

National Conservation Action plan for Cheetahs and African Wild Dog in Botswana

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Introduction:

The African wild dog (*Lycaon pictus*) and the cheetah (*Acinonyx jubatus*) present major challenges for conservationists in the 21st Century. Both species were formerly widely distributed in Africa, but both have experienced dramatic reductions in numbers and geographic range in recent decades (Ray, Hunter & Zigouris, 2005). All large carnivores need large areas to survive; yet wild dogs and cheetah range more widely, and hence need larger areas, than almost any other terrestrial carnivore species anywhere in the world. As human populations encroach on Africa's last wild areas, wild dogs and cheetah – particularly susceptible to the destruction and fragmentation of habitat – are often the first species to disappear.

Despite their threatened status (wild dogs are listed as endangered and cheetah as vulnerable, IUCN, 2006a), ecological importance as top carnivores (Woodroffe & Ginsberg, 2005b), and value to Africa's tourism industry (Lindsey *et al.*, 2007), to date remarkably little conservation action has been implemented for these two species. The majority of Africa's protected areas are too small to conserve viable populations, and active conservation efforts on unprotected lands have hitherto been restricted to a handful of projects.

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

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

Recognising these concerns, in 2006 the Cat and Canid Specialist Groups of the IUCN/SSC, in partnership with the Wildlife Conservation Society (WCS) and the Zoological Society of London (ZSL), initiated a Rangewide Conservation Planning Process for wild dogs and cheetah in December 2007, in line with the recommendations from the IUCN/SSC Species Conservation Planning Task Force. These recommendations include ensuring that the development of conservation strategy must involve an assessment of the status of the species (incorporating both numbers and distribution), the threats to the survival of the species and sub-populations and that the process must involve multi-stakeholder participation

The two species were addressed together as part of the process because, despite being taxonomically quite different, they are ecologically very similar and hence face similar threats. The outcome of the regional planning workshop was

- a) an increased understanding of the current distribution and status of the two species including the main threats to their survival.
- b) the development of a regional strategy for the conservation of cheetah and African wild dog, by specialists on the species' biology as well as conservation managers from governmental and non-governmental organisations (ie multi-stakeholders). Close involvement of government representatives was considered absolutely critical since they represent the organisations with the authority to implement any recommendations at the management and policy levels.

The IUCN/SSC species conservation strategy development process recognises that wildlife conservation policy is formulated, authorised and enforced at the national level. It is critical that conservation planning be enacted at this level. The development of national plans, through national workshops, is thus a vital component of the development of SCSs. The regional workshop was,

therefore, followed immediately by a national workshop in Botswana (which hosted the regional workshop), to which delegates from other countries in the region are invited as observers.

This document includes a summary of the status and distribution of cheetah and wild dog in Southern Africa and the importance of Botswana to the conservation of the two species. It also describes the National Conservation Action Plan, adapted from the regional conservation strategy for cheetah and African wild dog in Southern Africa during the Botswana national planning workshop.

Conservation of cheetahs and wild dog in Southern Africa

Distribution, status and major threats to survival

Southern Africa supports globally important populations of both cheetah and wild dogs. This regional plan is the first step in a programme to develop action plans for the species' conservation across their geographic range, conducted as a collaboration between national wildlife authorities across Southern Africa and the Cat and Canid Specialist Groups of IUCN/SSC. Given wild dogs' and cheetah's similar ecological needs, it makes sense to plan their conservation together. Moreover, management enacted for these two species will also benefit similar species such as lions, leopards, and hyaenas, though the converse is not necessarily the case given wild dogs' and cheetahs' requirement for far more extensive areas of wildlife-friendly habitat.

Both wild dogs and cheetah have experienced major contractions in their geographic range within Southern Africa, with resident populations known to remain in just 21% (cheetah) and 12% (wild dogs) of their historical range within the region. However, for much of the region (30 – 40%) there are no reliable data available regarding the status and distribution of the two species.

Protected areas are very important for the conservation of both cheetah and wild dogs, but the majority of animals reside outside the protected areas which are the focus of most conservation effort. Three quarters of cheetah resident range, and two thirds of wild dog resident range, falls on community and private lands. Given this knowledge it is unlikely that populations inside protected areas would be viable if isolated from unprotected lands, and conservation activity outside protected areas is absolutely critical for the long-term survival of these two species both inside and outside reserves.

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

Several important wild dog and cheetah populations straddle international boundaries. Trans-boundary management is therefore likely to be needed for conserving both species in the long term. A number of areas were identified where participants felt that it would be possible to restore both species, these focussed predominantly on protected areas that have been poorly managed in the past decade but where improved management is now taking place. However, the percentage range of these recoverable areas was relatively small and the strategic plan therefore focuses on securing the remaining populations with restoration as a lower priority.

Figure 1: Cheetah distribution in Southern Africa (Source IUCN/SSC, 2009)

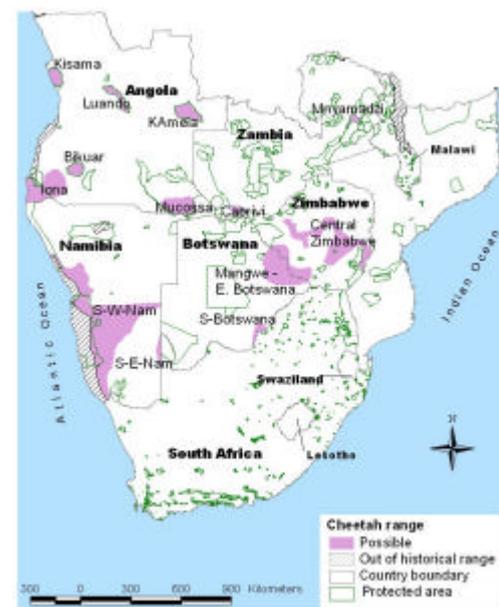
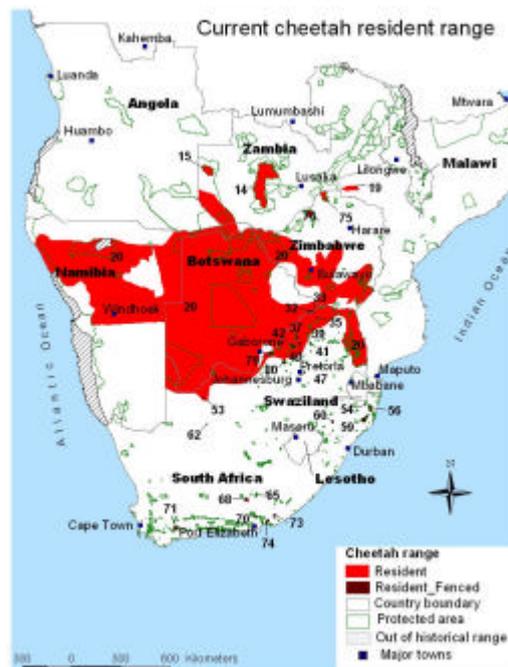
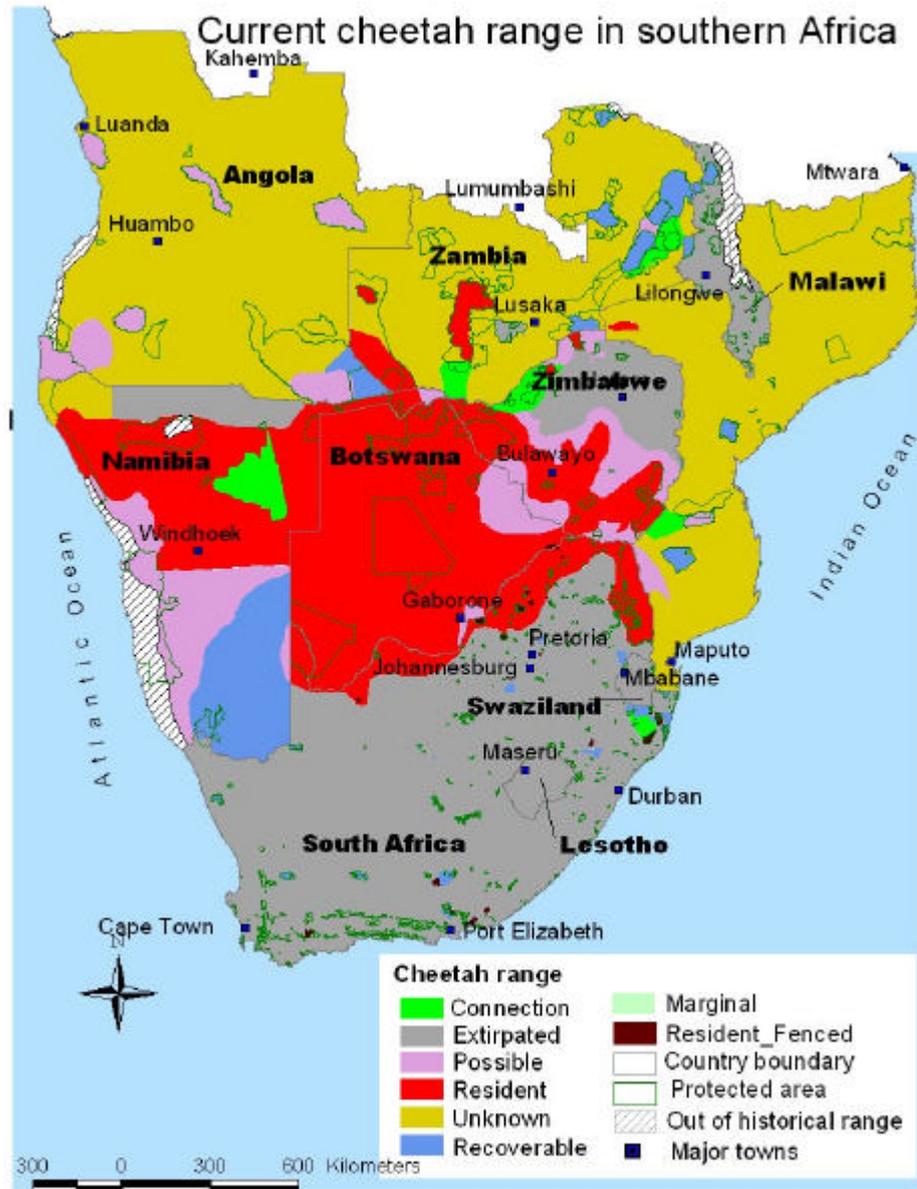
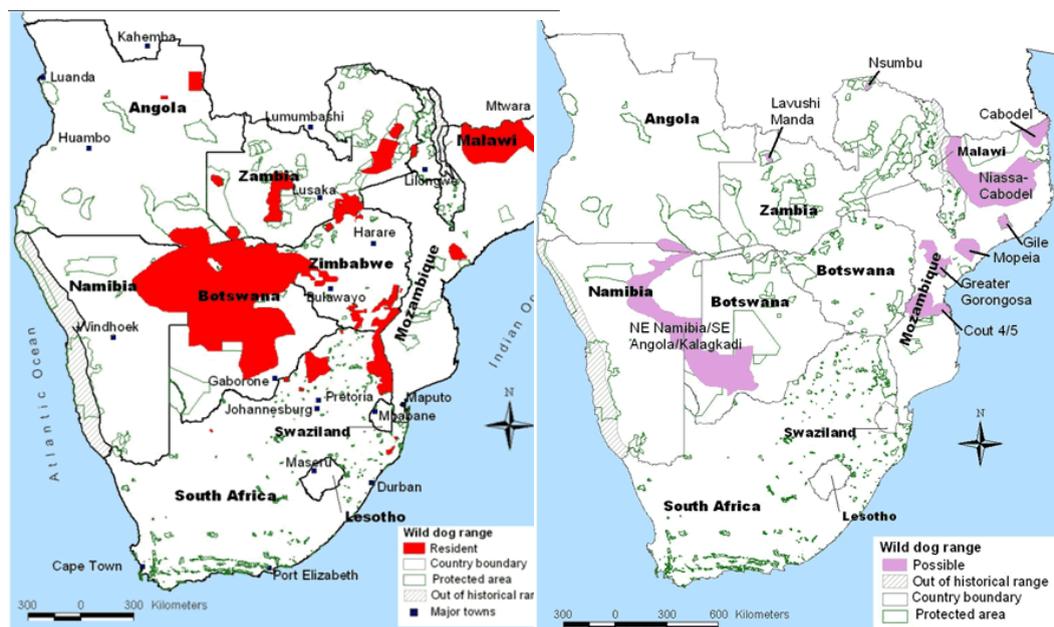
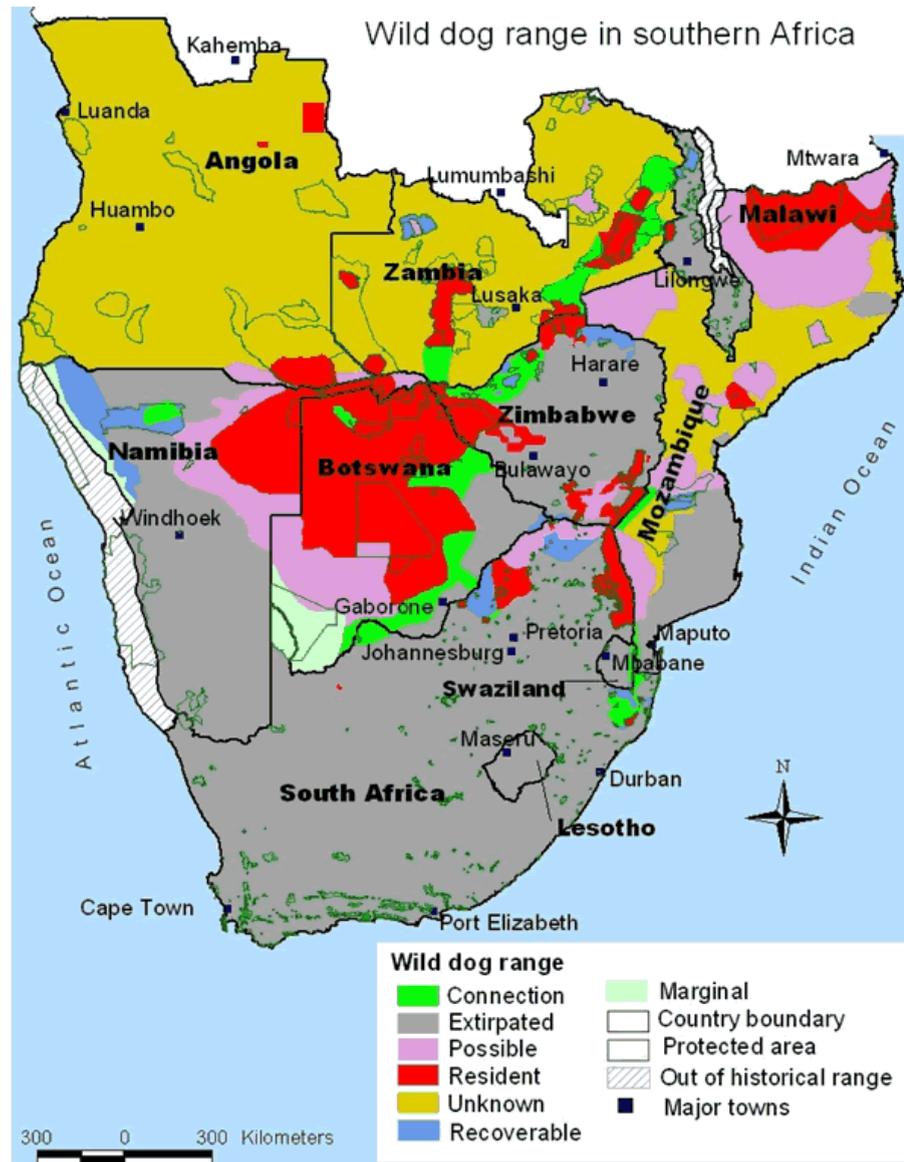


Figure 2: Wild dog distribution in Southern Africa (Source IUCN/SSC, 2009)



The regional conservation strategy

In response to the threats identified during the regional workshop held in Dec 2007, participants developed a regional conservation strategy for cheetah and African wild dog in Southern Africa. This regional strategy identified eight objectives that would need to be achieved to realize the vision of the participants. Under each objective a number of targets were identified, and nested within these targets specific activities that would need to be carried out, to achieve the objectives, in order to realize the vision of the participants.

However, for effective implementation of the regional strategy it was recognized by the participants that each country in the Southern African region would need to adapt the regional strategy to create national conservation action plans that would then be implemented within each country. This process was carried out during the Botswana national planning workshop, the output being the National Action Plan included in this document.

Importance of Botswana for cheetah and wild dog conservation

Cheetah in Botswana

Botswana is a key country for the survival of cheetah in the Southern African region. The maps developed during the regional workshop in December 2007 indicate that the whole of Botswana, except for one small area where the presence of cheetah has yet to be confirmed, has resident cheetah. In addition, Botswana appears to form the core of a large contiguous population of resident cheetah that extends across four other countries (Namibia, Zimbabwe, South Africa and Zambia)

The distribution of cheetahs within the Botswana component of this large resident population is not uniform (Klein, 2007). Although acknowledged to be widespread in the country, cheetah appear to be concentrated in the southern part of the country where densities of competitors are lower. Klein (2007) identified that a large part of the cheetahs' distribution occurs outside protected areas and they probably occur in higher densities in agricultural zones (where wild prey is available) than in conservation zones.

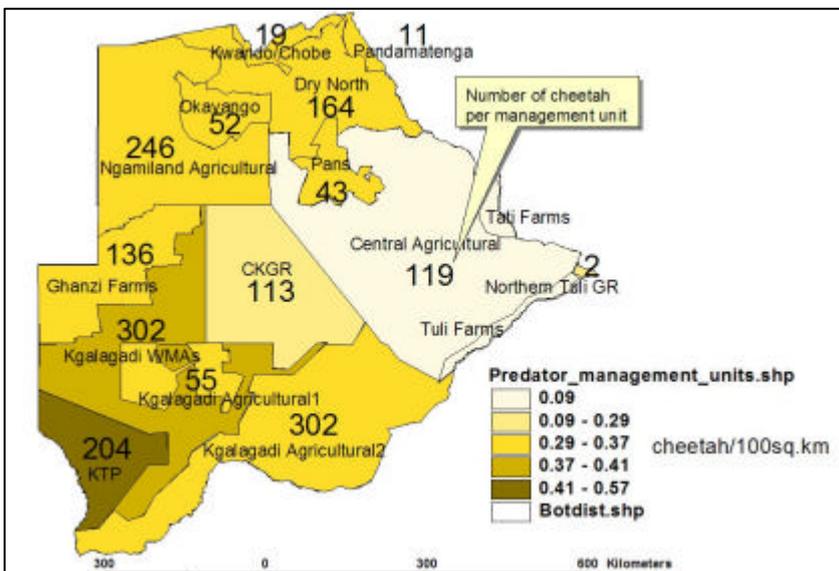


Figure 3: Detailed estimated distribution of cheetah within Botswana

Wild Dog in Botswana

Botswana is a key country for wild dog conservation, forming the heart of the largest contiguous resident population in the southern African region, that covers 5 countries. Northern Botswana supports approximately 700-800 wild dogs, one of the only populations containing more than an estimated 250-300 dogs in the whole of Africa. Botswana is unusual among African countries by virtue of its extremely low human population density and the consequent underlying development of natural areas. The Okavango Delta and surrounding areas support healthy populations of all the African large carnivores and the wild dog population of northern Botswana, the focus of the Botswana's Wild Dog population, is important to the conservation of the species in the region.

Although Botswana's population currently appears to be a robust one with a wide distribution, its survival into the next century is by no means assured. The greatest threats to Botswana's wild dog population are the loss of habitat to the growing human and cattle populations and the associated competition for limited resources such as land and water. Since the European Union (EU) began subsidising Botswana's beef industry in the 1970s, the erection of fences to separate wildlife and domestic stock, development of artificial water points and changing land uses have severely impacted the country's wildlife populations. As land and water continue to become scarce people and wildlife continue to be brought closer together and the frequency of human conflict with wild dogs is guaranteed to increase. Under the Fauna Conservation Act, wild dogs may not be shot without a license. However, such permits are not required if a farmer is defending livestock. Thus, wild dogs receive only partial legal protection, and in practice, wild dogs straying onto farms are shot on sight.

Over the past 30 years Botswana has designated 17 percent of its land to wildlife management and protection. This is divided between National Parks, Wildlife Management Area (WMAs) and Controlled Hunting Areas (CHAs). It seems clear that Botswana's government has consistently demonstrated legislative commitment to the long term management of its wildlife. Millions have been spent to create grassroots, community based conservation programs, with some areas within the Okavango region being put under the management and control of local communities. The fundamental idea is that earnings derived from wildlife utilisation returned directly to the local communities instead of the central government will increase the incentive of the local people to invest in long-term conservation. Co-management between communities and central government may be the best possible solution for a positive, encouraging and sustainable future for the African wild dog and wildlife in Botswana.

As human populations continue to rise, pressure on wild dogs will increase. Important to wild dog conservation is the reduction of human induced mortality persecution, hunting, snaring, and road traffic accidents. Integral to this is working with local people to reduce conflict between man and wild dogs as well as dispelling the myths associated with wild dogs. Lastly, the threat of disease to wild dogs needs to be investigated and managed. This includes minimising contact between wild dogs and domestic animals, implementing vaccination programs for domestic animals, and developing disease control strategies for wild dogs.

The national conservation action plan for cheetah and African wild dog in Botswana

As part of the implementation of the regional conservation strategy for cheetah and African wild dog in Southern Africa, Botswana translated the vision, goal, objectives, targets and actions incorporated in the regional strategy into a National Conservation Action Plan for Botswana. During this process each level was debated in a fully participatory workshop and adapted to enable effective conservation of cheetah and African wild dog in Botswana. The National Action Conservation action plan is described in detail below, and a logframe is included in the Appendix I of the report.

Vision and Goal

The vision, goal and objectives of the regional strategy were discussed in plenary to adapt them for a national action plan for Botswana.

It was agreed by participants that the vision of the regional strategy was appropriate for Botswana, but that the goal should be revised, as Botswana did not need to secure additional populations of cheetahs and wild dogs, rather the country needs to maintain the populations that are already resident within its borders

Vision

Secure, viable cheetah and wild dog populations across a range of ecosystems, that successfully coexist with, and are valued by, the people of southern Africa.

Goal

Improve the status of cheetahs and wild dogs, and secure additional viable populations of cheetahs and wild dogs across their range

Objectives

The objectives of the regional strategy were also discussed in plenary and the following adaptations were agreed upon by the participants:

Objective 2: Knowledge and information: It was agreed that there existed a great deal of indigenous knowledge of cheetahs and wild dogs within the country that needed to be captured and used to help conserve the two species

Objective 3: Information transfer: Participants wanted to incorporate the need for information to be transferred both within Botswana and between Botswana and the other countries of the region (inter-regional transfer)

Objective 4: Coexistence: The participants felt it was important to record at this level that actions taken to minimize conflict and promote coexistence between people and cheetahs and/or wild dogs should be feasible as well as socially, ecologically and economically acceptable

Objective 5: Land use. Participants focused on minimizing the adverse effects of land development and land use changes rather than working towards best land use practice as more appropriate for Botswana

Objective 6: Political Commitment. Participants made this objective stronger by including the need to obtain not just commitment but political will to the conservation needs of cheetah and wild dog

Objective 7: Policy and Legislation: Participants felt it was important not just to review and revise but to ensure that policies and legislation were harmonized at the national, regional and international levels

The final objectives adapted at the national workshop are included below:

Objectives

1 Develop capacity in all aspects of cheetah and wild dog conservation in southern Africa. (*Capacity Development*)

2 Improve knowledge (including awareness of indigenous knowledge) on the conservation biology of wild dogs and cheetahs across southern Africa. (*Knowledge and information*)

3 Develop and implement mechanisms for the transfer within Botswana and the Southern African region of information relevant to cheetah and wild dog conservation and ensure active commitment of stakeholders (*Information transfer*)

4 Minimise conflict and promote coexistence between cheetah, wild dogs and people across southern Africa through socially acceptable and feasible ecological and economic actions (*Coexistence*)

5 Minimise adverse effects of land development and land use changes on cheetah and wild dog conservation (*Land use*).

6 Obtain political commitment and willingness to the conservation of cheetah and wild dogs (*Political commitment*)

7 Review and, where necessary, revise and harmonise, international, national and local legislation, policies and protocols affecting cheetah and wild dog conservation (*Policy and legislation: It was noted by participants that revision of international legislation requires cooperation across range states*)

8 Facilitate the implementation of the regional conservation strategy as well as the national conservation action plan (Botswana) for cheetah and wild dogs in all range states. (*National Planning*)

Targets and activities

The participants were then divided up into four working groups, each group tasked with reviewing and revising where necessary the targets and activities under each of the eight objectives agreed during the plenary session. The working groups given objectives as follows:

Working group 1

- 1 Develop capacity in all aspects of cheetah and wild dog conservation in southern Africa
- 2 Improve knowledge (including awareness of indigenous knowledge) on the conservation biology of wild dogs and cheetahs across southern Africa.

Working group 2

- 3 Develop and implement mechanisms for the transfer within Botswana and the Southern African region of information relevant to cheetah and wild dog conservation and ensure active commitment of stakeholders
- 4 Minimise conflict and promote coexistence between cheetah, wild dogs and people across southern Africa through socially acceptable and feasible ecological and economic actions

Working group 3

- 5 Minimise adverse effects of land development and land use changes on cheetah and wild dog conservation
- 8 Facilitate the implementation of the regional conservation strategy as well as the national conservation action plan (Botswana) for cheetah and wild dogs in all range states.

Working group 4

- 6 Obtain political commitment and willingness to the conserve cheetah and wild dogs
- 7 Review and, where necessary, revise and harmonise, international, national and local legislation, policies and protocols affecting cheetah and wild dog conservation

The final revisions to the targets and activities under each objective are included in the section below, with indicators and actors included.

1. Capacity Development

Objective: Develop capacity in all aspects of cheetah and wild dog conservation in southern Africa.

1.1 Target: Identify gaps in capacity in all areas of cheetah and wild dog conservation in the region within two years.

Conduct interview and questionnaire surveys to establish current situation and identify gaps for all capacity components within two years, including:

- 1.1.1 Law enforcement and conflict;
- 1.1.2 Monitoring and research;
- 1.1.3 Education and outreach.

Actor: DWNP

Indicator: Report on gaps identified from questionnaires

Notes: Develop questionnaire and send out to relevant organisations;
Develop stronger linkages with agricultural training institutions; Stronger
focus on range management

1.2 *Target: Develop and implement one annual law enforcement and conflict resolution training programme in each district within three years.*

1.2.1 DWNP and Botswana Wildlife Training Institute (BWTI) in collaboration with Veterinary Services, Animal Production and the College of Agriculture-to review curricula, and identify gaps therein, within six months.

Actors – DWNP and BWTI in collaboration with Veterinary Services, Animal Production and the College of Agriculture.

Indicator – report to identify gaps in curricula

1.2.2 Develop law enforcement, conflict resolution and range management training modules identified and/or developed to address gaps within 18 months.

Actors BWTI, UB

Indicator – training modules in effect

1.2.3 Activate and source funds to support an annual law enforcement and conflict resolution training programme in each range state within two years.

Actors DWNP

Indicator – funds budgeted and secured

1.2.4 Initiate an annual law enforcement, conflict and range management training programme in each district within three years.

Actors DWNP and MOA

Indicator – completion of the training programs

1.3 *Target: Establish a network of government and non government institutions to develop capacity in research, monitoring, education and outreach within one year.*

1.3.1 Identify existing databases and extract relevant institutions and people within one year to create a large carnivore database.

Actors : DWNP, Kalahari Conservation Society

Indicator – creation of large carnivore database

1.3.2 Appoint a representative to create and maintain a network of opportunities and participate in a regional committee within one year.

Actors : DWNP, KCS, CCB, BPCP

Indicator – individual appointed

1.3.3 Contribute to the regional web portal to provide an interface between network members and the public within one year.

Actors : Network members

Indicator – national data made available to portal

2. Knowledge and information

Objective: Improve knowledge (including awareness of indigenous knowledge) on the conservation biology of wild dogs and cheetahs across Botswana.

- 2.4 *Target: Continue to acquire information about the status and distribution of cheetah and wild dogs across the region, within five years.*
- 2.4.1 Contribute to the ongoing cheetah and wild dog atlas; ongoing.
Actors: DWNP, UB, CCB, KCS, BPCP
Indicator: regular submission of data and updated atlas
- 2.4.2 Contribute to regional standardised monitoring and field techniques for cheetah and wild dog studies and a handbook within three years.
Actors: DWNP, CCB, BPCP
Indicator: contributions are made as a Botswana report
- 2.4.3 Continue surveys in possible range to assess population status and distribution for cheetah and wild dogs within five years.
Actors: DWNP, UB, CCB, KCS, BPCP
Indicator: survey reports
- 2.4.4 Maintain and expand long term monitoring programmes of cheetah and wild dog populations in resident range; ongoing.
Actors: DWNP, UB, CCB, KCS, BPCP, CI
Indicator: annual reports submitted
- 2.3 *Target: Acquire better understanding of the behavioural ecology of cheetah and wild dogs within five years.*
- 2.3.1 Conduct and maintain field studies on connectivity and dispersal mechanisms in both species, including factors influencing dispersal success, within five years.
Actors: DWNP, UB, BPCP, CCB, KCS
Indicator: field study reports submitted (publishable)
- 2.3.2 Conduct and maintain studies on cheetah and wild dogs habitat use and feeding ecology in different land uses in relation to potential range within five years.
Actors: DWNP, UB, BPCP, CCB, KCS
Indicator – field study reports submitted (should be peer-reviewed and published)
- 2.1 *Target: Generate and disseminate standardised, quantitative knowledge of conflict, threats and their drivers and mitigation across Botswana within five years.*
- 2.1.1 Compile available data on conflict, threats and their mitigation and, where possible, collate in standardised formats, within two years.
Actor: DWNP
Indicator – reports available deriving from standardised formats
- 2.1.2 Identify shortfalls in existing knowledge about conflict, threats and their mitigation within two years.
Actor: DWNP
Indicator – report on shortfalls available

- 2.1.3 Initiate additional studies (field studies, surveys, questionnaires and existing data, including indigenous knowledge systems) to quantify conflict, threats (including illegal trade), their drivers and mitigation, and effects on population viability; ongoing.
Actors : DWNP, UB, NGOs, researchers
Indicator: studies in progress, reports available (should be peer-reviewed and publishable)
- 2.1.4 Organise and hold a workshop to collate national information on conflict, threats and their mitigation within two years.
Actor: DWNP
Indicator – Proceedings of workshop available

3. Information transfer

Objective: Develop and implement mechanisms for the transfer of information relevant to cheetah and wild dog conservation and ensure active commitment of stakeholders.

3.1 *Target: Identify relevant benefits to local communities, governments and landowners within three years.*

- 3.1.1 Conduct a literature review and maintain a database on potential benefits of cheetah and wild dog conservation in Botswana within one year.

Actors : researchers, DWNP.

Indicators : (1) a comprehensive and accessible literature review,
(2) available database .

- 3.1.2 Hold meetings and workshops with communities, then landowners, then government, to collect information to identify relevant incentives and benefits within three years.

Actors : NGOs, Government

Indicators : (1) meetings held and minutes recorded and kept on file, and
(2) relevant incentives and benefits identified.

- 3.1.3 Centralize, share, and standardize where possible, the information relevant to cheetah and wild dog conservation among stakeholders, including the appointment of a national coordinator.

Actor: Regional and national IUCN coordinator of regional strategic plan, NGOs, DWNP.

Indicator: (1) a national coordinator identified and appointed to liaise with regional coordinator
(2) a database has been developed for ongoing contributions
(3) centralised, standardised data available online and able to be updated by stakeholders.

3.2 *Target: Develop multimedia projects for Botswana, building on the best existing material, within three years.*

- 3.2.1 Develop web based interactive reporting of sightings, data, findings and activities relevant to cheetah and wild dog conservation, including by accessing cheetah compendium website, within one year.
Actors: IUCN coordinator of regional strategic plan, national coordinator, NGOs, DWNP, all actors that observe or collect observations on wild dogs and cheetah.
Indicator: (1) Existence of an interactive web-based database to receive contributions.
- 3.2.2 Develop and use posters, leaflets, radio, TV, video, pictures and theatre groups to disseminate information locally within two years.
Actors: NGOs.
Indicator: (1) Dissemination of educational materials relevant to cheetah and wild dog conservation to 50% of sub-districts in each district.
- 3.2.3 Implement the standardized data entry that is provided by the regional coordinator to collect information on cheetah and wild dog distribution, especially in areas where information gaps occur, within three years.
Actors: IUCN coordinator of regional strategic plan, NGOs.
Indicators: (1) Have standardised methods of data entry in use country-wide
- 3.2.4 Feed into the regional national database of information on conflict, threats and their mitigation for southern Africa, ongoing.
- 3.3 *Target: Promote national awareness of local threats in Botswana within two years.*
- 3.3.1 Establish competitions, essays, etc. in schools and groups to enhance and highlight conservation education and review success within 2 years.
Actors: NGOs.
Indicators: (1) Use these methods in each sub-district in order to highlight conservation education.
- 3.3.2 Develop curricula regarding cheetah and wild dogs and integrate with activities of youth conservation clubs in Botswana (e.g. Wildlife Club in Botswana, Roots and Shoots, Association of Environmental Clubs of Botswana, UB Wildlife Society) within 2 years.
Actor: NGOs, DOE.
Indicator: (1) Country-wide development of integrated curricula.
- 3.3.3 Encourage sponsorship and increase numbers of Botswana sports teams, clubs and groups named after cheetah and wild dog at all levels, on an ongoing basis.
Actor: Local and international sports organizations, NGOs.
Indicator: (1) Increases in sponsorship and number of teams linked to cheetah and wild dog conservation.
- 3.4 *Target: Promote the conservation of the two species within Botswana.*
- 3.4.1 Hold annual national workshops and ensure follow-up with government, researchers and NGOs to inform the conservation management of cheetah and wild dogs; initiate within one year.

Actor: DWNP, NGOs.

Indicator: (1) National workshops with minutes and outputs held on file,
(2) integration with DWNP predator workshops.

- 3.4.2 Participate in wider range of meetings and stakeholder interest groups (i.e. those not directly concerned with conservation) to disseminate information about cheetah and wild dog conservation; initiate within one year.

Actors: NGOs, variety of government agencies, agricultural associations.

Indicator: (1) attendance and participation in meetings with minutes or reports held on file.

4. Coexistence

Objective: Minimise conflict and promote coexistence between cheetah, wild dogs and people across Botswana in an ecologically, economically, and socially acceptable manner

4.1 *Target: Reduce deliberate killing of cheetah and wild dogs to sustainable levels in Botswana within five years.*

- 4.1.1 Clarify, improve and standardize the monitoring of the causes and extent of intentional killing, in order to provide baseline information, for cheetah and wild dogs in Botswana.

Actors : DWNP, NGO, research.

Indicators : (1) percentage of complete PAC reports increased, and
(2) development of novel methods to monitor intentional killing.

- 4.1.2 Clarify, disseminate and lobby for enforcement of laws pertinent to killing of cheetah and wild dogs in Botswana within one year.

Actor: Botswana Farmer's Association, DWNP, NGOs.

Indicators : (1) Increased enforcement of the laws, and
(2) more stakeholders understand the laws.

- 4.1.3 Identify conflict areas and clarify extent of actual versus perceived losses caused by cheetah and wild dogs, on an ongoing basis.

Actors : NGOs, DWNP (PAC).

Indicators : (1) Increased awareness and
(2) improved data from conflict areas with a map showing conflict areas.

- 4.1.4 Educate relevant stakeholders about livestock husbandry practices proven to reduce depredation and encourage their use on an ongoing basis.

Actors : DAP, NGOs.

Indicators : (1) increased knowledge on livestock husbandry that deters predators, and
(2) increased use of those husbandry practices by livestock producers.

- 4.1.4 Implement human-wildlife conflict rapid response teams to react quickly and effectively to conflict situations, including the training of conflict point persons in remote conflict areas, in Botswana within two years.

Actors : DWNP PAC, communities, NGOs.

Indicators : (1) Have conflict teams that respond effectively to conflict situations in relevant hotspots, and
(2) identify and train conflict point persons in remote conflict areas.

4.1.5 Initiate programmes to combat negative perceptions of cheetah and wild dogs in Botswana within two years.

Actors : all NGOs.

Indicators : (1) More positive attitudes and perceptions of people towards cheetah and wild dogs, as measured through surveys.

4.2 *Target: Substantially reduce levels of incidental mortality in cheetah and wild dogs in Botswana within five years.*

4.2.1 Clarify, monitor extent, and raise awareness of incidental mortality of cheetah and wild dogs in Botswana within three years.

Actors : Police, DWNP, PAC register of roadkill, researchers

Indicator: (1) Increase in knowledge of causes and extent of all causes of incidental mortality, in order to provide baseline information, for cheetah and wild dogs in Botswana.

4.2.2 Substantially reduce snaring mortality of cheetah and wild dogs through initiatives such as anti-poaching efforts and community conservation, within five years.

Actors : DWNP Anti-Poaching Units, NGOs, crime prevention.

Indicator: (1) Decreased mortality due to snaring, and
(2) minimized sources of snare wire (e.g. derelict fencing).

4.2.3 Where appropriate, initiate programmes known to be effective at managing diseases that threaten cheetah and wild dog population viability, within five years

Actors : MOA, DVS, DWNP vets.

Indicators : (1) Increase in awareness of, and increased enforcement of, vaccination services available to domestic carnivores.

4.2.4 Implement targeted, enforceable programmes which reduce road mortality of cheetah and wild dog within five years.

Actors : Department of Road Safety, DWNP, Cattle control people.

Indicators : (1) Effective programmes implemented and reduced mortality of cheetah and wild dogs on roads.

4.2.6 Encourage land use practices (e.g. conservancies) which promote large, continuous tracts of fence-free habitat, within three years.

Actors : CBNRM, NGOs, Land Board, DWNP.

Indicators : (1) Decreased extent of fencing of and within WMA's, and (2) development of functional conservancies.

4.2.7 Promote and implement land use practices compatible with cheetah and wild dog conservation, within five years.

Actors : Land Board, DWNP, Department of Animal Production.

Indicators: (1) Map demonstrating increased land use practices and management compatible with cheetah and wild dog conservation.

4.3 *Target: Measurably increase perceived intrinsic and economic value of cheetah and wild dogs to all stakeholders within five years.*

4.3.1 Quantify and monitor the perceived intrinsic and economic value of cheetah and wild dogs to all stakeholders to provide baseline attitudinal data; on an ongoing basis.

Actors: NGOs, DWNP.

Indicators: (1) Database of reliable baseline data providing information on values and perception of values through surveys.

4.3.2 Develop appropriate value-added activities, such as but not limited to hunting and tourism, in Botswana within five years.

Actors: DWNP, CBNRM.

Indicator: (1) Increased income and novel value to stakeholders due to activities related to cheetah and wild dogs.

4.3.3 Investigate and highlight cultural values of cheetah and wild dogs across all range states within two years.

Actors: NGOs, CBNRM.

Indicator: (1) Produce a summary and create a database of indigenous and cultural values of cheetah and wild dogs.

4.3.4 Where relevant, develop self-sustaining community schemes that offset the costs of, and internalise the responsibilities for, conflict within three years.

Actors: NGOs, CBNRM, communities and village leaders.

Indicators: (1) Community schemes functioning and offsetting the costs of conflict.

4.3.5 Where appropriate, develop income generation and capacity development projects linked to cheetah and wild dog conservation, within three years.

Actors: Communities and village leaders, artisans, NGOs, marketers.

Indicators: (1) Existence of novel income sources linked to cheetah and wild dogs, and (2) broader participation among stakeholders and increase in number of stakeholders linked to cheetah and wild dogs.

5. Land use

Objective: Minimise adverse effects of land development and promote and implement best land use practice for cheetah and wild dog conservation.

5.1 *Target: Evaluate current land use and assess how these relate to cheetah and wild dog conservation by identifying determinants of success, within two years.*

5.1.1 Identify key national and regional (TFCA) stakeholders responsible for determining current and future land use strategies, within one year.

Actors – DWNP

Indicators – List of stakeholders responsible

5.1.2 Collate information from within Botswana regarding best land use practice in cooperation with the Ministry of Lands, MOA and DWNP, within one year.

Actors – CCB, Wild EnTrust, BPCP,

Indicators – report on best land use practice

5.1.3 Produce and distribute a document illustrating examples of land use strategies associated with successful cheetah and wild dog conservation from the region, within two years.

Actors – CCB, BPCP

Indicators - document

5.2 *Target: Promote the formation of multi-owner wildlife management units (e.g. conservancies etc.) by increasing awareness of the potential benefits of such land uses within two years.*

5.2.1 Identify key role players in Botswana able to drive the development of multi-owner wildlife management units, within one year.

Actors – DWNP

Indicators – List of key role players

5.2.2 Identify and advocate potential strategies to promote multi-owner wildlife management unit formation (e.g. through tax breaks and other economic incentives), within one year.

Actors – DWNP, CCB, BPCP

Indicators – Report of potential strategies

5.2.3 Initiate national lobbying efforts to promote the development of multi-owner wildlife management units, targeted at key landholders and government representatives, within two years.

Actors – CCB, BPCP

Indicators – enabling policies and legislation

5.2.4 Monitor the development of multi-owner wildlife management units and their influence on cheetah and wild dog conservation, to permit development of new approaches if necessary; after 5.2.3, ongoing.

Actors – DWNP, UB, CCB, Wild EnTrust

Indicators – Reports of cheetah and wild dog status from individual wildlife management units

5.2.6 Promote the use of fences that are permeable for wild dogs and cheetahs. On-going, start now

Actors – DWNP, CCB, BPCP, MOA

Indicators – Annual reports of the number of permeable fences erected

5.3 *Target: Promote wildlife based land uses and community based natural resource management in areas with potential for cheetah and wild dog conservation by 20% within four years.*

5.3.1 Identify areas with the greatest potential for wildlife based land uses conducive to cheetah and wild dog conservation in Botswana, within one year.

Actors – DWNP, CCB, BPCP

Indicators – maps illustrating areas with potential for wildlife based land use

5.3.2 Develop feasibility studies leading to business plans for Botswana government departments, enterprises and landowners to maintain wildlife conservation areas to benefit cheetahs, wild dogs and communities, within two years.

Actors – CCB, BPCP

Indicators – Business plans for wildlife conservation areas

5.3.3 Prepare funding proposals to implement the business plans within one year after their development, i.e. within three years.

Actors – DWNP, CCB, BPCP

Indicators – funds available

5.3.4 Monitor the development of wildlife based land uses, and their influence on cheetah and wild dog conservation, to permit development of new strategies if necessary after 5.3.3; ongoing.

Actors – DWNP

Indicators – maps and cheetah and wild dog numbers

5.4 *Target: Promote effective livestock husbandry and range management; ongoing.*

5.4.1 Lobby the MOA to adopt livestock husbandry practices as well as range management practices that are wildlife and predator friendly, within one year then on-going.

Actors – CCB, BPCP, DWNP, MOA, DAP

Indicators – MOA includes these practices in training and extension services.

5.4.2 Develop a nationwide training programme for, through accredited training facilities to increase the capacity of livestock owners and agriculture workers to practice sustainable range management and encourage the use of appropriate practices,. In close collaboration with the MOA, Botswana Cattle Producers Assoc, Farmers Associations, and other stakeholders, within a year.

Actors – CCB, BPCP, KCS to co-ordinate with other relevant NGOs

Indicators – Development of a programme

5.4.3 Promote the programme developed in 5.4.2 through existing agricultural, game ranching and community organisations within six months of development of those programmes, within 18 months.

Actors – CCB, BPCP

Indicators – number of organizations adopting the programme and holding training sessions.

5.4.5 Assess the effectiveness of new and existing livestock husbandry and range management programmes and disseminate results; ongoing.

Actors – DWNP, MOA, CCB and BPCP

Indicators - reports

6. Political commitment

Objective: Obtain political commitment and will to the conservation needs of Cheetah and wild dogs.

6.1. *Target: Ensure political commitment to developing the regional agreement for conserving cheetah and wild dogs across Southern Africa.*

6.1.1. Promote consistency in political commitment to the value of wildlife and livestock in Botswana.

Actors MEWT

Indicators: Amended legislation within five years

6.1.2. Liaise with IUCN SSC Cat and Canid Specialist Groups to ensure that Botswana signs the regional agreement, within one year.

Actors: DWNP, NGO.

Indicator: Signed agreement

6.1.3. Regional conservation strategy and national action plan endorsed by relevant ministries through national agencies, within one year.

Actors: DWNP

Indicators: Presentation of documents to national agencies.

6.2. *Target: To ensure that any outstanding trans-boundary agreements that will benefit the conservation of cheetah and wild dogs are signed within 1 year*

6.2.1. Identify all outstanding agreements that involve the government of Botswana will benefit cheetah and wild dogs within three months

Actors: DWNP

Indicators: Botswana signing agreements

6.2.2. Lobby for agreements to be signed by mobilising stakeholders and relevant governing bodies, within nine months.

Actors: DWNP, NGO's

Indicator: Signed agreements.

7. Policy and Legislation

Objective: Review and, where necessary, revise and harmonise national and local legislation, policies and protocols affecting cheetah and wild dog conservation.

7.1 *Target: Assessment of the relevance and efficacy of current national, regional and international policies, protocols and legislation pertaining to the conservation of cheetah and wild dogs, including trade in captive animals, within two years.*

7.1.1. Participate in a regional assessment of current protocols, policy and legislation within 18 months –

Actors: DWNP, NGO's.

Indicators: consultant report

7.1.2 Increase information exchange between range countries and the Coalition Against Wildlife trafficking (CAWT) to monitor trafficking in cheetah and wild dogs - ongoing and review progress every six months.

Actor: DWNP, NGO's, Police and Customs dept

Indicator: Report of CAWT meetings.

7.2. Target: Revise and harmonise policies, protocols and legislation, where appropriate within seven years.

7.2.1. National agencies will draw up and/or amend new policies, protocols and legislation where needed, within four years

Actors: DWNP, MOA, Land, BDF, NGO's, Attorney General's Chambers

Indicators Amended policies, protocols and legislation (if necessary).

7.2.2. Implement and enact these new and/or amended policies, protocols and legislation –

Actors: DWNP, BDF, Law enforcement agencies;

Indicators Annual implementation progress report on working policies, legislation and protocols in place.

7.2.3. Annual assessments of implementation.

Actors: DWNP, NGO's, possibility of an outside consultant

Indicators: Compliance trends; consultant report

7.3 Target: To improve the capacity of law enforcement and judicial agencies to implement legislation, policies and protocols relevant to cheetah and wild dog conservation within seven years.

7.3.1. National agencies to prioritise capacity needs to implement legislation, policies and protocols relevant to cheetah and wild dog conservation

Actors: DWNP, MOA, land, law enforcement.

Indicators: Report from agencies documenting capacity gaps and recommendations as to how to fill such gaps.

7.3.2. Prioritise and increase effective utilisation of resources to improve/develop capacity

Actors: MEWT

Indicators: Annual action plans

7.4 Target: Attain effective communication and collaboration between all relevant law enforcement and wildlife management authorities within Botswana: within 3 years

7.4.1. Hold national workshops, with all relevant NGO's and national agencies involved in law enforcement present within 1 year .

Actors: NGO's, DWNP, MOA, land, law enforcement, BDF

Indicators: Workshop proceedings

7.4.2. Set up National fora to meet annually, starting in 2008/9.

Actors: DWNP

Indicators: Minutes of annual meetings for fora.

7.4.3. Participate in Southern African regional forum of law enforcement agencies and NGO's.

Actors: DWNP, NGO's, MOA, Land, law enforcement,

Indicators: Minutes of meeting of regional forum.

7.4.4. Standardise and increase efficacy of reporting mechanisms dealing with animal control to conform to regional format, within one year.

Actors: DWNP

Indicator: Standardised format for reports; national database.

7.4.5. Standardise strategies to deal with problem animals, within one year

Actors – DWNP, MOA, Law enforcement agencies

Indicators: Standardise protocols for dealing with problem animals.

8. National Planning

Objective: Facilitate the implementation of the national action conservation plan.

8.1 *Target: Implement national action conservation action plan*

8.1.1 Obtain government endorsement within one year

Actors – DWNP

Indicators – endorsed action plan

8.1.2 Hold annual national workshops to monitor and review progress on the implementation of the regional strategy and national action plan implementation

Actors – DWNP

Indicators – workshops held

8.2 *Target: Ensure that human and financial resources are made available to facilitate the implementation of the national conservation action plan within one year.*

8.2.1 Appoint a national coordinator within DWNP within one year.

Actors – DWNP

Indicators – coordinator appointed

Appendix I: Log frame of the draft National Conservation Action Plan for cheetahs and wild dogs in Botswana

(Note: Objectives do not appear in this log frame in any order of priority but have been included in alphabetical order)

Vision:

Secure, viable cheetah and wild dog populations across a range of ecosystems, that successfully coexist with, and are valued by, the people of Botswana

Goal:

Improve the status of cheetahs and wild dogs, and secure additional viable populations across their range in Botswana

Objective: Capacity Development

Develop capacity in all aspects of cheetah and wild dog conservation in Botswana

Objective: Improving knowledge:

Improve knowledge (including awareness of indigenous knowledge) on the conservation biology of wild dogs and cheetahs across Botswana

Objective: Information transfer:

Develop and implement mechanisms for the transfer of information relevant to cheetah and wild dog conservation and ensure active commitment of stakeholders

Objective: Coexistence:

Minimise conflict and promote coexistence between cheetah, wild dogs and people across Botswana in an ecologically, economically, and socially acceptable manner

Objective: Land development and land use:

Minimise adverse effects of land development and promote and implement best land use practice for cheetah and wild dog conservation

Objective: Implementation:

Facilitate the implementation of the national action conservation plan

Objective: Policy and Legislation:

Review and, where necessary, revise and harmonise national and local legislation, policies and protocols affecting cheetah and wild dog conservation

Objective: Political commitment:

Obtain political commitment and will to the conservation needs of Cheetah and wild dogs

List of acronyms used in log frame:

BDF	Botswana Defence Force
BPCP	Botswana Predator Management Program
BWTI	Botswana Wildlife Training Institute
CAWT	Coalition against Wildlife Trafficking
CBNRM	Community Based Natural Resource Management
CCB	Cheetah Conservation Botswana
CI	Conservation International
DAP	Department of Animal Production
DVS	Department of Veterinary Services
DWNP	Department of Wildlife and National Parks
KCS	Kalahari Conservation Society
IUCN	International Union of Conservation
MOA	Ministry of Agriculture
MOE	Ministry of Education
MEWT	Ministry of Environment, Wildlife and Tourism
NGO	Non Governmental Organisation
PAC	Problem Animal Control
SSC	Species Survival Commission
SCS	Species Conservation Strategy
TFCA	Trans Frontier Conservation Area
UB	University of Botswana
WCS	Wildlife Conservation Society
WMA	Wildlife Management Area
ZSL	Zoological Society of London

Theme 1: Capacity Development

Objective: Develop capacity in all aspects of cheetah and wild dog conservation in Botswana.

Target	Activity	Responsible parties	Time Frame	<i>Verifiable indicators</i>
1.1 Identify gaps in capacity in all areas of cheetah and wild dog conservation in the region.	Conduct interview and questionnaire surveys to establish current situation and identify gaps for all capacity components, including: 1.1.1 Law enforcement and conflict.	DWNP	within two years	Report on gaps identified from questionnaires
	1.1.2 Monitoring and research.	DWNP	within two years	Report on gaps
	1.1.3 Education and outreach.	DWNP	within two years	Report on gaps
	1.1.4 Range management.	DWNP	within two years	Report on gaps
1.2 Develop and implement one annual law enforcement and conflict resolution training programme in each range state.	1.2.1 Review current curricula, and identify gaps.	DWNP, BWTI, DVS, DAH, COA	within six months.	Report to identify gaps in curricula
	1.2.2 Develop law enforcement, conflict resolution and range management training modules that encompass the range of regional training needs.	BWTI, UB	within 18 months	Training modules in effect
	1.2.3 Activate and source funds to support an annual law enforcement and conflict resolution training programme.	DWNP	within one year	Funds budgeted and secured
	1.2.4 Develop and implement one annual law enforcement and conflict training programme.	MOA, DWNP	within three years	completion of the training programs
1.3 Establish a network of programmes and institutions to develop capacity in research, monitoring, education and outreach.	1.3.1 Identify existing databases and extract relevant institutions involved in research, monitoring, education and outreach.	DWNP, KCS	within one year	Creation of large carnivore database
	1.3.2 Appoint a representative to create and maintain a network of opportunities and participate in a regional committee	DWNP, KCS, CCB, BPCP	within one year	Individual appointed
	1.3.3 Contribute to the regional web portal to provide an interface between network members and the public	Network members	within one year	National data made available to portal

Theme 2: Improving knowledge

Objective: Improve knowledge (including awareness of indigenous knowledge) on the conservation biology of wild dogs and cheetahs across Botswana.

Target	Activity	Responsible parties	Time Frame	Verifiable indicators
2.1 Generate and disseminate standardised, quantitative knowledge of conflict, threats and their drivers and mitigation.	2.1.1 Compile available data on conflict, threats and their mitigation and, where possible, collate in standardised formats.	DWNP	within two years	Reports available deriving from standardised formats
	2.1.2 Identify shortfalls in existing knowledge about conflict, threats and their mitigation.	DWNP	within two years	Report on shortfalls available
	2.1.3 Initiate additional studies (field studies, surveys, questionnaires and existing data) to quantify conflict, threats, their drivers and mitigation, and effects on population viability; ongoing.	DWNP, UB, NGO's, researchers	within five years	Studies in progress, reports available (should be peer-reviewed and publishable)
	2.1.4 Organise and hold a workshop to collate national information on conflict, threats and their mitigation.	DWNP	within two years	Proceedings of workshop available
2.3 Acquire better understanding of dispersal, habitat use and connectivity for cheetah and wild dogs.	2.3.1 Conduct and maintain field studies on dispersal mechanisms in both species, including factors influencing dispersal success.	DWNP, UB, CCB, KCS, BPCP	within five years	Field study reports submitted (publishable)
	2.3.2 Conduct and maintain studies on cheetah and wild dogs feeding ecology in different areas in relation to potential range.	DWNP, UB, CCB, KCS, BPCP	within five years	Regular submission of data and updated atlas
2.4 Acquire information about the status and distribution of cheetah and wild dogs across the region, and identify recoverable range that will not be recolonised naturally,	2.4.1 Contribute to the ongoing cheetah and wild dog atlas.	DWNP, UB, CCB, KCS, BPCP	within five years.	Regular submission of data and updated atlas
	2.4.2 Contribute to regional standardised monitoring and field techniques for cheetah and	DWNP, CCB, BPCP	within three years	Contributions are made as a Botswana

	wild dog studies and publish a handbook. 2.4.3 Continue surveys in possible range to assess population status and distribution for cheetah and wild dogs.	DWNP, UB, CCB, KCS, BPCP	within five years	report Survey reports
	2.4.4 Maintain and expand long term monitoring programmes of cheetah and wild dog populations in resident range.	DWNP, UB, CCB, KCS, BPCP, CI	w ongoing	Annual reports submitted
	2.4.5 Increase understanding of sustainable offtake of the two species .	DWNP, UB, CCB, KCS, BPCP, CI	ongoing	Survey reports

Theme 3: Information transfer

Objective: Develop and implement mechanisms for the transfer of information relevant to cheetah and wild dog conservation and ensure active commitment of stakeholders.

Target	Activity	Responsible parties	Time Frame	<i>Verifiable indicators</i>
3.1 Identify relevant benefits to local communities, governments and landowners.	3.1.1 Conduct literature review to consolidate information on potential benefits of cheetah and wild dog conservation.	researchers, DWNP	within one year	Comprehensive and accessible literature review, Available database
	3.1.2 Hold meetings and workshops with communities, then landowners, then government, to collect information to identify relevant incentives and benefits.	NGOs, Government	within three years	Meetings held and minutes recorded Relevant incentives and benefits identified
	3.1.3 Centralize, share, and standardize where possible, the information relevant to cheetah and wild dog conservation among stakeholders, including the appointment of a national coordinator	IUCN coordinator, NGO's, DWNP		National coordinator identified and appointed to liaise with regional coordinator Database has been developed for ongoing contributions Centralised, standardised data available online and able to be updated by stakeholders
3.2 Develop multimedia projects across all regional Botswana, building on the best existing material, within three years.	3.2.1 Develop web based interactive reporting of sightings, data, findings and activities relevant to cheetah and wild dog conservation.	Regional and national IUCN coordinator of regional strategic plan, NGOs, DWNP	within one year	Existence of an interactive web based database to receive contributions
	3.2.2 Develop and use posters, leaflets, radio,	NGO's	within two	Dissemination of

	TV, video, pictures and theatre groups to disseminate information locally.		years	educational materials relevant to cheetah and wild dog conservation to 50% of sub-districts in each district
	3.2.3 Implement the standardized data entry that is provided by the regional coordinator to collect information on cheetah and wild dog distribution, especially in areas where information gaps occur.	IUCN, NGO's	within three years	Have standardised methods of data entry in use country wide
	3.2.4 Feed into the regional national database of information on conflict, threats and their mitigation for southern Africa		ongoing	
3.3 Promote increased national awareness of local threats.	3.3.1 Establish competitions, essays, etc. in schools and groups to enhance and highlight conservation education.	NGO's	within two years	Use these methods in each sub-district in order to highlight conservation education
	3.3.2 Develop curricula regarding cheetah and wild dogs and integrate with activities of youth conservation clubs in Botswana (e.g. Wildlife Club in Botswana, Roots and Shoots, Association of Environmental Clubs of Botswana, UB Wildlife Society)	NGO's, DOE	within two years	Country-wide development of integrated curricula
	3.3.3 Encourage sponsorship and increase numbers of Botswana sports teams, clubs and groups named after cheetah and wild dog at all levels.	Local and international sports organizations, NGO's	ongoing	Increases in sponsorship and number of teams linked to cheetah and wild dog conservation.
3.4 Promote the conservation of the two species within Botswana.	3.4.1 Hold annual national workshops with government, researchers and NGOs to inform the conservation management of cheetah and wild dog.	DWNP, NGO's	initiative within one year	National workshops with minutes and outputs held on file Integration with DWNP predator workshops

	3.4.2 Participate in wider range of meetings and stakeholder interest groups (i.e. those not directly concerned with conservation) to disseminate information about cheetah and wild dog conservation.	NGOs, variety of government agencies, agricultural associations	initiate within one year	Attendance and participation in meetings with minutes or reports held on file
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Theme 4: Coexistence

Objective: Minimise conflict and promote coexistence between cheetah, wild dogs and people across Botswana in an ecologically, economically, and socially acceptable manner

Target	Activity	Responsible parties	Time Frame	<i>Verifiable indicators</i>
4.1 Reduce deliberate killing of cheetah and wild dogs to sustainable levels in Botswana within five years.	4.1.1 Clarify, improve and standardize the monitoring of the causes and extent of intentional killing, in order to provide baseline information, for cheetah and wild dogs in Botswana	DWNP, NGO, research	within three years	Percentage of complete PAC reports increased Development of novel methods to monitor intentional killing
	4.1.2 Clarify, disseminate and lobby for enforcement of laws pertinent to killing of cheetah and wild dogs in Botswana	Botswana Farmer's Association, DWNP, NGOs	within one year	Increased enforcement of the laws more stakeholders understand the laws
	4.1.3 Identify conflict areas and clarify extent of actual versus perceived losses caused by cheetah and wild dogs.	DWNP, NGO's	on an ongoing basis	Increased awareness more stakeholders understand the laws
	4.1.4 Educate relevant stakeholders about livestock husbandry practices proven to reduce depredation.	DAP, NGO's	within one to three years	Increased knowledge on livestock husbandry that deters predators increased use of those husbandry practices by livestock producers
	4.1.5 Implement human-wildlife conflict rapid response teams to react quickly and effectively to conflict situations, in Botswana.	DWNP, DAH, NGO's	within two years	Have conflict teams that respond effectively to conflict situations in relevant hotspots identify and train conflict point

				persons in remote conflict areas
4.2 Substantially reduce levels of incidental mortality in cheetah and wild dogs in Botswana within five years.	4.2.1 Clarify and monitor extent of incidental mortality of cheetah and wild dogs in Botswana.	Police, DWNP, PAC register of roadkill, researchers	within three years	Police, DWNP, PAC register of roadkill, researchers
	4.2.2 Substantially reduce snaring mortality of cheetah and wild dogs through initiatives such as anti-poaching efforts and community conservation.	DWNP Anti-Poaching Units, NGOs, crime prevention	within five years	Decreased mortality due to snaring Minimized sources of snare wire (e.g. derelict fencing).
	4.2.3 Where appropriate, initiate programmes known to be effective at managing diseases that threaten cheetah and wild dog population viability.	MOA, DVS, DWNP vets	within five years	Increase in awareness of, and increased enforcement of, vaccination services available to domestic carnivores
	4.2.4 Implement targeted, enforceable programmes which reduce road mortality of cheetah and wild dog.	Department of Road Safety, DWNP, Cattle control people	within five years	Effective programmes implemented and reduced mortality of cheetah and wild dogs on roads
	4.2.5 Encourage land use practices (e.g. conservancies) which promote large, continuous tracts of fence-free habitat.	CBNRM, NGOs, Land Board, DWNP	within three years	Decreased extent of fencing of and within WMA's Development of functional conservancies
	4.2.6 Promote and implement land use practices compatible with cheetah and wild dog conservation.	Land Board, DWNP, Department of Animal Production	within five years	Map demonstrating increased land use practices and management compatible with cheetah and wild dog conservation

4.3 Measurably increase perceived intrinsic and economic value of cheetah and wild dogs to all stakeholders.	4.3.1 Quantify and monitor the perceived intrinsic and economic value of cheetah and wild dogs to all stakeholders.	NGOs, DWNP	ongoing	Database of reliable baseline data providing information on values and perception of values through surveys
	4.3.2 Develop appropriate value-added activities, such as hunting and tourism, in Botswana.	DWNP, CBNRM.	within five years	Increased income and novel value to stakeholders due to activities related to cheetah and wild dogs
	4.3.3 Investigate and highlight cultural values of cheetah and wild dogs in Botswana.	NGOs, CBNRM	within two years	Produce a summary and create a database of indigenous and cultural values of cheetah and wild dogs.
	4.3.4 Where relevant, develop self-sustaining community schemes that offset the costs of, and internalise the responsibilities for, conflict.	NGOs, CBNRM, communities and village leaders	within three years	Community schemes functioning and offsetting the costs of conflict
	4.3.5 Where appropriate, develop income generation and capacity development projects linked to cheetah and wild dog conservation.	Communities and village leaders, artisans, NGOs, marketers	within three years	Existence of novel income sources linked to cheetah and wild dogs Broader participation among stakeholders and increase in number of stakeholders linked to cheetah and wild dogs

Theme 5: Land development and land use

Objective: Minimise adverse effects of land development and promote and implement best land use practice for cheetah and wild dog conservation.

Target	Activity	Responsible parties	Time Frame	Verifiable indicators
5.1 Evaluate current land use and assess how these relate to cheetah and wild dog conservation by identifying determinants of success, within two years.	5.1.1 Identify key regional stakeholders responsible for determining current and future land use strategies.	DWNP	within one year.	List of stakeholders responsible
	5.1.2 Collate information from within Botswana regarding best land use practice in cooperation with the Ministry of Lands, MOA and DWNP.	CCB, BPCP	within two years	Report on best land use practice
	5.1.3 Produce a document illustrating examples of land use strategies associated with successful cheetah and wild dog conservation from Botswana in the region.	CCB, BPCP	within two years	Document
5.2 Promote the formation of multi-owner wildlife management units (e.g. conservancies, community parks etc.) by increasing awareness of the potential benefits of such land uses.	5.2.1 Identify key role players in Botswana able to drive the development of multi-owner wildlife management units.	DWNP	within one year	List of key role players
	5.2.2 Identify potential strategies to promote multi-owner wildlife management unit formation (e.g. through tax breaks and other economic incentives) and draft proposals for consideration at national cheetah and wild dog workshops.	DWNP, CCB, BPCP	within one year	Report of potential strategies
	5.2.3 Initiate national lobbying efforts to promote the development of multi-owner wildlife management units, targeted at key landholders and government representatives.	CCB, BPCP	within two years	Enabling policies and legislation
	5.2.4 Monitor the development of multi-owner wildlife management units and their influence on cheetah and wild dog conservation, to permit development of new approaches if necessary; after 5.2.5.	DWNP, UB, CCB,BPCP	ongoing	Reports of cheetah and wild dog status from individual wildlife management units
	5.2.5 Maintain current resident range, maintain and recover corridors particularly in respect to wild dogs, through surveys and expansion of wild dog and cheetah populations.	DWNP, CCB, BPCP	within ten years	
	5.2.6 Promote the use of fences that are permeable for wild dogs and cheetahs.	DWNP, CCB, BPCP	within a year	Ongoing

5.3 Promote wildlife based land uses and community based natural resource management in areas with potential for cheetah and wild dog conservation by 20%.	5.3.1 Identify areas with the greatest potential for wildlife based land uses conducive to cheetah and wild dog conservation in Botswana	DWNP, CCB, BPCP		Maps illustrating areas with potential for wildlife based land use
	5.3.2 Develop feasibility studies leading to business plans for Botswana to help achieve the development of wildlife areas to benefit cheetahs, wild dogs and communities.	CCB, BPCP	within three years	Business plans for wildlife conservation areas
	5.3.3 Prepare funding proposals to implement the business plans within one year after their development.	DWNP, CCB, BPCP	within four years	Funds available
	5.3.4 Monitor the development of wildlife based land uses, and their influence on cheetah and wild dog conservation, to permit development of new strategies if necessary after 5.3.3.	DWNP	ongoing	Maps and cheetah and wild dog numbers
5.4 Promote effective livestock husbandry and range management.	5.4.1 Lobby the MOA to adopt livestock husbandry practices as well as range management practices that are wildlife and predator friendly	CCB, BPCP, DWNP	ongoing	MOA includes these practices in training and extension services
	5.4.2 Develop a nationwide training programme for, through accredited training facilities to increase the capacity of livestock owners and agriculture workers to practice sustainable range management and encourage the use of appropriate practices. In close collaboration with the MOA, Botswana Cattle Producers Assoc, Farmers Associations, and other stakeholders	CCB, BPCP, KCS to co-ordinate with other relevant NGO's	within a year	Development of a programme
	5.4.3 Promote such programmes through existing agricultural, game ranching and community organisations.	CCB, BPCP	within six months of development of those programmes	Number of organizations adopting the programme and holding training sessions
	5.4.4 Assess the effectiveness of new and existing livestock husbandry and range management programmes and disseminate results; ongoing.	DWNP, MOA, CCB and BPCP	ongoing	Reports

Theme 6: Political commitment**Objective: Obtain political commitment and will to the conservation needs of Cheetah and wild dogs.**

Target	Activity	Responsible parties	Time Frame	<i>Verifiable indicators</i>
6.1 <i>Ensure political commitment to developing the regional agreement for conserving cheetah and wild dogs across Southern Africa</i>	6.1.1 Promote consistency in political commitment to the value of wildlife and livestock in Botswana.	MEWT	6 months	Amended legislation within five years
	6.1.2 Liase with IUCN SSC Cat and Canid Specialist Groups to ensure that Botswana signs the regional agreement	DWNP, NGO's	6 months	Signed agreement
	6.1.3 Regional conservation strategy and national action plan endorsed by relevant ministries through national agencies .	DWNP	within one year	Presentation of documents to national agencies.
6.2 Ensure that any outstanding transboundary agreements that will benefit the conservation of cheetah and wild dogs are signed.	6.2.1 Identify all outstanding agreements that involve the government of Botswana will benefit cheetah and wild dogs .	DWNP	within one year	Botswana signing agreements
	6.2.3 Lobby for agreements to be signed by mobilising stakeholders and relevant government bodies.	DWNP, NGO's	within one year	Signed agreements

Theme 7: Policy and legislation

Objective: Review and, where necessary, revise and harmonise national and local legislation, policies and protocols affecting cheetah and wild dog conservation

Target	Activity	Responsible parties	Time Frame	<i>Verifiable indicators</i>
7.1 Assessment of the relevance and efficacy of current national, regional and international policies, protocols and legislation pertaining to the conservation of cheetah and wild dogs, including trade in captive animals.	7.1.1 Participate in a regional assessment of current protocols, policy and legislation.	DWNP, NGO's	within 18 months	Consultant report
	7.1.2 Increase information exchange between range countries and the Coalition Against Wildlife trafficking (CAWT) to monitor trafficking in cheetah and wild dogs - ongoing and review progress	DWNP, NGO's, Police and Customs dept	ongoing	Report of CAWT meetings.
7.2 Revise policies, protocols and legislation where appropriate within seven years	7.2.1 National agencies to draw up and/or amend policies, protocols and legislation where needed.	DWNP, MOA, Land, BDF, NGO's, Attorney General's Chambers	within four years	Amended policies, protocols and legislation
	7.2.2 Implement and enact these new and/or amended policies, protocols and legislation.	DWNP, BDF, Law enforcement agencies	ongoing	Annual implementation progress report on working policies, legislation and protocols in place
	7.2.3 Annual assessments of implementation.	DWNP, NGO's, possibility of an outside consultant		Compliance trends; consultant report
7.3 Improve the capacity of law enforcement and judicial agencies to implement legislation, policies and protocols relevant to cheetah and wild dog conservation.	7.3.1 National agencies to prioritise capacity needs to implement legislation, policies and protocols relevant to cheetah and wild dog conservation.	DWNP, MOA, land, law enforcement	within seven years	Report from agencies documenting capacity gaps and recommendations as to how to fill such gaps
	7.3.2 Mobilise resources required to improve	MEWT	within seven	Annual action plans

7.4 Attain effective communication and collaboration between all relevant law enforcement and wildlife management agencies across southern Africa within five years.	capacity.			
	7.4.1 Hold national workshops, with all relevant NGOs and national agencies involved in law enforcement present.	NGO's, DWNP, MOA, land, law enforcement, BDF	years within one year	Workshop proceedings
	7.4.2 Set up national fora to meet regularly.	DWNP	starting immediately	Minutes of annual meetings for fora
	7.4.3 Participate in Southern African regional forum of law enforcement agencies and NGO's.	DWNP, NGO's, MOA, law enforcement	within one year	Minutes of meeting of regional forum
	7.4.4 Standardise and increase efficacy of reporting mechanisms and strategies to deal with problem animal control.	DWNP	within one year	Standardised format for reports; national database
7.4.5 Standardise strategies to deal with problem animals.	DWNP, MOA, Law enforcement agencies		Standardise protocols for dealing with problem animals.	

Theme 8: National Planning**Objective: Facilitate the implementation of the national action conservation plan.**

Target	Activity	Responsible parties	Time Frame	<i>Verifiable indicators</i>
8.1 Implement a national action plan for Botswana.	8.1.1 Obtain government endorsement	DWNP	within one year	endorsed action plan
	8.1.2 Hold annual national workshops to monitor and review progress on the implementation of the regional strategy and national action plan implementation	DWNP	ongoing	workshops held
8.2 Ensure that human and financial resources are made available to facilitate the implementation of the regional strategy.	8.2.1 Appoint a national coordinator within DWNP.	DWNP	within one year	coordinator appointed