

Summary report of discussions during the

## *Southern Africa Lion Indaba*

held 4-5 June 2018 in Skukuza, Kruger National Park, RSA,  
presided by ALWG chair Sarel van der Merwe.



**Day 1 – 04 June 2018**

### **Session 1 – Status Quo**

#### **South Africa Population (Kelly)**

Q: What is taken from face?

A: Bottom jaw, muzzle etc. Seems to be claws and teeth (canine). Breeders are selling parts into local markets, limited information. It is legal to sell parts locally.

Q: Are small populations managed & moved?

A: Yes, intensive management

Q: Is there genetic management?

A: Yes, by Susan Miller.

SF: Mimic lion dynamics, genetics is outcome measure.

- Comment: Need to look at scale of poaching relevant to other issues like cattle being stolen.

#### **Namibia Population (Lise)**

Q: What is prey like in Central Namibia parks?

A: Lots of prey, large areas but change of ownership is problematic.

Q: Is there movement into Angola?

A: Yes, dispersal is up, including prides. Idea is to introduce lions into Angola.

Q: Why Flips are doing so well?

A: Could be above average rainfall and prey increase and water availability. Conflict increased though as people moving in. 1 mil head of livestock in that area. Current drought now seeing loss 50% livestock.

Q: What is happening with lion numbers in Damaraland?

A: Lots of land issues and lions taking a knock, but are largely stable. Drought issues increasing conflict, seen throughout that climate, strong influence.

Q: How did you know how lions that moved into Botswana were killed?



A: Followed up and found collars. Botswana researchers reported increase in lion poaching. Poisoning on increase.

### **Zimbabwe Population (Rae)**

Q: Why trophies unsustainable?

A: Set by ZimParks. Have an age quota system, but political influence is large. Lack of monitoring and census issues. Have been issues.

Q: How do you know unsustainable?

A: Example: Matusadona NP seen direct impacts. Other researchers seeing similar issues.

Q: Buby problem with too many lions?

A: Information leaked and caused issues but information not open so not sure. They claim to have too many but not.

PF: They need to manage themselves and ask for culling permits, won't get revenue though.

PL: Too many lions in these put areas. They are scared to cull due to public perceptions. Some areas won't take lions as worried they cannot control large numbers.

SF: Need to make sure have management plans in place from day 1.

Q: Link between Kruger and Gonarezhou?

A: Community land in between an issue.

### **Botswana Population (Christiaan)**

Q: Could climate benefit lion through livestock shift out of area?

A: Could, but prey densities would be low, so overall reduction. Increase in conflict in good areas, like the Delta.

Q: Water being taken out of rivers into Delta, is there a plan for Botswana during low rainfall?

A: Is a 3-way country forum, not sure how functional.

### **Zambia Population (Kelly, Peter) ±1,200 lions**

Q: What is driving reduction of prey base?

A: Bushmeat trade & management issues.

Q: Any benefits to communities since trophy hunting stopped?

A: No alternative support.

SF: What is driving poaching?

- Unclear property rights
- HWC



- Social injustices (raking resources away)

PF: 70% bushmeat sold locally. Need access to bushmeat alternative.

Q: How is lower Zambezi NP doing?

A: Doing ok, but lion numbers stable not growing.

PF: unfenced population seems to struggle to recover compared to small fenced populations.

### **Mozambique Population (Kris)**

Q: Role corrupt governments play?

A: Big issue.

Q: Stomach cavity removed?

A: Local muthi for fat from stomach?

Q: Bone trade an issue?

A: Not as prevalent as claws/teeth, but is on the increase as bones are going

PL: Gin traps an issue in central Mozambique.

Q: Estimate of lions in Tete?

A: not sure but probably less than 50.

PF: Targeted poaching new issue & we need to start getting published data out on the issue.

### **Malawi (Mike)**

Q: How many?

A: 20 with 6 on the way.

**Abstract:** Lions are said to have died out in Majete by 1980. The last written record was by G. D. Hayes in 1954.

AP introduced 4 lions from Pilanesberg and Madikwe in 2012 and that number grew to 11 by end 2017. (Relate story about Anthony taking potential donors to the Lion Boma where the lions killed a baboon, much to the horror of the visitors.)

In early 2018, 2 males were moved from Majete to Liwonde where there were no lion. (There was a concern that the 2 dominant Majete males were mating with their daughters.) The last male seen in Liwonde was on his own and thought to be from Mozambique. That was seen 5 years ago. The last females were seen in the mid-1990s.

In May 2018, AP sent 6 lions from Dinokeng (2) and Vanesha (4) to Malawi. 2 males went to Majete and 2 males and 2 females to Liwonde.



There is a plan to transfer a further 6 lions from the Eastern Cape (Shamwari) to Majete and Liwonde in coming months. That will then add up to 12 lions being transferred to Malawi in 2018. Three cubs have recently been born in Majete so the total population in the 2 parks will become 26.

All this was not without difficulties. In the 2012 transfer to Majete one of the females died on the aircraft. A lack of oxygen and stress from hours of being deeply anaesthetized on the floor of the aircraft, a Cessna Caravan, was thought to be the cause. We now move the lions in crates where less anaesthetic is required. We were offered up to 19 lions from a hunting area in Zambia near South Luangwa but government intervened and wanted a big price. One proposed transfer of 4 lions had to be cancelled at the last moment because 2 of the lions tested positive for TB. (The suspicion held by the local vet was that warthogs introduced TB to the lions from surrounding areas where TB exists amongst the cattle.) A further transfer was cancelled because of a dispute among the communities about who owned the lions.

There is a long term plan to move lion into Nkhotakota which used to be well known for lion. There were said to be lion there in 2012 but there are none now. Lions require a fence with hot wires at a low level. It is very hilly country and some plan needs to be made to avoid the use of herbicides along the fence which would have erosion risks. Perhaps some sort of sanctuary needs to be fenced off from the rest of the park? The 11 Majete lions choose to stay in area of about 5,000 hectares.

The last report of lion on Nyika was a single lion seen in 1999. It was thought to have crossed from Zambia and stayed for a couple of weeks during which time it killed an eland in the staff camp.

## **Angola (Paul)**

Q: How can Into Okavango Project link in with Panthera?

A: Both doing inventory work. Angola difficult, although lots of opportunity.

## **Session 1 – Discussion**

→ Spend time engaging on the issues surrounding the conservation of lions

SF: What do we think about status? Is it useful? Definition of status?

- PF: Red-listing criteria might be useful place to start
- Lions regarded as THREATENED
- Challenge is that lions are differentially threatened across the continent. Areas of no lions, areas where lions are in real trouble and areas where lions are going really well.

SF: How do we measure if we are having an impact?

- Adult female survived must be NB.
- Other demographic variables may not be reported upon.

PF: Standardizing metrics NB across researchers.



- Adult female survived must be reported but these are affected by a range of interventions.
- Protect livestock is an NB conflict mitigation intervention.

LH: Numbers on their own are not informative. Number of adult females reproducing is absolutely important.

PL: Donors are looking for research to be effective. But how do you measure impact? # adults/adult females. Lion database across region. How do we best count lions?

KE: Depends on scale that you are looking at. Occupy is good for nesting \_\_\_\_\_. Indices are generally better.

PL: How do you measure the counter-factual?

SF: Odds ratios could be useful. (Sam shared 2 papers about this with the group later)

PF: Individual sites should try to individually identify lions.

UR: Genetics can also be useful intervention for this monitoring of populations.

KM: Poaching figures could be added to the database.

GM: Conservation gaps could be interrogating which existing PA's are not functioning correctly and why. Threats, especially poisoning, should be a focus.

JA: Focus on what works in various parts of the region.

PF: Taking ownership of the "patch" is key.

SD: Why is it so difficult to get hard data on trophy hunting in Africa? We need to get the \_\_\_ out.

SF: Society make the decisions, not the scientists. How do we send out message?

PF: Difficult to get at the data. Sometimes prevented from actually getting into hunting blocks. Neutral observers needed.

SvM: How do we reconcile the two sides of the argument?

PF: Regional data is patchy and East Africa is the worse. No data essentially.

JJ: Disputes the lack of data for Tanzania.

Johan: Centralized database is key. These are ways of dealing with vested interests.

PA: We should be looking for better ways of counting lions and other

- Sometimes we don't need to count anything, we need to address social injustices.

SF: Don't let perceptions become facts. We will always have statistical issues \_\_\_\_\_ that occur at low densities.

BS: It's about building trust with communities and lions.

## **Session 2 – Problems for Lions in the Region**



## Lion Bone Trade (Vivienne)

- 2011 Red Flag Raised
- Where is this going? How does this threaten the population?
- Exports – Where does it go?
  - Laos is most common
  - Vietnam
  - etc
- Quota in 2017 – 800 to Vietnam, Thailand, Laos
  - 62% from Freestate, 22% from NW, 16% from Gauteng
  - 73% from Euthanasia, 26% from Hunting
- Lion Parts – Pan Africa Survey (28 countries)
  - Poisoning & Poaching = main source
  - Zootherapeutic use = main drivers (claws & teeth, skin)
    - Domestic vs. International Trade
    - Zootherapeutics vs. Crafts & Curios
- Muthi Market Surveys
  - 188 instances – 4 species (26% lion)
  - DNA analysis – where it's coming from, individual species ID – track the problem
    - Is it “stab & grab” poaching”? Look at care of preparation.
- National Captive Lion Survey
  - 117 respondents to 65 question questionnaire (purpose, #'s, facilities, sales live & bone, hunting, etc.)
  - How value of sales have changed
    - Trophy hunting decreased 2015
    - Live sales decreased 2015
  - Quota – effects business
  - Trophy hunting impact (import ban) – yes (scale down production, sell lions, redirect to recoup losses, euthanize lions, etc)
- What's next?
  - Full – Quota – SA CITES permit report – ToPS registered facilities
  - Partial – Hunting Safaris – Facilities Audits – Industry trade data
  - Requested – ToPS permits – Illegal activities, trade, stats
- Muthi Market monitoring Phase 2 (different provinces)
- Issues & Solution – Rubrics cube, everything intertwined

SF: Demand side? User value chain. Tradition? Income? Breakdown of customs creating new markets. International – mass consumers hemorrhaging resources.

Q: Anyone doing campaigns in demand countries?

A: WildAid

UR: With economic growth, demand in other Asian countries is up.

- Homeopathy vs Traditional Medicine – mentality



- If someone finds it important, they will harvest it (regardless of true effect)

### **Captive Bred Lion Hunting Shooting (Stewart)**

- Economically sustainable but not socially sustainable
  - Public influenced decision-making -> propaganda
    - Hunting needs a cleaner image
    - Positively influence public opinion
- PHASA (professional association) – opposing canning hunting created credibility
  - 2013 SA Predator Association opened dialog again
    - Credibility went down
  - 2015 PHASA voted against canned hunting
  - 2017 association taken over by pro lion breeders
    - HUGE reputational damage – paralyzed association
- Anti-canned hunting members left to create *Custodians of Professional Hunters of South Africa*

PF: Eat Africa missing out on opportunity – adjust

PL: Need a list of common claims by those pro & against canned lion.

- We could put together a committee to publish an opinion piece.

LH: Conservation model in Namibia couldn't run without hunters but they're not part of the conversation – need to be brought in

SF: Sustainability not conservation – 2 businesses for monopoly of a market. It is a stronger argument to focus on sustainability.

- 6-year-old rule doesn't make sense (off-take of old males – not many seen)
- Population of lions cannot have individuals removed – the potential is there though

### **Wildlife Poisoning (Andre: Vultures) – Putting a Band-Aid on an axe wound**

- Limiting impact of poisoning of vultures → impacts many species
  - Work together across species
    - Silent killer
    - Easy to obtain & use
      - Poachers know this
    - Can kill large # of animals quickly
- Lions – increased trend?
  - Easy, “safe” method (5-8 min to death)
  - Captive lions are easy targets (lack adequate protection)
- Lack of awareness & preparedness to prevent & reduce
  - AfricanWildlifePoisoning.org (database but underreported)
- Continent-wide issue
  - Human-wildlife conflict
  - Belief-use & other trade
- Bycatch of poisoning is widespread



- Target = 1 but Kills = 60+
- 90+% of vultures killed are killed by poison
  - Most significant threat to vultures on 3 continents.
- Sentinel Poisoning
  - Kill birds to reduce #s so they won't give the poachers away during poaching activities
- Hard to quantify because typically not found until much later – mass mortality events
- Incident Management → educate & train first responders
  - ID
  - Scope, divers, methods, etc.
  - Scene management
  - Investigation
  - Rescue & First-aid
  - Decontamination (takes 4-5 days to burn an elephant)
  - Legal process
  - Poisoning response planning
  - Data capture & dissemination
  - Human health concerns

VW: Can you test for poison on skin? The poison starts working before it gets to the stomach – may be residues on face or teeth.

BS: Lion fat is used for cooking & rubbing on children's heads so they'll grow up big & strong.

### **Herbivore Population Declines (Glyn for Moses)**

- DWNP – Department of Wildlife and National Parks
- Make Chase 2010-2011 survey of large mammals species in the delta (Okavango). His findings, that large mammal species were declining.
- The country was divided into northern vs. southern system
  - Elephants ↑ slightly
  - Eland ↑ in the south but ↓ in the north
  - Hartebeest stabilized
  - Impala ↑
  - Kudu ↑ in the south but ↓ in the north
  - Springbok ↓
  - Steenbok ↓
  - Wildebeest ↑ - doing great on ranches
  - Cattle is forever on the ↑ specially in the south
- More and more animals found outside PA in WMA where there is no water. Surprising! These are areas where there are cattle and human wildlife conflict and poaching are quite pronounced. Why?
- Derek carnivore surveys span 2013-present show a similar estimate from past surveys. This is for Southern Botswana.
- The survival of lions (and any other carnivores) is premised on the success of herbivores in the system.
- Provision of artificial water holes is not really a good solution.





PL: What does hunting ban have on communities and affected wildlife?

CW: Compensation make monitoring very expensive.

PF: Springbok numbers fluctuate between Nossob and Scheweel (??). Their mobility is non-sequential and affects carnivore movements.

## **Rhino Poaching**

- Endangered species investigation
  - Rhino – 2009 cases were around 350, about 1028 poached in 2016/2017 – KNP and KZN are hotspots
  - Elephant
  - Pangolin
  - Lion
- Arrests – 821 cases with 429 arrests for Rhinos in 2017
- New strategy is to break barriers between the sites of the covert operations
- Convictions – 102 suspects were convicted of 57 cases in 2017
- Wildlife traffic cases 413 (Mpumalanga and Limpopo are hotspots)
- Syndicates buy horns from permit holders. Permit holders then claim break ins.
- Challenges
  - Poor counations (no idea)
  - Increased poaching provinces
  - Contradicting provincial laws

JA: Why is there extradition between Moz & RSA?

A: There is not extradition laws but working on it.

LH: How long before they harmonize inter-provincial laws?

A: It takes a while to get such matters. Involves a lot of stakeholders.

SF: Water for animals → water for people. We need a paradigm shift. Social inclusion and social sustainability of actions needs to drive initiatives.

## **Session 2 – Discussion**

PF: Hunting might come back in Botswana but land use might have to be revised. Botswana has the opportunity to do hunting right.

CW: Hunting was not really driven ecological advise.

PA: There is opportunity for both hunting and photographic tourism if there is shared burden of wildlife management and benefit.

GN: Very little money is going toward communities. Some communities might benefit more than others but professional hunting communities need to increase the share for locals.

LH: Policy can be easily fixed to give communities more share of the hunting spoils.



**ALWG Function, Purposes and Membership** – Sarel reads new proposal for membership criteria and document is discarded on grounds of being too exclusionary.

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Day 2 – 05 June 2018

## **Session 1 – Opportunities & Solutions** (Notes taken by Caitlin)

### **Lion Recovery Fund (Peter Lindsey)**

- WCN & Leonardo DiCaprio Foundation
  - Aspirational Goal – bring back 50% lost in last 25 years
  - Achievable Goals
    - Halt declines
    - End country level extinctions
    - Restore lions in countries with recent extinctions
    - Net positive growth
- Strategy:
  - Expand Conservation Footprint
  - Build Will (public & political)
  - Increase Funding
- Invest in 3 Areas:
  - Conservation
    - PA management support
    - Promoting coexistence
    - Tackling illegal trade
  - Campaigns
  - Collaboration
- Where to invest?
  - Retain – large lion populations
  - Recover – sights where lions are reduced or extirpated
  - Rescue – preventing extinction
- 100% model, range wide – emphasis on landscapes, collaboration and catalyzing new projects
- Have funded 19 projects @ \$1.6mil

### **Lion Database: Open Access (Peter Lindsey)**

- Host: IUCN Cat Specialist Group
- Physical Host: Endangered Wildlife Trust

### **The Value of a Genomic Toolkit (Uma Ramarkrishnan)**

- Tiger scat collected for 20 years
- Tiger genetics cluster out in different way to IUCN management guidelines
  - Siberian tigers are more distinct



- SNP techniques have been developed to identify population specific markers
- Used genetics to determine population size
  - used mark-recapture using genetic samples
- used genetics to identify problem causing tigers and tigers responsible for conflict events
- Tiger cubs in trade can be typed to determine which areas they come from.
- Summary:
  - Genomics provide higher power, better resolution
  - Works with poor quality samples
  - Are cheap after development (<\$10 per sample)

### **Lion Genome Project (Simon Morgan)**

- Develop high quality genome at the chromosome level
- Develop lion genotyping panel
  - Samples from across full range
- Implementation & field ID kit development
  - Sequence technology is developing fast
    - i.e. Nanopore – sequencing device that plugs into your laptop and used in the field
- GeoMachineWild (?) – manage upload data to the cloud – needs more people to contribute to
- Uses:
  - Anti-trafficking
    - Infer geographical location
    - Distinguish between captive bred & wild population
  - Ensure sharing of data and samples
  - SAP – importance of pooling resources in a central location

### **Hunting for Lion Conservation (John J III)**

- Higher proportion of GMA/WMA than nation parks
- Examples of lion recovery in lion hunting areas:
  - Namibian conservancies
  - Save Valley Conservancy
  - Buby Valley Conservancy
  - Tanzania → low offtake these years; <30 lions/year
  - Tanzanian Lion Aging Laboratory
    - Using 6-year approach – numbers of lions being taken has reduced, age lion hunted has increased
  - Selous claimed to be the largest lion population in Africa
- Statements should be substantiated by facts. Data must support ALL statements.
- There is not enough evidence that trophy hunting secures more protected area.
- Most lions in hunting countries occur in PA's than WMA's.
  - It is touted to be the other way around.
- One of the challenges in winning the public is not confusing the message.



- Hunting is not automatically conservation. Conservation just happens to be an outcome of some hunting. We have to think of the messaging.
- There is misconception that hunting alleviates conflict with livestock
  - There is data to show that hunting of the wrong individual animal causes more conflict due to the response to the removal of a pride male.
- One of the problems with the hunting debate is that everything is exaggerated.
  - One of the core problems with hunting right now is that there is not enough funds to manage PA's that protect a source population so there is decline in wildlife numbers.
  - The hunting is in steep reverse and the conversation we should be having is that there is no replacement for hunting land use.
    - Land management can no longer continue to go forward under hunting alone. Hunting should be one land-use but hunting can no longer cover the necessary expense of proper hunting.
- If enough financing was generated to support the WMA's then the whole argument about the conservation impact of hunting would go away.
  - Governments are suffering a burden to support enormous WMA's to support the great white hunter. The revenue to support them is more than the WMA generate. Some WMA's should be done away with.
- We have to define the problem properly in order to know where to identify the shortages.
- The statement that hunting reduces poaching trivializes the challenges that come with poaching.

### **Options to Find More Lion Habitat (Michael Eustace)**

- Malawi parks bringing back lions
  - Rehabilitate the many parks that we have
- AP most entirely funded by donors
  - ±\$40 million
  - AP has been more successful than anyone expected
- Why the success?
  - Conservation buys no votes in Africa, therefore, parks allowed to decline
- The most important factor is that AP managed to get the funds. They got the right people to do the job. AP had the determination to overcome the many challenges.
  - Managing parks is not rocket science.
    - Control poaching and a park will thrive.
- AP are able to tell private leases inside their parks.

### **TRACE – Wildlife Forensics Project (Stephanie Pietsch)**

- Using DNA as a tool for forensic analysis
- Lion bone traceability meeting within the next 12 months
  - USAID
  - TRACE – The wildlife forensics network
  - TRAFFIC – The wildlife trade monitoring network
  - FAaWC – Forensic alliance against wildlife crime
- RhODIS – Rhino DNA Database



## General Discussion

The last lions in Africa are dying in the protected areas and if we don't manage our PA's well, they will be extinct.

How is the African parks model going to help the people living closer to the parks having in mind that these people are always crying that benefits are too small?

We need collaboration of different organizations to share their data in order to reduce/prevent wildlife loss.

What is the proportion of funding when it comes to WMA's & national parks? Are budgets increasing or decreasing?

\*This report was compiled by Caitlin Curry from written notes and recordings taken during the proceedings.

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Available: [www.africanliongroup.org](http://www.africanliongroup.org)