CAG-SA	2	EWT, NCCF, NCAP attendees	0.3	Responsibilities and membership of supervisory body for management of the metapopulation of Cheetahs identified	Salary for person to write terms of reference and inception document	Effective coordination of a metapopulation of Cheetahs requires establishment of an advisory body	CAG-SA inception document
	8.1.3 The CAG-SA committee meet and elect chairperson within 3 months	4	CAG-SA committee	0.3 months	Chairperson for CAG-SA elected	Voluntary contribution of human resources and funds for travel	To be effective, CAG-SA needs a chairperson to drive coordination of the metapopulation	Meeting held, chairperson selected
	8.1.4 Ensure that WAG-SA and CAG-SA fulfil terms of references	5	EWT	Annual, ongoing	Effective coordination of metapopulations ensured	Salary for person to conduct review	Ongoing effectiveness and relevance of management requires performance assessments	Annual performance reports

Target	Activity	Rank	Responsible party	Time Frame (Years)	Impacts	Resource required	Incentives	Verifiable indicators
8.2 A national model to assess the suitability of properties as potential sources, and identify existing sources, sinks and connectivity across matrices of land uses	8.2.1. Collate existing information	1	Specialist sourced by CAG-SA/WAG-SA	1	Basis for modelling produced	Funding for Post doc	Modelling not possible without input parameters	Report produced
	8.2.2 Develop mixed spatial and numerical (genetics) model	2	Specialist sourced by CAG-SA/WAG-SA	1.5	Prototype model produced	Funding for Post doc	Model produced as a basis for refinement	Prototype model produced
	8.2.3 Present draft model to national stakeholders for comments and suggestions	3	CAG-SA/WAG-SA	2	Expert input received	Funding for meeting	Acceptance of the model unlikely without stakeholder input	Meeting held
	8.2.4 Incorporate comments from national stakeholders to finalise model	4	CAG-SA/WAG-SA	2.5	Model finalized	Salary	Effective model created with widespread buy-in	Publishable scientific report
	8.2.5 Apply model to re-assess existing meta population reserves and assess potential new reserves	5	CAG-SA/WAG-SA	2.5	Model employed to improve functioning of, and expansion of metapopulations	Salary	Provide a scientific basis for the selection of reintroduction sites	Progress reports

Target	Activity	Rank	Responsible party	Time Frame (Years)	Impacts	Resource required	Incentives	Verifiable indicators
	8.2.6 Pressure (and assist where possible) provincial governments to develop a conservation plan for CHOGs and align model accordingly	6	CAG-SA/WAG-SA with government representatives	2.5	Alignment of provincial conservation management with the national strategy	Funding for meeting	Development of provincial strategies will ensure alignment with national strategy	Development of provincial strategies
8.3 Metapopulation management approaches developed and implemented through ecological management, advocacy and education by 2009 and ongoing thereafter	8.2.1 Metapopulation management plan for Cheetahs accepted by all stakeholders	1	EWT / CAG-SA	0.3	Coordinated strategy for metapopulation management of Cheetahs developed and agreed on	Salary	Conservation benefits of reintroduced populations significantly undermined if not coordinated to prevent genetic and demographic problems	Metapopulation management plan developed and agreed on
	8.2.2 All reserve owners / managers with reintroduced Cheetahs, and those planning to reintroduce Cheetahs subscribe to the metapopulation management plan	2	EWT / CAG-SA	2	Reintroduced Cheetahs form a functioning metapopulation	Salary, communications, transport, meetings	Conservation benefits of reintroduced populations significantly undermined if not coordinated to prevent genetic and demographic problems	Reserve owners / managers signed metapopulation MOU

Target	Activity	Rank	Responsible party	Time Frame (Years)	Impacts	Resource required	Incentives	Verifiable indicators
	8.2.3 Metapopulation management plan for Wild Dogs developed and accepted by all stakeholders	3	EWT / WAG-SA	1	Coordinated strategy for metapopulation management of Wild Dogs developed and agreed on	Salary	Conservation benefits of reintroduced populations significantly undermined if not coordinated to prevent genetic and demographic problems	Metapopulation management plan developed and agreed on
	8.2.4 All reserve owners / managers with reintroduced Wild Dogs, and those planning to reintroduce Wild Dogs subscribe to the metapopulation management plan	4	EWT / WAG-SA	2	Reintroduced Wild Dogs form a functioning metapopulation	Salary, communications, transport, meetings	Conservation benefits of reintroduced populations significantly undermined if not coordinated to prevent genetic and demographic problems	Reserve owners / managers signed metapopulation MOU
	8.2.5 Support activities for objectives 2,3,4,5,6	5	CAG-SA/WAG-SA	Ongoing	See relevant activities	Use model predictions and feasibility studies to predict suitable areas including education	Interventions will be more effective if focussed in line with needs	Metapopulation management approaches implemented through ecological management, advocacy and education by 2009 and ongoing thereafter

Target	Activity	Rank	Responsible party	Time Frame (Years)	Impacts	Resource required	Incentives	Verifiable indicators
	8.2.6 Conduct feasibility study of identified reintroduction sites and corridors	6	CAG-SA/WAG-SA	Ongoing	Reintroductions and conservation efforts focussed on areas with greatest potential	Funding and staff for field visits	Conservation efforts will be more effective if focussed on areas with greatest potential	Publishable scientific report
	8.3.7 Establish new populations in feasible sites	7	CAG-SA/WAG-SA	Ongoing	Geographic distribution and conservation status of CHOGs enhanced	Funding	Without expansion, current conservation status of CHOGs in SA is tenuous	Progress reports
	8.3.8 Monitor persistence of new subpopulations	8	CAG-SA/WAG-SA	Ongoing	Success of reintroductions monitored	Funding and staff	Threats cannot be managed effectively if their scope and impact are not known	Status reports received by CAG-SA and WAG-SA
	8.3.9 Promote and develop feasible corridors and linkages between reintroduced populations	5	CAG-SA/WAG-SA	Ongoing	Geographic distribution and conservation status of CHOGs enhanced		The viability of metapopulations and populations occurring outside of protected areas would be enhanced through connectivity	Corridors identified and efforts instigated to promote persistence of CHOGs in such areas

Target	Activity	Rank	Responsible party	Time Frame (Years)	Impacts	Resource required	Incentives	Verifiable indicators
8.4 The influence of commercial considerations on the implementation of metapopulation management approaches to CHOGs mitigated	8.4.1 Assess the importance of economic value and costs of CHOGs to stakeholders in relation to their participation in the national metapopulation	1	CAG-SA/WAG-SA	1.5	Clear understanding of the financial responsibilities and benefits associated with participation in the metapopulation	Funding for Post-doc	Functioning of, and participation in the metapopulation will be facilitated by clear understanding of financial implications	Publishable scientific report
	8.4.2 Consider options to promote metapopulation participation and facilitate management	2	CAG-SA/WAG-SA	Ongoing	Expansion of metapopulations facilitated	Funding	Expansion of metapopulations may require proactive intervention	Options outlined and conveyed to stakeholders
8.5 Metapopulation management approaches for CHOGs should not threaten the viability of the metapopulations, or other populations of the two species	8.5.1 Determine the circumstances under which the removal of CHOGs from farmlands is acceptable	1	CAG-SA/WAG-SA	1.5	Capture and removal of CHOGs from ranch land reduced	Funding for Post-doc	The sometimes arbitrary capture and removal of CHOGs from ranch lands jeopardizes the viability of free ranging populations	Conditions agreed and adhered to by stakeholders
	8.5.2 Examine the current liability model for dealing with breakouts from metapopulation reserves	1	CAG-SA/WAG-SA	1.5	Clear model established on liability guidelines for reintroductions	Funding for Post doc	Lack of clarity on legal issues relating to reintroductions may stifle expansion of the metapopulation	Publishable scientific report

Target	Activity	Rank	Responsible party	Time Frame (Years)	Impacts	Resource required	Incentives	Verifiable indicators
	8.5.3 Conduct an outreach / sensitisation program to inform neighbours about reintroduction programs and explore options for value added economic activities for neighbours of metapopulation reserves	2	CAG-SA/WAG-SA	Ongoing	Reduced conflict post-release, and reduced risk of legal challenges	Funding	Lack of outreach may result in conflict with neighbours and potential legal issues if CHOGs were to escape	Outreach programmes conducted
8.6 The viability of metapopulations evaluated using internal assessments	8.6.1 Establish and maintain a database of metapopulation subpopulations containing demographic, genetic and ecological information (the basic information that compromises a management plan)	1	CAG-SA/WAG-SA	1.5	Effective evaluation of the metapopulation	Funding for Post-doc	Evaluation is required to enable intervention where necessary to achieve and maintain viability	Publishable scientific report
	8.6.2 Define a metapopulation viability to incorporate both demographic and genetic factors and set acceptable levels of extinction risk	2	Internal and/or external specialists sourced by CAG-SA/WAG-SA	1.5	Clear targets to strive towards	Funding for Post doc	Metapopulation management more likely to be successful with clear targets	Publishable scientific report

Target	Activity	Rank	Responsible party	Time Frame (Years)	Impacts	Resource required	Incentives	Verifiable indicators
	8.6.3 Conduct research aimed at obtaining a better understanding the dynamics of predator prey relationships in small fenced reserves	2	CAG-SA/WAG-SA/academic institutions	Ongoing	Understanding of the minimum reserve sizes required for reintroductions under varying circumstances	PhD or post doc with adequate funding and necessary infrastructural support	Successful metapopulation management depends on clear understanding of ecological and financial impacts of CHOGs in small reserves	Analysed data showing impacts on population ecology of both Cheetahs and their prey. Publishable scientific report.
	8.6.4 Conduct bi-annual viability assessments of reintroduced subpopulations	3	Internal and/or external specialists sourced by CAG-SA/WAG-SA	bi-annually	Medium	Funding for meeting	Evaluation is required to enable intervention where necessary to achieve and maintain viability	Viability assessments conducted
	8.6.5 Adjust the metapopulation management strategy to ensure that the population is viable as needed	4	CAG-SA/WAG-SA	bi-annually	Management adjusted in line with experience and changing circumstances	Funding for meeting	Prospects for success will enhanced through adaptive management	Adaptation of metapopulation management strategy
	8.6.6 Establish an external scientific panel of expertise to conduct external assessments of the metapopulations	5	CAG-SA/WAG-SA	5 yearly	Management improved through external consultation	Funding for meeting	Will ensure that fresh thinking is injected into metapopulation management process	External assessments written

Target	Activity	Rank	Responsible party	Time Frame (Years)	Impacts	Resource required	Incentives	Verifiable indicators
	8.6.7 Ensure recommendations from external panel are adopted and implemented	7	CAG-SA/WAG-SA	5 yearly	Management improved through external consultation	Salary for update of management plans	Will ensure that fresh thinking is injected into metapopulation management process	Management plans updated

SECTION 6. Moving forwards

6.1 Towards a Biodiversity Management Plan for Species (BMP-S)

The National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004) (NEMBA), makes provision for individuals, organisations or organs of state to submit draft biodiversity management plans for, amongst others, indigenous species.(BMP-S). Such a BMP-S must be aimed at ensuring the long term survival in nature of the species, and must be consistent with the Biodiversity Act. If a BMP-S is approved by the Minister of Water and Environmental Affairs and implemented, adherence to its provisions becomes a legal obligation. The National Conservation Action Plan for Cheetahs and Wild Dogs will be compiled as a BMP-S and submitted to the directors of the provincial conservation authorities for review. Following amendments, the BMP-S will then be presented at a meeting of Working Group 1, involving these directors, as well as representatives from the Department of Environmental Affairs and other organs of state. The BMP-S will then be presented at the MINTECH meeting (a meeting of the technical advisors to the Minister involving heads of departments of the conservation authorities and the Director-General of the Department of Environmental Affairs). The penultimate step will be the review of the document at the MINMEC meeting (involving the Minister of Water and Environmental Affairs and provincial environmental MEC's), after which the document will be forwarded to the Minister of Water and Environmental Affairs for approval.

6.2 The BMP-S in the context of rangewide conservation efforts

As described in SECTION 2, this national conservation action plan was developed within the context of a rangewide planning process for Cheetahs and Wild Dogs. The South African conservation landscape differs in several respects from that of neighbouring states: specifically because of the ubiquity of small fenced reserves and the novel approaches required to ensure gene flow between tiny, isolated populations. This has necessitated the inclusion of a formal managed metapopulation approach for both Cheetahs and Wild Dogs, which is fleshed out in more detail under Objective 8, an objective that did not feature in the regional plan and is unlikely to feature in any other national plans. Although such approaches are currently necessary in South Africa, they should not be seen as a replacement for longer-term conservation goals which *inter alia* include securing additional suitable habitat through the establishment of transfrontier conservation areas and conservancies. Both Cheetahs and Wild Dogs are extremely wide-ranging and it is therefore important that the South African action plan complements those of neighbouring range states. In particular, long term planning should focus on fostering international cooperation for the conservation of these species, with particular reference to cross-border conservation areas and the development of movement corridors between areas of resident range.

SECTION 7. References

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SECTION 8. Appendices

Appendix 1: List of invited and attending participants

Name	Email address	Affiliation	Attended?
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Appendix 2: Reintroduced subpopulations of Cheetahs in South Africa (source: Deon Cilliers, unpublished data)

Reserve	Size km^2	Tenure	Province	Biome	Adult males	Adult females	Sub- adults	Cubs	Total	Lions present?
Kwe Kwe	?	Private	Eastern Cape	Thicket	1	0	0	0	1	0
Phumba	40	Private	Eastern Cape	Thicket	1	1			2	1
Lalibela	75	Private	Eastern Cape	Thicket	1	1			2	1
Hopewell	10	Private	Eastern Cape	Thicket	1	1	1	0	3	0
Bushman Sands	70	Private	Eastern Cape	Thicket	2	1			3	0
Amakhala	80	Private	Eastern Cape	Thicket	1	1	2	0	4	1
Blaauwbosch	30	Private	Eastern Cape	Nama Karoo	2	2			4	1
Shamwari	180	Private	Eastern Cape	Thicket	3	3	0	0	6	1
Samara	140	Private	Eastern Cape	Nama Karoo	2	2	0	3	7	0
Kuzuko/Addo	140	Private	Eastern Cape	Nama Karoo	2	2	4	0	8	1
Kwandwe	240	Private	Eastern Cape	Thicket	2	3	3	0	8	1
Mountain Zebra NP	280	State	Eastern Cape	Grasslands	2	2	8	0	12	0
Hlambanyati	85	Private	KwaZulu-Natal	Savannah	2	2	0	0	4	0
Zululand Rhino Reserve	220	Private	KwaZulu-Natal	Savannah	2	2	0	0	4	0
Mkuze Falls	80	Private	KwaZulu-Natal	Savannah	2	2	1		5	1
Nambiti	80	Private	KwaZulu-Natal	Savannah	7	1	0		8	1
Mkhuze	400	State	KwaZulu-Natal	Savannah	1	2	8	0	11	0
Hluhluwe-iMfolozi	960	State	KwaZulu-Natal	Savannah	?	?	?	?	30	1
Phinda	240	Private	KwaZulu-Natal	Savannah	5	10	0	27	42	1
Witwater	80	Private	Limpopo	Savannah	1	1	0	0	2	0
Mokolo River Game Reserve	90	Private	Limpopo	Savannah	2	0	0	0	2	0
Shambala	120	Private	Limpopo	Savannah	1	1	0	0	2	1
Makulu Makete	40	Private	Limpopo	Savannah	1	1	0		2	0
Ka Ingo	80	Private	Limpopo	Savannah	2	1	0	0	3	1
Entabeni	80	Private	Limpopo	Savannah	2	1	0	0	3	1
Welgevonden	400	Private	Limpopo	Savannah	1	2	0	0	3	1
Jubatus	25	Private	Limpopo	Savannah	2	1	0	0	3	0
Makoutsi	40	Private	Limpopo	Savannah	1	1	0	3	5	0
Greater Kuduland	80	Private	Limpopo	Savannah	4	2		3	8	0
Thornybush	80	Private	Limpopo	Savannah	5	2		4	11	1
Karongwe	80	Private	Limpopo	Savannah	2	4	7	0	13	1
Makalali	240	Private	Limpopo	Savannah	7	3	4	0	14	1
Thaba Tholo	340	Private	Limpopo	Savannah	20	?	?	?	20	1

Reserve	Size km^2	Tenure	Province	Biome	Adult males	Adult females	Sub- adults	Cubs	Total	Lions present?
Marakele NP	450	State	Limpopo	Savannah	?	?	?	?	?	?
Nkomazi	240	Private	Mpumalanga	Grasslands	2	0			2	1
Tswalu	1000	Private	Northern Cape	Savannah	3	2	0	0	5	1
Glen Lyon	100	Private	Northern Cape	Savannah	1	1	4	0	6	0
Pilanesberg NP	600	State	North West	Savannah	2	0	0	0	2	1
Madikwe	600	State	North West	Savannah	3	0	0	0	3	1
Sanbona	500	Private	Western Cape	Succulent Karoo	2	2	4	0	8	1
Total/average	**221**				**103**	**63**	**46**	**40**	**281**	**62.5%**

Appendix 3: Workshop Agenda

Conservation Planning for Cheetahs and African Wild Dogs in South Africa

Klein Kariba, Bela Bela, Limpopo Province, South Africa, 17-19 June 2009

Wednesday 17th June

11.00 Wild Dog Advisory Group meeting (Bosveld Meeting Room)
WAG members

15.00 Registration opens (Bosbok Conference Hall)
All workshop participants

18.00 Ice-breaker and braai
All workshop participants

Thursday 18th June

Introduction

8.30 Official welcome
Mr Deon Von Wielligh, Limpopo Economic Development Environment and Tourism

8.40 Introductions
All participants - include introductions of observers and explanation of their role

Presentations

The purpose of the meeting

9.00 Review of the global/continental conservation issues facing Cheetahs and Wild Dogs and the importance of adopting a regional conservation strategy
Gus Mills, Kgalagadi Cheetah Project

9.15 Background to the regional conservation planning process and identification of how the South African national planning process fits in
Netty Purchase, ZSL/WCS Co-ordinator for the regional Cheetah conservation strategy

9.30 Objectives of the South African National Conservation Action Planning meeting
Harriet Davies-Mostert, Endangered Wildlife Trust

Conservation status of and threats facing Wild Dogs and Cheetahs

9.45 Review of the regional distribution and status of Wild Dogs and Cheetahs
Netty Purchase, ZSL/WCS Co-ordinator for the regional Cheetah conservation strategy

10:00 The distribution and conservation status of Wild Dogs in South Africa
Peter Lindsey, Endangered Wildlife Trust

10:15 The distribution and conservation status of Cheetahs in South Africa
Kelly Marnewick, De Wildt Wild Cheetah Project

10:30 TEA AND COFFEE

10:45 Overview of national and provincial legislation pertaining to Wild Dogs and Cheetahs
Magdel Boshoff, Department of Environment and Tourism

Options for enhancing the conservation status of Wild Dogs and Cheetahs in South Africa

11:00 Metapopulation management of Wild Dogs and Cheetahs
Harriet Davies-Mostert, Endangered Wildlife Trust

11:15 Strategies for reducing conflict between farmers and Wild Dogs and Cheetahs
Deon Cilliers, De Wildt Wild Cheetah Project

11:30 Enhancing protected area networks through park expansion and development of transfrontier conservation areas
Sam Ferreira, SANParks

11:45 Presentation of the regional southern African conservation strategy for Wild Dogs and Cheetahs
Netty Purchase, ZSL/WCS Co-ordinator for the regional Cheetah conservation strategy

12:45 LUNCH

Thursday afternoon

13:45 Review the vision and goal for the regional strategy and ensure they are relevant to the national strategy
Facilitated discussion involving all participants

14:45 Review the objectives of the regional strategy, select those relevant to the national strategy, and identify additional ones pertinent to South Africa
Facilitated discussion involving all participants

15:15 Determine working groups to review targets under each objective
Facilitated discussion involving all participants

15:30 TEA AND COFFEE

15:45 Working groups review targets
Working groups

16:45 Working groups present their targets in plenary and for general discussion
Facilitated discussion involving all participants

17:30 END OF DAY

Friday 19th

08:00 Working groups are informed of the next stage in the process
Plenary session

08:15 Working groups review existing and identify new activities
Working groups

10:00 Plenary discussion of the activities
Facilitated discussion involving all participants

10:30 TEA AND COFFEE

11:00 Working groups rank each activity, identify responsible parties, timeframes, impacts, resources required, incentives and indicators (in table format)
Working groups

12:45 LUNCH

Friday afternoon

13:45 Plenary discussion of the activities and responsibilities
Facilitated discussion involving all participants

14:30 Present, review, discuss, and finalise log frame for national strategy
Facilitated discussion involving all participants

15:00 Discussion of way forward and assignment of tasks (including preparation of report)
Facilitated discussion involving all participants

15:15 Closing statement
Ms. Magdel Boshoff, DEAT

15:30 WORKSHOP CLOSE