



IMPLEMENTATION PLAN FOR THE REWILDING OF RANCHED LIONS

1. INTRODUCTION

The Lion Rescue Project (LRP) is a Non Profit Company based in the Hoedspruit Area of the Limpopo Province of South Africa.

There seems to be much controversy on the subject of the rewilding of ranched lions, of which most seems to be unfounded. This Implementation Plan will hopefully clear up any doubts as to the viability of such a project.

LRP is totally committed to the rewilding of ranched lions into well vetted conservation areas throughout Southern Africa. These lions will be sourced from selected breeding organizations recommended by the South African Predator Association (SAPA) which has a sound track record of breeders with proven excellent genetic stock.

One should bear in mind that these selected breeders today hold the key to stabilizing many areas where lion populations have declined and/or inbreeding has escalated and in need of new genetic material. Such was the scenario in the Hluhwe Umfolozi Reserve in Natal South Africa where 80 odd lions were removed and replaced with new genetic material.

CURRENT STATUS OF LION POPULATIONS IN AFRICA

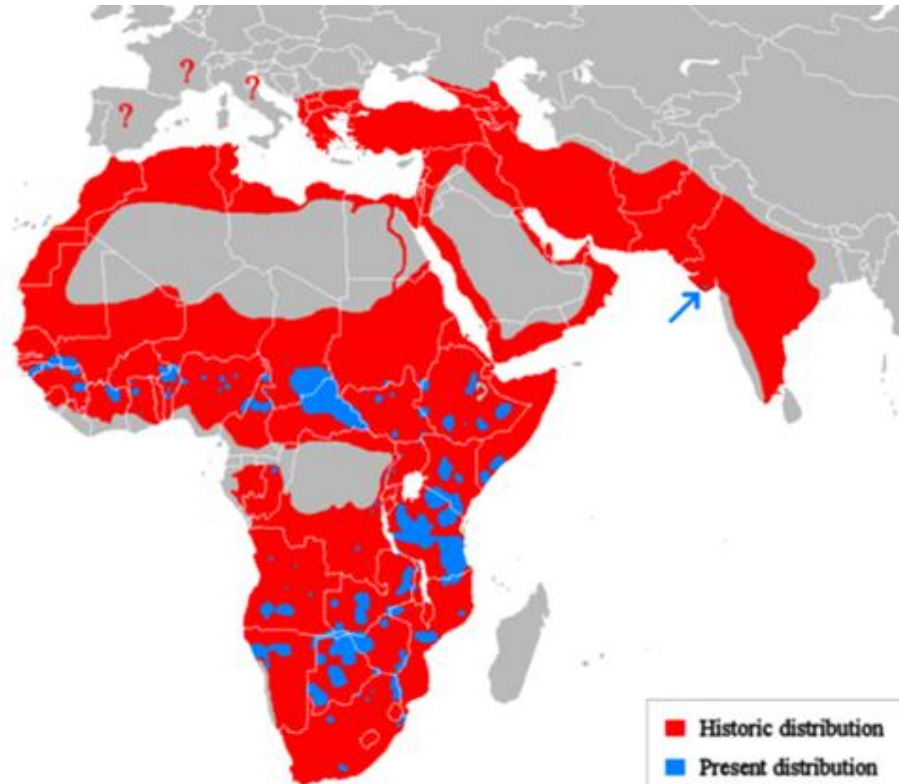
Lions used to roam throughout Eurasia, Africa and North America. However, in recent years, Lion populations are untenable outside of designated protected areas.

Lions have been listed as Vulnerable on the IUCN Red Data List since 1996 due to decline in population of about 43% in African countries since the early 1990s. Although the single most pressing cause of the decline is not fully understood, definite contributors to the decline are: (i) habitat loss, (ii) human wildlife conflict (iii) illegal hunting (Poaching) and the trade in body parts.

It is estimated that out of the 49 countries in Africa known to have had lions, they are now extinct in 25 countries. There are 12 countries where lions exist in minimal populations or are severely threatened and in fact may already be extinct, the remaining 12 countries still have some wild populations, all be they minimal. It is thought that only approximately 20 to 25000 lions exist throughout Africa at present.

It becomes clear that these apex predators have become extremely vulnerable, and it is of concern that CITIES and the IUCN have not listed them as a "Threatened" species considering their demise from over 100 000 to their present numbers, a drop of 75%.

It is on the basis of these freighting statistics that the Lion Rescue Project (LRP) wishes to undertake the rewilding of as many ranched lions as is possible into carefully vetted conservation areas throughout Southern and Central Africa.



ADDRESSING THE PROBLEM

Despite its size and with boundary fences limiting migration movement, the world renowned Kruger National Park is experiencing a problem with “in-breeding” since the lions cannot move freely over vast distances as was the case during earlier migration patterns.

The viability of the rewilding of ranched lions into a new wilderness environment is also facing a challenging debate amongst various “conservation orientated” movements. It remains a major problem that in many of these circles of criticism, there is a lack of knowledge and professional expertise on the specific topic, and views and arguments are driven by emotional decisions and not by hands-on experience in the specific field.

Dr Paul Booyens, as explained in his recent Doctorate thesis, carried out the successful release of managed lions in a private game reserve in Limpopo over a span of five years. Dr Booyens’ thesis clearly shows that ranched lions sourced from one hectare bomas, and released onto a 20000 hectare game farm, hunted and killed a kudu within 10-12 days. One of the females, after 10 months, had left the pride only to find her later with her new-born cubs.

(Ref. Department of Animal, Wildlife and Grassland Science University of the Free State Bloemfontein South Africa)

Further to this Antelope Park in Zimbabwe and Zambia have been rewilding ranched lions back into the wild with great success since 2005

However, to not completely ignore the probability of the arguments in favour/against the genetic influence, the basis for the rewilding of ANY lions into a new region, such relocation, reintroduction and rewilding, needs to be fully supported and regulated by sound genetic research and selection of disease free lions, which will be a critical part of the LRP reintroduction and well-monitored rewilding programs.

Thus, LRP has consulted with a genetics expert DR Laura on lions who supplied the following:

Questions refer to the target population for a potential lion conservation translocation

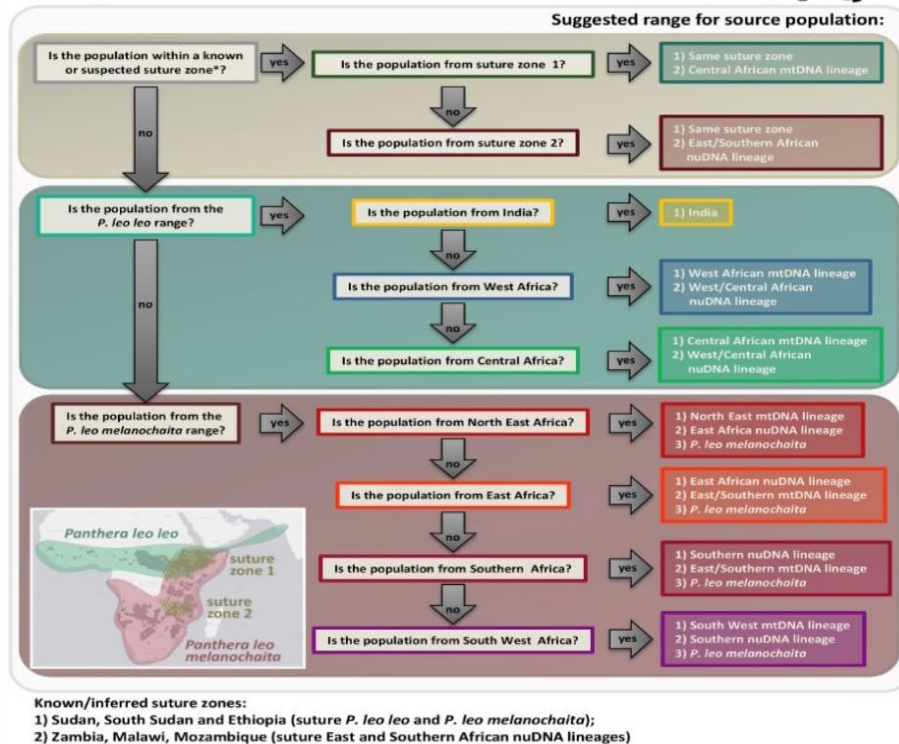


FIGURE 3 Decision tree to guide the choice of suitable source population for lion conservation translocations. Note that this decision tree does not include populations with a hybrid character due to previous translocations (grey lion symbols Figure 1, faded colours Figure 2 and Table S3)

would still be identified as 'no option' (depending on the DRC release site). To illustrate the trade of live lions included in the CITES Trade Database in a geographic context, these permitted translocations were mapped for each of the four trade categories ('W2' translocations indicated in blue) depending on their source and purpose codes (Figure 5).

4 | DISCUSSION

Here we present an overview of LCUs and their association to genetic clades, based on the best available evidence. We connect this to recommendations for future conservation translocations, by providing a hierarchical approach, which includes a 'first choice'.

Further to the above a genetic profile was conducted by the South African governments appointed Ministerial Lion Task Team (2022) stated that the comparison of captive and wild lion genotypes revealed that the genetic composition of captive lions is currently comparable to existing wild South African lions. Captive lions cluster with similar probabilities to three of four regional reference populations of wild lions included in the study and no major signatures of inbreeding were identified.

Critics argued that their presence has no demonstrated conservation value (Hunter et al. 2013). Others claimed that restoration of lion populations using captive-bred animals could contribute to in situ conservation, arguing that it was comparable to established methods using wild-caught founders to establish new prides across the small reserve population in South Africa (Abell et al. 2013). In response, one of the objectives included in the BMP was to critically evaluate the potential for captive lions to contribute to South Africa's conservation targets for wild lions.

A detailed understanding of the genetic composition and possible conservation value of South Africa's large captive lion sector is currently lacking. Using a standardized panel of 13 robust microsatellite

markers they found that the genetic composition and diversity of the captive lions analyzed is representative of that found in existing wild lion populations in South Africa.

The general consensus though, is that despite all criticism, there still appears to be no viable solution to the problem of the decline in numbers. Hence, access to ranched lions is considered to be a “rescue source” in terms of stabilizing the progressive decline in numbers in many areas, and because of its concentrated diversity, could also contribute to a more diverse distribution of genetic material.

One solid reason for holding this perspective is that because of the genetics knowledge of certain commercial breeders in their strive to breed superior genetic material, a program like LRP could tap into an already established genetic database to assist LRP in selecting animals with genetic material that would NOT negatively influence the new areas of rewilding.

(Professor Walter Veith who was the head of the Zoology department at the University of Cape Town)

Careful selection will be made in terms of the following criteria when choosing the composition of the intended prides for rewilding:

- ❖ It is the LRP's aim to rewild and donate a minimum of at least three prides of lions per annum to pre-selected areas and respective organizations. Reintroduction will comprise of two adult males with six females aged between 18 months and 3 years old.
- ❖ These prides will be selected on compatibility prior to release.
- ❖ Translocation policies and procedures will be implemented by our expert who has over 30 years' experience within this field of expertise.
- ❖ All the necessary permits will be obtained well before translocation by our expert that has over 20 years' experience in this field of expertise.
- ❖ These prides will undergo a careful selection process. The key to the success of re-wilding lions is to ensure that the areas have sufficient natural prey species, are “safe” from poachers and unfenced human settlements and where possible not overlap an existing prides territory.
- ❖ These prides will undergo a careful selection process regarding genetics, health and compatibility as mentioned above.
- ❖ Comprehensive health checks and samples of DNA for testing through Onderstepoort will be conducted by our veterinarians who have extensive experience working with large predators
- ❖ An essential part of the rewilding program will entail tracking and monitoring the pride as it is hypothesized that the reintroduction of ranched lions into a free roaming scenario would be deemed successful if the following criteria is met. *(Dr Paul Booyens)*

A) The ability to form social groups in an extensive wild habitat

B) The ability to become self-sustaining with no interference or supplementation by management

C) The ability to reproduce by raising offspring to mature/female sexual maturity and/or dispersal of males from natal prides

D) The ability to teach offspring to hunt effectively, interact socially, reproduce, and secure a healthy and viable F2- generation characteristic of wild managed lions

E) Be regarded as suitable potential founders for reintroduction programs where wild populations have disappeared or need to be augmented.

- ❖ LRP is also fully committed to the empowerment of local communities and members within the direct areas of activity, through sponsored wildlife training programs for students.

- ❖ Our programs are done on the basis of capacity building, taking the students into our respective conservation areas, giving lectures on site as to the pros and cons of general conservation principles. These programs consists of: (i) Game farm management, (ii) Game capture, (iii) Caretaking and Rewilding principles (iv) Wildlife veterinarian practices and principles, and to a lesser extent, (v) Hospitality.
- ❖ Selected students will be able to attend Game Capture courses with Para Wild given by our highly experienced team member Andre Pienaar.
- ❖ Fully trained and qualified students will be granted the opportunity to accompany the work team on a lion rewilding program in order to create a platform for research and gaining of valuable experience within the wildlife (predator) industry.

RESEARCH ON REWILDED AND RESCUED LIONS

First and foremost the LRP decry's the exploitation of the underprivileged. The programs on offer by the LRP is to those people who truly would like to explore the opportunities in various sectors of research on the rewilded lions will be made available as per below.

- ❖ The Lion Rescue Project is committed to research programs of the various prides that have been rewilded.
- ❖ This program will concentrate mainly on selected students from recognized accredited training centers, who are seeking a career in large predator research.
- ❖ The students will be part of the initial rewilding projects in terms of monitoring the specific rewilded pride, keeping and documenting comprehensive data on the five crucial aspects mentioned above.
- ❖ The purpose of the research on rewilded lions is crucial to the success of stabilizing denuded areas where lions thrived in the past, thus contributing to the stabilizing of lion populations.
- ❖ The first 8 weeks are crucial for intense mentoring. The fitness of the lions must be evaluated closely during this period.
- ❖ Should they survive this period, the lion's will be deemed fine in terms of self provision.
- ❖ Taking into account that each pride of six lions, two will be fitted with satellite radio collars, one male and one female.
- ❖ The satellite collars will supply a lot of information deducted from the data recovered.
- ❖ At this point of the project visual weekly observations must be undertaken.
- ❖ The more sightings of the lions the more one will learn from them although this is not always possible and or practical
- ❖ It is envisaged that one would have a good idea of their social tendencies within 6-8 months' time

and therefore most of the parameters for a successful rewilding would have been evaluated.

The important thing then is to wait for the F2 generation of cubs, which will take several years. Basically, a minimum 8 weeks of intensive evaluations, together with another 4-6 months of weekly observations, and then constant evaluations of tracking data would solidify successful rewilds.

Further to all above, all aspects of the prides movements day and night, hunting success or failures, prey species hunted, time spent hunting, who lead the initial hunt, mating details, pride structures in terms of dominance, first cubs born into the pride, cub dominance, defending the pride from other lion intruders, documenting which male or female lead the defense of the pride and any other information no matter how small or insignificant will be recorded.



Let us dwell on the wise words of the famous naturalist Carl Linnaeus who said:

THE WILDLIFE OF TODAY IS NOT OURS TO DO WITH WHAT WE PLEASE, WE HOLD IT IN TRUST, FOR THOSE WHO COME AFTER