

NATIONAL ACTION PLAN for the conservation of the African Lion *Panthera leo* in Ethiopia



Based on a workshop held in Addis Ababa 8 – 10 November 2010

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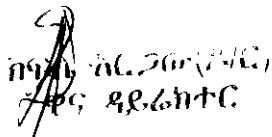
Preface

It is with great satisfaction that I hereby endorse the Lion Conservation Action Plan on behalf of the Ethiopian Wildlife Conservation Authority. The recommendations and policy directions described in this plan will be guiding our work for the coming five years, because we believe that they represent best practice and will promote persistence of the lion in Ethiopia.

The lion is an emblematic species for Ethiopia. Our wildlife assemblage would not be complete without it, indeed our national identity would be compromised without free-ranging lions on our territory. Of course this comes at a cost: we must mitigate conflict with farmers and maintain wild landscapes with sufficient prey base.

We acknowledge the assistance of national and international partners in organising the workshop that created consensus on the issues and in drafting the Lion Conservation Action Plan. We count on the collaboration of those partners, and other stakeholders, in the implementation of this plan.

Signed in Addis Abeba, 12 March 2012.

A handwritten signature in black ink, appearing to be 'Dr. Kifle Argaw' in Amharic script, written over a printed name.

Dr. Kifle Argaw

Director General

Ethiopian Wildlife Conservation Authority

1. Introduction

1.1 Context of the National Action Plan

Large carnivores have disappeared from many areas of high human density, and the species most exposed to conflicts with people are the most prone to extinction (Woodroffe 2001). Large carnivores tend toward large home ranges and low population densities, making them especially vulnerable to extinction brought on by habitat loss and/or human persecution (Noss et al. 1996; Woodroffe and Ginsberg 1998). Carnivores have been considered indicators of the overall fate of ecosystems, due to their trophic position (Crooks 2002; Estes et al. 2001; Noss et al. 1996).

The lion occurs in all African habitats except deep desert and deep rainforest; it is therefore an important element in many African ecosystems. The lion is a flagship species for Africa. However, the species is under increased pressure, especially in West and Central Africa (Bauer & Nowell, 2004). Ethiopia plays an important role in the species' distribution pattern: the southern part of the country is a crucial link in the connectivity between East and Central Africa (Figure 1).

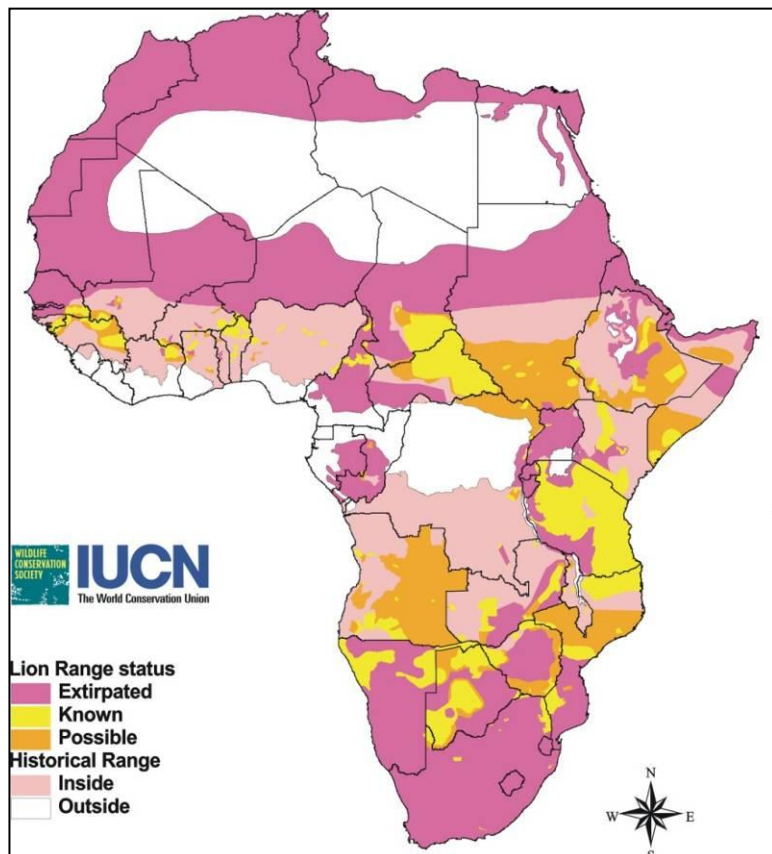


Figure 1: lion range map showing southwest Ethiopia as the link between east and central African populations (source: Regional Lion Conservation Strategies, IUCN 2006)

Recent surveys have indicated a suspected decline of 30-50% of the African lion population, with current estimates ranging from 23,000 to 39,000. The lion is classified as Vulnerable on the IUCN Red List of Threatened Species for this reason. The lion is most threatened in the regions of West and Central Africa, containing only about 10% of the continental estimated population.

The situation of the lion drew international attention at CITES CoP13 (13th Conference of the Parties to CITES) in October 2004. A Proposal to transfer the lion to Appendix I sparked extensive debate among African Range States, and highlighted the need to achieve a pan-African consensus on the way forward for lion conservation. The Proposal was withdrawn, and Range States agreed that a series of regional lion conservation workshops should be held. IUCN - The World Conservation Union - was asked to organize workshops which would bring together stakeholders in order to develop regional lion conservation strategies, using a participatory approach based on a logical framework. The Eastern and Southern African Lion Conservation Workshop was held January 8-13, 2006 in Johannesburg, South Africa (IUCN SSC Cat SG, 2006a). It followed a similar regional workshop for lions in West and Central Africa held in Douala, Cameroon in October, 2005 (IUCN SSC Cat SG, 2006b).

One of the recommendations from the regional lion conservation workshops was that National Action Plans should be developed, in order to guide the implementation of conservation measures at a national level. The present document was endorsed and published by the Ethiopian Wildlife Conservation Authority (EWCA) within that context. It was compiled by Hans Bauer and Fikirte Gebresenbet, based on the results of and the logical framework (Annex 1) drafted during a national large carnivore conservation workshop, held in Ghion Hotel, Addis Abba, from 8 to 10 November 2010, attended by various stakeholders (Picture below, Annex 2).



1.2 Lion Conservation in Ethiopia

The African lion is a national symbol of Ethiopia, and an important element of national identity. This is exemplified by the presence of lion statues in major towns, in the representation of a lion in old national flag and the use of a lion logo by several companies. Therefore, extinction of the lion in Ethiopia, nationally or locally, would not only be an important ecological loss but would also be a socio-cultural impoverishment.

A workshop on lion conservation in Ethiopia was held in Addis Abeba on 12 June 2009 and the proceedings used as background information for the present plan (Gebresenbet *et al.*, 2010).

Ethiopia is rich in biodiversity with a high level of endemism (World Conservation Monitoring Center 1991). The challenges facing the conservation of Ethiopian wildlife today are becoming increasingly formidable. Since the level of agricultural productivity has remained low, increase in food production has largely depended on increase in cultivated and grazing land. Usually, these expansions are at the expense of wildlife resources and habitats (Leykun 2000), and as a result most of the potential habitats for wildlife are being isolated and fragmented.

Within lion range in Ethiopia, the lion is probably the principal predator of domestic livestock, along with hyena, which causes conflict with stockbreeders (Gade, 2006; Abay and Bauer, 2011). Livestock loss and a poor management capacity for human-lion conflict, has lead to declines in lion populations. There is no single full and immediate solution to this problem, but the implementation of a combined approach, using several management measures and mitigation techniques could help to reduce conflicts and depredation to a tolerable level (Frank *et al.*, 2005).

Lions also present a risk to human life. Human death and injury are threats that people in lion range are presented with every day. Fatal lion attacks on people are actually very rare, but when it occurs, it is not tolerable.

2. Distribution and status

2.1 Review of existing information

There is limited information on the status and distribution of lions in Ethiopia. Lions are difficult to count, and any population estimate is essentially imprecise. Lion population estimates for Ethiopia, according to the continental overview collated by Chardonnet (2002) and Bauer and Van Der Merwe (2004), were 1477 and 1000 lions, respectively.

Presently lions are found only in a limited number of populations in Ethiopia. An inventory of known populations was made in the 2009 lion workshop (Gebresenbet et al., 2010), with lions in:

- Awash National Park (Awash River Valley, from Gewane to Hadar)
- Bale (Bale National Park, Hareenna forest)
- Gambella landscape
- Omo-Mago-Borana landscape
- Nechisar NP
- Hadiyya Zone (Gibe River Valley)
- Hararghe (Anenno, Babille Elephant Sanctuary and adjacent areas)
- Kefa (Bonga-Mizan road)
- Wollega (Dedessa River Valley, Meko and Sachi areas)

2.2 Present lion distribution map

During the November 2010 workshop, participants were asked to contribute their current knowledge of lion distribution in Ethiopia. Accordingly, some additional information about the current status of lion was obtained. These are:

- Maze NP
- Chebera Churechura NP
- Gebe Sheleko NP
- Loka Abya NP
- Illubabur, Wollega
- In the border of Gojam and Wollega, along the Nile gorge.

The following map was produced (Figure 2). This map represents the synthesis of the best information currently available. It is unlikely to be completely accurate or up to date; improvements are always possible and new information on lion distribution is most welcome.

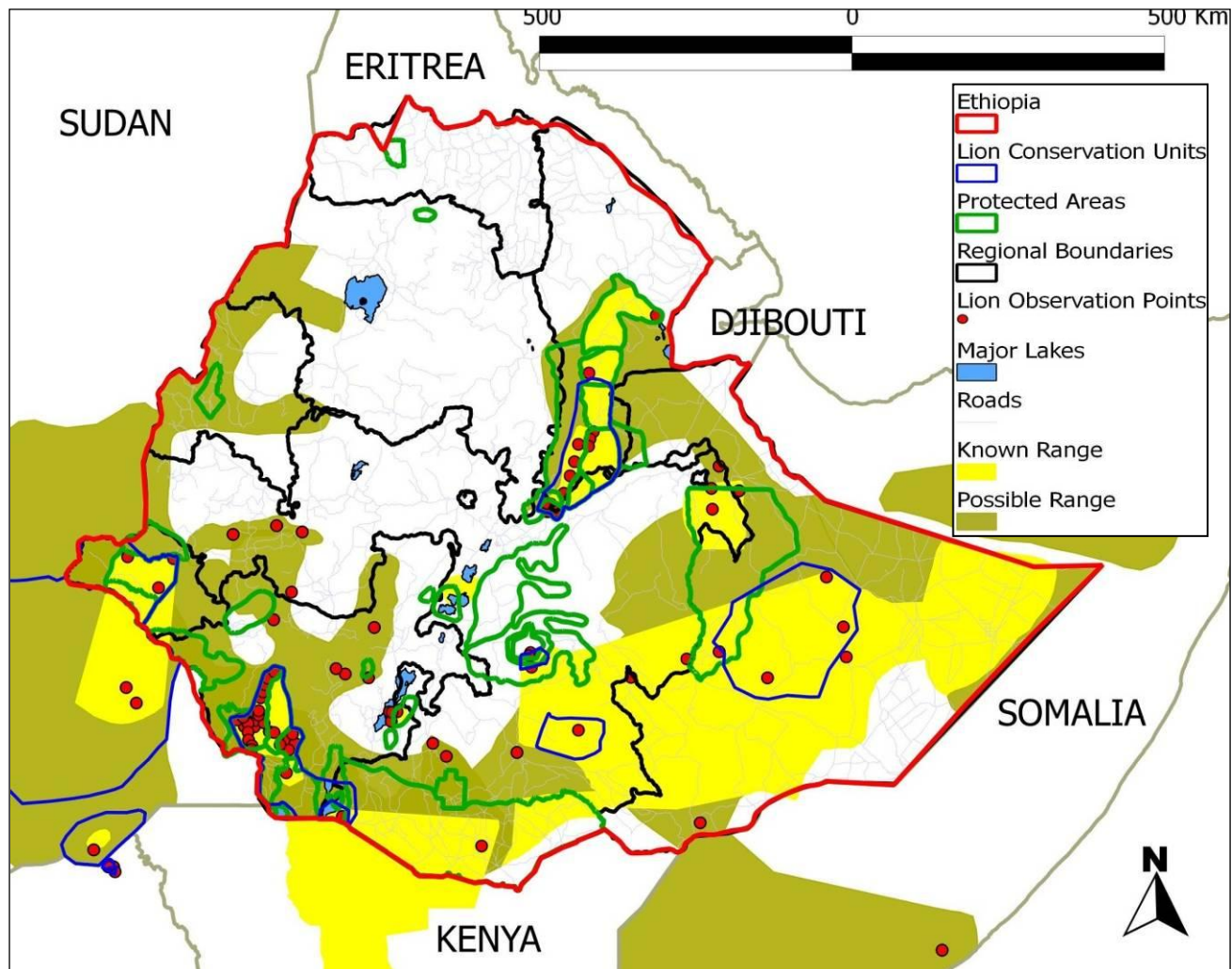


Figure 2: Lion distribution map (2010)

3. Threat and problem analysis

3.1 Problem analysis

There are several threats and problems for lion conservation in Ethiopia. Problem analysis shows that human population growth and the associated pressure on the nearby environment, habitat loss (mainly due to development that is incompatible with lion conservation), low political priority, weak law enforcement and commitment, lack of prey and human-lion conflict all pose major threats for conservation of lions (Kahsay and Gizat 2006; Kahsay et al.2007; EWCA and WSD 2010; Yirmed 2010; Gebresenbet et al., 2010).

Unmanaged human population growth leads to lion habitat fragmentation because as population pressure increases there is a growing need for broader settlement and agricultural lands. This in turn leads to human-lion conflict, which is always initiated by the settlement of human beings near lion habitat. This settlement introduces domestic animals, which are potential prey animals, to lions. Unplanned agriculture, and other livelihood activities, tend to destroy wild habitats; further exacerbating the status of lions by decreasing the number of wild animals, (including lions and their prey species). As human-lion contact increases, so does human-lion conflict, resulting in reductions in lion numbers (through indiscriminate killing; poisoning, trapping and shooting).

Lion conservation problems in Ethiopia were prioritized by impact during the 2009 National Lion Conservation Workshop (copied from Gebresenbet et al., 2010):

1. Population pressure
2. Habitat loss (lion incompatible development)
3. Low political priority
4. Weak law enforcement
5. Lack of capacity
6. Lack of prey
7. Lack of government support
8. Human-wildlife conflicts
9. Poor management strategy
10. Encroachment, resettlement
11. Lack of awareness
12. Civil strives and proliferation of firearms
13. Poor livestock husbandry

14. Poor land management around PAs
15. Lack of data
16. Untapped ecotourism potential
17. Cultural and traditional factors
18. Drought
19. Lack of monitoring
20. Trade in lion parts

The root causes of human-lion conflict, i.e., human population pressure, habitat loss and lack of prey, result in number of problems for lion conservation. The problems can be grouped as follows:

3.2 Management

Lion populations are not managed effectively. Improved lion population management would help resolve many problems in lion conservation. There is a widespread lack of government resources and professional capacity to undertake lion population monitoring and management. Developing a national Action Plan for lions will ensure coherent use of limited resources and will enhance management capacity.

3.3 Mitigation

Lion-human conflict is a major issue in lion conservation. Lions prey on livestock, mainly when there is high level of wild prey depletion, and in retaliation, people kill them. There will always be some level of conflict at the lion-human interface as long as lions prey on livestock. Therefore, in order to mitigate this problem, governments need to establish effective Problem Animal Control units, that can be deployed when preventive measures have failed. In addition, tolerance can be encouraged in some cases. Providing training to PA staff as to how to deal with certain problems of human-lion conflict will be a key component of this strategy.

3.4 Socio-economic and cultural factors

In most areas, local communities view the lion as having a negative economic value. This is either due to actual losses (e.g. of livestock), or perceived loss of income-generating opportunities, resulting from protection of lion habitat and lion prey species. Such perceptions have, in many areas, developed because area-specific lion conservation measures have been implemented without consultation and active participation of local communities. Their needs and capacities have not been taken into account, therefore,

there is no support for lion conservation from the community. Incorporating and consulting the local community in lion conservation is therefore a necessary strategy in order to gain support and ensure success of the National Action Plan. Benefits of lion conservation, particularly economic benefits, also need to be shared equitably with local communities.

The profile of lions in Ethiopian culture and history cannot be overstated. Statues of lions and emblems bearing the lion's image abound in Addis Ababa and other parts of the country. The lion is also prominently portrayed on coins and in many Ethiopian Orthodox Christian churches and historical manuscripts. This status of lions probably peaked during the Imperial years, particularly the reign



of the late Haile Selassie I. This status has hitherto only been a challenge to Lion conservation because it resulted in Lions being taken into captivity in various royal palaces, being hunted in the wild for skins, and being traded or exchanged as gifts among the nobility. The development of the Lion Action Plan presents an invaluable opportunity to explore this phenomenon and possibly exploit it to garner support for lion conservation initiatives in Ethiopian society. In-country support for lion conservation in Ethiopia is crucial to its long-term success. This can be in terms of corporate funding and acceptance amongst policy makers, communities living near lion habitats and the general public. Helpful in this regard would be the improvement of the captive facilities at Anbessa Gibi (Lion Zoo Amist Kilo), and the development of an education and information centre therein. Many of Ethiopia's national parks are quite distant from Addis Ababa, so this center would be a very important tool for reaching out to educational institutions and the general public.

3.5 Policy and land-use

In Ethiopia, there are unfavorable policies for integration of wildlife in land-use. Different human activities (E.g. agriculture, pastoralism and settlement) overshadow the need for wildlife-integrated land use. National legal frameworks and incentive structures need to be developed to promote wildlife-integrated land-use as a form of rural development. These legal frameworks should also be coordinated regionally to achieve maximum impact for wildlife conservation. Conducting research on the range and number of lions, identifying areas of transboundary lion movement and carrying out surveys on habitat encroachment in lion areas are necessary steps for the efficient implementation of wildlife integrated land-use plans. Wildlife-integrated land use, policies and planning are non-existent in many places and when they exist, they are not being implemented effectively. There is therefore an urgent need to review the current plan and amend it where necessary.

3.6 Trade

In the regional lion conservation strategy (IUCN, 2006), chapters on trade primarily focus on the aspect of trophy hunting. This focus also concerns Ethiopia, but in addition to that the label of trade in the national context should also refer to issues with trade in live cubs and in lion parts for medicinal purposes. Such trade is known to serve markets in the East and Middle East, but no data are available on the extent and impact.

It is essential that national laws enable sustainable legal trade, and that any trade complies with regional and international agreements such as CITES. The persistence of illegal trade within Ethiopia is largely due to ineffective law enforcement, which results from a lack of knowledge, weak capacity and low motivation within law enforcement agencies. There is a need for capacity building among enforcement agencies and increased resources for wildlife law enforcement efforts.

4. National Action Plan

Based on the information presented in the preceding chapters, participants defined a National Action Plan, using logical framework methodology. After defining the vision and goal, lion conservation objectives were defined for each threat. These objectives were further operationalised by setting targets and by defining the activities needed to achieve them. Time frames and responsibilities for these activities were also identified. A summary of the logical framework is given in Annex 1.

The long-term **vision** of the strategy is: “To ensure a sustainable environment for the mutual benefit of lion populations and people in perpetuity in Ethiopia.”

This vision represents a broad image that carries an idealistic situation in the long-term. This is operationalised in the medium term by the following goal.

The **goal** of the strategy is: “**To secure, and where possible restore, sustainable lion populations throughout their present and potential range in Ethiopia, recognizing their potential to provide substantial social, cultural, ecological and economic benefits.**”

Objective 1 (Management): To ensure effective conservation and management of lions, their habitats and wild prey in Ethiopia.

Target 1.1 The number and distribution of lions assessed throughout their range.

Activity 1.1.1 Identify and procure appropriate equipment for lion surveys

Activity 1.1.2 Train personnel in data capture, management and analysis

Activity 1.1.3 Carry out lion surveys throughout known and possible lion range

Activity 1.1.4 Develop and maintain National databases

Activity 1.1.5 Disseminate information to appropriate stakeholders

Target 1.2 Continuous monitoring of lion trends, habitat quality, other carnivores and prey base throughout lion range is ensured.

Activity 1.2.1 Identify key areas for data collection: including wildlife census, socio-economic data and habitat assessment

Activity 1.2.2 Develop and set up mechanisms for monitoring

Activity 1.2.3 Identify and procure appropriate equipment

Activity 1.2.4 Formulate a monitoring team

Activity 1.2.5 Develop and maintain National databases

Activity 1.2.6 Disseminate information to appropriate stakeholders

Target 1.3 Lion Management Plans are developed and implemented for each Lion Conservation Unit (LCU).

Activity 1.3.1 Collect relevant information

Activity 1.3.2 Analyze problems

Activity 1.3.3 Consult stakeholders

Activity 1.3.4 Formulate LCU Management Plan

Activity 1.3.5 Implement LCU Management Plan

Target 1.4 Capacity-building programs for lion conservation and management are implemented in 90% of the lion range

Activity 1.4.1 Identify training needs

Activity 1.4.2 Identify and procure appropriate equipment and funding

Activity 1.4.3 Develop and implement capacity building programs for lion conservation

Target 1.5 Research on lion ecology and the relation with communities in two priority areas is conducted

Activity 1.5.1 Identify and prioritize biological and socio-ecological research needs

Activity 1.5.2 Identify research groups

Activity 1.5.3 Identify and procure appropriate equipment and funding

Activity 1.5.4 Develop and carry out research projects in identified areas and aspects

Activity 1.5.5 Document research results and disseminate information to appropriate stakeholders

Objective 2 (Mitigation): To mitigate human-lion related conflict in Ethiopia.

Target 2.1 A database on human-lion conflict established in Ethiopia within one year

Activity 2.1.1 Develop database and data collection protocols to collect all data of lion attacks on livestock, humans and retaliatory lion killings.

Activity 2.1.2 Collect and collate all existing and future data on lion attacks on livestock, humans and retaliatory lion killings.

Activity 2.1.3 Make database available to all stakeholders

Target 2.2 Incidents of lion attacks on livestock reduced significantly within five years without affecting lion population viability, measured against a baseline

Activity 2.2.1 Develop and implement a public awareness and education package on lion conservation to increase people's vigilance towards lions

Activity 2.2.2 Develop non-lethal mitigation strategies to reduce livestock predation by lions (eg. Lion-proof enclosures and better livestock husbandry); using manuals and techniques developed elsewhere (e.g. IUCN African Lion Working Group)

Target 2.3 Incidents of lion attacks on people reduced significantly from current levels within five years and without affecting lion population viability, measured against a baseline

Activity 2.3.1 Develop and implement a public awareness package for sensitive areas, to minimize risk of lion attacks

Activity 2.3.2 Develop and implement effective problem animal control (PAC) protocols, including non-lethal alternatives, to deal with man-eating lions using manuals developed elsewhere

Target 2. 4 Numbers of indiscriminate lion killings reduced significantly within five years, measured against a baseline

Activity 2.4.1 Develop and implement public awareness and education package on lion conservation to increase people tolerance for lions

Activity 2.4.2 Demonstrate government agencies' ability to deal with problem animals in a swift and effective manner

Activity 2.4 3 Lobby and disseminate information to reduce availability and use of poisons illegally used to kill wildlife

Target 2.5 Build capacity of PA staff to be able to implement a Rapid Response to human-lion conflict events in and around PAs in lion range.

Activity 2.5.1 Implement a Rapid Response protocol to quickly address instances of attacks on livestock or people by lions

Activity 2.5.2 Provide adequate training of PA staff to deal with human-lion conflict using manuals developed elsewhere (e.g. IUCN African Lion Working Group)

Activity 2.5.3 Ensure that wildlife agency and partners have the means to provide swift and effective PAC in the aftermath of a lion attack on people.

Objective 3 (Socio-Economics): Maximize the benefits of lion conservation and ensure equitable distribution of the same to communities and other stakeholders in Ethiopia.

Target 3.1 Inventory of stakeholders directly affected by lion conservation completed with in two years

Activity 3.1.1 Identify stakeholders groups at the appropriate scale and cross-check with the database on human-lion conflict

Activity 3.1.2 Identify impacts on each stakeholder groups

Activity 3.1.3 Determine the magnitude of impacts

Activity 3.1.4 Prioritize groups for intervention based on magnitude of impacts

Target 3.2 Capacity building for priority stakeholders (Protected Areas & Communities) to assist them maximize benefit from managing lion population with in three years

Activity 3.2.1 Identify training needs in consultation with identified stakeholders

Activity 3.2.2 Develop and implement training material and programs

Activity 3.2.3 Review effectiveness of training material and programs in consultation with stakeholders

Activity 3.2.4 Implement adaptive program across LCU

Target 3.3 Collaboratively develop a lion benefit sharing programs at least in five LCU priority areas with in four year

Activity 3.3.1 Consult identified stakeholders on modality of benefit sharing

Activity 3.3.2 Determine the scope and scale of key activities on benefit sharing

Activity 3.3.3 Identify 'best practices' and integrate as appropriate

Target 3.4 Transparent mechanisms for equitable distribution of lion related /generated income to identify stakeholders implemented in five years

Activity 3.4.1 Identify income generated from lion conservation

Activity 3.4.2 Distribute generated income according to intensity of lion impact

Activity 3.4.3 Provide appropriate incentives for people in high conflict areas to assist in sustainable management of the lion population

Activity 3.4.4 Publish annual audit report

Activity 3.4.5 Review plan annually and amend where necessary

Objective 4 (Policy and land use): To ensure that all land use Plans and Strategies do not negatively impact, and if possible contribute to, lion conservation in Ethiopia.

Target 4.1 National wildlife-integrated land use plan exists that ensures conservation of existing lion populations and encourages establishment of new viable lion population across Ethiopia within two to five years.

Activity 4.1.1 Conduct a national survey to fill gaps in knowledge concerning lion population numbers and range.

Activity 4.1.2 Carry out surveys on habitat encroachment in lion areas

Activity 4.1.3 Review existing land use plans at national and local level and evaluate the extent to which they integrate lions, and develop new lion-integrated plans where and if necessary.

Activity 4.1.4 Submit land-use plans for approval and adoption by relevant authorities

Activity 4.1.5 Ensure implementation, monitoring and evaluation of land use plans

Target 4.2 The existence of transboundary lion populations is recognized and our neighbors are approached to produce a collaborative land use plan

Activity 4.2.1 Identify areas of transboundary lion movement

Activity 4.2.2 Identify relevant stakeholders across the border and work with them to produce a collaborative plan

Activity 4.2.3 Maintain communication, information exchange and experience sharing

Target 4.3 Legal and institutional frameworks that provide for integrated lion conservation and associated socio-economic benefits developed, adopted and nationally harmonized within five years across all lion range in Ethiopia.

Activity 4.3.1 Involve all stakeholders (possibly in a workshop) in the drawing up of a legal framework that will stipulate the legislation and regulations pertaining to lion conservation and the associated socio-economic benefits.

Activity 4.3.2 Publicize and advocate the new legislation as decided in previous activity (i.e. 4.3.1)

Activity 4.3.3 Ensure that the capacity exists at a national and regional level to implement and enforce new legislation and policy (may involve capacity-building activities)

Activity 4.3.4 where existing activities are incompatible with land use planning, alternative livelihoods may be explored and implemented.

Target 4.4 The majority of protected, unprotected and identified wildlife areas within lion range are effectively and adaptively managed within 10 years.

Activity 4.4.1 Conduct a national survey to fill gaps in knowledge concerning lion population numbers and range.

Activity 4.4.2 Agree on the best lion management practice on both national and range by range basis for Ethiopia, taking into account the experiences of other countries.

Activity 4.4.3 Review current management practices concerning lion conservation, and identify where there is a need for amendment and improvement.

Activity 4.4.4 Develop site-specific lion integrated management plans including capacity building, sustainable funding, monitoring and evaluation in lion range.

Activity 4.4.5 Implement management plans and continually evaluate effectiveness there of.

Target 4.5 Address the issue of trophy hunting as a sustainable activity contributing to conservation and socio-economic development within Ethiopia

Activity 4.5.1 Survey of lion populations to establish baseline numbers before any further quotas are set/hunting is continued

Activity 4.5.2 Research into trends of populations (increasing or decreasing)

Activity 4.5.3 If appropriate, develop a policy document outlining how benefits should be shared or distributed amongst stakeholders (hunting operators, government, communities)

Activity 4.5.4 Policy should be agreed between all partners when dealing with transboundary lion populations.

Objective 5 (Trade): To prevent illegal trade in lion and lion products

Target 5.1 Existing legislation regarding trade in lions, lion products and derivatives in Ethiopia enforced within one to two years

Activity 5.1.1 Train law enforcement officers (wildlife custom police) to identify lion products and understand legislation relevant to lion conservation

Activity 5.1.2 Prepare identification toolbox of lion products

Activity 5.1.3 Produce awareness posters at exit and entry points

Activity 5.1.4 Establish awareness at all judiciary levels about legislation relevant to lion conservation

Activity 5.1.5 Ensure that enforcement and arrests are backed up by adequate prosecution and sentencing.

Target 5.2 Information on illegal trade of lions collected to ensure the ongoing fulfillment of the CITES requirements

Activity 5.2.1 Collect and analyze relevant information on illegal trade of lions

Activity 5.2.2 Share information and coordinate activities among relevant Ethiopian institutions and with other lion range States

Activity 5.2.3 Put up awareness posters in lion ranges

6. Implementation of the National Action Plan

Implementation of the NAP is a critical objective. For efficient implementation, stakeholders should adhere to the following:

1. EWCA agree to appoint a National Carnivore Coordinator, the Coordinator should be appointed and active at the time of implementation of the present Action Plan.
2. Regional Ethiopian political bodies are to take note of the present Action Plan and support its implementation under the coordination of the Ethiopian Wildlife Conservation Authority.
3. Ethiopian authorities need to work together with authorities in neighboring states and other lion range States, in order to share experiences and collaborate on transboundary issues.
4. Federal and regional government bodies, international donors and other stakeholders should allocate resources for the implementation of this Action Plan.
5. All stakeholders are requested to inform and encourage all actors in lion conservation to adhere to this Action Plan in order to achieve a joined-up and effective approach.

Appendix 1: Logical Framework

Vision, Goal and Goal Targets

Vision	
Ensure a sustainable environment for the mutual benefit of lion populations and people in Ethiopia in perpetuity	
Goal	Targets
To secure, and where possible, restore sustainable lion populations throughout their present and potential range in Ethiopia, recognizing their potential to provide substantial social, cultural, ecological and economic benefits	Omo – Mago system remains LCU I (viable), Gambela – Boma system improves from LCU II (potentially viable) to LCU I (viable) and one LCU III (doubtful viability) becomes potentially viable; additionally, where appropriate dispersal of lions into corridors presently outside lion range, within 10 years
	Human and livestock loss reduced by at least 50% in at least half of the lion populations within 10 years
	Wildlife conservation-related net benefits achieved in 50% of areas within 5 years

Objectives, Targets and Activities

Theme: Management				
Objective 1: To ensure effective conservation and management of lions, their habitats and wild prey in Ethiopia				
Target	Activity	Rank	Responsible Party	Time frame
1.1. Number and distribution of lions assessed throughout their range.	1.1.1. Identify and procure appropriate equipment	1	EWCA, LCWG, PA's, NGO's , regional wildlife agencies	1 year
	1.1.2. Train personnel in data capture, management and analysis	2		
	1.1.3. Carry out lion surveys throughout known and possible lion range	3		
	1.1.4. Develop and maintain data bases at national level	4		
	1.1.5. Disseminate information to appropriate stakeholders	5		
1.2. Continuous monitoring of lion trends, habitat quality, other carnivores and prey base throughout lion range is ensured	1.2.1. Identify key areas for data collection: wildlife census, socio-economic data and habitat assessment	1	EWCA, PA's, regional wildlife agencies, other stakeholders	1 year
	1.2.2. Develop and set up mechanism for monitoring	2		
	1.2.3. Identify and procure appropriate equipment	3		
	1.2.4. Formulate monitoring team	4		
	1.2.5. Develop and maintain data bases at national	5		

	level			
	1.2.6. Disseminate information to appropriate stakeholders	6		
1.3. Lion Management Plans are developed and implemented for each Lion Conservation Unit (LCU)	1.3.1. Collect relevant information	1	EWCA, PA's, Regional administration, regional wildlife agencies, stakeholders, NGO's, LCWG	1 st steps 1 year, implementation for the duration of the present plan
	1.3.2. analyze problems	2		
	1.3.3. consult stakeholders	3		
	1.3.4. formulate LCU Management Plan	4		
	1.3.5. implement LCU Management Plan	5		
1.4. Capacity building programs for lion conservation and management are implemented in 90% of the lion range	1.4.1. Identify training needs	1	EWCA, LCWG, NGO's , training institutions	1 st steps 1 year, implementation on-going
	1.4.2. Identify and procure appropriate equipment and funding	2		
	1.4.3. Develop and implement capacity building programs for lion conservation	3		
1.5. Research on lion ecology and the relation with communities is conducted in two priority areas	1.5.1. Identify and prioritize biological and socio-ecological research needs	1	EWCA, LCWG, Universities, NGO's, stakeholders	5 years
	1.5.2. Identify research groups	2		
	1.5.3. Identify and procure appropriate equipment and funding	3		
	1.5.4. Develop and carry out research projects in identified areas and aspects	4		
	1.5.5. Document research results and Disseminate information to appropriate stakeholders	5		

Theme: Mitigation				
Objective 2: To mitigate human-lion related conflict				
Target	Activity	Rank	Responsible party	Time frame
2.1. Establish a database on human-lion conflict established in Ethiopia with in one year	2.1.1. Develop database, and data collection protocols, to collect all data on lion attacks on livestock, humans and retaliatory lion killings	1	LCWG; EWCA; Regional Coordinator	1 year
	2.1.2. Collect and collate all existing and future data on lion attacks on livestock, humans and retaliatory lion killings	2	PA staff; EWCA (NC); LCWG	immediately, and long term
	2.1.3. Make database available to all stakeholders	3	EWCA (NC); LCWG	long term; annual report
2.2. Incidents of lion attacks on livestock reduced significantly within 5 years and without affecting lion population viability, measured against a baseline	2.2.1. Develop and implement public awareness and education package on lion conservation to increase people vigilance towards lions	1	EWCA (NC); LCWG; Regional Coordinator; NGOs; PA staff; Ensessakotteh	1-2 years
	2.2.2. Develop non-lethal mitigation strategies to reduce livestock predation by lions (e.g. Lion-proof enclosures, better livestock husbandry). Using manuals and techniques developed elsewhere	2	EWCA (NC); LCWG; Regional Coordinator; NGOs; PA staff	2-3 years

2.3. Incidents of lion attacks on people reduced significantly from current levels within 5 years and without affecting lion population viability, measured against a baseline	2.3.1. Develop and implement public awareness package for sensitive areas, to minimize risk of lion attacks	1	EWCA (NC); LCWG; Regional Coordinator; NGOs; PA staff	1-2 years
	2.3.2. Develop and implement effective problem animal control (PAC) protocols, including non-lethal alternatives, to deal with man-eating lions. Using manuals developed elsewhere	2	EWCA (NC); LCWG; Regional Coordinator; NGOs; PA staff	2-3 years
2.4. Numbers of indiscriminate lion killings reduced significantly within 5 years, measured against a baseline	2.4.1. Develop and implement public awareness and education package on lion conservation to increase people tolerance for lions	1	EWCA (NC); LCWG; Regional Coordinator; NGOs; PA staff	1-2 years
	2.4.2. Demonstrate government agencies' ability to deal with problem animals in a swift and effective manner	2	EWCA (NC); LCWG; PA staff	2-3 years
	2.4.3. Lobby and disseminate information to reduce availability and use of poisons illegally used to kill wildlife	3	EWCA (NC); LCWG; NGOs	1-3 years
2.5. Build capacity of PA staff to conduct Rapid Response to human-lion conflict events in and around PAs in lion range.	2.5.1. Implement a Rapid Response protocol to quickly address instances of attacks on livestock or people by lions	1	EWCA (NC); LCWG; PA staff; NGOs	1 year
	2.5.2. Provide adequate training of PA staff to deal with human-lion conflict. Using manuals developed elsewhere	2	EWCA (NC); LCWG; PA staff; NGOs	1-2 years

	2.5.3. Ensure that wildlife agency and partners have the means to provide swift and effective PAC in the aftermath of a lion attack on people.	3	EWCA ; LCWG; PA staff; Ensessakotteh; Professional hunters	2-3 years
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Theme: Socio economics				
Objective 3: Maximize the benefits of lion conservation and ensure equitable distribution of the same to communities and other stakeholders				
Target	Activity	Rank	Responsible party	Time frame
3.1. Inventory of stakeholders directly affected by lion conservation completed within two years	3.1.1. Identify stakeholders groups at the appropriate scale	1	EWCA, NC, LCWG, Regional bodies, PAs	6 months
	3.1.2. Identify impacts on each stakeholder groups	2	EWCA, NC, LCWG, regional bodies PAs	1 yr
	3.1.3. Determine the magnitude of impacts	2	EWCA, NC, LCWG,	2yrs
	3.1.4. Prioritize groups for intervention based on magnitude do impacts	3	EWCA, NC, LCWG,	2yrs
3.2. Capacity building for priorities stakeholders (Protected Areas & Communities) to assist them maximize benefit from managing lion population within three years	3.2.1. Identify training needs in consultation with identified stakeholders	1	EWCA, NC, LCWG,	1 yr
	3.2.2. Develop and implement training material and programs	2	EWCA, NC, LCWG, Universities, NGO's, RC, Regional bodies,	2 yrs
	3.2.3. Review effectiveness of training material and program in consultation with stakeholders	3	EWCA, NC, LCWG, Universities,	2.5 yrs

			NGO's, RC, Regional bodies,	
	3.2.4. Implement adaptive program across LCU	4	EWCA, NC, RC, LCWG	3 yrs
3.3 Collaboratively develop a lion benefit sharing program at least in 5 LCU priority areas within four year	3.3.1. Consult identified stakeholders on modality of benefit sharing	1	EWCA, NC, RC, LCWG, Regional bodies	1 yr
	3.3.2. Determine the scope and scale of key activities on benefit sharing	2	EWCA, NC, LCWG, Regional bodies	2 yrs
	3.3.3. Identify 'best practices' and integrate as appropriate	1	EWCA, NC, RC LCWG,	2 yrs
3.4 Transparent mechanisms for equitable distribution of lion related /generated income to identify stakeholders implemented in five years	3.4.1. Identify income generated from lion conservation	1	EWCA, NC, LCWG, PAs, Regional bodies	2 yrs
	3.4.2. Distribute generated income according to intensity of lion impact	2	EWCA, NC, RC, LCWG, PAs, Regional bodies	3 yrs
	3.4.3. Provide appropriate incentives for people in high conflict areas to assist in sustainable management of the lion population	2	EWCA, NC, RC, LCWG, PAs, Regional bodies	3 yrs
	3.4.4. Publish annual audit report	3	EWCA, NC	3 yrs
	3.4.5. Review plan annually and amend where necessary	3	EWCA, NC, RC, LCWG,	3 yrs

Theme: Policy and land use				
Objective 4: To ensure that all land use Plans and Strategies do not negatively impact, and if possible contributes to lion conservation in Ethiopia.				
Target	Activity	Rank	Responsible party	Time frame
4.1. National wildlife-integrated land use plan exists that ensures conservation of existing lion populations and encourages establishment of new viable lion populations across Ethiopia within two to five years	4.1.1. Conduct a national survey to fill gaps in knowledge with regards to lion population numbers and range.	1	NC, EWCA, LCWG, NGO's, Regional bodies, Universities, Independent researchers	2 years
	4.1.2. Carry out surveys on habitat encroachment in lion ranges	2	NC,EWCA, LCWG, NGO's, Regional bodies, Universities, Independent researchers	2 years (concurrently)
	4.1.3. Review existing land use plans at national and local level and evaluate the extent to which they integrate lions, and develop new lion-integrated plans where and if necessary.	3	EWCA and regional bodies, EMA, and later, NC and LCWG	6 months (after the first two years)
	4.1.4. Submit land use plans for approval and adoption by relevant authorities	4	EWCA	6 months
	4.1.5. Ensure implementation, monitoring and	5	EWCA, LCWG,	2 to 3 years

	evaluation of land use plans		NC and regional bodies	(after adoption, monitoring is ongoing)
4.2 The existence of transboundary lion populations is recognized and our neighbors are approached to produce a collaborative land use plan	4.2.1. Identify areas of transboundary lion movement.	1	NC, EWCA, LCWG, NGO's, Regional bodies, Universities, Independent researchers, RC	2 years
	4.2.2. Identify relevant stakeholders across the border and work with them to produce a collaborative plan	2	EWCA and regional bodies, EMA, and later, NC, Universities and LCWG, RC	6 months
	4.2.3. Maintain communication, information exchange and experience sharing.	3	EWCA and regional bodies, NC, Universities and LCWG, RC	Ongoing
4.3 Legal and institutional frameworks that provide for integrated lion conservation and associated socio-economic benefits developed, adopted and nationally harmonized within 5 years	4.3.1. Involve all role players, possibly in a workshop, in the drawing up of a legal framework that will stipulate the legislation and regulations pertaining to lion conservation and the associated socio-economic benefits.	1	EWCA, NC, LCWG, regional bodies, judiciary bodies	After land use planning, 6 months for activity
	4.3.2. Publicize and advocate the new legislation as decided in 4.3.1.	2	EWCA, NC, LCWG, regional	Immediately and ongoing

across all lion range in Ethiopia.			bodies, judiciary bodies	
	4.3.3. Ensuring that the capacity exists at a national and regional level to implement and enforce new legislation and policy (may involve capacity building activities).	3	EWCA, NC, LCWG, regional bodies, Universities, NGO's	Two to four years
	4.3.4. Where existing activities are incompatible with land use planning, alternative livelihoods may be explored and implemented.	4	EWCA, NC, LCWG, regional bodies, Universities, NGO's	Two to four years
4.4 The majority of protected, unprotected and identified wildlife areas within the lion range are effectively and adaptively managed within 10 years	4.4.1. Conduct a national survey to fill gaps in knowledge with regards to lion population numbers and range.	1	NC, EWCA, LCWG, NGO's, Regional bodies, Universities, Independent researchers	2 years
	4.4.2. Agree what is the best lion management practice on both a national and range by range basis for Ethiopia, taking into account the experiences of other countries.	2	NC, EWCA, LCWG, regional bodies	6 months
	4.4.3. Review current management practices with regards to lion conservation, and identify where there is a need for amendment and improvement.	3	NC, EWCA, LCWG, regional bodies	6 months

	4.4.4. Develop site-specific lion integrated management plans including capacity building, sustainable funding, monitoring and evaluation in lion range.	4	NC, EWCA, LCWG, regional bodies	2 years and ongoing
	4.4.5. Implement management plans and continually evaluate effectiveness thereof.	5	EWCA, regional bodies, NC, LCWG, Regional coordinator (RC)	2 years and ongoing
4.5. Address the issue of trophy hunting as a sustainable activity contributing to conservation and socio-economic development within Ethiopia	4.5.1. Survey of lion populations to establish baseline numbers before any quotas are set/hunting is continued	1	NC, EWCA, LCWG, NGO's, Regional bodies, Universities, Independent researchers	2 years
	4.5.2. Research into trends of populations (increasing or decreasing)	2	NC, EWCA, LCWG, NGO's, Regional bodies, Universities, IR.	2 years (as above) and ongoing
	4.5.3. If appropriate, develop a policy document outlining how benefits should be shared or distributed amongst stakeholders (hunting operators, government, communities)	3	NC, EWCA, LCWG, NGO's, Regional bodies, hunting operators	6 months
	4.5.4. Policy should be agreed between all partners when dealing with transboundary lion populations.	4	EWCA, NC, Judiciary bodies, Regional bodies, RC, LCWG	6 months

Theme: Trade				
Objective 5: To prevent illegal trade in lion and lion products.				
Target	Activity	Rank	Responsible party	Time frame
5.1. Existing legislation on trade of lions and lion parts and derivatives enforced in Ethiopia within one to two years	5.1.1. Train law enforcement officers (wildlife, customs, police) to identify lion products and understand legislation relevant to lion		EWCA, Customs, Federal & local police, TRAFFIC, CITES	one to two years
	5.1.2. Prepare identification tool box of lion products		EWCA, TRAFFIC, CITES	
	5.1.3. Put up awareness posters at exit & entry points		EWCA & Custom	
	5.1.4. Establish awareness at all judiciary levels about legislation relevant to lion conservation		EWCA, Federal & Local Judiciaries	
5.2 Information on illegal trade of lions collected to ensure the ongoing fulfillment of the CITES requirements	5.2.1. Collect and analyze relevant information on illegal trade of lions		EWCA, Customs, Federal & local police, TRAFFIC, CITES	On going
	5.2.2. Share information with and coordinate activities among relevant Ethiopian institutions and between neighboring countries		EWCA, Customs, Federal & local police, TRAFFIC, CITES	

	5.2.3. Put up awareness posters in lion ranges		EWCA, Regions	
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Appendix 2: List of participants, by working group

Working Group 1: Management

Name	Organization
1. Awol Ali	Nech-Sar National Park
2. Aman Dadesa	Yabello Wildlife Sanctuary
3. Abdirizak Abdulahi	Somali Region BOA
4. Woubishet Zenebe	Omo National Park
5. Rezenom Almaw	EWCA
6. Hans Bauer	VLIR UOS

Working Group 2: Co-existence

Name	Organization
1. Adane Tsegaye	Chebera Churchura National Park
2. Hailay G/her	Kafta Shiraro National Park
3. Bereket Girma	Born Free Foundation, Ethiopia
4. Kedir Mohammed	Yangudi Rassa National Park
5. Adem Mahamed	Abijata Shala Lakes National Park
6. Addisu Asefa	Bale Mountains National Park
7. Claudio Sillero	Oxford University

Working Group 3: Socio-Economic

Name	Organization
1. Stephen Brend	Born Free Foundation Ethiopia
2. Abiot Hailu	Senkele Swayne's Hartebeest Sanctuary
3. Tibebu Yelemfrhat	Awash National Park
4. Alehegn Taye	Maze National Park
5. Zelalem Tefera	Frankfurt Zoology Society

Working Group 4: Policy and Land Use

Name	Organization
1. Maru Biadrlegn	Simien Mountains National Park
2. Mesay Yeshitila	Tourism of Park (Hawassa)
3. Alemayehu Matewos	Mago National Park
4. Anne- Marie Stewart	EWCP
5. Rea Tschopp	Wildlife Veterinary (consultant to EWCA and BFF)

Working Group 5: Trade

Name	Organization
1. Wondwossen Girmay	HOAREC- Parks & Buffer Zones Mg't Prog.
2. Almaz Tadesse	Wild CODE
3. Kumara Wakjira	EWCA
4. Mat Pines	Save Awash National Park
5. Gatluak Gatkoth	Gambella National Park

Working Group 6: Co-operation

Name	Organization
1. Charles Musyoki	Kenya Wildlife Service
2. Kahsay Gebretensae	EWCA
3. Martin Ring Malek	S.Sudan Wildlife Service
4. Fikirte Gebresenbet	Researcher
5. Chemere Zewdie	OFWE
6. Fedlu Abdella	Wildlife for Sustainable Development
7. Mamo Alemu	Geralle National Park
8. Asmare Goshu	Alatish National Park

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