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STRATÉGIES RÉGIONALES POUR LA CONSERVATION DES GUÉPARDS ET DES LYCAONS

(au 5 octobre 2018/ préparé par le Secrétariat et le Groupe de spécialistes des félins de l'UICN)

Résumé

Ce document présente trois stratégies régionales pour la conservation du guépard et du lycaon.

Les trois stratégies régionales ont été préparées dans le cadre du Programme de conservation à l'échelle de l'aire de répartition du guépard et du lycaon.

Le présent document comprend l'Annexe 1(en français) et les Annexes 2 et 3 (en anglais seulement).

STRATEGIE REGIONALE POUR LA CONSERVATION DES GUEPARDS ET DES LYCAONS EN AFRIQUE OCCIDENTALE, CENTRALE ET SEPTENTRIONALE

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UICN/CSE

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RESUME

Le lycaon (*Lycaon pictus*) et le guépard (*Acinonyx jubatus*) présentent des enjeux majeurs pour les conversationnistes du 21ème siècle. Bien que tous les grands carnivores requièrent de grands espaces, les lycaons et les guépards sont ceux qui ont besoin des plus grands pour vivre. Quand la population humaine envahit les dernières terres sauvages d'Afrique, ces deux espèces menacées sont souvent les premières à disparaître.

L'Afrique occidentale, centrale et septentrionale contient des populations de guépards et de lycaons qui ont une importance écologique à l'échelle mondiale. Cette stratégie régionale fait partie d'un programme qui vise à développer un plan d'actions pour la conservation de ces espèces à l'échelle nationale, en collaboration avec les autorités pour la faune sauvage dans cette région d'Afrique, et les groupes de spécialistes des félins et des canidés de l'IUCN/CSE. Du fait de la similarité des besoins écologiques des lycaons et des guépards, il apparaît logique de planifier leur conservation ensemble. De plus, les actions mises en place pour ces deux espèces profiteront aussi à d'autres carnivores comme les lions, les léopards et les hyènes. La réciproque ne serait pas forcément vraie dû au besoin unique des guépards et des lycaons d'un très grand domaine vital sauvage. Ce rapport décrit les résultats de l'atelier régional tenu au Niger en 2012 dont l'objectif était de planifier la conservation des guépards et des lycaons en Afrique occidentale, centrale et septentrionale. Les participants à cet atelier représentent les parties prenantes clés pour les guépards et les lycaons dans la région. La liste des participants inclut des membres des autorités de la faune sauvage, d'organisations non-gouvernementales (ONG), ainsi que des biologistes spécialistes de ces deux espèces.

En Afrique occidentale, centrale et septentrionale, l'aire de répartition géographique des guépards et les lycaons a subi une extrême réduction. Les populations « résidentes » ne couvrent maintenant plus que 9% (guépards) et 4% (lycaons) de leur répartition historique dans la région et ces deux espèces sont considérées comme irrémédiablement perdues de 57% (guépards) et 69% (lycaons) de cette région.

Bien que les aires protégées soient très importantes pour la conservation des guépards et des lycaons, la majorité de l'aire de répartition de ces espèces se trouve en dehors de celles-ci. En Afrique occidentale, centrale et septentrionale, plus des trois quarts de l'aire de répartition des guépards, et presque deux tiers de l'aire de répartition des lycaons, se trouvent sans statut de protection. Peu de populations à l'intérieur des aires protégées seraient viables si elles n'étaient pas connectées à l'habitat en dehors de ces aires. De ce fait, les actions de conservation en dehors des aires protégées sont cruciales pour la survie à long terme de ces espèces. De

plus, dans cette région immense, les populations de guépards et de lycaons se trouvant dans la partie occidentale sont celles qui dépendent le plus des aires protégées. Petites et isolées, elles sont très probablement extrêmement vulnérables, et leur conservation requiert une attention urgente.

Les menaces principales pesant sur la survie du guépard et du lycaon dans cette région sont la perte et la fragmentation de leur habitat, les conflits avec les éleveurs de bétail, la diminution des populations de leurs proies, le piégeage accidentel, les collisions avec des véhicules, les petites tailles des populations, les maladies infectieuses (lycaons) et la chasse pour le commerce d'animaux vivants ou des peaux (guépards). Ce rapport présente une stratégie qui vise à atténuer ces menaces, et à garantir la survie de ces deux espèces dans la région.

La région abrite seulement cinq populations connues de guépards et quatre populations de lycaons dont la plupart occupent des zones transfrontalières internationales. Une gestion transfrontalière est donc probablement nécessaire pour la conservation de ces espèces sur le long-terme. Les participants à l'atelier ont identifié les espaces sauvages où une restauration simultanée des deux espèces est envisageable ; il s'agit principalement d'aires protégées qui n'ont pas été bien gérées dans le passé mais qui pourraient supporter des populations de guépards et de lycaons si leur gestion était améliorée. Bien qu'elles soient relativement petites, ces aires de réhabilitation pourraient potentiellement contribuer à une augmentation de 2% de l'aire de répartition du guépard et 4% de celle du lycaon. Il s'agirait donc d'une augmentation substantielle de leur aire de résidence actuelle. La stratégie présentée ici se focalise donc sur la protection de populations existantes connues, l'identification de populations inconnues et, là où c'est possible, la restauration de populations.

La stratégie pour la conservation de ces deux espèces en Afrique occidentale, centrale et septentrionale reconnait le besoin de (i) développer les capacités dans tous les domaines touchant à la conservation des guépards et des lycaons dans la région, (ii) améliorer les connaissances sur la biologie de ces deux espèces, (iii) sensibiliser les responsables et les communautés sur la valeur du guépard, du lycaon et de leur habitat, (iv) promouvoir le rétablissement de populations de guépard et de lycaons, (v) encourager la bonne coexistence entre les humains, les guépards et les lycaons, (vi) réduire le nombres de guépards et de lycaons chassés illégalement, ainsi que la surexploitation de leurs proies, (vii) améliorer la chance de survie des populations de guépards et de lycaons, et (viii) garantir la mise en œuvre de la stratégie pour la conservation des guépards et des lycaons en Afrique orientale, centrale et septentrionale.

– CHAPITRE 2 –

CONTEXTE ET INTRODUCTION

2.1 Contexte

La conservation du lycaon (*Lycaon pictus*) et du guépard (*Acinonyx jubatus*) représente un énorme défi pour les conversationnistes du XXIe siècle. Avant, l'aire de répartition de ces espèces était très étendue dans toute l'Afrique ; cependant, au cours des dernières décennies, leur nombre et leurs aires de répartition ont très fortement diminué (IUCN/CSE, 2007a ; IUCN/CSE, 2007b). Tous les grands carnivores ont besoin d'aires géographiques très étendues pour survivre. Les lycaons et les guépards parcourent de très grandes distances, et ils nécessitent un espace vital plus grand comparativement aux autres carnivores terrestres. Au fur et à mesure que l'Homme empiète sur les derniers milieux sauvages d'Afrique, les lycaons et les guépards — particulièrement sensibles à la destruction et à la fragmentation de leurs habitats — sont souvent les premières espèces à disparaître.

Malgré leur statut d'espèces menacées (le lycaon est repris sur la liste des "espèces menacées" et le guépard sur celle des "espèces vulnérables", IUCN, 2012), leur importance écologique en tant que grands carnivores (Woodroffe & Ginsberg, 2005), et leur valeur auprès du secteur du tourisme africain (Lindsey *et al.*, 2007), très peu de mesures pour la conservation de ces deux espèces ont été mises en place. La plupart des aires protégées africaines sont trop petites pour que les populations soient viables, et les efforts de conservation sur des terres non protégées ont, jusqu'ici, été limités à quelques projets seulement.

Les trois facteurs suivants ont freiné les activités de conservation du guépard et du lycaon:

- le domaine vital de ces espèces est si grand qu'il faut planifier leur conservation à une échelle géographique immense, rarement requise auparavant pour la conservation d'animaux terrestres;
- les informations manquent sur la répartition et le statut des espèces, ainsi que sur les meilleurs outils à utiliser pour que le plan de conservation soit efficace;
- la plupart des pays africains ne disposent pas des moyens pour protéger ces espèces. En raison de menaces et d'enjeux environnementaux différents, l'expertise dans la prise en charge d'espèces plus emblématiques, telles que les éléphants et les rhinocéros, n'est peut-être pas transférable aux lycaons et aux guépards.

Reconnaissant ces difficultés, les groupes IUCN/CSE spécialistes des félins et des canidés en collaboration avec la Wildlife Conservation Society (WCS) et la Zoological Society de Londres (ZSL) ont mis en place, en 2006, un système de planification de la conservation au niveau des aires de répartition des lycaons et des guépards (http://www.cheetahandwilddog.org). Les deux espèces ont été étudiées ensemble, car malgré leurs différences taxonomiques, elles sont très similaires d'un point de vue écologique et doivent donc faire face aux mêmes menaces.

Ce système de planification de la conservation au niveau des aires de répartition comprend six objectifs:

1) Mieux faire connaître la nécessité de la conservation des lycaons et des guépards, en particulier aux professionnels de la conservation dans les États concernés.
2) Collecter des informations sur la répartition et la taille des populations de lycaons et de guépards de façon systématique, de manière à orienter les efforts de conservation et à évaluer le succès ou l'échec de ces efforts dans les années à venir.
3) Identifier des sites clefs pour la conservation des lycaons et des guépards, et notamment répertorier les corridors qui relient les principales aires de conservation.
4) Mettre en place des plans d'actions spécifiques aux niveaux global, régional et national, tant pour le lycaon que pour le guépard.
5) Encourager les responsables politiques à incorporer des exigences en matière de conservation des lycaons et des guépards dans la politique d'aménagement du territoire à l'échelle régionale aussi bien qu'à l'échelle nationale.
6) Développer les capacités locales à protéger les guépards et les lycaons en partageant les connaissances au sujet d'outils efficaces pour la planification et la mise en application du plan d'action de conservation.

Un élément essentiel de ce système est l'organisation d'une série d'ateliers rassemblant des spécialistes sur les guépards et les lycaons et des responsables de la conservation venant d'organisations gouvernementales et non gouvernementales. La participation étroite des représentants gouvernementaux a été considérée comme un élément essentiel étant donné qu'ils représentent les organisations qui ont le pouvoir de mettre en place les recommandations quelles qu'elles soient au niveau politique et au niveau de la gestion. Même si le procédé a pour but ultime de couvrir l'entièreté des aires de répartition des deux espèces, en raison du nombre d'États compris dans celle-ci, il aurait été très difficile de parvenir à des discussions et des échanges productifs au cours d'un seul atelier pour l'ensemble de la zone, c'est pourquoi les ateliers ont été organisés au niveau régional. Ce rapport présente les résultats du troisième et dernier atelier qui concerne l'Afrique occidentale, centrale et septentrionale. Les deux autres ateliers, consacrés à l'Afrique de l'Est et à l'Afrique australe ont été organisés en 2007 (IUCN/CSE, 2007a, IUCN/CSE,

2007b). Le paragraphe 2.4 détaille les objectifs de l'atelier et l'annexe 1 présente les participants à l'atelier.

Dans la mesure où la politique de conservation de la faune sauvage a été formulée, acceptée et appliquée au niveau national, il est impératif que la planification de la conservation soit également promulguée à ce niveau. L'élaboration de plans nationaux, par le biais d'ateliers nationaux, constitue donc un élément très important du système de planification de la conservation au niveau des aires de répartition des guépards et des lycaons. Ainsi, chaque atelier régional a été immédiatement suivi par un atelier national réalisé dans le pays organisateur de l'atelier régional. Des délégués issus d'autres pays de la région ont été invités à assister à ce premier atelier national en tant qu'observateurs. Cette démarche avait pour objectif de préparer l'organisation d'ateliers nationaux dans d'autres États de l'aire de répartition des deux espèces, puis de les réaliser, et ensuite de mettre en place un plan d'action pour chacun des États des aires de répartition des guépards et des lycaons. L'atelier consacré à l'Afrique occidentale, centrale et septentrionale, décrit ici, a été suivi d'un atelier national qui s'est tenu au Niger. Les résultats de celui-ci seront publiés séparément.

2.2 Biologie et besoins de conservation des lycaons

Les lycaons sont des membres très sociaux de la famille des canidés. Les meutes coopèrent pour chasser leurs proies (Creel & Creel, 1995), qui sont principalement des ongulés de taille moyenne (il s'agit en particulier d'impalas, *Aepyceros melampus*, en Afrique australe et orientale, et de cobes de Buffon, *Kobus Kob,* en Afrique centrale et occidentale), mais qui peuvent varier en taille allant du lièvre (*Lepus* spp) et du dik-dik (*Madoqua* spp, Woodroffe *et al.*, 2007b) au koudou (*Tragelaphus strepsiceros*) et même, parfois, à l'élan commun (*Taurotragus oryx*, Van Dyk & Slotow, 2003). La meute entière coopère à la reproduction de l'espèce. En général, seuls une femelle et un mâle sont les parents des chiots. Tous les membres de la meute prennent soin des jeunes (Malcolm & Marten, 1982). Il n'a jamais été observé de femelles élever des jeunes jusqu'au stade adulte sans l'aide d'autres membres de la meute ; c'est donc la meute et non l'individu qui est utilisé comme unité de mesure pour évaluer la taille des populations.

Contrairement à la plupart des autres carnivores (à l'exception des guépards), les lycaons ont tendance à éviter les zones à forte densité de proies (Mills & Gorman, 1997), et il semble que ce soit justement parce que les plus grands carnivores préfèrent ces zones (Creel & Creel, 1996; Mills *et al.*, 1997). Les lions (*Panthera leo*) et les hyènes tachetées (*Crocuta crocuta*) sont responsables du taux de mortalité élevé chez les lycaons adultes et juvéniles (Woodroffe *et al.*, 2007a).

C'est probablement en raison de cette tendance à éviter la présence des plus grands carnivores que les lycaons ont une faible densité de population et que leur aire de répartition est si étendue. Les densités de population sont, en moyenne, de 2.0 adultes et jeunes de l'année pour 100 km² (Fuller *et al.*, 1992a) et le domaine

vital par meute en Afrique australe et orientale est, en moyenne de 450 à 800 km² (Woodroffe & Ginsberg, 1998), mais certaines meutes peuvent avoir un domaine vital de plus de 2 000 km² (Fuller *et al.*, 1992a). Le domaine vital des lycaons, tout comme celui des guépards, est beaucoup plus étendu que ce à quoi l'on pouvait s'attendre au vu de leurs besoins énergétiques.

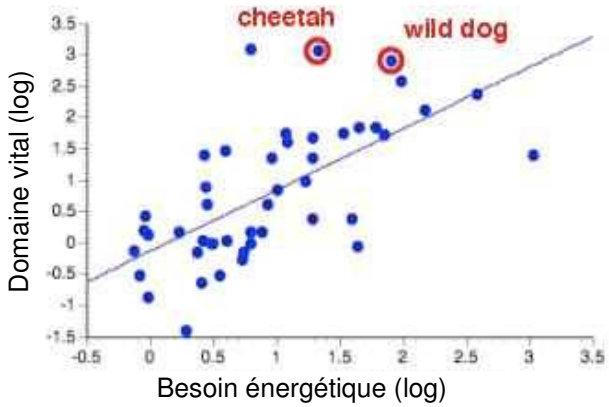


Figure 2.1 *La relation entre les besoins énergétiques de plusieurs carnivores et la taille de leur domaine vital, démontrant que les guépards (cheetah) et les lycaons (wild dog) ont besoin de plus d'espace que leurs besoins énergétiques peuvent le suggérer. La raison pour laquelle le lycaon apparait comme ayant une aire de répartition plus large celle du guépard, est que l'unité de mesure est la meute et non l'individu. Les données sont reproduites à partir de Gittleman & Harvey (1982).*

La plupart des nouvelles meutes se créent lorsque les jeunes lycaons (en général, mais pas toujours, vers l'âge de deux ans, McNutt, 1996) quittent leur meute natale pour former des groupes de dispersion unisexes à la recherche de nouveaux territoires et d'individus du sexe opposé. Ces groupes de dispersion peuvent parcourir des centaines de kilomètres (Fuller *et al.*, 1992b) ; ils ont ainsi été observés dans des zones très éloignées des populations résidentes (Fanshawe *et al.*, 1997). Le comportement de dispersion des lycaons peut compliquer l'interprétation des données de répartition. En effet, l'observation de petits groupes de lycaons ne signifie pas nécessairement qu'une population résidente soit présente à cet endroit. Toutefois, leur comportement leur permet, quand l'opportunité se présente, de recoloniser des espaces inoccupés.

Les populations de lycaons des diverses régions d'Afrique sont morphologiquement et génétiquement différentes mais aucune sous-espèce n'est reconnue (Girman *et al.*, 1993 ; Girman & Wayne, 1997). Les lycaons sont généralistes dans leur choix d'habitat : ils ont été observés dans des habitats aussi variés que les savanes inondées de manière saisonnière (McNutt & Boggs, 1996), les prairies (Kuhme, 1965), les forêts de montagne (Dutson & Sillero-Zubiri, 2005), les landes montagnardes (Thesiger, 1970) et les mangroves.

La première évaluation du statut de la population de lycaons a été menée de 1985 à 1988 (Frame & Fanshawe, 1990) et a été mise à jour en 1997 (Fanshawe *et al.*, 1997) et en 2004 (Woodroffe *et al.*, 2004). Ces évaluations ont révélé une réduction et un morcellement des populations de lycaons ; en effet, l'espèce a été éliminée d'une grande partie de l'Afrique centrale et occidentale, et a fortement diminué en Afrique australe et orientale. Toutefois, les données sur la distribution de l'espèce, qui ont principalement été rassemblées par courrier, favorisaient quelque peu les aires protégées alors qu'il y avait peu d'informations concernant les zones non protégées. Dès 1997, les lycaons avaient disparu de la plupart des aires protégées africaines, ne survivant que dans les plus grandes réserves (Woodroffe *et*

al., 1998). En 2008, on estimait que l'espèce comptait moins de 800 meutes. Elle est classée parmi les "espèces menacées" par l'UICN (IUCN, 2012).

Le déclin de la population de lycaons a été associé à la difficulté qu'ils rencontrent à vivre dans un environnement dominé par l'homme. Là où la densité humaine est élevée et donc où l'habitat est morcelé, les lycaons doivent faire face à des agriculteurs et des éleveurs hostiles qui mettent en place des collets pour capturer des ongulés sauvages se déplaçant à grande vitesse, et aux animaux domestiques qui sont porteurs de maladies potentiellement mortelles (Woodroffe & Ginsberg, 1997a). Même s'il s'agit de menaces courantes pour les grands carnivores, les faibles densités de population des lycaons et leurs aires de répartition très étendues les rendent plus vulnérables et les exposent davantage à ces impacts humains que la plupart des autres espèces (à l'exception peut-être du guépard).

Malgré les impacts humains sur leurs populations, les lycaons peuvent très bien, dans de bonnes circonstances, coexister avec l'homme (Woodroffe *et al.*, 2007b). En effet, les lycaons tuent rarement le bétail dans des zones où des proies sauvages sont présentes même en densité relativement faible (Rasmussen, 1999; Woodroffe *et al.*, 2005b) ; de plus, les techniques traditionnelles d'élevage du bétail constituent un moyen de dissuasion très efficace (Woodroffe *et al.*, 2006). Des outils ont été élaborés afin de réduire l'impact des conflits avec les éleveurs de bétail et ceux de gibier, des captures accidentelles, et des accidents sur la route. Toutefois, il n'existe toujours pas d'outils sûrs et efficaces contre les maladies (Woodroffe *et al.*, 2005a).

2.3 Biologie et besoins de conservation des guépards

Le guépard est l'un des membres les plus singuliers et spécifiques de la famille des félins. Il peut atteindre une vitesse de 103 km/h (Sharp, 1997), ce qui en fait l'animal terrestre le plus rapide. Toutefois, malgré sa technique de chasse particulière, il est généraliste dans son choix d'habitat. En effet, il vit aussi bien dans le désert que dans des buissons épais ou encore dans des savanes herbeuses (Myers, 1975).

Le système social des guépards est très différent de celui des autres félins. Les guépards femelles tolèrent les autres femelles ; elles n'ont pas vraiment de territoire, mais plutôt de grands espaces vitaux qui se chevauchent (Caro, 1994). Elles vivent en promiscuité : de nombreuses paternités multiples au sein des portées ont d'ailleurs été rapportées, et aucun signe de fidélité aux mâles n'a été observé (Gottelli *et al.*, 2007). Les mâles sont souvent sociaux : ils forment des coalitions de deux ou trois individus, en général de frères, qui restent ensemble jusqu'à leur mort (Caro & Durant, 1991). Les mâles en groupes sont plus susceptibles que les mâles solitaires de prendre et de garder des territoires qu'ils défendent contre d'autres intrus mâles (Caro & Collins, 1987). Dans l'écosystème du Serengeti, dans le Nord de la Tanzanie, la superficie moyenne des territoires des mâles est de 50 km², alors que les femelles et les mâles sans territoires couvrent

chaque année une superficie de 800 km² (Caro, 1994). On ne connaît aucun autre mammifère qui possède un tel système social, où les mâles sont sociaux et occupent de petits territoires, et où les femelles sont solitaires et traversent annuellement plusieurs territoires de mâles (Gottelli *et al.*, 2007).

Dès l'âge de deux ans, et après une gestation de trois mois, les femelles peuvent mettre bas (Caro, 1994). Pendant les deux premiers mois de leur vie, les petits restent dans un terrier, alors que leur mère part à la chasse tous les matins pour ne revenir qu'à la tombée de la nuit (Laurenson, 1993). La mortalité chez les petits guépards est parfois élevée : dans le Parc National du Serengeti, le taux de mortalité entre la naissance et le moment de l'indépendance est de 95% (Laurenson, 1994). Ces petits sont souvent tués par des lions ou des hyènes ; en effet, les mères ne peuvent défendre leurs petits contre ces prédateurs beaucoup plus grands qu'elles. Les jeunes peuvent également mourir à cause de l'exposition, d'un incendie ou d'abandon si leur mère ne trouve pas de nourriture. S'ils survivent, les petits resteront avec leur mère jusqu'à l'âge de 18 mois, ensuite ils vagabonderont pendant 6 mois encore avec les autres membres de leur portée. Le record de longévité pour un guépard mâle est de 11 ans, et pour une femelle en liberté, il est de 14 ans. Une fois l'âge de 12 ans atteint, les femelles ne se reproduisent plus (Durant *et al.*, 2004, ; Chauvenet *et al.*, 2011). Des paramètres démographiques ne sont disponibles que pour un nombre limité de populations : la moyenne et la variance de naissances et survie ont été publiées à partir d'une étude à long terme réalisée dans le Parc National du Serengeti en Tanzanie (Durant *et al.*, 2004), tandis que les pourcentages moyens de naissances et de survie disponibles proviennent de grandes fermes d'élevage en Namibie (Marker *et al.*, 2003b).

Les guépards sont des animaux principalement diurnes, bien qu'il leur arrive de chasser la nuit, en particulier pendant la pleine lune (Caro, 1994 ; Cozzi *et al,*. 2012). Leur technique de chasse est la suivante : ils commencent par une traque furtive puis se lancent à la poursuite de leur proie. C'est parce que leur vitesse et leur capacité d'accélération sont incomparables qu'ils ont autant de succès à la chasse, et ce, même s'ils entament la poursuite à des distances beaucoup plus grandes que des félins plus gros, tels que le lion ou le léopard (*Panthera pardus*). Leurs proies sont très variées et dépendent de l'habitat et de la situation géographique, bien que des animaux de 15-30 kg soit préférés, comme la gazelle de Thomson (*Gazella thomsonii*) ou la gazelle dorcas (*Gazella dorcas*).

A l'instar des lycaons, et contrairement à la plupart des autres grands carnivores, les guépards semblent éviter les aires à forte densité de proies, probablement en raison de la présence d'autres grands carnivores dans ces aires (Durant, 1998, 2000). Il est prouvé que les lions sont en grande partie responsables du taux élevé de mortalité chez les petits guépards dans le Parc National du Serengeti (Laurenson, 1994), et qu'ils peuvent aussi tuer des adultes, alors que les hyènes tuent les petits, mais volent les proies aux adultes.

Historiquement, le guépard était très répandu en Afrique et en Asie, jusqu'en Inde. Cependant, aujourd'hui, à l'exception d'une petite population en Iran, il a disparu d'Asie, et quelques populations seulement restent en Afrique du Nord et en

Afrique de l'Ouest. Ainsi, la plupart des guépards se trouvent aujourd'hui en Afrique subsaharienne. La première évaluation sur le statut des guépards a été réalisée au début des années 1970 (Myers, 1975) ; plus tard, au cours des années 1980, d'autres études ont été menées dans des pays spécifiques (Gros, 1996, 1998, 2002; Gros & Rejmanek, 1999), et un résumé du statut global de l'espèce a été effectué en 1998 (Marker, 1998). Toutefois, des données précises sur le statut et la densité de cette espèce sont très difficiles à collecter. En effet, c'est un animal timide et qui se montre rarement. De plus, les schémas de distribution des guépards montrent qu'ils se regroupent dans des aires qui deviennent temporairement des habitats favorables (en raison de l'absence de compétiteurs et de la disponibilité des proies), ce qui rend encore plus problématique l'estimation de leur nombre (Durant *et al.*, 2007 ; Durant *et al.*, 2010).

Comme les lycaons, et probablement en raison de leurs tendances similaires à éviter les plus grands prédateurs, les guépards vivent en groupes de faible densité qui, vont de 0,3 à 3 individus adultes/100 km² (Burney, 1980 ; Gros, 1996 ; Marker, 2002 ; Mills & Biggs, 1993 ; Morsbach, 1986 ; Purchase, 1998 ; Belbachir *et al.* non publié). Même si des estimations plus élevées ont été enregistrées dans certaines zones, il est probable qu'elles ne reflètent pas la densité réelle ; soit les populations vivent en zones clôturées ou intensément gérées soit les individus peuvent errer en dehors de l'aire qui est évaluée (élément qui souligne un problème général dans l'estimation des population de guépards (voir Bashir *et al.*, 2004).

Les données sur la superficie du domaine vital des guépards vont de 50 km² pour les mâles territoriaux du Parc National du Serengeti (Caro, 1994) à plus de 1000 km² en Namibie (Marker *et al.*, 2008). De même que pour le lycaon, le domaine vital du guépard est beaucoup plus vaste que ce que ses besoins énergétiques ne pourraient le laisser penser (Figure 2.1). Etant donné que leur aire de répartition couvre des zones très vastes, les guépards peuvent également être très dispersés. Selon certaines données, ils peuvent parcourir bien plus de 100 km (données non publiées de Durant), il est donc difficile de savoir si le fait de voir, à l'occasion, un guépard dans une aire signifie qu'il s'agit un membre d'une population résidente ou d'un individu de passage. Cependant, cette capacité à se disperser lui permet de recoloniser de nouvelles aires relativement facilement si, et quand, elles sont disponibles.

La taille de la population mondiale de guépards a été conjecturalement estimée à 14 000 individus (Myers, 1975) et a été établie à "moins de 15 000" (Marker, 2002). L'espèce est répertoriée comme "vulnérable" sur la liste rouge de l'UICN (IUCN, 2011). Même si les estimations ne semblent pas indiquer un déclin de la population, selon un consensus d'experts des guépards au niveau mondial, on assiste bien à une diminution de la population, soit parce que l'estimation de 1970 était inférieure à la réalité, soit parce que la dernière évaluation est une surestimation. Oui, l'aire de répartition du guépard s'est visiblement réduite par rapport à son aire de répartition historique (IUCN/SSC, 2007a ; IUCN/SSC, 2007b). Ces déclins ont en grande partie été attribués à la perte et au morcellement de son habitat (Marker *et al.*, 2003a; Marker *et al.* 2003b; Myers 1975). La disparition de

l'espèce de la quasi-totalité de son aire de répartition asiatique vient en partie de l'habitude qu'a l'aristocratie asiatique de capturer et d'utiliser les félins pour la chasse (Divyabhanusinh, 1995). Aujourd'hui, en Afrique subsaharienne, le contrôle létal pratiqué en raison de conflits réels ou perçus avec le bétail ou le gibier joue également un rôle très important dans le déclin de l'espèce (Marker *et al.*, 2003a; Marker *et al.*, 2003b; Myers, 1975).

2.4 L'atelier régional pour l'Afrique occidentale, centrale et septentrionale

L'atelier régional pour la planification de la conservation des guépards et des lycaons en Afrique occidentale, centrale et septentrionale s'est déroulé du 30 janvier au 3 février 2012, à l'hôtel La Tapoa, dans la partie Nigérienne du Parc Régional du W. Il y avait 33 participants (Figure 2.2), dont des représentants gouvernementaux et des représentants d'ONG venus d'Algérie, du Bénin, du Burkina Faso, du Cameroun, de République Centrafricaine, du Tchad, d'Egypte, de Libye, du Mali, du Niger, du Nigéria, du Sénégal et du Togo, ainsi que des spécialistes internationaux de Belgique, du Gabon, d'Inde, de Namibie, des Pays-Bas, de Suisse, du Royaume-Uni, des Etats-Unis et du Zimbabwe. Les noms des délégués, les détails sur leur affiliation et leurs coordonnées sont repris à l'Annexe 1. Un imprévu de dernière minute a empêché la venue du participant guinéen.

Figure 2.2 *Les délégués qui ont participé à l'atelier de planification de la conservation du lycaon et du guépard en Afrique occidentale, centrale et septentrionale. Cet évènement s'est tenu au cours des mois de janvier et de février 2012 au Parc Régional du W, au Niger (la liste complète des participants se trouve en Annexe 1).*

L'atelier d'Afrique occidentale, centrale et septentrionale comprenait deux objectifs principaux : la collecte d'informations sur le statut et la répartition des lycaons et des guépards dans la région, et ce dans un format qui pourrait être utilisé pour étayer la planification de la conservation, et la préparation d'un plan régional stratégique pour la conservation de ces deux espèces. Ce plan régional

stratégique a été conçu de manière à créer un modèle qui pourrait être utilisé, presque tel quel, afin de mettre au point des stratégies nationales pour la conservation de ces espèces dans cette vaste région.

Les chapitres 3 et 4 de ce rapport détaillent le statut et la répartition du guépard et du lycaon, respectivement, en Afrique occidentale, centrale et septentrionale. Les menaces planant sur ces deux espèces sont décrites au chapitre 5. Le chapitre 6 traite de la stratégie de conservation élaborée pour la région par les participants de l'atelier. L'agenda de l'atelier est présenté en Annexe 2, les méthodes utilisées pour la récolte des données sont exposées en Annexe 3, et le tableau du plan stratégique est fourni en Annexe 4.

– CHAPITRE 3 –

AIRE DE DISTRIBUTION ET STATUT DU GUEPARD AN AFRIQUE OCCIDENTALE, CENTRALE ET SEPTENTRIONALE

3.1 Aire de répartition historique

Historiquement, l'aire de distribution des guépards s'étendait sur toute l'Afrique occidentale, centrale et septentrionale, à l'exception des côtes maritimes de l'Afrique du Nord et des forêts de basse altitude de l'ouest et du centre de la région. Le guépard étant une espèce généraliste, il est capable de survivre dans de nombreuses conditions environnementales, du désert du Sahara à la végétation dense, tant que ses proies sont disponibles. A l'époque où les activités humaines n'avaient pas encore modifié une grande partie de leur habitat naturel, les guépards occupaient probablement la quasi-totalité de la région.

La carte de la distribution historique du guépard présentée ici a été créée par les participants à l'atelier pour la conservation des guépards et des lycaons en Afrique occidentale, centrale et septentrionale à partir d'une carte préexistante (Myers, 1975 ; Figure 3.1). Le rôle des participants fut de modifier la répartition historique publiée précédemment, en utilisant des données récentes et historiques, ainsi que les connaissances les plus à jour sur l'habitat préférentiel du guépard (Figure 3.1). Les sites où il n'y avait pas d'information sur la présence de l'espèce dans le passé sont considérés comme étant en dehors de leur aire de répartition historique.

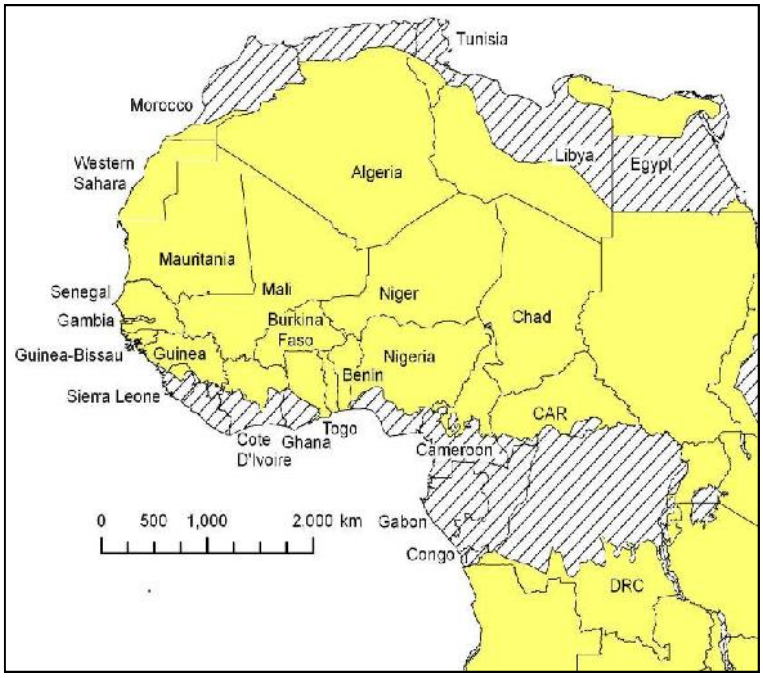


Figure 3.1 *Distribution historique des guépards, délimitée pendant l'atelier 2012. Les rayures indiquent les zones en dehors de la répartition historique de l'espèce.*

3.2 Aire de répartition actuelle

3.2.1 Les données sur les points d'observation

Pour cartographier l'aire de répartition actuelle des guépards, il a fallu tout d'abord rassembler toutes les données de localisations où l'espèce a été observée et confirmée présente ces 10 dernières années. Il ne s'agit pas exclusivement d'observation d'animaux vivants. La répartition de ces observations est présentée sur la Figure 3.2. Ces données sont susceptibles d'être biaisées en termes d'effort de récolte ainsi que pour leur communication. Par exemple, l'absence d'observation peut signifier deux choses : soit qu'il n'y a pas de guépards présents dans l'habitat, soit que les guépards sont présents mais leur présence n'a jamais été enregistrée. Néanmoins, de nombreuses études sur les antilopes dans le Sahara par le Fonds de Conservation du Sahara durant ces dix dernières années ont rarement trouvé de preuves de la présence des guépards dans la région.

De plus, une observation de guépards dans un habitat confirme que l'espèce a été présente dans cet habitat, mais n'indique pas s'il s'agissait d'une population résidente établie ou bien d'individus qui ne faisaient que passer. Si plusieurs observations se trouvent au même endroit, cela a tendance à indiquer que la population était établie dans l'habitat. Bien que les données sur les observations de guépards soient potentiellement biaisées, leur distribution (Figure 3.2) indique que l'aire de répartition de l'espèce estimée en 2012 est grandement réduite par rapport à ce qu'elle était historiquement.

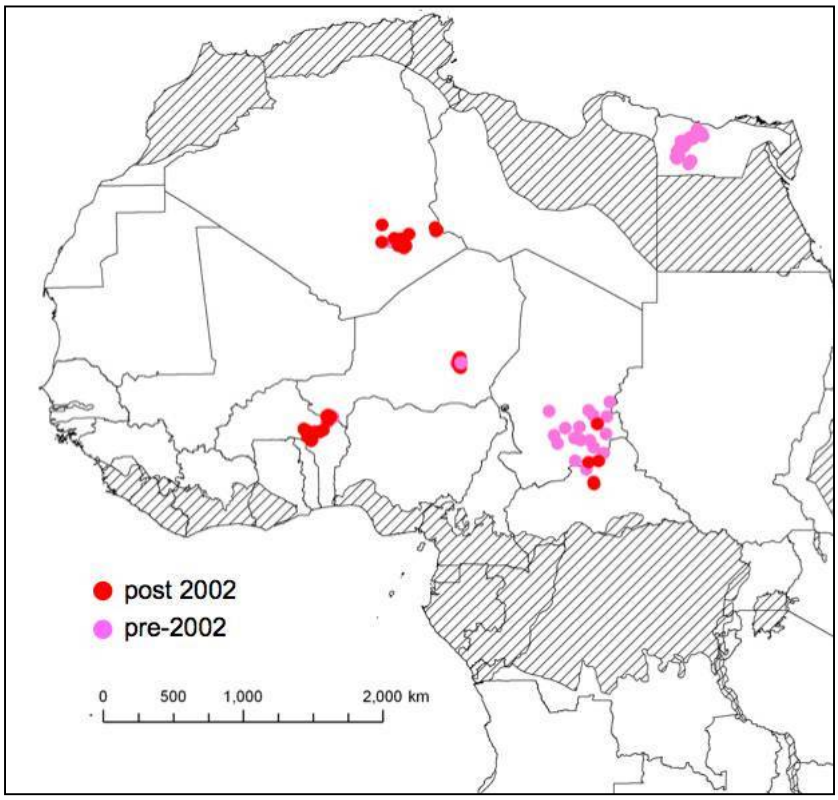


Figure 3.2 *Distribution des observations de guépards confirmées ces 10 dernières années et avant 2002.*

3.2.2 Catégories décrivant l'aire de répartition actuelle des guépards

Puisque l'aire de répartition actuelle des Guépards n'est pas connue précisément pour la région, six catégories décrivant le niveau de connaissance de cette aire ont été créées dans le but de produire une carte de la distribution de l'espèce en 2012 (Figure 3.3). Ces catégories sont plus ou moins identiques à celles utilisées pour le Lycaon (voir Chapitre 4). Plus de détails sur la définition de ces catégories peuvent être trouvés dans l'Annexe 3.

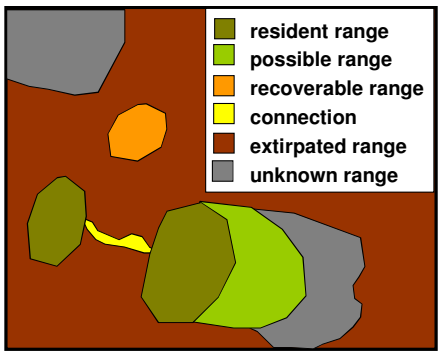


Figure 3.3 *Exemple d'une distribution imaginaire des six catégories d'aire de répartition*

(1) Aire de résidence (resident range): aire où les guépards résident actuellement.
(2) Aire potentielle (possible range): aire où les guépards sont peut-être résidents aujourd'hui mais où leur présence n'a pas été confirmée au cours des dix dernières années.
(3) Aire connective (connection): aire où les guépards ne sont pas forcément résidents mais qui est utilisée par les animaux quand ils se déplacent entre deux territoires habitables, ou bien vers de nouveaux territoires à coloniser. Ces habitats connectifs peuvent être soit des corridors d'habitat ininterrompus soit des patches d'habitat isolés représentant une étape entre deux habitats adéquats.
(4) Aire inconnue (unknown range): aire où le statut de l'espèce est inconnu et ne peut être déterminé à partir des connaissances sur le statut local de l'habitat ou des proies.

Aire d'extirpation: aire d'où l'espèce a été extirpée. Cette catégorie peut être divisée en deux:

(5) Aire non-réhabilitable (extirpated range) : aire où l'habitat a été lourdement modifié (ex. par l'agriculture ou l'urbanisation) ou fragmenté de telle manière que les animaux ne pourraient pas y résider dans un futur proche.
(6) Aire réhabilitable (recoverable range): aire où l'habitat est suffisamment large et contient assez de proies pour que les guépards puissent y survivre d'ici les 10 prochaines années si des actions de conservation adéquates sont menées.

3.2.3 Aire de répartition actuelle des guépards par rapport aux six catégories

La Figure 3.4 présente l'aire de répartition des guépards selon les six catégories, à partir des données disponibles en 2012 ; le tableau 3.1 présente les mêmes données de manière quantitative.

L'aire de répartition actuelle des guépards est beaucoup plus petite aujourd'hui qu'elle ne l'était historiquement. L'aire de résidence de l'espèce ne représente maintenant plus que 9 % de leur répartition historique. Bien que l'espèce vive encore, ou pourrait potentiellement être réhabilitée, dans d'autres endroits, elle est considérée aujourd'hui comme éteinte dans 57 % de son aire de répartition historique. Malgré tout, il est possible que les guépards soient présents dans 8 % supplémentaires de leur aire historique. L'Algérie, le Niger et la Libye possèdent tous de larges étendues d'aire potentielle pour l'espèce. Dans cet habitat, un recensement de l'espèce est donc impératif. Même si toutes les aires possibles sont identifiées comme des aires de résidence après ce recensement, l'espèce aura néanmoins perdu en tout 80 % de son habitat historique.

Il n'y avait pas de données pour presque un quart de l'aire historique de l'espèce. Même si une petite proportion de cette aire inconnue abrite encore des guépards, le statut de l'espèce pourrait être plus encourageant que ce que les données disponibles sur les aires de résidence ne le laissent présager. La grande partie de cette aire inconnue se trouve en Libye, au nord du Niger, au Tchad et en République Centrafricaine ; ce sont des pays qui ont tous souffert d'instabilité politique ces dernières années. L'habitat au Tchad et en République centrafricaine est presque entièrement constitué d'aires inconnues. D'autres endroits comme le sud du Maroc, le nord-ouest du Sahara, le sud du Burkina Faso et l'ouest de l'Égypte contiennent aussi énormément d'aires inconnues. Toutes ces aires sont des cibles majeures pour le recensement des guépards.

Les participants se sont mis d'accord sur le fait que les guépards ont été extirpés de 59 % de leur aire de répartition historique. Ce score est probablement une sous-estimation pour les même raisons que celles qui s'appliquent à l'aire de résidence : il est très probable qu'une grande partie de l'aire inconnue et de l'aire potentielle ne contiennent plus de guépards. De plus, seulement 1,6 % de l'aire historique de l'espèce est considérée réhabilitable, c'est-à-dire capable d'abriter une population de guépards dans le futur. Cela suggère qu'à partir du moment où un habitat devient inhabitable par l'espèce, il l'est probablement de manière définitive. Néanmoins, des aires réhabilitables clés ont été identifiées au Sénégal, au Cameroun, au Bénin, au Tchad, en République Centrafricaine et en Egypte.

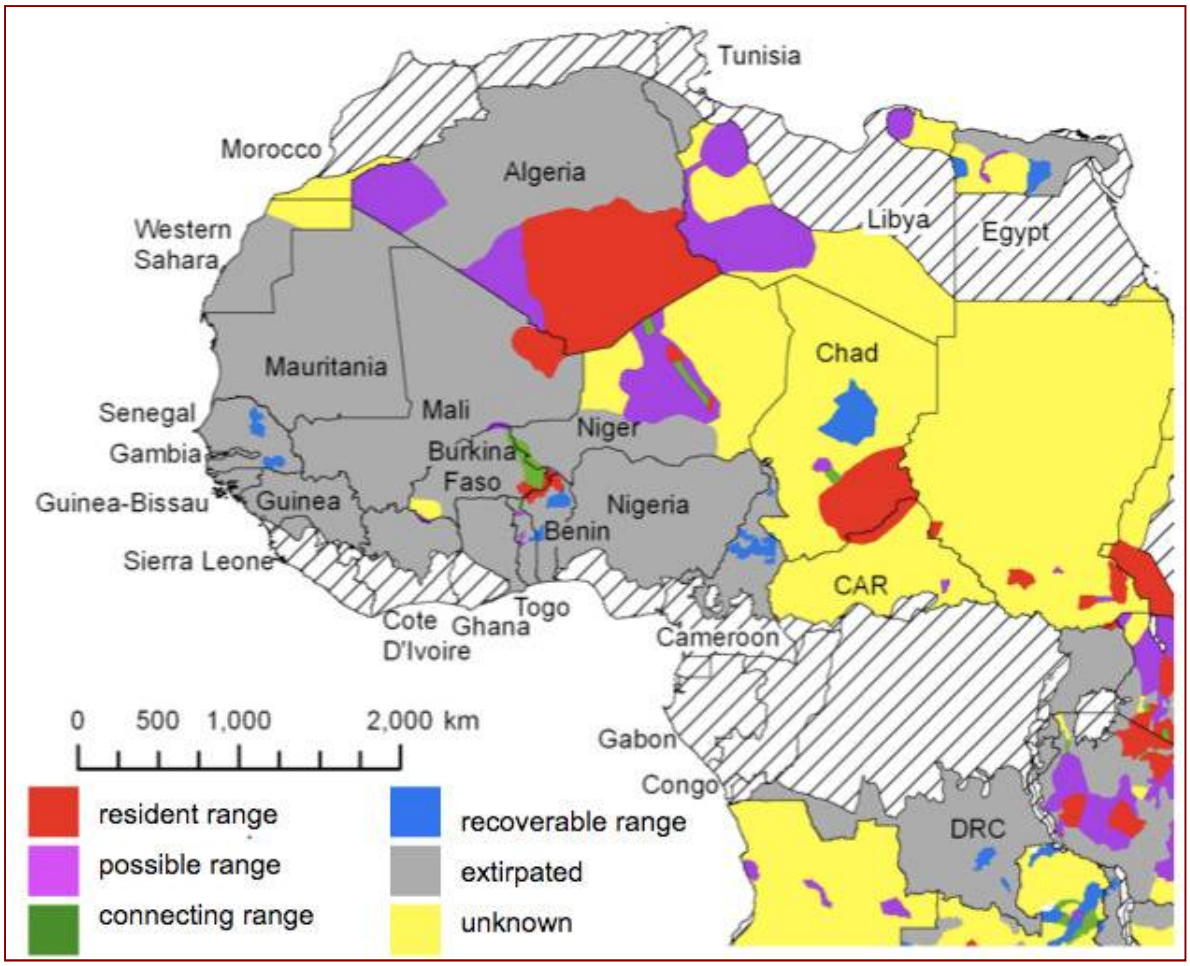


Figure 3.4 *Carte représentant la distribution des guépards en Afrique occidentale, centrale et septentrionale estimée par les participants à l'atelier en 2012. Les rayures indiquent des aires qui ne font pas partie de la distribution historique des guépards.*

Bien qu'il existe de grandes zones où le statut du guépard est inconnu, les données obtenues des pays ayant des informations relativement complètes (Mali, Algérie, Nigeria, Burkina Faso) suggèrent qu'une contraction marquée de la répartition géographique s'est produite chez cette espèce. Il est très probable de découvrir qu'il en est de même pour les pays qui ont beaucoup d'aires inconnues, une fois que plus de données seront collectées.

Tableau 3.1 *Distribution des guépards en Afrique occidentale, centrale et septentrionale d'après les participants à l'atelier en 2012. Les pourcentages sont calculés en divisant l'aire totale présumée dans chaque catégorie par le total de l'aire de répartition historique des guépards.*

Pays	Aire historique	Aire (km²) et % de l'aire historique dans chaque catégorie											
		Résidence		*Possible*		*Non-réhabilitable*		*Réhabilitable*		*Connective*		*Inconnue*	
	km²	km²	%	km²	km²	km²	km²	km²	%	km²	%	km²	%
Pays représentés à l'atelier													
Algérie	2 379 773	740 356	31.1%	311 281	13.1%	1 328 135	55.8%	0	0.0%	0	0.0%	0	0.0%
Bénin	103 415	11 828	11.4%	0	0.0%	75 347	72.9%	16 239	15.7%	0	0.0%	0	0.0%
Burkina Faso	251 170	8 571	3.4%	3 944	1.6%	199 894	79.6%	0	0.0%	21 500	8.6%	17 262	6.9%
Cameroun	205 333	0	0.0%	0	0.0%	176 034	85.7%	29 299	14.3%	0	0.0%	0	0.0%
Rep. Centrafricaine	492 034	30 562	6.2%	3 121	0.6%	0	0.0%	0	0.0%	0	0.0%	458 351	93.2%
Tchad	1 206 034	186 080	15.4%	7 420	0.6%	0	0.0%	79 401	6.6%	5 761	0.5%	927 372	76.9%
Egypte	324 543	0	0.0%	7 606	2.3%	159 086	49.0%	32 791	10.1%	0	0.0%	125 061	38.5%
Libye	999 156	0	0.0%	380 738	38.1%	0	0.0%	0	0.0%	0	0.0%	618 418	61.9%
Mali	1 214 767	62 841	5.2%	2 513	0.2%	1 149 413	94.6%	0	0.0%	0	0.0%	0	0.0%
Niger	1 148 443	13 507	1.2%	200 890	17.5%	281 277	24.5%	684	0.1%	27 255	2.4%	624 830	54.4%
Nigeria	700 206	0	0.0%	0	0.0%	700 206	100.0%	0	0.0%	0	0.0%	0	0.0%
Sénégal	184 051	0	0.0%	0	0.0%	165 325	89.8%	18 726	10.2%	0	0.0%	0	0.0%
Togo	50 995	0	0.0%	3 007	5.9%	45 279	88.8%	1 355	2.7%	1 354	2.7%	0	0.0%
Sous-total	*9 259 920*	*1 053 746*	*11.4%*	*920 520*	*9.9%*	*4 279 996*	*46.2%*	*178 496*	*1.9%*	*55 870*	*0.6%*	*2 771 294*	*29.9%*
Pays non-représentés à l'atelier													
Cote d'Ivoire	155 028	0	0.0%	0	0.0%	155 028	100.0%	0	0.0%	0	0.0%	0	0.0%
Rep. Dem. Congo	638 861	0	0.0%	0	0.0%	626 956	98.1%	11 905	1.9%	0	0.0%	0	0.0%
Gambie	10 023	0	0.0%	0	0.0%	10 023	100.0%	0	0.0%	0	0.0%	0	0.0%
Ghana	143 800	0	0.0%	0	0.0%	143 800	100.0%	0	0.0%	0	0.0%	0	0.0%
Guinée	201 635	0	0.0%	0	0.0%	201 635	100.0%	0	0.0%	0	0.0%	0	0.0%
Guinée-Bissau	29 476	0	0.0%	0	0.0%	29 476	100.0%	0	0.0%	0	0.0%	0	0.0%
Mauritanie	1 045 598	0	0.0%	0	0.0%	1 045 598	100.0%	0	0.0%	0	0.0%	0	0.0%
Maroc	66 260	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	66 260	100.0%
Sierra Leone	16 733	0	0.0%	0	0.0%	16 733	100.0%	0	0.0%	0	0.0%	0	0.0%
Tunisie	76 142	0	0.0%	0	0.0%	76 142	100.0%	0	0.0%	0	0.0%	0	0.0%
Ouest Sahara	288 861	0	0.0%	0	0.0%	203 831	70.6%	0	0.0%	0	0.0%	85 030	29.4%
Sous-total	*2 672 419*	*0*	*0.0%*	*0*	*0.0%*	*2 509 223*	*93.9%*	*11 905*	*0.4%*	*0*	*0.0%*	*151 290*	*5.7%*
Grand total	11 932 339	1 053 746	**8.8%**	920 520	**7.7%**	6 789 219	**56.9%**	190 401	**1.6%**	55 870	**0.5%**	2 922 584	**24.5%**

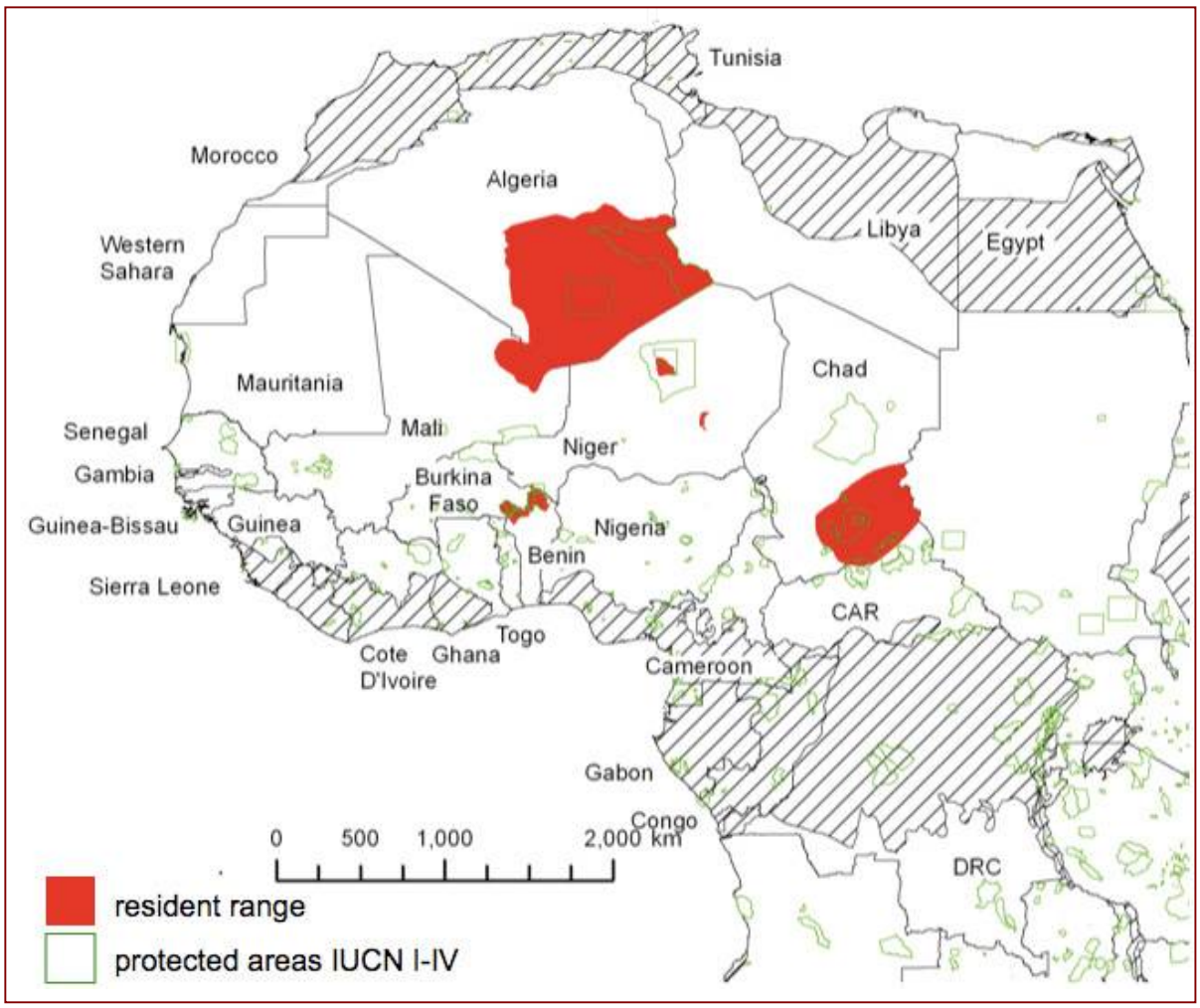


Figure 3.5 *Aires de résidence des guépards en Afrique occidentale, centrale et septentrionale comme estimée par les participants à l'atelier en 2012.*

Un pourcentage faible mais d'importance de l'aire historique des guépards (0,5 % ou 55 870 km²) est potentiellement significatif pour leur conservation car il connecte des aires de résidence à des aires possibles. Des aires connectives ont été identifiées au Niger, au Tchad et autour du Parc du W. Cela reflète peut-être une connaissance plus poussée de ces habitats et ne signifie en aucun cas que d'autres aires connectives ne sont pas importantes. Bien que l'aire connective soit petite, son importance reste énorme, car elle peut aider l'aire de répartition actuelle des populations de guépards à ne pas se fragmenter plus qu'elle ne l'est, et les populations à ne pas devenir génétiquement isolées. L'aire connective, par définition (section 3.3) ne contient pas de populations résidentes et, de ce fait, est probablement très vulnérable à la dégradation.

Le Tableau 3.2 présente en détail l'aire de résidence identifiée par les participants ; ces aires sont aussi représentées sur la carte en Figure 3.5. Les estimations de taille de population présentées dans le Tableau 3.2 doivent être interprétées avec beaucoup de prudence car elles dérivent de données incomplètes. Néanmoins, elles représentent au mieux les informations disponibles. Elles

suggèrent qu'il y aurait environ 446 guépards survivants dans cette région. Les deux grandes zones identifiées comme contenant le plus d'aires de résidence sont les Adrar des Ifoghas/Ahaggar/Ajjer/Mali ainsi que la zone Tchad/République Centrafricaine. Sachant que la densité maximale des guépards est de 1/1 000 km² dans la région, bien qu'elles soient larges, ces zones ne peuvent sûrement abriter que des populations petites mais viables. De plus, quelques guépards peuvent aussi être trouvés dans le complexe du W, les réserves naturelles de l'Aïr et du Ténéré et le Massif du Termit. Pour l'instant, nous ne savons pas si tous ces individus font partie de la sous-espèce *A. j. hecki*, qui est actuellement classifiée comme espèce En Danger Critique d'Extinction sur la liste rouge de l'UICN (Belbachir, 2008). Les résultats d'une analyse génétique pourraient révéler que la population de l'Algérie/Mali est peut-être la seule population de cette sous-espèce encore viable. La viabilité des autres populations reste dépendante du maintien de connectivité entre les populations. En particulier, les populations de guépards des régions des Massifs de l'Aïr et du Termit ne sont probablement pas assez grandes être viables. Il est impératif de faire un recensement pour mieux comprendre l'étendue de l'aire de répartition des guépards ainsi que le potentiel pour la connectivité entre les populations. De plus, l'établissement de l'identité génétique de ces populations menacées paraît urgent.

Tableau 3.2 *Distribution des aires de résidence des guépards en Afrique occidentale, centrale et septentrionale identifiée par les participants à l'atelier 2012. Le nombre de guépards est calculé en utilisant plusieurs méthodes. Ces estimations ont une très large marge d'erreurs. Les aires protégées sont celles des catégories I-IV de l'UICN.*

Nom	**Pays**	**Trans - frontalier?**	**Aire (km²)**		**Estimation taille de population (adultes)**	
			Totale	*Protégée*	*Total e*	*Protégée*
Adrar des Ifoghas/ Ahaggar/Ajjer & Mali	Algérie/Mali	Oui	803 202	153 464	201*	38‡
Complexe du W	Bénin/Burkina Faso/Niger	Oui	23 157	23 104	23†	23‡
Bahr Salamat	Tchad/Rep. centrafricaine	Oui	216 643	42 772	217†	43‡
Air et Ténéré	Niger	possible	8 052	5 059	4*	3‡
Massif de Termit	Niger	possible	2 693	0	1-2*	0
	Grand total :		1 053 746	224 399	**446**	**107**

*Les tailles de population dans les habitats désertiques ont été estimées à partir de la taille du polygone en utilisant une densité moyenne de 0,25 adultes par 1 000 km² , ce qui correspond à la moitié de la densité trouvée dans la région de Ti-n-haǧǧen (Belbachir *et al.* en révision) ; †Les tailles de population dans les habitats de savane ont été estimées à partir de la taille du polygone en utilisant une densité moyenne d'1 adulte par 1 000 km2 ; ǂ L'estimation de la taille des populations protégées a été faite en multipliant la taille de population total par la proportion de l'habitat qui se trouve dans des aires protégées.

3.2.4 Répartition dans les aires protégées

Comme illustré dans la Figure 3.5, une partie comparativement petite de l'aire de répartition connue des guépards se trouve dans des aires protégées de catégorie I-IV de l'UICN (Tableau 3.3). En tout, approximativement 21 % de l'aire de résidence se trouvent dans des zones protégées alors que 79 % se trouvent en dehors. La protection des populations de guépards dans ces aires protégées n'est néanmoins pas garantie et la majeure partie du reste de l'habitat de l'espèce est soumise à des pressions intenses.

Une plus grande partie (96 %) de l'aire potentielle des guépards se trouve en dehors des aires protégées désignées par les gouvernements. C'est aussi vrai pour la plupart des aires connectives (87 %), démontrant que le futur de ces habitats importants est loin d'être garanti. Par contre, une grande partie de l'aire réhabilitable pour le guépard (59 %) se trouve dans des zones protégées, probablement parce que ces zones offrent des grandes aires d'habitat intact.

Tableau 3.3 *Taille de chaque catégorie d'habitat connu ou suspecté d'être important pour le guépard dans des aires protégées de catégories I-IV (UICN). Les pourcentages correspondent aux aires de chaque catégorie se trouvant dans des aires protégées, divisées par le total de l'aire dans chaque catégorie (à partir du Tableau 3.1).*

	Aire et % de chaque catégorie se trouvant dans des aires protégées							
	Résidence		*Possible*		*Réhabilitable*		*Connective*	
Pays	km²	%	km²	%	km²	%	km²	%
Pays représentés à atelier								
Algérie	153 464	20.7%	0	0.0%	0	–	0	0.0%
Bénin	7 908	66.9%	0	–	0	0.0%	0	0.0%
Burkina Faso	8 527	99.5%	2 275	57.7%	0	–	2 342	10.9%
Cameroun	0	–	0	–	7 579	25.9%	0	–
Rép. Centrafricaine	12 865	42.1%	0	0.0%	0	–	0	–
Tchad	29 907	16.1%	0	0.0%	78 727	99.2%	0	0.0%
Egypte	0	–	0	0.0%	0	0.0%	0	–
Libye	0	–	0	0.0%	0	0.0%	0	–
Mali	0	0.0%	0	0.0%	0	–	0	0.0%
Niger	11 728	86.8%	29 540	14.7%	631	92.2%	4 688	17.2%
Nigeria	0	–	0	–	0	–	0	–
Sénégal	0	–	0	–	18 683	99.8%	0	–
Togo	0	–	3 007	100%	285	21.0%	0	0.0%
Sous-total	*224 399*	*21.3%*	*34 821*	*3.8%*	*105 904*	*59.3%*	*7 030*	*12.6%*
Pays non-représentés à l'atelier								
Rép. Dem. Congo	0	–	0	–	11 905	100%	0	–
Sous-total	*0*	–	*0*	–	*11 905*	*100%*	*0*	–
Grand total	224 399	21.3%	34 821	3.8%	117 810	61.9%	7 030	12.6%

3.2.5 Aire de répartition transfrontalière

Comme illustré dans la Figure 3.5, plusieurs populations résidentes de guépards sont connues ou suspectées d'être transfrontalières, soit par ce que leur aire de résidence couvre plusieurs pays, soit par ce que leur aire de résidence et l'aire potentielle sont adjacentes mais dans des pays différents. Les 5 populations résidentes listées dans le Tableau 3.2 sont toutes connues ou fortement suspectées d'être transfrontalières. Ces populations couvrent les frontières entre l'Algérie, le Mali et le Niger / le Niger, le Bénin, le Togo et le Burkina Faso / le Tchad et la République Centrafricaine. L'abondance de populations transfrontalières démontre l'importance d'une stratégie de conservation régionale.

3.2.6 Aire de répartition à travers les écorégions

Si l'on veut conserver des populations de guépards écologiquement représentatives, des efforts doivent être faits pour que le plus d'habitats divers possibles soient préservés. L'aire de répartition des guépards (aire de résidence, potentielle ou connective) a de ce fait été cartographiée par rapport aux écorégions identifiées par le World Wide Fund for Nature (WWF ; Olson *et al.,* 2001). Le nombre

d'aires de résidence et potentielles qui se trouvent partiellement ou entièrement dans chaque écorégion a été estimé à partir des données sur l'aire de répartition des guépards (Tableau 3.4). Pour prendre en compte le manque de précision dans l'estimation des frontières des écorégions et des polygones d'aire de répartition du guépard, ainsi que pour faciliter l'interprétation des résultats à une échelle qui est appropriée pour les guépards, cette analyse exclut toute partie de polygone < 1000 km^2. Les données présentées dans le Tableau 3.4 sont potentiellement intéressantes pour cibler les activités de conservation. Cette analyse montre que l'écorégion du désert du Sahara contient la plus grande étendue d'aire de résidence ininterrompue (510 623 km^2 ou 48 % de l'aire de résidence totale). Bien que l'aire soit très large, le nombre de guépards y vivant est probablement bas à cause d'une faible productivité et une très forte dispersion des proies. De plus, quatre écorégions - la savane de l'est du Soudan, la savane d'acacias sahélienne, la steppe du sud du Sahara, et les forêts montagneuses xériques de l'ouest du Sahara - contiennent chacune plus de 20 000 km^2 de l'aire de résidence des guépards. Les écorégions restantes contenant l'aire de résidence, les halophytes Sahariens, ne couvrent que 2 700 km^2.

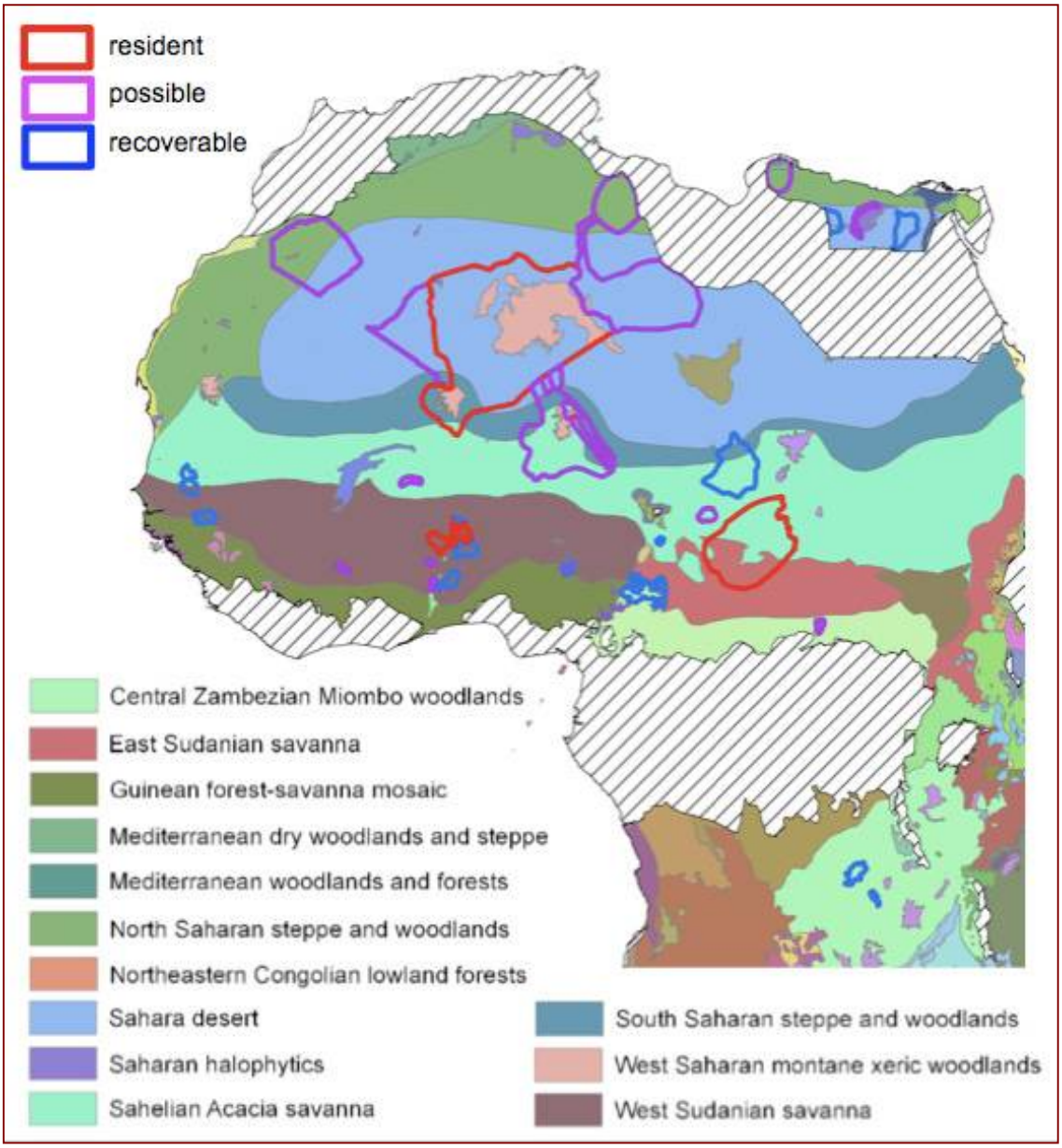


Figure 3.6 *Aires de répartition des guépards par rapport aux écorégions WWF. Pour simplifier, la légende ne présente que les écorégions qui recoupent l'aire de répartition de l'espèce. Les hachures indiquent des zones qui se trouvent en dehors de l'aire de répartition historique des guépards.*

Le nombre total de polygones représentant l'aire de résidence, estimé à 5, est extrêmement faible pour la région. Il est aussi important de noter que trois écorégions, la savane à l'est du Soudan, le désert et les halophytes du Sahara, ne sont représentées que dans un seul polygone. Deux écorégions, la forêt montagneuse xérique à l'ouest du Sahara et la savane à l'ouest du Soudan, ne sont présentes que dans deux polygones d'aire de résidence (Tableau 3.5). En revanche, trois écorégions, les forêts de miombo zambézien central, la savane à l'est du Soudan et la mosaïque forêt-savane du nord du Congo, sont aussi représentées dans 1 à 5 polygones d'aire de résidence en Afrique orientale et/ou australe (IUCN/SSC 2007a ; IUCN/SSC 2007b).

La représentation de l'aire potentielle des guépards à travers les écorégions ressemble fortement à celle de l'aire de résidence, avec les écorégions les plus représentées dans l'aire de résidence étant aussi les plus présentes dans l'aire potentielle. En revanche, il y a quatre écorégions présentes dans l'aire potentielle du guépard qui ne sont pas représentées dans leur aire de résidence. Ce sont :

1. La forêt sèche méditerranéenne et les steppes qui abritent deux polygones d'aire potentielle dans Al-Hamada Al-Hamra, le Fezzan et l'Altimim en Libye. En revanche, l'aire potentielle dans cette écorégion ne couvre que 7500 km².
2. Les savanes arborées et les forêts méditerranéennes pourraient aider à conserver une petite population dans la région de l'Altimim en Libye.
3. Les steppes et les forêts au nord du Sahara couvrent l'étendue la plus large d'aire potentielle, avec plus de 200 000 km² avec trois polygones. Ces aires se trouvent à l'ouest de l'Algérie, dans Al-Hamada Al-Hamra, le Fezzan et l'Altimim en Lybie.
4. La mosaïque forêt-savane de la région de Diefoula au Burkina Faso est potentiellement trop petite pour soutenir une population de guépards viable, mais est représentée par un seul polygone d'aire de résidence au sud en Afrique de l'Est (IUCN/SSC 2007a).

Les populations dans ces écorégions doivent être considérées comme une priorité en termes de recensement car elles pourraient contenir des populations qui vivent dans des écosystèmes rares.

Les aires réhabilitables les plus grandes ont été identifiées dans le désert du Sahara (35 000 km², 3 polygones) ; la savane d'acacias Sahélienne (69 000 km², 3 polygones) ; la savane à l'ouest du Soudan (27 500 km², 4 polygones), qui est aussi bien représentée dans l'aire de résidence (Tableau 3.4). Une partie substantielle de la mosaïque foret-savane du nord du Congo, des forêts de miombo Zambézien central, et les steppes et les forêts au sud du Sahara a été identifiée comme aire réhabilitable. La première écorégion est peu représentée dans les aires de résidence et potentielles du guépard en Afrique (Tableau 3.5).

Tableau 3.4 *Aires de répartition des guépards par rapport aux écorégions WWF en Afrique occidentale, centrale et septentrionale. Les données représentent le nombre de polygones de chaque catégorie ainsi que l'aire totale dans chaque écorégion. Les patches ≤1000 km² sont exclus.*

	Aire de résidence		**Aire potentielle**		**Aire réhabilitable**	
Ecorégion	*Nombre*	*aire (km²)*	*Nombre*	*aire (km²)*	*Nombre*	*aire (km²)*
Forêt de miombo Zambézien central	0	0	0	0	2	11 905
Savane à l'est du Soudan	1	89 044	0	0	1	7 953
Mosaïque forêt-savane de Guinée	0	0	0	0	1	1 428
Forêt sèche méditerranéenne et steppes	0	0	2	7 497	0	0
Bois et forêt méditerranéens	0	0	1	3 564	0	0
Forêt et steppes du nord du Sahara	0	0	3	215 439	0	0
Mosaïque forêt-savane du nord du Congo	0	0	1	3 121	1	19 271
Désert du Sahara	1	510 623	5	470 304	3	34 884
Halophytes Sahariens	1	2 726	1	3 393	0	0
Savane d'Acacias Sahéliens	3	136 833	3	136 605	3	69 026
Forêt et steppe du sud du Sahara	3	62 014	2	56 051	1	15 533
Forêt xérique montagneuse de l'ouest du Sahara	2	228 316	2	17 252	0	0
Savane de l'ouest du Soudan	2	23 158	3	4 067	4	27 548

Table 3.5 *Polygones d'aire potentielle qui couvrent des écorégions peu représentées dans l'aire de résidence (c'est-à-dire ≤2 aires de résidence en Afrique ≥1000 km²). Un recensement dans ces habitats pourrait permettre d'étendre les efforts pour la conservation des guépards dans le but de mieux intégrer les écorégions dans lesquelles le guépard était présent historiquement.*

	Nom du polygone									
Pays:	*Algérie*	*Algérie*	*Burkina Faso*	*Rep. Centrafrique*	*Egypte*	*Libye*	*Libye*	*Niger*	*Togo*	*Togo*
Ecorégion	SO Algérie	O Algérie	Diefoula	Unité 41 Zone de Chasse	Dépression du Qattara	Al-Hamada Al-Hamra Fezzan	Altimim	Massif Aïr/Tadress	Fazao-Malfakassa	Kéran
Forêt sèche méditerranéenne et steppes						X	X			
Bois et forêt méditerranéens							X			
Forêt et steppes du nord du Sahara		X				X	X			
Mosaïque forêt-savane du nord du Congo				X						
Désert du Sahara	X	X			X	X		X		
Halophytes Sahariens					X					
Forêt xérique montagneuse de l'ouest du Sahara						X		X		
Savane de l'ouest du Soudan			X						X	X

Tableau 3.6 *Polygones d'aire réhabilitable qui couvrent des écorégions peu représentées dans l'aire de résidence (c'est-à-dire ≤2 aires de résidence en Afrique ≥1000 km²). Une réhabilitation réussie des populations de guépard dans ces aires pourrait conduire à une meilleure représentation des écorégions anciennement utilisées par les guépards.*

	Nom du polygone							
Pays:	*Bénin*	*Cameroun*	*Tchad*	*Egypte*	*Egypte*	*Sénégal*	*Sénégal*	*Togo*
	Alibori/Trois Rivières	Benoué	Ouadi Rimé-Ouadi Achim	Frontière Libyenne	Ouest du Nil	Ferlo	Niokolo-Koba	Monts Koufe
Mosaïque forêt-savane de Guinée							X	
Mosaïque forêt-savane du nord du Congo		X						
Désert du Sahara			X	X	X			
Savane de l'ouest du Soudan	X					X	X	X

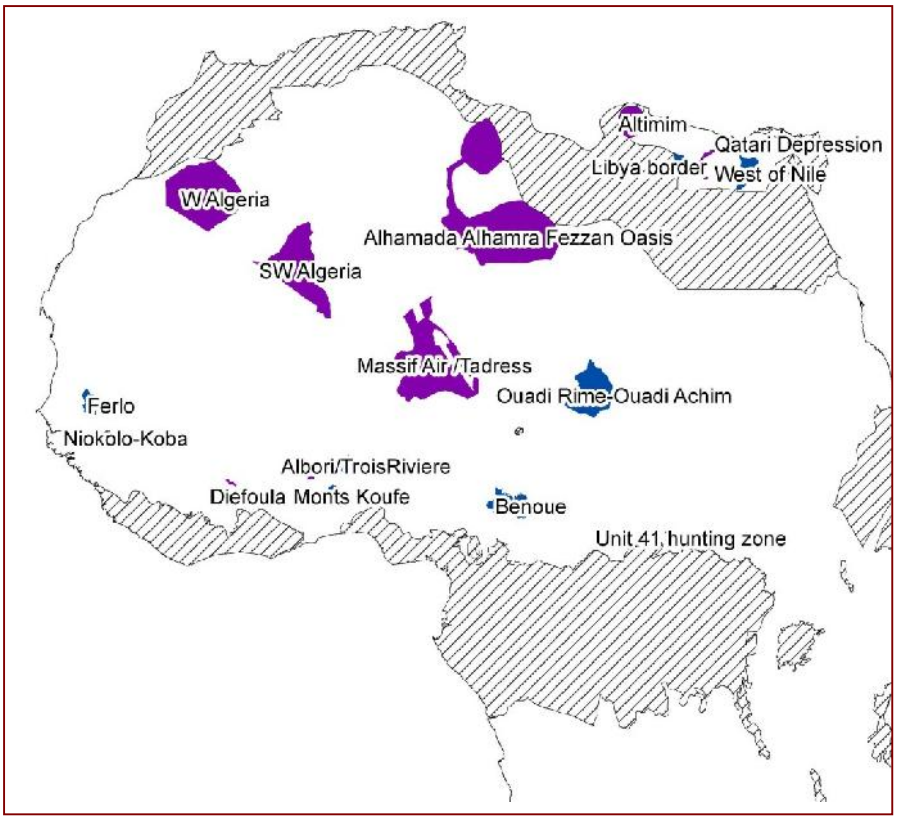


Figure 3.7 – *Aires potentielles (en violet) et aires réhabilitables (en bleu) qui se trouvent dans des écorégions peu représentées dans l'aire de résidence du guépard.*

3.3 Conclusions

La distribution géographique des guépards en Afrique occidentale, centrale et septentrionale s'est drastiquement contractée au cours des 100-200 dernières années. Historiquement, leur aire de répartition couvrait 12 millions de km^2, mais aujourd'hui, en 2012, elle n'en couvre plus que 9 % tout en étant toujours capable d'abriter des populations résidentes de guépards. Seules 5 populations sont connues, et elles sont distribuées à travers sept des vingt-cinq pays de cette région. Deux de ces pays, l'Algérie et le Tchad, supportent la plus grande majorité des guépards de cette région, comprenant plus de 88 % de l'aire de résidence de l'espèce. De plus, presque 80% de l'aire de résidence des guépards sont en dehors des aires protégées. Toutes les populations sont susceptibles d'être transfrontalières, et, de ce fait, dépendent de la coopération internationale pour leur survie.

Néanmoins, il existe des lacunes dans les connaissances de la région qui pourraient signifier que des populations additionnelles subsistent. Une petite partie de la région (8 %) pourrait en effet contenir des populations résidentes, et un quart de l'aire historique des guépards reste complètement inconnu. Ces aires où la distribution et le statut des guépards sont inconnus doivent être prioritairement recensées puisqu' il est impossible de sauvegarder des populations de guépards non connues. Plusieurs aires potentielles et inconnues sont transfrontalières. Plusieurs d'entre elles pourraient servir de lien entre des populations résidentes. Elles sont alors nécessaires pour maintenir la connectivité entre ces populations. Une grande proportion de ces aires n'est pas protégée. Une grande partie de la Lybie, de la République Centrafricaine et du Tchad est classifiée comme aire

inconnue pour le guépard, en raison des troubles civils passée ou en cours ; elle représente une priorité pour le recensement.

Neuf aires ont été identifiées comme réhabilitables, représentant en tout 1,6% de l'aire historique du guépard. Deux de ces aires sont au Sénégal, deux au Bénin, deux en Egypte, une au Cameroun, une au Tchad et une en RDC. Une recherche plus approfondie devrait être faite pour déterminer si ces aires peuvent être restaurées. L'étendue disponible serait-elle assez large, avec assez d'habitats et de proies ? Est-ce que les communautés locales verraient cette restauration de manière positive ? Si seule la moitié de ces aires était considérée adéquate, le nombre de populations résidentes de guépards pourrait être doublé dans la région. La majorité de ces aires (62 %) sont protégées. En revanche, les guépards ont été extirpés de 57 % de leur aire de répartition historique, sans aucune possibilité de restauration, ce qui indiquerait que la dégradation est souvent irréversible. Une fois leur habitat disparu, il est très difficile de le rétablir. Cela montre l'importance de s'assurer que les efforts de conservation des guépards sont mis en place dès que possible, avant que plus d'habitat ne soit perdu ou fragmenté de manière définitive.

– CHAPITRE 4 –

AIRE DE DISTRIBUTION ET STATUT DU LYCAON EN AFRIQUE OCCIDENTALE, CENTRALE ET SEPTENTRIONALE

4.1 Aire de répartition historique

Historiquement, les lycaons étaient plus ou moins présents dans toute la région d'Afrique occidentale, centrale et septentrionale. Espèce généraliste, le lycaon est capable de survivre dans un large éventail de conditions environnementales, dès lors que des proies sont disponibles. Bien que la densité la plus élevée a été enregistrée en savane boisée (Creel *et al.*, 2002), des populations ont été observées dans des habitats aussi divers que les prairies courtes (Khume, 1965), les forêts montagneuses (Dutson *et al.*, 2005) et les habitat semi-désertiques (Fanshawe, 1997). Avant que l'activité humaine ne modifie une partie substantielle des habitats naturels de l'Afrique occidentale, centrale et septentrionale, les lycaons étaient certainement présents dans une grande partie de cette région, leur distribution étant limitée au nord par le désert du Sahara, au sud par les forêts des basses terres et à l'ouest par l'océan.

Des études dans d'autres régions d'Afrique ont démontré que le lycaon reste peu commun, même dans les zones les plus sauvages, apparemment à cause d'interactions négatives avec d'autres grands carnivores (Creel & Creel, 1996; Mills *et al.*, 1997). De ce fait, malgré leur large aire de répartition historique, les lycaons n'ont jamais été abondants.

La carte de distribution historique des lycaons utilisée pendant ce processus a été mise à jour pendant l'atelier à partir d'une carte préexistante qui fut mise à jour (Figure 4.1). Les participants ont mis à jour la version précédente de cette carte en utilisant les données d'observations de l'espèce dans la nature et des données sur la distribution des types d'habitat.

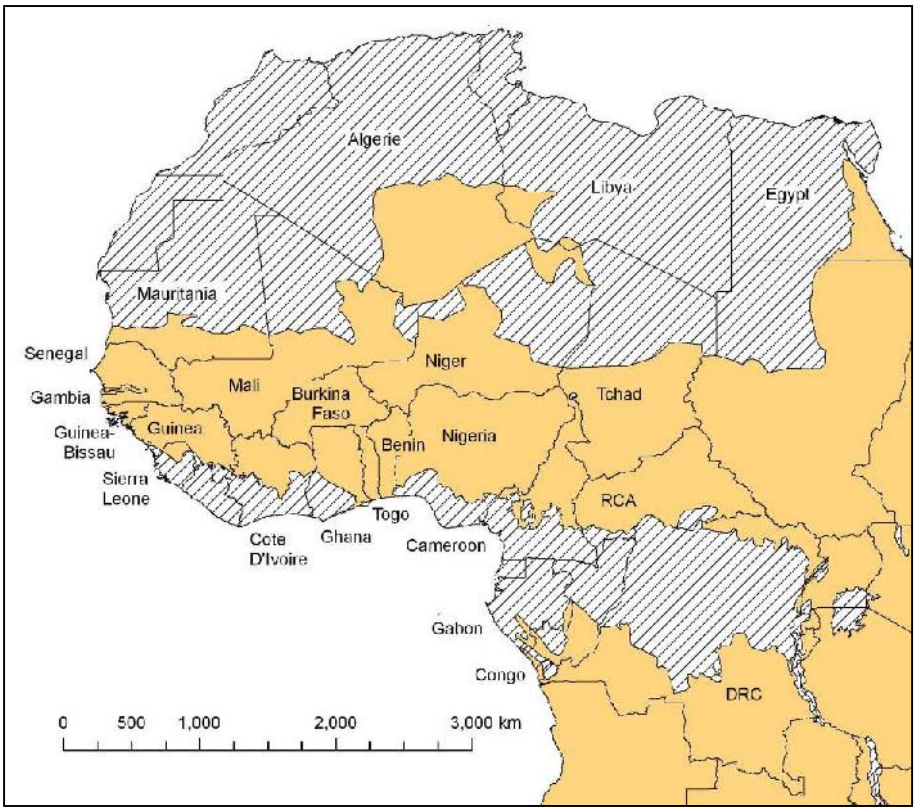


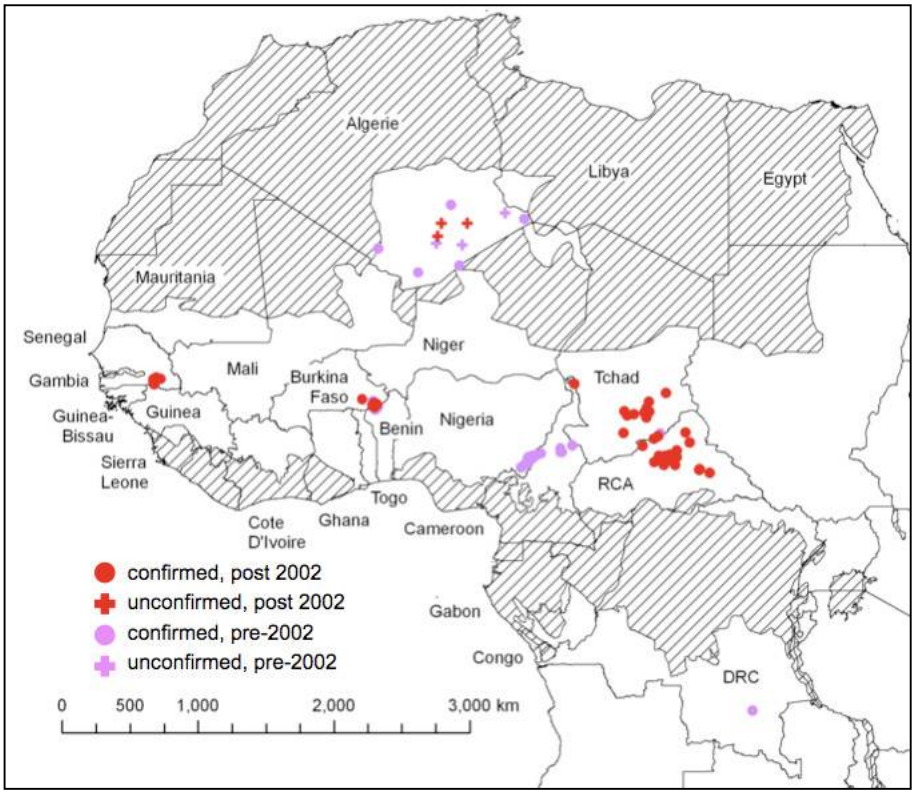
Figure 4.1 *Aires de répartition historique des lycaons avant que les activités humaines n'impactent leur habitat, révisée pendant l'atelier 2012. Les hachures indiquent des habitats en dehors de l'aire de répartition historique de l'espèce.*

4.2 Aire de répartition actuelle

4.2.1 Les données sur les points d'observation

Pour cartographier l'aire de répartition actuelle des lycaons, il a fallu tout d'abord rassembler toutes les données sur les localisations où l'espèce a été observée et confirmée présente au cours des 10 dernières années. Il ne s'agit pas exclusivement d'observation d'animaux vivants. La répartition de ces observations est présentée sur la Figure 4.2. Ces données sont susceptibles d'être biaisées par les efforts contrastés de récolte ainsi que pour leur communication. Bien que la distribution des observations soit très inégale spatialement, les points d'observations présentés en Figure 4.2 suggèrent que l'aire de distribution actuelle de l'espèce, estimée en 2012, est extrêmement réduite par rapport à sa distribution historique.

Figure 4.2 *Distribution des points d'observation de lycaons au cours des 10 dernières années et avant 2002.*



4.2.2 Catégories décrivant l'aire de répartition actuelle des Lycaons

Puisque l'aire de répartition actuelle des lycaons n'est pas précisément connue pour la région, six catégories décrivant le niveau de connaissance de cette aire ont été créées dans le but de produire une carte de la distribution de l'espèce en 2012 (Figure 4.3). Ces catégories sont plus ou moins identiques à celles utilisées pour le guépard (voir Chapitre 3). Plus de détails sur la définition de ces catégories peuvent être trouvés dans l'Annexe 3.

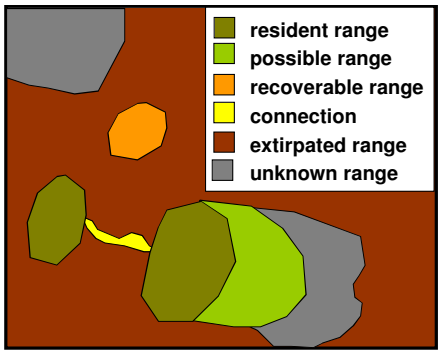


Figure 4.3 *Exemple d'une distribution imaginaire des six catégories d'aire de répartition.*

(1) Aire de résidence (resident range): aire où les lycaons résident actuellement.

(2) Aire potentielle (possible range): aire où les lycaons sont peut-être résidents aujourd'hui mais leur présence n'a pas été confirmée au cours des dix dernières années.

(3) Aire connective (connection): aire où les lycaons ne sont pas forcément résidents mais qui est utilisée par les animaux quand ils se déplacent entre deux territoires habitables, ou bien vers de nouveaux territoires à coloniser. Ces habitats connectifs peuvent être soit des corridors d'habitat ininterrompus soit des patches d'habitat isolés représentant une étape entre deux habitats adéquats.

(4) Aire inconnue (unknown range): aire où le statut de l'espèce est inconnu et ne peut être déterminé à partir des connaissances sur le statut local de l'habitat ou des proies.

Aire d'extirpation: aire d'où l'espèce a été extirpée. Cette catégorie peut être divisée en deux:

(5) Aire non-réhabilitable (extirpated range) : aire où l'habitat a été lourdement modifié (ex. par l'agriculture ou l'urbanisation) ou fragmenté de telle manière que les animaux ne pourraient pas y résider dans un futur proche.

(6) Aire réhabilitable (recoverable range): aire où l'habitat est suffisamment large et contient assez de proies pour que les lycaons puissent y survivre d'ici les 10 prochaines années si des actions de conservation adéquates sont effectuées.

4.2.3 Aire de répartition actuelle des lycaons par rapport aux six catégories

La Figure 4.4 présente l'aire de répartition des lycaons par rapport aux six catégories, en 2012 ; le Tableau 4.1 présente les mêmes données de manière quantitative.

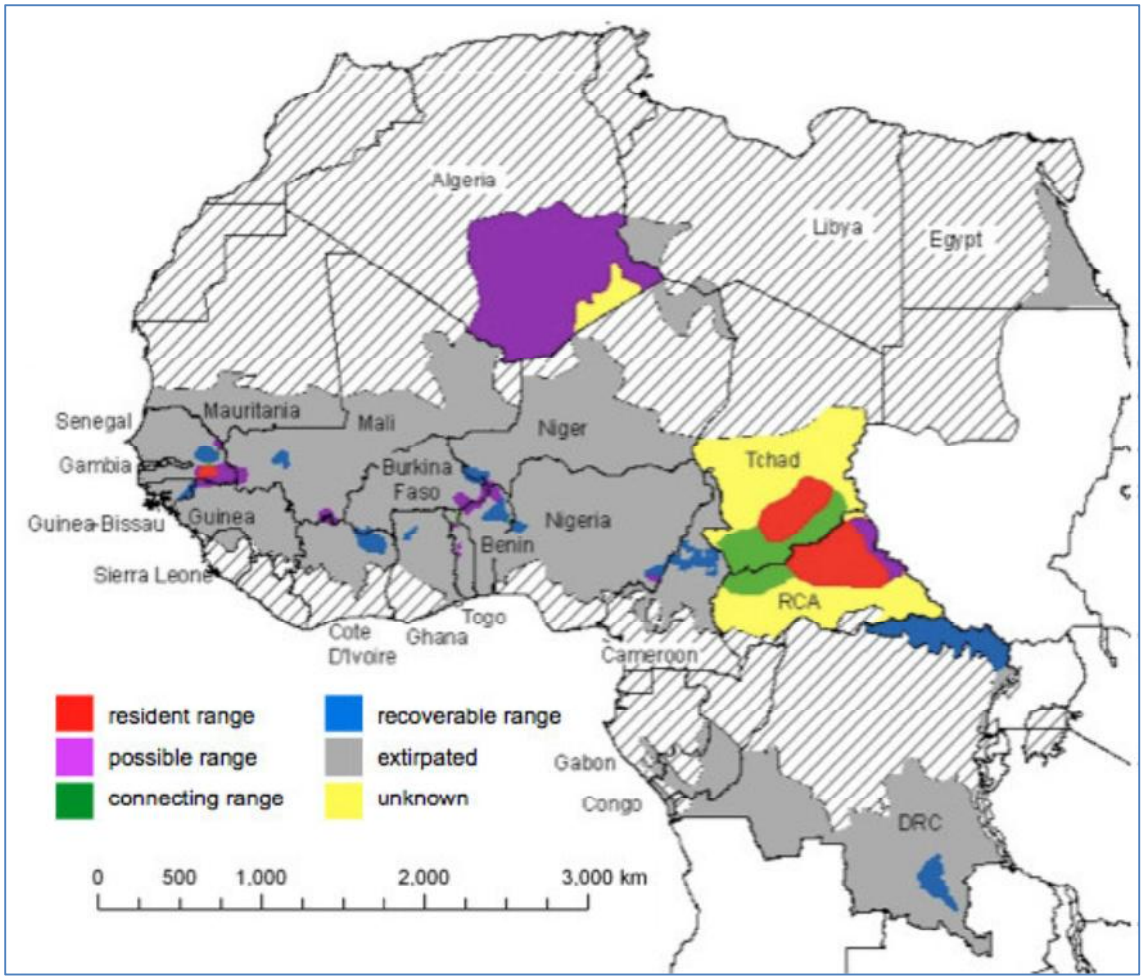


***Figure 4.4**. Carte de la distribution et du statut des lycaons en Afrique occidentale, centrale et septentrionale, définie par les participants à l'atelier de 2012. Les hachures indiquent des aires qui ne font pas partie de la distribution historique des lycaons.*

Plusieurs informations importantes émergent. Tout d'abord, les lycaons ne sont aujourd'hui considérés comme résidents que dans 4 % de leur aire historique. Bien que les lycaons soient peut-être encore présents dans certains habitats, ou bien que certains habitats soient réhabilitables, ils sont considérés comme extirpés irrévocablement de 69 % de leur distribution historique. Les estimations de taille de population présentées dans le Tableau 4.2 indiquent que toute la région pourrait contenir moins de 25 meutes de lycaons. Ensemble, ces résultats indiquent que la population a sévèrement décliné dans cette région.

Tableau 4.1 *Distribution des lycaons en Afrique occidentale, centrale et septentrionale. Les pourcentages sont calculés en divisant l'aire totale présumée dans chaque catégorie en 2012 par le total de l'aire de répartition historique des lycaons.*

	Aire historique	**Aire (km²) et % de l'aire historique répartie dans chaque catégorie**											
		Résidence		*Possible*		*Non-Réhabilitable*		*Réhabilitable*		*Connective*		*Inconnue*	
Pays	km²	km²	%	km²	%	km²	%	km²	%	km²	%	km²	%
Pays représentés à l'atelier													
Algérie	681 498	0	0.0%	628 376	92.2%	0	0.0%	0	0.0%	0	0.0%	53 122	7.8%
Benin	114 801	0	0.0%	12 960	11.3%	87 210	76.0%	14 199	12.4%	431	0.4%	0	0.0%
Burkina Faso	273 374	0	0.0%	9 382	3.4%	256 764	93.9%	7 041	2.6%	187	0.1%	0	0.0%
Cameroun	230 851	0	0.0%	0	0.0%	199 110	86.3%	31 408	13.6%	332	0.1%	0	0.0%
Rep. Centrafricaine	555 548	158 394	28.5%	36 372	6.5%	0	0.0%	0	0.0%	55 601	10.0%	305 181	54.9%
Tchad	654 829	101 505	15.5%	0	0.0%	112	0.0%	0	0.0%	131 779	20.1%	421 433	64.4%
Egypte	154 740	0	0.0%	0	0.0%	154 740	100.0%	0	0.0%	0	0.0%	0	0.0%
Libye	72 710	0	0.0%	0	0.0%	72 710	100.0%	0	0.0%	0	0.0%	0	0.0%
Mali	763 201	0	0.0%	14 107	1.8%	741 301	97.1%	7 793	1.0%	0	0.0%	0	0.0%
Niger	686 140	0	0.4%	3 004	0.4%	674 882	98.4%	8 254	1.2%	0	0.0%	0	0.0%
Nigeria	774 124	0	0.0%	2 846	0.4%	759 254	98.1%	11 535	1.5%	488	0.1%	0	0.0%
Sénégal	196 738	7 493	3.8%	18 543	9.4%	157 994	80.3%	11 532	5.9%	1 176	0.6%	0	0.0%
Togo	57 039	0	0.0%	3 349	5.9%	51 976	91.1%	0	0.0%	1 713	3.0%	0	0.0%
Sous-total	*5 215 593*	*267 392*	*5.1%*	*728 939*	*14.0%*	*3 156 053*	*60.5%*	*91 764*	*1.8%*	*191 708*	*3.7%*	*779 736*	*15.0%*
Pays non-représentés à l'atelier													
Congo	105 088	0	0.0%	0	0.0%	105 088	100.0%	0	0.0%	0	0.0%	0	0.0%
Cote d'Ivoire	173 218	0	0.0%	3 379	2.0%	149 816	86.5%	20 022	11.6%	0	0.0%	0	0.0%
Rep. Dem. Congo	1 100 342	0	0.0%	0	0.0%	935 959	85.1%	164 383	14.9%	0	0.0%	0	0.0%
Gabon	24 530	0	0.0%	0	0.0%	24 530	100.0%	0	0.0%	0	0.0%	0	0.0%
Gambie	10 801	0	0.0%	0	0.0%	10 801	100.0%	0	0.0%	0	0.0%	0	0.0%
Ghana	158 844	0	0.0%	0	0.0%	154 350	97.2%	4 494	2.8%	0	0.0%	0	0.0%
Guinée	222 373	191	0.1%	4 362	2.0%	216 320	97.3%	1 501	0.7%	0	0.0%	0	0.0%
Guinée-Bissau	32 157	0	0.0%	0	0.0%	27 924	86.8%	4 232	13.2%	0	0.0%	0	0.0%
Mauritanie	243 054	0	0.0%	206	0.1%	242 848	99.9%	0	0.0%	0	0.0%	0	0.0%
Sierra Leone	18 617	0	0.0%	0	0.0%	18 617	100.0%	0	0.0%	0	0.0%	0	0.0%
Sous-total	*2 089 023*	*191*	*0.0%*	*7 947*	*0.4%*	*1 886 253*	*90.3%*	*194 632*	*9.3%*	*0*	*0.0%*	*0*	*0.0%*
Grand Total	7 304 616	267 774	**3.7%**	736 886	**10.1%**	5 042 306	**69.0%**	286 397	**3.9%**	191 708	**2.6%**	779 736	**10.7%**

Deuxièmement, les participants s'accordent pour affirmer que les lycaons pourraient encore être présents dans 10 % de leur aire historique (aire potentielle), avec 11% de cette aire pour laquelle il n'y a pas d'information (aire inconnue). Si une partie de ces aires potentielles et inconnues contiennent encore des lycaons, le statut de l'espèce pourrait être plus positif que les données sur l'aire de résidence ne le laissent penser. La plus grande partie de l'aire potentielle se trouve au sud de l'Algérie, bien que la zone en périphérie et au sein du Complexe du W (Bénin, Burkina Faso, Niger) présente les observations les plus récentes et offre un habitat accueillant pour les lycaons. Une grande partie de l'aire inconnue appartient au Tchad et à la République Centrafricaine. Cela démontre le besoin urgent de faire un recensement dans ces pays. Des informations supplémentaires sur les aires prioritaires pour le recensement sont fournies dans la section 4.2.6.

Troisièmement, les participants ont identifié plus de 250 000 km^2 d'habitat qui pourraient être réhabilitables dans le futur. Bien que cette aire réhabilitable soit principalement répartie dans des patches relativement petits et isolés, elle contient aussi de l'habitat continu de taille substantielle au nord du Cameroun (où les lycaons ont apparemment été récemment extirpés) et au nord de la République Démocratique du Congo. Cette aire a le potentiel de maintenir des populations importantes de lycaons si une restauration efficace est réalisée.

Bien qu'il ne contienne pas de populations résidentes, un habitat représentant 3% de l'aire historique (191 708 km^2) a été identifié comme important pour le lycaon car il connecte des aires de résidence à des aires potentielles.

4.2.4 Statut actuel dans l'aire de résidence

Le Tableau 4.2 et la Figure 4.5 présentent des informations sur les trois aires de résidence identifiées par les participants dans la région. La seule population restante en Afrique occidentale, au sein et en périphérie du Parc National du Niokolo-Koba au Sénégal, est très petite et donc sérieusement menacée. Les deux populations en Afrique centrale occupent une aire géographique bien plus grande et sont capable de contenir bien plus d'individus. Néanmoins, la fréquence des observations reste très basse et les données sur ces deux populations sont rares. La taille de ces populations est donc estimée en utilisant une densité conservative de 1 adulte par 1 000 km^2. Un recensement systématique est donc impératif en Afrique centrale. Il pourrait permettre de réviser ces estimations à la hausse.

Tableau 4.2 *Distribution de l'aire de résidence des lycaons en Afrique occidentale, centrale et septentrionale identifiée par les participants à l'atelier 2012. Le nombre de lycaons est calculé en utilisant plusieurs méthodes. Ces estimations ont une très large marge d'erreur. Les aires protégées sont celles dans les catégories I-IV de l'UICN. Les localisations sont présentées dans la Figure 4.5.*

		Aire (km²)		Trans-frontalière ?	Estimation de population	
Nom	**Pays**	*total*	*protégée*		*adultes*	*meutes*
Niokolo/Badiar	Sénégal/Guinée	7 684	7 020	oui	50	3†
Bahr Salamat	Tchad	101 505	32 822	possible	100	8*
Bamingui-Bangoran-Manovo-Gounda-St Floris	République centrafricaine	158 394	49 695	possible	160	13*
	Grand total:	267 583	89 537		310	24

*La taille de population est estimée à partir de la taille du polygone en utilisant une densité conservative d'1 adulte/1 000 km² et 12 adultes/meute (incluant les jeunes) ; † la taille de population est estimée en utilisant plusieurs méthodes.

4.2.5 Répartition dans les aires protégées

La grande partie de l'aire de répartition actuelle des lycaons se trouve en dehors d'aires protégées (Tableau 4.3). En tout, 62% de l'aire de résidence, 76 % de l'aire potentielle, 77 % de l'aire réhabilitable et 98% de l'aire connective se trouvent en dehors des aires protégées. Cependant, ces nombres varient substantiellement entre l'Afrique centrale (68% de l'aire de résidence en dehors des aires protégées au Tchad et en République centrafricaine) et l'Afrique occidentale (avec seulement 16 % de l'aire de résidence en dehors des aires protégées au Sénégal et en Guinée).

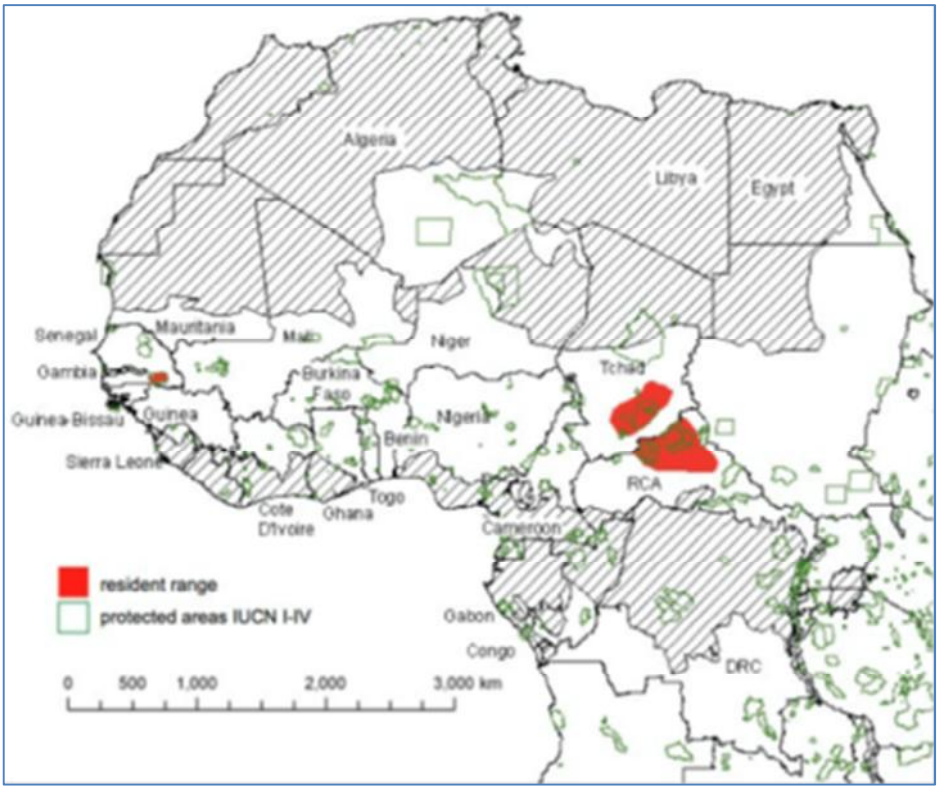


Figure 4.5 *Aires de résidence des lycaons en Afrique occidentale, centrale et septentrionale estimée par les participants à l'atelier en 2012.*

Tableau 4.3 *Taille de chaque catégorie d'habitat connu ou suspecté d'être important pour le lycaon dans des aires protégées de catégories I-IV (UICN). Les pourcentages sont calculés en divisant l'aire de chaque catégorie comprise dans les aires protégées par le total de l'aire de chaque catégorie (à partir du Tableau 4.1).*

	Aire and % de chaque catégorie dans des aires protégées							
	Résidence		*Possible*		*Réhabilitable*		*Connective*	
Pays	km²	%	km²	%	km²	%	km²	%
Pays représentés à l'atelier								
Algérie	0	–	138 786	22.1%	0	–	0	–
Benin	0	-	8 630	66.6%	0	-	0	-
Burkina Faso	0	-	9 337	99.5%	0	-	0	-
Cameroun	0	–	0	–	7 056	22.5%	0	-
Rep. centrafricaine	49 695	31.4%	6 356	17.5%	0	–	2 314	4.2%
Tchad	32 822	32.3%	0	–	0	–	542	0.4%
Mali	0	–	0	-	6 535	83.9%	0	–
Niger	0	-	2 957	98.5%	321	3.9%	0	–
Nigeria	0	–	2 461	86.5%	7 217	62.6%	0	-
Sénégal	6 862	91.6%	1 197	6.5%	0	-	15	1.3%
Togo	0	–	3 349	100%	0	–	0	-
Sous-total	*89 378*	*33.4%*	*173 073*	*23.7%*	*21 129*	*23.0%*	*2 871*	*1.5%*
Pays non-représentés à l'atelier								
Cote d'Ivoire	0	–	0	-	11 655	58.2%	0	–
Rep. Dem. Congo	0	–	0	–	36 837	22.4%	0	–
Ghana	0	–	0	–	4 494	100.0%	0	–
Guinée	158	83.1%	118	2.7%	0	-	0	–
Guinée Bissau	0	-	0	-	0	-	0	-
Mauritanie	0	-	0	-	0	-	0	-
Sous-total	*158*	*83.1%*	*118*	*1.5%*	*52 986*	*27.2%*	*0*	–
Grand total	89 537	**33.5%**	173 191	**23.5%**	74 115	**25.9%**	2 871	**1.5%**

4.2.6 Aire de répartition transfrontalière

Comme illustré dans la Figure 4.4, plusieurs aires importantes pour les lycaons sont transfrontalières. Bien qu'une seule des trois populations résidentes listées dans le Tableau 4.2 soit connue comme étant transfrontalière, les deux autres sont probablement aussi connectées sur la frontière entre le Tchad et la République Centrafricaine. Des connections transfrontalières importantes sont également présentes entre le Sénégal/Mali et la Guinée, entre le Bénin, le Burkina Faso et le Niger et entre le Cameroun, le Nigéria et le Tchad.

L'importance de ces liens entre les pays montre le besoin impératif de mettre en place une stratégie de gestion transfrontalière pour les populations de lycaons dans cette région.

4.2.7 Aire de répartition par rapport aux écorégions

La Figure 4.6 présente la distribution des polygones d'habitats importants pour la conservation des lycaons (aire de résidence, potentielle ou connective) par rapport aux écorégions identifiées par le World Wide Fund for Nature (WWF, Olson *et al.* 2001). Le Tableau 4.4 liste le nombre d'aires de résidence, potentielles et réhabilitables qui se trouvent partiellement ou entièrement dans chaque écorégion. Pour prendre en compte le

manque de précision dans l'estimation des frontières des écorégions et des polygones d'aire de répartition du lycaon, ainsi que pour faciliter l'interprétation des résultats à une échelle qui est appropriée pour cette espèce, cette analyse exclut tous polygones <1000 km^2.

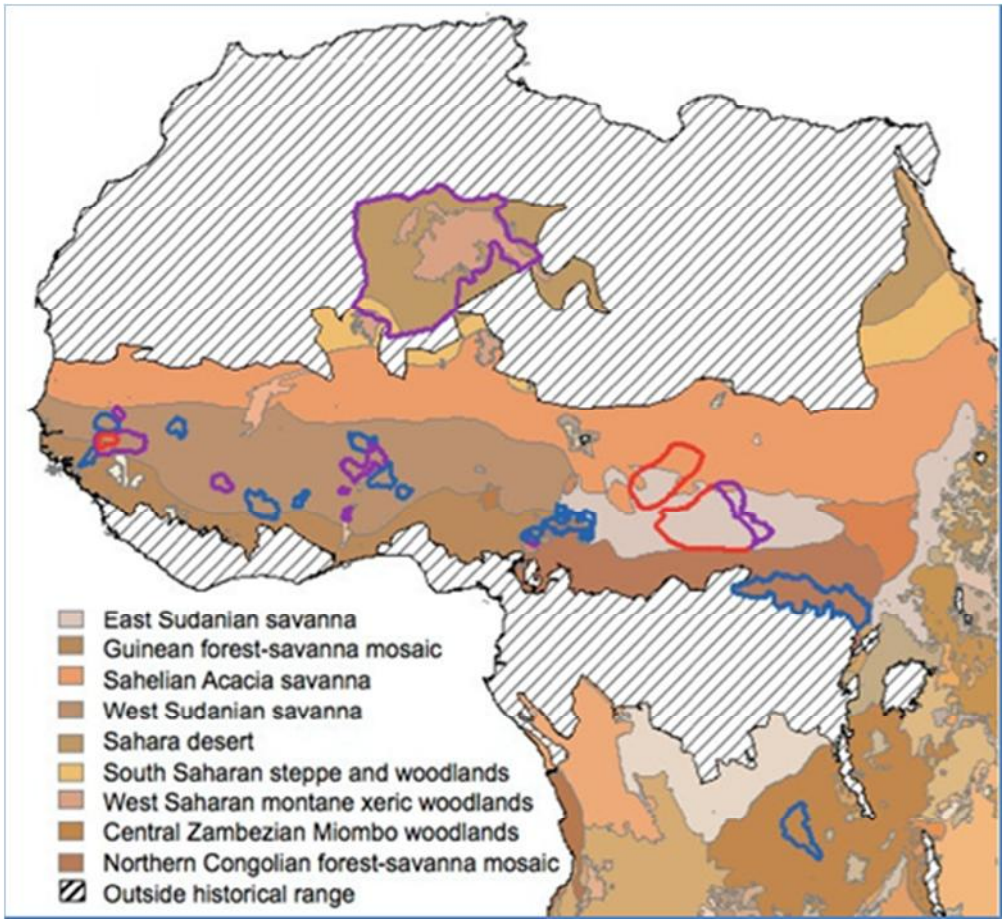


Figure 4.6 *Aires de répartition des lycaons par rapport aux écorégions WWF. Pour simplifier, la légende ne présente que les écorégions qui recoupent l'aire de répartition de l'espèce. Les hachures indiquent les habitats qui se trouvent en dehors de l'aire de répartition historique des lycaons.*

Le Tableau 4.4 et la Figure 4.6 montrent que les écorégions les plus occupées par les lycaons sont : la savane de l'est du Soudan et la savane d'acacias sahélienne (en Afrique centrale) et la savane de l'est du Soudan (en Afrique occidentale). Cela illustre l'importance écologique des populations de lycaons dans cette région car deux de ces trois écorégions ne sont représentées nulle part ailleurs dans leur aire de répartition en Afrique, et la troisième n'est représentée que dans un seul polygone d'aire de résidence (au sud du Soudan). De ce fait, les quelques populations encore présentes en Afrique occidentale et centrale vivent dans des conditions écologiques uniques, ce qui suggère l'importance de leur conservation en dépit de leur taille réduite.

Tableau 4.4 *Aire de répartition des lycaons par rapport aux écorégions WWF en Afrique occidentale, centrale et septentrionale. Les données représentent le nombre de polygones de chaque catégorie ainsi que l'aire totale dans chaque écorégion. Les patches ≤1000km² sont exclus.*

	Aire résident		**Aire potentielle**		**Aire réhabilitable**	
Ecorégion	*Nombre*	*aire (km²)*	*Nombre*	*aire (km²)*	*Nombre*	*aire (km²)*
Savane à l'est du Soudan	2	208 572	1	30 692	1	8 897
Mosaïque forêt-savane de Guinée	1	1 548	2	8 746	3	14 213
Savane d'acacias sahélienne	2	51 327	1	5 745		
Savane à l'ouest du Soudan	1	6 136	6	62 116	7	75 251
Désert du Sahara			1	409 032		
Forêt et steppes du sud du Sahara			1	26 197		
Forêt xérique montagneuse de l'ouest du Sahara			1	192 420		
Forêt de miombo Zambézien central					1	37 513
Mosaïque forêt-savane du nord du Congo					2	147 863

Tableau 4.5 *Polygones d'aire potentielle pour les lycaons qui couvrent des écorégions peu représentées dans l'aire de résidence (c'est-à-dire ≤2 aires de résidence en Afrique ont chacune est ≥1000 km²). Un recensement dans ces habitats pourrait permettre d'étendre les efforts pour la conservation du lycaon dans le but de mieux intégrer les écorégions dans lesquelles le lycaon était présent historiquement.*

	Nom du polygone						
Pays:	*Algérie*	*Mali/Cote d'Ivoire*	*Nigeria*	*Sénégal/ Mali*	*Sénégal/ Mali/Guinée*	*Togo*	*Togo*
Ecorégion	Ahaggar /Ajjer	Faune Niémen Dougoli	Gashaka Gumti	Faleme	Niokolo-Bafing	Fazao Malfakassa	Kéran
Mosaïque foret-savane de Guinée			X		X		
Savane de l'ouest du Soudan		X		X	X	X	X
Désert du Sahara	X						
Foret steppe du sud du Sahara	X						
Fort xérique montagneuse de l'ouest du Sahara	X						

Table 4.6 *Polygones d'aire réhabilitable pour les lycaons qui couvrent des écorégions peu représentées dans l'aire de résidence (c'est-à-dire ≤2 aires de résidence en Afrique ≥1000 km²). Une réhabilitation réussie des populations de lycaons dans ces aires pourrait conduire à une meilleure représentation des écorégions anciennement utilisées par les lycaons.*

	Nom du polygone										
Pays	*Benin*	*Cameroun*	*Cote d'Ivoire/ Burkina Faso*	*Rep Dem Congo*	*Ghana*	*Guinée / Guinée Bissau*	*Mali*	*Niger/Burkina Faso*	*Nigeria*		*Sénégal*
Ecorégion	Alibori/La Sota/Trois Riviéres	Faro/ Benoué/ Bouba Ndjida	Comoé-Lebara	Bili-Garamba	Mole	Boé Dulombi	Boucle Baoule	Niger/ Burkina Faso	Kainji Lake	SE Nigeria	Ferlo
Mosaïque forêt-savane de Guinée			X			X				X	
Savane de l'ouest du Soudan	X		X		X		X	X	X		X
Mosaïque forêt-savane du nord du Congo		X		X							

Les Tableaux 4.5 et 4.6 présentent une étude plus poussée de la représentation des écorégions dans l'aire de répartition actuelle des lycaons en comparant la distribution de l'aire potentielle (Tableau 4.5) et l'aire réhabilitable (Tableau 4.6) à celle de l'aire de résidence à travers les écorégions. Les aires potentielles et réhabilitables identifiées par les participants à l'atelier couvrent une surface substantielle (>1000 km² dans les deux cas) des six écorégions qui ne sont pas représentées du tout dans l'aire de résidence des lycaons (incluant l'aire de résidence en Afrique orientale et australe ; ces écorégions sont le désert du Sahara, les steppes et forêts du sud du Sahara, et les forêt xériques montagneuses à l'ouest du Sahara), ou bien représentées par moins de trois polygones d'aires de résidence (cela inclut la mosaïque forêt-savane de la Guinée, la savane à l'ouest du Soudan et la mosaïque forêt-savane au nord du Congo). Cette distribution est présentée sur la Figure 4.7. Les efforts de conservation qui ont pour but de maximiser la représentation écologique des lycaons dans les écorégions devraient rendre prioritaires les aires potentielles ou bien essayer de restaurer les lycaons dans les aires réhabilitables.

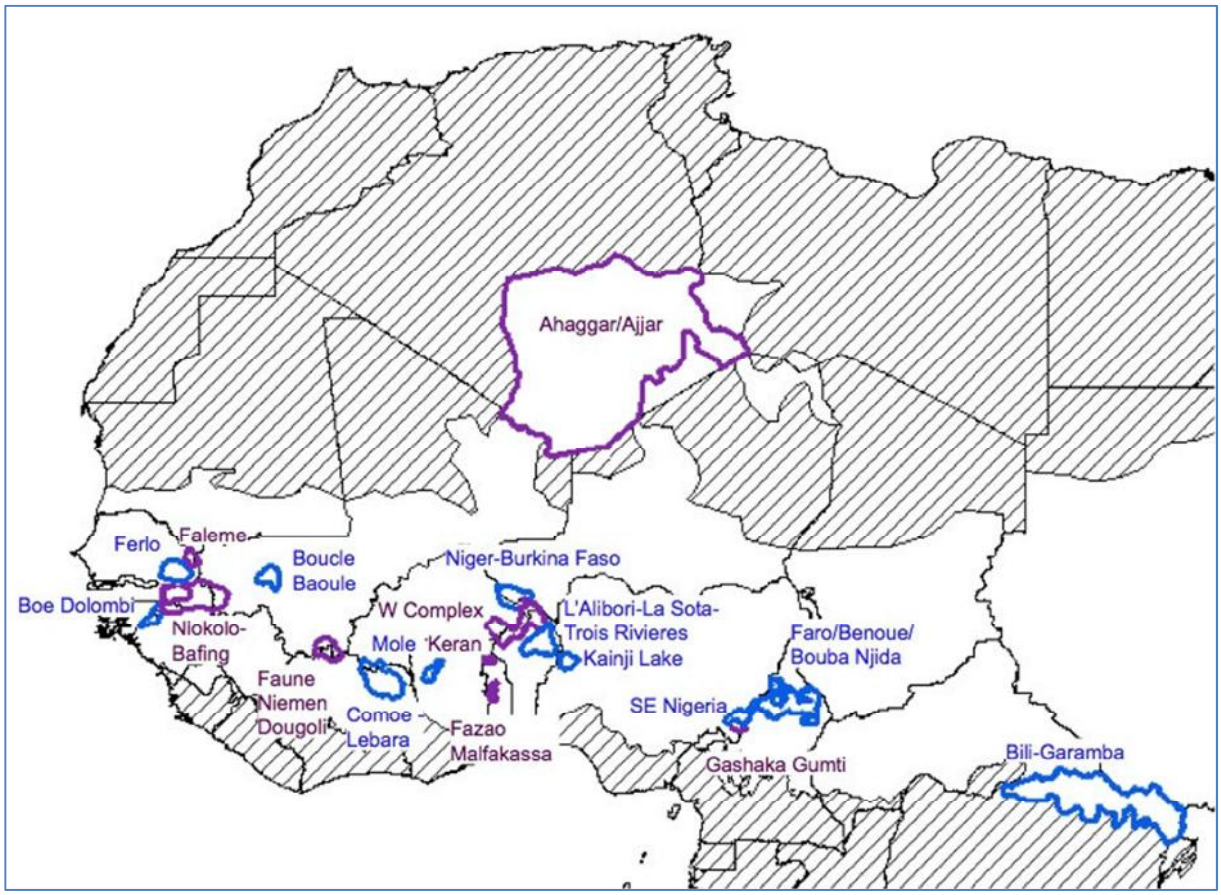


Figure 4.7 *Aires potentielles (en violet) et aires réhabilitables (en bleu) qui se trouvent dans des écorégions WWF peu représentées dans l'aire de résidence du lycaon.*

4.3 Conclusions

La distribution géographique du lycaon en Afrique occidentale, centrale et septentrionale a été considérablement réduite durant les derniers 100-200 ans. Historiquement présent sur plus de 7 million de km^2, les lycaons n'occupent plus que 300 000 km^2 soit moins de 4% du total de leur aire historique en 2012. Dans les 25 pays qui faisaient partie de cette aire historique, il n'y a plus que trois populations résidentes, ce qui représente une estimation de 25 meutes au total. Bien que les lycaons n'aient probablement jamais été présents à haute densité, les estimations de densité de populations actuelle en Afrique de l'Ouest sont extrêmement basses, ce qui reflète probablement la déplétion des proies et la dégradation de l'habitat. De ce fait, bien que le nombre de lycaons se soit effondré dans cette région, la restauration représente une sérieuse option, même dans leur aire de résidence.

En plus de l'aire de résidence, il existe des aires potentielles dans lesquelles les lycaons pourraient toujours persister. La grande partie d'aire potentielle qui se trouve au sud de l'Algérie pourrait être particulièrement importante, non seulement par ce qu'elle pourrait contenir un nombre non-négligeable de lycaons (mais à faible densité), mais aussi par ce qu'elle représente plusieurs conditions écologiques qui ne sont trouvées nulle part ailleurs.

Les participants ont aussi identifié des aires réhabilitables ; néanmoins puisque les populations résidentes actuelles sont sérieusement menacées, la priorité doit être donnée à leur protection avant d'essayer de réintroduire d'autres populations.

-CHAPITRE 5-

MENACES POUR LES POPULATIONS DE LYCAONS ET DE GUEPARDS EN AFRIQUE OCCIDENTALE, CENTRALE ET SEPTENTRIONALE

5.1 Introduction

L'évaluation des menaces pour les populations de lycaons et de guépards constitue un élément essentiel de la planification de la conservation de ces espèces. Il est indispensable de comprendre la nature de ces menaces afin d'identifier les mesures susceptibles de les atténuer et ainsi d'atteindre les objectifs de conservation fixés.

5.2 Les menaces directes

Les participants à l'atelier ont fourni des données sur les menaces pesant sur les populations connues de lycaons et de guépards. Ainsi, en plus de cartographier les populations observées, il a été demandé aux participants d'établir une liste des facteurs les plus susceptibles de menacer ces populations, et d'en apporter la preuve. Ces informations ont ensuite été examinées et collectées séparément pour les lycaons et les guépards (Figure 5.1). Toutefois, comme les menaces répertoriées étaient presque identiques pour les deux espèces, nous avons choisi de les traiter ensemble.

Figure 5.1 *Les participants ont fourni des informations concernant des menaces pour des populations particulières.*
Ces données ont ensuite été rassemblées pour obtenir un aperçu des menaces pour chacune des deux espèces en Afrique occidentale, centrale et septentrionale.

5.2.1 La perte et la fragmentation de l'habitat (guépards et lycaons)

La perte et la fragmentation de l'habitat constituent la menace principale pesant tant sur le lycaon que sur le guépard, elles sont également liées à plusieurs autres menaces directes listées plus bas. C'est parce que ces espèces vivent en groupes de très faible densité et que leur aire de répartition est si étendue, que leurs populations ont besoin de domaines vitaux beaucoup plus vastes pour survivre que les autres carnivores. Par conséquent, les lycaons et les guépards sont plus sensibles à la perte d'habitat que ne le sont les

espèces apparentées. A long terme, la conservation de populations viables de lycaons et de guépards demandera probablement des terrains de plus de 10 000 km², sauf si une gestion très intensive peut être maintenue. Dans de bonnes circonstances, les deux espèces sont capables de survivre et de se reproduire dans un environnement dominé par l'homme ; c'est pourquoi, en principe, les vastes aires nécessaires à la conservation du lycaon et du guépard peuvent être des zones protégées, non protégées, ou une combinaison des deux. En effet, en Afrique orientale et australe, les terres non protégées sont d'une importance capitale, tant pour faire vivre une grande partie des populations résidentes que pour relier entre elles les aires géographiques de populations résidentes afin de maintenir le flux génétique. Une approche similaire est envisageable en Afrique centrale et septentrionale, où d'importantes aires non protégées abritent encore des guépards et/ou des lycaons. Cependant, en Afrique occidentale, la plupart des lycaons et des guépards survivent à l'intérieur d'un petit réseau d'aires protégées qui sont très éloignées les unes des autres et qu'il semble difficile de relier (cf. chapitres 3 et 4).

5.2.2 Les conflits avec les éleveurs de bétail (guépards et lycaons)

Dans certaines parties de leur aire géographique, les lycaons et les guépards sont menacés par les conflits avec les éleveurs de bétail. Si les deux espèces tendent à préférer les proies sauvages, elles peuvent, dans certaines circonstances, s'attaquer au bétail, ce qui pousse les éleveurs à les tuer. De tels conflits peuvent concerner les pasteurs de subsistance ainsi que les gros éleveurs commerciaux. Ni les guépards ni les lycaons ne sont des charognards ; les risques d'empoisonnement sont moins importants que dans le cas d'autres carnivores tels que les hyènes et les léopards. Toutefois, ils peuvent être tués ou blessés, notamment par des lances.

5.2.3 La réduction du nombre de proies (guépards et lycaons)

Le guépard et le lycaon sont tous les deux des chasseurs efficaces, capables de survivre dans des conditions où la densité de proies est basse. Néanmoins, la déplétion des proies dans certains endroits à cause de la chasse, de la haute densité d'élevage, et de la conversion d'habitat en terres agricoles, ont probablement un impact direct et négatif sur les populations de guépards et de lycaons. La déplétion des proies peut aussi avoir des conséquences indirectes sérieuses et qui sont difficiles à prévoir. Par exemple, elle peut causer la modification des interactions entre les grands carnivores, ou l'intensification du conflit avec les éleveurs de bétail car les guépards et les lycaons sont susceptibles d'attaquer le bétail plus souvent quand il y a peu de proies disponibles (Woodroffe *et al.*, 2005b)

5.2.4 La petite taille des populations (guépards et lycaons)

Les participants ont identifié la petite taille des populations comme une menace pour la survie de la plupart des populations de guépards et de lycaons qui vivent toujours en Afrique occidentale, centrale et septentrionale. En effet, la taille estimée de plusieurs de ces populations, parmi lesquelles certaines sont très isolées géographiquement, se situe à un niveau où des effets stochastiques peuvent être suffisants pour provoquer une extinction locale. Certaines aires (par ex. le Sahara) offrent naturellement une faible densité de proies et n'ont peut-être jamais abrité

d'importantes populations de guépards ou de lycaons. Cependant, dans d'autres aires (par ex. le complexe W-Arly-Pendjari) leur nombre est exceptionnellement bas, malgré le fait qu'ils se trouvent dans des aires protégées. Si l'on parvenait à augmenter le nombre d'individus dans ces populations, cela pourrait minimiser les risques génétiques et démographiques liés à des périodes prolongées "d'étranglement" que peuvent rencontrer des populations de petite taille.

5.2.5 La chasse pour le commerce d'animaux vivants et autres usages (principalement pour le guépard)

Dans cette région, on sait que les guépards ont été chassés pour leur fourrure, pour des usages culturels et pour le commerce d'animaux vivants. Bien qu'il n'y ait pas de données sur l'amplitude de cette menace, la petite taille des populations de guépards dans cette région, et le nombre de participants qui considèrent ce facteur comme une menace probable pour le félin, laisse penser que ce genre de chasse pourrait être une préoccupation majeure. Aucun compte rendu n'indique que le lycaon est délibérément chassé pour les mêmes raisons.

5.2.6 La chasse sportive

La chasse sportive n'a pas été considérée par les participants comme une menace pour les populations existantes de guépards et de lycaons dans cette région. Pourtant, il semble qu'elle ait contribué à l'extinction du lycaon au Cameroun, et une perception négative des guides de chasse qui persiste dans cette région pourrait être un frein à la réhabilitation des populations de lycaons.

5.2.7 Le piégeage accidentel (guépards et lycaons)

Bien que les pièges ne visent pas directement les deux espèces, tant les guépards que les lycaons peuvent être pris accidentellement dans des collets destinés à d'autres animaux. Dans cette région, on pense que les piégeages accidentels menacent au moins une population de guépards, et qu'ils constituent une menace possible pour les lycaons. Les connaissances dans le reste de l'Afrique nous montrent que les lycaons sont particulièrement sensibles à cette menace. L'utilisation très répandue de collets pour capturer du gibier dans la région est un des sujets de préoccupation pour la survie des quelques lycaons restants.

5.2.8 Les accidents de la route (guépards et lycaons)

Les voies d'accès rapide représentent une menace potentielle pour le guépard comme pour le lycaon. Ce dernier surtout utilise les routes pour se déplacer et se reposer, ce qui le rend donc particulièrement vulnérable aux accidents de la route. C'est une préoccupation majeure au niveau de l'autoroute N7 qui traverse le Parc National de Niokolo-Koba, au Sénégal.

5.2.9 Les maladies infectieuses (principalement pour le lycaon)

Il n'y a pas de données concernant les effets des maladies infectieuses sur les guépards et les lycaons en Afrique occidentale, centrale ou septentrionale. Cependant, une photo montre que, par le passé, un lycaon a probablement été atteint par la rage en République Centrafricaine. D'après des données venant

d'autres régions d'Afrique, les maladies peuvent avoir des effets très importants sur les populations de lycaons. Par exemple, en 1991, la rage a contribué à l'extinction de la population de lycaons dans l'écosystème du Serengeti-Mara (Gascoyne *et al.*, 1993, Kat *et al.*, 1995) et la maladie de Carré a causé la mort d'une meute entière au Botswana (Alexander *et al.*, 1995) et en Tanzanie (Goller *et al.*, 2010). Les risques de maladie sont particulièrement élevés pour les lycaons qui vivent en dehors des aires protégées, et qui sont donc plus susceptibles d'entrer en contact avec les chiens domestiques. Les maladies représentent probablement une menace moindre pour les guépards, même si dans certaines zones, l'anthrax a causé la mort de nombreux individus (Lindeque *et al.*, 1996).

Figure 5.2 *Les participants ont collaboré pour identifier les contraintes limitant la réduction des menaces qui pèsent sur les guépards et les lycaons***.**

5.3 Les contraintes en matière de réduction des menaces

La conservation des populations de guépards et de lycaons exige la réduction des menaces répertoriées plus haut, et souvent à une échelle spatiale très grande. Les participants à l'atelier ont ainsi identifié les freins qui pourraient empêcher ce résultat. Le bilan est identique chez les deux espèces.

Parmi les contraintes identifiées chez les guépards et les lycaons, on comptait le manque de priorité que les décideurs politiques accordent à la faune sauvage, une gestion médiocre, un manque de rigueur dans l'application des lois, un manque de planification stratégique pour la conservation, un manque de coordination internationale, des conflits armés dans certaines aires clés, une perception négative des guépards et des lycaons dans certains secteurs de la société, un manque de fonds, un manque de capacités, et un manque de sensibilisation de la part des gouvernements et du grand public. Ces contraintes ont également été influencées par des facteurs que les conservationnistes ne peuvent limiter, comme la croissance de la population humaine, le développement économique et le changement climatique. Ces contraintes humaines qui pourraient être modifiées contrastent avec les contraintes biologiques caractéristiques des guépards et des lycaons qui ne peuvent être changées, telles que les interactions négatives de l'espèce avec d'autres grands carnivores.

Ce résumé des obstacles à la conservation que les guépards et les lycaons rencontrent a servi à l'analyse de la problématique et a été un élément essentiel pour mettre sur pied le plan stratégique (voir Chapitre 6). Récemment, des outils ont été élaborés afin de répondre aux nombreuses menaces directes envers les populations de guépards et de lycaons (par ex. Woodroffe *et al.*, 2005a), mais les causes profondes de ces menaces comprennent notamment des problèmes tels que la présence humaine excessive dans les aires occupées par la faune sauvage et un manque de capacités de conservation. Tous ces éléments sont communs à de nombreuses espèces de la région.

5.4 Conclusions

Les menaces directes et les plus importantes auxquelles sont confrontés les guépards et les lycaons sont très similaires. Elles sont mêmes semblables aux menaces qui pèsent sur tous les autres grands carnivores d'Afrique. Toutefois, l'aire de répartition très étendue des guépards et des lycaons les rend particulièrement sensibles à ces dangers. Cela veut dire aussi que les réponses à ces menaces doivent se faire sur des aires d'une superficie extrêmement grande. Les similitudes entre les menaces signifient que, à de rares exceptions près, les activités de conservations mises en œuvre pour l'une des deux espèces seront probablement bénéfiques aux deux.

– CHAPITRE 6 –

PLAN STRATEGIQUE POUR LA CONSERVATION DES GUEPARDS ET DES LYCAONS EN AFRIQUE CENTRALE, OCCIDENTALE ET SEPTENTRIONALE

6.1 Introduction

La stratégie de conservation des guépards et lycaons de l'Afrique centrale, occidentale et septentrionale a été créée pendant un exercice de planification participatif couplé à l'examen de leurs distributions et statuts comme décrit dans les chapitres 3-5. Il était impératif que pendant cette partie de l'atelier soient présents des représentants gouvernementaux du secteur de la faune sauvage des pays importants pour les guépards et les lycaons (la liste des participants est disponible en Annexe 1).

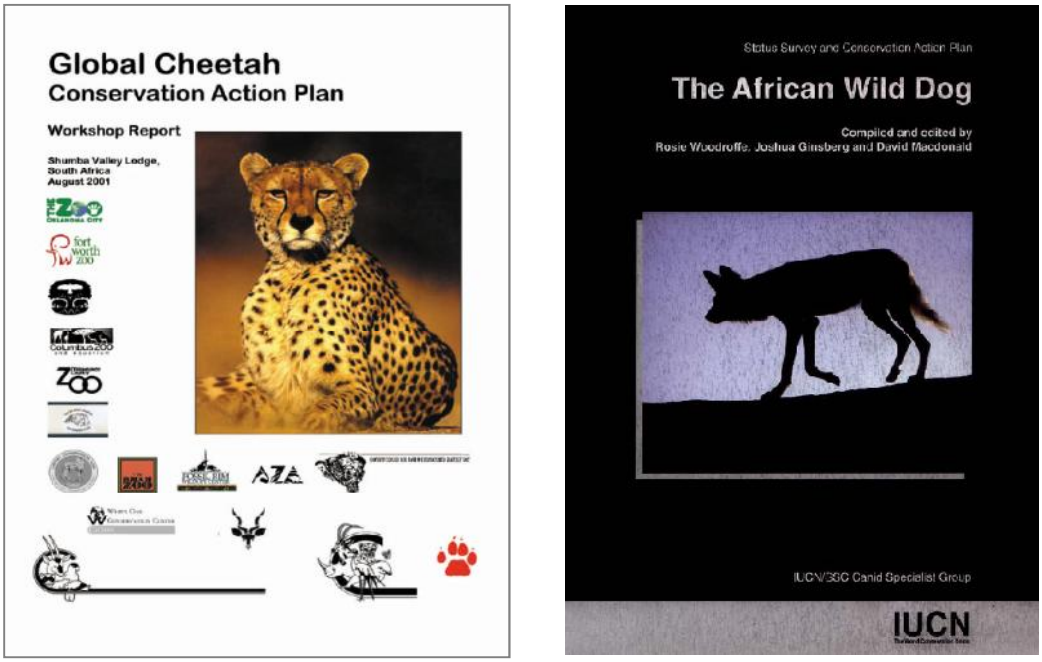


Figure 6.1 *Plans d'actions existants pour le guépard et le lycaon (Bartels et al., 2001; Woodroffe et al., 1997b).*

La structure et le développement du plan stratégique sont basés sur un processus récemment développé par l'UICN. Le processus est clairement illustré dans les stratégies régionales pour la conservation des guépards et des lycaons en Afrique orientale et australe (IUCN/CSE 2007a; 2007b). Ces stratégies, en retour, sont basées sur les plans stratégiques pour les éléphants (IUCN, 2005) et pour les lions d'Afrique (IUCN, 2006). De plus, l'information contenue dans les plans d'actions existants pour les guépards et les lycaons –Global Cheetah Conservation

Action Plan (Bartels *et al.*, 2001, 2002) et African Wild Dog Status Survey and Conservation Action Plans (Woodroffe *et al.*, 1997b; Woodroffe *et al.*, 2004) – a été très importante pour le processus (Figure 6.1).

Le processus pendant l'atelier comprend les parties suivantes:

1. *L'engagement des parties prenantes*
   Des individus et institutions clés pour la mise en action de ce plan (les autorités gouvernementales, des spécialistes des espèces et des ONG pertinentes) étaient impliqués dans le processus de planification de la stratégie.

2. *Résumé des connaissances*
   Le processus de cartographie a servi à établir l'information la plus actualisée sur le statut et la distribution des deux espèces (voir Chapitre 3-4). Cette information est essentielle pour le développement du plan stratégique.

3. *Analyse de problèmes*
   Une analyse de problèmes a servi à identifier les menaces, le manque de connaissances et les contraintes qui peuvent limiter la capacité des participants à conserver les guépards et les lycaons. L'analyse de problèmes offre des informations critiques pour le développement des objectifs du plan stratégique.

4. *Planification stratégique*
   Un plan en cascade a été construit, commençant par une vision, puis un but, suivis d'une série d'objectifs pour atteindre ce but, et pour finir des résultats et activités pour remplir ces objectifs (Figure 6.2)

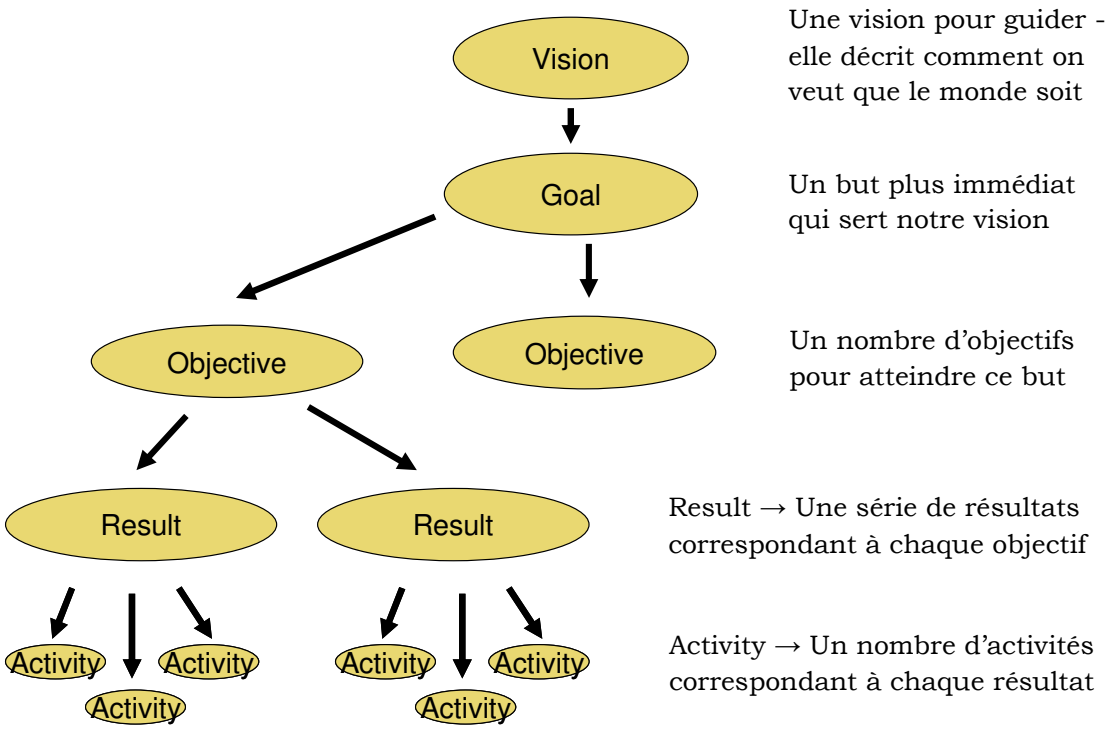


Figure 6.2 *La structure du plan stratégique.*

Le processus de planification stratégique était participatif, cherchant un consensus, et incluant toutes les parties prenantes dans le développement de la stratégie. Le processus a été mis en place de façon à ce que l'expertise et les connaissances des participants servent à renseigner la stratégie, et à s'assurer que les individus et les institutions pertinentes se l'approprient, dans le but de faciliter sa mise en place. L'objectif était que la stratégie soit réaliste et, par ce qu'elle est régionale, qu'elle soit suffisamment générale pour être facilement transférable au niveau national. Les détails de la stratégie et de son développement sont décrits ci-dessous.

6.2 Le processus de planification stratégique

Le processus de planification comprend six étapes :

1. Développement de la vision
2. Développement du but
3. Analyse de problèmes
4. Développement d'un nombre d'objectifs correspondant aux problèmes identifiés dans l'analyse
5. Développement d'un nombre de résultats qui correspondent à chaque objectif.
6. Développement d'un nombre d'activités qui correspondent à chaque résultat.

Le développement de la stratégie a été couplé avec l'exercice de cartographie pour que l'information sur la distribution, le statut et les menaces sur les espèces puissent influencer sa formulation. Cette approche permet aussi d'offrir plus de temps à l'équipe en charge des cartes pour les digitaliser. Le début de l'atelier était donc focalisé sur la cartographie et le développement de la vision et le but en parallèle (voir l'Annexe 2 pour l'agenda de l'atelier). Des cartes provisoires étaient ainsi disponibles au moment de l'analyse de problème. Dans la phase finale de l'atelier, l'attention était focalisée sur le développement de la stratégie.

6.2.1 La vision

Une vision pour le long-terme a été développée dans le but de guider la stratégie pour les prochaines 25-50 années. L'intention était de créer une vision optimiste mais réaliste du futur de la conservation des guépards et des lycaons et de servir de source d'inspiration.

La vision a été développée par un groupe de travail spécifiquement dédié à sa création (en parallèle avec la cartographie). Les résultats de ce travail ont été présentés pendant une session plénière, pour permettre discussions et débats. Une vision provisoire a ensuite été retravaillée par deux fois par le groupe de travail. Les participants qui n'étaient pas en train de cartographier ont aussi rejoint le groupe de travail. La version finale de la vision a finalement été acceptée pendant une dernière session plénière.

La vision finale est :

Vision

Une région d'Afrique occidentale, centrale et septentrionale avec des populations de guépards et de lycaons restaurées, gérant sa biodiversité et ses ressources naturelles de manière durable et concertée pour le bien-être des populations humaines.

La vision a été formulée de manière précise pour refléter les idées suivantes :

- Le terme « restaurées » a été choisi pour indiquer que le groupe souhaiterait non seulement protéger les populations actuelles de guépards et de lycaons mais aussi que les deux espèces soient réhabilitées là où elles ont été extirpées.
- « qui gère sa biodiversité et ses ressources naturelles de manière durable » est écrit de cette manière pour indiquer que le groupe pense que la conservation des guépards et des lycaons a le plus de chance de réussir si l'approche est holistique, focalisée sur la gestion durable de la biodiversité et des ressources naturelles.
- « pour le bien-être des populations humaines » a été inclus pour indiquer que la conservation des ressources naturelles et de la biodiversité sert la population humaine. Le mot « bien-être » reflète tous les bénéfices possibles,

incluant ceux de nature économique, culturel et écologique, qui peuvent être tirés des ressources naturelles et de la biodiversité.

6.2.2 But

Le but a été développé de manière similaire à celle utilisée pour définir la vision. Le but reflète ce que le groupe veut accomplir à plus court terme que pour la vision - à environ 10-20 ans. Le but est défini comme réaliste et atteignable. De plus, il a été créé pour être mesurable afin de déterminer quand il a été atteint. Le but, de ce fait, avait besoin d'être plus clairement défini que la vision, bien qu'il la supporte. Le but final est le suivant :

But

Des populations de guépards et de lycaons mieux connues, viables et valorisées en Afrique occidentale, centrale et septentrionale.

Comme pour la vision, le choix des mots inclus dans la définition du but a été délibéré et pensé pour refléter les choses suivantes :

- « mieux connues » reflète l'opinion du groupe qu'il y a actuellement très peu de connaissances sur les guépards et les lycaons dans cette région.
- « viable » indique que les populations de guépards et de lycaons doivent être durables, avec des populations relativement larges capables de survivre sur le long-terme.
- le terme « valorisées » a été délibérément laissé ambigu pour refléter les différents types de valeurs qui existent : économiques, culturelles et écologiques.

6.2.3 L'analyse de problèmes

L'étape majeure suivante dans le processus de planification était le développement de l'analyse de problèmes. Les participants ont été séparés en quatre groupes de travail avec pour instructions d'écrire sur des fiches les obstacles principaux à la conservation des guépards et des lycaons. Les deux premiers groupes se sont chargé des menaces pesant sur les deux espèces, c'est à dire ce qui les précipite vers l'extinction comme la fragmentation de l'habitat ou le conflit avec les éleveurs de bétail. Les deux autres groupes ont été chargés d'identifier les *lacunes* et *contraintes* qui empêchent de réduire ces menaces comme, par exemple, le manque de ressources, l'organisation politique, le manque de connaissances ou bien de capacités. Les groupes devaient aussi spécifier si les menaces, lacunes ou contraintes s'appliquent aux guépards, aux lycaons ou aux deux espèces en écrivant sur une fiche jaune les problèmes concernant les guépards, sur une fiche rose ceux spécifiques aux lycaons, et sur une fiche blanche ceux concernant les

deux espèces. Ces fiches ont finalement été collectées, combinées et utilisées pour développer l'arbre de problèmes (Figure 6.3).

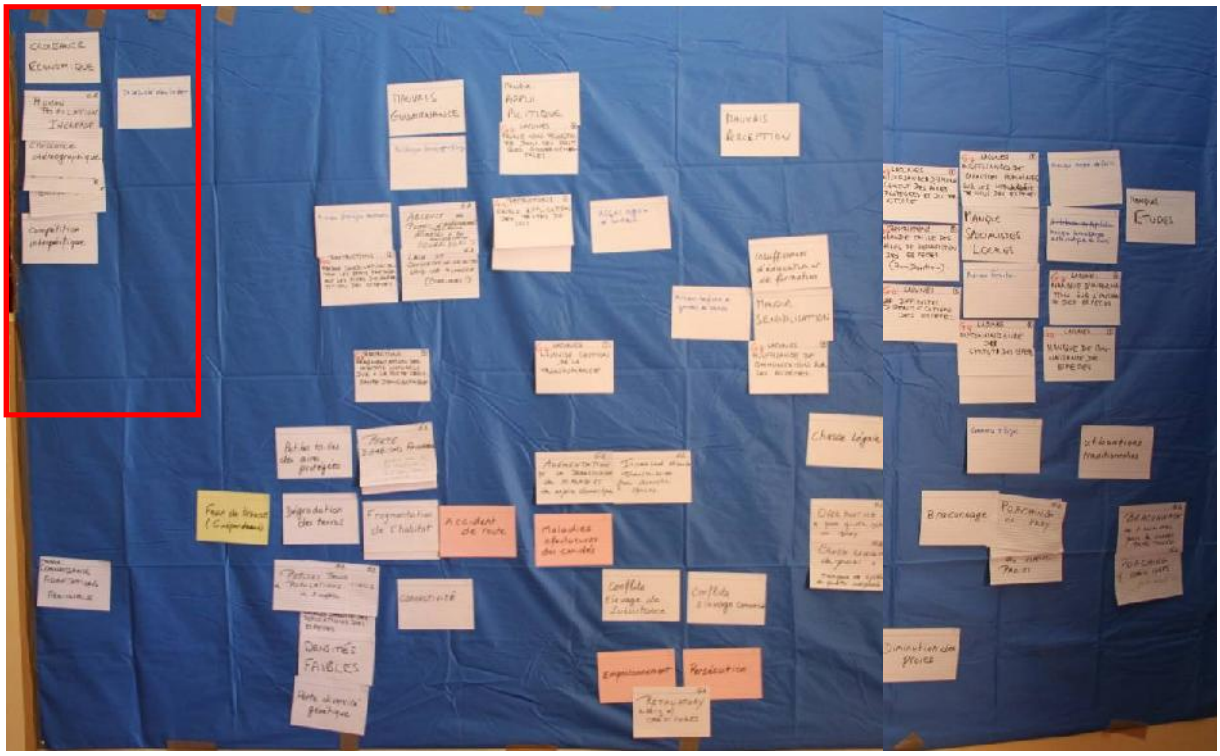


Figure 6.3 *Résultats de l'analyse des problèmes. Les résultats sont présentés de manière plus lisible in Figure 6.4. L'encadré rouge regroupe les problèmes sur lesquels le groupe ne peut agir.*

Quand plusieurs fiches relataient le même problème, celles-ci étaient mises les unes sur les autres. De plus, certains problèmes, comme le changement climatique ou la croissance de la population humaine, furent considérés comme en dehors de l'influence du groupe bien que leur importance ait été mise en avant. Ces problèmes ont donc été mis de côté pendant que les participants se sont concentrés sur ceux qui peuvent être directement réglés, ou bien indirectement réglés par le biais des parties prenantes.

Peu de problèmes affectent seulement les guépards ou seulement les lycaons (Figure 6.4). La maladie a été listée comme une menace sérieuse pour les lycaons mais pas pour les guépards. De la même manière, le commerce et la chasse pour raisons culturelles ont été listés comme menaçant les guépards mais pas les lycaons en Afrique centrale, occidentale et septentrionale. L'analyse de problèmes a clairement démontré qu'il y a peu de menaces, lacunes ou contraintes qui ne s'appliquent qu'à une seule des deux espèces. C'est pour cette raison que le groupe a décidé de développer une seule stratégie pour les deux espèces au lieu d'une pour chacune. Les avantages d'avoir une seule stratégie incluent une plus grande simplicité et des effets plus forts des actions de conservation parce que les bénéfices sont pour deux espèces et non une seule.

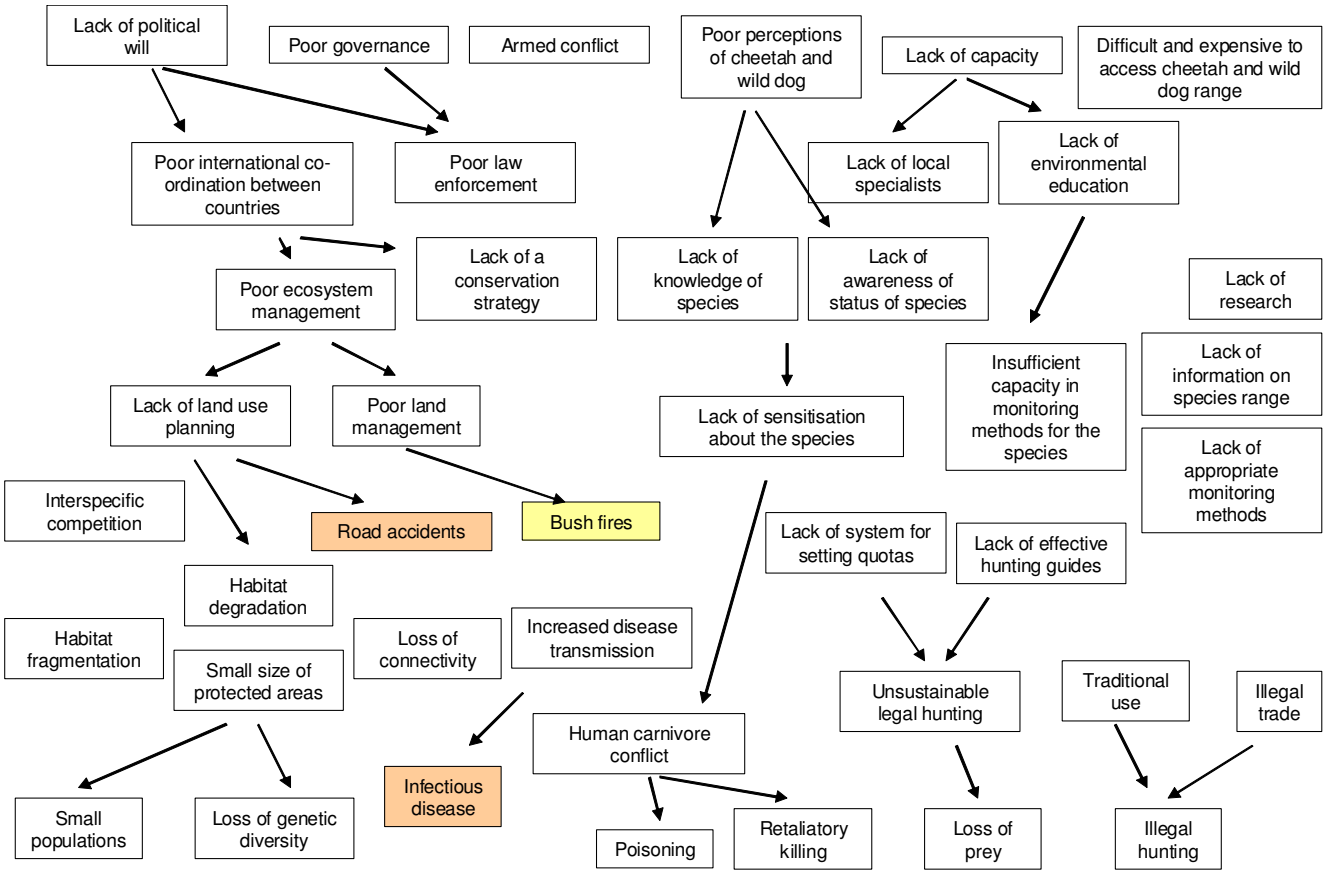


Figure 6.4 *Diagramme représentant l'arbre à problèmes. Ces résultats correspondent à ceux présentés en Figure 6.3.*

6.2.4 Les objectifs

L'analyse de problèmes a été essentielle pour le développement des objectifs du plan stratégique car les problèmes identifiés permettent de trouver des solutions. Les objectifs sont divisés en huit thèmes qui représentent tous les aspects de l'arbre à problèmes :

Développement des compétences

Ce thème concerne les problèmes causés par un manque de capacités comme par exemple le manque de personnel, de ressources, d'équipement ou bien de formation.

Objectif 1

Etablir les ressources, connaissances et outils nécessaires pour la conservation des guépards et des lycaons

Approfondissement des connaissances

Ce thème concerne les problèmes venant du manque d'informations sur les guépards et les lycaons, incluant leur distribution, leur statut, leur habitat et gestion.

Objectif 2

Approfondir les connaissances sur le guépard et le lycaon en se basant sur la collecte coordonnée de données fiables

Sensibilisation

Ce thème concerne les problèmes dus au manque de connaissances des communautés locales ainsi que des décideurs politiques sur la gestion des écosystèmes et des besoins de conservation ainsi que sur le statut des guépards et des lycaons.

Objectif 3

Sensibiliser toutes les parties prenantes aux valeurs socio-économiques, écologiques et intrinsèques des écosystèmes et de la faune sauvage en général, et en particulier des guépards et des lycaons.

Politique et législation

Ce thème regroupe les problèmes associés à la politique et aux législations inappropriées pour la conservation des guépards et des lycaons, ainsi que leur manque d'application.

Objectif 4

Promouvoir la mise en œuvre des politiques et des législations favorables aux écosystèmes, adaptées, là où c'est nécessaire, afin d'optimiser le rétablissement des populations de guépards et de lycaons.

Coexistence

Ce thème couvre les problèmes dus à la coexistence entre humains/animaux domestiques et les guépards/lycaons et leurs proies.

Objectif 5

Promouvoir la coexistence entre le guépard, le lycaon, les populations humaines et leurs animaux domestiques en réduisant les conflits.

Utilisation

Ce thème concerne les problèmes dus à la surexploitation des proies desquelles les guépards et les lycaons dépendent, ainsi qu'aux prélèvements illégaux et aux mortalités accidentelles des guépards et des lycaons.

Objectif 6

Réduire la pression des prélèvements illégaux et des mortalités accidentelles des guépards et des lycaons ainsi que la surexploitation de leurs proies.

Gestion de l'habitat

Ce thème aborde les problèmes causés par une gestion de l'environnement inappropriée ou insuffisante, comme par exemple, une gestion inadéquate de l'habitat et des écosystèmes ou la perte de connectivité et la fragmentation.

Objectif 7

Maintenir, améliorer et rétablir la viabilité des populations de guépards et de lycaons par la gestion de l'habitat et d'autres mesures appropriées.

Mise en place de cette stratégie

Ce thème cible la mise en place de la stratégie. Il est inclus car cette mise en place doit être suivie, et parce que les activités stipulées garantissent qu'elle va être appliquée.

Objectif 8

Mettre en place les compétences et les moyens adéquats au niveau régional pour la mise en œuvre de la stratégie de conservation du guépard et du lycaon en Afrique occidentale, centrale et septentrionale.

Ces huit objectifs ont été développés précisément pour que tous les problèmes identifiés soient réglés. De plus, chaque objectif fixé par cette stratégie était identifié par l'analyse de problèmes.

6.2.5 Résultats

Après la mise en place des objectifs et que tous les participants se sont mis d'accord sur leurs définitions exactes, les résultats ont été développés pour atteindre ces objectifs. Les résultats sont plus spécifiques que les objectifs et décrivent comment ces derniers peuvent être atteints. Chaque objectif est associé

avec 1-6 résultats, et les résultats sont développés de telle manière à ce que si tous les résultats sont atteints, l'objectif dont ils relèvent l'est aussi. Autrement dit, chaque résultat est nécessaire pour atteindre un objectif et si tous les résultats sont obtenus, l'objectif est atteint. Les résultats sont conçus pour être « SMART », c'est à dire « specific, measurable, achievable, realistic and time-lined » soit : spécifiques, mesurables, atteignables, réalistes et temporellement définis. Au total, 19 résultats ont été créés pour le plan stratégique.

Développement des compétences

Objectif 1

Etablir les ressources, connaissances et outils nécessaires pour la conservation des guépards et des lycaons

Résultats:

1.1 D'ici 5 ans, les capacités pour la mise en œuvre de la stratégie régionale de conservation du guépard et du lycaon sont acquises.

Approfondissement des connaissances

Objectif 2

Approfondir les connaissances sur le guépard et le lycaon en se basant sur la collecte coordonnée de données fiables

Résultats:

2.1 Les données sur le statut et l'écologie du guépard et du lycaon dans les aires de répartition (voir cartes de distribution, figures 3.5 et 4.5) sont disponibles, analysées et diffusées à travers diverses méthodes d'ici 5 ans.

Sensibilisation

Objectif 3

Sensibiliser toutes les parties prenantes aux valeurs socio-économiques, écologiques et intrinsèques des écosystèmes et de la faune sauvage en général, et en particulier des guépards et des lycaons.

Résultats:

3.1 D'ici 5 ans, toutes les autorités concernées (les décideurs politiques, les institutions en charge de la gestion de la faune sauvage, les ministères chargés de l'aménagement du territoire, les administrations), sont identifiées

et rendues conscientes du statut et des besoins de conservation du guépard et du lycaon, ainsi que de leur importance et de leur valeur.

3.2 D'ici 5 ans, 80% des parties prenantes impliquées dans les zones où le guépard et le lycaon sont potentiellement présents, sont sensibilisée sur le statut de conservation défavorable de ces espèces, et ont une perception bien plus positive de la valeur de ces espèces et de l'importance de les protéger et de préserver leurs habitats.

Politique et législation

Objectif 4

Promouvoir la mise en œuvre des politiques et des législations favorables aux écosystèmes, adaptées, là où c'est nécessaire, afin d'optimiser le rétablissement des populations de guépards et de lycaons.

Résultats:

4.1 D'ici 5 ans, toutes les politiques et les législations relatives au rétablissement des populations de guépards et de lycaons sont identifiées et mises en œuvre.

4.2 D'ici 10 ans, toutes les politiques et les législations appropriées sont adaptées aux besoins du guépard et du lycaon en matière de conservation, et harmonisées à travers la région (par exemple, accords transfrontaliers, CMS).

Coexistence

Objectif 5

Promouvoir la coexistence entre le guépard, le lycaon, les populations humaines et leurs animaux domestiques en réduisant les conflits.

Résultats:

5.1 Le niveau de conflits entre l'homme et les carnivores (guépard et lycaon), incluant la persécution directe, l'empoisonnement et les maladies, est évalué dans la région, avec une attention toute particulière portée à l'aire de répartition actuelle, et ce au cours des deux prochaines années.

5.2 Le nombre de conflits entre l'homme et les carnivores autour et dans l'aire de répartition actuelle est diminué de manière significative d'ici 5 ans.

5.3 Les bénéfices retirés par les communautés locales conduisent à une meilleure valorisation du guépard et du lycaon à l'intérieur et autour de l'aire de répartition actuelle d'ici 5 ans.

Utilisation

Objectif 6

Réduire la pression des prélèvements illégaux et des mortalités accidentelles des guépards et des lycaons ainsi que la surexploitation de leurs proies.

Résultats:

6.1 Les prélèvements illégaux et les mortalités accidentelles des guépards et des lycaons sont évalués et diminuent de manière significative à l'intérieur et autour de l'aire de répartition actuelle, d'ici 5 ans

6.2 Les proies naturelles du guépard et du lycaon sont gérées de manière efficace dans les aires protégées de leurs aires de répartition, d'ici 5 ans.

6.3 Des plans de restauration des proies naturelles dans les aires de répartition probable et réhabilitable sont développés et mis en œuvre d'ici 5 ans.

Gestion de l'habitat

Objectif 7

Maintenir, améliorer et rétablir la viabilité des populations de guépards et de lycaons par la gestion de l'habitat et d'autres mesures appropriées.

Résultats:

7.1 Les populations résidentes actuelles de guépards et de lycaons et leurs habitats sont rétablis d'ici 10 ans.

7.2 Les populations de guépards et de lycaons dans les aires de résidence actuelle sont viables et auront augmenté d'au moins 50%, d'ici10 ans.

7.3 Les zones favorables à la survie des populations de guépards et de lycaons dans les aires de répartition possibles et réhabilitables, ainsi que les corridors sont gérées et rétablies d'ici 7 ans.

Mise en place de cette stratégie

Objectif 8

Mettre en place les compétences et les moyens adéquats au niveau régional pour la mise en œuvre de la stratégie de conservation du guépard et du lycaon en Afrique occidentale, centrale et septentrionale.

Résultats:

8.1 La stratégie régionale de conservation du guépard et du lycaon est acceptée et appropriée par les Etats parties d'ici 2 ans.

8.2 Un mécanisme de financement durable de la stratégie régionale est développé et mis en place d'ici 5 ans.

8.3 Un organe de coordination et de suivi de la mise en œuvre de la stratégie est opérationnel d'ici 1 an.

6.2.6 Activités

Les activités représentent la dernière étape dans la définition de la stratégie et sont encore plus spécifiques que les résultats ; elles listent les actions qui permettent d'obtenir chaque résultat. Comme pour les résultats et leurs objectifs, chaque ensemble d'activités est nécessaire et suffisant pour l'obtention des résultats et sont « SMART ». En revanche, les activités sont suffisamment générales pour pouvoir s'intégrer aux plans d'actions nationaux dans la région de l'Afrique centrale, occidentale et septentrionale. Au total, 62 activités ont été développées pour cette stratégie.

Développement des compétences

Objectif 1:

Etablir les ressources, connaissances et outils nécessaires pour la conservation des Guépards et des Lycaons

Résultat 1.1 D'ici 5 ans, les capacités pour la mise en œuvre de la stratégie régionale de conservation du guépard et du lycaon sont acquises.

Activité 1.1.1 Identifier les besoins en termes de renforcement des capacités spécifiques aux deux espèces d'ici 2 ans.

Activité 1.1.2 Identifier les institutions, les chercheurs et les autres parties prenantes pouvant renforcer les capacités du personnel et des autres acteurs en charge de la gestion du guépard et du lycaon d'ici 1 an.

Activité 1.1.3 Concevoir des modules de formation spécifiques aux deux espèces à l'intention du personnel en charge de leur gestion d'ici 3 ans.

Activité 1.1.4 Mettre en œuvre des modules de formation, d'évaluation et de remise à niveau après la réalisation des Activités 1.1.1, 1.1.2 et 1.1.3.

Approfondissement des connaissances

Objectif 2

Approfondir les connaissances sur le guépard et le lycaon en se basant sur la collecte coordonnée de données fiables.

Résultat 2.1 Les données sur le statut et l'écologie du guépard et du lycaon dans les aires de répartition (voir cartes de distribution, figures 3.5 et 4.5) sont disponibles, analysées et diffusées à travers diverses méthodes d'ici 5 ans.

Activité 2.1.1 Procéder à une évaluation des statuts des populations de guépards et de lycaons d'ici 2 ans.

Activité 2.1.2 Favoriser et privilégier les actions de recherches, de suivi et de conservation à mener dans les zones identifiées après avoir réalisé un bilan des connaissances sur l'état actuel des populations de guépards et de lycaons (voir Activité 2.1.1)

Activité 2.1.3 Créer une base de données centralisée et accessible d'ici 3 ans.

Activité 2.1.4 Organiser des réunions périodiques pour la diffusion des données d'ici 3 ans.

Activité 2.1.5 Produire un bulletin bisannuel d'ici 1 an.

Activité 2.1.6 Elaborer une page web spécifique relative à la stratégie de conservation des deux espèces sur le site internet www.cheetahandwilddog.org d'ici 1 an.

Activité 2.1.7 Réaliser des études d'impact des différentes méthodes de gestion de l'habitat (par ex. points d'eau, feux d'aménagement, salines, etc.) sur les populations de guépards et de lycaons pour optimiser la gestion de l'habitat pour la conservation de ces deux espèces.

Activité 2.1.8 Identifier les méthodes les plus appropriées pour la recherche, le suivi et la gestion du guépard et du lycaon dans les divers habitats dans leurs aires de répartition.

Sensibilisation

Objectif 3

Sensibiliser toutes les parties prenantes aux valeurs socio-économiques, écologiques et intrinsèques des écosystèmes et de la faune sauvage en général, et en particulier des guépards et des lycaons.

Résultat 3.1 D'ici 5 ans, toutes les autorités concernées (les décideurs politiques, les institutions en charge de la gestion de la faune sauvage, les ministères impliqués dans l'aménagement du territoire, les administrations) sont identifiées et rendues conscientes du statut et des besoins de conservation du guépard et du lycaon, ainsi que de leur importance et de leur valeur.

Activité 3.1.1 Identifier les autorités concernées et la meilleure méthode (par exemple un atelier national) de leur transmettre le message central au sujet de la conservation du guépard et du lycaon d'ici 1 an.

Activité 3.1.2 Préparer et mettre en œuvre la meilleure méthode de diffusion du message central à ces autorités concernant la conservation du guépard et du lycaon d'ici 2 ans.

Résultat 3.2 D'ici 5 ans, 80% des parties prenantes impliquées dans les zones où le guépard et le lycaon sont potentiellement présents, sont sensibilisées sur le statut de conservation défavorable de ces espèces, et ont une perception bien plus positive de la valeur de ces espèces et de l'importance de les protéger et de préserver leurs habitats.

Activité 3.2.1 Identifier toutes les parties prenantes dans les zones où le guépard et le lycaon sont potentiellement présents d'ici 1 an.

Activité 3.2.2 Développer la littérature nécessaire et les médias appropriés à une campagne de sensibilisation, et mettre en œuvre cette campagne dans toutes les zones où le guépard et le lycaon sont présents ou potentiellement présents de la deuxième à la cinquième année.

Activité 3.2.3 Evaluer le changement de perception des différentes parties prenantes sur la valeur de ces espèces et l'importance de protéger et de préserver leurs habitats au début et à la fin de la campagne de sensibilisation, lors de la première et de la cinquième année.

Politique et législation

Objectif 4

Promouvoir la mise en œuvre des politiques et des législations favorables aux écosystèmes, adaptées, là où c'est nécessaire, afin d'optimiser le rétablissement des populations de guépards et de lycaons.

Résultat 4.1 D'ici 5 ans, toutes les politiques et les législations relatives au rétablissement des populations de guépards et de lycaons sont identifiées et mises en œuvre.

Activité 4.1.1 Identifier toutes les politiques et les législations relatives au rétablissement des populations de guépards et de lycaons d'ici 1 an.

Activité 4.1.2 Faire du lobbying et aider, là où c'est possible, à la mise en œuvre des politiques et des législations identifiées de la deuxième à la quatrième année.

Activité 4.1.3 Mesurer les changements survenus suite à la mise en œuvre des politiques et des législations identifiées de la deuxième à la cinquième année après la réalisation des Activités 4.1.1 & 4.1.2.

Résultat 4.2 D'ici 10 ans, toutes les politiques et les législations appropriées sont adaptées aux besoins du guépard et du lycaon en matière de conservation, et harmonisées à travers la région (par exemple, accords transfrontaliers, CMS).

Activité 4.2.1 Identifier toutes les politiques et législations qui doivent être adaptées afin de répondre aux besoins du guépard et du lycaon en matière de conservation pendant la deuxième année.

Activité 4.2.2 Faire du lobbying pour adapter les politiques et les législations identifiées auprès des autorités responsables, de la deuxième à la quatrième année après la réalisation d'Activité 4.2.1.

Activité 4.2.3 Suivre le nombre des changements effectuée dans les politiques et les législations, et évaluer leur mise en œuvre de la septième à la dixième année après la réalisation des Activités 4.2.1 et 4.2.2.

Coexistence

Objectif 5

Promouvoir la coexistence entre le guépard, le lycaon, les populations humaines et leurs animaux domestiques en réduisant les conflits

Résultat 5.1 Le niveau de conflits entre l'homme et les carnivores (guépard et lycaon), incluant la persécution directe, l'empoisonnement et les maladies, est évalué dans la région, avec une attention toute particulière portée à l'aire de répartition actuelle, et ce au cours des deux prochaines années.

Activité 5.1.1 Evaluer, au moyen de questionnaires et d'examens rapides, les pertes perçues ou réelles du bétail à cause des prédateurs, les abattages illégaux, les cas d'empoisonnement et l'occurrence des maladies liées aux canidés, à l'intérieur et autour de l'aire de répartition actuelle, d'ici 18 mois.

Activité 5.1.2 Elaborer une carte (et classer) des zones de conflits réels et potentiels qui nécessitent des mesures de réduction des conflits d'ici 2 ans.

Résultat 5.2 Le nombre de conflits entre l'homme et les carnivores autour et dans l'aire de répartition actuelle est diminué de manière significative d'ici 5 ans.

Activité 5.2.1 Cibler des zones à forte intensité de conflits et mettre en place des campagnes d'information et de sensibilisation locales pour améliorer la protection du bétail et pour réduire les conflits avec le guépard et le lycaon après la réalisation d'Activité 5.1.2.

Activité 5.2.2 Développer là où c'est approprié des mesures de réduction des conflits pour améliorer les pratiques d'élevage qui réduisent efficacement les pertes de bétail par prédation des guépards et des lycaons de la troisième à la cinquième année.

Activité 5.2.3 Identifier et promouvoir des méthodes pour réduire la transmission de maladies des animaux domestiques au lycaon, comme par exemple la vaccination des chiens domestiques contre la rage.

Résultat 5.3 Les bénéfices retirés par les communautés locales conduisent à une meilleure valorisation du guépard et du lycaon à l'intérieur et autour de l'aire de répartition actuelle d'ici 5 ans.

Activité 5.3.1 Développer des activités d'écotourisme en utilisant le guépard et le lycaon comme espèces emblématiques pour augmenter la valeur écotouristique de la région de la deuxième à la cinquième année.

Activité 5.3.2 Développer des activités lucratives et respectueuses de l'environnement au profit des communautés riveraines de l'aire de répartition actuelle du guépard et du lycaon.

Utilisation

Objectif 6

Réduire la pression des prélèvements illégaux et des mortalités accidentelles des guépards et des lycaons ainsi que la surexploitation de leurs proies.

Résultat 6.1 Les prélèvements illégaux et les mortalités accidentelles des guépards et des lycaons sont évalués et diminuent de manière significative à l'intérieur et autour de l'aire de répartition actuelle, d'ici 5 ans.

Activité 6.1.1 Evaluer, grâce à des interviews des parties prenantes (les communautés locales, les guérisseurs, les commerçants, le personnel des aires protégées, les services de douanes etc.) et à d'autres méthodes, le nombre de cas et l'importance de l'utilisation du guépard et du lycaon pour divers besoins, la capture d'animaux vivants et les mortalités accidentelles dans l'aire de répartition actuelle, d'ici 3 ans.

Activité 6.1.2 Mettre en place des vastes campagnes publiques de sensibilisation, d'information et de communication et faire du lobbying auprès des autorités législatives pour lutter contre les prélèvements illégaux et les mortalités accidentelles dans les aires où ces menaces existent, de la deuxième à la cinquième année.

Activité 6.1.3 Renforcer les activités de lutte anti-braconnage dans les diverses aires protégées pour éviter les prélèvements illégaux et les mortalités accidentelles de guépards et de lycaons; il s'agit d'une activité à long terme.

Résultat 6.2 Les proies naturelles du guépard et du lycaon sont gérées de manière efficace dans les aires protégées de leurs aires de répartition, d'ici 5 ans.

Activité 6.2.1 Soutenir la gestion des aires protégées de sorte à favoriser de meilleures activités de lutte anti-braconnage afin de

réduire significativement les prélèvements de proies d'ici 5 ans.

Activité 6.2.2 Accroitre la capacité des gestionnaires des aires protégées à lutter contre le braconnage des proies en favorisant une synergie d'intervention entre les projets et les bailleurs de fonds qui soutiennent les aires protégées abritant des populations résidentes de guépards et de lycaons d'ici 5 ans.

Activité 6.2.3 Aider les Etats parties à établir et mettre en place des quotas de chasse durables en termes de proies dans les zones cynégétiques de la première à la troisième année.

Résultat 6.3 Des plans de restauration des proies naturelles dans les aires de répartition probable et réhabilitable sont développés et mis en œuvre d'ici 5 ans.

Activité 6.3.1 Travailler en collaboration avec les Etats parties pour identifier les aires clés pour le guépard et le lycaon à l'extérieur de l'aire de répartition actuelle afin de mettre en œuvre des activités devant conduire à la restauration de l'habitat et des populations de proies et de prédateurs de la deuxième à la cinquième année.

Activité 6.3.2 Rechercher un soutien financier et préparer des plans en vue de favoriser la réhabilitation des populations de guépards et de lycaons dans certaines aires de répartition potentielles, y compris leur réintroduction dans des aires réhabilitables de la troisième à la cinquième année.

Gestion de l'habitat

Objectif 7

Maintenir, améliorer et rétablir la viabilité des populations de guépards et de lycaons par la gestion de l'habitat et d'autres mesures appropriées.

Résultat 7.1 Les populations résidentes actuelles de guépards et de lycaons et leurs habitats sont rétablis d'ici 10 ans.

Activité 7.1.1 Elaborer et adopter des plans de conservation et de gestion des aires protégées abritant les populations de guépards et de lycaons d'ici 2 ans.

Activité 7.1.2 Mettre en œuvre les plans de conservation et de gestion d'ici 10 ans.

Activité 7.1.3 Evaluer et réviser les plans de conservation et de gestion, d'ici 5 ans.

Activité 7.1.4 Impliquer les populations locales dans la gestion des aires de répartition actuelle de guépards et de lycaons d'ici 10 ans.

Résultat 7.2 Les populations de guépards et de lycaons dans les aires de résidence actuelle sont viables et ont augmenté d'au moins 50%, d'ici10 ans.

Activité 7.2.1 Harmoniser les textes de loi sur la protection du guépard et du lycaon d'ici 2 ans**.**

Activité 7.2.2 Suivre et évaluer la croissance des populations de guépards, de lycaons et de leurs proies d'une manière continue.

Activité 7.2.3 Réduire les conflits entre l'homme et les carnivores par le développement d'activités lucratives et respectueuses de l'environnement dans les aires avoisinantes à partir de la deuxième année.

Activité 7.2.4 Evaluer les possibilités de réintroduire le Guépard et le Lycaon dans des habitats viables (par exemple analyse génétique, habitat, etc.) à partir de la troisième année.

Résultat 7.3 Les zones favorables à la survie des populations de guépards et de lycaons dans les aires de répartition possibles et réhabilitables, ainsi que les corridors sont gérées et rétablies d'ici 7 ans.

Activité 7.3.1 Confirmer les zones de présence potentielles, réhabilitables des populations de guépards et de lycaons dans la sous-région, ainsi que les corridors de déplacement actuels des deux espèces d'ici 2 ans.

Activité 7.3.2 Elaborer et adopter des plans de conservation et de gestion pour les zones avec possibilité de réhabilitation et les corridors de déplacement actuels et possibles d'ici 2 ans, après la réalisation de l'Activité 7.3.1.

Activité 7.3.3 Mettre en œuvre les plans de gestion d'ici 10 ans après la réalisation de l'Activité 7.3.2.

Activité 7.3.4 Evaluer et réviser les plans de conservation et de gestion, d'ici 2 ans après la réalisation d'Activité 7.3.3**.**

Activité 7.3.5 Impliquer les populations locales dans la gestion des corridors de déplacement des guépards et des lycaons, d'ici 10 ans.

Mise en place cette stratégie

Objectif 8

Mettre en place les compétences et les moyens adéquats au niveau régional pour la mise en œuvre de la stratégie de conservation du guépard et du lycaon en Afrique occidentale, centrale et septentrionale.

Résultat 8.1 La stratégie régionale de conservation du guépard et du lycaon est acceptée et appropriée par les Etats parties d'ici 2 ans.

Activité 8.1.1 Organiser des ateliers régionaux d'internalisation avec les structures de tutelles et les autres parties prenantes d'ici 1 an.

Activité 8.1.2 Elaborer et adopter un Mémorandum d'Accord de mise en œuvre de la stratégie d'ici 2 ans.

Activité 8.1.3 Identifier les sources de financement pour le développement des plans d'actions nationaux pour la mise en œuvre de la stratégie régionale d'ici 2 ans.

Résultat 8.2 Un mécanisme de financement durable de la stratégie régionale est développé et mis en place d'ici 5 ans.

Activité 8.2.1 Identifier les besoins de financement pour la mise en œuvre de la stratégie régionale dans un délai d'un an.

Activité 8.2.2 Réaliser une étude de faisabilité de recherche de fonds suffisants pour la mise en place de la stratégie régionale dans un délai de 3 ans.

Activité 8.2.3 Elaborer un plan de financement pour la mise en œuvre de la stratégie régionale d'ici 2 ans.

Activité 8.2.4 Renforcer les capacités en vue de lever des fonds pour le financement de la stratégie régionale d'ici 2 ans.

Activité 8.2.5 Identifier les bailleurs de fonds potentiels de manière continue.

Activité 8.2.6 Faire du lobbying auprès des bailleurs de fonds potentiels de manière continue.

Résultat 8.3 Un organe de coordination et de suivi de la mise en œuvre de la stratégie est opérationnel d'ici 1 an.

Activité 8.3.1 Recruter un coordinateur régional et mettre en place un réseau d'experts de la région d'ici 1 an.

Activité 8.3.2 Organiser des réunions périodiques (annuelles) de suivi et d'évaluation de la stratégie de manière continue.

6.3 Conclusions and planification nationale

Le plan régional stratégique a été développé dans un format qui lui permet d'être facilement adapté pour une mise en place nationale, à travers un atelier participatif national qui inclut toutes les parties prenantes y compris celles qui ont participé à l'atelier régional. Un tel atelier devrait durer deux jours. Les étapes principales pour traduire la stratégie régionale en stratégie nationale sont les suivantes :

- Présenter la stratégie régionale avec toute l'information de fond et demander l'autorisation pour l'utiliser comme modèle pour la stratégie nationale.
- Commenter l'interprétation de la vision, du but et des objectifs au niveau national.
- Pour chaque objectif, prendre chaque résultat et activité et décider s'ils doivent être acceptés ou rejetés, tout en sachant que certains résultats et certaines activités ne sont pas forcements pertinents pour tous les pays.
- Même si les activités sont adoptées, leur définition exacte aura peut-être besoin d'être ajustée.
- Un calendrier, des acteurs et des indicateurs vérifiables doivent être ajoutés à chaque activité.

Le plus grand soin a été pris pour s'assurer que la stratégie régionale de l'Afrique centrale, occidentale et septentrionale était bien structurée, particulièrement au niveau de sa vision, son but et ses objectifs, pour faciliter son utilisation pour les stratégies nationales. La stratégie régionale a été très bien traduite en stratégie nationale pour le Niger, développée dans un atelier juste après l'atelier régional (Direction de la Faune, de la Chasse et des Aires Protégées, en préparation), suggérant que les participants à l'atelier régional ont correctement fait leur travail (Figure 6.5).

Figure 6.5 *La participation des délégués du Niger à l'atelier régional pour l'Afrique centrale, occidentale et septentrionale a garanti que la stratégie régionale soit facilement adaptable à la stratégie nationale du Niger. Les participants d'autres pays clés de la région étaient aussi présents, et il est prévu qu'ils développent des stratégies nationales coordonnées pour la région.*

– CHAPITRE 7 –

MISE EN ŒUVRE DU PLAN STRATEGIE REGIONAL

Une fois la stratégie régionale finalisée, les participants se sont penchés sur la meilleure façon de la mettre en œuvre. Le processus de planification au niveau régional offre un mécanisme important pour la mise en œuvre au niveau national et il est donc été incorporé dans ce plan. Les mécanismes et accords qui sont en place au niveau international, par exemple la Convention sur les Espèces Migratrices, sont aussi importants et étaient représentés pendant l'atelier. De plus, utiliser les synergies existant entre le guépard, le lycaon et les autres espèces est aussi important. Les participants tiennent particulièrement à ce que ce plan d'action soit utilisé dans le futur pour conduire la conservation des guépards et lycaons en Afrique occidentale, centrale et septentrionale.

Le procédé suivant a été adopté :

- Le premier jet est produit pour que les participants commentent et fassent des révisions.
- Les commentaires et changements suggérés par les participants sont intégrés.
- Une deuxième version est produite, les participants ainsi que les cabinets ministériels pertinents doivent l'approuver.

Les membres des gouvernements qui étaient présents à l'atelier régional se sont engagés à obtenir le soutien ministériel pour cette stratégie. Le rapport devrait aussi être soumis à l'UICN pour une approbation officielle de la part de la CSE.

Un atelier national pour la planification de la conservation des guépards et des lycaons au Niger a eu lieu immédiatement après l'atelier régional dans le Parc Régionale du W (Division de la Faune et de la Chasse, en préparation). Cet atelier a démontré que la stratégie régionale pouvait être transférée au niveau national, et permettre le développement rapide d'un plan d'action au niveau national avec la coopération totale des participants nationaux.

La mise en œuvre de ce plan nécessite un soutien financier non-négligeable. Si possible, il devrait être couvert au niveau national par les gouvernements, mais il est aussi envisageable que des ONG, des donneurs bilatéraux et multilatéraux priorisent les activités de conservation mises en place et de ce fait offrent une aide financière.

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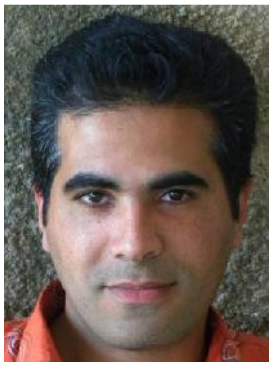

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ANNEXE 2 AGENDA

Planification de la conservation des guépards et des lycaons en Afrique

Rangewide Conservation Planning for Cheetahs and African Wild Dogs

Atelier régional pour le Nord-Ouest de l'Afrique

West, Central and North Africa Regional Workshop

Parc National du W, 30 janvier – 3 février 2012

W National Park, 30th January – 3rd February 2012

– PROGRAMME –

- AGENDA -

Dimanche 29 janvier / Sunday, 29th January

Arrivée à l'Hôtel de La Tapoa, Parc National du W, Niger

Arrival Hotel La Tapoa, W National Park, Niger

18:30 Mot de bienvenue et arrangements logistiques / Unofficial welcome and logistical arrangements

Abdul Karim Samna (DFC/AP), Samaïla Sahailou (W NP), Sarah Durant & Rosie Woodroffe (ZSL)

18:35 Réception informelle suivie d'un dîner / Icebreaker: drinks followed by dinner

Tous les participants

Lundi 30 janvier

9:00 Mot de bienvenue au Parc du W / Welcome to W National Park

Samaïla Sahailou, Conservateur du Parc W

9:05 Mot de bienvenue à l'atelier de la conservation des guépards et des lycaons en Afrique / Welcome to the Rangewide Conservation Planning workshop

Sarah Durant & Rosie Woodroffe, Zoological Society of London

9:10 Cérémonie officielle de bienvenue / Official welcome and opening remarks

Madame Issa Mariama Ali, Directrice de la Faune, de la Chasse et des Aires Protégées, République du Niger.

9:30 Présentation des participants / Introductions

Tous les participants / All participants

9:40 Biologie et conservation des guépards – synthèse / Biology and conservation of cheetahs – an overview

Sarah Durant, Zoological Society of London

10 :00 Biologie et conservation des lycaons – synthèse / Biology and conservation of African wild dogs – an overview

Rosie Woodroffe, Zoological Society of London

10:20 Comment développer une stratégie de conservation des espèces / Developing Species Conservation Strategies

Christine Breitenmoser, UICN/SSC Cat Specialist Group

10:50 Présentation du programme et objectifs des ateliers /Presentation of the agenda, goals and outputs for this meeting

Sultana Bashir, UICN/SSC Cat Specialist Group

11:00 PAUSE CAFÉ / COFFEE BREAK

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

Karen Minkowski

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

Tous les participants / All participants

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

Karen Minkowski

13:00 DEJEUNER / LUNCH

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

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

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

Mardi 31 janvier / Tuesday, 31st January

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

Groupe 1 / Working Group 1

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

Tous les participants / All participants

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

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

10:45 PAUSE CAFE / COFFEE

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

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

13:00 DEJEUNER / LUNCH

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

Groupe 1 / Working Group 1

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

Tous les participants / All participants

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

Groupe 1 / Working Group 1

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

Tous les participants / All participants

17:30 Fin de la journée

End of day's working

Mercredi 1er février / Wednesday, 1st February

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

Karen Minkowski

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

Tous les participants / All participants

10:30 PAUSE CAFÉ / COFFEE

11:00 Présentation de l'analyse finale de l'arbre de problèmes et explication des modalités d'utilisation de cette analyse pour formuler des objectifs /Presentation of final problem tree analysis and explanation of how to use the problem analysis to formulate objectifs

Equipe en charge de la stratégie / Strategy drafting team

12:00 Trois groupes de discussion / Three working groups

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

13:00 DEJEUNER / LUNCH

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

Tous les participants / All participants

14:30 Présentation et discussion autour des objectifs préliminaires / Presentation and discussion of first drafts of objectifs

Tous les participants / All participants

15:30 PAUSE CAFE / TEA

16:00 Trois groupes de discussion

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

17:30 Fin de la journée

End of day's working

Jeudi 2 février

9:00 Présentation du deuxième jet des objectifs /Presentation of second draft objectifs

L'équipe chargée de la stratégie / Strategy drafting team

9:10 Discussion autour et modification des objectifs /Discussion and modification of draft objectives

Tous les participants / All participants

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

Groupes de discussion / Working groups

10:20 PAUSE CAFE / COFFEE

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

Tous les participants / All participants

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

Tous les participants / All participants

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

Groupes de discussion / Working groups

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

Tous les participants / All participants

13:00 DEJEUNER / LUNCH

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

Groupes de discussion / Working groups

16:00 PAUSE CAFE / TEA

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

Tous les participants / All participants

Vendredi 3 février

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

Groupes de discussion / Working groups

10:30 PAUSE CAFE / COFFEE

11:00 Les groupes finalisent les activités, acteurs et calendriers / Working groups finalise activities, including actors and timelines if and when appropriate

Groupes de discussion / Working groups

13:00 DEJEUNER / LUNCH

14:00 Présentation de la stratégie finalisée, suivie d'une discussion / Presentation of completed strategy, followed by discussion

Equipe chargée de la stratégie / Strategy drafting team

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

Tous les participants / All participants

15:00 Cérémonie officielle de clôture / Official close of regional meeting

Madame Issa Mariama Ali, Directrice de la Faune, de la Chasse, et des Aires Protégées, République du Niger.

15:30 PAUSE CAFE / TEA

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

ANNEXE 3 INSTRUCTIONS POUR CREER LA CARTE DE DISTRIBUTION

A3.1 Evaluer la distribution et le statut de l'espèce

A3.1.1 Les participants au processus de cartographie

Les participants au processus de planification de la conservation des guépards et des lycaons ont fourni leurs propres données et ont apporté leurs connaissances sur la distribution et le statut de ces deux espèces selon leur niveau d'expertise. Certains participants au processus n'ont pas pu venir à l'atelier ; ils ont alors été contactés avant l'atelier pour qu'ils puissent néanmoins fournir leurs données et connaissances.

A3.1.2 Points d'observations (presque entièrement cartographiés avant l'atelier)

Les points d'observations constituent la source de données principale sur laquelle les cartes de distribution sont basées. Un point d'observation est un endroit localisé où la présence de guépards et/ou de lycaons a été confirmée. Il peut s'agir d'animaux vivants, de carcasses, de traces, d'attaques de bétail et des localisations télémesurées. Pour chaque point, un certain nombre d'informations pertinentes sont collectées : nb d'animaux vus, âge (adulte ou juvénile) et le niveau d'expérience de la personne qui a fait l'observation des animaux (pour donner une idée de la fiabilité des données). On a demandé aux participants de fournir des données collectées ces 10 dernières années. En revanche pour les endroits qui n'ont pas été recensés récemment, des données plus anciennes étaient aussi les bienvenues ; ce type de donnée est aussi utile pour cartographier l'aire de répartition historique des espèces.

A3.1.3 Polygones d'aire de répartition (presque entièrement cartographiés avant l'atelier)

Les points d'observations et autres données ont été utilisés pour délimiter des polygones d'aire de répartition pour les deux espèces. Tout habitat connu pour avoir abrité les espèces autrefois est considéré comme faisant partie de leur aire de répartition historique. Des données détaillées sur la distribution géographique historique n'étaient disponibles que pour certains endroits ; ailleurs, la cartographie a été basée sur les besoins généraux en termes d'habitat des espèces.

Ni les guépards, ni les lycaons n'occupent actuellement la totalité de leur aire de répartition historique. De ce fait, leurs distributions en 2012 ont dû être divisées en plusieurs catégories (Figure A3.1) :

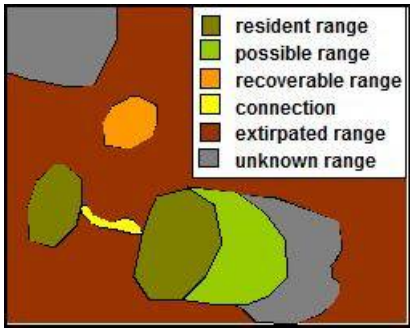

Figure A3.1 *Exemple d'une distribution imaginaire des six catégories d'aire de répartition*

- Aire de résidence (resident range): aire où les espèces résident actuellement. Parce que les deux espèces ont de fortes capacités de dispersion, tous les points d'observations n'indiquent pas une population résidente ; certains correspondent à des individus en transit. L'aire de résidence est identifiée par (i) l'espèce y est détectée régulièrement au fil des années, (ii) l'espèce se reproduit à cet endroit (par exemple si des petits ont été vus), and (iii) pour les lycaons, si une meute a été vue (groupe avec des individus des deux sexes et souvent >3 animaux) mais pas un petit groupe (≤3 individus) ou bien un groupe composé d'animaux du même sexe car ils sont probablement en train de se disperser.

- Aire potentielle (possible range): aire où les espèces sont peut-être résidentes aujourd'hui mais leur présence n'a pas été confirmée au cours des dix dernières années. En général, il s'agit d'endroits qui contiennent un habitat favorable pour les espèces ainsi que des proies, mais dans lesquels il n'y a pas eu beaucoup d'efforts de recensement (un recensement aérien n'est pas efficace pour détecter ces deux espèces). De plus, certains endroits sont considérés comme aire potentielle car les données ne sont pas vérifiées (ex. des rapports d'observateurs peu expérimentés) ou bien car les observations sont celles d'individus en transit.

- Aire connective (connection): aire où les espèces ne sont pas forcément résidentes mais qui est utilisée par les animaux quand ils se déplacent entre deux territoires habitables, ou bien vers de nouveaux territoires à coloniser. Ces habitats connectifs peuvent être soit des corridors d'habitat ininterrompus soit des patches d'habitat isolés représentant une étape entre deux habitats adéquat.

- Aire inconnue (unknown range): aire où le statut des espèces est inconnu et ne peut être déterminé à partir de connaissances sur le statut local de l'habitat ou des proies.

Aire d'extirpation: aire d'où l'espèce a été extirpée. Cette catégorie peut être divisée en deux:

(5) Aire non-réhabilitable (extirpated range) : aire où l'habitat a été lourdement modifié (ex. par l'agriculture ou l'urbanisation) ou fragmenté de telle manière que les animaux ne pourraient pas y résider dans un futur proche.

- Aire réhabilitable (recoverable range): aire où l'habitat est suffisamment large et contient assez de proies pour que les espèces puissent y survivre d'ici les 10 prochaines années si des actions de conservation adéquates sont effectuées. En dessinant ces aires réhabilitables, les participants ont pris en compte le fait que les deux espèces vivent à faible densité, se déplacent sur de grandes distances, et donc ne pourraient être restaurées dans des habitats trop petits (<3000 km^2) si une gestion intense ne peut être mise en place (ex. des barrières anti-prédateurs et une gestion active de la population).

En principe, les activités de conservation pour ces deux espèces (ex. gestion, recensement et suivi) peuvent être mises en place dans chacune de ces aires géographiques. Même dans les aires classées non-réhabilitables, des programmes de sensibilisation et d'éducation sont vitaux pour le succès des efforts de conservation dans les habitats adjacents.

En plus de cartographier et de délimiter chaque polygone, les participants ont aussi fourni des informations sur les utilisations des terres dans ces polygones, la taille et le statut des populations de guépards et de lycaons dans les aires qui en contiennent, la disponibilité des proies et les menaces potentiellement encourues par les espèces.

A3.1.4 Mettre ensemble les données de tous les participants

Les participants ont fourni des données sur leur zone d'expertise avant l'atelier ; ces données furent ensuite regroupées sur des cartes représentant la région en entier. Pendant l'atelier, ces cartes ont été retravaillées et modifiées à partir des discussions entre les participants (Figure A3.2).

Figure A3.2 *Les participants en train de travailler sur les cartes pour les améliorer.*

Le processus de regroupement des données de plusieurs participants a produit, dans certains cas, des changements drastiques des polygones de

distribution. En particulier, certains polygones ont été fusionnées quand il est devenu apparent que la même population avait était observée à plusieurs endroits et par plusieurs observateurs (souvent dans plusieurs pays à la fois). Dans ce cas, les participants se sont aussi mis d'accord sur une nouvelle estimation de la taille de population, de statut, des utilisations des terres et des menaces pour cette population.

Grace à ce procédé, les participants ont produit une carte digitale représentant l'aire de répartition des deux espèces en Afrique occidentale, centrale et septentrionale.

A3.1.5Analyse des données sur le statut et la distribution (faite le 2-3 février 2012)

Une fois les cartes de distribution finies avec l'assentiment de tous les participants, elles ont été utilisées pour évaluer la proportion d'aire de répartition de chaque espèce qui se trouve dans des aires protégées. Cette information a servi dans le processus de planification de la stratégie, en montrant l'importance des aires protégées mais aussi des aires non-protégées pour la conservation future des guépards et des lycaons.

La distribution des espèces a aussi été confrontée aux frontières nationales, pour évaluer l'importance d'une gestion transfrontalière ; cela a aussi servi à renseigner la stratégie.

Les participants ont aussi utilisé les données sur toutes les menaces potentielles sur le guépard et le lycaon pour identifier les menaces clés sur ces deux espèces. Pour cela, des groupes de travail ont été formés (un pour le guépard et un pour le lycaon) pour discuter de ces menaces et évaluer les preuves que chacune des menaces nominées a un vrai impact, ou pourrait avoir un impact sur la viabilité actuelle et future des guépards et des lycaons. Ensuite, les participants ont synthétisé cette information pour toutes les populations dans la région et identifié les menaces clés qui affectent plusieurs populations. Les résultats de ces deux groupes de travail étaient si similaires qu'ils ont été plus tard regroupés.

ANNEXE 4 CADRE LOGIQUE DU PLAN STRATEGIQUE

VISION

Une région d'Afrique occidentale, centrale et septentrionale avec des populations de guépards et de lycaons restaurées, gérant sa biodiversité et ses ressources naturelles de manière durable et concertée pour le bien-être des populations humaines.

BUT

Des populations de guépards et de lycaons mieux connues, viables et valorisées en Afrique occidentale, centrale et septentrionale.

Thème	Objectif	Résultat	Activité
Développement des compétences	1. Etablir les ressources, connaissances et outils nécessaires pour la conservation des guépards et des lycaons	1.1 D'ici 5 ans, les capacités pour la mise en œuvre de la stratégie régionale de conservation du guépard et du lycaon sont acquises.	1.1.1 Identifier les besoins en termes de renforcement des capacités spécifiques aux deux espèces d'ici 2 ans.
			1.1.2 Identifier les institutions, les chercheurs et les autres parties prenantes pouvant renforcer les capacités du personnel et des autres acteurs en charge de la gestion du guépard et du lycaon d'ici 1 an.
			1.1.3 Concevoir des modules de formation spécifiques aux deux espèces à l'intention du personnel en charge de leur gestion d'ici 3 ans.
			1.1.4 Mettre en œuvre des modules de formation, d'évaluation et de remise à niveau après la réalisation des Activités 1.1.1, 1.1.2, et 1.1.3.
Approfondissement des connaissances	2. Approfondir les connaissances sur le guépard et le lycaon en se basant sur la collecte coordonnée de données fiables.	2.1 Les données sur le statut et l'écologie du guépard et du lycaon dans les aires de répartition (voir cartes de distribution, figures 3.5 et 4.5) sont disponibles, analysées et diffusées à travers diverses méthodes d'ici 5 ans.	2.1.1 Procéder à une évaluation des statuts des populations de guépards et de lycaons d'ici 2 ans.
			2.1.2 Favoriser et privilégier les actions de recherches, de suivi et de conservation à mener dans les zones identifiées après avoir réalisé un bilan des connaissances sur l'état actuel des populations de guépards et de lycaons (voir Activité 2.1.1).
			2.1.3 Créer une base de données centralisée et accessible d'ici 3 ans.
			2.1.4 Organiser des réunions périodiques pour la diffusion des données d'ici 3 ans.
			2.1.5 Produire un bulletin bisannuel d'ici 1 an.

			2.1.6 Elaborer une page web spécifique relative à la stratégie de conservation des deux espèces sur le site internet www.cheetahandwilddog.org d'ici 1 an.
			2.1.7 Réaliser des études d'impact des différentes méthodes de gestion de l'habitat (par ex. points d'eau, feux d'aménagement, salines, etc.) sur les populations de guépards et de lycaons pour optimiser la gestion de l'habitat aux besoins pour la conservation de ces deux espèces.
			2.1.8 Identifier les méthodes les plus appropriées pour la recherche, le suivi et la gestion du guépard et du lycaon dans les divers habitats dans leurs aires de répartition.
Sensibilisation	3. Sensibiliser toutes les parties prenantes aux valeurs socio-économiques, écologiques et intrinsèques des écosystèmes et de la faune sauvage en général, et en particulier des guépards et des lycaons.	3.1 D'ici 5 ans, toutes les autorités concernées (les décideurs politiques, les institutions en charge de la gestion de la faune sauvage, les ministères chargés de l'aménagement du territoire, les administrations), sont identifiées et rendues conscientes du statut et des besoins de conservation du guépard et du lycaon, ainsi que de leur importance et de leur valeur.	3.1.1 Identifier les autorités concernées et la meilleure méthode (par exemple un atelier national) de leur transmettre le message central au sujet de la conservation du guépard et lu Lycaon d'ici 1 an.
			3.1.2 Préparer et mettre en œuvre la meilleure méthode de diffusion du message central à ces autorités concernant la conservation du guépard et du lycaon d'ici 2 ans.
		3.2 D'ici 5 ans, 80% des parties prenantes impliquées dans les zones où le guépard et le lycaon sont potentiellement présents, sont conscients du statut de conservation défavorable de ces espèces, et ont une perception bien plus positive de la valeur de ces espèces et de l'importance de les protéger et de préserver leurs habitats.	3.2.1 Identifier toutes les parties prenantes dans les zones où le guépard et le lycaon sont potentiellement présents d'ici 1 an
			3.2.2 Développer la littérature nécessaire et les médias appropriés à une campagne de sensibilisation, et mettre en œuvre cette campagne dans toutes les zones où le guépard et le lycaon sont présents ou potentiellement présents de la deuxième à la cinquième année.
			3.2.3 Evaluer le changement de perception des différentes parties prenantes sur la valeur de ces espèces et l'importance de protéger et de préserver leurs habitats au début et à la fin de la campagne de sensibilisation, lors de la première et de la cinquième année.

Politiques et législations	4. Promouvoir la mise en œuvre des politiques et des législations favorables aux écosystèmes, adaptées, là où c'est nécessaire, afin d'optimiser le rétablissement des populations de guépards et de lycaons.	4.1. D'ici 5 ans, toutes les politiques et les législations relatives au rétablissement des populations de guépards et de lycaons sont identifiées et mises en œuvre.	4.1.1 Identifier toutes les politiques et les législations relatives au rétablissement des populations de guépards et de lycaons d'ici 1 an.
			4.1.2 Faire du lobbying et aider, là où c'est possible, à la mise en œuvre des politiques et des législations identifiées de la deuxième à la quatrième année.
			4.1.3 Mesurer les changements survenus suite à la mise en œuvre des politiques et des législations identifiées de la deuxième à la cinquième année après la réalisation des Activités 4.1.1 & 4.1.2.
		4.2. D'ici 10 ans, toutes les politiques et les législations appropriées sont adaptées aux besoins du guépard et du lycaon en matière de conservation, et harmonisées à travers la région (par exemple, accords transfrontaliers, CMS).	4.2.1 Identifier toutes les politiques et législations qui doivent être adaptées afin de répondre aux besoins du guépard et du lycaon en matière de conservation pendant la deuxième année.
			4.2.2 Faire du lobbying pour adapter les politiques et les législations identifiées auprès des autorités responsables, de la deuxième à la quatrième année après la réalisation d'Activité 4.2.1.
			4.2.3 Suivre le nombre des changements effectués dans les politiques et les législations, et évaluer leur mise en œuvre de la septième à la dixième année après la réalisation des Activités 4.2.1 et 4.2.2.
Coexistence	5. Promouvoir la coexistence entre le guépard, le lycaon, les populations humaines et leurs animaux domestiques en réduisant les conflits.	5.1. Le niveau de conflits entre l'homme et les carnivores (guépard et lycaon), incluant la persécution directe, l'empoisonnement et les maladies, est évalué dans la région, avec une attention toute particulière portée à l'aire de répartition actuelle, et ce au cours des deux prochaines années.	5.1.1 Evaluer, au moyen de questionnaires et d'examens rapides, les pertes perçues ou réelles du bétail à cause des prédateurs, les abattages illégaux, les cas d'empoisonnement et l'occurrence des maladies liées aux canidés, à l'intérieur et autour de l'aire de répartition actuelle, d'ici 18 mois.
			5.1.2 Elaborer une carte (et classer) des zones de conflits réels et potentiels qui nécessitent des mesures de réduction des conflits d'ici 2 ans.
		5.2. Le nombre de conflits entre l'homme et les carnivores autour et dans l'aire de répartition actuelle est diminué de manière significative d'ici 5 ans.	5.2.1 Cibler des zones à forte intensité de conflits et mettre en place des campagnes d'information et de sensibilisation locales pour améliorer la protection du bétail et pour réduire les conflits avec le guépard et le lycaon après la réalisation d'Activité 5.1.2.
			5.2.2 Développer là où c'est approprié des mesures de réduction des conflits pour améliorer les pratiques d'élevage qui réduisent efficacement les pertes de bétail par prédation des guépards et des lycaons de la troisième à la cinquième année.
			5.2.3 Identifier et promouvoir des méthodes pour réduire la transmission de

			maladies des animaux domestiques au lycaon, comme par exemple la vaccination des chiens domestiques contre la rage.
		5.3. Les bénéfices retirés par les communautés locales conduiront à une meilleure valorisation du guépard et du lycaon à l'intérieur et autour de l'aire de répartition actuelle d'ici 5 ans	5.3.1 Développer des activités d'écotourisme en utilisant le guépard et le lycaon comme espèces emblématiques pour augmenter la valeur écotouristique de la région de la deuxième à la cinquième année.
			5.3.2 Développer des activités lucratives et respectueuses de l'environnement au profit des communautés riveraines de l'aire de répartition actuelle du guépard et du lycaon.
Utilisation	6. Réduire la pression des prélèvements illégaux et des mortalités accidentelles des guépards et des lycaons ainsi que la surexploitation de leurs proies.	6.1 Les prélèvements illégaux et les mortalités accidentelles des guépards et des lycaons sont évalués et diminuent de manière significative à l'intérieur et autour de l'aire de répartition actuelle, d'ici 5 ans.	6.1.1 Evaluer, grâce à des interviews des parties prenantes (les communautés locales, les guérisseurs, les commerçants, le personnel des aires protégées, les services de douanes etc.) et à d'autres méthodes, le nombre de cas et l'importance de l'utilisation du guépard et du lycaon pour divers besoins, la capture d'animaux vivants et les mortalités accidentelles dans l'aire de répartition actuelle, d'ici 3 ans.
			6.1.2 Mettre en place des vastes campagnes publiques de sensibilisation, d'information et de communication et faire du lobbying auprès des autorités législatives pour lutter contre les prélèvements illégaux et les mortalités accidentelles dans les aires où ces menaces existent, de la deuxième à la cinquième année.
			6.1.3 Renforcer les activités de lutte anti-braconnage dans les diverses aires protégées pour éviter les prélèvements illégaux et les mortalités accidentelles de guépards et de lycaons; il s'agit d'une activité à long terme.
		6.2 Les proies naturelles du guépard et du lycaon sont gérées de manière efficace dans les aires protégées de leurs aires de répartition, d'ici 5 ans.	6.2.1 Soutenir la gestion des aires protégées de sorte à favoriser de meilleures activités de lutte anti-braconnage afin de réduire significativement les prélèvements de proies d'ici 5 ans.
			6.2.2 Accroitre la capacité des gestionnaires des aires protégées à lutter contre le braconnage des proies en favorisant une synergie d'intervention entre les projets et les bailleurs de fonds qui soutiennent les aires protégées abritant des populations résidentes de guépards et de lycaons d'ici 5 ans.
			6.2.3 Aider les Etats parties à établir et mettre en place des quotas de chasse durables en termes de proies dans les zones cynégétiques de la première à la troisième année.

		6.3 Des plans de restauration des proies naturelles dans les aires de répartition probable et réhabilitable sont développés et mis en œuvre d'ici 5 ans.	6.3.1 Travailler en collaboration avec les Etats parties pour identifier les aires clés pour le guépard et le lycaon à l'extérieur de l'aire de répartition actuelle afin de mettre en œuvre des activités devant conduire à la restauration de l'habitat et des populations de proies et de prédateurs de la deuxième à la cinquième année.
			6.3.2 Rechercher un soutien financier et préparer des plans en vue de favoriser la réhabilitation des populations de guépards et de lycaons dans certaines aires de répartition potentielles, y compris leur réintroduction dans des aires réhabilitables de la troisième à la cinquième année.
Gestion de l'habitat	7. Maintenir, améliorer et rétablir la viabilité des populations de guépards et de lycaons par la gestion de l'habitat et d'autres mesures appropriées.	7.1 Les populations résidentes actuelles de guépards et de lycaons et leurs habitats sont rétablis d'ici 10 ans.	7.1.1 Elaborer et adopter des plans de conservation et de gestion des aires protégées abritant les populations de guépards et de lycaons d'ici 2 ans.
			7.1.2 Mettre en œuvre les plans de conservation et de gestion d'ici 10 ans.
			7.1.3 Evaluer et réviser les plans de conservation et de gestion, d'ici 5 ans.
			7.1.4 Impliquer les populations locales dans la gestion des aires de répartition actuelle de guépards et de lycaons d'ici 10 ans.
		7.2 Les populations de guépards et de lycaons dans les aires de résidence actuelle sont viables et ont augmenté d'au moins 50%, d'ici10 ans.	7.2.1 Harmoniser les textes de loi sur la protection du guépard et du lycaon d'ici 2 ans.
			7.2.2 Suivre et évaluer la croissance des populations de guépards, de lycaons et de leurs proies d'une manière continue.
			7.2.3 Réduire les conflits entre l'homme et les carnivores par le développement d'activités lucratives et respectueuses de l'environnement dans les aires avoisinantes à partir de la deuxième année.
			7.2.4 Evaluer les possibilités de réintroduire le guépard et le lycaon dans des habitats viables (par exemple analyse génétique, habitat, etc.) à partir de la troisième année.
		7.3 Les zones favorables à la survie des populations de guépards et de lycaons dans les aires de répartition possibles et réhabilitables, ainsi que les corridors sont gérées et rétablies d'ici 7 ans.	7.3.1 Confirmer les zones de présence potentielles, réhabilitables des populations de guépards et de lycaons dans la sous-région, ainsi que les corridors de déplacement actuels des deux espèces d'ici 2 ans.
			7.3.2 Elaborer et adopter des plans de conservation et de gestion pour les zones avec possibilité de réhabilitation et les corridors de déplacement actuels et possibles d'ici 2 ans, après la réalisation de l'Activité 7.3.1.

			7.3.3 Mettre en œuvre les plans de gestion d'ici 10 ans après la réalisation de l'Activité 7.3.2.
			7.3.4 Evaluer et réviser les plans d'aménagement et de gestion, d'ici 2 ans après la réalisation d'Activité 7.3.3.
			7.3.5 Impliquer les populations locales dans la gestion des corridors de déplacement des guépards et des lycaons, d'ici 10 ans.
Mise en place de cette stratégie	8. Mettre en place les compétences et les moyens adéquats au niveau régional pour la mise en œuvre de la stratégie de conservation du guépard et du lycaon en Afrique occidentale, centrale et septentrionale.	8.1 La stratégie régionale de conservation du guépard et du lycaon est acceptée et appropriée par les Etats parties d'ici 2 ans.	8.1.1 Organiser des ateliers régionaux d'internalisation avec les structures de tutelles et les autres parties prenantes d'ici 1 an.
			8.1.2 Elaborer et adopter un Mémorandum d'Accord de mise en œuvre de la stratégie d'ici 2 ans.
			8.1.3 Identifier les sources de financement pour le développement des plans d'actions nationaux pour la mise en œuvre de la stratégie régionale d'ici 2 ans.
		8.2 Un mécanisme régional de financement durable pour la stratégie aura été créé et sera opérationnel d'ici 5 ans.	8.2.1 Identifier les besoins de financement pour la mise en œuvre de la stratégie dans un délai d'un an.
			8.2.2 Réaliser une étude de faisabilité de recherche de fonds suffisants pour la mise en place de la stratégie régionale dans un délai de 3 ans.
			8.2.3 Elaborer un plan de financement pour la mise en œuvre de la stratégie régionale d'ici 2 ans.
			8.2.4 Renforcer les capacités en vue de lever des fonds pour le financement de la stratégie régionale d'ici 2 ans.
			8.2.5 Identifier les bailleurs de fonds potentiels de manière continue.
			8.2.6 Lobbying auprès des bailleurs de fonds de manière continue.
		8.3 Un organe de coordination et de suivi de la mise en œuvre de la stratégie est opérationnel d'ici 1 an.	8.3.1 Recruter un coordinateur régional et mettre en place un réseau d'experts de la région d'ici 1 an.
			8.3.2 Organiser des réunions périodiques (annuelles) de suivi et d'évaluation de la stratégie de manière continue.

ANNEXE 5 REMERCIEMENTS

Nous sommes extrêmement reconnaissants à la Howard G. Buffett Foundation et à la Wildlife Conservation Society pour l'aide financière qui nous a permis d'organiser cet atelier, et pour leur soutien continu malgré les difficultés logistiques qui ont souvent été de rigueur. Nous tenons également à remercier Aliénor Chauvenet pour son aide dans l'organisation de l'atelier, et Gianetta Purchase pour avoir fourni un support logistique et administratif supplémentaire pendant l'atelier. L'atelier a aussi bénéficié des conseils et e l'aide offerts par Thomas Rabeil qui, à notre grande déception, n'a pas pu venir en personne à cause d'une rupture du tendon d'Achilles. Le processus de cartographie a grandement profité des données fournies par les personnes qui n'ont pas pu venir à l'atelier en personne, et nous sommes reconnaissants à Farid Belbachir, Thomas Rabeil et Philippe Chardonnet tout particulièrement pour les connaissances incroyablement étendues de la région.

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ANNEX 2

REGIONAL CONSERVATION STRATEGY FOR THE CHEETAH AND AFRICAN WILD DOG IN EASTERN AFRICA

DRAFT report not yet endorsed by national governments
For Information Only – Please do not circulate

IUCN The World Conservation Union | Canid Specialist Group | SPECIES SURVIVAL COMMISSION CAT SPECIALIST GROUP | ZSL LIVING CONSERVATION | WILDLIFE CONSERVATION SOCIETY

Endorsements

We hereby declare that we endorse the regional conservation strategy for cheetah and African wild dog in eastern Africa

Signature ..... Date .....
Ministry of Natural Resources Development and Environmental Protection
Ethiopia

Signature ..... Date .....
Ministry of Wildlife and Tourism
Kenya

Signature ..... Date .....
Ministry of Environment, Wildlife Conservation and Tourism
Southern Sudan

Signature ..... Date .....
Ministry of Natural Resources and Tourism
Tanzania

Signature ..... Date .....
Ministry of Wildlife, Tourism and Antiquities
Uganda

Signature ..... Date .....
Species Survival Commission
IUCN

REGIONAL CONSERVATION STRATEGY FOR THE CHEETAH AND AFRICAN WILD DOG IN EASTERN AFRICA

CONTENTS

– CHAPTER 1 –

SUMMARY

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

Eastern 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 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 with eastern Africa, with resident populations known to remain in just 6% (cheetah) and 7% (wild dogs) of their historical range. 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. Nearly two-thirds of cheetah resident range, and over half of wild dog resident range, falls on community and private lands. As a result, the populations inside protected areas would not 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.

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. Little or no unoccupied habitat was identified where wild dog or cheetah populations could be restored. The strategic plan therefore focuses on securing the remaining populations rather than restoring those that have been lost.

The strategic plan for the species' conservation in eastern Africa recognises the need to (i) promote coexistence of cheetah and wild dogs with people and domestic animals; (ii) provide relevant stakeholders and managers with scientific and timely information on the status of and threats to cheetah and wild dog populations; (iii) strengthen human, financial and information resources for conserving cheetah and wild dogs; (iv) ensure that appropriate legislation is in place to allow wild dog and cheetah conservation at the national and international levels; (v) mainstream cheetah and wild dog conservation in land use planning and its implementation; and (vi) promote the development and implementation of national conservation plans for both species. This last point is important because almost all conservation effort is enacted within national policies, under the jurisdiction of national wildlife authorities. For this reason, the regional strategy was deliberately developed in a format that would facilitate translation into national action plans. It is expected that these action plans will be implemented by national wildlife authorities, in partnership with relevant NGOs and other institutions.

– CHAPTER 2 –

BACKGROUND AND INTRODUCTION

2.1 Background

The African wild dog (*Lycaon pictus*) and the cheetah (*Acinonyx jubatus*) present major challenges for conservationists in the 21st Century. Both species were formerly widely distributed in Africa, but both have experienced dramatic reductions in numbers and geographic range in recent decades (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. The two species were addressed together because, despite being taxonomically quite different, they are ecologically very similar and hence face similar threats.

The Rangewide Conservation Planning Process has six stated objectives:

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

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

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

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

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

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

A key component of this process is a series of workshops, bringing together specialists on the species' biology with conservation managers from governmental and non-governmental organisations. Close involvement of government representatives was considered absolutely critical since they represent the organisations with the authority to implement any recommendations at the management and policy levels. While the process will ultimately cover the entire geographic range of both species, the large number of range states involved means that productive discussion and interchange would have been very difficult to achieve at a single workshop covering the whole area. Workshops are therefore being conducted at the regional level; this report presents the outcomes of the first regional workshop, covering eastern Africa. Details of the meeting's objectives and participants are presented in section 2.4 below.

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

2.2 Biology and conservation needs of African wild dogs

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

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

Probably because of this tendency to avoid larger predators, wild dogs live at low population densities and range widely. Population densities average around 2.0 adults and yearlings per 100km^2 (Fuller *et al.*, 1992a) and home ranges average 600-800km^2 per pack in eastern Africa (Woodroffe & Ginsberg, 1998), with some packs ranging over areas in excess of 2,000km^2 (Fuller *et al.*, 1992a). Both wild

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

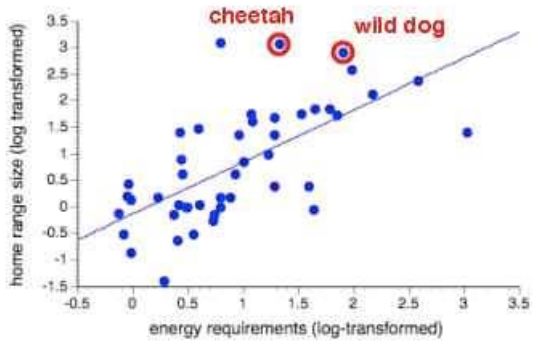


Figure 2.1 *The relationship between energy requirements and home range size in multiple carnivore species, showing the large home ranges occupied by cheetah and wild dogs in comparison with their energy needs. Wild dogs are recorded as having greater needs than cheetah because the social unit is a pack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

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

Wild dog populations in different regions of Africa are morphologically and genetically different, but no subspecies are recognised (Girman & Wayne, 1997; Girman *et al.*, 1993). Wild dogs are habitat generalists, and have been recorded in habitats as diverse as wooded savannah (Creel & Creel, 2002), short grasslands (Kuhme, 1965), montane forest (Dutson & Sillero-Zubiri, 2005), montane moorland (Thesiger, 1970) and mangroves (see Figure 4.1).

The first status survey for wild dogs was conducted in 1985-8 (Frame & Fanshawe, 1990), and this was updated in 1997 (Fanshawe *et al.*, 1997) and 2004 (Woodroffe, McNutt & Mills, 2004). These surveys revealed substantial loss and fragmentation of wild dog populations, with the species extirpated across most of western and central Africa, and greatly depleted in eastern and southern Africa. However distribution data, which were collated mainly by exhaustive postal correspondence, were somewhat biased towards protected areas with little information available from unprotected lands. By 1997, wild dogs had disappeared from most of Africa's protected areas, persisting only in the largest reserves (Woodroffe *et al.*, 1998). In 2004 the species was estimated to number fewer than 6,000 adults and yearlings (Woodroffe *et al.*, 2004). The species is listed as 'endangered' by the IUCN (IUCN, 2006a).

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

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

developed to reduce the impacts of conflicts with game and livestock ranchers, accidental snaring, and road accidents, although safe and effective tools to manage disease risks are still under development (Woodroffe *et al.*, 2005a).

2.3 Biology and conservation needs of cheetah

The cheetah is one of the most unique and specialised members of the cat family. It can reach speeds of 64 miles per hour (103 km per hour, Sharp, 1997), making it the fastest creature on land. However, despite their specialised hunting strategy, cheetah are habitat generalists, ranging across a wide variety of habitats, from desert through grassland savannas to thick bush (Myers, 1975).

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

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

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

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

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

Like wild dogs, and probably because of similar tendencies to avoid larger predators, cheetah live at low densities with recorded densities ranging between 0.3-3 adult cheetah/100km^2 (Burney, 1980; Gros, 1996; Marker, 2002; Mills & Biggs, 1993; Morsbach, 1986; Purchase, 1998). Although markedly higher estimates have been documented in some areas, it is likely these estimates do not reflect true density, as individuals counted may roam outside the survey area (highlighting a general problem with surveying cheetah, see Bashir *et al.*, 2004).

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

Global population size has been 'guesstimated' at 14,000 (Myers, 1975) and 'less than 15,000' (Marker, 2002). The species is listed as vulnerable by the IUCN red list (IUCN, 2006a). Although these population size estimates do not suggest a decline, the consensus view among the world's experts on the species is that there has been a decline, either because the 1970s estimate was an underestimate or because the later estimate was an overestimate. Certainly the distribution of the species has contracted markedly from its historical range. Declines have been largely attributed to habitat loss and fragmentation (Marker *et al.*, 2003a; Marker *et al.*, 2003b; Myers, 1975). The disappearance of the species from across nearly its entire Asian range was in part also due to the habit of the Asian aristocracy to capture and use cheetah for hunting (Divyabhanusinh, 1995). Today, in sub-Saharan Africa, lethal control due to perceived or actual conflict with livestock or game ranching also plays a strong role in the decline of the species (Marker *et al.*, 2003a; Marker *et al.*, 2003b; Myers, 1975).

2.4 The eastern Africa regional workshop

The eastern Africa regional workshop on conservation planning for cheetah and wild dogs was held on 1st-6th February, 2007, at Mpala Research Centre in Kenya. It was attended by 28 delegates including government and NGO representatives from southern Sudan, Ethiopia, Uganda, Kenya and Tanzania, and species specialists from Botswana, Namibia, Kenya, Tanzania, USA and UK (Figure 2.2); the delegates' names, affiliations and contact details are provided in Appendix 1. One delegate from Sudan was not permitted to attend the workshop due to a trade embargo by the US government, but contributed data. Two other delegates from the USA were prevented from attending but contributed data and/or

expertise. No participants were invited from Rwanda, Burundi, Eritrea or Djibouti as these countries were known or strongly suspected to support no resident populations of either species. No participant from Somalia could be identified with appropriate information or authority.

Figure 2.2 *Delegates to the conservation planning workshop for African wild dogs and cheetah in eastern Africa, held at Mpala Research Centre, Kenya in February 2007 (a full list of participants is provided in Appendix I).*

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

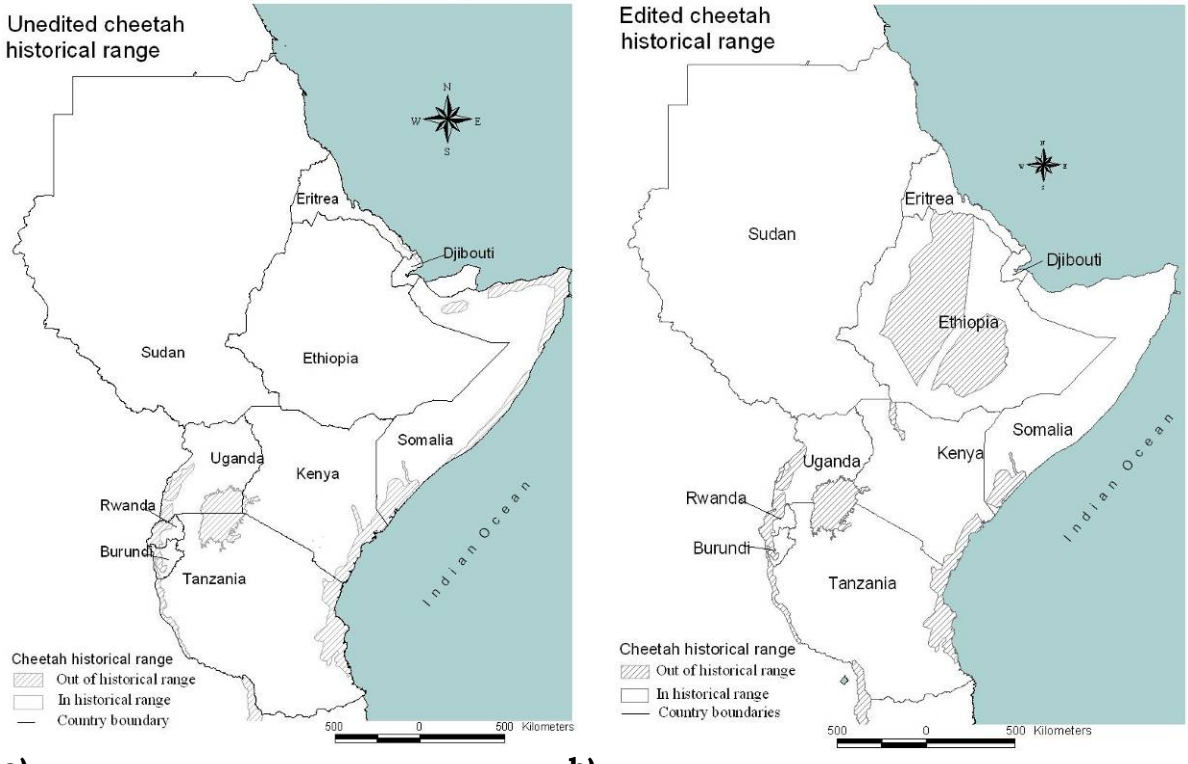
Chapters 3 and 4 of this report present details on the status and distribution of cheetah and wild dogs, respectively, in eastern Africa. Chapter 5 describes the threats to both species. Chapter 6 describes the conservation strategy developed for the region by workshop participants. The agenda for the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

– CHAPTER 3 –

THE DISTRIBUTION AND STATUS OF CHEETAH WITHIN EASTERN AFRICA

3.1 Historical distribution

In the past, cheetah were broadly distributed within eastern Africa. Cheetah are habitat generalists, able to persist in a wide array of environmental conditions as long as prey are available, ranging from the Sahara desert to reasonably thick bush. Before human activity modified substantial proportions of eastern Africa's natural habitats, cheetah were presumed to have occupied nearly the entire region, bounded to the east by the Indian Ocean and to the west by the lowland rainforests of the Congo basin (Figure 3.1a). They were thought to have been excluded only from forest, and to have occurred across most other habitats of eastern Africa (Myers, 1975). However, this generally accepted historical map of cheetah distribution (Myers, 1975) was developed from what was known about preferred habitat of cheetah at that time, together with a map of known habitat distribution. Whilst the habitat maps have not altered greatly, much more is known about the habitat preferences of cheetah today, modifying the presumed previous historic range. Participants in the workshop agreed that cheetah were probably never present in the high mountains of Ethiopia, as there are no records of cheetah ever having occurred in this area (Figure 3.1b). However it also seems likely that cheetah were more widespread than initially thought along the coastal strip of Kenya and Tanzania, as well as over the horn of Africa, as they have been recorded within some of these areas. The relevant parts of these areas were therefore included in the historical range of the species used for analyses presented here.



a) **b)**

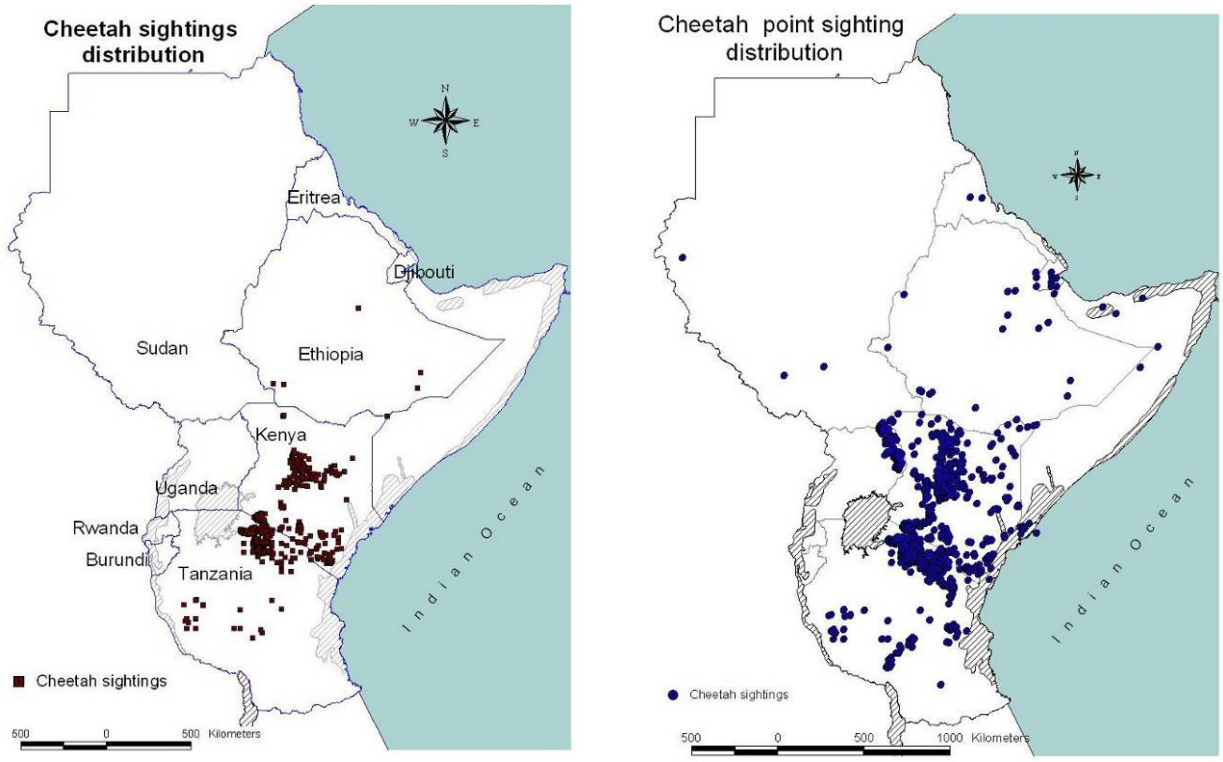
Figure 3.1 *Cheetah historical range, prior to the impact of human activity, a) as previously documented prior to this workshop (Myers, 1975) and b) after revision during the workshop.*

The highest cheetah densities have been recorded in wooded savannah (Caro, 1994; Marker *et al.*, in press). However, the species lives at low density wherever it occurs, partly because it comes into competition with other large carnivores, such as lion and spotted hyaena (Durant, 1998). Because of this, cheetah densities in pristine wilderness areas that harbour large numbers of other large carnivores are similar to densities in relatively degraded habitat where prey densities are low and large carnivores have been excluded. This is because the best habitats attract the highest densities of competing carnivores. It unlikely, therefore, that cheetah were ever abundant, despite their broad geographical distribution.

3.2 Current distribution

3.2.1 Point location data

Mapping of current distribution undertaken at the workshop was informed by maps of recent and historical data on cheetah locations (mainly sightings) compiled prior to the workshop (Figure 3.2, Appendix 3). A sighting observation signifies that cheetah have definitely occurred in a particular area, but does not signify whether there is a resident breeding population or whether the sighting involved transient individuals. Repeated sightings in a particular area are likely to indicate a resident population. The absence of sighting information in an area can mean one of two things: either there are no cheetah in the area, or there are cheetah in the area but they have not been recorded. The latter explanation is likely to be valid in areas where there are few observers, as this provides little opportunity for recording cheetah, and is a likely explanation for the absence of recent sightings from Sudan and Somalia (Figure 3.2).



a) ***b)***

Figure 3.2 *Sightings of cheetah across the region a) from 1997 to 2007 and b) including records dating from 1968-1996.*

3.2.2 Categories of current geographical range

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

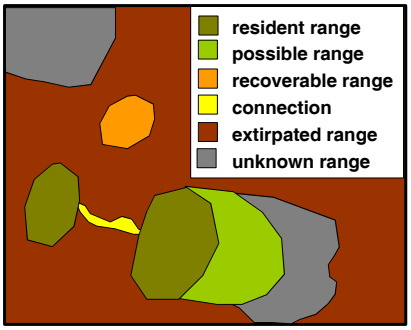


Figure 3.3 *Possible dispositions of different types of geographic range on an imaginary map*

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

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

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

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

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

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

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

3.2.3 Current distribution across different range categories

Figure 3.4 shows cheetah geographic range as mapped by workshop participants in 2007, according to the six categories above; Table 3.1 presents the same data in a quantitative format.

The current geographic distribution of cheetah is greatly reduced in comparison with their historical distribution. Cheetah are known to be resident in only about 6% of their historical range, and are possibly present in another 18% of their historical range. Even if all the areas where they could possibly be present turn out to hold resident populations, this still represents an apparent loss of approximately three quarters of their historical range, whilst, if the possible areas are shown not to hold resident populations, there could be a loss of over 90% of historical range. Ethiopia, Kenya and Tanzania contain sizeable areas of possible range for cheetah. In these areas, surveys to establish the status of the species are a clear priority.

No information on distribution was available for 63% of the species' historical geographic range. If even a small proportion of this 'unknown' range still supports cheetah, the species' status could be more encouraging than the data on resident and possible range would imply. Most of the 'unknown' range falls in Sudan, a country which is just emerging from civil war, and where there has hence been

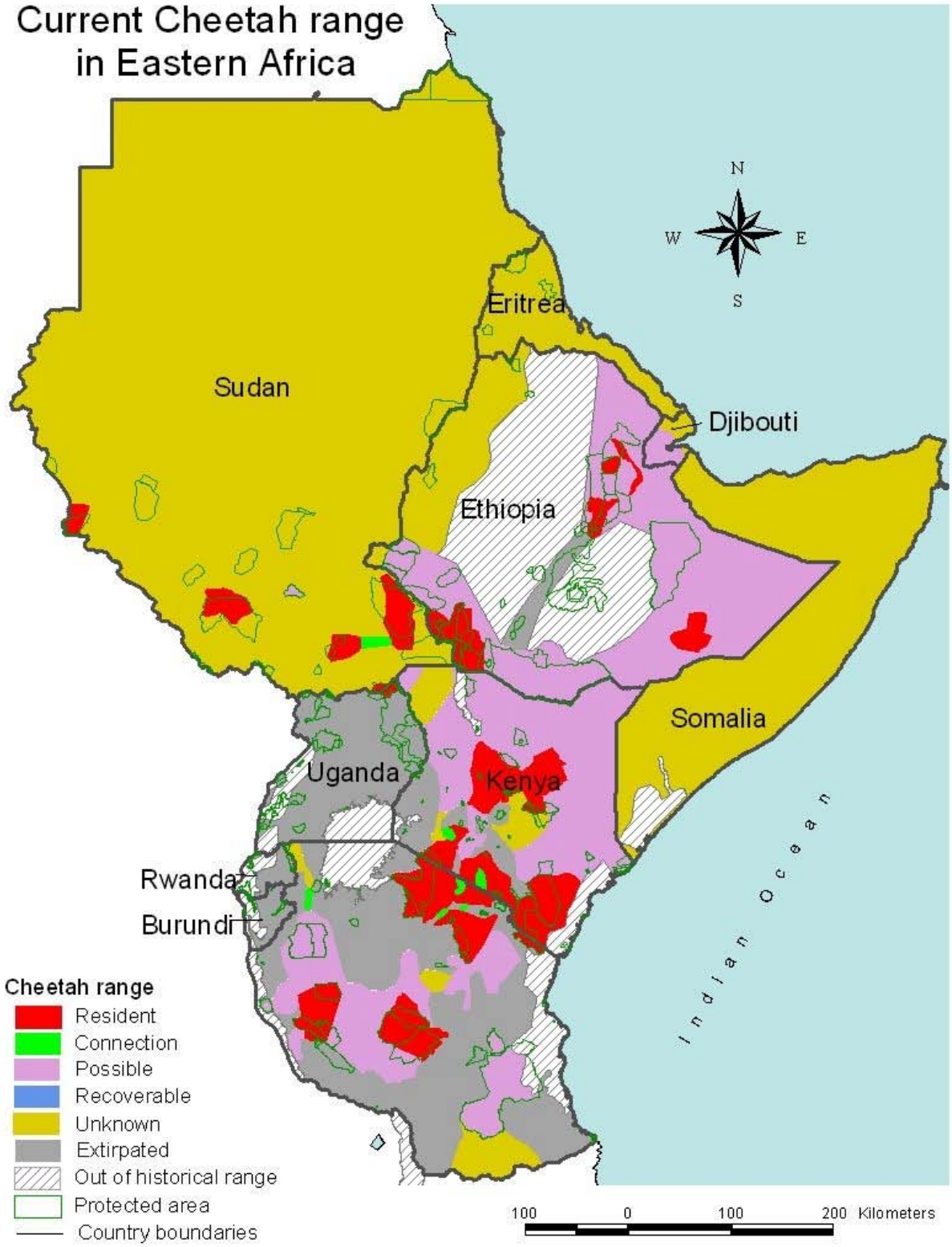


Figure 3.4 *Cheetah distribution in 2007 as mapped by participants at the workshop. Protected areas shown in this map include national parks, game reserves and conservation areas, and are all within IUCN Categories I-IV.*

Table 3.1 *Distribution of cheetah in range states within eastern Africa (note percentage sub-totals and totals were calculated as the total land area estimated to be in each category of cheetah range in 2007, divided by the total land area falling inside historic cheetah range).*

		Area (km²) and % of historic range falling in each range category											
	Historical	*resident*		*possible*		*connecting*		*unknown*		*recoverable*		*unrecoverable*	
Country	**range**	km²	%	km²	%	km²	%	km²	%	km²	%	km²	%
Countries represented at workshop													
Ethiopia	621,937	50,288	8.1	423,259	68.1	0	0.0	122,100	19.6	0	0	26,290	4.2
Kenya	475,133	107,412	22.6	266,827	56.2	3,677	0.8	40,192	8.5	0	0	57,025	12.0
Sudan	2,351,492	47,013	2.0	1,548	0.1	3,605	0.2	2,299,326	97.8	0	0	0	0.0
Tanzania	729,512	103,685	14.2	188,939	25.9	2,938	0.4	44,262	6.1	0	0	389,688	53.4
Uganda	164,125	2,188	1.3	0	0.0	0	0.0	0	0.0	0	0	161,937	98.7
Sub-total	*4,342,199*	*310,586*	*7.2*	*880,573*	*20.3*	*10,220*	*0.2*	*2,505,880*	*57.7*	*0*	*0*	*634,940*	*14.6*
Countries not represented at workshop													
Burundi	15,826	0	0	0	0	0	0	0	0.0	0	0	15,826	100.0
Djibouti	19,818	0	0	12,085	61.0	0	0	7,733	39.0	0	0	0	0.0
Eritrea	114,269	0	0	0	0	0	0	114,269	100.0	0	0	0	0.0
Rwanda	12,353	0	0	0	0	0	0	0	0.0	0	0	12,353	100.0
Somalia	537,027	0	0	0	0	0	0	537,027	100.0	0	0	0	0.0
Sub-total	*699,293*	*0*	*0*	*12,085*	*1.7*	*0*	*0*	*659,029*	*94.2*	*0*	*0*	*28,179*	*4.0*
Grand total	5,041,492	310,586	6.2	892,658	17.7	10,220	0.2	3,164,909	62.8	0	0	663,119	13.2

little survey work for any species. Somalia consists almost entirely of unknown range, having constraints similar to, if not worse than, those in Sudan. Ethiopia and Eritrea also contain sizeable areas of unknown range. Surveys in all these countries are clear priorities.

Overall, cheetah were agreed to be extirpated across a minimum of 13% of their historical range. This is almost certainly an under-estimate for reasons similar to those described for the estimate of resident range. That is, it is likely that a high proportion of the 'unknown' range, and a proportion of the 'possible' range, no longer supports cheetah. None of this extirpated range was considered recoverable, that is, it was thought to be unable to support cheetah populations in future. This suggests that, once habitat is lost to cheetah, it may be gone forever. While there are large areas of unknown range, the evidence from countries which have relatively complete information (Ethiopia, Tanzania, Kenya, Rwanda, Burundi and Uganda) suggests that a marked contraction in geographic range has occurred in this species. It is therefore likely that a similar pattern will emerge in countries with substantial areas of unknown range, such as Sudan and Somalia, once sufficient information becomes available.

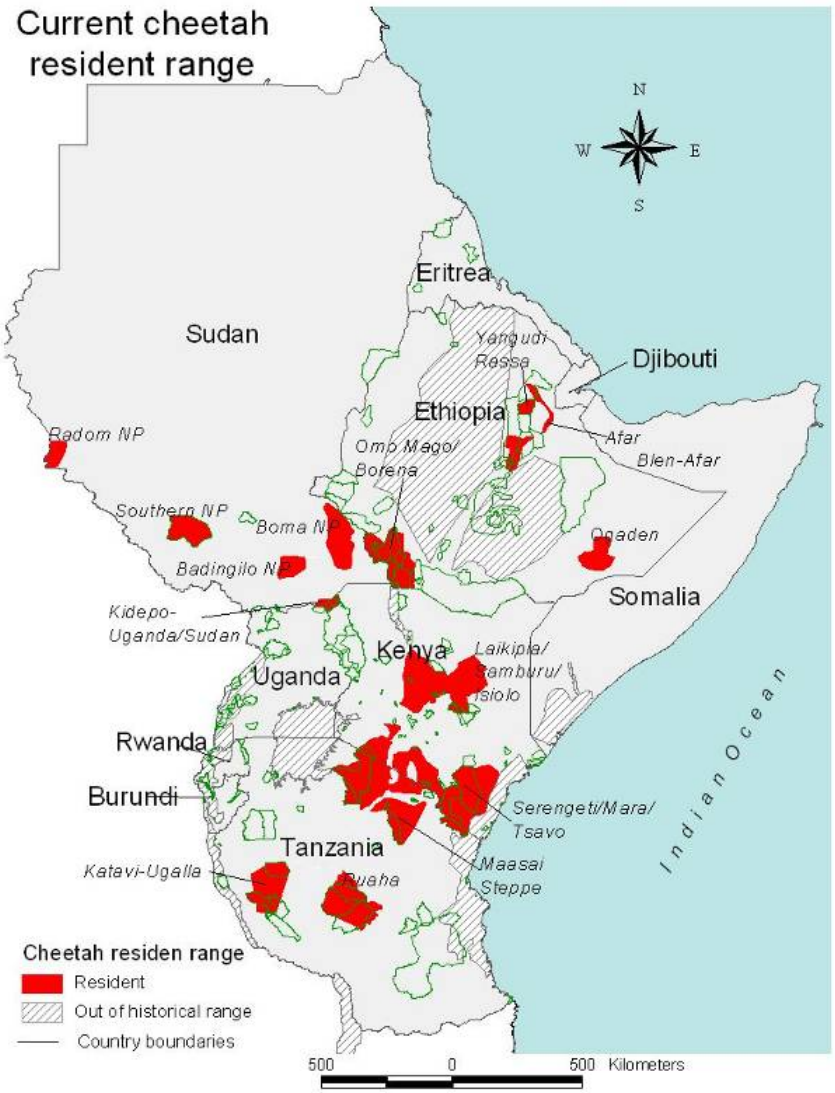


Figure 3.5 *Areas of resident cheetah range in eastern Africa, as identified by workshop participants.*

A small, but important 0.2% (10,220km^2) of historical range is considered potentially significant for cheetah conservation because it connects areas of resident or possible range. Most such connecting habitat was identified in Kenya

and Tanzania. This is probably a reflection of the better knowledge base available in those two countries, both of which have active national cheetah monitoring programmes, and does not mean that connecting range is not important in other range states. Indeed, a small amount of connecting range was identified in southern Sudan (Figure 3.4). Whilst connecting range is small in size, its importance outweighs the total area, as without maintaining such areas the regional cheetah population will become even more fragmented and genetically isolated. Connecting range, by definition (Section 3.3), is believed not to contain resident populations and hence is likely to be highly threatened.

Table 3.2 *Areas in eastern Africa considered by participants to support resident cheetah populations. Population estimates are derived from a number of different methodologies and have a very wide margin of error. Locations are shown in Figure 3.5.*

Name	**Country**	**Trans-boundary?**	**Area (km²)**		**Population estimate (adults)**	
			Total	*Protected*	*Total*	*Protected*
Afar	Ethiopia	no	4,073	997	40*	10‡
Blen-Afar	Ethiopia	no	7,342	6,497	70*	60‡
Ogaden	Ethiopia	no	11,095	0	110*	0‡
Omo Mago/Borena	Ethiopia	possibly	25,010	17,281	250*	170‡
Yangudi Rassa	Ethiopia	no	2,768	2,768	30*	30‡
Laikipia/Samburu	Kenya	no	47,390	2,074	450†	20‡
Badingilo NP	Sudan	no	7,482	1,266	70*	12‡
Boma NP	Sudan	possibly	19,294	13,106	190*	130‡
Kidepo-Uganda	Uganda/Sudan	yes	3,332	833	12†	3‡
Radom NP	Sudan	possibly	6,122	3,491	60*	30‡
Southern NP	Sudan	no	12,973	9,629	130*	100‡
Katavi-Ugalla	Tanzania	no	20,917	9,163	150*	90‡
Maasai Steppe	Tanzania	no	17,743	3,222	100*	30‡
Ruaha	Tanzania	no	26,530	20,040	200†	150‡
Serengeti/Mara/Tsavo	Kenya/Tanzania	yes	98,616	36,177	710†	260‡
	Grand total:		**310,687**	**126,544**	**2,572**	**1,095**

*population sizes estimated from the size of the polygon using a conservative density of 1 adult per 100km²; †population sizes estimated by delegates using a variety of methodologies; ‡sizes of protected populations estimated by multiplying total population size by the proportion of total land area falling inside protected areas.

Table 3.2 provides greater detail on the areas of resident range mapped by participants; locations of these areas are shown in Figure 3.5. The population estimates provided in Table 3.2 must be interpreted with great caution as they were derived using a variety of formal and informal approaches, often on the basis of extremely sparse data; however there are no alternative more accurate data available. Nonetheless, of the 15 populations, only four are estimated to number ≥200 adults and independent adolescents.

3.2.4 Distribution across protected areas

As is apparent from Figure 3.4, a comparatively small proportion of current geographical range of cheetah falls inside protected areas (Table 3.3). Overall, only slightly more than one third of the total resident range occurs on protected land, with the remaining population, close to two thirds, occurring outside the region's protected area system. These parts of the regional population are by no means secure, and in most of the areas listed there are heavy pressures on the land surrounding the protected areas. As an example, if all such unprotected lands were lost, the single largest population currently identified (the Serengeti/Mara/Tsavo population) would number around 260 individuals (rather than >700) and would

constitute a number of small fragmented sub-populations rather than a single population. Several of these sub-populations would be too small to remain viable and hence would be expected ultimately to become extinct.

Like resident range, the majority (79%) of possible range falls outside government-designated protected areas. All connecting areas fall outside protected areas, and hence the future of these valuable corridors is unlikely to be secure. There is no recoverable range for cheetah and hence ensuring the maintenance of range outside protected areas in a systematic way so as to maintain connectivity is likely to be critical for preservation of this species.

Table 3.3 *Occurrence of areas known or suspected to be important for cheetah conservation in IUCN Category I-IV protected areas. Percentages are calculated as the land area in each category falling inside protected areas, divided by the total land area in that range category.*

	Area (km²) and % of each range category falling inside protected areas							
	resident		*possible*		*connecting*		*recoverable*	
Country	km²	%	km²	%	km²	%	km²	%
Countries represented at workshop								
Ethiopia	27,542	54.8	113,685	26.9	0	0	0	0
Kenya	21,199	19.7	10,860	4.1	0	0	0	0
Sudan	12,977	27.6	1,548	30.1	0	0	0	0
Tanzania	49,474	47.7	55,244	29.2	0	0	0	0
Uganda	2,167	99.0	0	0	0	0	0	0
Sub-total	***113,359***	***36.5***	***181,337***	***20.5***	***0***	***0***	***0***	***0***
Countries not represented at workshop								
Burundi	0	0	0	0	0	0	0	0
Djibouti	0	0	0	0	0	0	0	0
Eritrea	0	0	0	0	0	0	0	0
Rwanda	0	0	0	0	0	0	0	0
Somalia	0	0	0	0	0	0	0	0
Sub-total	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***
Grand total	***113,359***	***36.5***	***181,337***	***20.5***	***0***	***0***	***0***	***0***

3.2.5 Distribution across international boundaries

As shown in Figure 3.5, several important resident cheetah populations are known or suspected to traverse international boundaries, either because the resident population spans the boundary, or because a polygon of known resident range abuts a polygon of possible range in a neighbouring country. Of the 15 resident populations listed in Table 3.2, five (33%) are known or strongly suspected to be trans-boundary, representing an estimated 1,220 adults, nearly half the estimated population across the entire region. These populations span the borders between Uganda and Sudan, Sudan and Ethiopia, Tanzania and Kenya, and Sudan, Kenya and Ethiopia. If possible range is included, the number of trans-boundary populations is increased. This large number of trans-boundary populations, and their importance in terms of the numbers of cheetah they contain, highlights the likely need for trans-boundary management of cheetah conservation across the region.

3.2.6 Distribution across ecoregions

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

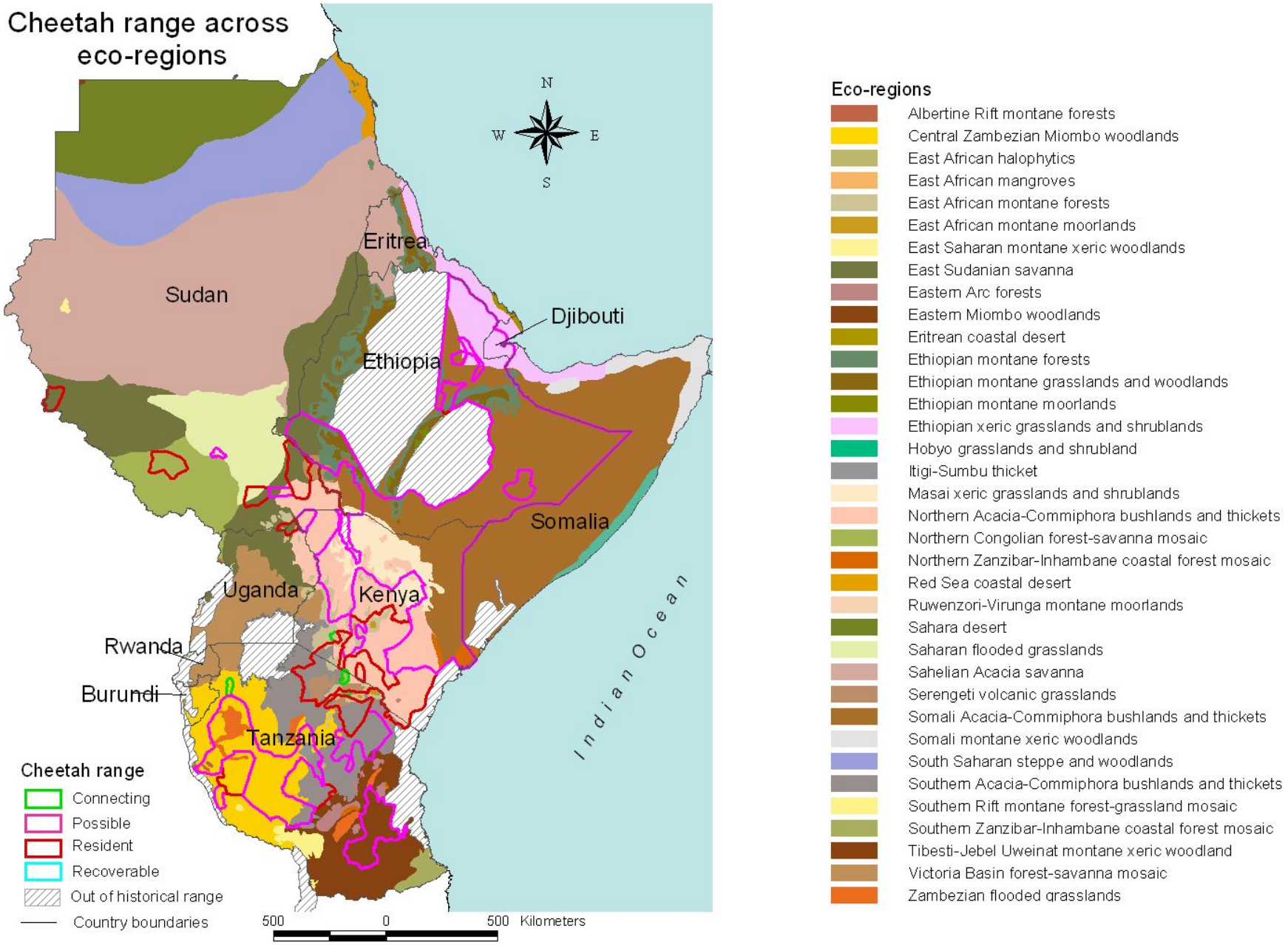


Figure 3.7 *Distribution of cheetah geographic range across WWF ecoregions*

(Table 3.4). To account for inaccurate estimation of the boundaries of each ecoregion and range polygon, and to ensure interpretation on a spatial scale relevant to cheetah home range, this analysis excludes any part of a range polygon measuring <500km^2. The data presented in Table 3.4 are of potential interest for targeting conservation activities. The analysis shows that there are several ecoregions which each contain only one resident population of cheetah.

The ecoregion that contains the greatest area of resident cheetah range by far (94,000km^2 or 30% of total resident range) comprises the northern *Acacia-Commiphora* bushlands and thickets. Another five ecoregions – East African montane forests; East Sudanian savannah; northern *Acacia-Commiphora* bushlands and thickets; Somali *Acacia-Commiphora* bushlands and thickets; and southern *Acacia-Commiphora* bushlands and thickets – each constitute part of 4-5 polygons of resident range. A further six ecoregions – Central Zambezian Miombo woodlands; Ethiopian montane forests, Ethiopian xeric grasslands and shrublands, Serengeti volcanic grasslands, and Victoria basin forest savannah mosaic – form part of the range of only two resident populations. The analysis identified three ecoregions which appear in only a single polygon of cheetah resident range within eastern Africa. These are:

1. The northern Congolian forest-savannah mosaic, which covers much of Uganda and Rwanda and also occurs in western Kenya and northwestern Tanzania, where there are no resident populations of cheetah. The only resident population of cheetah in this ecoregion is the Boma National Park population which is in a comparatively small patch of this habitat in south Sudan bordering Ethiopia.
2. Saharan flooded grassland, which only occurs in Sudan, harbours a single population in the Southern National Park polygon.
3. Zambezian flooded grassland, which comprises part of the land occupied by a single population in the Katavi-Ugalla ecosystem of western Tanzania.

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

1. The eastern miombo woodlands, which harbour two possible range polygons, in the Selous and on the Maasai steppe, covering a substantial area totalling 39,000km^2.
2. The Ethiopian montane grasslands and woodlands ecoregion, which may help support a possible population in the eastern and southern portion of Ethiopia.
3. The Itigi Sumbu thicket, in itself a very small ecoregion, crosses one polygon of possible cheetah range in central Tanzania.
4. The northern Zanzibar-Inhambane coastal forest mosaic, which is represented only in a single pocket of possible cheetah range in eastern Kenya, close to the Somalia border.

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

Connecting range is limited, but is nonetheless important for the reasons outlined earlier. It occurs in only four habitat types, of which two are relatively rare (Table 3.4).

The distribution of range polygons across ecoregions is another important way to help identify priority areas for surveys and conservation. Table 3.5 lists polygons of possible range that overlap ecoregions which are represented in two or fewer polygons of resident cheetah range. All the polygons of possible range listed in Table 3.5 overlap one or more poorly represented ecoregion, however there are two

Table 3.4 *Distribution of cheetah range across WWF ecoregions within eastern Africa. Data give the number of range polygons, and combined area of land, falling within each ecoregion. Land parcels ≤500km² are excluded, as are land parcels falling within the Albertine Rift montane forest, East African montane moorland and East African halophytics ecoregions as it is unlikely cheetah ever reside in these habitat types.*

	Resident range		**Possible range**		**Connecting range**	
Ecoregion	*number*	*area (km²)*	*number*	*area (km²)*	*number*	*area (km²)*
Central Zambezian Miombo woodlands	2	31,012	3	93,618	1	1,727
East African mangroves	0	0	0	0	0	0
East African montane forests	4	12,690	2	9,326	2	2,050
East Sudanian savannah	5	24,098	2	21,767	0	0
Eastern Arc forests	0	0	0	0	0	0
Eastern Miombo woodlands	0	0	2	38,952	0	0
Ethiopian montane forests	2	5,169	1	38,772	0	0
Ethiopian montane grasslands and woodlands	0	0	1	18,686	0	0
Ethiopian xeric grasslands and shrublands	2	3,352	1	47,872	0	0
Itigi-Sumbu thicket	0	0	1	3,072	0	0
Masai xeric grasslands and shrublands	2	16,055	2	71,514	0	0
Northern *Acacia-Commiphora* bushlands & thickets	5	94,718	4	91,424	1	2,220
Northern Congolian forest-savannah mosaic	1	12,973	0	0	0	0
Northern Zanzibar-Inhambane coastal forest mosaic	0	0	1	8,475	0	0
Saharan flooded grasslands	1	3,772	1	1,191	0	0
Sahelian Acacia savannah	0	0	0	0	0	0
Serengeti volcanic grasslands	2	13,532	0	0	1	539
Somali *Acacia-Commiphora* bushlands & thickets	5	33,487	4	420,858	0	0
South Saharan steppe and woodlands	0		0	0	0	0
Southern *Acacia-Commiphora* bushlands & thickets	4	50,640	0	0	0	0
Southern Rift montane forest-grassland mosaic	0	0	0	0	0	0
Southern Zanzibar-Inhambane coastal forest mosaic	0	0	0	0	0	0
Victoria Basin forest-savannah mosaic	2	3,925	1	1,642	0	0
Zambezian flooded grasslands	1	1,112	1	13,282	0	0

Table 3.5 *Polygons of possible range which cover ecoregions poorly represented by the resident range (using ≤2 areas of resident range each ≥500km² as a definition of 'poor' representation). Surveys of these areas could be potentially valuable for expanding cheetah conservation efforts to better represent the ecoregions formerly inhabited by cheetah. Locations of the polygons are provided in Figure 3.7.*

	Polygon name						
Ecoregion	*Kenya/ Ethiopia*	*Malagarasi/ Chunya*	*Maasai Steppe South*	*Nkasi-Ufipa*	*Selous*	*Shambe NP*	*Representation in resident range*
Central Zambezian miombo woodlands		X	X	X			2
Eastern Miombo woodlands		X	X		X		0
Ethiopian montane forests	X						2
Ethiopian montane forests and grasslands	X						0
Ethiopian xeric grasslands and shrublands	X						2
Itigi-Sumbu thicket		X					0
Masai xeric grasslands and shrublands	X						2
Northern Congolian forest-savannah mosaic						X	1
Northern Zanzibar-Inhambane coastal forest mosaic	X				X	X	0
Saharan flooded grasslands						X	1
Serengeti volcanic grasslands							2
Victoria Basin forest-savannah mosaic	X						2
Zambezian flooded grasslands		X			X		1
Total ecoregions represented in polygon	**6**	**4**	**2**	**1**	**3**	**2**	**-**

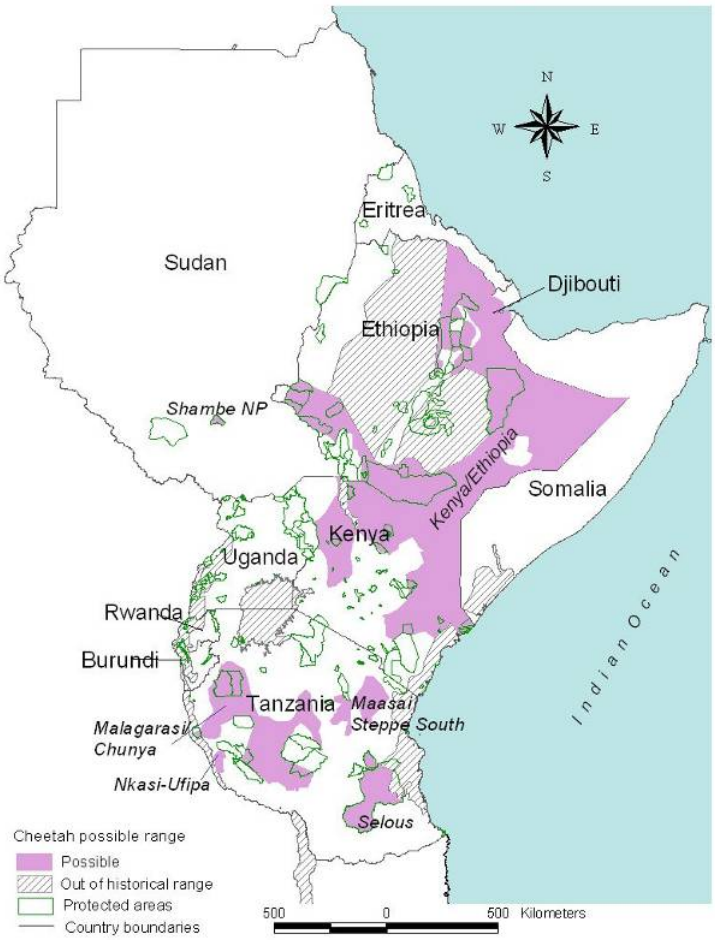


Figure 3.7 *Areas of possible cheetah range which fall in ecoregions represented by fewer than three polygons of resident range.*

polygons (Kenya/Ethiopia, and Malagarasi/Chunya in Tanzania) that together provide representation for 10 poorly represented polygons (see Figure 3.7). Only the Northern Congolian forest savannah-mosaic, Saharan flooded grasslands and Serengeti volcanic grasslands are not represented by these two polygons. The addition of Shambe National Park in Sudan would provide additional representation for the first two of these ecoregions. The latter ecoregion, Serengeti volcanic grasslands, is geographically localised and is not represented elsewhere in the region.

3.3 Conclusions

The geographical distribution of cheetah in eastern Africa has contracted drastically in recent years. Cheetah are now known to inhabit only 6% of their previous historic range, despite the fact that historic range estimated here is smaller than that previously published. Only 15 populations are known to remain, and these are distributed across six of the 10 countries in the region. One of those countries, Uganda, supports only a fraction of a very small population bordering with Sudan. Of the remaining populations, only four are estimated to hold more than 200 adult and adolescent cheetah, and 64% of the area inhabited by these populations is unprotected. Several populations, which encompass nearly half the known resident population, span international boundaries and hence will depend on international cooperation for their survival.

Nonetheless, despite the small number of known populations, a substantial part of the region (18%) may possibly harbour resident populations, while an even larger area (63%) is completely unknown. These areas are priorities for surveys as, until the true extent of the distribution of cheetah is known, it is difficult to plan

systematically for the conservation of the species. Many of these possible populations or unknown areas cross international boundaries, and several of them may serve as linkages between known resident populations and hence are potentially critical for maintaining connectivity between populations. An even larger proportion of these areas is unprotected, reflecting the fact that more information is available about populations inside protected areas than those outside. The majority of Sudan and Somalia is classified as unknown range for cheetah, due to past or ongoing civil unrest, presenting clear priorities for surveys.

No areas were identified where recovery of extirpated cheetah populations might be possible. This indicates the irreversible nature of the decline in the distribution of cheetah. Once the habitat is gone, it is very difficult to recover it, demonstrating the importance of ensuring that planning for cheetah conservation be put in place as soon as possible, before habitat is irretrievably fragmented and lost.

– CHAPTER 4 –

THE DISTRIBUTION AND STATUS OF AFRICAN WILD DOGS WITHIN EASTERN AFRICA

4.1 Historical distribution

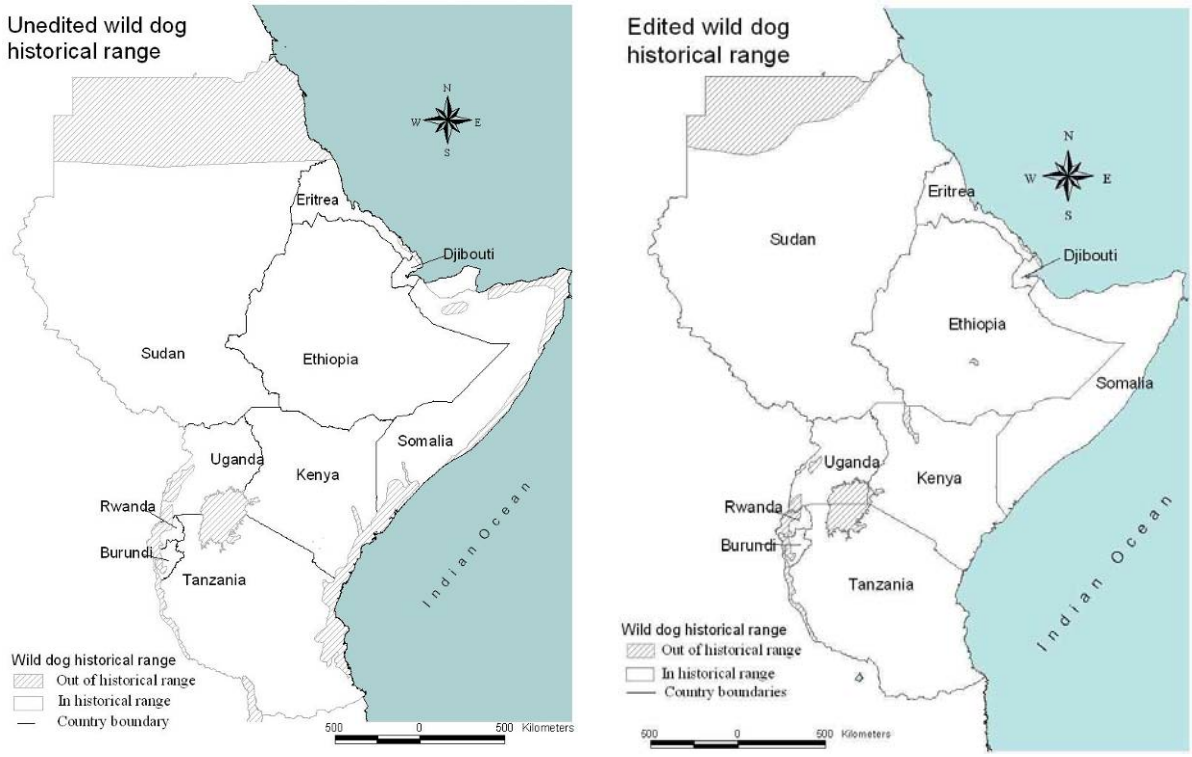
In the past, wild dogs were broadly distributed across eastern Africa. Wild dogs are habitat generalists, able to persist in a wide array of environmental conditions as long as prey are available. Although the highest wild dog densities have been recorded in wooded savannah (Creel *et al.*, 2002), populations have been recorded in habitats as diverse as short grasslands (Kuhme, 1965), montane forest (Dutson *et al.*, 2005), and mangroves (Figure 4.1). Before human activity modified substantial proportions of eastern Africa's natural habitats, wild dogs would have occupied most of the region, bounded in the east by the Indian Ocean, in the north by the sand deserts of the Sahara, and in the west by the lowland rainforests of the Congo basin.

Today, wild dogs remain uncommon even in essentially pristine wilderness, apparently due to negative interactions with larger carnivores (Creel *et al.*, 1996; Mills *et al.*, 1997). Hence, despite their formerly broad geographical distribution, wild dogs were probably never abundant.

Figure 4.1 *Wild dogs live in a wide array of habitats from montane forest (upper left, showing wild dogs in the Harenna forest in Ethiopia) and swamp margins (upper right) to desert (centre), semi-arid areas (lower left) and even, occasionally, mangrove forest (lower right, showing wild dogs swimming off the coast of Lamu District in northern Kenya).*

The map of wild dogs' historic distribution used in this process was updated in the course of the workshop from a pre-existing map. Participants amended the published historic range by (i) adding the coastal areas of Tanzania, Kenya and Somalia, where wild dogs have been reported in recent years, to the species' presumed historic range; (ii) bounding the distribution in northern Sudan by the

edge of sand deserts rather than an apparently arbitrary latitudinal line; and (iii) excluding a small area of the Ethiopian highlands that is above 3,500m (as wild dogs passing through these areas are considered vagrant; Figure 4.2).



a) **b)**

Figure 4.2 *Wild dog historical range, prior to the impact of human activity, a) as previously documented and b) after revision during the workshop.*

4.2 Current distribution

4.2.1 Point locations

The first step in mapping wild dogs' current distribution was to collate data on the locations of recent (i.e. during the past 10 years) confirmed records of wild dogs' presence, primarily (though not exclusively) sightings of live animals. The locations of these records are shown in Figure 4.3. These data are highly biased by observation effort: for example the large numbers of records from central Kenya and the eastern part of the Serengeti ecosystem in northern Tanzania reflect the presence of active wild dog research projects in these areas. By contrast, there are far fewer reports from Ethiopia and Sudan where no formal monitoring of wild dogs is underway. The wider spread of records across Tanzania partly reflects the fact that the country maintains an active national carnivore atlas.

The point locations shown in Figure 4.3 suggest that wild dogs' current geographic distribution, as estimated in 2007, is greatly reduced in comparison with their historical distribution.

4.2.2 Categories of current geographical range

Since wild dogs' distribution is imperfectly known across the region, the mapping process recognised six categories of current geographical range (Figure 4.4). Further details on range definitions are provided in Appendix 3.

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

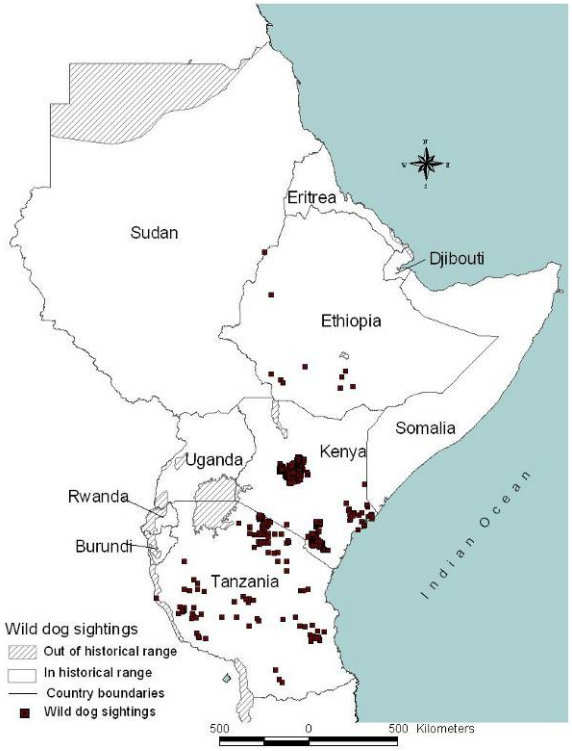


Figure 4.3 *Locations of confirmed wild dog sightings in 1997-2007*

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

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

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

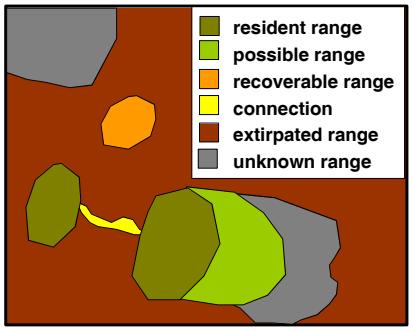


Figure 4.4 *Possible dispositions of different types of geographic range on an imaginary map*

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

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

4.2.3 Current distribution across different range categories

Figure 4.5 shows the areas of wild dogs' historical geographic range judged, in 2007, to fall into these six categories; Table 4.1 presents the same data in a quantitative format. Several important pieces of information are apparent.

First, wild dogs are considered to be still resident in approximately 7% of their historical range. Although this figure represents a 'worst case scenario', it does highlight the massive contraction in geographic range that appears to have occurred in this species.

Second, participants considered it possible that approximately 8% of wild dogs' historical range might still support resident populations, and no information on status was available for a massive 62% of the species' historical range. If even a small proportion of this 'possible' and 'unknown' range still supports wild dogs, the species' status could be more encouraging than the data on resident range would imply. Most of the 'unknown' range falls in Sudan, Ethiopia, Somalia and northern Kenya, highlighting the need for surveys in these countries. Ethiopia, Kenya and Tanzania contain large areas of 'possible' range. More information on promising survey areas is given in section 4.2.6 below.

Third, wild dogs are considered extirpated across approximately 23% of their historical range (including recoverable, unrecoverable and connecting range). This is almost certainly a substantial underestimate; it is likely that a high proportion of the 'unknown' range no longer supports wild dogs. Of this extirpated range, only 2.3% (26,542km^2) was considered likely to be able to support wild dog populations in future. The largest tract of such 'recoverable' range comprises the unoccupied parts of the Serengeti-Mara ecosystem on the Tanzania-Kenya border. Serengeti National Park formerly supported several wild dog packs although densities were never high (Burrows, 1995). It seems likely that recent recovery of wild dogs to the east of the protected area complex may be followed by natural recolonisation of the protected areas. Such a natural recovery would be highly beneficial for Kenya and Tanzania's tourist industries but, given past low densities inside the parks, would probably not represent a marked increase in the numbers of wild dog packs in the region.

Despite supporting no known resident populations, a further 0.8% (40,718km^2) of historical range was considered potentially important for wild dog conservation because it connected areas of resident or possible range.

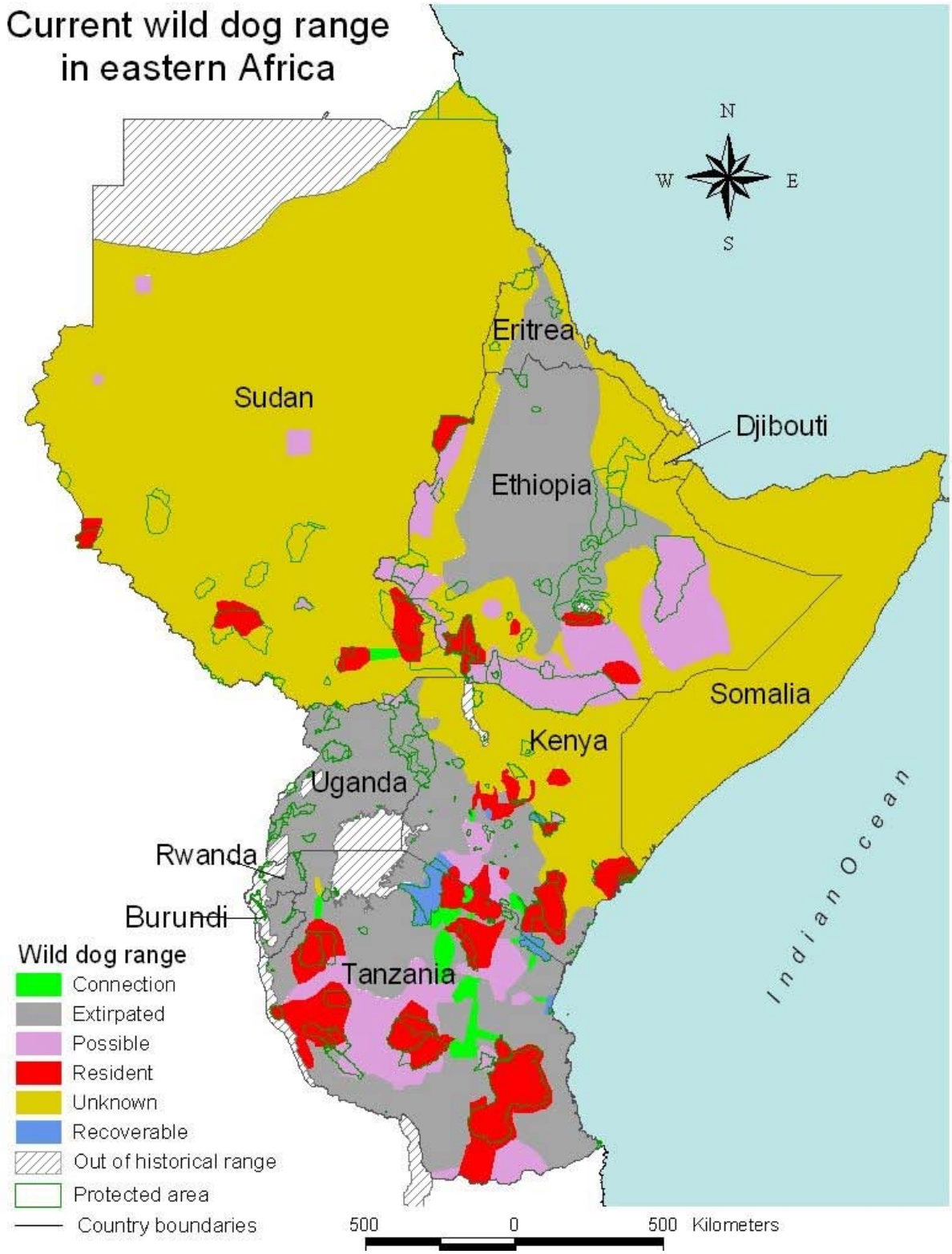


Figure 4.5 *Map of wild dog distribution and status as judged by participants in 2007. Protected areas shown in the map include national parks, game reserves and conservation areas, and are all within IUCN Categories I-IV.*

Table 4.1 *Distribution of African wild dogs in range states within eastern Africa (note that percentage subtotals and totals were calculated as the total land area estimated to be in each category of wild dog range in 2007, divided by the total land area falling inside historical wild dog range).*

		Area (km²) and % of historic range falling in each range category											
	Historical	*resident*		*possible*		*unrecoverable*		*recoverable*		*connecting*		*unknown*	
Country	**range**	km²	%	km²	%	km²	%	km²	%	km²	%	km²	%
Countries represented at workshop													
Ethiopia	1,009,389	28,389	2.8%	238,886	23.7%	373,634	37.0%	0	0%	0	0%	368,480	36.5%
Kenya	495,906	64,261	13.0%	29,513	6.0%	126,610	25.5%	6,739	1.4%	3,001	0.6%	265,782	53.6%
Sudan	2,028,708	53,664	2.6%	13,944	0.7%	2,128	0.1%	0	0%	3,605	0.2%	1,955,367	96.4%
Tanzania	777,901	196,510	25.3%	140,713	18.1%	385,469	49.6%	19,803	2.5%	34,112	4.4%	1,294	0.2%
Uganda	174,735	0	0%	1,759	1.0%	172,976	99.0%	0	0%	0	0%	0	0%
Sub-total	*4,486,639*	*342,824*	*7.6%*	*424,815*	*9.5%*	*1,060,817*	*23.6%*	*26,542*	*0.6%*	*40,718*	*0.9%*	*2,590,923*	*57.7%*
Countries not represented at workshop													
Burundi	15,827	0	0%	0	0%	15,827	100%	0	0%	0	0%	0	0%
Djibouti	18,274	0	0%	0	0%	0	0%	0	0%	0	0%	18,274	100%
Eritrea	111,660	0	0%	0	0%	47,455	42.5%	0	0%	0	0%	64,205	57.5%
Rwanda	12,354	0	0%	0	0%	12,354	100%	0	0%	0	0%	0	0%
Somalia	538,183	0	0%	0	0%	0	0%	0	0%	0	0%	538,183	100%
Sub-total	*696,298*	*0*	*0%*	*0*	*0%*	*75,636*	*10.9%*	*0*	*0%*	*0*	*0%*	*620,662*	*89.1%*
Grand total	5,182,937	342,824	6.6%	424,815	8.2%	1,136,453	21.9%	26,542	0.5%	40,718	0.8%	3,211,585	62.0%

Table 4.2 *Areas in eastern Africa considered by participants to support resident wild dog populations. Population estimates are calculated using a number of different methodologies and have a very wide margin of error. Locations are in Figure 4.6.*

Name	**Country**	**Area (km²)**		**Trans-boundary?**	**Population estimate**	
		total	*protected*		*adults*	*packs*
Arba Minch	Ethiopia	1,598	0	no	16*	1*
Filtu	Ethiopia	7,136	0	no	71*	6*
Harenna	Ethiopia	5,874	3,258	no	40†	2†
Omo-Mago	Ethiopia (& possibly Sudan)	13,783	12,565	possibly	40†	4†
Ijara-Lamu	Kenya (& possibly Somalia)	13,031	1,974	probably	130*	11*
Isiolo	Kenya	3,552	0	no	30†	2†
Kajiado-Loliondo	Kenya & Tanzania	29,089	18	yes	100†	8†
Kora-Nkitui	Kenya	2,008	2,008	no	20†	2†
Machakos	Kenya	1,062	0	no	25†	2†
Samburu-Laikipia	Kenya	13,885	368	no	220†	20†
Tsavo	Kenya	24,431	17,355	no‡	100†	12†
Bandingilo	Sudan	7,482	1,266	no	75*	6*
Boma	Sudan (& possibly Ethiopia)	19,295	13,105	possibly	193*	16*
Dinder	Sudan (& possibly Ethiopia)	7,775	7,726	possibly	78*	6*
Radom	Sudan (& possibly CAR)	6,139	3,511	probably	61*	5*
Southern	Sudan	12,973	9,629	no	130*	11*
Katavi	Tanzania	39,097	11,297	no	200†	17*
Kigosi-Moyowosi	Tanzania	23,290	11,332	no	400†	33*
Maasai Steppe	Tanzania	18,995	3,222	no	70†	8†
Rungwa-Ruaha	Tanzania	27,286	21,331	no	500†	35†
Selous	Tanzania (& Mozambique)	71,337	44,835	yes	800†¶	50†¶
	Grand total:	**349,117**	**164,800**		**3,299**	**257**

*population sizes estimated from the size of the polygon using a conservative density of 1 adult per 100km² and 12 adults (including yearlings) per pack; †population sizes estimated by delegates using a variety of methodologies; ‡recoverable range across border in Tanzania; ¶excludes the part of this population in Niassa, in neighbouring Mozambique (as Mozambique is considered to fall in southern Africa).

4.2.4 Distribution across protected areas

Much of wild dogs' current geographical range falls outside protected areas. This is quantified in Table 4.3. Overall, 52% of resident range, 76% of possible range, 18% of recoverable range and 99% of connecting range is estimated to fall outside government-designated protected areas. Hence, conservation activities outside protected areas are likely to be critical for preservation of this species.

4.2.5 Distribution across international boundaries

As shown in Figure 4.6, several important areas for wild dog conservation traverse international boundaries. Of the 21 resident populations listed in Table 4.2, seven (33%) are known or strongly suspected to be trans-boundary. These populations represent an estimated 1,400 adult and yearling wild dogs, roughly 40% of the regional total. If possible range is included, the number of trans-boundary populations is increased, with populations potentially spanning Ethiopia's borders with Sudan and Kenya, and Sudan's border with Uganda. In some cases areas of occupied habitat which appear to be disjunct within one country are in fact connected through another; for example, the areas of resident range in Kajiado District, Kenya, and to the East of the Masai Mara (also in Kenya) are connected through the Loliondo area of neighbouring Tanzania.

The large number of trans-boundary populations, and their importance in terms of the numbers of wild dogs they contain, highlights the need for trans-boundary management of wild dog conservation in several areas.

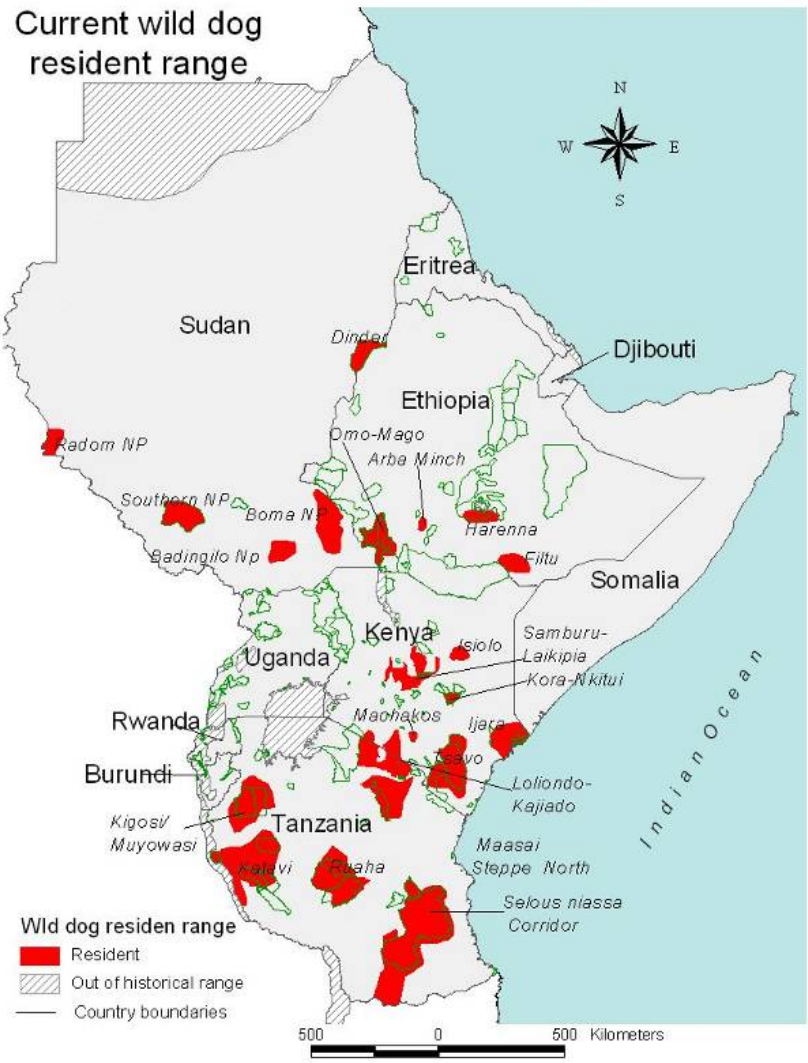


Figure 4.6 *Areas of resident wild dog range in eastern Africa, as identified by workshop participants.*

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

	Area (km²) and % of each range category falling inside protected areas							
	resident		*possible*		*recoverable*		*connecting*	
Country	km²	%	km²	%	km²	%	km²	%
Countries represented at workshop								
Ethiopia	15,822	55.7	89,728	37.6	0	–	0	–
Kenya	21,705	33.8	2,346	7.4	4,554	67.6	313	10.4
Sudan	35,237	65.7	2,381	17.1	0	–	0	–
Tanzania	92,035	47.0	7,555	5.4	17,156	86.4	186	0.5
Uganda	0	–	1,741	99.0	0	–	0	–
Sub-total	*164,799*	*48.1*	*103,751*	*24.4*	*21,709*	*81.6*	*499*	*1.3*
Countries not represented at workshop								
Burundi	0	–	0	–	0	–	0	–
Djibouti	0	–	0	–	0	–	0	–
Eritrea	0	–	0	–	0	–	0	–
Rwanda	0	–	0	–	0	–	0	–
Somalia	0	–	0	–	0	–	0	–
Sub-total	*0*	–	*0*	–	*0*	–	*0*	–
Grand total	**164,799**	**48.1**	**103,751**	**24.4**	**21,709**	**81.6**	**499**	**1.3**

4.2.6 Distribution across ecoregions

Figure 4.7 shows the locations of range polygons important for wild dog conservation (resident, possible, recoverable and connecting) across WWF's ecoregions (Olson *et al.*, 2001). Table 4.4 lists the numbers of resident and possible range polygons falling entirely or partly within each ecoregion; as for the analyses of cheetah distribution, to account for inaccurate estimation of the boundaries of each ecoregion and range polygon, and to ensure interpretation on a spatial scale relevant to wild dog ranging, this analysis excludes any part of a range polygon measuring <500km^2.

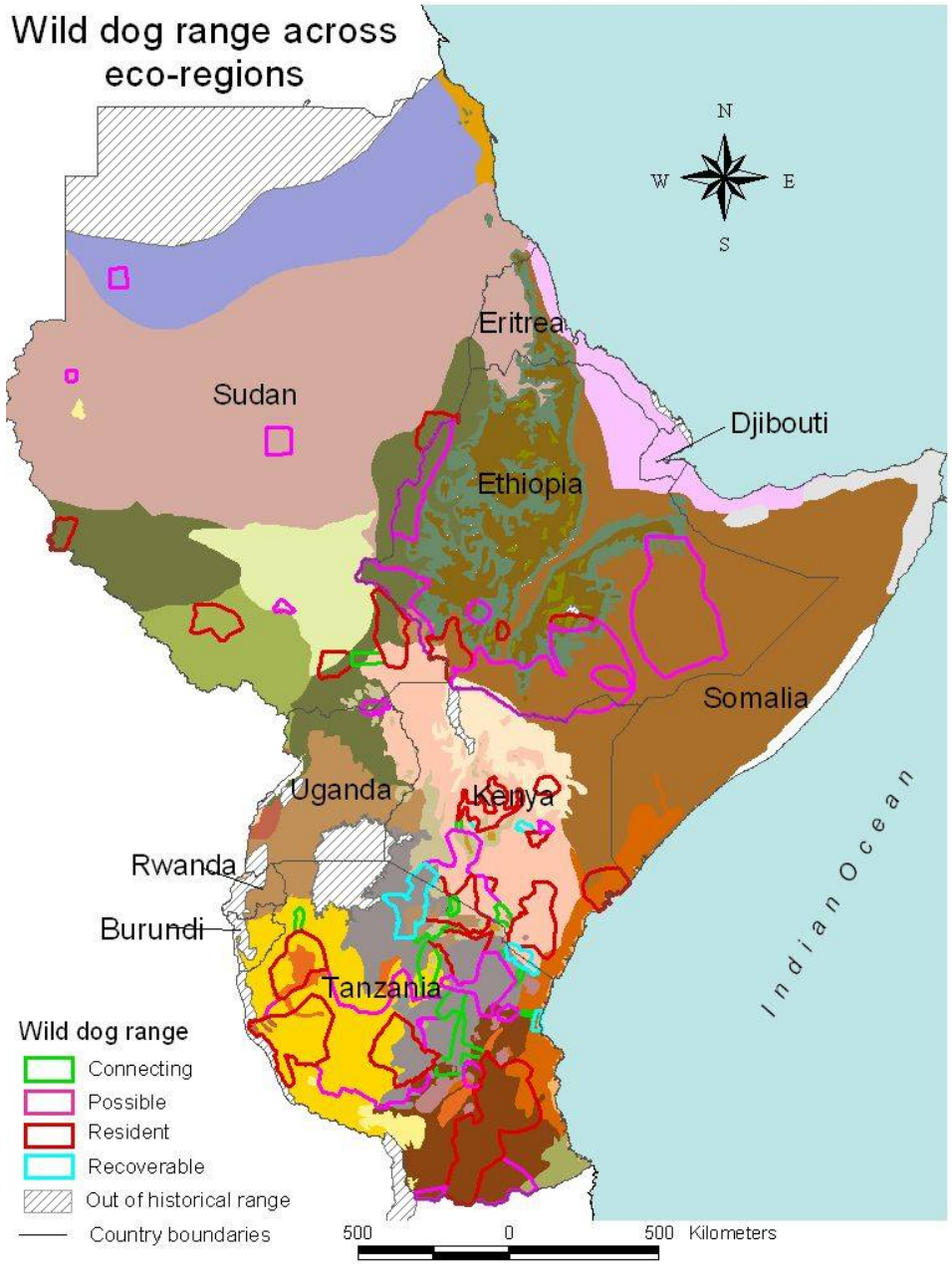
Table 4.4 and Figure 4.7 show that the major ecoregions occupied by wild dogs in eastern Africa are both Northern and Southern *Acacia-Commiphora* bushlands & thickets, Zambezian flooded grasslands, Central Zambezian Miombo woodlands, Serengeti volcanic grasslands and East African montane forests. The diversity of these ecoregions illustrates wild dogs' broad habitat preferences.

The data presented in Table 4.4 are of potential interest for targeting conservation activities. First, this analysis identifies two areas of resident wild dog range which fall within ecoregions not occupied by any other wild dog populations. The first of these is the Harenna Forest population in Ethiopia, which overlaps the Ethiopian montane forest ecoregion. This population (which is shown in Figure 4.1) is excluded from Table 4.4 because its area of occupancy is so small that it does not contain ≥500km^2 of any one ecoregion. However, as wild dog use of Ethiopian montane forest, an ecoregion not represented in Table 4.4, has been confirmed (Dutson *et al.*, 2005), this appears to be an ecologically unique population which is, by this criterion, of high conservation value.

A second wild dog population which appears to be ecologically unique is the Ijara-Lamu population, which is the only known resident population to inhabit the East African mangrove ecoregion. Once again, wild dog use of this unusual habitat type has been confirmed (see Figure 4.1). Given the small area of this ecoregion falling within the Ijara-Lamu range polygon (Table 4.4), it could be useful to conduct surveys in the adjoining area of Somalia, which shares the same ecoregion and may well support more wild dogs.

The areas identified as recoverable range all fall within ecoregions which are already reasonably well represented in number and geographical extent by polygons of resident range (Table 4.4). Hence, while wild dog recovery in areas such as the Serengeti ecosystem should be encouraged – to restore ecological functionality, to increase wild dog numbers, and to enhance tourism opportunities – such recovery is unlikely to greatly influence representation across ecoregions. In contrast, the distribution of possible range polygons across ecoregions is one way to help identify priority areas for surveys. Table 4.5 lists polygons of possible range that might be good targets for surveys as they include ecoregions which are poorly represented by resident range. Several polygons of possible range cover ecoregions not represented in the resident range; if these areas do, in fact, support wild dog populations they would be ecologically unique by this criterion. Other polygons cover ecoregions represented by just one or two polygons of resident range. In total there are 12 polygons of possible range which would make substantial contributions to representation of wild dog populations across ecoregions if they did, in fact, still support wild dogs. Of these 12 polygons, six are in Tanzania, four are in Sudan, one is in Ethiopia and the last spans the Ethiopia-Kenya border; their locations are shown in Figure 4.8.

Although Tanzania contains a greater area of resident range than any other country in the region (Table 4.1), it also contains the greatest number of survey sites likely to contribute to ecological representation, because it is a biodiverse country comprising a large number of ecoregions. While Sudan comprises a substantially smaller number of ecoregions (Figure 4.7), it contains a relatively



Eco-regions

- Albertine Rift montane forests
- Central Zambezian Miombo woodlands
- East African halophytics
- East African mangroves
- East African montane forests
- East African montane moorlands
- East Saharan montane xeric woodlands
- East Sudanian savanna
- Eastern Arc forests
- Eastern Miombo woodlands
- Eritrean coastal desert
- Ethiopian montane forests
- Ethiopian montane grasslands and woodlands
- Ethiopian montane moorlands
- Ethiopian xeric grasslands and shrublands
- Hobyo grasslands and shrubland
- Itigi-Sumbu thicket
- Masai xeric grasslands and shrublands
- Northern Acacia-Commiphora bushlands and thickets
- Northern Congolian forest-savanna mosaic
- Northern Zanzibar-Inhambane coastal forest mosaic
- Red Sea coastal desert
- Ruwenzori-Virunga montane moorlands
- Sahara desert
- Saharan flooded grasslands
- Sahelian Acacia savanna
- Serengeti volcanic grasslands
- Somali Acacia-Commiphora bushlands and thickets
- Somali montane xeric woodlands
- South Saharan steppe and woodlands
- Southern Acacia-Commiphora bushlands and thickets
- Southern Rift montane forest-grassland mosaic
- Southern Zanzibar-Inhambane coastal forest mosaic
- Tibesti-Jebel Uweinat montane xeric woodland
- Victoria Basin forest-savanna mosaic
- Zambezian flooded grasslands

Figure 4.7 *Distribution of wild dog geographic range across WWF ecoregions*

Table 4.4 *Distribution of wild dog range across WWF ecoregions within eastern Africa. Data give the numbers of range polygons, and combined area of land, falling within each ecoregion. Land parcels ≤500km² are excluded, as are land parcels falling within the Albertine Rift montane forest, East African montane moorland and East African halophytics ecoregions as wild dog use of these habitat types has not been confirmed.*

	Resident range		**Possible range**		**Recoverable range**	
Ecoregion	*number*	*area (km²)*	*number*	*area (km²)*	*number*	*area (km²)*
Central Zambezian Miombo woodlands	3	18,715	2	5,959	0	0
East African mangroves	1	558	0	0	0	0
East African montane forests	4	19,807	2	2,449	0	0
East Sudanian savannah	4	11,009	2	3,176	0	0
Eastern Arc forests	2	12,545	2	7,349	0	0
Eastern Miombo woodlands	1	11,499	6	39,203	0	0
Itigi-Sumbu thicket	0	0	1	13,272	0	0
Masai xeric grasslands and shrublands	2	2,313	1	839	0	0
Northern *Acacia-Commiphora* bushlands & thickets	9	25,463	2	2,067	4	5,340
Northern Congolian forest-savannah mosaic	1	3,523	1	1,766	0	0
Northern Zanzibar-Inhambane coastal forest mosaic	3	16,960	1	16,148	1	1,248
Saharan flooded grasslands	2	7,482	2	2,665	0	0
Sahelian *Acacia* savannah	1	3,974	2	5,327	0	0
Serengeti volcanic grasslands	2	28,950	0	0	1	4,369
Somali *Acacia-Commiphora* bushlands & thickets	2	2,587	4	3,270	0	0
South Saharan steppe and woodlands	0	0	1	2,839	0	0
Southern *Acacia-Commiphora* bushlands & thickets	3	75,540	5	76,870	3	15,069
Southern Rift montane forest-grassland mosaic	0	0	1	70,266	0	0
Southern Zanzibar-Inhambane coastal forest mosaic	0	0	1	73,574	0	0
Victoria Basin forest-savannah mosaic	2	5,348	1	789	0	0
Zambezian flooded grasslands	2	70,927	1	89,056	0	0

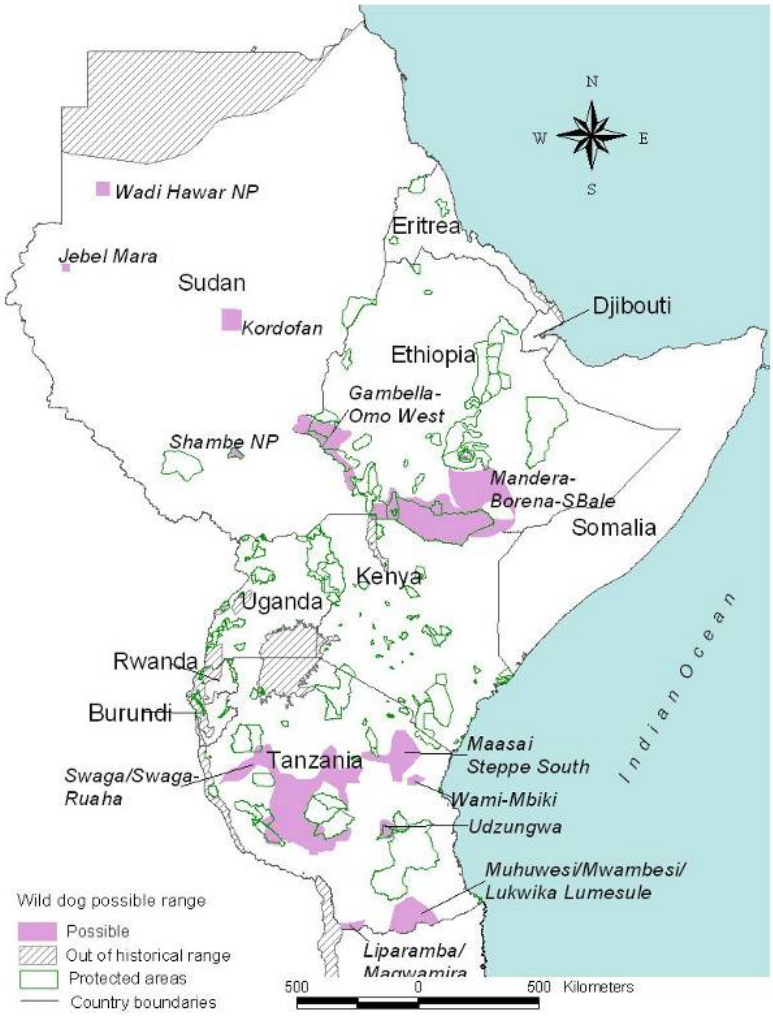


Figure 4.8 *– Areas of possible wild dog range which fall in ecoregions represented by fewer than three polygons of resident range*

large number of possible range polygons. These are potentially ecologically important, yet a lack of surveys and monitoring during the past protracted civil war mean that there are very few known resident populations.

4.3 Conclusions

The geographic range of wild dogs in eastern Africa has experienced a substantial contraction over the past one or two hundred years. From a historical distribution formerly covering over 5 million km^2, in 2007 less than 350,000km^2 – 7% of the total – still appears to support resident wild dog populations. In the 10 countries in the region, only 21 populations are known to remain, and of these only five are estimated to number ≥200 adults and yearlings. Most remaining resident populations rely on unprotected, as well as protected, lands for their survival, highlighting the need for conservation efforts outside parks and reserves. About 40% of wild dogs in the region live in populations which span international boundaries; conserving these is likely to require trans-boundary cooperation.

Although the number and geographical extent of known populations is small, there are much larger areas that may still support resident populations. Surveys in such areas would be of great value. Although the area of land to be surveyed is daunting, 12 areas (in four countries) identified as possibly supporting wild dogs cover ecoregions which are under-represented by the known resident populations, and surveys in these areas might be particularly valuable.

Only a comparatively small number of locations were identified where recovery of extirpated wild dog populations might be considered. Most of these adjoin areas that are currently occupied and natural recovery is thus fairly likely. Reintroduction is unlikely, therefore, to be necessary to conserve wild dogs in the region in the medium term.

Table 4.5 *Polygons of possible range which cover ecoregions poorly represented by the resident range (using ≤2 areas of resident range each ≥500km² as a definition of 'poor' representation). Surveys of these areas could be potentially valuable for expanding wild dog conservation efforts to better represent the ecoregions formerly inhabited by wild dogs. Site locations are shown in Figure 4.8.*

	Polygon of possible range name												
	Swaga Swaga-Ruaha, Tanzania	Wadi Hawar NP, Sudan	Muhuwesi-Mwambesi-Lukwika-Lumesule, Tanzania	Maasai Steppe South, Tanzania	Udzungwa, Tanzania	Wami-Mbiki, Tanzania	Liparamba-Magwamira, Tanzania	Shambe National Park, Sudan	Jebel Mara, Sudan	Kordofan, Sudan	Mandera-Borena-SBale, Kenya & Ethiopia	Gambella-Omo West, Ethiopia	Representation in resident range
Itigi-Sumbu thicket	X												0
South Saharan steppe and woodlands		X											0
Southern Rift montane forest-grassland mosaic	X												0
Southern Zanzibar-Inhambane coastal forest mosaic			X										0
Eastern miombo woodlands	X		X	X	X	X	X						1
Northern Congolian forest-savannah mosaic								X					1
Sahelian *Acacia* savannah									X	X			1
Eastern Arc forests					X	X							2
Masai xeric grasslands and shrublands											X		2
Saharan flooded grasslands								X				X	2
Victoria Basin forest-savannah mosaic												X	2
Zambezian flooded grasslands	X												2
Total ecoregions represented in polygon	**4**	**1**	**2**	**1**	**2**	**2**	**1**	**2**	**1**	**1**	**1**	**2**	**–**

- CHAPTER 5 -

THREATS TO WILD DOG AND CHEETAH POPULATIONS IN EASTERN AFRICA

5.1 Introduction

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

5.2 Proximate threats

Data on threats to known wild dog and cheetah populations were contributed by workshop participants. In addition to mapping known populations, participants were asked to list the factors most likely to threaten those populations, and to provide evidence that each factor represented a threat. This information was then reviewed and collated separately for wild dogs and cheetah (Figure 5.1). However, as the threats identified were almost identical for the two species (Figure 5.2), we shall discuss them together.

Figure 5.1 *(above) – Participants collated information on threats to particular populations to achieve an overview of threats to each species within the eastern Africa region.*

Figure 5.2 *(left) – The key threats to wild dogs (in pink), cheetah (in yellow), or both (in white) within eastern Africa, as identified by one of two working groups charged with considering this issue.*

5.2.1 Habitat loss and fragmentation (both species)

Loss and fragmentation of habitat together represent the over-arching threat to both cheetah and wild dogs, which contributes to several of the other proximate threats listed below. Because both species live at such low densities and range so widely, their populations require much larger areas of land to survive than do those of other carnivore species. For this reason, wild dogs and cheetah are more sensitive to habitat loss than are related species. Conserving viable populations of wild dogs and cheetah is likely to require land areas far in excess of 10,000km^2. Fortunately, both species have the ability to survive and breed in human-dominated landscapes under the right circumstances; hence such large areas may be

protected, unprotected, or a combination of the two. Both species also have excellent dispersal abilities, making it comparatively easy to maintain gene flow between populations, and to encourage recolonisation of suitable unoccupied habitat by conserving connecting habitat.

5.2.2 Conflict with livestock farmers (both species)

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

5.2.3 Prey loss (both species)

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

5.2.4 Accidental snaring (both species)

Although neither species is regularly targeted by snaring, both species may become captured accidentally in snares set for other species. Such accidental snaring is a major source of wild dog mortality in some areas (Woodroffe *et al.*, 2007a). While effects on cheetah populations are less well quantified, snared cheetah are reported occasionally and snaring may threaten some populations.

5.2.5 Road accidents (both species)

High speed roads represent a threat to both cheetah and wild dog populations. Wild dogs in particular use roads to travel and rest, and are therefore especially vulnerable to road accidents. This is a particular concern where paved roads cross or adjoin major wildlife areas, such as the Nairobi-Mombasa road which traverses Tsavo National Park in Kenya, and the Morogoro-Iringa road, which traverses Mikumi National Park (part of the greater Selous ecosystem) in Tanzania.

5.2.6 Poorly managed tourism (both species)

Unregulated tourism has the capacity to threaten both cheetah and wild dogs. In cheetah, negative effects of tourism mainly involve interference with hunting, scaring cheetah away from kills to which they are unlikely to return, and separation of mothers from cubs, due to the presence of large numbers of tourist vehicles. In wild dogs, most impacts arise from tourists visiting active dens on foot, causing packs to move dens or even abandon their pups. In contrast, well-regulated tourism can make substantial contributions to wild dog and cheetah conservation, both through the revenue it generates for conservation, and by raising awareness.

5.2.7 Infectious disease (mainly wild dogs)

Infectious disease can have major impacts on wild dog populations. Rabies contributed to the extinction of the wild dog population in the Serengeti-Mara ecosystem in 1991 (Gascoyne *et al.*, 1993; Kat *et al.*, 1995), and canine distemper decimated a captive population held in Mkomazi National Reserve (van de Bildt *et al.*, 2002), illustrating the capacity of both viruses to provoke major population

crashes. Both viruses are maintained within populations of domestic dogs (Cleaveland *et al.*, 2000; Cleaveland & Dye, 1995); hence disease risks are likely to be particularly high for wild dogs living outside protected areas. Although cheetah are occasionally affected by infectious disease (notably mange within the Serengeti-Mara ecosystem, Caro *et al.*, 1987b), disease is not known to threaten free-ranging cheetah populations in eastern Africa.

5.2.8 Hunting and live trade (mainly cheetah)

Cheetah are hunted in some areas for their fur, and also for cultural uses. Additionally, illegal trade in cheetah cubs to the Middle East has been reported in Ethiopia and is suspected in other areas.

5.3 Constraints on alleviating threats

Conserving cheetah and wild dog populations requires mitigating the threats listed above, on a very large spatial scale. Workshop participants therefore identified the barriers to achieving this outcome. These constraints were classified into four categories: political, economic, social and biological. Once again, results for cheetah and wild dogs were extremely similar (Figure 5.4). Political constraints included lack of land use planning, insecurity and political instability in some ecologically important areas, and lack of political will to foster cheetah and wild dog conservation. Economic constraints included lack of financial resources to support conservation, and lack of incentives for local people to conserve wildlife. Social constraints included negative perceptions of wild dogs and cheetah, lack of capacity to achieve conservation, lack of environmental awareness, rising human populations, and social changes leading to subdivision of land and consequent habitat fragmentation.

These potentially mutable human constraints contrast with several biological constraints which are characteristic of wild dogs and cheetah and cannot be changed: these included the species' wide ranging behaviour, their negative interactions with other large carnivores, and their susceptibility to infectious disease.

Figure 5.3 *(above) – Participants discuss proximate and ultimate threats.*

Figure 5.4 *(left) – Constraints on alleviating threats to cheetah and wild dog populations, as identified by one working group.*

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

many of the proximate threats to wild dog and cheetah populations (e.g. Woodroffe *et al.*, 2005a), but the ultimate causes of these threats include problems such as human encroachment on wildlife areas, and lack of conservation capacity, which are common to many species in the region.

5.4 Conclusions

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

– CHAPTER 6 –

STRATEGIC PLAN FOR CHEETAH AND WILD DOG CONSERVATION IN EASTERN AFRICA

6.1 Background

The Eastern Africa Cheetah and Wild Dog Conservation Strategy was constructed during participatory planning exercises which were intermeshed with the review of distribution and status discussed in Chapters 3-5 (see Appendix 2). It was particularly critical that there was high-level governmental representation from the wildlife sector within cheetah and wild dog ranges during this part of the workshop (participants are listed in Appendix 1).

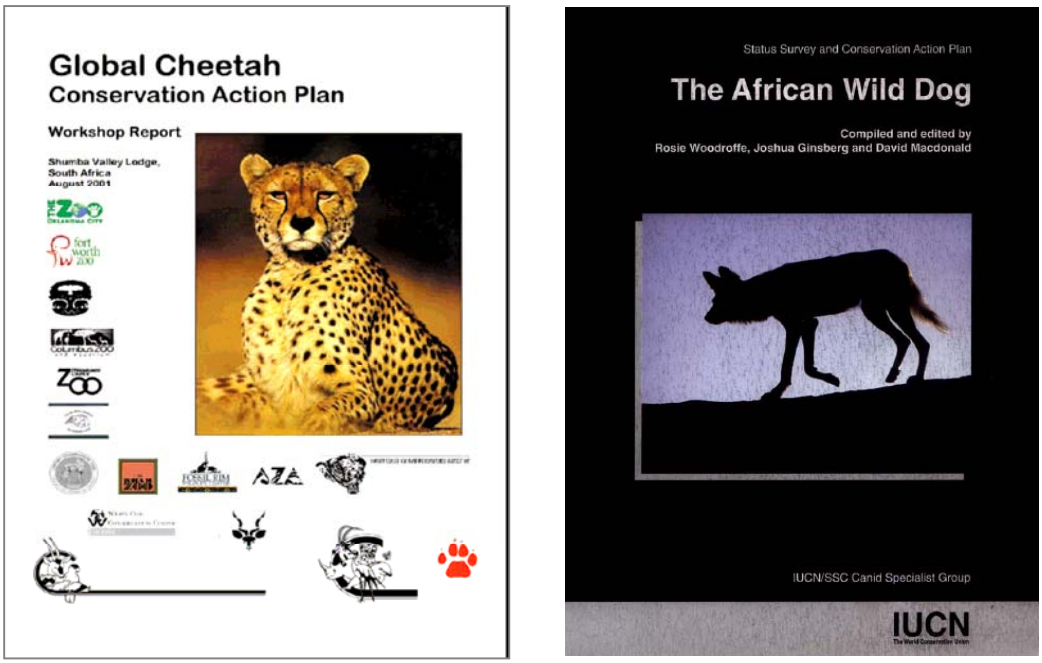


Figure 6.1 *Previous species action plans for cheetah and wild dogs (Bartels et al., 2001; Woodroffe, Ginsberg & Macdonald, 1997b).*

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

The workshop process used here included the following key components:

1. *Engagement of stakeholders*
   Key individuals and institutions best able to implement the plan – including government authorities, species specialists and relevant NGOs – were all involved in the strategic planning process
2. *Summary of knowledge*
   The mapping process within the workshop established up-to-date information on the status and distribution of both species (see Chapters 3-4). This

provided essential information for the development of the strategic plan. Additionally, prior work on conservation tools for mitigating threats (e.g. Woodroffe *et al.*, 2005a) and for population surveys and monitoring (e.g. Bashir *et al.*, 2004) were critical for developing the plan.

3. *Problem analysis*
   A problem analysis was conducted to identify threats, gaps and constraints impacting participants' ability to conserve cheetah and wild dogs. The problem analysis provided information critical for the development of the objectives of the strategic plan.
4. *Strategic plan*
   A cascading plan was constructed, starting at a vision, to a goal, to a series of objectives devised to meet the goal, and then a number of targets and activities to address each objective (Figure 6.2).

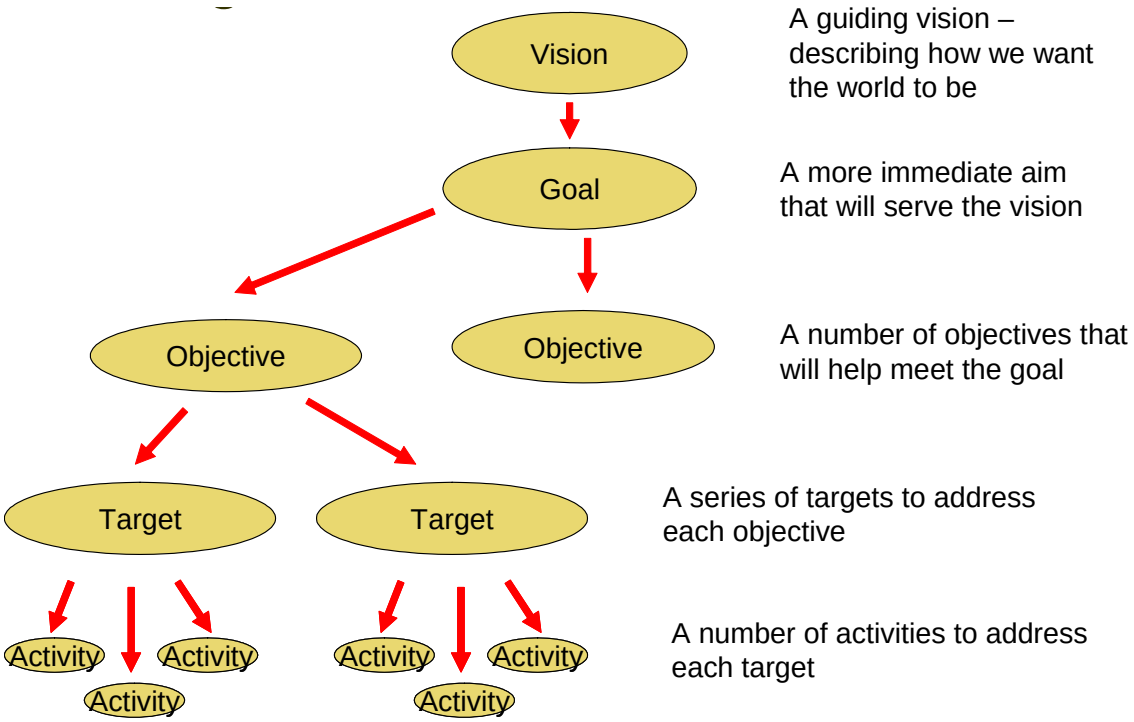


Figure 6.2 *The structure of a strategic plan.*

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

6.2 The strategic planning process

The planning process was made up of six key stages:

1. The development of a vision
2. The development of a goal
3. A problem analysis
4. The development of a number of objectives which address the problems identified by the problem analysis

5. The development of a number of targets to address each objective
6. The development of a number of activities to address each target

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

6.2.1 The 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 cheetah and wild dog conservation and to provide a source of inspiration.

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

The agreed vision was:

Vision:

To secure viable and ecologically functional cheetah and wild dog populations as valued components of development in eastern Africa

This vision was carefully worded to reflect the following points:

- 'Viable' populations implies both sustainable and relatively large populations that are able to persist in the long term.
- 'Ecologically functional' was chosen to indicate that the group agreed that it was important to conserve populations across representative natural ecosystems, to ensure that each species was exposed to as full a range as possible of ecological challenges to which they would have been subjected in their evolutionary history, including their natural predators, parasites and prey.
- 'Valued components of development' was phrased to indicate that cheetah and wild dogs should be considered as part of human development, while 'valued' was left deliberately ambiguous to reflect different types of value, including economic, cultural and ecological values.

6.2.2 The Goal

The goal was developed in a manner similar to that used for the vision, coincident with the mapping process. The goal was intended to reflect what the group wanted to accomplish in a shorter time period than that identified for the vision – around 10-20 years. The goal was thus intended to be realistic and achievable. It was also intended to be broadly measurable, so that it would be possible to know when it had been achieved. The goal therefore needed to be more clearly defined than the vision, although it should also support the vision statement. The goal was finalised as:

Goal:

To reverse declines and improve the status of cheetah and wild dog populations and their habitats across eastern Africa

As with the vision, the wording of the goal was carefully and deliberately developed to reflect the following:

- 'reverse declines' indicated that the group felt that populations of cheetah and wild dogs were now so low in the eastern African region that declines needed to be reversed, not just halted.
- 'improve the status' was kept deliberately ambiguous so that 'status' incorporated 'population status' (i.e. population viability, distribution and ecological functionality) as well as 'status' in terms of people's perceptions – which were thought to be often too negative.
- 'their habitats' was included to indicate that habitats were critical to the continued survival of free ranging cheetah and wild dog populations.

6.2.3 The problem analysis

The next major step in the strategic planning process was the development of the problem analysis. Participants were split into four working groups and asked to write out cards to define the main barriers to the conservation of each species. The first two groups identified the main *proximate threats* to the species, i.e. the drivers of extinction such as habitat fragmentation and conflict with livestock farmers. The other two groups identified the main *gaps* and *constraints* hindering mitigation of these threats, such as resource constraints, political frameworks, gaps in knowledge, and lack of capacity. The groups were asked to specify whether the threat, gap or constraint applied to either or both species by writing on a yellow card for a cheetah-specific problem, a pink card for a wild dog-specific problem, or a white card for a problem affecting both species (see Figures 5.2 and 5.4). The cards were then collected together and used to develop a problem tree (Figure 6.3).

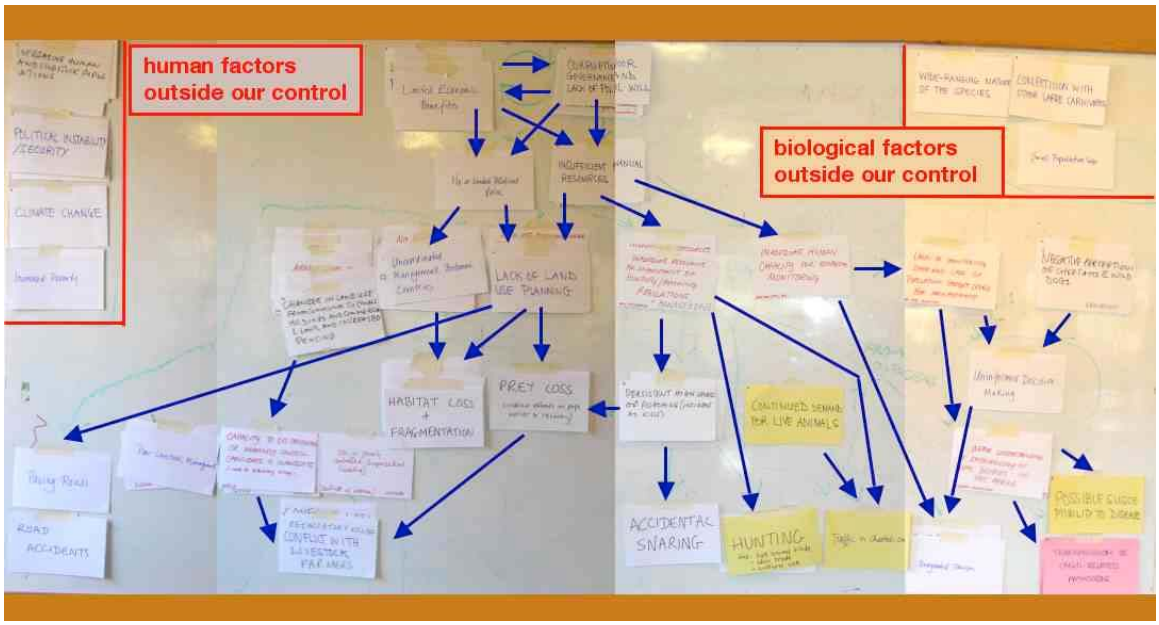


Figure 6.3 *The results of the problem analysis. These are provided again in a more readable format in Figure 6.4.*

Where there was overlap in problems (i.e., different cards described roughly the same problem), cards were superimposed on top of each other. Some anthropogenic problems, such as climate change and human population growth, were considered beyond the remit of the group's influence, although their importance was emphasised. Likewise, biological factors which influence threats to the species, such as their wide ranging behaviour and susceptibility to disease, were noted but considered immutable. Both these categories of issues were put to the side while the participants concentrated on issues which could be addressed directly or indirectly by the stakeholder group.

There were very few problems judged to be cheetah- or wild dog-specific (Figure 6.4). Disease was listed as a threat that could impact wild dog populations but which was not known to have serious impacts on wild cheetah populations. Likewise, the captive trade and hunting for skins for cultural use were listed as threats that could impact cheetah populations but which were not known to have any impact on wild dog populations within eastern Africa. Overall, the problem analysis clearly demonstrated that there were very 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 higher conservation leverage due to increased conservation benefits for two species rather than one.

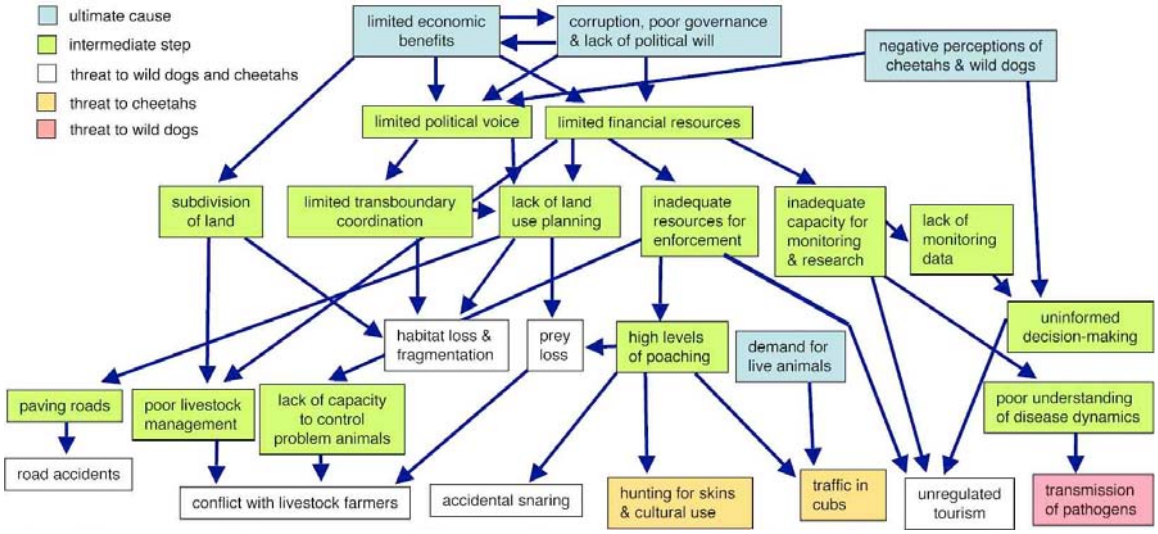


Figure 6.4 *A diagrammatic representation of the problem tree. This is summarised from the original tree shown in Figure 6.3, for greater readability.*

6.2.4 The objectives

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

Coexistence:

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

Objective 1:
Develop and implement strategies to promote coexistence of cheetah and wild dogs with people and domestic animals

Surveys and information

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

Objective 2:
Provide relevant stakeholders and managers with scientific and timely information on the status of, and threats to, cheetah and wild dog populations

Capacity development

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

Objective 3:
Strengthen human, financial and information resources for conserving cheetah and wild dogs in collaboration with stakeholders

Policy and legislation

This theme addresses problems arising from a lack of, or inappropriate, policies and legal frameworks within and outside the wildlife sector and more widely.

Objective 4:
Review and harmonise existing legislation, and, where necessary, develop new legislation, for conservation across cheetah and wild dog range at national and international levels

Advocacy

This theme tackles problems arising from a low importance attached by the public and government to cheetah and wild dog conservation. This category largely addresses policy and legislation issues beyond the expertise of the group, *i.e.*, outside the remit of government wildlife sectors and wildlife NGOs, falling under ministries charged with responsibilities other than wildlife conservation and management. This theme includes critically important issues such as land use policy and economic development.

Objective 5:
Mainstream cheetah and wild dog conservation in land use planning and its implementation

National planning

This theme concerns problems arising from a lack of national strategies for cheetah and wild dog conservation. This was a relatively small, but nonetheless important, theme which covered the translation of the regional strategic plan into a series of national action plans and their subsequent implementation.

Objective 6:
Promote the development and implementation of national conservation programmes for cheetah and wild dogs, by government and other stakeholders

The objectives were developed carefully so that they were sufficient to encompass the problem analysis, *i.e.*, there were no problems that were not addressed by these six objectives. Furthermore, no objective addressed issues that were not identified by the problem analysis.

6.2.5 The targets

Once the objectives were in place, and their wording agreed, targets were developed to meet the objectives. Targets were more specific than objectives, and described how the objectives should be met. Each objective was associated with 1-6 targets, and the targets were devised to ensure that, if all targets under an objective were met, then that objective would be achieved. In other words, each target was necessary to meet the objective, and if all the targets were met then the objective would be achieved. Targets were carefully designed to be 'SMART', that is, they were specific, measurable, achievable, realistic and time-lined. There were a total of 17 targets developed for the final plan:

Coexistence:

Objective 1:
Develop and implement strategies to promote coexistence of cheetah and wild dogs with people and domestic animals
Targets:

1.1 Programmes to reduce indiscriminate hunting and illegal offtake of wild ungulates implemented in affected areas within three years
1.2 Sustainable tools to reduce wild dog and cheetah impacts on livestock developed and disseminated across the region within three years
1.3 Initiate and maintain programmes for local people to derive sustainable economic benefits from cheetah and wild dog presence and their prey in selected areas within three years
1.4 Awareness creation programmes relevant to cheetah and wild dog conservation developed in key areas within three years
1.5 Holistic canid disease management strategies developed in key areas within three years

Surveys and information:

Objective 2:
Provide relevant stakeholders and managers with scientific and timely information on the status of and threats to cheetah and wild dog populations
Targets:

2.1 Surveys and monitoring to evaluate presence, trends and threats in key cheetah and wild dog ranges initiated and maintained
2.2 Strategies for disseminating information relevant to cheetah and wild dog conservation to all key stakeholders across eastern Africa developed and implemented within one to three years

Capacity development:

Objective 3:
Strengthen human, financial and information resources for conserving cheetah and wild dogs in collaboration with stakeholders

Targets:

3.1 A cheetah and wild dog 'business plan' for each country developed within one to two years

3.2 Have extension, enforcement, and monitoring personnel trained and equipped to operate within 50% of the cheetah and wild dog populations' ranges within three to five years

Policy and legislation:

Objective 4:

Review and harmonise existing legislation, and, where necessary, develop new legislation, for conservation across cheetah and wild dog range at national and international levels

Targets:

4.1 Gaps in information on positive and negative effects of hunting on cheetah and wild dog conservation which can assist in policy evaluation and development are identified within one to three years

4.2 Information on the extent of illegal wildlife-related activities within cheetah and wild dog ranges for relevant authorities to strengthen policy/law enforcement and quality tourism provided within one to three years

4.3 Explicit information provided to the management authorities to support identification and prioritisation of corridor and dispersal areas for improved connectivity of cheetah and wild dog ranges within one to three years

4.4 A memorandum of understanding to co-ordinate eastern African country management and its enforcement relevant to cheetah and wild dog conservation developed within one to three years

Advocacy:

Objective 5:

Mainstream cheetah and wild dog conservation in land use planning and its implementation

Targets

5.1 Overseeing government authorities and local communities and other stakeholders within cheetah and wild dog resident and connecting ranges are made aware of the importance of cheetah and wild dog populations within two to three years

5.2 A land use plan for cheetah and wild dog resident and connecting range outside protected areas compatible with the species' conservation established within five years

5.3 Awareness is raised among relevant donors and civil society about cheetah and wild dog populations, the effects of land use on them, and the economic and conservation consequences within two to three years

National planning:

Objective 6:

Promote the development and implementation of national conservation programmes for cheetah and wild dogs, by government and other stakeholders

Targets:

6.1 National action plans for cheetah and wild dog conservation developed and endorsed by appropriate government authorities in all eastern African range states within three years

6.2.6 Activities

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. As with the targets and their respective objectives, each set of activities was designed to be necessary and sufficient to meet the associated target, and to be 'SMART'. However activities were also sufficiently general to cover the entire eastern African region so that they could be interpreted appropriately within national action planning workshops. A total of 56 activities were developed within the strategic plan; they are listed below.

Coexistence

1 Objective: Develop and implement strategies to promote coexistence of cheetah and wild dogs with people and domestic animals

1.1. Target: Programmes to reduce indiscriminate hunting and illegal offtake of wild ungulates implemented in affected areas within three years

- **1.1.1 Activity:** Identify areas where wild dog or cheetah populations are significantly threatened by accidental snaring
- **1.1.2 Activity:** Identify areas where prey loss contributes to conflict between livestock farmers and cheetah or wild dogs, or directly undermines the viability of wild dog or cheetah populations
- **1.1.3 Activity:** Support the implementation of measures to reduce indiscriminate hunting and/or illegal offtake in identified areas

1.2. Target: Sustainable tools to reduce wild dog and cheetah impacts on livestock developed and disseminated across the region within three years

- **1.2.1. Activity:** Identify areas where cheetah and wild dog populations are significantly threatened by conflict with livestock farmers
- **1.2.2. Activity:** Identify the circumstances that contribute to livestock depredation by cheetah and wild dogs in the identified areas
- **1.2.3. Activity:** Develop effective strategies for disseminating existing information on reducing cheetah and wild dog impacts on livestock to relevant parties across eastern Africa
- **1.2.4. Activity:** Work with communities in affected areas to develop and implement the most effective livestock husbandry strategies to reduce depredation by cheetah and wild dogs

1.3. Target: Initiate and maintain programmes for local people to derive sustainable economic benefits from cheetah and wild dog presence and their prey in selected areas within three years

- **1.3.1 Activity:** Identify areas across eastern Africa where ecotourism could effectively assist cheetah and wild dog conservation through sustainable economic benefits for local communities, and hence improving tolerance of both species
- **1.3.2 Activity:** Encourage sustainable ecotourism programmes and the distribution of their revenue to appropriate parties in cheetah and wild dog range
- **1.3.3 Activity:** In areas of eastern Africa where ecotourism is unlikely to provide sufficient benefits, investigate alternative options for generating revenue which encourage cheetah and wild dog conservation
- **1.3.4 Activity:** Develop and disseminate guidelines for responsible tourist viewing of cheetah and wild dogs

1.4. Target: Awareness creation programmes relevant to cheetah and wild dog conservation developed in key areas within three years

- **1.4.1 Activity:** Identify target areas and audiences best placed to influence cheetah and wild dog conservation
- **1.4.2 Activity:** Investigate local traditions, knowledge and cultural values relevant to cheetah and wild dogs and incorporate into outreach materials and strategies
- **1.4.3 Activity:** Tailor existing outreach materials for cheetah and wild dog conservation to local conditions in eastern Africa and disseminate

1.5. Target: Holistic canid disease management strategies developed in key areas within three years

- **1.5.1 Activity:** Identify areas where wild dog populations are significantly threatened by canid disease
- **1.5.2 Activity:** Work with livestock and/or veterinary departments to encourage domestic dog vaccination and husbandry within identified areas
- **1.5.3 Activity:** Evaluate existing disease management strategies for wild dogs and related species to assess their likely relevance to eastern Africa
- **1.5.4 Activity:** Identify circumstances where intervention may or may not be appropriate through continued research on the dynamics of canid disease in areas where domestic dogs coexist with wildlife
- **1.5.5 Activity:** Evaluate the conservation potential of vaccinating free ranging wild dogs against canid diseases

Surveys and information

2. Provide relevant stakeholders and managers with scientific and timely information on the status of and threats to cheetah and wild dog populations

2.1. Target: Surveys and monitoring to evaluate presence, trends and threats in key cheetah and wild dog ranges initiated and maintained

- **2.1.1 Activity:** Conduct surveys to determine presence in areas identified as unknown, possible and connected ranges in all the eastern African countries within two years
- **2.1.2 Activity:** Within known resident ranges, initiate and maintain monitoring activities to determine population trends and threats within the range
- **2.1.3 Activity:** Within known resident ranges, conduct research to establish demographic and threat status

2.2. Target: Strategies for disseminating information relevant to cheetah and wild dog conservation to all key stakeholders across eastern Africa developed and implemented within one to three years

- **2.2.1 Activity:** Each eastern African range state will use national workshops, publications, meetings and/or other media to disseminate information relevant to cheetah and wild dog conservation within one year
- **2.2.2 Activity:** Establish a standardised database format to facilitate the collection and sharing of data within one year
- **2.2.3 Activity:** Establish and update national and regional databases and disseminate resulting information within two years

Capacity Development

3 Strengthen human, financial and information resources for conserving cheetah and wild dogs in collaboration with stakeholders

3.1. Target: A cheetah and wild dog 'business plan' for each country developed within one to two years

- **3.1.1 Activity:** Identify individuals and institutions to undertake these activities in each country by end of regional workshop
- **3.1.2 Activity:** Review existing and possible revenue streams for cheetah and wild dog conservation within one year
- **3.1.3 Activity:** Produce and disseminate the cheetah and wild dog 'business plan' for each country within two years

3.2. Target: Have extension, enforcement, and monitoring personnel trained and equipped to operate within 50% of the cheetah and wild dog populations ranges within three to five years

- **3.2.1 Activity:** Immediately initiate activities to address urgent issues affecting cheetah and wild dog conservation (such as trafficking) wherever they are known to occur
- **3.2.2 Activity:** Strengthen collaboration in monitoring of resident and connecting range for cheetah and wild dogs within one year
- **3.2.3 Activity:** Initiate outreach and request information in unknown areas within one year
- **3.2.4 Activity:** Complete a Training and Resource Needs Assessment in each range country (this could happen within National Workshops) within one year
- **3.2.5 Activity:** Integrate Business Plan, Training Needs Assessment and Action plan within two years
- **3.2.6 Activity:** Employ or identify a full time cheetah and wild dog specialist (including community-scouts, parabiologists, community liaisons) in each target population within two years

Policy and management

4. Review and harmonise existing legislation, and, where necessary, develop new legislation, for conservation across cheetah and wild dog range at national and international levels

4.1. Target: Gaps in information on positive and negative effects of hunting on cheetah and wild dog conservation which can assist in policy evaluation and development are identified within one to three years

- **4.1.1 Activity:** Collect information pertaining to cheetah and wild dog population trends and known threats across regional and international areas under different types of hunting policies within one to three years
- **4.1.2 Activity:** Map areas of known legal hunting districts within identified resident and possible cheetah and wild dog ranges within the eastern African countries within one to three years
- **4.1.3 Activity:** Produce a review document on national protected species legislation within the region and its implications for cheetah and wild dog conservation within one year

4.2. Target: Information on the extent of illegal wildlife-related activities within cheetah and wild dog ranges for relevant authorities to strengthen policy/law enforcement and quality tourism provided within one to three years

- **4.2.1 Activity:** Develop standardised methodologies to collect information on illegal activities relevant to cheetah and wild dog conservation within resident range within one to three years
- **4.2.2 Activity:** Collect spatially explicit information on the magnitude of illegal activities relevant to cheetah and wild dog conservation within key resident range and include within national and regional databases in two years
- **4.2.3 Activity:** Quantify the impacts of insensitive tourism on cheetah and wild dogs inside and outside of protected areas and use to develop outreach materials to raise awareness about cheetah- and wild dog-friendly observation practices within one to three years

4.3. Target: Explicit information provided to the management authorities to support identification and prioritisation of corridor and dispersal areas for improved connectivity of cheetah and wild dog ranges within one to three years

- **4.3.1 Activity:** Determine the spatial extent of corridor and dispersal areas between resident, possible and unknown ranges within one to three years
- **4.3.2 Activity:** Determine threats, habitat quality, and the extent of suitable habitat in and surrounding corridors and dispersal areas within one to three years

4.4. Target: A memorandum of understanding to co-ordinate eastern African country management and its enforcement relevant to cheetah and wild dog conservation developed within one to three years

- **4.4.1 Activity:** Facilitate the formation of a representative team of species biologists and wildlife management authorities to draft a memorandum of understanding to represent interests of cheetah and wild dog in trans-boundary issues within one to three years
- **4.4.2 Activity:** Propose and support proposals for cheetah and wild dog to be listed within the Convention on Migratory Species within two years

Advocacy

5 Mainstream cheetah and wild dog conservation in land use planning and its implementation.

5.1. Target: Overseeing government authorities and local communities and other stakeholders within cheetah and wild dog resident and connecting ranges are made aware of the importance of cheetah and wild dog populations within two to three years

- **5.1.1 Activity:** Initiate and implement visiting programme to regional and local government offices, lodges and universities to present and distribute summary of cheetah and wild dog conservation issues, posters and this strategic plan within one year
- **5.1.2 Activity:** Convene a 'conservation-caucus' type body in each country (e.g. like the environmental conservation committee in Tanzania) within one year

5.2. Target: A land use plan for cheetah and wild dog resident and connecting range outside protected areas compatible with the species' conservation established within five years

- **5.2.1 Activity:** Identify priority areas to be incorporated into land use plans within six months
- **5.2.2 Activity:** Strongly encourage governments to strengthen the legal mandate for land use planning within one year
- **5.2.3 Activity:** Complete individual village (community or private land owner) land use plans within two years
- **5.2.4 Activity:** Integrate village and community plans into cross-sectoral (and species) plans such as conservancy or wildlife management areas within two years

5.3. Target: Awareness is raised among relevant donors and civil society about cheetah and wild dog populations, the effects of land use on them, and the economic and conservation consequences within two to three years

- **5.3.1 Activity:** Initiate poster campaigns to raise awareness of cheetah and wild dog conservation within their range, including possible and connecting areas within one year
- **5.3.2 Activity:** Promote representation of cheetah and wild dog conservation issues in mass media in range countries within one year
- **5.3.3 Activity:** Develop and maintain cheetah and wild dog literature and information repositories (e.g. online and in country) within one year

National planning

6 Promote the development and implementation of national conservation programmes for cheetah and wild dogs, by government and other stakeholders

6.1 Target: National action plans for cheetah and wild dog conservation developed and endorsed by appropriate government authorities in all eastern African range states within three years

- **6.1.1 Activity:** Identify focal person, group or office to lead national planning processes within each range state in eastern Africa within one month
- **6.1.2 Activity:** Prepare and organise stakeholder meeting(s) in every range state where this has not yet occurred to identify national priorities for wild dog and cheetah conservation within two years
- **6.1.3 Activity:** Draft, review, finalise and endorse national action plans for wild dog and cheetah conservation within every range state in eastern Africa within the context of a broader regional strategy within three years

6.3 Conclusions and national planning

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

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

Great care was taken to ensure that the eastern Africa regional strategic plan was well structured, particularly in its vision, goal and objectives, to facilitate its use in developing national strategies. This regional strategic plan translated very well into the Kenya national strategy developed in a subsequent workshop (Kenya Wildlife Service, in prep), which suggests that the participants in the eastern Africa regional workshop did their ground-work well (Figure 6.5).

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

– CHAPTER 7 –

IMPLEMENTATION OF THE REGIONAL STRATEGIC PLAN

Once the regional strategy was finalised, consideration was given towards how best to implement it. The national action planning process was seen as providing an important mechanism towards national implementation, and this process was incorporated into the plan itself. However, international mechanisms and agreements were also considered important, such as the identified need to seek listing of both species on the Convention on Migratory Species. Making use of synergies between cheetah, wild dogs and other species was also important. For example, Tanzania currently has a programme of mapping elephant corridors across the country, and many such corridors are also likely to be important for cheetah and wild dogs. Participants considered it critical that the plan should not sit on a shelf gathering dust but should be relevant and actively used to direct conservation action within eastern African cheetah and wild dog range states.

The following process was agreed:

- First draft to participants to review and comment
- Participants' comments incorporated
- Second draft to participants for final acceptance and request endorsement from relevant government ministries
- The first page of the report to be set aside to provide signatures and dates of government endorsement

Governmental representatives present at the regional workshop agreed to assist with the endorsement process and to provide details and addresses of the relevant government departments. The report would then be submitted to IUCN for formal endorsement.

Immediately after the regional workshop, a Kenya national action planning workshop for cheetah and wild dogs was held in Nairobi (Kenya Wildlife Service, in prep). This workshop demonstrated that the regional strategy could be effectively transferred to a national setting, and enabled the swift development of a national action plan with the full participation of a wide range of national delegates.

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

Patrick Omondi closed the meeting on behalf of the Kenya Wildlife Service.

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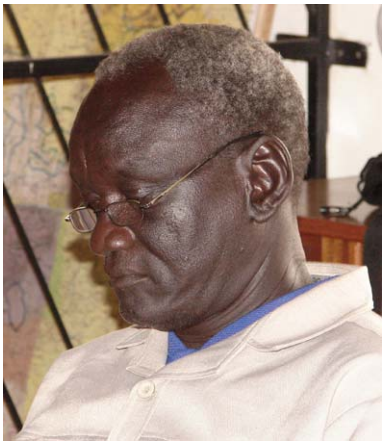

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APPENDIX 2: AGENDA

Wednesday, 31st January

Arrive Mpala Research Centre

18:00 Icebreaker: drinks followed by dinner
All participants

Thursday, 1st February

9:00 Official welcome
Patrick Omondi, Head of Species Conservation, Kenya Wildlife Service

9:05 Introductions
All participants

9:20 Biology and conservation of cheetah – an overview
Sarah Durant

9:40 Biology and conservation of African wild dogs – an overview
Rosie Woodroffe

10:00 Rangewide priority setting: how it has been applied to other species
Pete Coppolillo

10:15 Strategic planning for conservation: how it has been applied to other species
Sarah Durant

10:30 Presentation of the agenda, goals and outputs for this meeting
Sarah Durant and Rosie Woodroffe

10:45 COFFEE BREAK

11:15 Presentation of draft maps of cheetah and wild dog status and distribution, and how to go about revising them
Karen Minkowski

12:00 Discussion of vision and goal for cheetah and wild dog conservation in East Africa
All, facilitated by Sarah Durant, Rosie Woodroffe and Christine Breitenmoser

13:00 LUNCH

14:00 Three working groups:

Working Group 1	*Working Group 2*	*Working Group 3*
Refine vision and goals for regional conservation strategy	Revise information on distribution and status of cheetah	Revise information on distribution and status of wild dogs

17:30 BREAK for game drive/sundowners

19:30 DINNER

Friday, 2nd February

9:00 Presentation of revised vision and goal
Working Group 1

9:10 Discussion of revised vision and goal
All, facilitated by Sarah Durant and Christine Breitenmoser

9:30 Working groups reconvene

Working Group 1	*Working Group 2*	*Working Group 3*
Finalise statements of vision and goals	Continue mapping, synthesis of data, and review of maps for cheetah	Continue mapping, synthesis of data, and review of maps for wild dogs

10:45 COFFEE

11:15 Working groups reconvene

Working Group 1	*Working Group 2*	*Working Group 3*
Discuss and develop list of threats to cheetah and wild dogs drawing on threat data contributed by participants	Finalise mapping, synthesis of data, and review of maps for cheetah	Finalise mapping, synthesis of data, and review of maps for wild dogs

13:00 LUNCH

IN THE BACKGROUND - GIS experts (Karen & Margaret) continue mapping - calling in participants from plenary as necessary.

14:00 Presentation on threats to cheetah and wild dogs in East Africa
Working Group 1

14:15 Discussion of threats to cheetah and wild dogs in East Africa
All, facilitated by Rosie Woodroffe

15:00 Presentation of finalised goal and vision statements
Working Group 1

15:15 Problem analysis: what hinders us from achieving our goal
All, facilitated by Sarah Durant and Christine Breitenmoser

17:30 BREAK for game drive/sundowners

19:30 DINNER

IN THE BACKGROUND - strategy drafting team turns problem analysis into draft problem tree - consulting with individual contributors where necessary

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Saturday, 3rd February

09:00 Presentation and review of finalised distribution maps.
Discussion of distribution of cheetah and wild dog in relation to each other, ecoregions, international borders, and protected areas.
Karen Minkowski and Margaret Waweru

IN THE BACKGROUND - GIS team produce table of polygons of known range, possible range, and recoverable range, listed within ecoregions.

09:45 Presentation of problem tree and preliminary problem analysis for discussion and revision
All, facilitated by Sarah Durant and Christine Breitenmoser

IN THE BACKGROUND - Problem tree team revise problem tree

10:30 COFFEE

11:00 Identification of axes for population comparison, their attributes and scales of comparison (e.g. ecoregions, nations)
All participants, facilitated by Rosie Woodroffe

12:00 Score polygons of occupied range according to agreed attributes
Working Group 1:scorings Working Group 2: weightings

13:00 LUNCH

14:00 Presentation of final problem tree analysis and explanation of how to use the problem analysis to formulate objectives
All, facilitated by Sarah Durant and Christine Breitenmoser

15:30 TEA

16:00 Presentation of population comparison results, juxtaposition of results for cheetah and wild dogs, and discussion of how to proceed with comparison at rangewide and national scales. This could include identifying geographical units within which conservation effort may be focused.
All, facilitated by Rosie Woodroffe

17:30 BREAK for game drives/sundowners

19:30 DINNER

Sunday, 4th February

MORNING OFF
Game Drives, all-terrain croquet, visits to staff of Samburu-Laikipia Wild Dog Project

DRAFTING TEAM edit final set of objectives removing ambiguities and overlap

14:00 Presentation of second draft objectives
Strategy drafting team

14:10 Discussion and modification of draft objectives
All, facilitated by Sarah Durant and Christine Breitenmoser

14:20 Working group for each objective improves objective definition and develops list of objective targets
Working groups (one per objective)

15:40 Presentation of revised objectives and objective targets, and discussion
All, facilitated by Sarah Durant and Christine Breitenmoser

16:00 Working groups revise objective targets
Working groups (one per objective)

17:00 Presentation of revised objective targets
All, facilitated by Sarah Durant and Christine Breitenmoser

19:30 DINNER

Monday, 5th February

9:00 Identify and develop activities for each objective target in objective-based working groups
Working groups

10:20 COFFEE

12:00 Working groups present activities
All, facilitated by Sarah Durant and Christine Breitenmoser

13:00 LUNCH

14:00 Working groups revisit and redraft activities informed by discussion
Working groups (one per objective)

15:00 Working groups present final activities and provide list for strategy drafting team
All, facilitated by Sarah Durant and Christine Breitenmoser

15:30 Discussion of plans for moving forward
All, facilitated by Sarah Durant, Rosie Woodroffe and Christine Breitenmoser

16:00 Official close of regional meeting
Patrick Omondi, Head of Species Conservation, Kenya Wildlife Service

19:30 DINNER

IN THE BACKGROUND, logframe finalised for use in Kenya national workshop.

Tuesday, 6th February

8:00 Depart for Nairobi

APPENDIX 3: MAPPING METHODOLOGY

A3.1 Assessing the species' distribution and status

A3.1.1 Participants in the mapping process

Participants in the conservation planning process contributed data on the species' distribution and status, drawing upon their own and their colleagues' data and experience. Participants – some of whom were unable to attend the workshop in person – were contacted in advance of the workshop and asked to provide data from their own geographical area of expertise. The process involved participants from Ethiopia, Kenya, Sudan, Tanzania and Uganda. No participants were invited from Rwanda, Burundi, Eritrea or Djibouti as these countries were known or strongly suspected to support no populations of either species. No participant could be identified with appropriate information from Somalia.

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

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

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

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

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

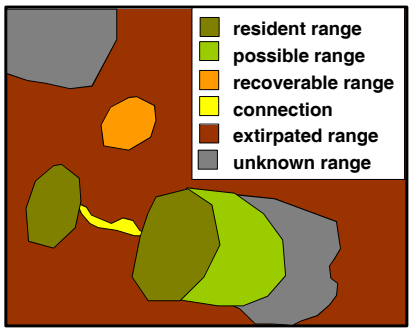


Figure A3.1 *Possible dispositions of different types of geographic range on an imaginary map*

- resident range: land where the species was known to be still resident. Because both cheetah and wild dogs have excellent dispersal abilities, not every point location indicates the presence of a resident population; some may indicate transient dispersing animals. Resident range was recognised by (i) regular detection of the species in an area, over a period of several years; (ii) evidence of breeding (e.g. young cheetah cubs sighted, or wild dog pups or dens recorded); and (iii) for wild dogs, sightings of complete packs (groups containing members of both sexes, usually >3 animals) rather than small groups (≤3 animals), or single-sex groups, which are likely to be dispersal groups.
- possible range: land where the species may still be resident, but where the species' residency had not been confirmed in the last 10 years. Usually these

would be areas which contain suitable habitat and prey, but which have had little or no ground-based surveying in recent years (aerial surveys are unlikely to detect either species). Some areas were considered to constitute possible range because only unconfirmed reports were available (e.g. reports from inexperienced observers) or for which there were only reports of transient individuals or groups.

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

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

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

A3.1.4 Collating data from multiple participants (conducted 1st-2nd February)

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

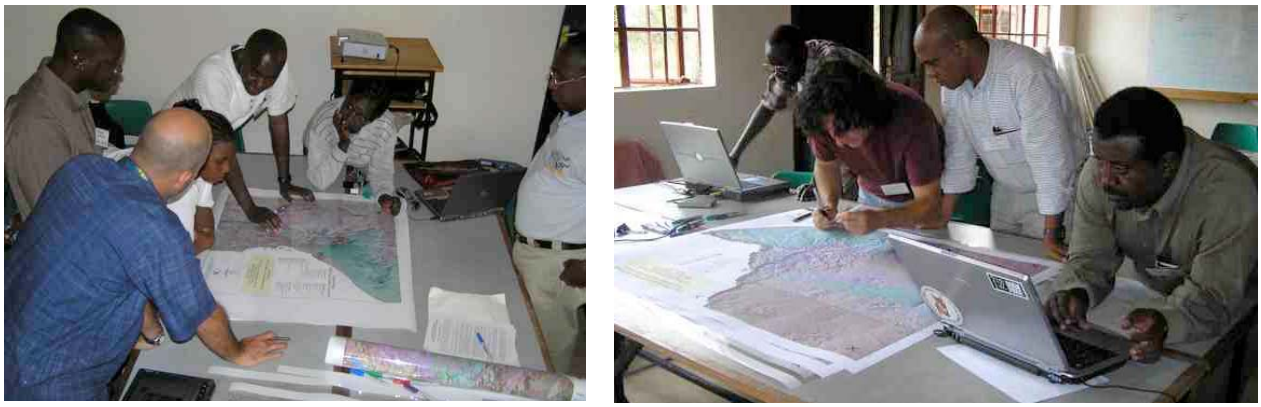


Figure A3.2 *Participants update distribution maps for different parts of eastern Africa.*

The process of collating data from multiple participants led, in some cases, to substantial changes in the range polygons. In particular, a number of polygons were merged when it became clear that populations mapped by participants from different areas (frequently in different countries) constituted single populations. In such cases, updated data on population size and status, land uses, and threats for the new (merged) polygon were agreed by participants.

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

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

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

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

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

Range polygons were also compared with the WWF ecoregions identified within eastern Africa (Olson *et al.*, 2001). Following Sanderson et al. (2002), ecoregions were used as a measure of the 'ecological settings' within which wild dog or cheetah populations occur. Mapping the species' distribution across these ecoregions therefore provided one way for participants to pick out polygons that were potentially ecologically unique (and therefore arguably particularly valuable) because they fell within under-represented ecoregions.

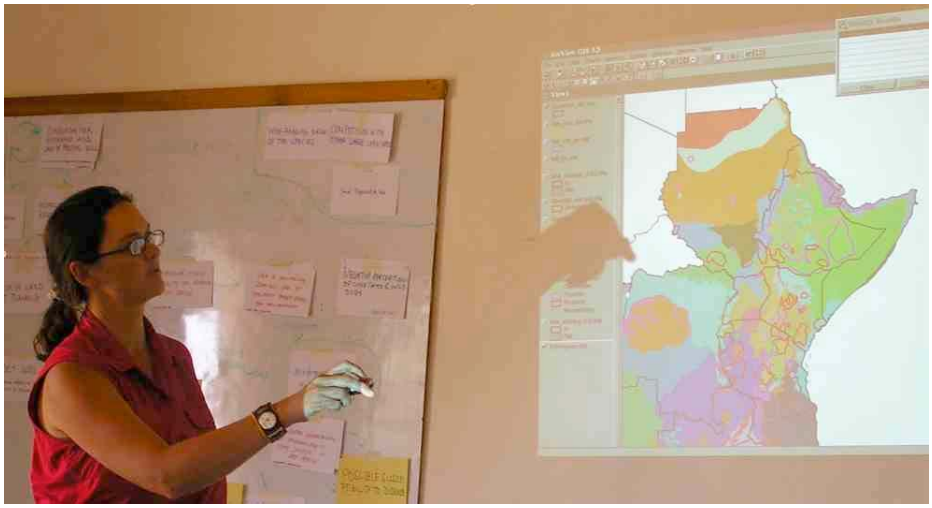


Figure A3.3 *Presenting the preliminary analysis of species distribution across WWF ecoregions*

There was discussion among participants about whether it would be valuable, for conservation planners and managers, to use the contributed data to compare and prioritise populations for conservation investment. To illustrate the possible

inputs to, and outputs from, such a process, the organisers conducted and presented a preliminary analysis comparing the seven resident wild dog populations (occupying seven polygons of resident range) within Kenya. This analysis scored each population according to its 'ecological value' (based upon its size, whether it occupied an under-represented ecoregion, and whether it formed part of an intact predator guild), and its threat status (based upon the number and apparent severity of threats faced). These scores were then plotted on orthogonal axes, and used to identify populations which appeared (by these measures) to be both ecologically important and highly threatened; such populations might be particularly important targets for conservation action.

In response to this presentation, government representatives expressed interest in seeing the results of such a prioritisation within national boundaries, as they felt that this could help them organise their own conservation efforts. Representatives of the two IUCN/SSC Specialist Groups, as well several of the species specialists, felt that such an exercise would be valuable at international levels to help direct international donor funding to areas particularly important for conservation of the two species; the latter would be similar to the WCS 'rangewide priority setting' exercises previously conducted for other species (e.g. Sanderson *et al.*, 2002). The whole group appreciated the potential complexity of conducting such an exercise, but the species biologists showed particular enthusiasm for developing the process, while managers were more concerned simply to see the results. It was therefore agreed that a small group of biologists would take this process forward after the workshop. This is likely to be most valuable if conducted once workshops have been completed for the species' entire geographic ranges, allowing a truly rangewide comparison of populations. Results will be communicated to, and discussed with, all workshop participants.

APPENDIX 4: STRATEGIC PLAN LOGICAL FRAMEWORK

Vision			
To secure viable and ecologically functioning cheetah and wild dog populations as valued components of development in eastern Africa.			
Goal			
To reverse declines and improve the status of cheetah and wild dog populations and their habitats across eastern Africa.			
Theme	**Objective**	**Target**	**Activity**
Coexistence	1. Develop and implement strategies to promote coexistence of cheetah and wild dogs with people and domestic animals	1.1 Programmes to reduce indiscriminate hunting and illegal offtake of wild ungulates implemented in affected areas within three years	1.1.1 Identify areas where wild dog or cheetah populations are significantly threatened by accidental snaring
			1.1.2 Identify areas where prey loss contributes to conflict between livestock farmers and cheetah or wild dogs, or directly undermines the viability of wild dog or cheetah populations
			1.1.3 Support the implementation of measures to reduce indiscriminate hunting and/or illegal offtake in identified areas
		1.2 Sustainable tools to reduce wild dog and cheetah impacts on livestock developed and disseminated across the region within three years	1.2.1 Identify areas where cheetah and wild dog populations are significantly threatened by conflict with livestock farmers
			1.2.2 Identify the circumstances that contribute to livestock depredation by cheetah and wild dogs in the identified areas
			1.2.3 Develop effective strategies for disseminating existing information on reducing cheetah and wild dog impacts on livestock to relevant parties across eastern Africa
			1.2.4 Work with communities in affected areas to develop and implement the most effective livestock husbandry strategies to reduce depredation by cheetah and wild dogs
		1.3 Initiate and maintain programmes for local people to derive sustainable economic benefits from cheetah and wild dog presence and their prey in selected areas within three years	1.3.1 Identify areas across eastern Africa where ecotourism could effectively assist cheetah and wild dog conservation through sustainable economic benefits for local communities, and hence improving tolerance of both species
			1.3.2 Encourage sustainable ecotourism programmes and the distribution of their revenue to appropriate parties in cheetah and wild dog range
			1.3.3 In areas of eastern Africa where ecotourism is unlikely to provide sufficient benefits, investigate alternative options for generating revenue which encourage cheetah and wild dog conservation
			1.3.4 Develop and disseminate guidelines for responsible tourist viewing of cheetah and wild dogs
		1.4 Awareness creation programmes relevant to cheetah and wild dog conservation developed in key areas within three years	1.4.1 Identify target areas and audiences best placed to influence cheetah and wild dog conservation
			1.4.2 Investigate local traditions, knowledge and cultural values relevant to cheetah and wild dogs and incorporate into outreach materials and strategies
			1.4.3 Tailor existing outreach materials for cheetah and wild dog conservation to local conditions in eastern Africa and disseminate

Theme	Objective	Target	Activity
1. Coexistence (cont)	1. Develop and implement strategies to promote coexistence of cheetah and wild dogs with people and domestic animals (cont)	1.5 Holistic canid disease management strategies developed in key areas within three years	1.5.1 Identify areas where wild dog populations are significantly threatened by canid disease
			1.5.2 Work with livestock and/or veterinary departments to encourage domestic dog vaccination and husbandry within identified areas
			1.5.3 Evaluate existing disease management strategies for wild dogs and related species to assess their likely relevance to eastern Africa
			1.5.4 Identify circumstances where intervention may or may not be appropriate through continued research on the dynamics of canid disease in areas where domestic dogs coexist with wildlife
			1.5.5 Evaluate the conservation potential of vaccinating free ranging wild dogs against canid diseases
2. Surveys and information	2. Provide relevant stakeholders and managers with scientific and timely information on the status of and threats to cheetah and wild dog populations	2.1 Surveys and monitoring to evaluate presence, trends and threats in key cheetah and wild dog ranges initiated and maintained.	2.1.1 Conduct surveys to determine presence in areas identified as unknown, possible and connected ranges in all the eastern African countries within two years
			2.1.2 Within known resident ranges, initiate and maintain monitoring activities to determine population trends and threats within the range. Continuous with annual review.
			2.1.3 Within known resident ranges, conduct research to establish demographic and threat status
		2.2 Strategies for disseminating information relevant to cheetah and wild dog conservation to all key stakeholders across eastern Africa developed and implemented within one to three years	2.2.1 Each eastern African range state will use national workshops, publications, meetings and/or other media to disseminate information relevant to cheetah and wild dog conservation within one year
			2.2.2 Establish a standardised database format to facilitate the collection and sharing of data within one year
			2.2.3 Establish and update national and regional databases and disseminate resulting information within two years
3. Capacity Development	3. Strengthen human, financial and information resources for conserving cheetah and wild dogs in collaboration with stakeholders	3.1 A Cheetah and Wild Dog 'business plan' for each country developed within one to two years	3.1.1 Identify individuals and institutions to undertake these activities in each country by end of regional workshop
			3.1.2 Review existing and possible revenue streams for cheetah and wild dog conservation within one year
			3.1.3 Produce and disseminate the cheetah and wild dog 'business plan' for each country within two years
		3.2 Have extension, enforcement, and monitoring personnel trained and equipped to operate within 50% of the cheetah and wild dog populations ranges within three to five years	3.2.1 Immediately initiate activities to address urgent issues affecting cheetah and wild dog conservation (such as trafficking) wherever they are known to occur
			3.2.2 Strengthen collaboration in monitoring of resident and connecting range for cheetah and wild dogs within one year
			3.2.3 Initiate outreach and request information in unknown areas within one year
			3.2.4 Complete a Training and Resource Needs Assessment in each range country (this could happen within National Workshops) within one year
			3.2.5 Integrate Business Plan, Training Needs Assessment and Action plan within two years
			3.2.6 Employ or identify a full time cheetah and wild dog specialist (including community-scouts, parabiologists, community liaisons) in each target population within two years

Theme	Objective	Target	Activity
4. Policy and legislation	4. Review and harmonise existing legislation, and, where necessary, develop new legislation, for conservation across cheetah and wild dog range at national and international levels	4.1. Gaps in information on positive and negative effects of hunting on cheetah and wild dog conservation which can assist in policy evaluation and development are identified within one to three years	4.1.1 Collect information pertaining to cheetah and wild dog population trends and known threats across regional and international areas under different types of hunting policies within one to three years
			4.1.2 Map areas of known legal hunting districts within identified resident and possible cheetah and wild dog ranges within the eastern African countries within one to three years
			4.1.3 Produce a review document on national protected species legislation within the region and its implications for cheetah and wild dog conservation within one year
		4.2. Information on the extent of illegal wildlife related activities within cheetah and wild dog ranges for relevant authorities to strengthen policy/law enforcement and quality tourism provided within one to three years	4.2.1 Develop standardised methodologies to collect information on illegal activities relevant to cheetah and wild dog conservation within resident range within one to three years
			4.2.2 Collect spatially explicit information on the magnitude of illegal activities relevant to cheetah and wild dog conservation within key resident range and include within national and regional databases in two years
			4.2.3 Quantify the impacts of insensitive tourism on cheetah and wild dogs inside and outside of protected areas and use to develop outreach materials to raise awareness about cheetah and wild dog friendly observation practices within one to three years
		4.3. Explicit information provided to the management authorities to support identification and prioritisation of corridor and dispersal areas for improved connectivity of cheetah and wild dog ranges within one to three years	4.3.1 Determine the spatial extent of corridor and dispersal areas between resident, possible and unknown ranges within one to three years
			4.3.2 Determine threats, habitat quality, and the extent of suitable habitat in and surrounding corridors and dispersal areas within one to three years
		4.4. A memorandum of understanding to co-ordinate eastern African country management and its enforcement relevant to cheetah and wild dog conservation developed within one to three years.	4.4.1 Facilitate the formation of a representative team of species biologists and wildlife management authorities to draft a memorandum of understanding to represent interests of cheetah and wild dogs in trans-boundary issues within one to three years
			4.4.2 Propose and support proposals for cheetah and wild dogs to be listed within the Convention on Migratory Species within two years

Theme	Objective	Target	Activity
5. Advocacy	5. Mainstream Cheetah and Wild Dog conservation in land use planning and its implementation	5.1. Overseeing government authorities and local communities and other stakeholders within cheetah and wild dog resident and connecting ranges are made aware of the importance of cheetah and wild dog populations within two to three years	5.1.1 Initiate and implement visiting programme to regional and local government offices, lodges and universities to present and distribute summary of cheetah and wild dog conservation issues, posters and this strategic plan within one year
			5.1.2 Convene a 'conservation-caucus' type body in each country (e.g. like the environmental conservation committee in Tanzania) within one year
		5.2. A land use plan for cheetah and wild dog resident and connecting range outside protected areas compatible with the species' conservation established within five years	5.2.1 Identify priority areas to be incorporated into land use plans within 6 months
			5.2.2 Strongly encourage governments to strengthen the legal mandate for land use planning within one year
			5.2.3 Complete individual village (community or private land owner) land use plans within two years
			5.2.4 Integrate village and community plans into cross-sectoral (and species) plans such as conservancy or wildlife management areas within two years
		5.3. Awareness is raised among relevant donors and civil society about cheetah and wild dog populations, the effects of land use on them, and the economic and conservation consequences within two to three years	5.3.1 Initiate poster campaigns to raise awareness of cheetah and wild dog conservation within their range, including possible and connecting areas within one year
			5.3.2 Promote representation of cheetah and wild dog conservation issues in mass media in range countries within one year
			5.3.3 Develop and maintain cheetah and wild dog literature and information repositories (e.g. online and in country) within one year
6. National planning	6. Promote the development and implementation of national conservation programmes for cheetah and wild dogs, by government and other stakeholders.	6.1 National action plans for cheetah and wild dog conservation developed and endorsed by appropriate government authorities in all eastern African range states within three years	6.1.1 Identify focal person, group or office to lead national planning processes within each range state in eastern Africa within one month
			6.1.2 Prepare and organise stakeholder meeting(s) in every range state where this has not yet occurred to identify national priorities for wild dog and cheetah conservation within two years
			6.1.3 Draft, review, finalise and endorse national action plans for wild dog and cheetah conservation within every range state in eastern Africa within the context of a broader regional strategy within three years

APPENDIX 5: ACKNOWLEDGEMENTS

We are very grateful for the Howard G. Buffett Foundation and the Wildlife Conservation Society for providing the funding to make this workshop possible.

The mapping exercise benefited greatly from the insight and expertise of Dr Eric Sanderson, of WCS, who unfortunately was unable to attend the workshop itself due to an unforeseen strike by British Airways.

The mapping also benefited from information provided by a number of people prior to the workshop. We particularly thank Mohanad Gadora who contributed data from Sudan but was not allowed to attend the workshop due to a USA trade embargo against the Government of Sudan which affected this largely African workshop due to WCS involvement, and Kim McCreery who was prevented from attending by the British Airways strike. We also thank Alfred Akwoch Omoli, Markus Borner, Tim Davenport, David Moyer, Rudolf Hahn, Minasona Lero Peter and the staff of Boma Wildlife Training Centre, Sudan, for contributing information.

Paul Peter Awol also thanks Alfred Akwoch Omoli and Paul Elkan for assistance in attending the workshop.

The workshop itself was punctuated by an unexpected and unprecedented strike at Mpala Research Centre where the meeting was being held. We particularly thank our cook, Peter, for feeding us so well during this difficult time. We are also deeply indebted to Amanda Lopez, Molly Fay and Kayna Chapman who stepped into the breach to continue feeding the delegates on strike days, and to the many Mpala researchers who interrupted their own work to help out with washing up and other tasks that helped the project continue working.

REGIONAL CONSERVATION STRATEGY FOR THE CHEETAH AND AFRICAN WILD DOG IN SOUTHERN AFRICA

REVISED AND UPDATED

AUGUST 2015

Range Wide Conservation Program for Cheetah & African Wild Dogs

IUCN / SSC Canid Specialist Group

WCS

IUCN

ASSOCIATION OF ZOOS & AQUARIUMS

THE HOWARD G. BUFFETT FOUNDATION

ZSL | LET'S WORK FOR WILDLIFE

SAFE SAVING ANIMALS FROM EXTINCTION

SPECIES SURVIVAL COMMISSION CAT SPECIALIST GROUP

REGIONAL CONSERVATION STRATEGY FOR THE CHEETAH AND AFRICAN WILD DOG IN SOUTHERN AFRICA

RWCP & IUCN/SSC
August 2015

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

REVISED CONSERVATION STRATEGY FOR THE CHEETAH AND WILD DOG IN SOUTHERN AFRICA

CHAPTER 1

Executive Summary

1.1 Background

The cheetah (*Acinonyx jubatus*) and the African wild dog (*Lycaon pictus*, hereafter 'wild dogs') present major challenges for conservationists in the 21st Century. All large carnivores need large areas to survive; but 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, these two threatened species are often the first to disappear.

Protected areas are very important for the conservation of both cheetah and wild dogs, but the majority of these animals reside outside the protected areas which are the focus of most conservation effort. Over three quarters of cheetah resident range, and 70% of wild dog resident range, falls on community and private lands, outside of formally protected areas. Given this knowledge it is unlikely that populations inside protected areas would be viable if isolated from unprotected lands (Durant et al, in press). Therefore conservation activity outside protected areas is absolutely critical for the long-term survival of these two species. In addition, 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.

1.2 The Range Wide Conservation Program for Cheetah and African Wild Dogs

In recognition of their vast area requirements, the Range Wide Conservation Program for Cheetah and African Wild Dogs (RWCP) was born, formerly called the Rangewide Planning Process. This is a joint initiative of the Zoological Society of London and the Wildlife Conservation Society, endorsed by the IUCN Cat and Canid Specialist Groups. This program has been responsible for driving a coordinated, landscape level approach to cheetah and wild dog conservation, through engagement with government wildlife authorities, field programs, non-governmental organizations and other stakeholders in all range states. The southern African office was established in 2007, with a regional coordinator based in Zimbabwe.

1.3 Cheetah and Wild Dogs in Southern Africa

Both cheetah and wild dogs have experienced major contractions in their geographic range within southern Africa, with resident populations known to remain in just 22.6% (cheetah) and 17% (wild dogs) of their historical range within the region. However, for about a quarter of the region (25% for cheetah and 23% for wild dogs) there are little reliable data available regarding the status and distribution of the two species.

Despite this, southern Africa still supports globally important populations of both cheetah and wild dogs and remains the stronghold for both species within Africa. Nonetheless, populations are declining, due to a number of threats which include habitat loss and fragmentation, conflict with livestock and game farmers, loss of prey populations, unintentional snaring, road kills, small population sizes, infectious diseases (mainly wild dogs) and hunting for live trade and skins (mainly cheetah). The Regional Conservation Strategy developed here provides a framework to alleviate these threats and to ensure the survival of these two species in the region. Given wild dogs' and cheetah's similar ecological needs, it makes sense to plan their conservation together.

1.4 The Regional Conservation Strategy for the Cheetah and African Wild Dog in Southern Africa

The Regional Conservation Strategy presented in this document is a revised and updated version of the first strategy, developed in 2007 (IUCN/SSC, 2007). The strategic planning process has been conducted as a collaboration between national wildlife authorities across southern Africa, the Range Wide Conservation Program for Cheetah and African Wild Dogs (RWCP) and the Cat and Canid Specialist Groups of the IUCN/SSC.

The first Regional Conservation Strategy (IUCN/SSC, 2007) was developed after a workshop in Botswana in December 2007, attended by 38 participants, including representatives from all eight southern African range states. The workshop followed the now recognized IUCN strategic planning framework and produced a regional strategy, designed to foster the development of National Action Plans in each range state.

At a meeting near Johannesburg in August 2015, the Regional Conservation Strategy for Southern Africa was revised and updated (see Chapter 6).

The strategic plan for the species' conservation in southern Africa recognizes the need to (i) develop capacity in all aspects of cheetah and wild dog conservation in the region; (ii) improve knowledge on the conservation of both species; (iii) ensure that information relevant to both species is disseminated to stakeholders; (iv) minimise conflict and promote coexistence between cheetah, wild dog and people; (v) minimise the adverse effects of land development and implement best land use practice for cheetah and wild dog; (vi) obtain political commitment to cheetah and wild dog conservation; (vii) review and harmonise existing legislation and policy affecting cheetah and wild dog conservation; and (viii) facilitate the development and implementation of national conservation plans for both species.

CHAPTER 2

Introduction and Background

2.1 Background

The cheetah (*Acinonyx jubatus*) and the African wild dog (*Lycaon pictus*) 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; however, wild dogs and cheetah range more widely than almost any other terrestrial carnivore species anywhere in the world, and consequently need larger areas. As human populations encroach on Africa's last wild areas, wild dogs and cheetah – both 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 (Woodroffe & Sillero-Zubiri, 2012) and cheetah as vulnerable (Durant et al., 2015) on the IUCN red list), ecological importance as top carnivores (Woodroffe & Ginsberg, 2005), and value to Africa's tourism industry (Lindsey et al., 2007), remarkably little conservation action had been implemented for these two species when this strategy was first developed in 2007. The majority of Africa's protected areas are too small to conserve viable populations, and active conservation efforts on unprotected lands had 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 has, until recently, been 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.

Recognizing 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 (now the Range Wide Conservation Program for Cheetah and African Wild Dogs (RWCP)). The two species were addressed together because, despite being taxonomically quite different, they are ecologically very similar and face similar threats.

The Rangewide Conservation Planning Process had six stated objectives:

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

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

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

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

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

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

A key component of this process is a series of workshops, bringing together specialists on the species' biology and conservation managers from governmental and non-governmental organizations. Close involvement of government representatives was considered absolutely critical as they represent the organizations with the authority to implement any recommendations at the management and policy levels.

The RWCP covers the whole of Africa, with the continent split into three regions, each with its own coordinator. This allows for specific and regionally relevant conservation planning. The southern African office of the RWCP was established in 2007, and the first regional

workshop was held in Botswana in December 2007. Details of this meeting can be found in the 2007 Regional Conservation Strategy (IUCN/SSC, 2007).

Since wildlife conservation policy is formulated, authorized 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 part of the RWCP's efforts. To this end, the 2007 southern African workshop was followed immediately by a National Action Planning Workshop for Botswana, to which delegates from other countries in the region were invited as observers. This was to help countries understand the process and help them to organize national workshops in their own countries. Subsequently, between 2008 and 2013, all other range states in southern Africa except Angola developed, and made reasonable progress towards implementing, National Action Plans.

The second southern African regional workshop, held in South Africa in August 2015 had two main objectives. First, to collate and share progress made against the objectives of the 2007 regional strategy, developed eight years previously, and second, to revise and update the strategy and the logframe of objectives, results and activities. **This revised strategy is presented in Chapter 6 and the logframe in Appendix 4.**

2.2 The Biology and Conservation Needs of Cheetah

The cheetah is a unique and specialized member of the cat family. While running down its prey, it can reach speeds of 64 miles per hour (103 km per hour, Sharp, 1997), making it the fastest creature on land. However, despite their specialized hunting strategy, cheetah are habitat generalists, ranging across a wide variety of habitats, from desert through grassland savannas to thick bush (Myers, 1975).

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

Cheetah females are able to give birth to their first litter at two years of age, after a three-month gestation (Caro, 1994). The cubs are kept in a lair for the first two months of their life, while their mother leaves them to hunt every morning and returns at dusk (Laurenson, 1993). Cheetah cub mortality can be high: in the Serengeti mortality of cubs from birth to independence was reported at 95% (Laurenson, 1994). There, cubs died mostly because they were killed by lions or spotted hyaenas; mothers cannot defend cubs against these much larger predators (Laurenson, 1994). However, a more recent study by Mills & Mills (2014) in the Kgalagadi Transfrontier Park, showed the survival of cheetah cubs was seven times higher than on the Serengeti plains, and cub mortality was rarely attributed to lions (Mills & Mills 2014). Cubs may also die from exposure or fire, or from abandonment if their mother is unable to find food. If they survive, the cubs will stay with their mother until they are 18 months old, after which they will roam with their littermates for another six months (Caro, 1994). The longest recorded longevity in the wild is 14 years for females and 11 years for males, however females have never been recorded as reproducing beyond 12 years (Durant unpublished data). Demographic parameters are available for only a small number of populations; mean and variance of birth and survival have been published from the long term study in the Serengeti National Park in Tanzania (Durant, Kelly & Caro, 2004), whilst mean birth and survival rates are available from ranch lands in Namibia (Marker et al., 2003b).

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

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

Cheetah live at low densities with most recorded densities ranging between 0.1 to 3 adult cheetah/100km^2 (Burney, 1980; Gros, 1996; Marker, 2002; Mills & Biggs, 1993; Morsbach, 1986; Purchase, 1998). Although markedly higher estimates have been documented in some areas (e.g. the Serengeti plains), it is likely these estimates do not reflect true density, as individuals counted may roam outside the survey area (highlighting a general problem with surveying cheetah, see Bashir *et al*., 2004). Cheetah home ranges have been recorded as ranging from 50km^2 for territorial males in the Serengeti (Caro, 1994) to over 1,000km^2 in Namibia (Marker *et al*., 2008). As with wild dogs, cheetah home ranges are much larger than would be predicted from their energy needs (Figure 2.1).

Because they can range across such large areas, cheetah can also disperse widely, having been recorded as moving over much more than one hundred kilometres (Durant unpublished data), making it difficult to determine whether occasional cheetah sightings in an area represent transient individuals or a resident population. However, this ability to disperse enables cheetah to recolonize new areas fairly easily if and when they become available.

Cheetah used to be widespread across Africa and across Asia as far east as India. However today, most of the remaining cheetah are concentrated in sub-Saharan Africa, with only a few populations in north and west Africa and one small Asian population in Iran (c. 70-100 individuals). The first status survey for cheetah was in the early 1970s (Myers, 1975), later, in the 1980s, surveys of selected countries were conducted (Gros, 1996, 1998, 2002; Gros & Rejmanek, 1999), and in 1998 a summary of global status was collated (Marker, 1998). However, given that the cheetah is shy, cryptic and rarely seen across most of its range, accurate information on status and densities are extremely difficult to collect for this species (Durant *et al*, 2016). Furthermore, the ranging patterns of the species incline it to cluster in areas that become temporarily favourable habitat (due to the absence of competitors and availability of prey), making estimating numbers additionally problematic (Durant *et al*., 2007; 2016). **This document provides the most up to date and accurate information on cheetah status and distribution across southern Africa.**

The species is listed as vulnerable by the IUCN red list, although a recent paper (Durant et al., 2016) calls for cheetah to be uplisted to endangered following evidence of recent rapid decline. In the 1970s, global population size was 'guesstimated' at 14,000 (Myers, 1975) but is now thought to be only 7,100 individuals (Durant et al., 2016). Unfortunately, as these recent numbers demonstrate, there has been a significant decline in the species numbers. The consensus among the world's cheetah experts suggests this is a genuine decline, rather than a recent underestimate. Certainly the distribution of the species has contracted markedly from its historical range, with declines largely attributed to habitat loss and fragmentation (Myers, 1975; Marker *et al*., 2003a; Marker et al., 2003b; van der Meer, 2016). The disappearance of the species from across nearly its entire Asian range was also in part due to the habit of the Asian aristocracy of capturing and using cheetah for hunting (Divyabhanusinh, 1995). Today, in sub-Saharan Africa, lethal control due to perceived or actual conflict with livestock or game ranching also plays a strong role in the decline of the species (Marker *et al*., 2003a; Marker *et al*., 2003b; Myers, 1975).

2.3 The Biology and Conservation Needs of African Wild Dogs

African wild dogs are highly social members of the canid family. Packs cooperate to hunt their prey (Creel & Creel, 1995) which consists mainly of medium-sized ungulates (particularly impala, *Aepyceros melampus*), but may range in size from hares (*Lepus spp*) and dik diks (Madoqua spp, Woodroffe et al., 2007b) to kudu (*Tragelaphus strepsiceros*) and even, occasionally, eland (*Tragelaphus oryx*) (Van Dyk & Slotow, 2003). Packs also cooperate to breed, usually with only one female and one male being parents of the pups, but with all pack members contributing to pup care (Malcolm & Marten, 1982). As females have rarely been observed to raise pups to adulthood without assistance from other pack members, packs, rather than individuals, are often used as the units for measuringfuntional wild dog population size.

Unlike most carnivore species (except cheetah), wild dogs tend to avoid areas of high prey density, probably because larger carnivores prefer such areas (Creel & Creel, 1996; Mills & Gorman, 1997). Lions (*Panthera leo*) and spotted hyaenas (*Crocuta crocuta*) are important causes of death for adult and juvenile wild dogs (Woodroffe et al., 2007a). This tendency to avoid larger predators may also help to explain the low population densities and wide ranges exhibited by wild dogs. Population densities average around 2.0 adults and yearlings per 100km^2 (Fuller et al., 1992a) and home ranges average 450-650km^2 per pack in southern Africa (Woodroffe & Ginsberg, 1998), with some packs ranging over areas in excess of 2,000km^2 (Fuller *et al*., 1992a). Both wild dogs and cheetah occupy home ranges larger than would be predicted on the basis of their energy needs (Figure 2.1).

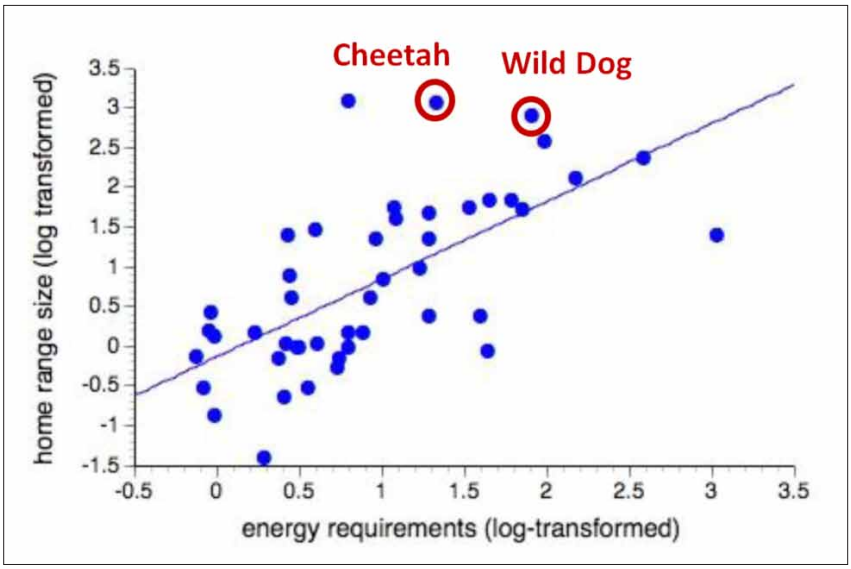


Figure 2.1 *The relationship between energy requirements and home range size in multiple carnivore species, showing the large home ranges occupied by cheetah and wild dogs in comparison with their energy needs. Wild dogs are recorded as having greater needs than cheetah because the social unit is a pack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

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

Wild dog populations in different regions of Africa are morphologically and genetically different, but no subspecies are formally recognized (Girman & Wayne, 1997; Girman et al., 1993). Wild dogs are habitat generalists, and have been recorded in habitats as diverse as wooded savannah (Creel & Creel, 2002), short grasslands (Kuhme, 1965), montane forest (Dutson & Sillero-Zubiri, 2005) and montane moorland (Thesiger, 1970).

The first status survey for wild dogs was conducted in 1985-88 (Frame & Fanshawe, 1990), and this was updated in 1997 (Fanshawe et al., 1997) and 2004 (Woodroffe, McNutt & Mills, 2004). These surveys revealed substantial loss and fragmentation of wild dog populations, with the species extirpated across most of western and central Africa, and greatly depleted in eastern and southern Africa. However, distribution data, which were collated mainly by exhaustive postal correspondence, were somewhat biased towards protected areas with little information available from unprotected lands. By 1997, wild dogs had disappeared from most of Africa's protected areas, persisting only in the largest reserves (Woodroffe & Ginsberg, 1998). In 2004 the species was estimated to number fewer than 6,000 adults and yearlings (Woodroffe McNutt & Mills, 2004). The species is listed as 'endangered' by the IUCN (Woodroffe & Sillero-Zubiri, 2012). This document provides the most up to date and accurate information on wild dog status and distribution across southern Africa.

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

Despite human impacts on their populations, however, wild dogs can coexist successfully with people under the right circumstances (Woodroffe et al., 2007b). Wild dogs seldom kill livestock where wild prey remain, even at comparatively low densities (Rasmussen, 1999; Woodroffe et al., 2005b), and traditional livestock husbandry is a highly effective deterrent (Woodroffe et al., 2006). Tools have been developed to reduce the impacts of conflicts with game and livestock ranchers, accidental snaring, and road accidents, but safe and effective tools to manage disease risks are still under development (Woodroffe et al., 2005a).

2.4 The layout of this document

Chapters 3 and 4 of this report present details on the status and distribution of cheetah and wild dogs, respectively, in southern Africa in 2015. Chapter 5 describes the threats to both species. Chapter 6 describes the conservation strategy developed for the region by workshop participants (listed in Appendix 1). The agenda for the workshop is presented in Appendix 2, the methods used to collate the data are outlined in Appendix 3, and a logical framework table of the strategic plan is provided in Appendix 4.

CHAPTER 3

The Distribution and Status of Cheetah within Southern Africa

3.1 Historical distribution

Cheetah are habitat generalists, able to persist in a wide array of environmental conditions as long as prey are available, ranging from the Sahara Desert to reasonably thick bush. Before human activity modified substantial proportions of southern Africa's natural habitats, cheetah were presumed to have occupied virtually the entire region, bounded to the east by the Indian Ocean and to the west by the South Atlantic Ocean (Figure 3.1). In the past, cheetah were broadly distributed across the whole of southern Africa, absent only from the vast expanse of Etosha Pan in Namibia and those areas covered by Lake Malawi and Lake Tanganyika. It was previously thought that cheetah were historically absent from the desert regions on the western coast of what is now Namibia (IUCN/SSC 2007). However at the 2015 workshop, this stretch of coast in Namibia was designated as transient range for cheetah (i.e. within historical range and still used occasionally by migratory individuals). This change of designation resulted from evidence from Namibian cheetah projects showing cheetah moving through those areas, both historically and presently, and was agreed on by all Namibian participants.

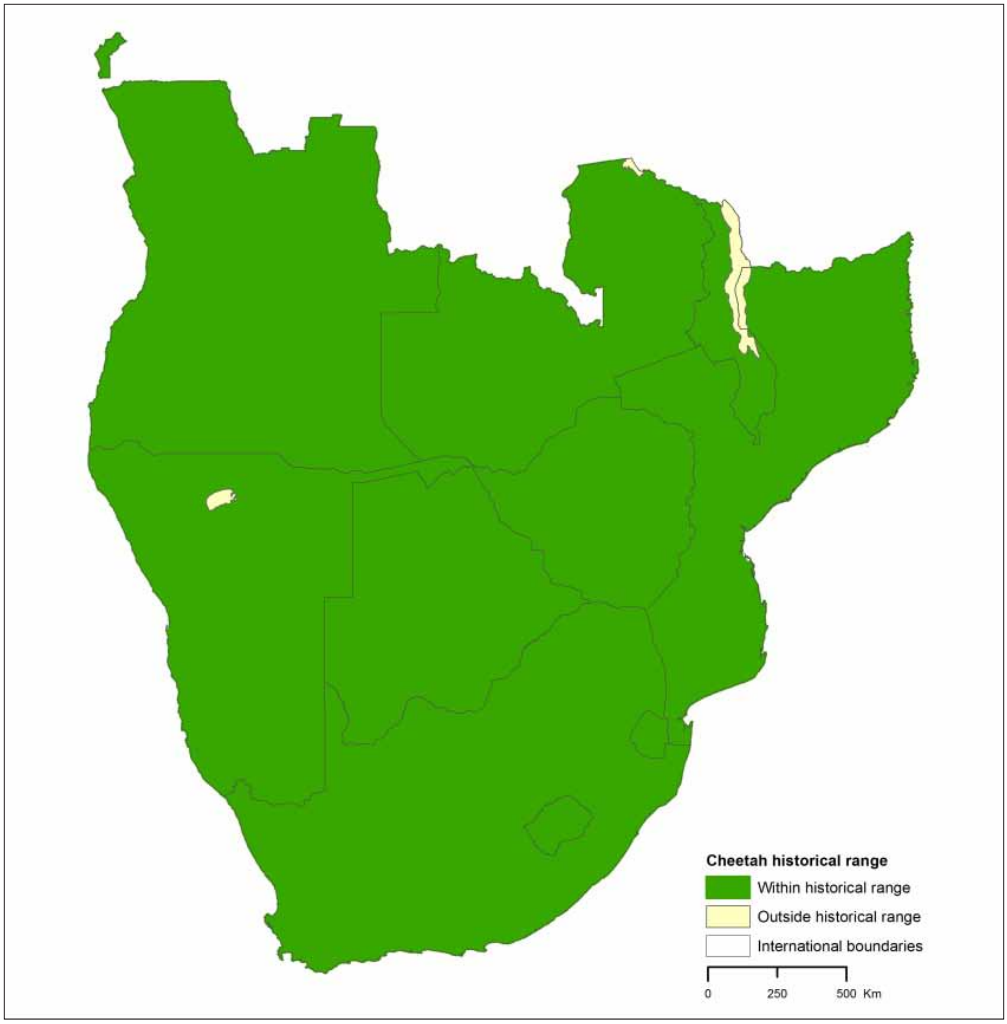


Figure 3.1 *Cheetah historical range, prior to the impact of human activity after revision at the second Southern African Regional Workshop for Cheetah and Wild Dogs (2015)*

The highest cheetah densities have been recorded in wooded savannah (Durant et al., 2011; Marnewick et al., 2014). However, the species lives at low density wherever it occurs, partly because it comes into competition with other large carnivores, such as lions and spotted hyaenas (Durant, 1998). Because of this, in well protected wilderness areas that harbour large numbers of other large carnivores, cheetah densities seldom exceed 2/100km^2. This is because the best habitats attract the highest densities of competing carnivores.

Outside of protected areas however, cheetah densities are often even lower, mainly due to lack of prey, persecution and poor quality habitat. It is unlikely, therefore, that cheetah were ever abundant, despite their broad geographical distribution. Even today, while maximum densities rarely exceed 2 cheetah/100km^2, densities in some places are significantly lower; for example 0.21-0.55 cheetah/1,000 km^2 for the Saharan cheetah in Algeria (Belbachir et al 2015).

3.2 Current distribution

3.2.1 Categories of current geographic range

Since cheetah distribution is imperfectly known across the region, the original mapping process recognised seven categories of current geographic range, the definitions for which were updated at the 2015 workshop. These categories are identical to those used for wild dogs (see chapter 4). Further details on range definitions are provided in Appendix 3.

1. **Resident range:** land where wild cheetah are known to still be resident. (A Resident fenced category is used for areas <1,000km^2 which are well fenced, see below)
2. **Possible resident range:** land where wild cheetah may still be resident, but where residency has not been confirmed in the last 10 years.
3. **Transient range:** habitat used intermittently by cheetah, but where cheetah are known not to be resident and which does not connect to other resident ranges.
4. **Connecting range:** land where cheetah are not thought to be resident, but which dispersing animals may use to move between occupied areas, or to recolonise extirpated range. Such connections might take the form of 'corridors' of continuous habitat or 'stepping stones' of habitat fragments.
5. **Recoverable range:** land where habitat and prey remain over sufficiently large areas that either natural or assisted recovery of cheetah might be possible within the next 10 years if reasonable conservation action were to be taken.
6. **Extirpated range:** land where the species has been extirpated, and where habitat is so heavily modified or fragmented as to be uninhabitable by resident cheetah for the foreseeable future.
7. **Unknown range:** land where the species' status is currently unknown and cannot be inferred using knowledge of the local status of habitat and prey.

Populations are considered to be 'wild' when they are not intensively managed, in line with the guidelines of IUCN/SSC (IUCN Standards and Petitions Subcommittee 2016; see also Redford et al 2011). In the case of wide-ranging and low density species such as cheetah, and after consultation with the IUCN/SSC Cat Specialist Group, we consider intensive management necessary in reserves less than 1,000km^2 when they are surrounded by impermeable fencing. We consider cheetah populations in reserves that are unfenced, or where fences are permeable to cheetah, as wild. Populations in small fenced reserves can make a valuable contribution to 'wild' populations by providing individuals for restocking when they are well-managed to maintain high levels of genetic diversity, such as the South African cheetah meta-population. For now these areas are referred to as fenced populations, but it needs to be emphasised that this does not imply captive populations.

3.2.2 Current distribution across different range categories

Figure 3.2 shows cheetah geographic range as mapped by workshop participants in 2015, according to the seven categories listed above; Table 3.1 presents the same data in a quantitative format.

The current geographic distribution of cheetah is greatly reduced in comparison with their historical distribution. Cheetah are known to be resident in only about 22.6% and possibly resident in another 6.6% of their historical range. Therefore, even if all known and possible range holds resident populations, there has still been an apparent loss of over two thirds of their historical range.

The largest known resident population of cheetah in southern Africa extends across five countries (Angola, Namibia, Botswana, South Africa and Mozambique). The cheetah population in north western Zimbabwe (in the Greater Hwange Ecosystem) may in future be connected to this large transboundary population, but currently evidence for such connectivity is lacking. However, there have been cheetah sighted in the concessions bordering the Botswana border (Matetsi and Imbabala) as well as occasional cheetah sightings around Kasane (Esther van der Meer pers. comm.). Nonetheless there is no direct evidence of connectivity at this point in time.

In southern Africa, consensus opinion concluded cheetah have been extirpated across a minimum of 40.7% of their historical range in southern Africa (see Table 3.1), an increase from 26% in 2007. Rather than an increase in loss of range, this increase in percentage of extirpated range rather represents a recognition that much of the area formally designated as 'unknown' is in fact extirpated (see Section 3.3). Most of this extirpated area occurs in the intensively agricultural country of South Africa, the heavily populated country of Malawi, and more recently in Zimbabwe, since the land reform program resulted in a loss of many game farms and conservancies (Figure 3.2).

However, cheetah were also recorded absent from areas in Zambia (the Luangwa protected area complex) and in Mozambique (Zinave

and Gorongosa National Parks) where they had been recorded as present until relatively recently, and are currently designated as 're-coverable' range. Accordingly, the extent of extirpated range is almost certainly an under-estimate, given that a high proportion of the 'unknown' range, and a proportion of the 'possible resident' range, is likely to no longer support cheetah (although assessment of recoverable range status also need to be carried out).

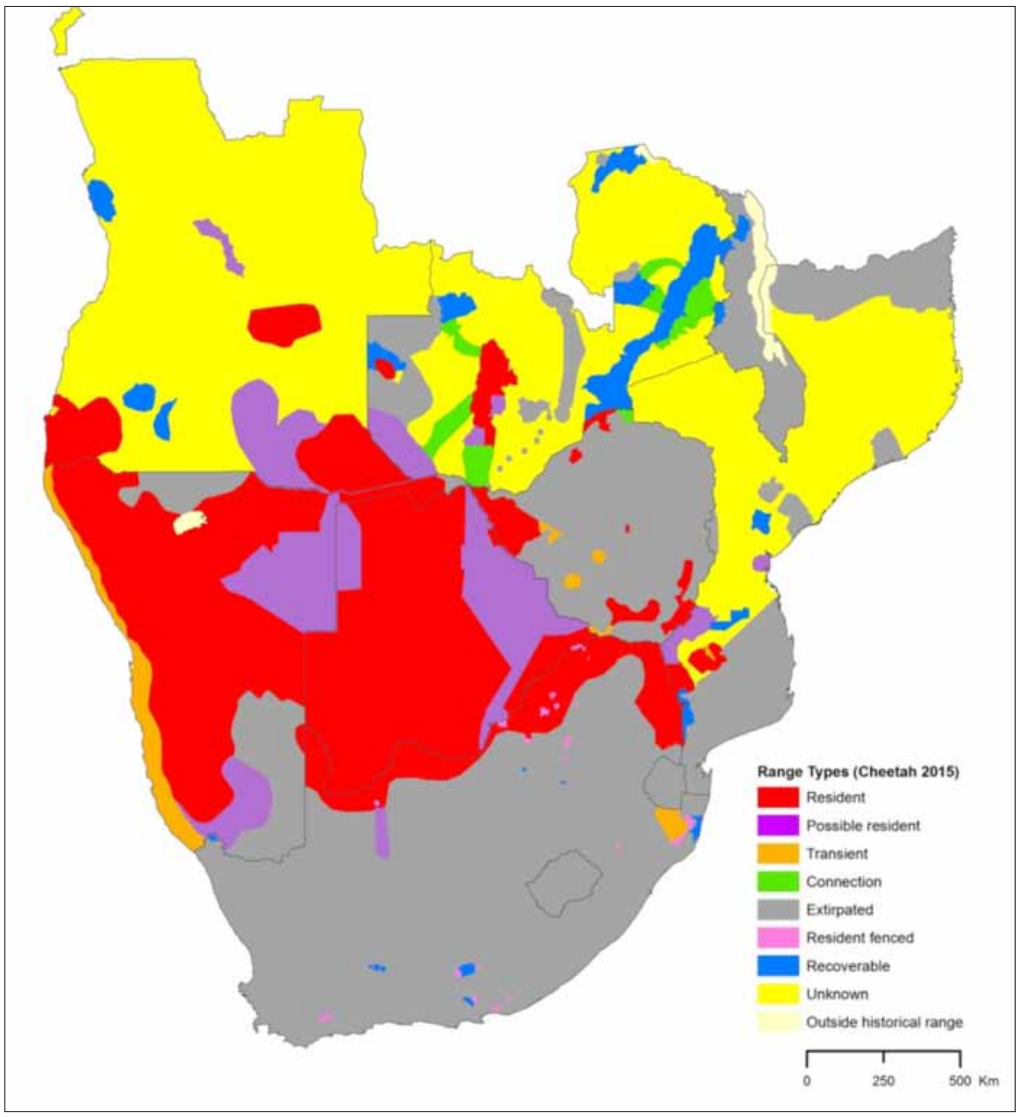


Figure 3.2 *Distribution of Cheetah across southern Africa as mapped by participants at the 2015 workshop (and updated for Angola, December 2016)*

A small, but important, 1% (56,855km^2) of historical range is considered potentially significant for cheetah conservation because it connects areas of resident or possible range. As data become available for unknown areas, the extent of connecting range is likely to increase. Note that connecting range, by definition (Section 3.2.1), is believed not to contain resident populations and is likely to be highly threatened.

It was acknowledged during the workshop that there was a large area of southern Africa (25%) where the status of cheetah is unknown (despite this decreasing from 40% since 2007). Although it is unlikely that all this unknown area would contain resident populations of cheetah, it was agreed that the extent of resident range is likely to increase once more information is available from these currently unknown areas, particularly for some areas in Angola (although data presented at the October 2016 National Conservation Planning workshop for Cheetah and Wild Dogs in Angola added significantly to our knowledge of cheetah and wild dog distribution in some parts of the country, and such updated information is included in this updated strategy).

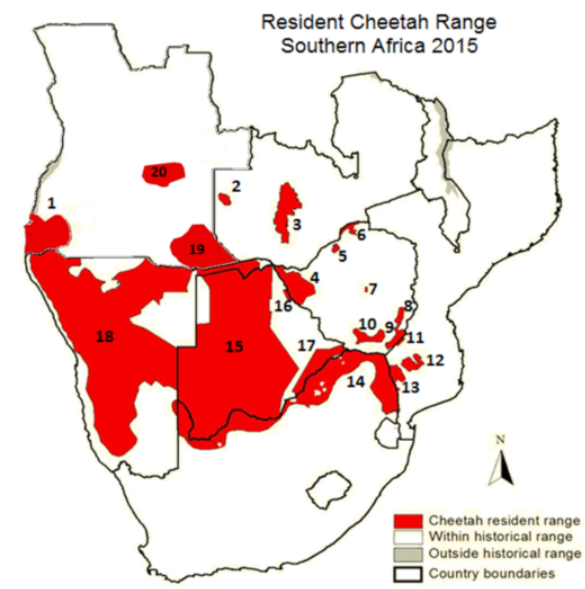
Table 3.1 *Distribution of cheetah in range states within southern Africa, in 2015 (and updated for Angola, December 2016). (Note percentage totals were calculated as the total land area estimated to be in each category of cheetah range in 2015, divided by the total land area falling inside historic cheetah range). For changes in range since 2007, please see section 3.3.*

	Total country area	Outside of historical range	Total area within historical range	Resident		Small Resident Fenced*		Possible Resident		Transient		Connecting		Recoverable		Extirpated		Unknown	
				km²	%	km²	%	km²	%	km²	%	km²	%	km²	%	km²	%	km²	%
Angola	1,239,890	0	1,239,890	128,963	10	0	0	127,902	10	0	0	0	0	13,104	1	0	0	977,206	79
Botswana	578,123	0	578,123	454,283	79	484	0	123,117	21	0	0	0	0	0	0	0	0	0	0
Malawi	117,784	22,091	95,693	0	0	0	0	0	0	0	0	0	0	6,399	7	89,294	93	0	0
Mozambique	788,242	10,543	777,699	14,928	2	0	0	15,382	2	873	0	0	0	11,113	1	242,367	31	492,958	63
Namibia	823,987	0	823,987	506,980	62	0	0	121,010	15	55,175	7	0	0	0	0	140,743	17	0	0
South Africa	1,219,700	0	1,219,700	142,303	12	11,089	1	6,445	1	7,328	1	0	0	5,816	0	1,049,354	86	0	0
Zambia	751,769	2,445	749,324	29,396	4	0	0	30,362	4	0	0	55,205	7	89,885	12	95,638	13	448,838	60
Zimbabwe	390,427	0	390,427	47,717	12	0	0	0	0	7,434	2	1,650	0	0	0	333,837	86	0	0
				1,324,570	**22.62**	**11,573**	**0.1**	**424,218**	**6.62**	**70,810**	**1.16**	**56,855**	**0.97**	**126,317**	**2.66**	**1,951,233**	**40.73**	**1,919,002**	**25.25**

* 'Small' fenced areas are here defined as those fenced areas which are less than 1,000km² in size.

3.2.3 Current areas of Cheetah Resident Range and Cheetah Population Estimates in Southern Africa

Cheetah are currently resident in parts of all southern African countries except Lesotho, Swaziland and Malawi (Figure 3.3). Estimated numbers of cheetah resident in each area are given in Table 3.2. By far the widest extent of cheetah resident range is found across Botswana and Namibia, although population densities are low for most of this range.



1	Iona NP & surrounds	Angola
2	Liuwa Plains National Park	Zambia
3	Greater Kafue Ecosystem	Zambia
4	Greater Hwange to Victoria Falls	Zimbabwe
5	Matusadona National Park	Zimbabwe
6	Zambezi Valley Complex	Zimbabwe
7	Midlands Rhino Conservancy	Zimbabwe
8	Savé Valley Conservancy	Zimbabwe
9	Gonarezhou NP & Malilangwe	Zimbabwe
10	Nuanetsi & Bubye Conservancy	Zimbabwe
11	Maunge	Mozambique
12	Banhine National Park	Mozambique
13	Limpopo NP & Lebombo	South Africa
14	Northern South Africa & Kruger	South Africa
15	Botswana resident range	Botswana
16	Pandamatenga	Botswana
17	Tuli Block	Botswana
18	Namibian resident range	Namibia
19	Luengue-Luiana National Park	Angola
20	Moxico	Angola

Figure 3.3 *Resident Cheetah Range in southern Africa 2015 (excluding fenced reserves in South Africa, and with Angola updated December 2016)*

Map unit	Area	Country	Area (km^2)	Population Estimate	Area protected (km^2)	No of cheetah protected	Method of calculating*
1	Iona NP & surrounds	Angola	44,966	39	20,455	18	Expert based
2	Liuwa Plains National Park	Zambia	3,170	20	2,921	18	Expert based
3	Greater Kafue Ecosystem	Zambia	26,222	65	22,185	55	0.25 / 100km^2
4	Greater Hwange to Victoria Falls	Zimbabwe	24,470	45	15,541	29	Expert based
5	Matusadona National Park	Zimbabwe	1,422	3	1,422	3	Expert based
6	Zambezi Valley Complex	Zimbabwe	3,612	12	2,102	7	Expert based
7	Midlands Rhino Conservancy	Zimbabwe	318	4	-	-	Expert based
8	Savé Valley Conservancy	Zimbabwe	2,664	15	-	-	Expert based
9	Gonarezhou NP & Malilangwe	Zimbabwe	6,414	25	4,734	18	Expert based
10	Nuanetsi & Bubye Conservancy	Zimbabwe	8,816	40	-	-	Expert based
11	Maunge	Mozambique	844	6	22	0	Expert based
12	Banhine National Park	Mozambique	7,261	10	-	-	Expert based
13	Limpopo NP, Lebombo & Sabie	Mozambique	6,823	41	6,392	38	Expert based
14	Northern South Africa & Kruger	South Africa	142,303	696	28,631	412	Expert based
15	Botswana resident range	Botswana	429,622	1547	105,225	379	0.36 / 100km^2
16	Pandamatenga	Botswana	1,456	5	10	0	0.35 / 100km^2
17	Tuli Block	Botswana	23,204	142	743	5	0.61 / 100km^2
18	Namibian resident range	Namibia	506,980	1498	67,017	134	Expert based
19	Luengue-Luiana National Park	Angola	58,281	58	58,281	58	
20	Moxico	Angola	25,717	26	0	0	0.1 / 100km^2
			1,324,570	**4,297**	**335,686**	**1,172**	

** 'Expert based' is where the population estimate provided is based on either intensive monitoring over the whole polygon, detailed surveys and / or spoor surveys or extrapolation from intensive monitoring in part of the polygon, taking into account habitat suitability across the polygon. For areas where density estimates are given, these are based on best estimates from researchers combined with knowledge of cheetah needs and the habitat suitability.*

Table 3.2 *Areas in southern Africa considered by participants to support resident cheetah populations in unfenced areas in 2015 (and updated for Angola, December 2016). Population estimates are derived from a number of different methodologies and some have a wide margin of error. Locations are shown in Figure 3.3 above. Area protected includes only land within IUCN Category I-IV Protected Areas.*

The population estimates provided in Table 3.2 must be interpreted with caution as they were derived using a variety of formal and informal approaches, sometimes on the basis of relatively sparse data. However, knowledge has improved significantly since 2007 and whilst there is still some degree of uncertainty in some areas, this is the most accurate dataset of population estimates currently available. It is important to note that in southern Africa one large resident population was identified covering five countries (Angola, Namibia, Botswana, South Africa and Mozambique) and encompassing an area of over a million km^2. However, only 20% of this range falls on protected land, again emphasizing that to safeguard cheetah, conservation action needs to take place outside of protected areas. In total this large area is estimated to hold c. 4,000 cheetah (of which only c. 1,000 are in protected areas). No other resident population identified in the region had an estimated population of cheetah greater than 100 adults and independent adolescents.

3.2.3.1 Small fenced cheetah populations

Table 3.2 provides detail on the areas of unfenced cheetah resident range mapped by participants (locations of these areas are shown in Figure 3.3). In South Africa, participants also provided information for 53 small (<1,000km^2) fenced reserves with resident populations of cheetah. These are not included in calculations of 'wild' free roaming cheetah numbers, or areas, as the populations in each reserve are isolated from all other cheetah populations, and are intensively managed as components of a metapopulation. However, they do constitute a significant contribution to the cheetah population in terms of numbers. In total, these fenced reserves in South Africa cover 11,089km^2 and hold 334 cheetah (EWT pers comm). These cheetah have conservation value in that they are genetically well managed, are wild, well protected, predator-aware and tourist friendly, and thus are contributing to the greater, wild cheetah population and can also be used for restoration in areas designated as recoverable range.

3.2.4 Distribution of cheetah across protected areas

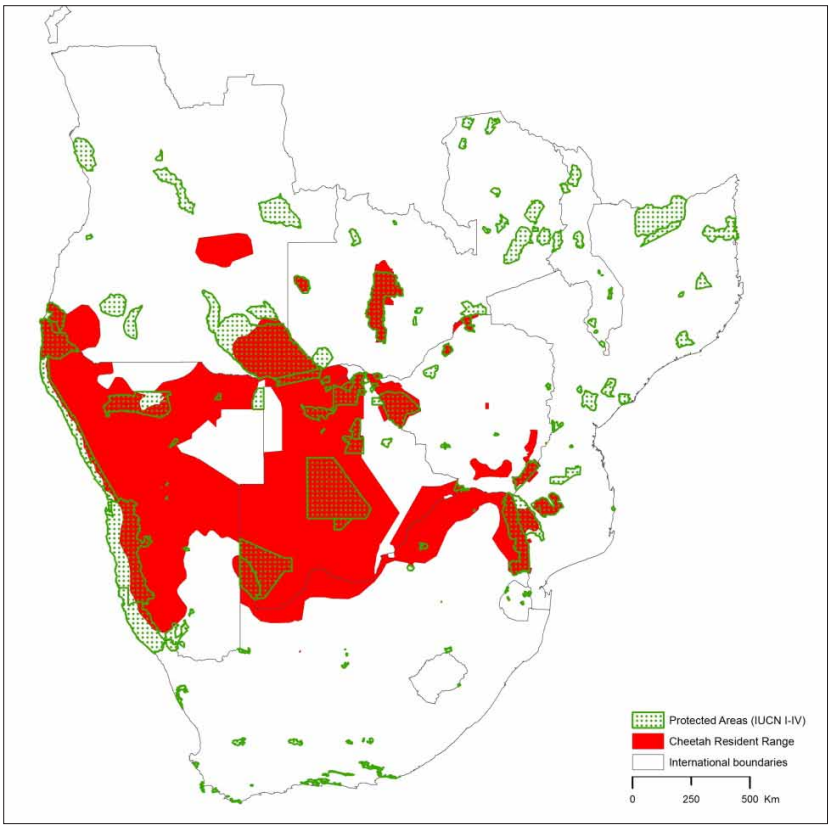


Figure 3.4 *The distribution of IUCN Category I-IV Protected Areas relative to Cheetah Resident Range, 2015 (and updated for Angola, December 2016)*

As is apparent from Figure 3.4, a comparatively small proportion of the current geographical range of cheetah falls inside protected areas (see also Table 3.2), with only about 25% (335,686km^2) of the total resident range occurring on protected land (IUCN categories I-IV). The remaining population, c 75%, occurs outside the region's formal protected area network. Unfortunately, most unprotected areas in southern Africa are rarely secure for cheetah, with heavy pressure on land, and increasing conflict with humans, coupled with a declining prey base (which can also be a threat in protected areas). However, there are some exceptions to this, including some of the conservancies in Namibia (totalling 161,900km^2) and Zimbabwe (c. 13,000km^2) where protection is usually adequate enough to secure resident cheetah populations. Although these areas are excluded as protected areas from the maps and calculations because they are not designated as IUCN category I-IV, they nonetheless represent areas which do have a level of protection and in which wildlife populations can thrive.

However, in most places, cheetah are more vulnerable outside of the formal protected areas, and this represents cause for concern. In Botswana, for example, if cheetah were lost from all non-protected lands, the national cheetah population would decline from c. 1,547 to just 379 cheetah. Moreover, without the non-protected lands that support resident cheetah, resident populations would be mostly small and highly fragmented, with limited connectivity. Such populations in turn would thus face an elevated risk of extinction.

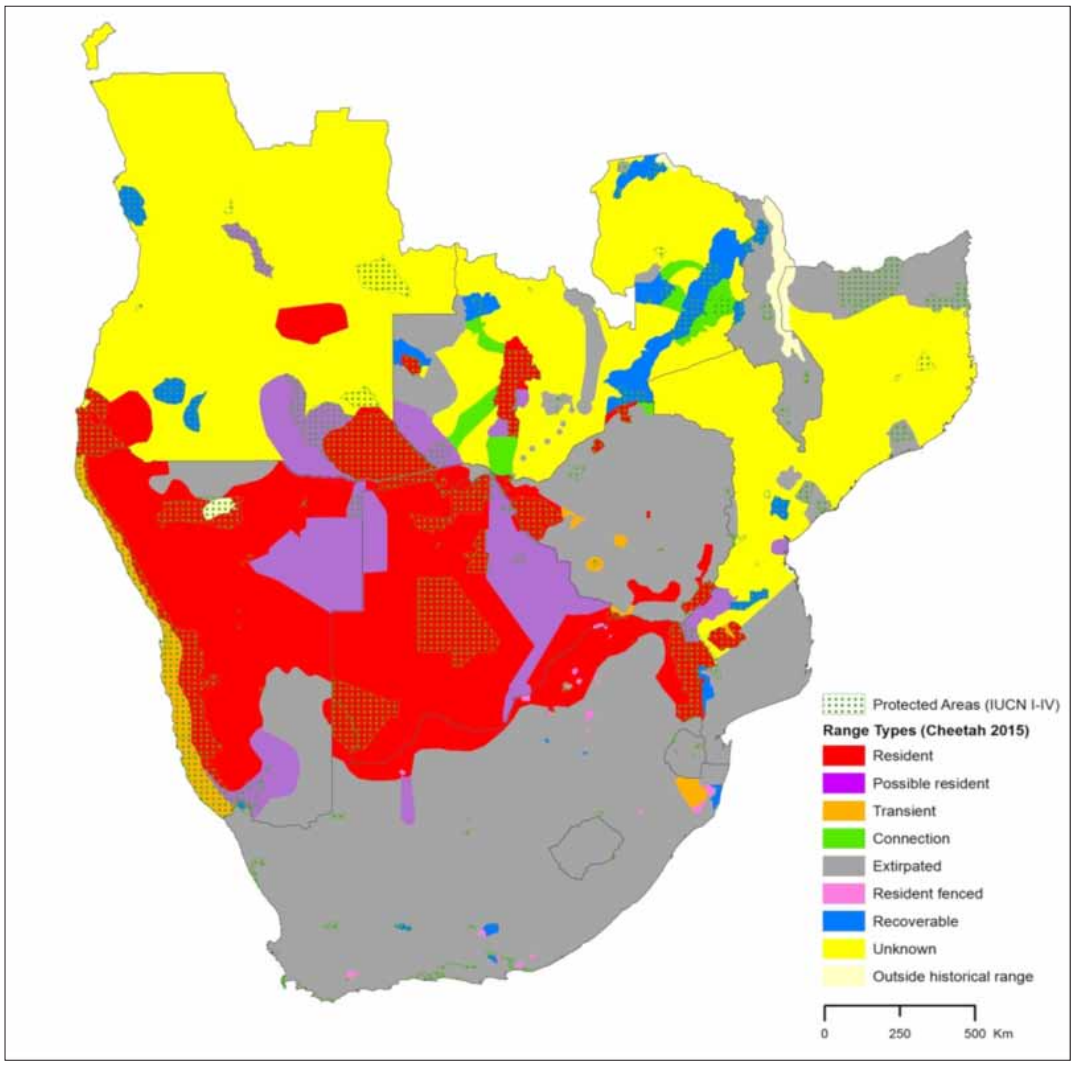


Figure 3.5 *The distribution of IUCN Category I-IV Protected Areas relative to Cheetah Distribution (All Range Types), 2015 (and updated for Angola, December 2016)*

Very little of the possible resident range falls inside protected areas (Figure 3.5). In Zambia (mainly) and Zimbabwe, none of the areas listed as connecting range are protected and thus the future of these valuable corridors is unlikely to be secure (Figure 3.5).
Much of the recoverable range identified lies in protected areas, for example Quicama, Bicuar and Mupa National Parks, Angola; North and South Luangwa National Park, Zambia; Nyika, Vwaza Marsh and Kasungu National Parks, Malawi; and Gorongosa and Zinave National Parks, Mozambique (Figure 3.5). These are the areas judged by the experts attending the workshop to be areas that could, under a certain set of circumstances (including removal of original causes of decline), once again support resident cheetah populations.

3.2.5 Distribution across international boundaries

The largest resident population of cheetah, that spans five international boundaries, incorporating areas of Angola, Namibia, Botswana, South Africa and Mozambique (Figure 3.3), supports a cheetah population of 4,021 individuals. This represents 94% of the total resident population, and 92% of the total population of the region when the managed meta-population in small fenced reserves in South Africa is included. This large and highly significant population of cheetah highlights the importance of the need for transboundary management, and harmonisation of control of threats across international borders. In addition, with proper transboundary conservation (and more research) on the north western side of the Greater Hwange Ecosystem, it is likely that that large area of resident range of cheetah in Zimbabwe could be eventually connected as well.

3.3 Status of Cheetah in 2015 as compared with 2007

	Resident	Resident small fenced	Possible resident	Transient	Connecting	Recoverable	Extirpated	Unknown
2007	20.90%	0.07%	6.80%	---	1.60%	4.20%	26.00%	40.50%
2015	22.62%	0.10%	6.62%	1.16%	0.97%	2.66%	40.73%	25.25%
Difference	1.72%	0.03%	-0.18%	---	-0.63%	-1.54%	14.73%	-15.25%

Table 3.3 Comparison of percentage area under different range distribution categories between 2007 and 2016 (Angolan figures updated December 2016)

	Resident	Resident small fenced	Possible resident	Transient	Connecting	Recoverable	Extirpated	Unknown
2007	1,178,563	8,336	385,643	---	89,320	236,904	1,466,400	2,289,461
2015	1,324,570	11,573	424,218	70,810	56,855	126,317	1,951,233	1,919,002
Difference	146,007	3,237	38,575	---	-32,465	-110,587	484,833	-370,459

Table 3.4 Comparison of areas (in km^2) under different range distribution categories between 2007 and 2016 (Angolan figures updated December 2016)

Tables 3.3 and 3.4 reveal that resident range in 2016 was 146,007km^2 more than in 2007; an increase of 1.72%). However, there have been some notable changes in the distribution of land classified as resident range (see section 3.3.1).

Possible resident range has increased by c. 38,000km^2 and connecting range and recoverable range have both declined a little, although the new transient range category may partially account for some of this. The biggest differences are in the areas of extirpated and unknown range. The former has increased by 14.73% (or 484,833km^2) whilst the latter has decreased by 15.25% (or 370,459km^2). This difference is largely due to improved information and knowledge; shifting some area of previously unknown range into different categories, and also of greater certainty regarding areas where cheetah are definitely now known to be extirpated.

3.3.1 Changes in resident range distribution since 2007

Encouragingly the area of land designated as resident range for cheetah has increased by 146,007km^2; from 1,178,563km^2 in 2007 to 1,324,570km^2 in 2015. However, there have also been some significant changes in the spatial distribution of land classified as resident range (Figure 3.6).

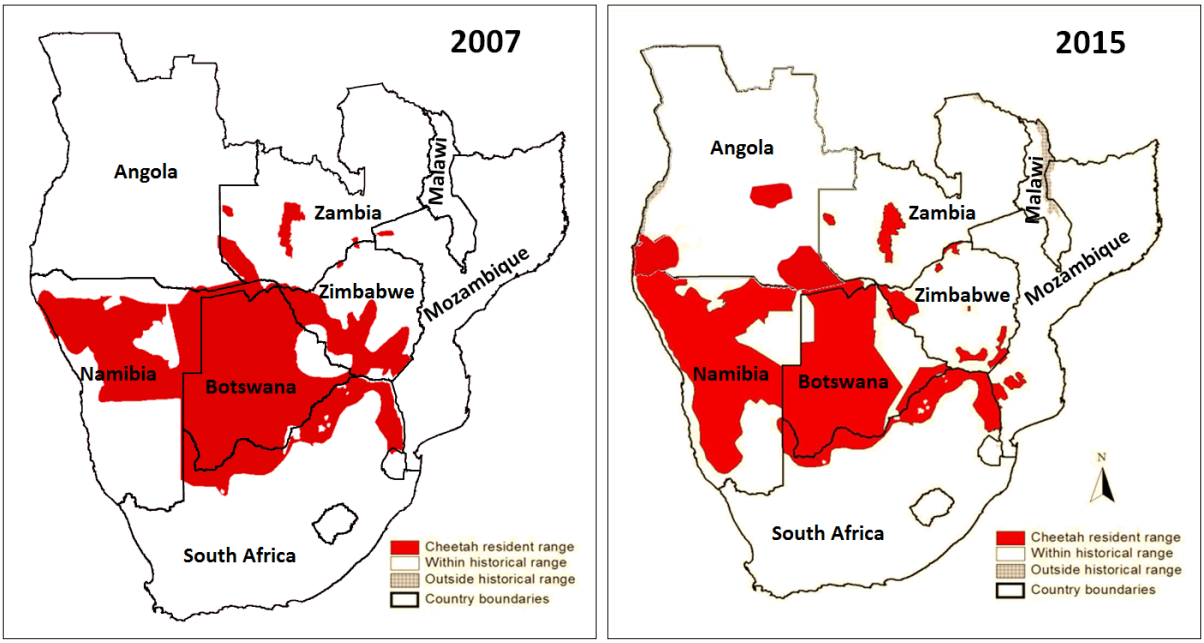


Figure 3.6 *Resident range of cheetah in 2007 (left) and 2015 (right) (and updated for Angola, December 2016). The amount of land designated as resident range for cheetah has increased by 146,007km^2 since 2007, but the distribution has also changed. Note the large extension of cheetah resident range in Namibia and the addition of several populations in Angola, but also the severe reduction in cheetah resident range in Zimbabwe.*

Since 2007, much more of Namibia, and three populations in Angola have been classified as resident range for cheetah, whilst much of the area previously considered resident range in Zimbabwe is now extirpated. Whilst the increase in resident range in Namibia and Angola looks fairly encouraging, it must be noted that the estimated cheetah densities for these landscape are very low (0.1 to 0.2 individuals / 100km^2). In contrast, some of the areas that have been lost as resident range for cheetah (e.g. in Zimbabwe) supported higher densities of cheetah.

Accordingly, **in terms of numbers, the total estimate for cheetah in southern Africa has declined from 6,260 cheetah in 2007 to only 4,297 cheetah in 2015 (or 4,631 if we include the 334 individuals in the small fenced reserves in South Africa).** The number of cheetah in formally protected areas has also declined from 1,460 individuals in 2007 to 1,172 in 2015. Some of this change is due to more information about density in different habitats, but some almost certainly represents real decline.

3.4 Conclusions

The geographical distribution of cheetah in southern Africa has contracted drastically in recent years. Cheetah are now known to inhabit only 22.6% of their previous historic range in the region, as identified by the participants of the 2015 workshop. The population is dominated by one critically important, relatively widespread, population which covers five different countries: Angola, Namibia, Botswana, South Africa and Mozambique. There are also a number of smaller fragmented resident populations in Mozambique, Zambia and Zimbabwe, and a number of managed cheetah populations in South Africa.

Overall, the population estimate for free ranging cheetah in southern Africa in 2015 is 1,963 individuals less than it was in 2007 (6,260 in 2007 as compared with 4,297 in 2015). In terms of numbers, this represents a loss of 33% in 8 years, or a compounded annual growth rate of -4.83% per year. However, as mentioned, not all of this can be attributed to actual loss as some may represent the availability of better data. It is clear that there has been a major decline of cheetah in Zimbabwe and there is anecdotal information that may represent real decline in Namibia as well, but more information is needed before we can tease out exactly what has been happening.

With over 77% of remaining cheetah resident range in southern Africa unprotected, and considering also that even cheetah populations in protected areas are not always safe (Durant et al, 2016), the population is far from secure. There is therefore an urgent need for international cooperation in the conservation of cheetah across the region, not just in protected areas, if the connectivity of the remaining populations is to be maintained.

Despite a great deal of information being available for some of the region (namely Botswana, Namibia, South Africa and Zimbabwe) cheetah status is unknown across 25% of the region, and uncertain (considered "possible range") in a further 6.6%. It is a priority to establish whether identified unknown range contains cheetah, as well as confirming whether or not possible resident range does in fact contain breeding populations of cheetah. This will necessitate surveys which may open up the possibility of further transboundary range, including between south eastern Angola, Namibia and Zambia, and between Mozambique and Zimbabwe, highlighting the need for transboundary co-operation in cheetah conservation.

A number of areas were identified in Zambia (mainly), Angola, Malawi and Mozambique with some form of protected area status, where cheetah populations could recover ('recoverable range'). The potential for such recovery should be assessed through an increased understanding of the causes for the initial decline, and whether these causes can be removed or reduced. However, almost 41% of total historical cheetah range (mainly in Malawi, Zimbabwe and South Africa) was considered extirpated and unrecoverable. This emphasises the threat of increasing human populations and intensive agriculture to the survival of cheetah populations. Finally, much of the unknown range is likely to be devoid of cheetah given high human population densities and intensive agriculture.

Taken together, the decline in population size, increase in extirpated range and vulnerability of the 77% of the cheetah population living outside of protected areas, call for immediate planning and implementation of cheetah conservation at the landscape scale, before habitat is irretrievably fragmented and lost.

CHAPTER 4

The Distribution and Status of African Wild Dogs within Southern Africa

4.1 Historical distribution

In the past, wild dogs were broadly distributed across southern Africa. Wild dogs are habitat generalists, able to persist in a wide array of environmental conditions as long as prey are available. Although the highest wild dog densities have been recorded in wooded savannah (Creel & Creel, 2002), populations have been recorded in habitats as diverse as short grasslands (Kuhme, 1965), montane forest (Dutson & Sillero-Zubiri, 2005), and semi-desert (Fanshawe, 1997). Before human activity modified substantial proportions of southern Africa's natural habitats, wild dogs would have occupied most of the region, bounded by the sea to the east and south, and by the sand deserts of the Namib to the west. Today, wild dogs remain uncommon even in essentially pristine wilderness, apparently due to negative interactions with larger carnivores (Creel & Creel, 1996; Mills & Gorman, 1997). Hence, despite their formerly broad geographical distribution, wild dogs were probably never abundant.

The map of wild dogs' historic distribution (Figure 4.1) was updated during the 2015 Regional Workshop from a map produced in 2007. Participants amended the published historic range by excluding more of the western coast of Angola (an extension of Namibia's skeleton coast).

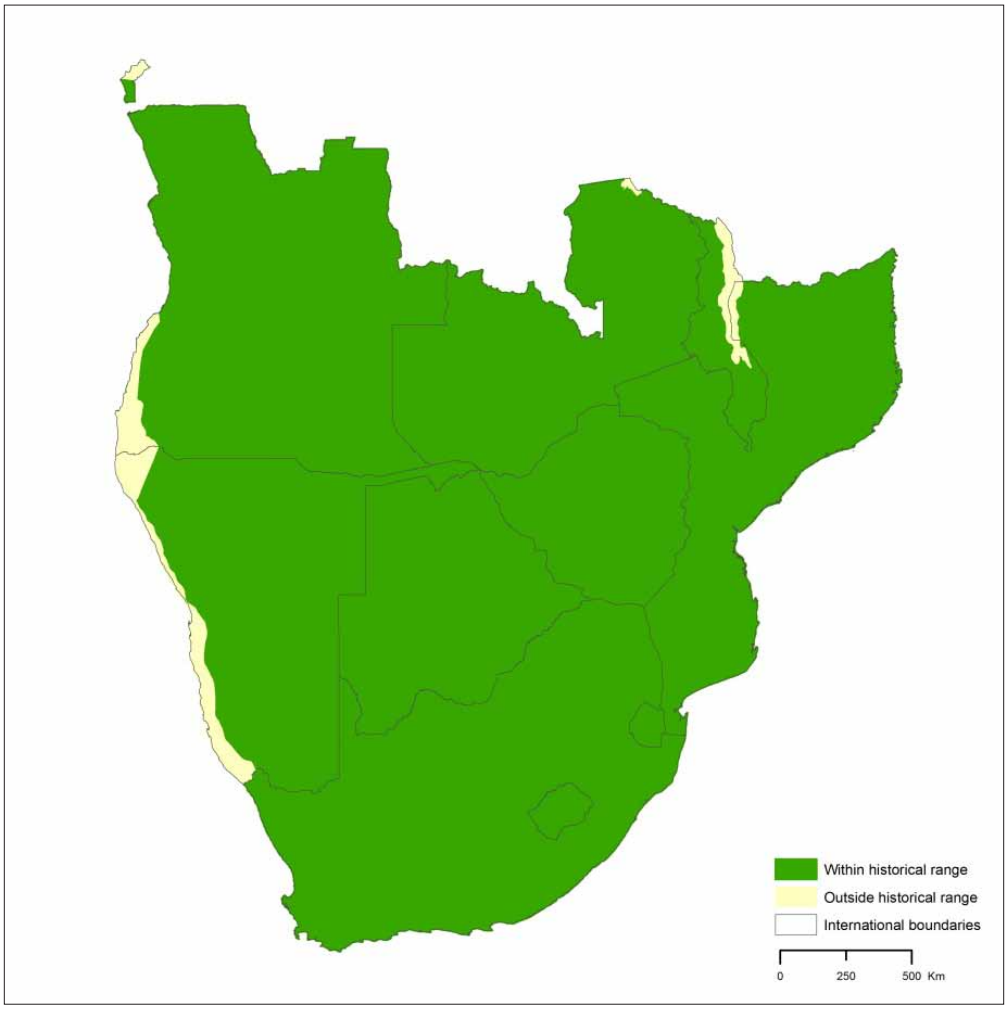


Figure 4.1 *African wild dog historical range, prior to the impact of human activity as agreed at the second Southern African Regional Workshop for Cheetah and Wild Dogs (2015)*

4.2 Current distribution

4.2.1 Categories of current geographical range

Since African wild dog distribution is imperfectly known across the region, the original mapping process recognised seven categories of current geographical range, which were updated at the 2015 workshop. These categories are identical to those used for cheetah (see Chapter 3). Further details on range definitions are provided in Appendix 3.

1. **Resident range:** land where wild African wild dogs are known to still be resident. (A Resident fenced category is used for areas <1,000km^2 which are well fenced, see below)
2. **Possible resident range:** land where wild African wild dogs may still be resident, but where residency has not been confirmed in the last 10 years.
3. **Transient range:** habitat used intermittently by African wild dogs, but where wild dogs are known not to be resident and which does not connect to other resident range.
4. **Connecting range:** land where African wild dogs are not thought to be resident, but which dispersing animals may use to move between occupied areas, or to recolonize extirpated range. Such connections might take the form of 'corridors' of continuous habitat or 'stepping stones' of habitat fragments.
5. **Recoverable range:** land where habitat and prey remain over sufficiently large areas that either natural or assisted recovery of African wild dogs might be possible within the next 10 years if reasonable conservation action were to be taken.
6. **Extirpated range:** land where the species has been extirpated, and where habitat is so heavily modified or fragmented as to be uninhabitable by resident African wild dogs for the foreseeable future.
7. **Unknown range:** land where the species' status is currently unknown and cannot be inferred using knowledge of the local status of habitat and prey.

As with cheetah, populations of African wild dogs are considered to be 'wild' when they are not intensively managed, in line with the guidelines of IUCN/SSC (IUCN Standards and Petitions Subcommittee 2016, see also Redford et al 2011). Given their low densities and wide ranging nature, after consultation with the IUCN Canid Specialist Group, we consider intensive management necessary in reserves less than 1,000km^2 when they are surrounded by impermeable fencing. We consider African wild dog populations in reserves that are unfenced, or where fences are permeable to wild dogs, as wild. Populations in small fenced reserves can and do make a valuable contribution to wild populations by providing individuals for restocking when they are well-managed to maintain high levels of genetic diversity, such as the South African wild dog meta-population. For now these areas are referred to as fenced populations, but it needs to be emphasised that this does not imply captive populations.

4.2.2 Current distribution across different range categories

Figure 4.2 shows African wild dogs geographic range as mapped by workshop participants in 2015, according to the seven categories above; Table 4.1 presents the same data in a quantitative format. For detailed comparison with 2007, please see Section 4.4.

African wild dogs are considered to still be resident in approximately 17% of their historical range (as compared with 12.4% in 2007). Although this figure represents a 'worst case scenario', it does highlight the major contraction in geographic range that appears to have occurred in this species over the last century. Participants considered it possible (or even probable) that a further 8.6% of wild dogs' historical range might still support resident populations. This figure is very similar to that generated in 2007 for possible range (8.7% in 2007). No information was available for 22% of the species' historical range, as compared with 34% in 2007.

If even a small proportion of this 'possible' and 'unknown' range still supports wild dogs, the species' status could be more encouraging than the data on resident range would imply. Most of the 'unknown' range falls in Angola, Zambia and Mozambique, highlighting the need for surveys in these countries. Mozambique, Botswana and Angola also contain large areas of 'possible' range (Figure 4.2).

Wild dogs are considered to be extirpated across 43.9% of their historical range (including extirpated, recoverable and connecting range, Table 4.1; Figure 4.2). This is almost certainly a substantial underestimate; it is likely that a high proportion of the 'unknown' range no longer supports wild dogs. Of this extirpated range, only 2.3% was considered likely to be able to support wild dog populations in future (i.e. recoverable range). The largest tract of such 'recoverable' range falls in, and to the west of, Etosha National Park in Namibia (Figure 4.3). Wild dogs' history in Etosha is uncertain, and three attempts at reintroduction have failed (Scheepers & Venzke, 1995). However, considerable experience of successful reintroductions has been accumulated since the last attempt (Gusset et al., 2008), and it would certainly be worth considering another attempt if careful evaluations suggested that the habitat was suitable and the causes of wild dogs' original extirpation have been alleviated. However, more recent evidence suggests wild dogs may in time naturally recolonise Etosha from the farmlands east of the park, which would be far preferable to any assisted reintroduction attempts.

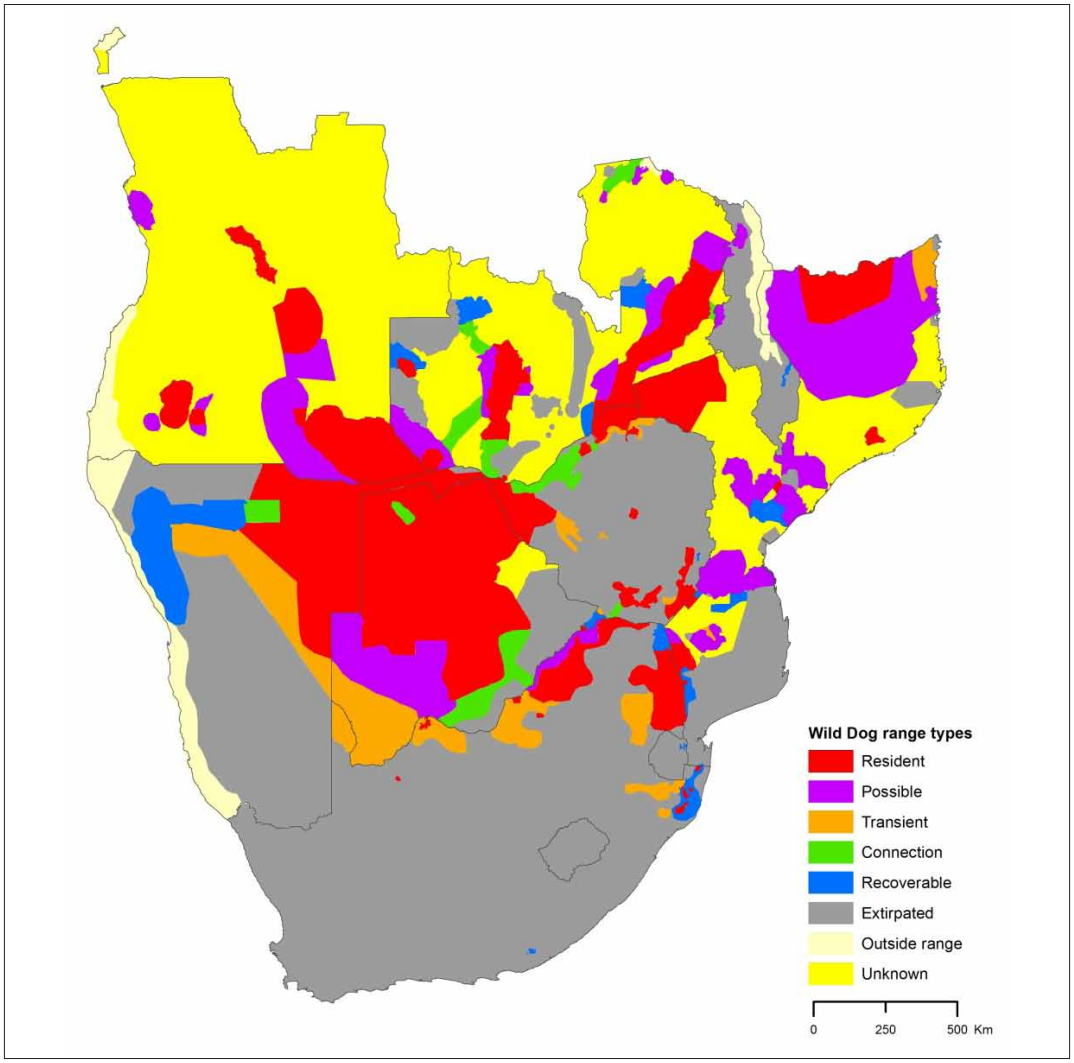


Figure 4.2. *Distribution of African Wild Dogs across southern Africa as mapped by participants at the 2015 workshop (and updated for Angola December 2016)*

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

Table 4.1 Distribution of African wild dogs in range states within southern Africa in 2015 (and updated for Angola, December 2016). (Note that percentages were calculated as the total land area estimated to be in each category of wild dog range in 2015, divided by the total land area falling inside historical wild dog range).

	Total country area	Outside of historical range	Total area within historical range	Resident		Small Resident fenced		Possible Resident		Transient		Connecting		Recoverable		Extirpated		Unknown	
				km²	%	km²	%	km²	%	km²	%	km²	%	km²	%	km²	%	km²	%
Angola	1,239,890	38,267	1,201,623	129,328	11	0	0	75,097	6	0	0	0	0	0	0	0	0	1,004,431	83
Botswana	578,123	0	578,123	315,405	55	335	0.1	83,086	14	56,354	10	33,197	6	2,023	0	69,574	12	18,993	3
Malawi	117,784	22,091	95,693	0	0	0	0	6,399	7	0	0	0	0	1,060	1	88,236	92	0	0
Mozambique	788,242	10,543	777,699	113,291	15	0	0	248,872	32	13,160	2	0	0	16,522	2	131,927	17	254,922	33
Namibia	823,987	78,319	745,668	181,442	24	0	0	0	0	73,671	10	9,507	1	78,147	10	408,254	55	0	0
South Africa	1,219,700	0	1,219,700	64,665	5	4,094	0.3	10,375	1	70,137	6	0	0	13,219	1	1,057,330	87	0	0
Zambia	751,769	1,982	749,787	100,895	13	0	0	69,749	9	0	0	31,716	4	26,630	4	85,781	11	434,129	58
Zimbabwe	390,427	0	390,427	57,954	15	0	0	0	0	12,967	3	17,780	5	262	0	301,484	77	0	0
Average				962,978	17.25	4429	0.05	493,578	8.63	226289	3.88	92200	2.00	137863	2.25	2142586	43.88	1,712,475	22.13

* 'Small' fenced areas are here defined as those fenced areas which are less than 1,000km² in size.

4.2.3 Current Areas of African Wild Dog Resident Range and African Wild Dog Population Estimates in Southern Africa

African wild dogs are currently (2015) determined to be resident in various parts of all southern African countries except Lesotho, Swaziland and Malawi. Figure 4.3 illustrates the current areas of known wild dog resident range across southern Africa. Estimated numbers of wild dogs resident in each area are given in Table 4.2. By far the widest extent of wild dog resident range is, as for cheetah, found across Botswana and Namibia, although population densities are low for much of this range (excluding parts of Botswana's Okavango delta, and parts of the Zambezi Region (formerly the Caprivi Strip) in Namibia where wild dog densities are relatively high).

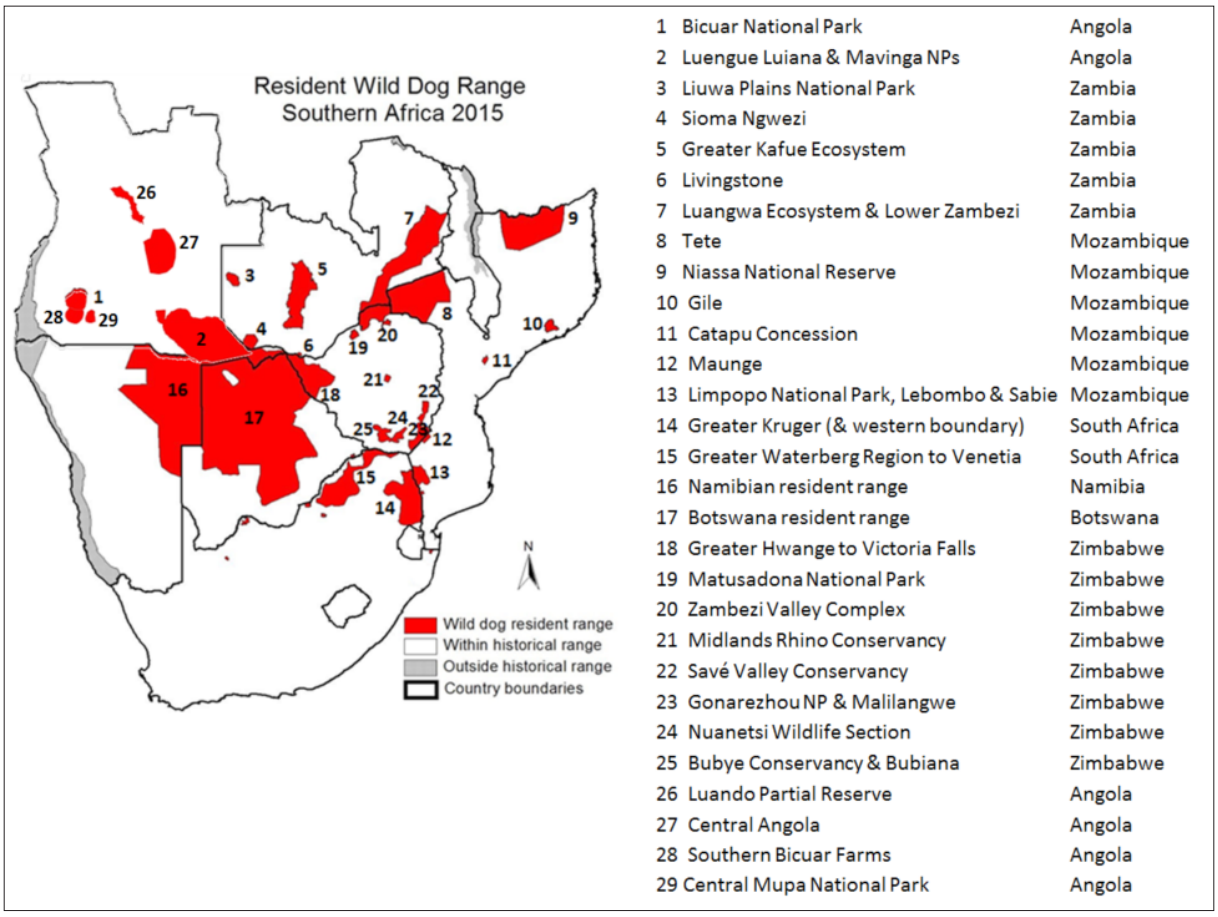


Figure 4.3 *Resident African Wild Dog range in southern Africa 2015 (excluding fenced reserves in South Africa, and updated for Angola, December 2016)*

	Name	Country	Area (km^2)	Population estimate		Area protected	No of wild dogs protected	Method of calculating
			Total	*Adults / yearlings*	*Packs*			
1	Bicuar National Park	Angola	7,728	45	4	7,728	45	Expert based
2	Luengue Luiana & Mavinga	Angola	75,010	225	19	75,010	225	0.3 per 100km^2
3	Liuwa Plains National Park	Zambia	3,170	16	2	2,921	15	0.5 per 100km^2
4	Sioma Ngwezi	Zambia	4,300	30	3	4,297	30	1 per 100km^2
5	Greater Kafue Ecosystem	Zambia	30,680	110	11	22,184	100	Expert based
6	Livingstone	Zambia	353	4	1	69	1	1 per 100km^2
7	Luangwa Ecosystem & Lower Zambezi	Zambia	62,392	300	52	20,216	97	Expert based
8	Tete	Mozambique	52,135	209	43	0	0	0.4 per 100km^2
9	Niassa National Reserve	Mozambique	49,666	497	41	26,660	267	1 per 100km^2
10	Gile	Mozambique	2,840	28	2	2,838	28	1 per 100km^2
11	Catapu Concession	Mozambique	779	8	1	0	0	1 per 100km^2
12	Maunge	Mozambique	1,067	5	1	21	0	1 per 100km^2
13	Limpopo National Park, Lebombo & Sabie	Mozambique	6,803	35	3	6,392	33	Expert based
14	Greater Kruger (& western boundary)	South Africa	31,850	288	24	14,737	133	Expert based
15	Greater Waterberg Region to Venetia	South Africa	32,815	20	2	728	0	Expert based
16	Namibian resident range	Namibia	181,441	544	45	11,672	35	0.3 per 100km^2
17	Botswana resident range	Botswana	315,405	1310	131	76,450	318	Expert based
18	Greater Hwange to Victoria Falls	Zimbabwe	25,038	189	36	15,430	116	Expert based
19	Matusadona National Park	Zimbabwe	1,497	2	1	1,422	2	Expert based
20	Zambezi Valley Complex	Zimbabwe	13,499	135	11	2,118	21	1 per 100km^2
21	Midlands Rhino Conservancy	Zimbabwe	937	7	1	0	0	Expert based
22	Savé Valley Conservancy	Zimbabwe	2,999	98	14	0	0	Expert based
23	Gonarezhou NP & Malilangwe	Zimbabwe	6,371	126	13	4,998	99	Expert based
24	Nuanetsi Wildlife Section	Zimbabwe	2,884	34	3	0	0	Expert based
25	Bubye Conservancy & Bubiana	Zimbabwe	4,729	70	7	0	0	Expert based
26	Luando Partial Reserve	Angola	8,737	9	1	8,737	9	0.1 per 100km^2
27	Central Angola	Angola	29,126	29	3	0	0	0.1 per 100km^2
28	Southern Bicuar Farms	Angola	5,886	18	2	0	0	0.3 per 100km^2
29	Central Mupa National Park	Angola	2,841	20	2	2,841	20	Expert based
			962,978	**4,411**	**479**	**307,469**	**1,594**	

Table 4.2 *Areas in southern Africa considered by participants to support resident African wild dog populations in unfenced areas in 2015 (and updated for Angola, December 2016). Population estimates are derived from a number of different methodologies and some have a relatively wide margin of error. Locations are shown in Figure 4.3 above. Area protected includes only land within IUCN Category I-IV.*

The population estimates provided in Table 4.2 must be interpreted with caution as they were derived using a variety of formal and informal approaches, sometimes on the basis of relatively sparse data; however there are no alternative more accurate data available, and the current knowledge is a significant improvement on what has been known previously. It is important to note that in southern Africa one large resident wild dog population was identified covering five countries (Angola, Namibia, Botswana Zambia and Zimbabwe) and encompassing an area of over half a million km^2 (601,547km^2). However, only 30% of this area (182,928km^2) falls under protected land, again emphasizing the fact that conservation action needs to take place outside of protected areas. In total this large area is estimated to hold 2,302 wild dogs, or 235 packs, (of which only 725 individuals are in protected areas: Table 4.2).

4.2.3.1 Small fenced African wild dog populations

Table 4.2 provides detail on the areas of unfenced wild dog resident range mapped by participants (locations of these areas are shown in Figure 4.3). In South Africa, participants also provided information for 11 small (<1,000km^2) fenced reserves with resident populations of wild dogs. These are not included in calculations of free roaming wild dog numbers or areas as the populations in each reserve are isolated from all other wild dog populations, and are managed as components of a metapopulation. However, they do constitute important areas for the conservation of the species as a whole. In total, these fenced reserves in South Africa which support African wild dogs cover 5,086km^2 and hold 19 packs of wild dogs (225 adults & yearlings; EWT pers comm).

4.2.4 Distribution across protected areas

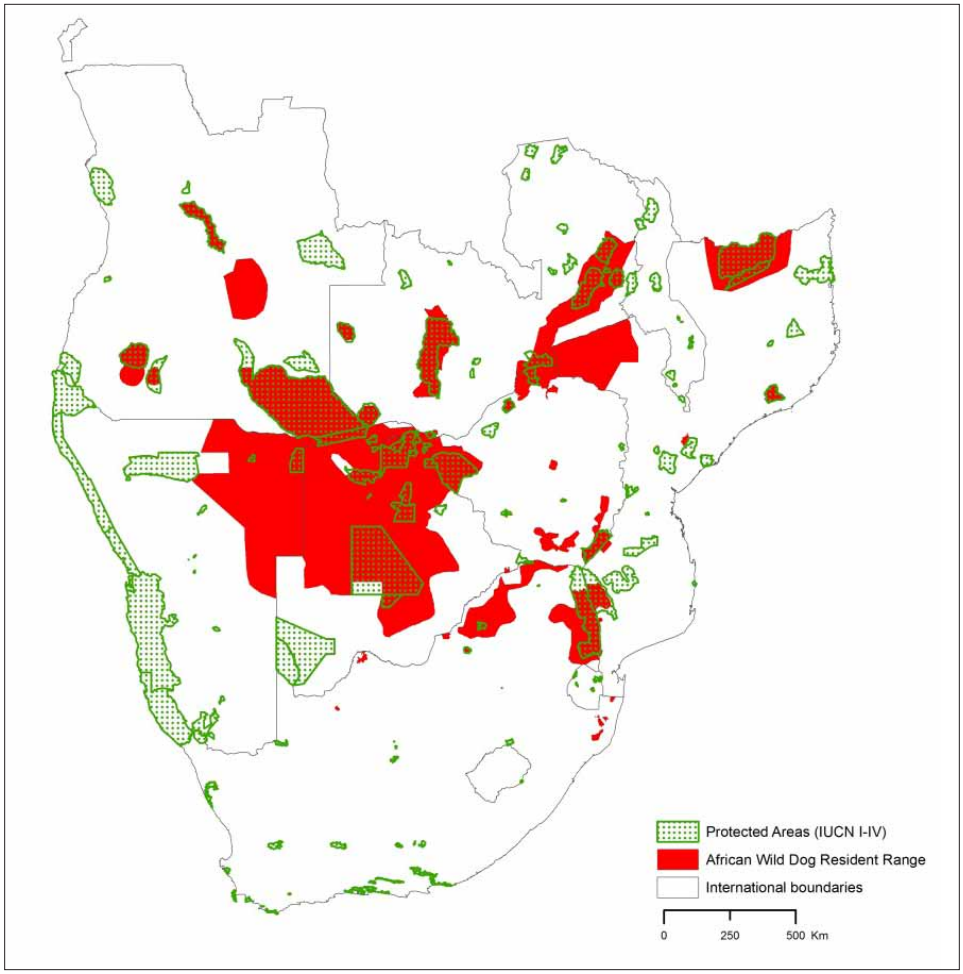


Figure 4.4. *The distribution of IUCN Category I-IV Protected Areas relative to African Wild Dog Resident Range, 2015 (and updated for Angola December 2016)*

As is apparent from Figure 4.4, much of wild dogs' current geographical range falls outside protected areas. This is quantified in Table 4.2. Overall, only 32% of resident range for wild dogs occurs on protected land (IUCN categories I-IV) with the remaining populations (68%) occurring outside the regions formal protected area network. Although in 2007, 38% of the resident range occurred on protected land, the difference is not due to a decline of resident range in protected areas but rather the identification of new resident range outside protected areas (for example in the Tete area of Mozambique).

That over 65% of Africa's wild dogs are found outside of formally protected areas is cause for concern, as unprotected areas are by no means secure, with heavy pressure on land, and increasing conflict with humans coupled with a declining prey base. Indeed even inside protected areas, wild dog populations are not always secure due to increased demand for bushmeat reducing prey availability and causing direct mortality in wire snares. Human encroachment and declassification of protected areas are also a significant current threat to both wild dog and cheetah populations in protected areas.

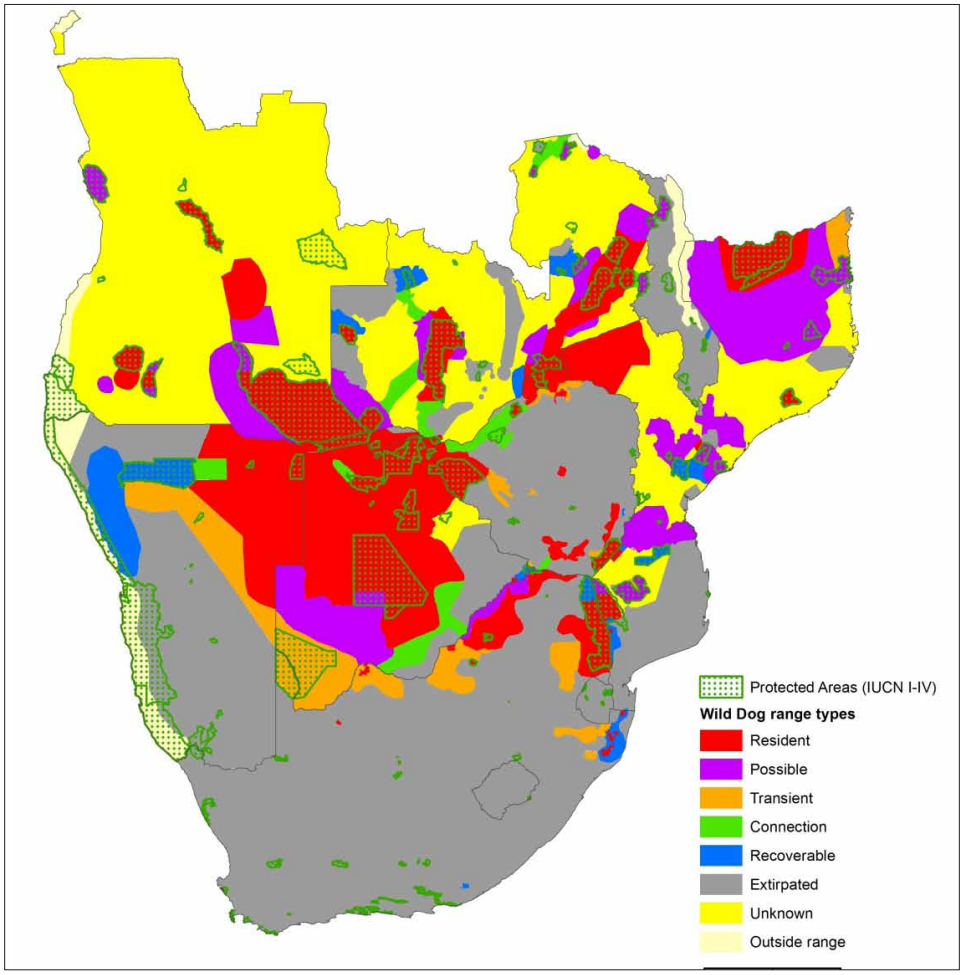


Figure 4.5. *The distribution of IUCN Category I-IV Protected Areas relative to African Wild Dog Distribution (All Range Types), 2015 (and updated for Angola, December 2016)*

Although wild dog populations outside of formal protected areas are for the most part very insecure, there are some exceptions to this. Private or community conservancies in Namibia and Zimbabwe, for example, tend to be well protected and many support good, secure wild dog populations. These conservancies are not shown on the maps, and our calculations consider them outside protected areas because they are not designated as IUCN category I-IV; nevertheless they represent areas which do have a level of protection and in which wildlife can thrive.

As illustrated in Figure 4.5, 68% of resident range falls outside of protected areas, as well as most of the possible resident range, and connecting range. This indicates that, as with cheetah, conservation activities outside protected areas are likely to be critical for preservation of this species. Unlike for cheetah, very little of the recoverable range identified falls inside formally protected areas. The exception is Etosha National Park which, as mentioned, may be recolonised naturally from the east.

4.2.5 Distribution across international boundaries

As shown in Figure 4.3, the most important areas for wild dog conservation traverse international boundaries; these include the three largest populations in the region. The total number of wild dogs estimated to be in transboundary populations in southern Africa in 2015 (including Niassa National Park which is transboundary with populations in Tanzania) is 3,995 individuals (437 packs), which is 91% of the total estimated population in southern Africa. This high percentage serves to emphasise the importance of transboundary conservation, including harmonisation of control of threats across international borders.

4.3 Status of African Wild Dogs in 2015 as compared with 2007

	Resident	Resident small fenced	Possible resident	Transient	Connecting	Recoverable	Extirpated	Unknown
2007	12.50%	0.02%	8.80%	---	3.00%	2.10%	39.80%	33.80%
2015	17.25%	0.05%	8.63%	3.80%	1.98%	2.25%	43.87%	22.13%
Difference	4.75%	0.03%	-0.17%	---	-1.02%	0.15%	4.07%	-11.67%

Table 4.3 Comparison of percentage of historical range within different range distribution categories in 2007 and 2015 (and updated for Angola, December 2016)

	Resident	Resident small fenced	Possible resident	Transient	Connecting	Recoverable	Extirpated	Unknown
2007	690,575	3,818	483,389	---	167,975	114,076	2,200,685	1,867,166
2015	962,978	4,429	493,578	226,289	92,200	137,863	2,142,586	1,712,475
Difference	272,403	611	10,189	---	-75,775	23,787	-58,099	-154,691

Table 4.4 Comparison of areas (in km^2) under different range distribution categories between 2007 and 2015 (and updated for Angola, December 2016)

As can be seen from Tables 4.3 and 4.4, between 2007 and 2015, resident range has increased by almost 5% (272,403km^2), but extirpated range also increased by over 4%. We have managed to reduce the area of unknown range by over 11%. The new transient category probably accounts for much of the reduction in areas designated as connecting range in 2015, as well as the discrepancy in the extirpated category where the percentage of extirpated land has increased, but the actual area has decreased (by 58,099km^2) since 2007.

4.3.1 Changes in resident range distribution since 2007

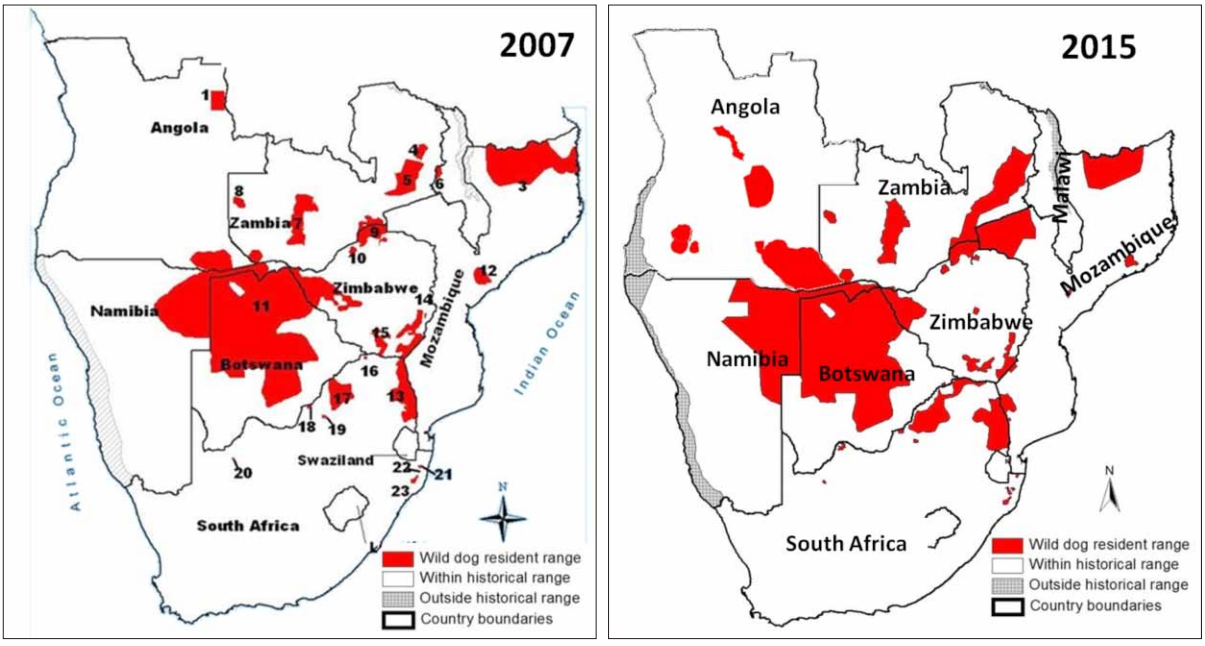


***Figure 4.6** Resident range of African wild dogs in 2007 (left) and 2015 (right; and updated for Angola December 2016). The amount of land designated as resident range for wild dogs has increased by 267,107km^2 since 2007, but the distribution has also changed. Note the large extension of wild dog resident range in eastern Zambia and into the Tete area in Mozambique, an extension of resident range in Namibia and the addition of several areas in Angola.*

Since 2007, the availability of better data for wild dogs in northern Namibia has resulted in resident range expanding westwards to cover a large portion of north eastern Namibia. Whilst some of this is likely to reflect a genuine range expansion, much is probably simply improved knowledge. In addition, a probably genuine range expansion for wild dogs, coupled with better data, results in a significant expansion south west from Luangwa National Park in Zambia. Contrary to the situation in 2007, it is now believed that the wild dog

population in the Luangwa Valley is connected through Lower Zambezi National Park into the Zambezi Valley in Zimbabwe. An additional significant area of range in the Tete area of Mozambique was agreed by participants at the 2015 workshop to also be resident range for wild dogs, and with this linking through to the Zambezi Valley, and up into the Luangwa ecosystem, it makes this area a new and important transboundary population. At the October 2016 National Conservation Planning Workshop for Cheetah and African Wild Dogs in Angola, experts also confirmed several new areas in Angola as resident range for wild dogs.

When looking at numbers, the total estimate for African wild dogs in southern Africa has increased slightly from 4,273 wild dogs in 470 packs in 2007 to 4,411 wild dogs in 479 packs in 2015/16. If the small fenced reserves are included, this figure increases to 4,636 dogs in 498 packs. Whilst the estimated number of free ranging wild dogs has not changed significantly since 2007 (increase of only 138 wild dogs, or 9 packs), there have been some subtle changes. Areas of resident range have been added (Fig 4.6), and density estimates for some areas revised down based on better availability of data.

Given an increase in resident range of 272,403km^2 (almost 5% increase since 2007), the limited increase in population estimate indicates that populations must be declining across much of the previously known resident range.

4.4 Conclusions

The geographic range of wild dogs in southern Africa has experienced a substantial contraction over the past two hundred years. From a historical distribution formerly covering over 5 million km^2, in 2015 less than 1,000,000km^2 (17% of the total) still appears to support resident wild dog populations. Even so, both resident range area and population estimates for free roaming dogs have increased since 2007, although the latter by only 138 individuals or 9 packs.

Only seven of the 10 countries in the region support wild dogs; Lesotho and Swaziland have no wild dogs at all, while Malawi has only occasional sightings of presumably transient wild dogs in Kasungu National Park (although there are moves to reintroduce some. Close to 92% of wild dogs in the region live in populations which span international boundaries, and as such transboundary cooperation in their conservation is imperative.

Overall, estimated free ranging wild dog numbers have not changed significantly since 2007, showing only a slight increase from 4,273 wild dogs in 470 packs in 2007, to 4,411 wild dogs in 479 packs in 2015. This represents an increase of only 4.8% over 8 years, and were this to be genuine population growth, would demonstrate a compound annual growth rate of 0.59% per year.

However, it is unlikely that this is indicative of an increasing population, but rather of more areas discovered as holding resident wild dogs. In fact, the estimate of resident range for wild dogs has increased by 272,403km^2 since 2007, so such a modest increase in overall population numbers (of only 138 individual wild dogs) does indicate a decline in many of the previously known populations. Nonetheless it is moderately encouraging that even with our substantially improved knowledge we are not recording a decline in overall wild dog numbers.

Although the number and geographical extent of known populations is small relative to the species' historic range, there are additional areas that may still support resident populations ('possible range'). Of particular relevance here are large areas in northern and central Mozambique, south eastern Angola and southern Botswana. Surveys in such areas would be of great value and should be prioritised.

Only a comparatively small number of locations were identified where recovery of extirpated wild dog populations might be considered (recoverable range). The most notable of these is a large area of land in Namibia, going west through Etosha National Park and then south a short way in from the coast. Most other areas designated as recoverable range, adjoin areas that are currently occupied by wild dogs, and natural recovery is thus potentially possible. Reintroduction is probably not, therefore, a high priority for conserving wild dogs in the region in the medium term.

Despite a great deal of information being available for some of the region (in particular South Africa, Namibia, Botswana and Zimbabwe), wild dog status is still unknown across 22.1% of the region and uncertain (considered 'possible') in another 8.6%. Most of the unknown range is currently located in Angola, Zambia and Mozambique. These areas are also priorities for survey work.

CHAPTER 5

Threats to Cheetah and African Wild Dogs in Southern Africa

5.1 Introduction

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

5.2 Proximate threats

In the 2007 workshop, data on threats to known wild dog and cheetah populations were contributed by workshop participants. In addition, during the mapping process, participants were asked to list the factors most likely to threaten current known populations, and to provide evidence that each factor represented a threat. This information was then reviewed and collated separately for wild dogs and cheetah. However, as the threats identified were almost identical for the two species, they are from here on discussed together.

The sections below describe the major threats faced by the species, as identified at the 2007 workshop and updated at the 2015 workshop. Additional threats identified in 2015 are listed below these points.

5.2.1 Habitat loss and fragmentation (both species)

Loss and fragmentation of habitat together represent the greatest over-arching threat to both cheetah and wild dogs, and contributes to several of the other proximate threats listed below. Because both species live at such low densities and range so widely, their populations require much larger areas of land to survive than do those of other carnivore species. For this reason, cheetah and wild dogs are more sensitive to habitat loss than are related species. In the long term, conserving viable populations of cheetah and wild dogs is likely to require land areas far in excess of 10,000km^2, unless very intensive management can be maintained. Fortunately, both species have the ability to survive and breed in human-dominated landscapes under the right circumstances; as such the large areas needed for wild dog and cheetah conservation could be protected land, unprotected land, or a combination of the two. Both species also have excellent dispersal abilities, therefore by conserving connecting habitat it should be made possible to maintain gene flow between populations, and to encourage recolonization of suitable unoccupied habitat, even in landscapes which have been moderately fragmented. However, as human population continues to increase in Africa, and pressure on the natural resources intensifies, this remains a very significant and real threat.

5.2.2 Conflict with livestock farmers (both species)

Both cheetah and wild dogs are threatened by conflict with livestock farmers in some parts of their geographic range. While both species tend to prefer wild prey over livestock, both may kill livestock under some circumstances and therefore risk being killed by farmers in retaliation. Such conflict may involve both subsistence pastoralists and commercial ranchers. As neither species regularly scavenges, they are less susceptible to poisoning than are other carnivores such as hyaenas and leopards, but may be shot or speared. Even where there is no genuine conflict, common misperceptions about the species amongst community members can also lead to unnecessary persecution.

5.2.3 Conflict with game farmers (both species)

Both cheetah and wild dogs are threatened by conflict with game farmers in parts of their geographic range. Since farmed game often represent the two species' natural prey, there are few, if any, measures which can be taken to reduce predation by cheetah and wild dogs. Wild dogs are particularly unpopular with game farmers not only because they take valuable game, but also because their tendency to chase large prey into fences (Van Dyk & Slotow, 2003) can cause serious damage to fences (Lindsey, du Toit & Mills, 2005). This was highlighted in the 2015 meeting as an increasing problem in South Africa particularly, where the breeding of expensive rare genetic and colour morphs of plains game species is becoming increasingly widespread. Due to their value, there is often low tolerance of any threat from a predator and persecution is more common.

5.2.4 Prey loss (both species)

Both cheetah and wild dogs are highly efficient hunters, able to survive in areas of comparatively low prey density. Nevertheless, loss of prey from some areas, due to hunting, illegal bushmeat harvesting, high livestock densities, habitat conversion or veterinary cordon fences may directly impact cheetah and wild dog populations. Prey loss can also have serious indirect effects, since predation on livestock may become more frequent where wild prey are depleted (Woodroffe et al., 2005b), intensifying conflict with livestock farmers. Although often more severe outside of protected areas, prey loss (due largely to unsustainable bushmeat poaching), is also a significant threat inside many protected areas where cheetah and wild dog populations should be secure.

5.2.5 Accidental snaring (both species)

Although neither species is regularly targeted by snaring (but see Davies & Du Toit, 2004), both species may be captured accidentally in snares set for other species. Such accidental snaring is a major source of wild dog mortality in many parts of southern Africa (Woodroffe et al., 2007a), both inside and outside of protected areas, and is the most serious threat to wild dog populations in several areas. While effects on cheetah populations are less well quantified, snared cheetah are reported occasionally and snaring may threaten some populations, including inside protected areas. In addition, as mentioned above, snaring can negatively impact wild dog and cheetah's prey populations as well. At the 2015 meeting, participants added that one major problem is the widespread availability of fence wire that is then used for snare wire (often inside and/or immediately adjacent to protected areas), as well as poor decision making about fencing placement and materials, and inadequate disposal of materials that can be used for killing wildlife (e.g. wire).

5.2.6 Road accidents (both species)

High speed roads represent a threat to both cheetah and wild dog populations. Wild dogs in particular use roads to travel and rest, and are therefore especially vulnerable to road accidents. This is a particular concern where paved roads or other fast, all-weather roads cross or adjoin major wildlife areas, such as the Lusaka-Mongu road which traverses Kafue National Park in Zambia, and the Bulawayo-Victoria Falls road which traverses wild dog habitat close to Hwange National Park in Zimbabwe. As the region develops and more roads are tarred, this source of mortality could increase unless awareness programmes are instigated (e.g. in northern Mozambique).

5.2.7 Small population size (both species)

Participants identified small population size as a threat to the persistence of several wild dog and cheetah populations in southern Africa. Many of these populations have been reintroduced to small, fenced areas in South Africa and are intensively managed as part of nationwide metapopulation. Without such management few, if any, could be considered viable. However, several very small populations (especially cheetah populations) have persisted in unfenced areas; maintaining connectivity with other suitable habitat will be vital for the conservation of these populations.

5.2.8 Infectious disease (mainly wild dogs)

Infectious disease can have major impacts on wild dog populations. Rabies contributed to the extinction of the wild dog population in the Serengeti-Mara ecosystem in 1991 (Gascoyne et al., 1993; Kat et al., 1995), and there have been several outbreaks documented in southern Africa (for example see Hofmeyr et al., 2000; Hofmeyr et al., 2004). Canine distemper caused at least one whole-pack death in Botswana (Alexander et al., 1996) and thwarted a reintroduction attempt at Tswalu in South Africa. More recently (2016), wild dogs in South Africa's Kruger National Park have also been impacted by distemper (EWT, pers. comm. 2016). Both rabies and canine distemper viruses are maintained within populations of domestic dogs (Cleaveland et al., 2000; Cleaveland & Dye, 1995); hence disease risks are likely to be particularly high for wild dogs living outside protected areas. Disease probably represents a smaller threat to cheetah, although in some areas anthrax has caused substantial mortality (Lindeque, Brain & Turnbull, 1996).

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

Cheetah are rarely hunted for their fur, or for cultural uses, in southern Africa. However, illegal or badly regulated trade in live cheetah for the pet trade has been documented in Botswana, Namibia and South Africa and may be an increasing problem throughout the region. The main sink area for such trade is the captive breeding industry of South Africa. Cheetah are hunted legally within the hunting industry in Namibia; the smaller legal quotas to hunt the species in Zimbabwe and Botswana are rarely used. Wild dogs are occasionally taken for cultural uses (especially in Zimbabwe (Davies & Du Toit, 2004) and Malawi), but this is probably too uncommon to constitute a serious threat to population viability. The biggest threat to cheetah from the illegal pet trade is on those populations in the Horn of Africa (Kenya, Ethiopia, Somalia, South Sudan and Djibouti).

During the 2015 workshop, some additional threats were identified. These included:

5.2.10 Irresponsible tourism and den disturbances (mainly wild dogs)

Some participants felt that irresponsible tourism, particularly at wild dog dens, was an emergent threat to the future vigour of the impacted packs. Significant and regular den disturbances by unregulated tourists could pose a major threat to pup survival in the long term.

5.2.11 Increased use of poison (both species)

Although neither cheetah nor wild dogs scavenge often, the increased use of poison for 'silent poaching' is a potential threat, particularly where waterholes are poisoned. This was deemed an emerging threat for cheetah and wild dogs.

5.2.12 Poor coexistence with communities

Given that cheetah and wild dogs are living alongside some of the poorest people in the world, the lack of benefits to communities from cheetah and wild dogs, the lack of resilience in communities subject to impact of cheetah and wild dogs and the lack of alternative livelihoods all present a threat to the future of the species on communal lands. There was also a perception amongst participants that there had been a reduction in options for wildlife-based revenues for communities.

5.2.13 Detrimental land use policies

It was felt by participants in the 2015 meeting that certain issues regarding land use posed a direct and serious threat to wild dogs and cheetah. These included a lack of engagement with private sector in minimizing impacts of mining and resource extraction, a lack of coordination to speak with one voice to stop damaging large scale development and poor zonation or poor integration of land use programs. Also included here was the increasing amount of predator proof fencing for game management (which would block dispersals and heighten the risks from stochastic events like drought or disease outbreaks).

5.2.14 Insufficient political commitment

Lack of cross-sectoral coordination and cooperation at the political level was felt to be a threat to cheetah and wild dogs by hampering conservation efforts at the policy level. Related to this was a concern about the lack of power of environmental ministries and the lack of political integration of biodiversity conservation into other areas of policy and political engagement. Finally, an emerging threat is that of the diversion of resources towards elephant and rhinos. With a major poaching crisis currently underway, most attention, effort and resources are being diverted to rhino and elephant conservation programs, resulting in fewer resources and less time for cheetah and wild dog conservation issues at government level.

5.2.15 Other

Other threats determined by participants in the 2015 workshop, which although important, are largely beyond the ability of the participants to address, include:

- Land mines which restrict access by wildlife authorities and kill animals
- Corruption in law enforcement agencies
- Loss of resilience in cheetah and wild dog populations due to climate change

5.3 Constraints on alleviating threats

Conserving cheetah and wild dog populations requires mitigating the threats listed above, often on very large spatial scales. Workshop participants therefore identified the barriers to achieving this outcome. Again, results for cheetah and wild dogs were extremely similar and are discussed together.

Identified constraints included lack of political will to foster cheetah and wild dog conservation, political upheaval in some important wild dog and cheetah areas, insufficient funding, lack of capacity, inappropriate legislation, poor land management, and lack of awareness by both government and the public. These potentially mutable human constraints contrast with several biological constraints which are characteristic of wild dogs and cheetah and cannot be changed: these included the species' negative interactions with other large carnivores, and their ability to kill valuable "game" animals.

This summary of the problems facing wild dog and cheetah conservation was used to inform a problem analysis which was critical for the development of the strategic plan (see Chapter 6). In recent years, tools have been developed to address many of the proximate threats to wild dog and cheetah populations (e.g. Woodroffe et al., 2005a), but the ultimate causes of these threats include problems such as human encroachment on wildlife areas, and lack of conservation capacity, which are common to many species in the region.

5.4 Conclusions

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

It was the aim of the strategic review meeting to revise the strategic conservation plan to incorporate objectives, results and activities to address the identified threats.

CHAPTER 6

The Regional Conservation Strategy for Cheetah and African Wild Dogs in Southern Africa (Updated August 2015)

6.1 Background

The first Southern Africa Cheetah and Wild Dog Conservation Strategy was produced in 2007. The structure and development of the strategic plan followed a process that had recently been developed by IUCN/SSC, and implemented in a similar planning exercise for cheetah and wild dogs in eastern Africa in 2007 (IUCN/SSC, 2008). This process was also illustrated by two previous species strategic plans in Africa: that for the West African Elephant (IUCN, 2005) and the African Lion (IUCN, 2006).

Information from previous action plans for cheetah and wild dogs – the Global Cheetah Conservation Action Plan (Bartels et al., 2001, 2002) and the African Wild Dog Status Survey and Conservation Action Plan (Woodroffe et al., 1997; Woodroffe, McNutt & Mills, 2004) – were also critical to the development of the process.

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

1. **Engagement of stakeholders:** Key individuals and institutions best able to implement the plan – including government authorities, species specialists and relevant NGOs – were all involved in the strategic planning process.
2. **Summary of knowledge:** The mapping process within the workshop established up-to-date information on the status and distribution of both species (see Chapters 3-4). This provided essential information for the development and updating of the strategic plan.
3. **Problem analysis:** A problem analysis was conducted to identify threats, gaps and constraints impacting participants' ability to conserve cheetah and wild dogs. The problem analysis provided information critical for the development of the objectives for the strategic plan. This was updated at the 2015 workshop, and fed into the new plan.
4. **Strategic plan:** A cascading plan was constructed, starting at a vision, proceeding to a goal, a series of objectives devised to meet the goal, and then a number of targets and activities to address each objective (Figure 6.1). At the 2015 meeting, this plan was revised from the objectives level down.

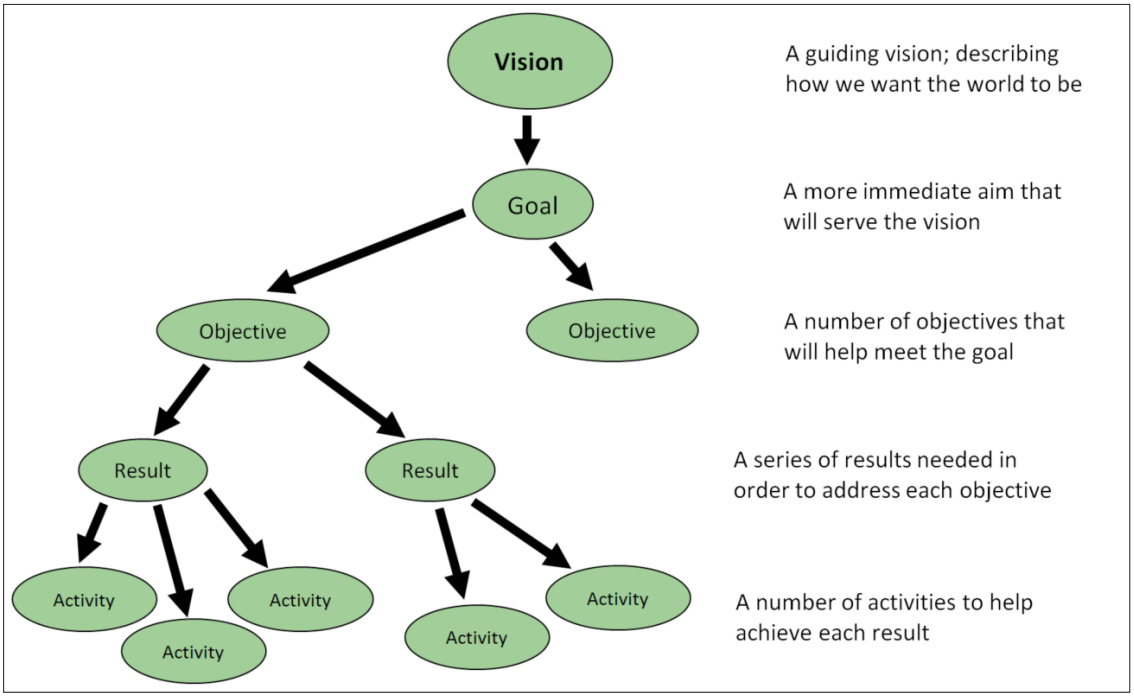


Figure 6.1 *The structure of the strategic plan developed in the 2007 and 2015 workshops. In the 2007 workshop, 'results' had been called 'targets' but these were updated to be 'results' in the 2015 workshop, to be in line with the IUCN/SSC strategic planning guidelines*

6.2 The Strategic Planning Process

The planning process is made up of six key stages:

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

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

The original strategic plan was revised from objective level down in 2015. It included a revision of the problem tree and several more problems were identified and added (see Section 5.2).

6.3 The Review Process (2015)

The second regional workshop, with the aim of revising and updating the 2007 Regional Conservation Strategy, was held from the 9th to 13th August 2015, at Heia Safari Ranch, Johannesburg, South Africa. In total 48 participants attended, including 23 participants from field programs from all eight range states, 11 government wildlife authority representatives from seven range states (all excluding Zimbabwe), five participants of the RWCP, five participants from AZA, one from the Pan African AZA (PAAZA), one GIS expert, one representative of the Convention on the Conservation of Migratory Species (CMS), and the co-chair of the IUCN Cat Specialist Group.

The workshop included presentations by the seven governments present on the progress made by their respective wildlife authorities towards the objectives of the 2007 regional strategy (IUCN/SSC 2007), as well as presentations by the 18 field projects, outlining their progress towards achieving the strategy's objectives. Participants were very encouraged to see how much work had been done since 2007 and it set a very positive tone for the meeting, although the challenges were also clear. The presentations were followed by a session to update the southern African distribution maps for cheetah and African wild dogs; a process greatly benefitting from the wealth of expert knowledge present all together.

Prior to the workshop all project and government participants had been asked to fill out their progress against the logframe of the original 2007 Regional Strategy (IUCN/SSC 2007). This information was pulled together by the RWCP regional coordinator for southern Africa. This was an extremely informative and valuable exercise, and was summarised during the workshop simply by indicating against which activities an organisation had made progress, and then summarising these by objective (Table 6.1). This demonstrated clearly in which areas most progress had been made and where less progress was made, allowing for guidance of the revision process to make these difficult objectives more achievable. In particular, most progress was achieved in the themes covering knowledge and information, coexistence and national planning (once adding in the RWCP's contribution), fair progress in the capacity development, information transfer and policy and legislation. However, much less progress has been made in the challenging areas of addressing land use change and engaging political commitment.

Theme	Objective	Project Progress	Government Progress
Capacity Development	1. Develop capacity in all aspects of cheetah and wild dog conservation in southern Africa.	**43%**	**22%**
Knowledge & Information	2. Improve knowledge on the conservation biology of wild dogs and cheetah across southern Africa.	**63%**	**55%**
Information transfer	3. Develop and implement mechanisms for the transfer of information relevant to cheetah and wild dog conservation and ensure active commitment of stakeholders.	**47%**	**34%**
Coexistence	4 Minimise conflict and promote coexistence between cheetah, wild dogs and people across southern Africa	**50%**	**63%**
Land Use	5 Minimise adverse effects of land development and promote and implement best land use practice for cheetah and wild dog conservation.	**26%**	**13%**
Political commitment	6 Obtain political commitment to the conservation needs of cheetah and wild dogs	**6%**	**12%**
Policy & Legislation	7 Review and, where necessary, revise, international, national and local legislation, policies and protocols affecting cheetah and wild dog conservation.	**20%**	**49%**
National Planning	8 Facilitate the implementation of the regional strategy and develop and implement national action plans for the conservation of cheetah and wild dogs in all range states.	**28%**	**40%**

Table 6.1: *A summary of progress made by projects and government wildlife authorities against the progress of the Regional Conservation Strategy for the Cheetah and African Wild Dog in Southern Africa (IUCN/SSC 2007)*

The remainder of the workshop was spent on a revision and update of the strategic logframe for the new strategy. While the goal and vision remained in place, the objectives, results and activities laid out the roadmap for achieving the goal, thus participants were asked to build on their experience to review and, where necessary, revise this roadmap to make it fit for purpose for another 7-8 years. To do this, participants were split into four working groups and each tackled two objectives. Final editing was conducted in plenary to reach a consensus on the final structure and wording of the strategy. Significant changes were made to the Land Use and Policy and Legislation Objectives which had proven difficult to implement from the last plan.

The whole process has demonstrated the immense value in workshops to review and revise such plans to keep them relevant, realistic and up to date. The revised strategy is substantially improved from the first version, as participants brought to bear their considerable experience in implementing the strategy in their revisions. The review workshop also demonstrated that the cheetah and wild dog strategy is a living, working document, and that not only is it meant to be implemented, but there would be follow up on progress.

6.4 The Updated Regional Strategy

6.4.1 The Vision and the Goal

Both the vision and goal of the original 2007 strategy were kept the same:

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

GOAL: Improve the status of cheetah and wild dogs, and secure additional viable populations across their range in southern Africa

6.4.2 The problem analysis

The problem tree developed in 2007 was detailed and comprehensive (Figure 6.2). However, at the 2015 workshop, a few more problems and threats were identified.

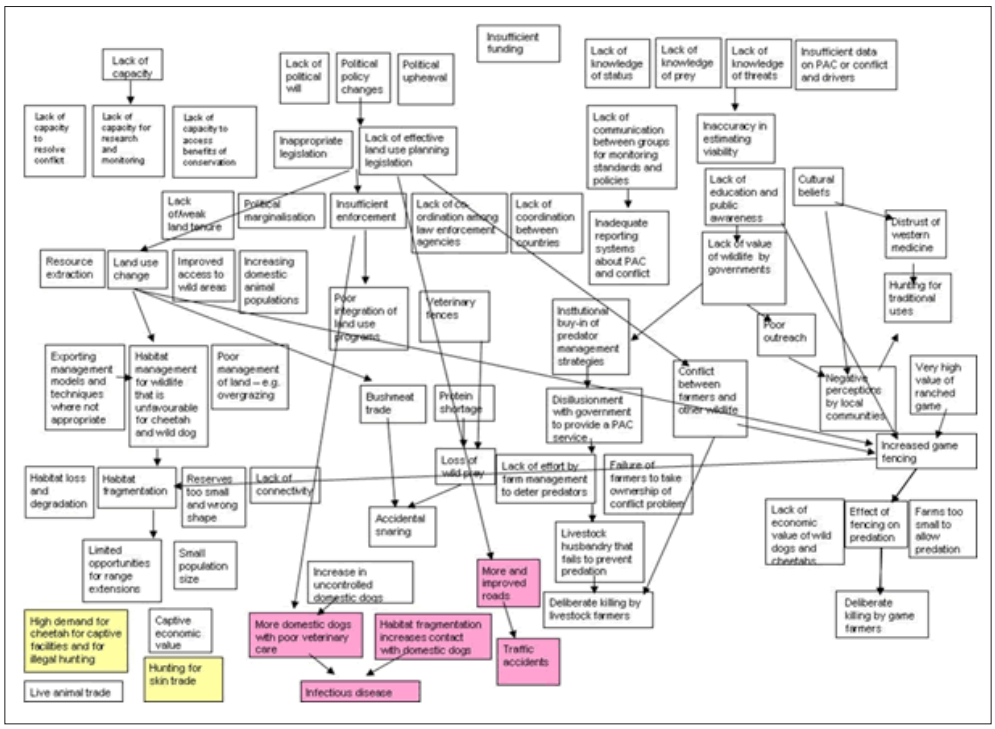


Figure 6.2 *A diagrammatic representation of the problem tree developed in 2007. This was added to in 2015. Yellow boxes refer to cheetah only, pink boxes refer to wild dogs only, and white boxes refer to both species.*

Additional problems identified in 2015, which were not identified as threats / problems in 2007 are listed below (and expanded on in Section 5.2)

6.4.2.1 Coexistence

Increased use of poison
Poisoning of waterholes
Den disturbance for wild dogs
Irresponsible tourism
Lack of benefits to communities from cheetah and wild dogs
Lack of resilience in communities subject to impact of cheetah and wild dogs
Lack of alternative livelihoods
Lack of gender empowerment (do we want to address this generally – or do we want gender empowerment to underlie our approach)

6.4.2.2 Land use

Increased predator proof fencing for game management
Availability of fence wire that is then used for snare wire/poor decision making about fencing placement
Inadequate disposal of materials that can be used for killing wildlife
Loss of resilience in cheetah and wild dog populations due to climate change
Lack of engagement with private sector in minimising impacts of mining/resource extraction
Lack of coordination to speak with one voice to stop damaging large scale development
Poor zonation/Poor integration of land use programs

6.4.2.3 Political Commitment

Lack of cross-sectoral coordination and cooperation
Lack of power of environmental ministries
Lack of political integration of biodiversity conservation
Diversion of resources into elephant and rhinos

6.4.2.4 Policy and legislation

Reduction in options for wildlife-based revenues

6.4.2.5 Other

Land mines restrict access by wildlife authorities and kills animals
Corruption in law enforcement agencies

6.4.3 The Revised Objectives

The original objectives were revised in the 2015 meeting. Although there was no fundamental change to meaning, the wording was improved (Table 6.2).

Theme	Original Objectives (2007)	Revised Objectives (2015)
Capacity Development	Develop capacity in all aspects of cheetah and wild dog conservation in southern Africa	To develop capacity in all aspects of cheetah and wild dog conservation in southern Africa.
Knowledge and Information	Improve knowledge on the conservation biology of cheetah and wild dog across southern Africa	To improve knowledge and generate information for the conservation of cheetah and wild dogs across southern Africa.
Information Transfer	Develop and implement mechanisms for the transfer of information relevant to cheetah and wild dog conservation and ensure active commitment of stakeholders	To increase active commitment of stakeholders and awareness of the wider public by transferring information relevant to cheetah and wild dog conservation
Coexistence	Minimise conflict and promote coexistence between cheetah, wild dog and people across southern Africa	To promote coexistence of people with cheetah and wild dogs across southern Africa
Land Use	Minimise adverse effects of land development and promote and implement best land use practice for cheetah and wild dog conservation	To promote best land use practice for cheetah and wild dog conservation and minimise adverse effects of land development
Political Commitment	Obtain political commitment to the conservation needs of cheetah and wild dogs	To advocate for increased political commitment to the conservation of cheetah and wild dogs
Policy and Legislation	Review, and where necessary revise, international, national and local legislation, policies and protocols affecting cheetah and wild dog conservation	To advocate for stronger international, national and local legislation, policies and protocols to support cheetah and wild dog conservation
National Planning	Facilitate the implementation of the regional strategy and develop and implement national actions plans for the conservation of cheetah and wild dogs in all range states	To maintain and implement up to date national action plans and utilise other relevant frameworks for the conservation of cheetah and wild dogs in all range states.

Table 6.2 *Original and revised objectives of the Southern African Regional Strategy for the Conservation of Cheetah and African Wild Dogs*

6.4.4 The Revised Results and Activities

The anticipated results, previously called targets, were extensively revised and updated, as were the activities necessary to achieve these results. These are laid out in the revised regional strategy below (and also in the logframe, Appendix 4)

6.4.5 The Revised Strategy

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

1. Capacity Development

Objective 1: To develop capacity in all aspects of cheetah and wild dog conservation in southern Africa.

1.1. Result: National gaps in capacity in all areas of cheetah and wild dog conservation in the region are identified and documented.

- **1.1.1. Activity:** Establish current situation and identify gaps for all capacity components (law enforcement, monitoring and research, education outreach, protected area management, political, etc.) in each country
- **1.1.2. Activity:** Integrate national reports into a regional synthesis

1.2. Result: A regional strategy is developed for capacity development (based on the regional synthesis report) across all levels

- **1.2.1. Activity:** Identify a committee member from each country to develop the regional capacity development strategy
- **1.2.2. Activity:** Develop the results and activities required for capacity development at the national and regional level, aligned where possible with international initiatives
- **1.2.3. Activity:** Identify and engage with appropriate training institutions
- **1.2.4. Activity:** Activate and source funds to implement the capacity development strategy at the national or regional level, wherever appropriate

1.3. Result: The Regional Capacity Development Strategy is implemented and evaluated

- **1.3.1. Activity:** Implement the activities identified by the Regional Capacity Development Strategy (in 1.2.2 above)
- **1.3.2. Activity:** Make use of the RWCP website to disseminate the Regional Capacity Development Strategy and rel evant resources, and facilitate networking
- **1.3.3. Activity:** Establish mechanisms for evaluating effectiveness of Regional Capacity Development Strategy
- **1.3.4. Activity:** Evaluate the effectiveness of the Regional Capacity Development Strategy using the mechanisms established in 1.3.3.

2. Knowledge and information

Objective 2: To improve knowledge and generate information for the conservation of cheetah and wild dogs across southern Africa.

2.1. Result: A better understanding of the status, distribution, biology and ecology of African wild dogs and cheetah is acquired

- **2.1.1. Activity:** Continue field studies on dispersal in both species, including factors influencing dispersal success.
- **2.1.2. Activity:** Continue studies on cheetah and wild dogs feeding ecology in different areas in relation to potential range.
- **2.1.3. Activity:** Assess viability and connectivity of small wild dog and cheetah populations.
- **2.1.4. Activity:** Continue to contribute to the ongoing cheetah and wild dog atlas
- **2.1.5. Activity:** Continue to conduct surveys in unknown and possible range to assess population status and distribution for cheetah and wild dogs.
- **2.1.6. Activity:** Assess recoverable range for factors likely to influence recolonization (natural or artificial) within two years.
- **2.1.7. Activity:** Maintain and expand long term monitoring programmes of cheetah and wild dog populations in resident range; ongoing.
- **2.1.8. Activity:** Research, collate and make available best practice guidelines and ethical considerations for cheetah and wild dog research, conservation, tourism and reintroduction.
- **2.1.9. Activity:** Continue research into new and improved ways to survey and monitor cheetah and wild dogs

2.2. Result: Standardised, quantitative knowledge of threats and their mitigation are generated and disseminated across southern Africa, including on poaching for bush-meat, habitat loss and fragmentation, illegal trade, captive management, climate change and irresponsible tourism, within two years.

- **2.2.1. Activity:** Gather and disseminate information on the best practise for captive management of wild dog and cheetah to prevent illegal offtake from the wild and the associated illegal trade.
- **2.2.2. Activity:** Gather and disseminate information on present and emerging threats to cheetah and wild dog conservation from the bush-meat trade.

2.2.3. Activity: Gather and disseminate information on present and emerging threats to cheetah and wild dog conservation from irresponsible tourism activities.

2.2.4. Activity: Gather and disseminate information on threats caused by game farming/ranching.

2.2.5. Activity: Gather and disseminate information on loss and fragmentation of cheetah and / or wild dog habitat.

2.2.6. Activity: Gather and disseminate information on conservancy models and illustrate the potential benefits of conservancies as an alternative to game farming/ranching.

2.2.7. Activity: Gather and disseminate information on meta-population management.

2.3. Result: Standardised, quantitative knowledge of human-carnivore conflict mitigation across southern Africa is generated and disseminated within two years.

2.3.1. Activity: Establish a technical working group incorporating all range states.

2.3.2. Activity: Technical working group to address all relevant regional NGO's, researchers and governments to ask for involvement and data/information to contribute to best practice manual for conflict mitigation for predators (by October 2015).

2.3.3. Activity: Regional NGO's, researchers and governments to compile available data and information on conflict issues and their mitigation solutions.

2.3.4. Activity: Technical working group to develop an interactive online database where information can be uploaded and compiled.

2.3.5. Activity: NGO's, researchers and governments to nationally collate their information and upload onto interactive database/or make it available to the technical working group (by March 2016).

2.3.6. Activity: Technical working group to work through information provided and create a practical, useful 'living' document to be delivered to the wider public (by June 2017). This will be completed through a workshop if funding can be sourced.

2.3.7. Activity: Technical working group to develop a strategy for delivery of the document to the wider public.

2.3.8. Activity: Technical working group to obtain letters of support from key stakeholders.

2.3.9. Activity: Market and deliver the document to the wider public (to be completed two years after start date).

3. Information transfer

Objective 3: **To increase active commitment of stakeholders and awareness of the wider public by transferring information relevant to cheetah and wild dog conservation.**

3.1. Result: Information about relevant benefits of cheetah and wild dogs to local communities, governments and landowners continues to be shared.

3.1.1. Activity: Hold meetings and workshops with communities, landowners and government, to exchange knowledge and information regarding relevant incentives and benefits; ongoing.

3.2. Result: Multimedia projects continue to be developed across all regional range states, building on the best existing material.

3.2.1. Activity: Continue to develop web-based, interactive reporting mechanisms for sightings, data, findings and activities relevant to cheetah and wild dog conservation.

3.2.2. Activity: Continue to develop and use posters, leaflets, radio, TV, video, pictures and theatre groups to disseminate information locally.

3.2.3. Activity: Ensure a minimum standard of data collection throughout the region, especially in areas where information gaps occur.

3.3. Result: Increased national awareness of local threats to cheetah and wild dogs across range states.

3.3.1. Activity: Continue to establish competitions, essays, etc. in schools and groups to enhance and highlight conservation education.

3.3.2. Activity: Continue to develop curricula regarding cheetah and wild dogs and integrate with activities of youth conservation clubs.

3.3.3. Activity: Continue to encourage sponsorship of sports teams, clubs and groups named after cheetah and wild dogs at all levels.

3.4. Result: National research symposiums promoted in all regional range states.

3.4.1. Activity: Promote workshops on cheetah and wild dogs at annual scientific symposiums.

3.4.2. Activity: Continue to participate in a wider range of meetings and stakeholder interest groups (i.e. those not directly concerned with conservation) to disseminate information about cheetah and wild dog conservation

3.5. **Result:** A greater awareness of issues related to cheetah and wild dog conservation among relevant stakeholders in all range states.

- **3.5.1. Activity:** Continue to develop and disseminate education and awareness material, building on best existing material, for both adults and children in all range states.
- **3.5.2. Activity:** Continue to create and implement multimedia programmes to raise awareness and understanding of cheetah and wild dog conservation in all range states.
- **3.5.3. Activity:** Sensitise leaders to the value of cheetah and wild dog conservation; ongoing.
- **3.5.4. Activity:** Link with existing initiatives and provide relevant information and interpretive materials to support judicial and law enforcement agencies.

4. Coexistence

Objective 4: **To promote coexistence of people with cheetah and wild dogs across southern Africa.**

4.1. **Result:** The deliberate killing of cheetah and wild dogs is reduced

- **4.1.1. Activity:** Continue monitoring the extent of deliberate killing of cheetah and wild dogs in all range states, and collate data annually on a national level, and every three years for the region.
- **4.1.2. Activity:** Clarify and advocate for enforcement of laws pertinent to killing of cheetah and wild dogs across range states, on an ongoing basis.
- **4.1.3. Activity:** Identify conflict areas and clarify extent of actual versus perceived losses caused by cheetah and wild dogs, on an ongoing basis.
- **4.1.4. Activity:** Sensitize relevant stakeholders about livestock husbandry practices proven to reduce depredation, on an ongoing basis.
- **4.1.5. Activity:** Develop and implement national standard operating procedures on acceptable responses to conflict situations within one year and encourage exchange between range states (e.g. procedures on captures, translocation, lethal control etc).
- **4.1.6. Activity:** Implement human-wildlife conflict rapid response teams to react quickly and effectively to conflict situations, across all range states within two years.
- **4.1.7. Activity:** Initiate and continue programmes to combat negative perceptions of cheetah and wild dogs in all range states within one year.

4.2. **Result:** The levels of incidental mortality in cheetah and wild dogs are reduced in all range states as appropriate within five years.

- **4.2.1. Activity:** Continue monitoring the extent of incidental mortality of cheetah and wild dogs in all range states, and collate data annually on a national level, and every three years for the region.
- **4.2.2. Activity:** Reduce snaring mortality of cheetah and wild dogs through initiatives such as anti-poaching efforts, removal of snare wires, and integrated community based population, health and environment initiatives, on an ongoing basis.
- **4.2.3. Activity:** Initiate programmes known to be effective at managing diseases that threaten cheetah and wild dog population viability, on an ongoing basis.
- **4.2.4. Activity:** Implement targeted, enforceable programmes which reduce road mortality of cheetah and wild dog on an ongoing basis.
- **4.2.5. Activity:** Substantially reduce poisoning mortality of cheetah and wild dogs through law enforcement and awareness campaigns.

4.3. **Result:** The perceived intrinsic and economic value of cheetah and wild dogs to all stakeholders are measurably increased within five years.

- **4.3.1. Activity:** Quantify and monitor the perceived intrinsic and economic value of cheetah and wild dogs to all stakeholders; ongoing.
- **4.3.2. Activity:** Promote wildlife based economic activities that promote cheetah and wild dog conservation and directly benefit communities and other stakeholders, in all range states within five years.
- **4.3.3. Activity:** Investigate and highlight the cultural significance of cheetah and wild dogs across all range states; ongoing.
- **4.3.4. Activity:** Develop self-sustaining community schemes that offset the costs of, and internalise the responsibilities for, conflict on an ongoing basis.
- **4.3.5. Activity:** Develop income generation and capacity development projects linked to cheetah and wild dog conservation, on an ongoing basis.

4.4. **Result:** Socio-economic drivers to foster co-existence of land users with cheetah and wild dogs are addressed.

- **4.4.1. Activity:** Identify and engage key stakeholders and experts to address socio economic threats to cheetah and wild dogs within 5 years.
- **4.4.2. Activity:** Identify socio-economic factors relevant to cheetah and wild dog conservation within two years.

4.4.3. Activity: Develop strategies to address socio economic threats to cheetah and wild dogs within five years.

4.4.4. Activity: Encourage range states to develop a bio-economic strategy that promotes co-existence with cheetah and wild dogs.

5. Land use

Objective 5: **To promote best land use practice for cheetah and wild dog conservation and minimise adverse effects of land development.**

5.1. **Result:** Current, proposed and trends in land use are evaluated against the conservation needs of cheetah and wild dogs.

5.1.1. Activity: Build and maintain relationships with key regional stakeholders responsible for determining current and future land use strategies, within one year.

5.1.2. Activity: Collate guidelines based on case studies of land-use strategies associated with successful cheetah and wild dog conservation from each country in the region, within two years.

5.1.3. Activity: Engage constructively with industry, provide support in the form of best management practices and seek opportunity that will benefit cheetah and wild dog

5.2. **Result:** Integrated and innovative land-use management, planning and development aligned with cheetah and wild dog conservation is facilitated.

5.2.1. Activity: Identify and recommend guidelines in collaboration with government and private sector for social and environmental responsibility aligned with cheetah and wild dog conservation.

5.2.2. Activity: Coordinate cross sectorial communication among all key players including private sector to facilitate cooperation and collaborative initiatives that address cheetah and wild dog conservation, e.g. IUCN Global Business and Biodiversity Programme.

5.2.3. Activity: Promote cross sectorial participation in the Range Wide Conservation Program.

5.3. **Result:** The formation of landscape scale wildlife management units (e.g. conservancies, community parks etc.) is promoted by increasing awareness of the potential benefits of such land uses within two years.

5.3.1. Activity: Promote awareness of opportunities for partnerships for management of wildlife areas that benefit cheetah and wild dogs.

5.3.2. Activity: Monitor the development of landscape scale wildlife management units (e.g. large, multiple use areas that could encompass conservancies, parks and community grazing areas) and their influence on cheetah and wild dog conservation, to enable adaptive management.

5.3.3. Activity: Optimise current resident range, maintain and recover corridors and connectivity and secure at least 20% of recoverable and possible range within five years to facilitate the expansion of cheetah and wild dog populations.

5.3.4. Activity: Promote wild dogs and cheetah as the flagship species of large landscape level habitat conservation initiatives, for protected area networks and corridors, including TFCA's.

5.4. **Result:** Cheetah and wild dog range is expanded within southern Africa through reintroductions of the species to appropriate areas of recoverable range.

5.4.1. Activity: Identify appropriate range.

5.4.2. Activity: Engage partner organisations and relevant government authority personnel in establishing reintroduction plans.

5.4.3. Activity: Ensure reintroduction plans follow IUCN Reintroduction guidelines.

5.4.4. Activity: Identify source populations of cheetah or wild dogs, including, where possible, through regional and international studbooks to identify populations of sound genetic viability.

5.4.5. Activity: Monitor reintroduction efforts and individual animals for at least five years post release.

5.5. **Result:** Wildlife based land uses and community participation in natural resource management are promoted in areas with potential for cheetah and wild dog conservation.

5.5.1. Activity: Identify and prioritize areas with potential for natural resource based land uses conducive to cheetah and wild dog conservation for each country annually.

5.5.2. Activity: Linking local capacity, resources, services and expertise to maximise partnership opportunities to en hance areas with potential for cheetah and wild dogs.

5.5.3. Activity: Evaluate the effectiveness of wildlife based land uses and their outcomes for cheetah and wild dog conservation to enable adaptive management.

5.5.4. Activity: Strengthen and increase (by 20%) buffer zones around areas with potential for cheetah and wild dog conservation through promoting community participation and partnership opportunities.

5.6. **Result:** Effective and appropriate livestock husbandry, range management and agriculture that is consistent with cheetah and wild dog conservation is promoted.

- **5.6.1. Activity:** Promote and link agriculture and range management programmes to relevant areas.
- **5.6.2. Activity:** Coordinate with the providers of training programmes to increase the capacity of agricultural communities to practice sustainable range management.
- **5.6.3. Activity:** Assess the effectiveness of new and existing livestock husbandry and range management programmes against the conservation needs of cheetah and wild dogs and disseminate results annually to inform adaptive management strategies.

6. Political commitment

Objective 6: To advocate for increased political commitment to the conservation of cheetah and wild dogs.

6.1. **Result:** A regional agreement to collaborate in conserving cheetah and wild dogs across southern Africa is approved by all governments.

- **6.1.1. Activity:** Link with local and international advocacy organisations, such as International Conservation Caucus Foundation ICCF, to achieve results outlined in this strategy.
- **6.1.2. Activity:** Draw up an agreement, in collaboration with these advocacy organisations, for range state governments regarding commitment to conserve cheetah and wild dogs.
- **6.1.3. Activity:** Present agreement to national agencies who will then take it to ministers, within six months of the agreement being drawn up.
- **6.1.4. Activity:** Organise a regional state meeting where the agreement will be formally signed by the eight countries.

6.2. **Result:** Relevant transboundary agreements that will benefit the conservation of cheetah and wild dogs are promoted.

- **6.2.1. Activity:** Develop and promote further agreements and strategies that will benefit cheetah and wild dogs.
- **6.2.2. Activity:** Link and partner with local and international advocacy organisations, for example the ICCF, to achieve effective transboundary conservation efforts.

7. Policy and Legislation

Objective 7: To advocate for stronger international, national and local legislation, policies and protocols to support cheetah and wild dog conservation.

7.1. **Result:** The relevance and efficacy of current national, regional and international policies, protocols and legislation pertaining to the conservation of cheetah and wild dogs is assessed.

- **7.1.1. Activity:** Identify existing international and national legislative frameworks that could help promote the conservation of cheetah and wild dog.
- **7.1.2. Activity:** Range Wide Conservation Program to employ a consultant to carry out an assessment of the efficacy and suitability of these frameworks (identified in 7.1.1), and compile recommendations.

7.2. **Result:** Cheetah and wild dog conservation actions are aligned to existing national and international policies, protocols and legislation, and revision is lobbied for where appropriate.

- **7.2.1. Activity:** Make use of consultant recommendations (7.1.2) to align regional actions to national and international initiatives.
- **7.2.2. Activity:** Implement and enact these new and/or aligned policies, protocols and legislation.
- **7.2.3. Activity:** Identify policies, protocols and legislation that will imminently be undergoing revision, and send repre sentatives of the Range Wide Conservation Program to advocate for revision at these meetings.
- **7.2.4. Activity:** For legislation that does not adequately address cheetah and wild dog conservation needs, and for which there is no planned revision, advocate for changes, including by making use of existing networks (e.g. IUCN SA members etc).

7.3. **Result:** Cheetah and wild dog range states encouraged to actively participate in biodiversity-related multilateral environmental agreements (MEAs, e.g. CMS, CBD, CITES, SADC protocols, WENSA) and other international processes.

- **7.3.1. Activity:** Investigate how existing MEAs can facilitate cheetah and wild dog conservation, and make recommendations for action.
- **7.3.2. Activity:** Adopt the recommendations identified in 7.3.1
- **7.3.3. Activity:** Advocate for range states to become parties to the Convention on Migratory Species and other relevant conventions.
- **7.3.4. Activity:** Investigate and obtain support for this strategy from CMS and other MEAs.
- **7.3.5. Activity:** Develop and/or identify existing relevant motions for submission to the IUCN World Conservation Congress.

7.4. **Result:** This revised strategy for the conservation of cheetah and African wild dogs in southern Africa is incorporated into both the National and SADC Regional conservation plans by 2017.

7.4.1. Activity: At a regional level, to request that the Chair of SADC take the lead in ensuring that the Revised Strategy for the Conservation of Cheetah and African Wild Dogs is incorporated in the SADC Regional Biodiversity Strategy and Action Plan (RBSAP), by 2016.

7.4.2. Activity: At a national level, each SADC member state to incorporate their national conservation action plan for cheetah and African wild dogs into their respective National Biodiversity Strategies and Action plan (NBSAP) by 2017.

7.4.3. Activity: Encourage SADC countries to prioritize the conservation of cheetah and wild dogs in the implementation of the Programme of Work for Protected Areas (POWPA)

7.4.4. Activity: Encourage SADC member states to prioritise the conservation of cheetah and wild dogs in their Global Environmental Facility (GEF) allocations.

7.5. **Result:** The capacity of law enforcement and judicial agencies to implement legislation, policies and protocols relevant to cheetah and wild dog conservation is improved.

7.5.1. Activity: National agencies to identify and align with existing law enforcement networks, and prioritise capacity needs to enforce legislation, policies and protocols relevant to cheetah and wild dog conservation.

7.5.2. Activity: Secure resources required to improve capacity.

7.5.3. Activity: Develop capacity according to priorities set by national agencies (in 7.4.1).

7.5.4. Activity: Maintain ongoing engagement with existing networks dealing with, inter alia, issues of bushmeat poaching, law enforcement, illegal trade, problem animal control relevant to cheetah and wild dog conservation.

8. National Planning

Objective 8: To maintain and implement up to date national action plans and utilise other relevant frameworks for the conservation of cheetah and wild dogs in all range states.

8.1. **Result:** National Action Plans for each country are revised (or where necessary developed) to be S.M.A.R.T and in line with this strategy, within two years.

8.1.1. Activity: Identify key stakeholders to facilitate the revision process in each country within 6 months.

8.1.2. Activity: Revise the action plans in each state within two years.

8.2. **Result:** The implementation of the revised national action plans is facilitated within two years of the revision.

8.2.1. Activity: Identify appropriate mechanisms within each country for driving the implementation process within 6 months.

8.2.2. Activity: Identify constraints and where possible provide the means to ensure implementation of the revised national strategy within one year.

8.2.3. Activity: Encourage all stakeholders to use the revised national action plan to guide their conservation actions at all times.

8.2.4. Activity: Arrange a workshop between governments to exchange information on the implementation process of national action plan.

6.5 Conclusions and national planning

The regional strategic plan was developed, and has been updated, in a format that can be readily adapted for national implementation, through a national participatory workshop process engaging all national stakeholders, including those who attended the regional strategic workshop/s. In the southern African region, such national workshops have been held in Botswana (2007), Malawi (2011), Mozambique (2010), Namibia (2013), South Africa (2007), Zambia (2009) and Zimbabwe (2009). The national workshop for Angola is scheduled for October 2016.

The principal steps in translating the regional strategy into a national strategy are as follows:

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

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APPENDIX 1

Participants of the 2015 Review Meeting

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APPENDIX 2

Agenda

HEIA SAFARI RANCH - 9TH TO 13TH AUGUST 2015

SUNDAY 9TH AUGUST 2015

All arrive at Heia Safari Ranch
(Shuttles to depart JNB International Airport at various times throughout the day)

18:30 Icebreaker Drinks at the bar
All participants

19:30 DINNER

MONDAY, 10TH AUGUST

8:45 Official welcome and opening remarks
Christine Breitenmoser

9:00 Welcome from workshop hosts (Heia Safari Ranch)
Venue staff

9:05 Brief welcome and introduction from RWCP
Sarah Durant

9:15 Introduction to AZA and SAFE – including the organizational and operation details of the cooperative species management program AZA team

9:30 Introductions
All participants

9:50 Background Presentation – The Regional Conservation Strategy for Cheetah and Wild Dogs, and the need for review; to include aims and objectives of the meeting
Sarah Durant

10:10 TEA BREAK

Presentations from country wildlife authorities on progress made against objectives of Regional Strategy Country Wildlife Authority Representatives x8 (15 minutes per presentation)

10:45 Botswana
Michael Flyman

11:00 Mozambique
Abel Nhabanga & Pedro Periera & Oraca Cuambe

11:15 Malawi
Chiza Manda

11:30 Angola
Iracelma Machado

11:45 Namibia
Ortwin Aschenborn & Uakedisa Muzuma

12:00 Zimbabwe
Colum Zhuwau

12:15 Zambia
Clive Chifunte & Chuma Simukonda

12:30 Conservation across borders: CMS and its relevance to cheetah and wild dogs
Nopasika Malta Qwathekana

12:45 LUNCH BREAK

Project Presentations: (10 minutes per presentation)

14:00 Endangered Wildlife Trust (South Africa)
Kelly Marnewick / Harriet Davies-Mostert

14:10 Cheetah Outreach (South Africa)
Deon Cilliers

14:20 Cheetah Conservation Fund (Namibia)
Laurie Marker / Anne Schmidt-Küntzel

14:30 Naankuse (Namibia) – Namibian Wild Dog Project
Rudie van Vuuren

14:40 IZW (Namibia)
Joerg Melzheimer

14:50 Caprivi Carnivore Project (Namibia)
Lise Hansen

15:00 Angola Carnivore Survey (Angola)
Paul Funston

15:10 Angolan Carnivore Project (Angola)
Ezequiel Fabiano

15:20 Botswana Predator Conservation Trust (Botswana)
Tico McNutt

15:30 Cheetah Conservation Botswana (Botswana)
Jane Horgan

15:40 Panthera (Zambia / KAZA)
Kim Overton

15:50 Zambian Carnivore Program (Zambia)
Johnathan Merkle

16:00 Conservation Lower Zambezi (Zambia)
Ian Stevenson

16:10 TEA BREAK

16:40 African Wildlife Conservation Fund (Zimbabwe)
Jessica Watermeyer

16:50 Painted Dog Conservation (Zimbabwe)
Hilary Madzikanda

17:00 Cheetah Conservation Project Zimbabwe (Zimbabwe)
Esther van der Meer

17:10 Painted Dog Research Trust (Zimbabwe)
Greg Rasmussen

17:20 Limpopo Transfrontier Predator Project (Mozambique)
Leah Everatt

17:30 Malawi Wild Dog Project (Malawi)
Emma Stone

17:40 Summary of the day
Sarah Durant and Christine Breitenmoser

18:00 END OF DAY 1

18:30 Drinks Reception

19:30 DINNER

TUESDAY, 11TH AUGUST

8:30 Plan for the day
Sarah Durant and Christine Breitenmoser

8:45 South Africa
Angela Gaylard & Charlene Bissett

9:00 The illegal trade in cheetah
Nick Mitchell

9:10 Maps - Presentation of Regional Cheetah and Wild Dog Maps (both updated in 2014 / early 2015)
Lizanne Roxburgh

9:30 Working groups: One cheetah and one wild dog working group to discuss any changes or updates to the two maps
Lizanne Roxburgh / Nick Mitchell

10:30 TEA BREAK (informal)

11:00 Continue discussions on changes and updates to maps – finalise by lunch

12:30 LUNCH BREAK

14:00 Summary of Progress against Regional Strategy so far (compilation of data from log frames – and achievements to date)
Rosemary Groom

14:40 An examination of the problem tree – is it still valid?
Presentation and explanation of the problems identified in the first regional meeting. Summary of continuing and new barriers and obstacles to cheetah and wild dog conservation
Plenary discussion: Does the problem tree continue to address all the problems confronting cheetah and wild dog conservation? Are there new problems that need to be addressed?
Facilitated by Christine Breitenmoser and Sarah Durant

15:40 Reviewing the 2007 regional strategy: Plenary review of Objectives. Are they still valid or do they need changes?
Facilitated by Christine Breitenmoser and Sarah Durant

16:00 TEA BREAK

16:30 Reviewing the 2007 regional strategy: Targets and activities
Working Groups – Review the targets and activities under each of the 8 objectives of the Regional Strategy to update and change where necessary (each working group (x4) takes two themes)
Facilitated by Christine Breitenmoser and Sarah Durant

17:30 FINISH

19:00 DINNER

19:45 Climate change and its relevance to cheetah and wild dogs
Rosie Woodroffe

20:05 Human Wildlife Conflict Toolkit
Nick Mitchell

20:15 END OF DAY 2

WEDNESDAY, 12TH AUGUST

8:15 Plan for the day
Sarah Durant and Christine Breitenmoser

8:30 Continue in working groups to update targets and activities of regional strategy

10:30 TEA BREAK (informal)

11:00 Plenary - each working group to present on their suggested updates to the targets and activities of the log frame of the Regional Strategy Facilitated by Christine Breitenmoser and Sarah Durant

13:00 LUNCH BREAK

14:00 Plenary (cont.)

15:00 Return to working groups to revise and update targets and activities according to plenary discussion

16:00 TEA BREAK

16:30 Working groups (cont.)
Groups hand in revised targets and activities to facilitators

17:30 END OF DAY 3

19:00 DINNER

THURSDAY 13TH AUGUST

8:15 Plan for the day
Sarah Durant and Christine Breitenmoser

8:30 Plenary – presentation and review of finalised distribution maps
Facilitated by Rosemary Groom

9:20 Plenary – presentation and review of updated log frame of regional strategy
Facilitated by Christine Breitenmoser and Sarah Durant

11:00 Wrap up of meeting and way forward

11:45 Closing remarks

12:00 END OF MEETING and LUNCH

13:45 & 15:00 Shuttles depart for OR Tambo International Airport

APPENDIX 3

Mapping Methodology and Definitions of Range Categories

Range maps were produced during the 2007 Regional Workshop and have been subsequently updated after each National Action Planning Workshop. During the 2015 workshop, both cheetah and wild dogs were once again thoroughly revised and updated, making the most of the wealth of species experts from throughout the region, all in the same room. Both the range polygons and the associated metadata tables were updated at the workshop and have subsequently been scrutinised by participants on a country by country basis to ensure they are as accurate as possible. The maps presented in this document thus represent the best available distribution maps for both wild dogs and cheetah in 2015.

A3.1 Update of Range Category Definitions

After extensive plenary discussions, the range categories were eventually updated to the following:

(1) Resident range:
Land where the species was known to still be resident. This recognised the knowledge that both cheetah and wild dogs have excellent dispersal abilities, meaning that not every point location indicates the presence of a resident population; some may indicate transient dispersing animals. Resident range was defined as areas where (i) the species has been regularly detected over a period of several years; (ii) there was evidence of breeding (e.g. young cheetah cubs sighted, or wild dog pups or dens recorded); and (iii) for wild dogs, there were sightings of complete packs (groups containing members of both sexes, usually >3 animals) rather than small groups (≤3 animals), or single-sex groups, which are likely to be dispersal groups.

(2) Possible Resident Range*:
Land where the species may still be resident, but where residency had not been confirmed in the last 10 years. Usually these would be areas which contain suitable habitat and prey, but which have had little or no ground-based surveying in recent years (aerial surveys are unlikely to detect either species). Some areas were considered to constitute possible range because only unconfirmed reports (e.g. reports from inexperienced observers), or only sparse, irregular sightings were available or there were only reports of transient individuals or groups. This also includes once off surveys that have detected presence but not breeding behaviour.

* In the attribute table, it is made clear whether the range is possible resident with presence recorded (i.e. from a once off survey or sporadic sightings, excluding pups or cubs) or where presence has not been recorded, but expert opinion is of the consensus there would be wild dogs or cheetah resident there (due to suitable habitat and prey availability)

(3) Transient Range*:
Habitat used intermittently by wild dogs or cheetah, but known not to be used regularly, providing no connection to areas of resident, possible or unknown range, and unlikely to be made suitable for use by resident wild dog or cheetah populations through any reasonable form of management. Such areas are likely to be natural habitats that are only marginally suitable for cheetah or wild dogs (e.g. desert), or heavily modified / human impacted areas. Transient range also includes areas which have been used sporadically by dispersing animals (e.g. from collar data).

* The transient range category was newly defined in the 2015 workshop, but is a variation on the 'marginal' range category described for wild dogs only in 2007.

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

(5) Recoverable range*:
Land where cheetah and wild dogs are currently known to be extirpated, but where habitat and prey remain over sufficiently large areas that either natural or assisted recovery of the species might be possible within the next 10 years if reasonable conservation action were to be taken.

* In designating areas of recoverable range, participants were asked to bear in mind that both species live at low densities and travel very widely, so they would rarely be recoverable in small areas (<3,000km^2) unless very intensive management (e.g. predator-proof fencing and active population management) could be implemented.

(6) Extirpated range:
Land where the species is currently extinct, and where habitat has been so heavily modified or fragmented (e.g. by cultivation or urbanisation) as to be uninhabitable by resident animals for the foreseeable future.

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

A3.2 Using the Maps

These maps are useful in a number of ways.

- They are the recognised basis for the IUCN red list updates for distribution and numbers of both cheetah and African wild dogs across Africa
- They provide a documented history of changes in range of the two species over time
- They can be used to prioritise different types of conservation intervention

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

In order to improve our understanding of both cheetah and wild dogs' distribution and abundance, surveys should be prioritised in areas currently designated as unknown or possible range. Direct conservation efforts should be focussed in and around areas of resident range and areas of connecting range. Work in areas designated as recoverable range should focus on identifying and eliminating or mitigating the factors that caused the local extirpation of the species, with a view to eventual population recovery.

APPENDIX 4

The Strategic Logframe of the Revised and Updated 2015 Regional Conservation Strategy for the Cheetah and African Wild Dog in Southern Africa

VISION: ***Secure, viable cheetah and wild dog populations across a range of ecosystems that successfully coexist with, and are valued by, the people of southern Africa***
GOAL: ***Improve the status of cheetah and wild dogs, and secure additional viable populations across their range in southern Africa***

Theme	Objective	Results	Activities
Capacity Development	1. To develop capacity in all aspects of cheetah and wild dog conservation in southern Africa.	1.1 National gaps in capacity in all areas of cheetah and wild dog conservation in the region are identified and documented.	1.1.1 Establish current situation and identify gaps for all capacity components (law enforcement, monitoring and research, education outreach, protected area management, political, etc.) in each country
			1.1.2 Integrate national reports into a regional synthesis
		1.2 A regional strategy is developed for capacity development (based on the regional synthesis report) across all levels	1.2.1 Identify a committee member from each country to develop the regional capacity development strategy
			1.2.2 Develop the results and activities required for capacity development at the national and regional level, aligned where possible with international initiatives
			1.2.3 Identify and engage with appropriate training institutions
			1.2.4 Activate and source funds to implement the capacity development strategy at the national or regional level, wherever appropriate
		1.3 The Regional Capacity Development Strategy is implemented and evaluated	1.3.1 Implement the activities identified by the Regional Capacity Development Strategy (in 1.2.2 above)
			1.3.2 Make use of the RWCP website to disseminate the Regional Capacity Development Strategy and relevant resources, and facilitate networking
			1.3.3 Establish mechanisms for evaluating effectiveness of Regional Capacity Development Strategy
			1.3.4 Evaluate the effectiveness of the Regional Capacity Development Strategy using the mechanisms established in 1.3.3.
Knowledge and Information	2. To improve knowledge and generate information for the conservation of cheetah and wild dogs across southern Africa.	2.1 A better understanding of the status, distribution, biology and ecology of African wild dogs and cheetahs is acquired	2.1.1 Continue field studies on dispersal in both species, including factors influencing dispersal success.
			2.1.2 Continue studies on cheetah and wild dogs feeding ecology in different areas in relation to potential range.
			2.1.3 Assess viability and connectivity of small wild dog and cheetah populations.
			2.1.4 Continue to contribute to the ongoing cheetah and wild dog atlas
			2.1.5 Continue to conduct surveys in unknown and possible range to assess population status and distribution for cheetah and wild dogs.
			2.1.6 Assess recoverable range for factors likely to influence recolonization (natural or artificial) within two years.
			2.1.7 Maintain and expand long term monitoring programmes of cheetah and wild dog populations in resident range; ongoing.
			2.1.8 Research, collate and make available best practice guidelines and ethical considerations for cheetah and wild dog research, conservation, tourism and reintroduction.
			2.1.9 Continue research into new and improved ways to survey and monitor cheetah and wild dogs
		2.2 Standardised, quantitative knowledge of threats and their mitigation are generated and disseminated across southern Africa, including on poaching for bush-meat, habitat loss and fragmentation, illegal trade, captive management, climate change and irresponsible tourism, within two years.	2.2.1 Gather and disseminate information on the best practise for captive management of wild dog and cheetahs to prevent illegal offtake from the wild and the associated illegal trade.
			2.2.2 Gather and disseminate information on present and emerging threats to cheetah and wild dog conservation from the bush-meat trade.
			2.2.3 Gather and disseminate information on present and emerging threats to cheetah and wild dog conservation from irresponsible tourism activities.
			2.2.4 Gather and disseminate information on threats caused by game farming/ranching.
			2.2.5 Gather and disseminate information on loss and fragmentation of cheetah and / or wild dog habitat.
			2.2.6 Gather and disseminate information on conservancy models and illustrate the potential benefits

		2.3 Standardised, quantitative knowledge of human-carnivore conflict mitigation across southern Africa is generated and disseminated within two years.	of conservancies as an alternative to game farming/ranching.
			2.2.7 Gather and disseminate information on meta-population management.
			2.3.1 Establish a technical working group incorporating all range states.
			2.3.2 Technical working group to address all relevant regional NGO's, researchers and governments to ask for involvement and data/information to contribute to best practice manual for conflict mitigation for predators (by October 2015).
			2.3.3 Regional NGO's, researchers and governments to compile available data and information on conflict issues and their mitigation solutions.
			2.3.4 Technical working group to develop an interactive online database where information can be uploaded and compiled.
			2.3.5 NGO's, researchers and governments to nationally collate their information and upload onto interactive database/or make it available to the technical working group (by March 2016).
			2.3.6 Technical working group to work through information provided and create a practical, useful 'living' document to be delivered to the wider public (by June 2017). This will be completed through a workshop if funding can be sourced.
			2.3.7 Technical working group to develop a strategy for delivery of the document to the wider public.
			2.3.8 Technical working group to obtain letters of support from key stakeholders.
			2.3.9 Market and deliver the document to the wider public (to be completed two years after start date).
Information transfer	3. To increase active commitment of stakeholders and awareness of the wider public by transferring information relevant to cheetah and wild dog conservation	3.1 Information about relevant benefits of cheetah and wild dogs to local communities, governments and landowners continues to be shared	3.1.1 Hold meetings and workshops with communities, landowners and government, to exchange knowledge and information regarding relevant incentives and benefits; ongoing.
		3.2 Multimedia projects continue to be developed across all regional range states, building on the best existing material.	3.2.1 Continue to develop web-based, interactive reporting mechanisms for sightings, data, findings and activities relevant to cheetah and wild dog conservation.
			3.2.2 Continue to develop and use posters, leaflets, radio, TV, video, pictures and theatre groups to disseminate information locally.
			3.2.3 Ensure a minimum standard of data collection throughout the region, especially in areas where information gaps occur.
		3.3 Increased national awareness of local threats to cheetah and wild dogs across range states.	3.3.1 Continue to establish competitions, essays, etc. in schools and groups to enhance and highlight conservation education.
			3.3.2 Continue to develop curricula regarding cheetah and wild dogs and integrate with activities of youth conservation clubs.
			3.3.3 Continue to encourage sponsorship of sports teams, clubs and groups named after cheetah and wild dogs at all levels.
		3.4 National research symposiums promoted in all regional range states.	3.4.1 Promote workshops on cheetah and wild dogs at annual scientific symposiums.
			3.4.2 Continue to participate in a wider range of meetings and stakeholder interest groups (i.e. those not directly concerned with conservation) to disseminate information about cheetah and wild dog conservation
		3.5 A greater awareness of issues related to cheetah and wild dog conservation among relevant stakeholders in all range states.	3.5.1 Continue to develop and disseminate education and awareness material, building on best existing material, for both adults and children in all range states.
			3.5.2 Continue to create and implement multimedia programmes to raise awareness and understanding of cheetah and wild dog conservation in all range states.
			3.5.3 Sensitise leaders to the value of cheetah and wild dog conservation; ongoing.
			3.5.4 Link with existing initiatives and provide relevant information and interpretive materials to support judicial and law enforcement agencies.
Coexistence	4. To promote coexistence of people with cheetah and wild dogs across southern Africa	4.1 The deliberate killing of cheetah and wild dogs is reduced	4.1.1 Continue monitoring the extent of deliberate killing of cheetah and wild dogs in all range states, and collate data annually on a national level, and every three years for the region.
			4.1.2 Clarify and advocate for enforcement of laws pertinent to killing of cheetah and wild dogs across range states, on an ongoing basis.

			4.1.3 Identify conflict areas and clarify extent of actual versus perceived losses caused by cheetah and wild dogs, on an ongoing basis. 4.1.4 Sensitize relevant stakeholders about livestock husbandry practices proven to reduce depredation, on an ongoing basis.
			4.1.5 Develop and implement national standard operating procedures on acceptable responses to conflict situations within one year and encourage exchange between range states (e.g. procedures on captures, translocation, lethal control etc).
			4.1.6 Implement human-wildlife conflict rapid response teams to react quickly and effectively to conflict situations, across all range states within two years.
			4.1.7 Initiate and continue programmes to combat negative perceptions of cheetah and wild dogs in all range states within one year.
		4.2 The levels of incidental mortality in cheetah and wild dogs are reduced in all range states as appropriate within five years.	4.2.1 Continue monitoring the extent of incidental mortality of cheetah and wild dogs in all range states, and collate data annually on a national level, and every three years for the region.
			4.2.2 Reduce snaring mortality of cheetah and wild dogs through initiatives such as anti-poaching efforts, removal of snare wires, and integrated community based population, health and environment initiatives, on an ongoing basis.
			4.2.3 Initiate programmes known to be effective at managing diseases that threaten cheetah and wild dog population viability, on an ongoing basis.
			4.2.4 Implement targeted, enforceable programmes which reduce road mortality of cheetah and wild dog on an ongoing basis.
			4.2.5 Substantially reduce poisoning mortality of cheetah and wild dogs through law enforcement and awareness campaigns.
		4.3 The perceived intrinsic and economic value of cheetah and wild dogs to all stakeholders are measurably increased within five years.	4.3.1 Quantify and monitor the perceived intrinsic and economic value of cheetah and wild dogs to all stakeholders; ongoing.
			4.3.2 Promote wildlife based economic activities that promote cheetah and wild dog conservation and directly benefit communities and other stakeholders, in all range states within five years.
			4.3.3 Investigate and highlight the cultural significance of cheetah and wild dogs across all range states; ongoing.
			4.3.4 Develop self-sustaining community schemes that offset the costs of, and internalise the responsibilities for, conflict on an ongoing basis. 4.3.5 Develop income generation and capacity development projects linked to cheetah and wild dog conservation, on an ongoing basis.
		4.4 Socio-economic drivers to foster co-existence of land users with cheetah and wild dogs are addressed.	4.4.1 Identify and engage key stakeholders and experts to address socio economic threats to cheetah and wild dogs within 5 years.
			4.4.2 Identify socio-economic factors relevant to cheetah and wild dog conservation within two years.
			4.4.3 Develop strategies to address socio economic threats to cheetah and wild dogs within five years.
			4.4.4 Encourage range states to develop a bio-economic strategy that promotes co-existence with cheetah and wild dogs.
Land Use	5. To promote best land use practice for cheetah and wild dog conservation and minimise adverse effects of land development	5.1 Current, proposed and trends in land use are evaluated against the conservation needs of cheetah and wild dog	5.1.1 Build and maintain relationships with key regional stakeholders responsible for determining current and future land use strategies, within one year.
			5.1.2 Collate guidelines based on case studies of land-use strategies associated with successful cheetah and wild dog conservation from each country in the region, within two years.
			5.1.3 Engage constructively with industry, provide support in the form of best management practices and seek opportunity that will benefit cheetah and wild dog
		5.2 Integrated and innovative land-use management, planning and development aligned with cheetah and wild dog conservation is facilitated.	5.2.1 Identify and recommend guidelines in collaboration with government and private sector for social and environmental responsibility aligned with cheetah and wild dog conservation, e.g. IUCN Global Business and Biodiversity Programme.
			5.2.2 Coordinate cross sectorial communication among all key players including private sector to facilitate cooperation and collaborative initiatives that address cheetah and wild dog
			5.2.3 Promote cross sectorial participation in the Range Wide Conservation Program

		5.3 The formation of landscape scale wildlife management units (e.g. conservancies, community parks etc.) is promoted by increasing awareness of the potential benefits of such land uses within two years.	5.3.1 Promote awareness of opportunities for partnerships for management of wildlife areas that benefit cheetah and wild dogs
			5.3.2 Monitor the development of landscape scale wildlife management units (e.g. large, multiple use areas that could encompass conservancies, parks and community grazing areas) and their influence on cheetah and wild dog conservation, to enable adaptive management
			5.3.3 Optimise current resident range, maintain and recover corridors and connectivity and secure at least 20% of recoverable and possible range within five years to facilitate the expansion of cheetah and wild dog populations.
			5.3.4 Promote wild dogs and cheetah as the flagship species of large landscape level habitat conservation initiatives, for protected area networks and corridors, including TFCA's.
		5.4 Cheetah and wild dog range is expanded within southern Africa through reintroductions of the species to appropriate areas of recoverable range	5.4.1 Identify appropriate range.
			5.4.2 Engage partner organisations and relevant government authority personnel in establishing reintroduction plans.
			5.4.3 Ensure reintroduction plans follow IUCN Reintroduction guidelines.
			5.4.4 Identify source populations of cheetah or wild dogs, including, where possible, through regional and international studbooks to identify populations of sound genetic viability.
			5.4.5 Monitor reintroduction efforts and individual animals for at least five years post release.
		5.5 Wildlife based land uses and community participation in natural resource management are promoted in areas with potential for cheetah and wild dog conservation.	5.5.1 Identify and prioritize areas with potential for natural resource based land uses conducive to cheetah and wild dog conservation for each country annually.
			5.5.2 Linking local capacity, resources, services and expertise to maximise partnership opportunities to enhance areas with potential for cheetah and wild dogs.
			5.5.3 Evaluate the effectiveness of wildlife based land uses and their outcomes for cheetah and wild dog conservation to enable adaptive management.
			5.5.4 Strengthen and increase (by 20%) buffer zones around areas with potential for cheetah and wild dog conservation through promoting community participation and partnership opportunities.
		5.6 Effective and appropriate livestock husbandry, range management and agriculture that is consistent with cheetah and wild dog conservation is promoted.	5.6.1 Promote and link agriculture and range management programmes to relevant areas.
			5.6.2 Coordinate with the providers of training programmes to increase the capacity of agricultural communities to practice sustainable range management. 5.6.3 Assess the effectiveness of new and existing livestock husbandry and range management programmes against the conservation needs of cheetah and wild dogs and disseminate results annually to inform adaptive management strategies.
Political Commitment	6. To advocate for increased political commitment to the conservation of cheetah and wild dogs	6.1 A regional agreement to collaborate in conserving cheetah and wild dogs across southern Africa is approved by all governments	6.1.1 Link with local and international advocacy organisations, such as International Conservation Caucus Foundation ICCF, to achieve results outlined in this strategy
			6.1.2 Draw up an agreement, in collaboration with these advocacy organisations, for range state governments regarding commitment to conserve cheetah and wild dogs.
			6.1.3 Present agreement to national agencies who will then take it to ministers, within six months of the agreement being drawn up.
			6.1.4 Organise a regional state meeting where the agreement will be formally signed by the eight countries.
		6.2 Relevant transboundary agreements that will benefit the conservation of cheetah and wild dogs are promoted.	6.2.1 Develop and promote further agreements and strategies that will benefit cheetah and wild dog.
			6.2.2 Link and partner with local and international advocacy organisations, for example the ICCF, to achieve effective transboundary conservation efforts.
Policy and Legislation	7. To advocate for stronger international, national and local legislation, policies and protocols to support cheetah and wild dog conservation	7.1 The relevance and efficacy of current national, regional and international policies, protocols and legislation pertaining to the conservation of cheetah and wild dogs is assessed.	7.1.1 Identify existing international and national legislative frameworks that could help promote the conservation of cheetah and wild dog.
			7.1.2 Range Wide Conservation Program to employ a consultant to carry out an assessment of the efficacy and suitability of these frameworks (identified in 7.1.1), and compile recommendations.
		7.2 Cheetah and wild dog conservation actions are aligned to existing national and international policies, protocols and legislation, and revision is	7.2.1 Make use of consultant recommendations (7.1.2) to align regional actions to national and international initiatives 7.2.2 Implement and enact these new and/or aligned policies, protocols and legislation

		lobbied for where appropriate.	7.2.3 Identify policies, protocols and legislation that will imminently be undergoing revision, and send representatives of the Range Wide Conservation Program to advocate for revision at these meetings
			7.2.4 For legislation that does not adequately address cheetah and wild dog conservation needs, and for which there is no planned revision, advocate for changes, including by making use of existing networks (e.g. IUCN SA members etc).
		7.3 Cheetah and wild dog range states encouraged to actively participate in biodiversity-related multilateral environmental agreements (MEAs, e.g. CMS, CBD, CITES, SADC protocols, WENSA) and other international processes.	7.3.1 Investigate how existing MEAs can facilitate cheetah and wild dog conservation, and make recommendations for action.
			7.3.2 Adopt the recommendations identified in 7.3.1
			7.3.3 Advocate for range states to become parties to the Convention on Migratory Species and other relevant conventions.
			7.3.4 Investigate and obtain support for this strategy from CMS and other MEAs.
			7.3.5 Develop and/or identify existing relevant motions for submission to the IUCN World Conservation Congress.
		7.4 This revised strategy for the conservation of cheetah and African wild dogs in southern Africa is incorporated into both the National and SADC Regional conservation plans by 2017	7.4.1 At a regional level, to request that the Chair of SADC take the lead in ensuring that the Revised Strategy for the Conservation of Cheetah and African wild dog is incorporated in the SADC Regional Biodiversity Strategy and Action Plan (RBSAP), by 2016
			7.4.2 At a national level, each SADC member state to incorporate their national conservation action plan for cheetah and African wild dogs into their respective National Biodiversity Strategies and Action plan (NBSAP) by 2017
			7.4.3 Encourage SADC countries to prioritize the conservation of cheetah and wild dogs in the implementation of the Programme of Work for Protected Areas (POWPA)
			7.4.4 Encourage SADC member states to prioritise the conservation of cheetah and wild dogs in their Global Environmental Facility (GEF) allocations
		7.5 The capacity of law enforcement and judicial agencies to implement legislation, policies and protocols relevant to cheetah and wild dog conservation is improved.	7.5.1 National agencies to identify and align with existing law enforcement networks, and prioritise capacity needs to enforce legislation, policies and protocols relevant to cheetah and wild dog conservation.
			7.5.2 Secure resources required to improve capacity.
			7.5.3 Develop capacity according to priorities set by national agencies (in 7.4.1).
			7.5.4 Maintain ongoing engagement with existing networks dealing with, *inter alia*, issues of bushmeat poaching, law enforcement, illegal trade, problem animal control relevant to cheetah and wild dog conservation
National Planning	8. To maintain and implement up to date national action plans and utilise other relevant frameworks for the conservation of cheetah and wild dogs in all range states.	8.1 National Action Plans for each country are revised (or where necessary developed) to be S.M.A.R.T and in line with this strategy, within two years	8.1.1 Identify key stakeholders to facilitate the revision process in each country within 6 months.
			8.1.2 Revise the action plans in each state within two years.
		8.2 The implementation of the revised national action plans is facilitated within two years of the revision.	8.2.1 Identify appropriate mechanisms within each country for driving the implementation process within 6 months.
			8.2.2 Identify constraints and where possible provide the means to ensure implementation of the revised national strategy within one year.
			8.2.3 Encourage all stakeholders to use the revised national action plan to guide their conservation actions at all times.
			8.2.4 Arrange a workshop between governments to exchange information on the implementation process of national action plan.