## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contents</td>
<td>2</td>
</tr>
<tr>
<td>Authors</td>
<td>3</td>
</tr>
<tr>
<td>Background</td>
<td>3</td>
</tr>
<tr>
<td>Program Goal</td>
<td>5</td>
</tr>
<tr>
<td>Program Operational Structure</td>
<td>5</td>
</tr>
<tr>
<td>Conservation Target</td>
<td>6</td>
</tr>
<tr>
<td>Status of African Lions in the AZA Community</td>
<td>6</td>
</tr>
<tr>
<td>AZA Conservation Activities</td>
<td>6</td>
</tr>
<tr>
<td>AZA Public Engagement Activities</td>
<td>7</td>
</tr>
<tr>
<td>Threats</td>
<td>8</td>
</tr>
<tr>
<td>Conservation Status of African Lions</td>
<td>9</td>
</tr>
<tr>
<td>Recovery Plans</td>
<td>9</td>
</tr>
<tr>
<td>Threats</td>
<td>10</td>
</tr>
<tr>
<td>Work Plan</td>
<td>12</td>
</tr>
<tr>
<td>Objectives</td>
<td>13</td>
</tr>
<tr>
<td>Conservation Objectives</td>
<td>14</td>
</tr>
<tr>
<td>Public/Stakeholder Engagement Objectives</td>
<td>14</td>
</tr>
<tr>
<td>Communications/Public Awareness Objectives</td>
<td>14</td>
</tr>
<tr>
<td>Funding Objectives</td>
<td>15</td>
</tr>
<tr>
<td>Actions</td>
<td>16</td>
</tr>
<tr>
<td>Conservation Actions</td>
<td>16</td>
</tr>
<tr>
<td>Public/Stakeholder Engagement Actions</td>
<td>17</td>
</tr>
<tr>
<td>Communications/Public Awareness Actions</td>
<td>17</td>
</tr>
<tr>
<td>Funding Actions</td>
<td>18</td>
</tr>
<tr>
<td>References</td>
<td>19</td>
</tr>
<tr>
<td>Partners</td>
<td>20</td>
</tr>
</tbody>
</table>
Authors

Editor
Hollie Colahan, Denver Zoo

Contributors
Claire Martin, Disney’s Animal Kingdom
Lily Maynard, Disney’s Animal Kingdom
Cheryl Morris, Omaha’s Henry Doorly Zoo
Beth Schaefer, Los Angeles Zoo
Jean-Gael Collomb, Wildlife Conservation Network
Paul Thomson, Wildlife Conservation Network
Peter Lindsey, Wildlife Conservation Network

Photo Credits
Hollie Colahan
Background

There are over 350 lions at 100 AZA accredited zoos.
Program Goal

The African Lion SAFE Program’s goal is to increase the number of African lions in the wild through public engagement and partnering with those working on the ground in Africa. The program will offer a menu of opportunities for AZA institutions to support lion conservation through both funding opportunities and public engagement.

Program Operational Structure

<table>
<thead>
<tr>
<th>Organization</th>
<th>Representatives</th>
<th>Contact Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Leader</td>
<td>Hollie Colahan</td>
<td><a href="mailto:hcolahan@denverzoo.org">hcolahan@denverzoo.org</a> 720-337-1647</td>
</tr>
<tr>
<td>Los Angeles Zoo &amp; Botanical Gardens</td>
<td>Beth Schaefer</td>
<td><a href="mailto:beth.schaefer@lacity.org">beth.schaefer@lacity.org</a> 323-644-4254</td>
</tr>
<tr>
<td>Omaha’s Henry Doorly Zoo &amp; Aquarium</td>
<td>Cheryl Morris, Ph.D</td>
<td><a href="mailto:cheryld@omahazoo.com">cheryld@omahazoo.com</a> 402-738-6906</td>
</tr>
<tr>
<td>Disney’s Animal Kingdom</td>
<td>Lily Maynard</td>
<td><a href="mailto:Lily.T.Maynard@disney.com">Lily.T.Maynard@disney.com</a> 407-938-3287</td>
</tr>
<tr>
<td>Wildlife Conservation Network (WCN)</td>
<td>Jean-Gael Collomb, Ph.D</td>
<td><a href="mailto:jg@wildnet.org">jg@wildnet.org</a> 415-202-6380</td>
</tr>
<tr>
<td>Field Conservation Committee Liaison</td>
<td>Claire Martin</td>
<td><a href="mailto:Claire.Martin@disney.com">Claire.Martin@disney.com</a> 407-938-2430</td>
</tr>
<tr>
<td>Education Advisor</td>
<td>Amanda Berlinski</td>
<td><a href="mailto:ABerlinski@lpzoo.org">ABerlinski@lpzoo.org</a> 312-742-2053</td>
</tr>
<tr>
<td>Program Partners</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Denver Zoo</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disney’s Animal Kingdom</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Los Angeles Zoo</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Omaha’s Henry Doorly Zoo &amp; Aquarium</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Additional zoos to be added</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Conservation Target

Recent genetic work indicates two subspecies. *P. l. leo* includes lions found in India as well as northern, western and central Africa and *P. l. melanochaita* in eastern and southern Africa (Bertola 2015). *Panthera leo* includes both the African and Asiatic lion. The African Lion SAFE program is focused on conserving lions across all of Africa, so both sub species are included in the Conservation Target. The small population of lions in India is not included in this plan.

Status of African Lions in the AZA Community

One hundred AZA zoos house African lions across North and South America. More zoos house lions than elephants or gorillas, cementing their status as an iconic zoo species. As the most sexually dimorphic and only social felid, they fill an important role in the diversity of zoo collections. Their popularity in movies, logos, and popular culture make them immediately recognizable to zoo visitors of all ages. Zoo guests expect to see charismatic species such as lions, and connections to these recognizable and familiar species help engage audiences in understanding and engaging in the mission of zoos.

In 1993, the Lion Species Survival Plan (SSP) began actively managing a breeding population for zoos. The Lion SSP, under the purview of the Felid Taxon Advisory Group (TAG), is designated as a Green program and won the AZA SSP Sustainability Award in 2018. The population is stable at around 370 animals. SAFE Program Leader Hollie Colahan also serves as the SSP Coordinator and Vice Chair of the TAG. Steering Committee member Cheryl Morris serves as TAG Co-Chair.

AZA Conservation Activities

In the 2018 Felid TAG Regional Collection Plan, the Lion SSP identified field conservation as one of the priority goals. Past involvement has included endorsing field projects and partnering with a member zoo to coordinate distribution of funds, but the SAFE Program will now be the signature conservation priority for the SSP. Through SAFE, AZA zoos will have the opportunity to directly engage in fundraising and awareness campaigns that will make a measurable difference for lion conservation.

According to the 2013-2017 AZA Annual Report on Conservation and Science (ARCS) reports, 61 AZA institutions supported lion field conservation, with contributions totaling over $3 million. They supported 57 different organizations across more than ten countries.
AZA Public Engagement Activities

Many zoos highlight their support for specific lion conservation projects, which include financial support, staff participation, and hosting field conservationists at their zoos or conferences. In recent years, many zoos have organized activities for World Lion Day in August.
Threats

Lions have vanished from 92% of their historic range.
Conservation Status of African Lions

<table>
<thead>
<tr>
<th>Agency</th>
<th>Status</th>
</tr>
</thead>
</table>
| US Fish & Wildlife Service | Threatened – *P. l. melanochaita*  
                           | Endangered – *P. l. leo*                                   |
| IUCN Red List           | Critically Endangered in West Africa                        
                           | Vulnerable elsewhere in Africa                             |

Over the last 25 years, lion populations in Africa have been nearly cut in half, with 20,000-30,000 individuals remaining (Bauer et al 2016). Lions occupy only 8% of their historic range today and have been extirpated from 26 countries (Bauer et al 2016). Much like giraffes, the dramatic decline of lions went largely unnoticed for many years and has only recently become a top conservation priority for zoos.

Recovery Plans

The IUCN Cat Specialist Group published the following conservation strategies:

*The Conservation Strategy for the Lion in Eastern and Southern Africa (IUCN 2006a)*
*The Conservation Strategy for the Lion in West and Central Africa (IUCN 2006b)*

In 2015, Bauer et al published a review of these strategies with updates on progress, the objectives of both plans were summarized together:

<table>
<thead>
<tr>
<th>Objective</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Conserve current populations of free ranging lions</td>
</tr>
<tr>
<td>2</td>
<td>Conserve current lion habitat and prey base</td>
</tr>
<tr>
<td>3</td>
<td>Minimize human lion conflict</td>
</tr>
<tr>
<td>4</td>
<td>Equitably distribute the costs and benefits of long-term lion management</td>
</tr>
<tr>
<td>5</td>
<td>Have global, regional and national policies and legal frameworks provide for lion conservation and associated socio-economic benefits</td>
</tr>
<tr>
<td>6</td>
<td>Promote institutional strengthening towards an enabling environment for lion conservation</td>
</tr>
<tr>
<td>7</td>
<td>Minimize the trade in lion bones and body parts</td>
</tr>
</tbody>
</table>
The primary threats to lions include (Bauer et al 2015):

1. **Habitat loss**
   Lions and their prey are at risk from the loss of habitats as a result of rapid human population growth, rapid and poorly planned development, incursion of humans into wildlife areas, agricultural expansion, unsustainable harvesting of trees for timber, charcoal and firewood, and the expansion of mining, etc. The area of suitable habitats for lions is declining, and remaining patches are becoming more fragmented and isolated, which makes lion populations more prone to edge-effects and stochastic events.

2. **Loss of prey**
   Prey numbers are declining in many areas through an increasingly commercialized bushmeat trade, through competition with growing numbers of livestock and as a result of livestock loss. When bushmeat poachers use snares and traps, lions are often killed as incidental by-catch.

3. **Human-lion conflict**
   At its worst, this includes human deaths, but more commonly is a result of retaliatory or preemptive killing of lions in response to livestock losses or the threat thereof. The killing of lions with poison is particularly problematic as it can result in the death of whole prides and significant collateral mortality of other species.

4. **Targeted poaching of lions**
   There are indications in parts of Africa that lions are increasingly targeted by poachers for their body parts. The body parts that are in demand appear to include paws, teeth, skins, fat, bones and others. The extent to which this is due to demand from Asia, versus demand from local African or expatriate Asian communities in Africa, is not yet clear. This threat has potential to proliferate rapidly.

5. **Cultural killing of lions**
   In parts of Africa, and most notably in parts of Kenya and Tanzania, lions are killed by young men during rite of passage rituals.

6. **Trophy hunting**
   The trophy hunting of lions is permitted in several African countries. The issue is highly controversial and contested. While trophy hunting does generate some revenue for conservation and helps to justify the retention of large blocks of land for wildlife, the industry is deeply flawed in many places. In addition, when lions are hunted, unless the quotas are set extremely conservatively, the associated mortality can have negative impacts on populations.
There are a number of factors that pre-dispose lions, their habitats, and their prey to the threats outlined above. These factors include:

1. **Governance related issues**
   A number of African countries are struggling with poor governance, weak institutions, and corruption – which undermine the ability of range states to effectively tackle environmental threats.

2. **Legal frameworks**
   In some African countries, legal frameworks governing wildlife and land need revisions to allow for more effective control of threats to lions, their habitats and their prey. In some cases, solid legal frameworks are in existence but require better application.

3. **Poverty and food insecurity**
   Many African countries continued to grapple with the twin challenges of poverty and food insecurity. These factors make it difficult for governments and local people to prioritize wildlife conservation. In addition, highly impoverished communities are often reliant on direct extraction of wildlife and other natural resources for survival, and on the conversion of habitat for subsistence farming which poses a challenge for wildlife conservation.

4. **Inadequate management capacity**
   This includes lack of capacity and funding for the management of protected areas and other types of wildlife areas. Budget deficits facing protected areas in lion range are in the region of 1-2 billion dollars per annum. This issue is a factor that makes lions, their habitats and prey vulnerable to a wide range of human pressures.

5. **Inadequate engagement of communities in conservation efforts**
   Communities often bear the costs of living with lions and other wildlife but receive few if any of the benefits. Ensuring that communities are effectively engaged and empowered as conservation stakeholders is an essential prerequisite to effective conservation efforts.

Because lions range across many countries and habitats, a wide ranging approach is required. The African Lion SAFE Program will work closely with partners in Africa to determine where help will be needed most.
Protected areas could support 3-4x the current population if properly resourced and managed.
SAFE Objectives

The Lion SAFE Program has adopted Lion Recovery Fund’s conservation strategy outlined below (Wildlife Conservation Network 2017):

1. **Expand the Conservation Footprint**
   Africa’s protected areas have the potential to support 3-4 times the number of lions that currently persist in the wild, if optimally managed. One of the most impactful strategies to saving lions is to focus these protected areas, and the corridors and rangelands that connect them. Increased prey base and tolerant communities would create “lionscapes” where lions could thrive. Lions reproduce quickly and their numbers are not yet so low that recovery is out of reach. See Conservation Actions for details on an upcoming meeting to develop this strategy.

2. **Build the Will**
   The recent and rapid decline of lions is not widely appreciated, and the impacts of this loss are even less understood, both within Africa and around the world. To reverse these changes we need to work hard to build: the public will within Africa and the world at large for the conservation of Africa’s wildlife in the face of growing threats; the political will in Africa and in the community of nations as a whole to step up to meet the challenges facing conservation in Africa; and the philanthropic will to ensure that sufficient funds are available for the conservation of lions, their habitats and their prey. See Conservation Actions for details on a meeting to develop this strategy.

3. **Scale the Funding**
   None of these strategies and solutions can be implemented without an increase in funding. The Lion Recovery Fund is designed to be catalytic, in both raising funds and leveraging funds from other groups. AZA institutions can become another key partner in this effort. See Funding Objectives for more details.

In May 2019, Disney’s Animal Kingdom and Wildlife Conservation Network hosted the Lion Footprint Forum, which convened thinkers, practitioners, and funders to develop strategies for lion conservation. The African Lion SAFE program’s strategies will be heavily influenced by the outcomes of this meeting. The proceedings of this meeting have not been published as of submission, but the concepts discussed are represented in the objectives and actions listed below.
Conservation Objectives

1. **Build partnerships between AZA zoos, SAFE, and lion conservation organizations to address the threats to lions in Africa (All Objectives).**
   SAFE will partner with WCN’s Lion Recovery Fund to provide opportunities for AZA zoos to participate in and support lion conservation. This strategy will be developed by July 31, 2019.

2. **Develop a strategy that leverages the power of AZA zoos and SAFE to make measurable impacts on lion populations (Objectives 1, 2, and 3).**
   Recognizing a one-size-fits-all model is not an effective strategy for zoos or lions, SAFE will use a strategy that is inclusive and maximizes participation, effective as of the plan publication.

   Pathways for participation in SAFE will be:
   - Staff participation in lion conservation projects
   - Financial support for lion conservation projects
   - Financial support for lion projects in Africa through the LRF
   - Participation in World Lion Day or the SAFE Public Engagement campaign

Public/Stakeholder Engagement Objectives

1. **Grow AZA participation in lion conservation (Strategy Objectives 1, 2, and 6).**
   Over the last 5 years, 61 AZA zoos contributed funds to lion conservation and an unknown number participated in World Lion Day activities. SAFE can help coordinate, track and provide resources for more zoos to become involved, increasing the number of AZA institutions supporting lion conservation by financial contributions or World Lion Day participation to 100 by 2021.

Communications/Public Awareness Objectives

1. **Launch a public engagement campaign (Strategy Objectives 1 and 2).**
   Together, African Lion SAFE and Disney will launch a public engagement campaign in summer of 2019 to drive support and action for lion conservation together with WCN. The campaign, Protect the Pride, will coincide with the release of the Lion King Movie. We will collaborate with AZA institutions to leverage the stories of the work to inspire our guests and drive greater collective impact for the species.

2. **Increase awareness about lion conservation (Strategy Objectives 1 and 2).**
   Many AZA zoos conduct daily demonstrations, host behind the scenes tour experiences, and display graphics at their lion exhibits. SAFE can help coordinate, track and provide resources for more zoos to become involved, increasing the number of AZA institutions sharing lion conservation messaging on grounds or online to 100 by 2021.
1. **Increase the funding to support Lion Recovery Fund (Strategy Objectives 1-7)**
   Together, African Lion SAFE and Disney will explore a campaign in summer of 2019 to drive support and action for lion conservation together with WCN. AZA institutions have directed significant funding to help protect lions and their habitats and we look to grow that funding to increase the impact on wild lion populations. Details of this objective will be finalized in 2019.

2. **Increase the funding to support lion conservation from AZA zoos (Strategy Objectives 1 and 2)**
   AZA zoos contributed about $600,000/year to lion conservation over the last 5 years. By partnering with LRF and raising awareness, SAFE will increase funding for lion conservation from AZA zoos to $2 million over the next 3 years (2019-2021).
## Conservation Actions

<table>
<thead>
<tr>
<th>Objective</th>
<th>Action/Task/Activity</th>
<th>Lead(s)</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Build partnerships between AZA zoos, SAFE, and lion conservation organizations to address the threats to lions in Africa</td>
<td>WCN hosted a meeting at Walt Disney World, bringing together lion conservation experts from across Africa to help develop a strategy and framework to grow the conservation footprint for lions across Africa. SAFE representative will be participating to determine how zoos and aquariums can play a role in the strategy.</td>
<td>Claire Martin Paul Thomson (WCN)</td>
<td>May 2019</td>
</tr>
<tr>
<td>Investigate opportunities to partner with other SAFE programs for species that have ranges that overlap with lions (cheetahs, vultures, etc.).</td>
<td></td>
<td>Hollie Colahan Cheryl Morris</td>
<td>October 2019</td>
</tr>
<tr>
<td>Develop a strategy that leverages the power of AZA zoos to make measurable impacts on lion populations.</td>
<td>Compose and send appeal letter/email to all AZA institutions outlining how to get involved in SAFE and encouraging participation</td>
<td>Hollie Colahan</td>
<td>July 2019</td>
</tr>
<tr>
<td></td>
<td>Develop a database of all AZA institution participation in SAFE, including financial support, field work, on grounds messaging and World Lion Day participation.</td>
<td>Beth Schaefer Cheryl Morris</td>
<td>October 2019</td>
</tr>
</tbody>
</table>
## Public/Stakeholder Engagement Actions

<table>
<thead>
<tr>
<th>Objective</th>
<th>Action/Task/Activity</th>
<th>Lead(s)</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grow AZA participation in lion conservation</td>
<td>Develop World Lion Day materials for AZA institutions and promote on social media channels</td>
<td>Hollie Colahan with Lion SSP</td>
<td>July 2019</td>
</tr>
<tr>
<td></td>
<td>Develop a process for zoos that provide financial support to receive updates from LRF funded projects</td>
<td>Paul Thomson (WCN) Hollie Colahan</td>
<td>September 2019</td>
</tr>
<tr>
<td></td>
<td>Add Disney’s Animal Kingdom as a program partner</td>
<td>Hollie Colahan</td>
<td>January 2019</td>
</tr>
</tbody>
</table>

## Communications/Public Awareness Actions

<table>
<thead>
<tr>
<th>Objective</th>
<th>Action/Task/Activity</th>
<th>Lead(s)</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Launch a public engagement campaign</td>
<td>Partner with Disney’s Animal Kingdom to launch a nationwide public awareness campaign, Protect the Pride in association with the release of the move The Lion King</td>
<td>Hollie Colahan Lily Maynard</td>
<td>June 2019</td>
</tr>
<tr>
<td>Increase public awareness about lion conservation</td>
<td>Develop materials for zoos to help deliver consistent conservation messaging about lion conservation</td>
<td>Hollie Colahan, with Lion SSP</td>
<td>October 2019</td>
</tr>
<tr>
<td></td>
<td>Incorporate lion conservation stories into Lion SSP social media channels</td>
<td>Hollie Colahan, with Lion SSP</td>
<td>Ongoing</td>
</tr>
<tr>
<td></td>
<td>Contribute Lion SAFE program updates to AZA for Connect or online distribution</td>
<td>Hollie Colahan</td>
<td>1x/year</td>
</tr>
</tbody>
</table>
Develop a process to publicly recognize activities and support in SAFE

<table>
<thead>
<tr>
<th>Objective</th>
<th>Action/Task/Activity</th>
<th>Lead(s)</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase the funding to support Lion Recovery Fund</td>
<td>Partner with Disney’s Animal Kingdom to increase the funding to LRF</td>
<td>Claire Martin JG Collomb (WCN)</td>
<td>June 2019</td>
</tr>
</tbody>
</table>

Increase the funding to support lion conservation

<table>
<thead>
<tr>
<th>Objective</th>
<th>Action/Task/Activity</th>
<th>Lead(s)</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase total funding from AZA institutions by increasing current levels of support to reach $2 million over 3 years</td>
<td>Hollie Colahan</td>
<td>2021</td>
<td></td>
</tr>
<tr>
<td>Increase total funding from AZA institutions by increasing adding new supporters to reach 100 AZA institutions</td>
<td>Hollie Colahan</td>
<td>2021</td>
<td></td>
</tr>
</tbody>
</table>

Increase the funding to support lion conservation from AZA zoos

<table>
<thead>
<tr>
<th>Objective</th>
<th>Action/Task/Activity</th>
<th>Lead(s)</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investigate opportunities to partner with other SAFE programs for species that have ranges that overlap with lions (cheetahs, vultures, etc.)</td>
<td>Hollie Colahan Cheryl Morris</td>
<td>October 2019</td>
<td></td>
</tr>
</tbody>
</table>
References


