

# Conservation Strategy and Action Plan for the Lion (*Panthera Leo*) in Zimbabwe



Zimbabwe Parks and Wildlife Management Authority  
Ministry of Environment and Tourism



## **Acronyms used**

AA	Appropriate Authority
AWCF	African Wildlife Consultative Forum
CAMPFIRE	Community Areas Management Programme for Indigenous Resources
CRG	Carnivore Research Group
CITES	Convention on International Trade in Endangered Species of Flora and Fauna
HAC SIS	Human Animal Conflict Scheme for Insurance
IUCN	International Union for the Conservation of Nature
MOMS	Management Oriented Monitoring System
NGO	Non Government Organisation
NP	National Park
PAC	Problem Animal Control
PWMA	Parks & Wildlife Management Authority
RDC	Rural District Council
SASUSG	Southern Africa Sustainable Use Specialist Group
SOAZ	Safari Operators Association of Zimbabwe
TFCA	Transfrontier Conservation Area
THT	Tiki Hywood Trust
WWF	World Wide Fund for Nature
ZATSO	Zimbabwe Association of Tour and Safari Operators
ZNSPCA	Zimbabwe National Society for the Prevention of Cruelty to Animals
ZPH&GA	Zimbabwe Professional Hunters & Guides Association
ZPWMA	Zimbabwe Parks and Wildlife Management Authority

## Table of Contents

<b>1.</b>	<b>INTRODUCTION</b> .....	<b>5</b>
<b>2.</b>	<b>BACKGROUND</b> .....	<b>6</b>
<b>3.</b>	<b>ISSUES RELATING TO LION CONSERVATION IN ZIMBABWE</b> .....	<b>7</b>
<b>3.1</b>	<b>Management &amp; research</b> .....	<b>7</b>
<b>3.2</b>	<b>Capacity needs</b> .....	<b>7</b>
<b>3.3</b>	<b>Mitigation</b> .....	<b>7</b>
<b>3.4</b>	<b>Socio-economic</b> .....	<b>8</b>
<b>3.5</b>	<b>Communication and information dissemination</b> .....	<b>8</b>
<b>3.6</b>	<b>Framework for captive breeding</b> .....	<b>8</b>
<b>3.7</b>	<b>Trade and regulation</b> .....	<b>8</b>
<b>3.8</b>	<b>Regional collaboration</b> .....	<b>8</b>
<b>4.</b>	<b>STRATEGY FOR THE CONSERVATION OF THE LION IN ZIMBABWE</b> .....	<b>9</b>
<b>4.1</b>	<b>Vision (Long term objective)</b> .....	<b>9</b>
<b>4.2</b>	<b>Goal (Immediate objective or purpose)</b> .....	<b>9</b>
<b>4.3</b>	<b>Goal Targets</b> .....	<b>9</b>
<b>4.3.1</b>	<b>Target 1</b> .....	<b>9</b>
<b>4.3.2</b>	<b>Target 2</b> .....	<b>9</b>
<b>4.3.3</b>	<b>Target 3</b> .....	<b>9</b>
<b>4.4</b>	<b>Outputs (Results and outcomes)</b> .....	<b>9</b>
<b>4.4.1</b>	<b>Lion Management</b> .....	<b>9</b>
<b>4.4.2</b>	<b>Lion Research</b> .....	<b>11</b>
<b>4.4.3</b>	<b>Mitigation</b> .....	<b>11</b>
<b>4.4.4</b>	<b>Socio-economic</b> .....	<b>13</b>
<b>4.4.5</b>	<b>Regulation</b> .....	<b>14</b>
<b>4.4.6</b>	<b>Communication, Awareness and Information Dissemination</b> .....	<b>14</b>
<b>4.4.7</b>	<b>Regional and Trans-boundary Collaboration</b> .....	<b>15</b>
<b>5.</b>	<b>ROLES &amp; RESPONSIBILITIES</b> .....	<b>16</b>
<b>5.1</b>	<b>PWMA- Lion Coordinator</b> .....	<b>16</b>
<b>5.2</b>	<b>PWMA: Utilisation Unit</b> .....	<b>16</b>
<b>5.3</b>	<b>PWMA Field Stations: Ecologists, Wardens</b> .....	<b>16</b>
<b>5.4</b>	<b>CAMPFIRE Association and RDCs with AA status</b> .....	<b>16</b>
<b>5.5</b>	<b>Carnivore Research Group (CRG)</b> .....	<b>16</b>
<b>5.6</b>	<b>Lion conservation &amp; management co-ordinating committee (LCMCC)</b> .....	<b>16</b>
<b>5.7</b>	<b>SOAZ</b> .....	<b>17</b>
<b>5.8</b>	<b>Lion Captive Breeders Association</b> .....	<b>17</b>
<b>6</b>	<b>IMMEDIATE ACTIONS</b> .....	<b>18</b>
<b>7</b>	<b>REFERENCES</b> .....	<b>19</b>

## **FOREWORD**

Zimbabwe is one of the few lion range states in Africa, where large areas of land which have been set aside as protected areas, still have viable lion populations. In some parts of Africa, lions have been completely wiped out through uncontrolled hunting, revenge killings, habitat loss and other factors with the only record to indicate their existence in the past now left as anecdotal evidence. The lion is a powerful African symbol, it is a flagship species and yet its future is under threat. The conflict with local communities and the threat to livestock and human lives in many parts of the world including Zimbabwe is well documented. While its attraction in ecotourism as one of the most beautiful and graceful cats, and as a trophy animal in sport hunting, its economic benefits are huge. Its social and cultural values are an integral part of the Zimbabwean lifestyle, therefore efforts to ensure lion conservation need to be strengthened.

The Zimbabwe Conservation Strategy and Action Plan for the Lion will guide the conservation and management of this important top predator. The strategy and action plan is the outcome from a workshop in which stakeholders representing the wildlife industry, technocrats, inter and non-governmental organizations, wildlife producers etc, actively participated. Hence the strategy and action plan addresses the needs of this country. It, at the same time responds to regional and international standards set by Treaties such as CITES and CBD etc.

Collaborative work on Research and Monitoring on lion needs to be strengthened to ensure that adaptive management is practiced and is also based on sound scientific data. The strategy and action plan also sets the stage for the sharing of experiences between stakeholders and therefore creates a conducive environment for researchers, protected area managers, policy makers and local communities to map the way forward for lion management. We need to be mindful of the need to put communities who bear the largest cost of living with the lion at the centre of all conservation efforts.

## 1. INTRODUCTION

The lion *Panthera leo* is a powerful cultural symbol of Africa and an important indicator of an area's wilderness qualities where it occurs. It is also a key species for tourism, research and trophy hunting, the last embedded in mythology and reflecting the pinnacle of success in a classical African hunting safari.

Increasingly threatened, with much of its former range now lost, the lion is a major predator of domestic livestock, presenting challenges and hardship to those who live amongst lions. Whilst an economic and dangerous liability, the lion is also a major source of economic benefit being one of Africa's most important tourism attractions.

In Zimbabwe, the lion population is estimated to be between 1,000-1,700 animals (Chardonnet 2002, Bauer and Van Der Merwe 2004,) with a current range of c. 60,000-90,000 km<sup>2</sup> compared to their distribution over approximately 250,000 km<sup>2</sup> in the early 60s (Child and Savory 1964, Smithers 1983). Occasional records indicate the presence of lions from time to time in a number of unexpected localities, e.g. lions are presently stock raiding around Nyanga NP in Zimbabwe's Eastern Highlands. The present range is less than one quarter than 50 years ago and probably no more than 20% of the country's total land area.

Information on population status, current distribution and trends (as opposed to range) still remains lacking for most major wildlife areas although there are estimates of numbers for some areas. Lion specific surveys and research has been limited to areas of the Parks & Wildlife Estates, namely Hwange NP and Matetsi SA in northwest Matabeleland, and Mana Pools and Matusadona NPs in the Zambezi Valley (Loveridge 2002, Purchase 2002, Monks 2005), and the Save Valley Conservancy.

## 2. BACKGROUND

At the 13<sup>th</sup> Conference of the Parties to the Convention on International Trade in Endangered Species of Flora and Fauna (CITES), which took place in Bangkok, Thailand in October 2004, Kenya submitted a proposal on the African lion calling for the transfer of the lion population from Appendix 11 to Appendix I, for consideration by the Parties. In response, Parties recommended a detailed examination of the issues surrounding the conservation of the African lion, through a series of regional workshops.

IUCN together with other key stakeholders, organized two sub-regional workshops on the conservation of the African lion. The first workshop brought together 14 West and Central African lion range states to a workshop in Douala, Cameroon in October 2005. The second workshop brought together 15 lion range states from Eastern and Southern African to a workshop that took place in Johannesburg, South Africa in early January 2006 (Bauer, Chardonnet and Nowell 2005). Participants at each workshop included Directors of Wildlife Conservation Departments and their technical advisors, safari operators, community leaders, non-governmental organisations involved in conservation, as well as researchers on the African lion.

The workshops came up with a number of recommendations which included:

- The need for African lion range States to follow up the workshops by developing and implementing national lion management plans.
- The need for a Pan African Conservation strategy to form the basis of a region wide collaboration in the conservation of the lion and which would also form the basis for the management of other wildlife species on regional scale.

In the spirit of following up the first recommendation, the Zimbabwe Parks and Wildlife Management Authority (PWMA), together with IUCN, convened a workshop to develop a national lion conservation strategy and action plan for the African lion in Zimbabwe. It is intended that this strategy and plan will motivate for increased lion conservation activity. Attended by conservation NGOs, the private sector, and Rural District Councils (RDCs), as well as PWMA and IUCN, the workshop was held in late October-early November 2006.

### **3. ISSUES RELATING TO LION CONSERVATION IN ZIMBABWE**

#### **3.1 Management & research**

Management decisions, including technical advice, policy formulation and management interventions, need to be based on sound scientific information, with research programmes addressing specific problems encountered by conservation managers (Funston 2006, Loveridge 2006). Some key issues that need attention include:

- The need to develop and decide upon standardized lion census methods for application.
- The need to initiate standardized surveys in areas within Zimbabwe where the status of lion is unknown.
- Improved understanding of the ecology and biology of the lion, including its habitat and prey. These may be changing under human influences, or in the longer term, as a result of climate change.
- Changes in lion population trends and range as a result of habitat change, hunting, and increased informal killing to protect livestock and people.
- Determination of morphological or other features that facilitate the rapid identification of adult male trophy animals in the field.
- Protocols and data base requirements for monitoring population status, trophy hunting and PAC off takes, and the use of this data for future management and development of best hunting practices.
- The socio-economic impacts of lion conservation and the need for stakeholder inclusion in decision making.
- The need to continuously review the legal and institutional frameworks that provide incentives for the expansion of wildlife as form of land use.
- The need to clarify policy in the context of banning the use of female lions as trophy animals.

#### **3.2 Capacity needs**

Capacity requirements reflect the adequacy of human, financial and material resources. Under-resourced wildlife agencies are a major constraint to performance and the realisation of the potential of wildlife as a serious economic sector activity (Child 2004). Pertinent issues include:

- Capacity for management, monitoring and scientific research.
- Appropriate PWMA and other Government staff training programmes at different levels and for other key stakeholders, such as CAMPFIRE Association, RDCs, SOAZ and relevant NGOs.
- The need to identify appropriate training programs and institutions. This should include in-house training.
- The need for capacity to manage problem animals including discretionary control work, data collection, analysis, synthesis and feedback.
- The need for capacity to administer and manage CITES requirements.

Given that most State wildlife agencies never have adequate human, financial and material resources, there is the need to focus on innovative and accountable ways of fund raising.

#### **3.3 Mitigation**

Lions kill livestock and occasionally humans, and vengeful killings are frequent. This is a fundamental reason for the decline in lion populations in many African countries (Woodroffe et al. 2006). Being highly emotive, the issue has potential to undermine lion conservation efforts if not addressed properly. The objective is to minimise and where possible to eliminate human-lion related conflicts. Some issues for consideration include:

- A framework for rapid PAC response. Parks needs to work closely with RDCs on this matter.
- Setting up databases for monitoring human-lion conflict.
- Participatory planning to minimize human-lion conflict.
- Designing mechanisms (including traditional ones) to reduce livestock predation.
- The need to create awareness and education on lion conservation issues.
- The possible translocation and reintroductions of problem animals in areas far removed from human habitation.

### **3.4 Socio-economic**

Linked very closely to mitigation of lion problems and lion-human interactions are the associated costs and benefits of long-term lion conservation. Costs need to be minimised and benefits maximised within equitable arrangements. This is especially important amongst rural communities who bear the cost of living with wildlife. CAMPFIRE has made considerable progress in this regard and any lion strategy needs to build on such progress. For example, the benefits of lion conservation need to be more explicitly recognised in the distribution of revenues from safari hunting and ecotourism activities in CAMPFIRE and other areas. Moreover, further devolution of revenues earned from CAMPFIRE, to below that of RDC is needed. In this regard a promising start has been made in some districts with Appropriate Authority 'status whereby wildlife producer communities are now being paid hunting revenues directly (Taylor 2006, Taylor and Murphree 2007).

### **3.5 Communication and information dissemination**

Information is key to decision making. Information is required at different levels and the type of information may vary with the level of the stakeholder.

- Policy makers and resource managers require information to establish effective management systems.
- Parks managers need information to ensure lions are sustainably managed in their areas of jurisdiction.
- Parliamentarians need information to assist them to understand the ecological, socioeconomic and cultural issues relating to lion conservation to enable them to debate these issues with understanding.
- Communities need to know how to mitigate the effects of lions on their livestock.
- Trophy hunters need information to help them maximize their hunting opportunities.

### **3.6 Framework for captive breeding**

In recent years there has been an increase in the number of captive lion breeders in the country. The issues here include the following:

- Critical analysis of the value of captive lion breeding to conservation efforts.
- Examination and critical analysis (costs/benefits) of the introduction of captive bred lions to the wild.
- Examination and critical analysis of market opportunities and threats for captive bred lions, e.g. canned lion hunting.
- The need and requirements for the regulation of captive lion breeding in the country.

### **3.7 Trade and regulation**

In southern Africa, illegal trade in lion and lion products is not yet a major problem. However the situation may change in time. Consideration may need to be given to the following issues:

- The need to ensure non-detriment findings related to lion trophy export quotas under CITES.
- The need to train and coordinate law enforcement officers (Immigration, Customs, Police) to identify lion products.
- The need to review national legislation and policies.
- The need to set up systems to share information with other States.

### **3.8 Regional collaboration**

Collaboration across national borders is an important step in building up-bilateral and regional lion conservation strategies. During the eastern and southern African lion workshop, the pooling of knowledge from surrounding African states on the distribution of lions clearly showed that lions in and around the various countries adjacent to Zimbabwe are a shared resource. It is appropriate in such cases to develop shared systems for lion conservation. This includes some of the following:

- Collaborative and standardized conservation approaches.
- Shared systems for data collection.
- Similar or comparable management systems.



- Communication and sharing of information.

## **4. STRATEGY FOR THE CONSERVATION OF THE LION IN ZIMBABWE**

Analysis of the above set of issues led to the formulation of a conservation strategy for lions in Zimbabwe, together with an accompanying logical framework and action plan. Targets and their indicators were established at the Goal and Output levels.

### **4.1 Vision (Long term objective)**

*Lions conserved and managed sustainably for their aesthetic, cultural and ecological values, and the socio-economic development of Zimbabwe.*

### **4.2 Goal (Immediate objective or purpose)**

*To secure and where possible, restore as many viable lion populations as possible in Zimbabwe whilst mitigating their negative impacts and enhancing their value for the benefit of people through sustainable use.*

### **4.3 Goal Targets**

#### **4.3.1 Target 1**

Ensure the persistence of key lion populations and other important populations including those of doubtful viability

#### **4.3.2 Target 2**

Human and livestock loss reduced

#### **4.3.3 Target 3**

Optimize wildlife conservation-related net benefits to local communities

### **4.4 Outputs (Results and outcomes)**

#### **4.4.1 Lion Management**

**Output 1.** Lion populations, their habitats and wild prey effectively conserved and managed in collaboration with local stakeholders

#### **Target 1.1:**

Establish a baseline survey and monitoring programme for identified lion populations and their range inside and outside the Parks & Wildlife Estate

#### *Activities*

- 1) Undertake baseline surveys, and where necessary, identify populations outside Parks & Wildlife Estate
- 2) Design, develop and set up simple but robust monitoring protocols for key variables (populations, habitats, prey)
- 3) Set up systems for carrying out collaborative surveys and monitoring across boundaries with shared lion populations (National Park, Safari Area, Forest Area, Communal Land, Large/Small Scale Commercial Farming and/or International)

#### **Target 1.2:**

Maintain and strengthen capacity for lion conservation, management, monitoring and research within PWMA and amongst other key stakeholders

*Activities*

- 1) Undertake training needs assessment
- 2) Identify and secure funding resources
- 3) Provide training and capacity strengthening within PWMA and amongst other key stakeholders e.g. RDCs
- 4) Train personnel in data capture, management and analysis

**Target 1.3:**

Identify and implement best management standards and practice for all trophy hunted lion populations, ensuring their viability and sustainable, equitable and adaptively managed trophy quotas

*Activities*

- 1) Implement Quota Setting Methodology rigorously and consistently across all hunting areas
- 2) Review and analyse annual quotas and offtakes to ensure these are adaptive and responsive to population changes, trophy quality and levels of PAC over time
- 3) Allocate quotas at a scale reflective of lion ecological and biological functionality which invariably differs across different land unit sizes or land uses
- 4) Refine and update the hunt return form [TR2] and the trophy hunting database and review annually thereafter
- 5) Ensure centralised database and cost-effective system for data collection from hunting areas and subsequent collation, entry, analysis, reporting and feedback to key stakeholders in the wildlife industry (PWMA, RDCs, SOAZ, conservation NGOs, Researchers etc)
- 6) Replicate Matetsi Safari Area hunt data collection system in all Parks and non-Parks hunting areas and train PWMA, RDC and other relevant field staff to gather and collate hunting data as per the Matetsi system
- 7) Train PWMA, RDC and other relevant field staff in the Quota Setting Methodology
- 8) Review system of fixed and optional quotas (and auctioned hunts) to improve incentives to hunt trophy male lion only, including quota-based incentives/disincentives
- 9) Review trophy fees to maximise benefit and generate additional revenue
- 10) Review and put in place criteria for age-based identification of male trophy animals

**Target 1.4:**

Develop and implement a national lion captive breeding management policy<sup>1</sup>

*Activities*

- 1) Identify captive breeding enterprises and establish purpose
- 2) Consult with stakeholders including breeders, ZNSPCA, IUCN Captive Breeding Specialist Group, and others e.g. Tikki Hywood Trust (THT)
- 3) Establish destination and role of captive bred lions upon reaching maturity
- 4) Relate captive bred lions to existing captive breeding policies for crocodiles, ostriches and operations for other captive bred wild species, e.g. Lion & Cheetah Park, Chipangali
- 5) Review existing policies and/or guidelines
- 6) Appoint Working Group to develop captive lion breeding policy as appropriate or necessary e.g. WWF-SARPO, NSPCA, THT, Captive Breeders, Wildlife Veterinary Unit.

<sup>1</sup> There was no representative of the captive lion breeders present at the Workshop

**Target 1.5:**

Develop and implement co-management frameworks for wildlife management

*Activities*

- 1) Develop a national lion action plan that articulates collaborative co-management of lion populations amongst different land categories and users in the four major wildlife areas of the country: NW

- Matabeleland, Sebungwe Region, Zambezi Valley and SE Lowveld
- 2) Ensure adoption and implementation of co-managements plans by stakeholders including conservancies
  - 3) Develop and implement participatory monitoring of implementation of plans

**Target 1.6:**

The geographic distribution range of the lion population expanded

*Activities*

- 1) Conservancies and neighbouring communities to work together and incorporate neighbouring communal lands into conservancies where possible.
- 2) TFCAs to develop programmes to increase jointly managed lion populations

**4.4.2 Lion Research**

**Output 2:**

Information for effective and adaptive lion conservation management generated

**Target 2.1:**

Initiate targeted research on lion ecology, management and mitigation of conflict

*Activities*

- 1) Identify gaps in knowledge of lion ecology and biology that require research
- 2) Identify areas where collaborative (including cross boundary/border) research is required
- 3) Standardise methodology where collaborative research is required
- 4) Develop cost-effective age determination methods for lions
- 5) Identify population ecology research questions in key lion populations
- 6) Explore predator-prey relationships
- 7) Identify socio-ecological research needs.
- 8) Assess the impact of key threats to lion populations in Zimbabwe at present, with particular focus on human-lion conflict, snaring (both direct mortality of lions in snares and depletion of prey populations), and the sustainability of hunting quotas

**4.4.3 Mitigation**

**Output 3:**

Human-lion related conflicts minimized and, where possible, eliminated

**Target 3.1:**

Develop and establish databases on lion/human conflict

*Activities*

- 1) Collect PAC (Problem Animal Control) reports on lion related problems
- 2) Analyse reports & produce evaluation matrix
- 3) Produce report with recommendations on appropriate PAC monitoring system, e.g. MOMS (Oriented Monitoring Systems)
- 4) Undertake community training on MOMS

**Target 3.2:**

Identify and implement methods to reduce and mitigate livestock losses and lion attacks on humans

*Activities*

- 1) Undertake participatory planning on how to mitigate livestock losses and lion attacks on humans
- 2) Undertake field work to identify weakness in livestock husbandry in relation to mitigation
- 3) Review literature, capitalise on experiences and lessons learned elsewhere, e.g. Namibia, and undertake community leadership exchange visits
- 4) Examine and design appropriate farmer-based compensation schemes, e.g. HACSYS, Namibia
- 5) Provide training on lion mitigation methods
- 6) Implement mitigation methods as appropriate at selected sites

**Target 3.3:**

Trained and properly staffed PAC Units established to conduct rapid response, restrained and precisely targeted problem animal control

*Activities*

- 1) Undertake needs assessment and capacity for managing PAC Units at PWMA field station and/or RDC levels
- 2) Define the role and responsibility of Units
- 3) Train and equip Units
- 4) Training and capacity building for PAC to be delegated to the responsible appropriate authority (RDC) and sub-district levels
- 5) Collaborative and effective PAC techniques developed and implemented within 5 years

**Target 3.4:**

Incidents of human-lion conflict reduced by at least 30% in 5 years while also reducing retaliatory killing

*Activities*

- 1) Specific awareness and education package on lion conservation and management developed and implemented within 5 years
- 2) Mechanisms developed with the livestock sector to reduce livestock predation by lions by at least 35% from the current level within 5 years

**Target 3.5:**

Number of lions killed through indiscriminate killings reduced by at least 30% in 5 years after baseline established.

*Activities*

- 1) Country specific awareness and education package on lion conservation and management developed and implemented within 5 years
- 2) Develop incentives for communities to use legal PAC in identified 3 hotspots within 5 years.

**Target 3.6:**

Incidences of lion attacks on humans reduced by at least 30% from the current levels in 5 years

*Activities*

- 1) Develop and implement collaborative and effective PAC techniques
- 2) Develop appropriate educational and awareness programmes to promote avoidance of potentially lethal encounters between humans and lions

#### 4.4.4 Socio-economic

##### Output 4:

The costs and benefits of long-term lion management equitably distributed

##### Target 4.1:

Complete an inventory of stakeholders directly affected by lion conservation

##### Activities

- 1) Identify stakeholder groups (e.g. local communities, CAMPFIRE RDC representatives, commercial safari hunting operators (SOAZ, ZPH&GA), tourism operators ZATSO) at the appropriate scale
- 2) Identify the financial impacts of lion conservation on each stakeholder group
- 3) Determine extent and magnitude of socio-economic impacts on each stakeholder group
- 4) Prioritise groups for intervention based on extent and magnitude of socio-economic impacts

##### Target 4.2:

Deliver appropriate training and capacity building to prioritised stakeholders

##### Activities

1. Identify representative stakeholders groups per wildlife region
2. Identify training needs in consultation with identified stakeholders
3. Develop training materials and implement training programmes
4. Review effectiveness of training material and programme in consultation with identified stakeholders
5. Implement adaptive programme across 4 wildlife regions

##### Target 4.3:

Agree and implement collaboratively developed area-specific lion management plans with identified stakeholder groups in each wildlife region within 5 years-.

##### Activities

- 1) Consult identified stakeholders
- 2) Determine the scope and scale of the key activities of the management plan
- 3) Identify and integrate 'best practices', making provisions for:
  - Ownership issues
  - Zoning for wildlife
  - Mutually binding agreement
  - Verifiable compliance
  - Suitable wildlife utilization plan (e.g. tourism, trophy hunting)
  - Income flows and cost distribution (including rainy-day funds to anticipate uncertainties in tourist revenues)
  - Appropriate husbandry techniques
  - Conflict-mitigation measures
  - Regulation of human immigration
  - Adequate wildlife and conflict monitoring
  - Annual environmental audits
- 4) Implement management plan
- 5) Review plan annually and amend where necessary

#### **Target 4.4:**

Implement transparent mechanisms to equitably distribute lion-related/generated income to identified stakeholders (groups and/or communities)

##### *Activities*

- 1) Identify income generated from lion conservation (see CAMPFIRE generated revenues)
- 2) Ensure that benefits of protecting lion populations reach local stakeholders
- 3) Distribute generated income according to intensity of lion impact (Apply CAMPFIRE Producer Community/Ward principles)
- 4) Provide appropriate incentives, e.g. implementation of mitigation measures and/or local re-location of people in high-conflict areas to low-conflict areas
- 5) Provide appropriate incentives e.g. participatory land use planning, to discourage immigration into lion and other wildlife range

#### **4.4.5 Regulation**

##### **Output 5:**

Effective regulation of consumptive lion utilisation ensured

##### **Target 5.1:**

Implement approved policy and practice at national and local levels regarding problem animal control (PAC) of lions within 2 years

##### *Activities*

- 1) Review, and revise where necessary, current policy and practice at national and local levels regarding problem animal control of lions (PAC)
- 2) Identify key responsibilities of the Appropriate Authority (AA), i.e. the land occupier in respect of problem animal control of lions, given the vulnerable status of lions and recent changes in land tenure
- 3) Incorporate PAC offtakes with trophy hunting quota offtake to ensure that the overall offtake (i.e. total quota) is sustainable.
- 4) Determine need for regulation of PAC, including the provision of incentives/disincentives
- 5) Establish database for lion PAC (see Targets 1.5 & 3.1 above)
- 6) Ensure PAC policy and practice conforms to the appropriate scale of lion ecological functionality, temporally and spatially, and that this is recognised as an AA responsibility with respect to hunting and PAC offtakes

#### **4.4.6 Communication, Awareness and Information Dissemination**

##### **Output 6:**

Promote awareness in lion conservation and management

##### **Target 6.1:**

To carry out awareness programmes in 50% of the districts in Zimbabwe within the next three 3 years

##### *Activities*

- 1) Identify target groups that need awareness
- 2) Identify awareness needs for different target groups e.g. hunters, politicians. farmers
- 3) Develop and package awareness materials for different target groups, e.g. multi-media tools, TV, internet, radio
- 4) Implement awareness programmes

- 5) Create feedback mechanisms for target groups
- 6) Provide extension, information and interpretative services to surrounding communities

**Target 6.2:**

Create lion conservation and management information units within one year

*Activities*

- 1) Facilitate flow of information from various sources
- 2) Document and process information from various sources
- 3) Create information database
- 4) Use Mushandike Natural Resources College as a training centre
- 5) Define personnel needs and resource requirements
- 6) Training, M&E, Research

**4.4.7 Regional and Trans-boundary Collaboration**

**Output 7:**

Regional conservation and management of trans-boundary lion populations achieved through effective collaboration

**Target 7.1:**

Undertake an inventory of national strategies for lion management

*Activities*

- 1) Make a presentation at the AWCF Meeting in November 2006
- 2) Develop a budgeted proposal seeking funds to undertake the inventory
- 3) Appoint 1/. a consultant or 2/. design questionnaire or 3/. use TFCA Conservation Committee or a combination of 2 & 3

**Target 7.2:**

Encourage the development of national lion conservation strategies where these are missing &/ or incomplete

*Activities*

- 1) Seek consensus from the AWCF for the development & implementation of national lion conservation strategies
- 2) Contact counterparts before the AWCF Meeting
- 3) Present national lion strategies where applicable and/or available
- 4) Obtain support from neighbouring countries for the development of national lion conservation strategies
- 5) Persuade neighbours to develop national lion conservation strategies

**Target 7.3:**

Develop an integrated and harmonised lion management strategy for Transfrontier Conservation Areas (TFCAs)

*Activities*

- 1) Within 2-3 years (medium term) develop the SADC strategy for lion conservation and management
- 2) Develop appropriate framework:
  - Develop National strategies

- Seek consensus through AWCF  
Incorporate into TFCA Treaties
- Develop SADC strategy

#### **Target 7.4:**

Implement lion conservation strategy and management plan

#### *Activities*

- 1) Incorporate strategy into TFCA Conservation Committee workplans [& other stakeholder workplans]
- 2) Seek funding as required
- 3) Carry out half-yearly compliance reviews
- 4) Report back annually to all stakeholders especially those not involved in implementation

## **5. ROLES & RESPONSIBILITIES**

### **5.1 PWMA- Lion Coordinator**

- Put in place management protocols for lion populations requiring special protection.
- Coordinate all national activities on the lion conservation, research and management including (i) census surveys, (ii) setting up monitoring needs, (iii) coordinating data collection including on human-lion conflicts.
- Make submission of trophy data by safari operators mandatory.
- Identify key areas for data collection, e.g. ecological & biological; trade; hunting; socio-economic data.
- Together with Utilisation Unit and Carnivore Research Group, design and develop database systems for data capture, collation, analysis, feedback and dissemination.

### **5.2 PWMA: Utilisation Unit**

- Ensure compliance with hunting regulations and submission of Hunt Return Forms and TR2 Forms.
- Maintain databases for safari hunting and PAC & mitigation measures

### **5.3 PWMA Field Stations: Ecologists, Wardens**

- Procure and make available needed resources for anti-poaching and law enforcement activities (staff, vehicles, fuel, camping equipment etc) .
- Collate and ensure submission of Hunt Return Forms and TR2 Forms.
- Enforce compliance with hunting regulations.
- Liaise with Utilisation Unit and Coordinator .

### **5.4 CAMPFIRE Association and RDCs with AA status**

- Ensure compliance with hunting regulations and submission of Hunt Return Forms and TR2 Forms.
- Facilitate PAC data collection on a regular basis according to PAC monitoring protocols; other data as requested from time to time.
- Facilitate training and capacity building.

### **5.5 Carnivore Research Group (CRG)**

- Explore more comprehensive set of measures of trophies shot (photos, blood for genetic/ disease screening, other skull and tooth measures) (ecologists on field stations, Co-ordinating committee, carnivore researchers).

### **5.6 Lion conservation & management co-ordinating committee (LCMCC)**

- To be chaired by PWMA/Lion Coordinator and to include representation of all parties involved in lion



conservation and management.

- All parties, including PWMA, Carnivore Research Group and conservation NGOs through Coordinating Committee to contribute to the LCMCC Fund.

#### **5.7 SOAZ**

- Safari Operators and PHs to ensure compliance with hunting regulations and submission of Hunt Return Forms and TR2 Forms. Training as required.
- SOAZ to facilitate appropriate training of members.

#### **5.8 Lion Captive Breeders Association**

- To be reflected in Lion Captive Breeding Policy

## **6 IMMEDIATE ACTIONS**

Immediate actions which need to be taken are:

- Overall: Appoint a Lion Coordinator for PWMA, to be followed up by the establishment of A Lion Conservation & Management Co-ordinating Committee.
- Establish baseline data as soon as possible and build databases.
- Specific outputs to include:
  1. Management: Develop Lion Captive Breeding Policy
  2. Research: Constitute the Carnivore Research Group
  3. Mitigation: Review and undertake needs assessment for PAC Units
  4. Socio-economic: Pursue CAMPFIRE fiscal devolution aggressively
  5. Apply regulations as required, e.g. mandatory trophy measurements
  6. Disseminate and publicise the development and implementation of this Strategy
  7. Inform regional partners, i.e. range states.

## 7 REFERENCES

- Bauer, H and Van Der Merwe, S 2004. Inventory of free-ranging lions *Panthera leo* in Africa. *Oryx* 38(1), 26-31.
- Bauer, H, Chardonnet, Ph and Kristin Nowell 2005. Status and distribution of the lion (*Panthera leo*) in East and Southern Africa. Background paper for the East and Southern African Lion Workshop, Johannesburg, 2006. IUCN, Pretoria.
- Chardonnet, Ph. (ed) 2002. Conservation of the African Lion: Contribution to a Status Survey. International Foundation for the Conservation of Wildlife, Paris.
- Child, B (ed) 2004. Parks in Transition: Biodiversity, Rural Development and the Bottom Line. Earthscan, London.
- Child, G and Savory, CR 1964. The distribution of large mammal species in Southern Rhodesia. *Arnoldia* 1(14), 1-15.
- Funston, P 2006. Population ecology of the African lion. Presentation at the Workshop to develop a conservation strategy and action plan for the lion in Zimbabwe. Harare, October 2006.
- Loveridge, AJ 2002. Hwange Lion Project. Workshop on Ecological Research in Hwange National Park. Wildlife Conservation Unit, Oxford.
- Loveridge, AJ 2006. The impact of sport hunting and edge effects on lion populations. Presentation at the Workshop to develop a conservation strategy and action plan for the lion in Zimbabwe. Harare, October 2006.
- Monks, N 2005. Lion management plan: Zimbabwe: Research and management needs. Presentation at the Workshop to develop a conservation strategy and action plan for the lion in Zimbabwe. Harare, October 2006.
- Purchase, G 2002. Aspects of the ecology and behaviour of lions (*Panthera leo*) and spotted hyaenas (*Crocuta crocuta*) in Matusadona National Park, a closed woodland savannah system: Is there any evidence of competition between the two species? PhD Thesis, University of Aberdeen.
- Taylor, RD 2006. CAMPFIRE, Zimbabwe: Case studies on successful southern African NRM initiatives and their impacts on poverty and governance. Draft report to IUCN on behalf of USAID FRAME. IUCN South Africa, Pretoria.
- Taylor, RD and Murphree, MW 2007. Masoka and Gairesi Field Site Assessments: Case studies on successful southern African NRM initiatives and their impacts on poverty and governance. Draft report to IUCN on behalf of USAID FRAME. IUCN South Africa, Pretoria.
- Smithers, RHN 1983. The Mammals of the Southern African Subregion. University of Pretoria, Pretoria.
- Woodroffe R, Frank, LG, Lindsey, PA, ole Ranah, SMK and Romahach, S 2006. Livestock husbandry as a tool for carnivore conservation in Africa's community rangelands: a case-control study. *Biodivers. Conservation*, Springer B.V.