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The African Lion and Environmental Research Trust (ALERT) is dedicated to the facilitation and promotion of sound conservation and management plans, by means of a responsible development approach, for the African lion (*Panthera leo*), recognizing their potential to provide substantial social, cultural, ecological and economic benefits.

For millennia the lion has been a potent symbol for thousands of cultures throughout the world; a symbol of courage, of authority and of wisdom.

But this, the most iconic creature that has ever lived on our planet is in danger of losing its place as the King of Beasts.

Only with our collective pride there is still time to save the lion, to ensure the future of “the fiercest and most magnanimous of the four footed beasts” (Samuel Johnson’s Dictionary of the English Language, 1755).

The African lion: *an ambassador promoting action to the benefit of all Africa’s people and wildlife.*



African lion populations might still exist in theoretical numbers to support their conservation status as “vulnerable” by IUCN standards. But analyses of population structure, geographical fragmentation, risks from inbreeding depression and subsequent loss of evolutionary potential, and probable/actual disease threats, provide many additional causes of concern for the long-term viability of this species.

Pressures on land use from increasing human populations leading to continued fragmentation of the remaining suitable habitat coupled with indiscriminate killing in defence of life and livestock and prey base depletion are recognized as being the principle causes for their decline.



Western countries would like to maintain the biodiversity of African wildlife; African countries are

not so sure, and would like to see direct commercial benefit to such maintenance, as wildlife populations often enter into direct and significant conflict with human populations, their livestock, and agricultural crops.

Tourism and hunting are presently the only income generators for countries that maintain wildlife, but such income is currently distributed in ways largely beneficial to the tourism and hunting companies.

In other words, the companies reap large benefits and the range countries get peanuts. Communities living alongside dangerous animals such as lions usually receive no or negative benefits from their presence

Despite considerable evidence from research and growing media attention about the dramatic decline in lion populations across Africa, positive action by range states to halt and perhaps reverse this decline has remained minimal.





ALERT proposes that African range states:

- need to carefully assess their commitment to the survival of the African lion. This will entail a difficult program to balance human population demands against wildlife conservation needs as part of a responsible development approach;
- must decide where to conserve lion populations with designated buffer zones to provide secondary levels of protection;
- must assume responsibility for monitoring the numbers of lions within their borders and objectively evaluate estimations presented by parties that might have possible vested interests;
- should carefully evaluate issued quotas for lion trophy hunting based on a need for long-term conservation of the species rather than short-term financial gain for hunting companies and, minimally, national coffers.
- should vigorously prosecute any transgression against wildlife laws without prejudice or influence;
- need to be committed to locally relevant lion conservation programs and report on the objectives, methods and effectiveness of such actions in a transparent fashion. This will entail effort and commitment, but will result in the protection of wildlife habitat with a better chance of long term sustainability.

ALERT, while supporting international

recommendations, will also be a demanding proponent for relevant African solutions. After all, it is our wildlife heritage, our need to protect and conserve, and our solutions that will be relevant to how wildlife populations are responsibly managed in the future.

We are convinced this is the only positive way forward.

Given the greatly reduced potential for the natural re-colonization of free-ranging lion populations, coupled with the cultural shift necessary to realize proposed conservation aims, ALERT accepts the need for interventionist approaches and thus supports assisted lion reintroduction into specific areas.

Such areas would include localities where lion populations have been eradicated, but that have been identified as high priority for reestablishment of the species, and where the causes of the original population loss have been identified and are being mitigated.



Conservation Status of the African Lion

Estimating African lion populations with any accuracy is difficult [1] and involves many uncertainties. While the three main surveys to date all used different methods, it is widely accepted that lion populations in Africa are in serious continuing decline.

Lions (*Panthera leo*) are listed as Convention of International Trade in Endangered Species (CITES) Appendix II and are regarded as 'vulnerable' by the International Union for the Conservation of Nature (IUCN) Red List [Version 3.1 2001].

The criteria for classification being:

"An observed, estimated, inferred or suspected population size reduction of $\geq 30\%$ over the last 10 years or three generations, whichever is the longer, where the reduction or its causes may not have ceased OR may not be understood OR may not be reversible, based on:

(a) direct observation

(b) an index of abundance appropriate to the taxon

(c) a decline in area of occupancy, extent of occurrence and/or quality of habitat

(d) actual or potential levels of exploitation"





Myers (1975) wrote, "*Since 1950, [lion] numbers may well have been cut in half, perhaps to as low as 200,000 in all or even less*". Later, Myers (1984) wrote, "*In light of evidence from all the main countries of its range, the lion has been undergoing decline in both range and numbers, often an accelerating decline, during the past two decades*".

In the early 1990s, IUCN/SSC Cat Specialist Group members made educated "guesstimates" of 30,000 to 100,000 for the African lion population.

Two surveys provided the first real estimates of the African lion population with some ground-truthing.

The African Lion Working Group, a network of lion specialists affiliated with the IUCN/SSC Cat Specialist Group, conducted a mail survey and compiled estimates of 100 known African lion populations. Not included were lion populations of known existence but unknown or un-estimated size. The ALWG African lion **population estimate is 23,000, range of 16,500 - 30,000** [data collected in 2002 and published in 2004].

The second survey was carried out by Philippe Chardonnet (2002) and sponsored by the International Foundation for the Conservation of Wildlife and Conservation Force. He compiled estimates for 144 individual African lion populations, grouped into 36 largely isolated sub-populations. His methodology included extrapolation of estimates of known populations into areas where lion status was unknown, and his total figure is larger: **39,000 lions in Africa; range of 29,000 - 47,000.**

It is important to realize that these numbers are based on various categories of what can best be described as "guesstimates". Bauer and van der Merwe's data, for example, are about 76% based on some category of estimation. This is not surprising, as lions are difficult to count accurately. These large predators occur at low densities and individual recognition is difficult and relies on considerable photographic evidence and expertise. Several survey techniques are available but have been used in very few known geographic locations that lions still occur as they are both time-intensive and expensive. Despite such shortcomings, **African lion numbers are accepted by most experts to be in sharp decline.**

In attempts to clarify conservation efforts for African lions, two workshops were held in 2005/6. An outcome of the workshops was to identify Lion Conservation Units (LCUs), defined as *“an area of known, occasional and/or possible lion range that can be considered an ecological unit of importance”*. Listed LCU's were also assigned population trends although it is not possible to derive the basis of such assignments. As such, the population trends must be considered speculative in a scientific sense.

Although not specifically stated within the publications from these workshops that each LCU is ecologically independent, it is assumed as such as defined by Chardonnet (2002); he describes units similar to the identified LCUs stating that sub-populations were *“distinct populations separated by: natural barriers such as large rivers or mountain ranges, and/or; extensive areas of human settlements, and/or; very large distances”*.

The long-term importance for lion conservation of many LCU's is questionable, as viability is highly dependent on free population interchange. The Gorongosa / Marrromeu LCU in Mozambique, for example, covers an area of 42,000km² with an estimated “increasing” population of 100 – 250. Gorongosa NP, one of two protected areas within the range, has an estimated decreasing population of 34 – 60 lions with little or no possible natural immigration due to the Park's isolation by community areas with an estimated population density of 250,000.

Similar criticisms apply to the multi-country LCUs (Guinea/Guinea-Bissau/Mali/Senegal in the case of the Niokolo-Guinea LCU; Botswana, Zimbabwe, South Africa in the case of Shashe-Limpopo LCU). While the contiguous LCUs can be viewed as containing populations of significant importance to overall conservation plans for the species, by far the largest percentage of LCU's were designated based on incomplete, unsubstantiated, and anecdotal information on lion numbers. This applies especially to countries like Sudan, Democratic Republic of Congo, Angola, and Somalia from which no reasonable lion numbers can be expected to be produced in the foreseeable future. As an example of such uncertainty, of 109 locations reported by Bauer and van der Merwe [2] to contain lion populations, 76% of estimates were based on various categories of “guesses”. In only 14% of locations could numbers be confidently estimated using recent surveys and/or data based on actual counts. LCUs were assigned trends that acknowledge levels of confidence of future viability of the populations, but overall, the LCU approach is currently flawed and compromised by reliance on population data with little hope of substantiation.





In 39% of LCUs, populations were considered as stable or increasing with 43% decreasing and 17% of unknown trend. Of the four LCUs wholly or partly within Kenya, two are identified as having stable populations whilst one is identified as having an increasing population. These trends contradict latest estimates of lion numbers provided by the Kenyan Wildlife Service further raising concerns over the validity of these trends for other LCUs.

Further, recent surveys in West and Central Africa produced alarming results, including the outcome that lion presence could be confirmed in only 2 of 12 IUCN identified LCUs studied in the West African region. The authors concluded that *“It is unclear whether our results indicate a true deterioration in lion status since 2005-6 or whether the LCUs in question were delimited based on outdated or inaccurate information. Our survey results suggest a combination of both.”*

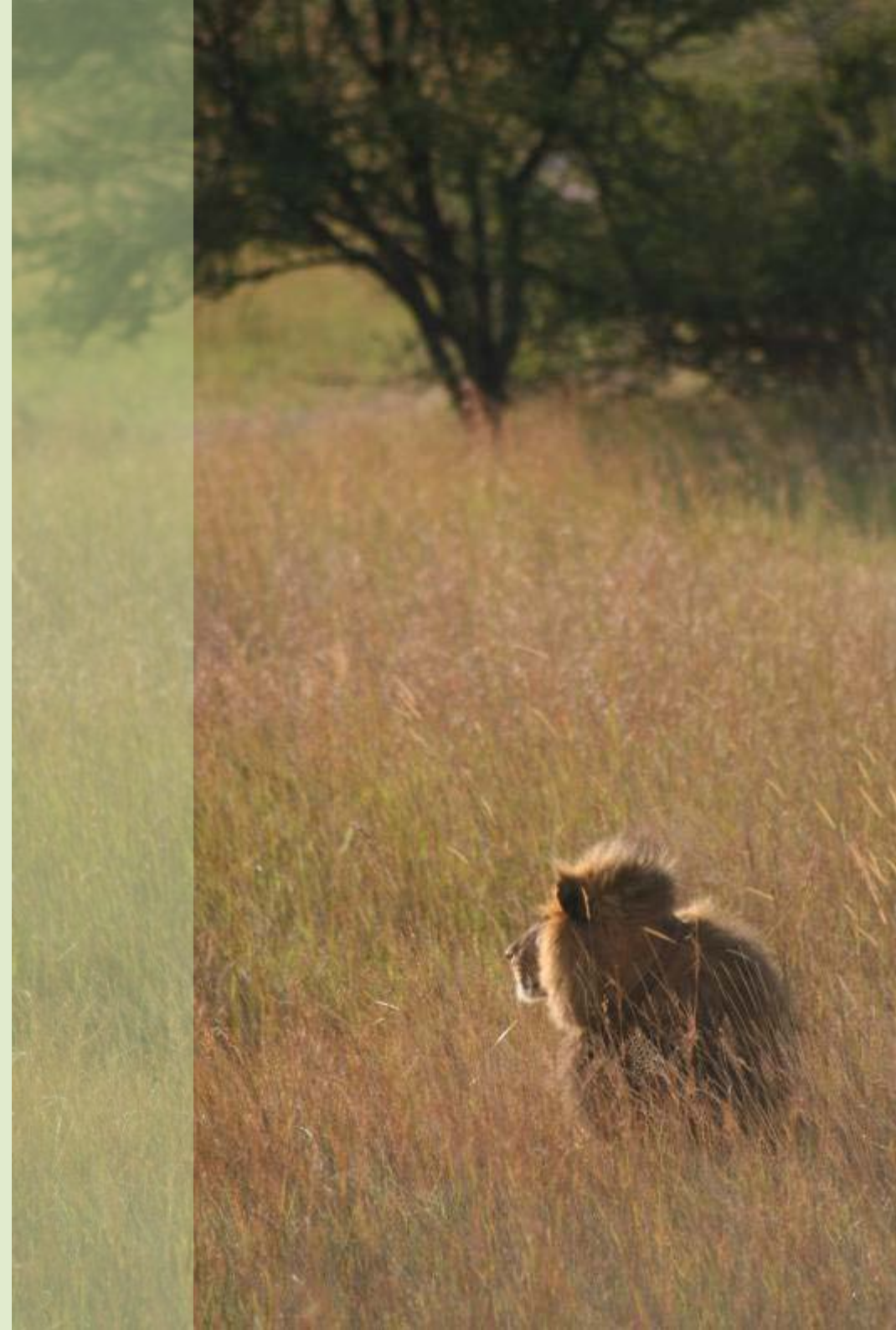
Interventionist approaches to lion conservation

Lion populations are becoming increasingly fragmented within insular reserves closed to natural immigration. **Whereas previously, natural re-colonization had been possible, the opportunities for such events today are greatly reduced or non-existent.** This trend increasingly applies even within countries with previously substantial lion populations outside protected areas. Natural re-colonization thus increasingly requires emigration from an occupied area through an inhospitable habitat matrix.

An interventionist approach to species management, including lion conservation, has increasingly been adopted through translocation or reintroduction. The reintroduction of lions has well-practiced techniques although small numbers of animals have been involved. Over thirty sites in South Africa have reintroduced lions over the past two decades with methods being adopted in other countries undergoing land-use changes, such as Namibia. Many of these reintroductions however have added little to the conservation of the species as they have been conducted at the incorrect social scale with failures to manage non-viable reintroduced populations within a meta-population framework.

Reintroductions may be suitable in protected areas where lions have been extirpated or where extant populations have become genetically non-viable and natural re-colonization is unlikely. Examples could include countries recovering from civil war such as Angola, Mozambique, Rwanda and Uganda, or where closed populations would benefit from an infusion of genetic material, such as in the Ngorongoro Crater.

There, while lions recovered from a severe disease epizootic in 1963, three subsequent outbreaks between 1994 and 2001 occurred in such rapid succession that this isolated population has been unable to recover. Kissui and Packer consider that the Crater population may have become usually vulnerable to infectious disease in recent years owing to its close proximity to a growing human population (including their domestic dogs) and a history of inbreeding. The Crater lions may therefore provide important insights into the vulnerability of many isolated lion populations.





Since the lion population has dropped so rapidly during the past few decades, we do not know how drastic a measure we might have to take a decade from now to ensure the survivability of lion populations in Africa.

However, reintroduction will become increasingly more important as affirmed by the IUCN due to the rapid increase in the number of small and even large resurrected reserves and the expansion of threats to wildlife. In addition, small populations will require active management to maintain genetic diversity.

A question exists therefore on the possible sources of lions for such reintroduction programs.

Whenever possible, reintroductions should include the release of young adult wild lions captured for the purpose of translocation and released into areas which have been shown to support adequate wild prey and where an effective program to mitigate threats to reintroduced populations has been put into place. Wild caught animals will be maintained in large pens within the release area for several months (“soft release”), in an effort to reduce their tendency to return to the area from which they originated.

“The reality of the current situation is that it will not be possible to ensure the survival of an increasing number of threatened taxa without effectively using a diverse range of complementary conservation approaches and techniques including, for some taxa, increasing the role and practical use of ex situ techniques.

If the decision to bring a taxon under ex situ management is left until extinction is imminent, it is frequently too late to effectively implement, thus risking permanent loss of the taxon.”

IUCN Technical Guidelines on the Management of
Ex-Situ Populations for Conservation (2002)

If the reintroduction of wild caught lions is not possible, or if the results are poor, we can attempt a multi-stage program to reintroduce lions originally bred from wild-living individuals.

Suitable lions would be bred in large fenced areas, along with natural game, carefully shielded from human contact. The resulting cubs, not habituated to humans and taught to hunt by their wild-living parents, would then be released into the wild. After their release, the next generation of cubs would then be reared.

Founder populations for the multi-stage program may originate from captive individuals. Suitable disease-free captive lions which lack hunting skills would be bred in fenced areas. Their offspring would be raised around humans and become part of stage one of the African Lion Rehabilitation & Release into the Wild Program.

Because these offspring are used to humans, it is easier to study them, learning various characteristics such as behaviour patterns, traits necessary to form a successful pride, how they develop various hunting skills, etc.

Later, once these offspring mature they can be used to form prides designed to maximize the breeding and survival of offspring.

These prides would be released into semi-wild environments with natural game, and human contact removed. Their non-human habituated cubs would then be released at an appropriate age into the wild after pre-release training by their parents.





The semi-wild environments provide opportunities for well-controlled experiments on all aspects of the captive versus wild situations, and refinement of proposed reintroduction protocols.

For instance, should captive-reared youngsters not learn to hunt well, we might try adding experienced, wild-caught individuals to the captive-reared group, recognizing that integration into the existing social mix might be challenging. With properly designed holding facilities, we will have the flexibility to try different approaches to group formation.

Rearing them in captivity would also permit experiments in aversive conditioning to teach them to avoid livestock.

Finally, an important part of this approach is that the Walk with Lions Program raises tourism funding to contribute to the costs of this program, but also many other conservation projects. It also creates many jobs for the local community. Thus it becomes an integral part of a self-sustainable conservation model that gives local communities a reason to not only protect wildlife populations, but also to encourage their growth.

By taking the above multi pronged approach in the future, we can scientifically study each of them to determine, which program, or combination of programs, is most appropriate under specific conditions.

While some may say there is no need to study captive breeding programs since there are still many wild lions, we still want to study all approaches, and combinations of them, to get a better scientific understanding of them and their differences under controlled scientific conditions. ALERT will seek expertise from successful felid introduction programs such as those involving private reserves in South Africa, and other actual reintroduction programs.



This project of studying all approaches seeks to fund itself through external funding, the development of ecotourism operations around as many elements of the program as are possible whilst ensuring that local communities living near the program's conservation areas are fully involved in the revenue generating potential, thus developing relevant sustainable support for conservation.

Further, all elements of the program seek to address the broader issues in lion conservation at each project site. This includes the complete rejuvenation of the wildlife area including all environmental and biotic factors, habitat protection and mitigation of the reasons why local lion populations declined in the first place.

Providing adequate protection for prey resources in a large area is a major undertaking, requiring considerable effort and political will on the part of national and local governments and neighbouring human communities. ALERT would work with national park authorities to train and equip park guards, anti-poaching units, and resource assessment teams. Park infrastructure may need to be renovated, tourism facilities built and support staff trained. We would also help surrounding communities improve farming and livestock-rearing practices in order to end their reliance on bushmeat, thereby allowing prey populations to recover. We would also work with them to secure livestock from attacks by the growing lion population. Wildlife-based enterprises and other tourism operations, would be established in order to improve local livelihoods. Underlying all development efforts would be the understanding that local communities must see wildlife as essential to their economic well-being if they are to protect it.



Frequently Asked Questions.....

For more information and latest news about the African Lion Rehabilitation & Release into the Wild Program please click [here](#).

Is there a need for a program to reintroduce lions from a captive bred source?

Lion (*Panthera leo*) populations across Africa have declined considerably, estimates showing a decrease of about 30% in the last twenty years. With few exceptions, lion populations now occur as isolated remnants with doubtful long-term viability. Natural re-colonization of areas in which populations have decreased or have been eliminated is unlikely given continued fragmentation of the remaining suitable habitat. This raises the importance of interventionist approaches in lion conservation through translocation and reintroduction programs. We estimate that only six geographically clustered populations contain sufficient individuals to potentially serve as a source for reintroduction programs but analysis of the risks of inbreeding depression and disease prevalence within free-ranging populations mostly precludes their use in reintroduction programs even if genetic, political and economic barriers to their use could be overcome. The use of captive bred lions potentially allows barriers that make most wild-caught lions non-viable as a source to be removed; however, reintroduction of captive bred lions brings additional complexity in reintroduction methodology.

But why do people need to interact with the lions, isn't that just a means to generate profits for the individuals operating those programs?

The parents of the lions that we release are captive born and have no experience of the wild; as such they have nothing to teach their offspring about survival. We have found that if the cubs are given the opportunity to build their confidence in their natural environment then they will also instinctually develop the skills they need to survive. For any young animal to play, to explore and to practice life skills, it needs to feel secure. Our staffs take the place of dominant members of the pride and provide that security. An independent study confirmed that our presence is significant in the engagement of play behaviour; vital to health and learning. Tourists are permitted to join these daily walks as this raises significant funding for the project, although a certain amount of risk must be considered in doing so.

Is all this just a cover for an involvement in the canned hunting industry? Isn't that where the lions too old to walk with paying guests go?

Whilst many organizations offering interactions with lion cubs are involved with the canned hunting industry, and that is ultimately where those cubs will end up when they get too big, ALERT and its partner organizations has no links to operators of canned hunting. No lion has ever been sold to a canned hunting operation. ALERT maintains comprehensive registers of the lions within the program and publishes such information so that visitors and supporters of our programs can see for themselves.

Andrew Conolly, owner of Antelope Park did sell a number of lions in the past, a condition of the sale being that they could not be hunted. In 2008 The Times newspaper published an article claiming that these lions were sold into canned hunting, although provided no evidence to support such an accusation. Following an independent enquiry by the UK's Press Complaints Commission during which evidence was provided that a condition of the sale was that the lions could not be hunted, the newspaper was obliged to retract the article and issue an apology. Of course this apology received significantly less press than the original article.

ALERT does not support the maintenance of an industry where captive lions are bred for the purpose of shooting them for sport.

The lions that undertake the stage one lion walking program are intended for release into semi-wild environments with their cubs, raised by the pride, in their natural environment are subsequently released into the wild at an appropriate time and under the conditions for release area selection already outlined.

Take a walk with us in

LION COUNTRY...

Filmed during 2009 and 2010 the African Lion Rehabilitation & Release into the Wild Program featured in two series produced by Anglia TV for the UK's ITV network.

Series one (6 x 30 minutes) aired in primetime in early 2010 and was followed in March 2011 by series two (6 x 60 minutes).

At its peak Lion Country attracted 5 million viewers in the UK but has picked up considerably more through airing on a number of international channels.

A selection of episodes from the series is available to view [here](#)





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