



FINAL REPORT TO NAMIBIA CHAMBER OF ENVIRONMENT

Project Title: Kunene Lion Support Programme

Award Period: 11 April 2018 – 31 May 2020

Executive Summary

The award period of this grant has been characterized by a prolonged and crippling drought. The socio-economic impact on local farmers and residents within this area cannot be underestimated or ignored. People, who were living hand to mouth as subsistence farmers have lost huge amounts of stock and food security has become an issue in some areas. The situation is obviously compounded by lions (and other predators) struggling to find prey and taking livestock. Both farmers and livestock are being forced into areas they would not normally occupy, and the resultant conflict is inevitable.

This grant has, without any doubt, enabled the members of IRDNC's Human Wildlife Support Team to stand by communities in their time of crisis, thereby reducing losses of livestock and lions. The grant enabled our Team to be high-profile in the hardest struck areas, to cement critical relationships with farmers, community members and Traditional Leaders, and in turn, to engender respect and understanding from the communities.

As if the drought and resultant livestock losses were not severe enough, the Covid19 pandemic arrived and is set to have a devastating lasting effect on local economy. More than 90% of income for these respective conservancies (and areas) comes from the hospitality industry (both consumptive and non-consumptive). These activities have largely come to halt with a shattering loss of income and employment for the local communities. Economists have warned that recovery from this will be slow and might take up to 18 months. This will be a critical period for community-based conservation as farmers and communities work to recover from the last few challenging years.

For conservation practitioners, challenges for the next few years will revolve around human wildlife conflict, high-value species poaching and seeking some form of income diversification for conservancies.

Discussion

The below NDVI image gives an idea of the rainfall or vegetation growth situation as on 20 March 2020, still really dry over much of the lion range area. Predictions for the remaining few weeks of the season are not promising.

Deviation of the 11 to 20 March 2020 period's vegetation index (NDVI) from the long-term average (since 2002)

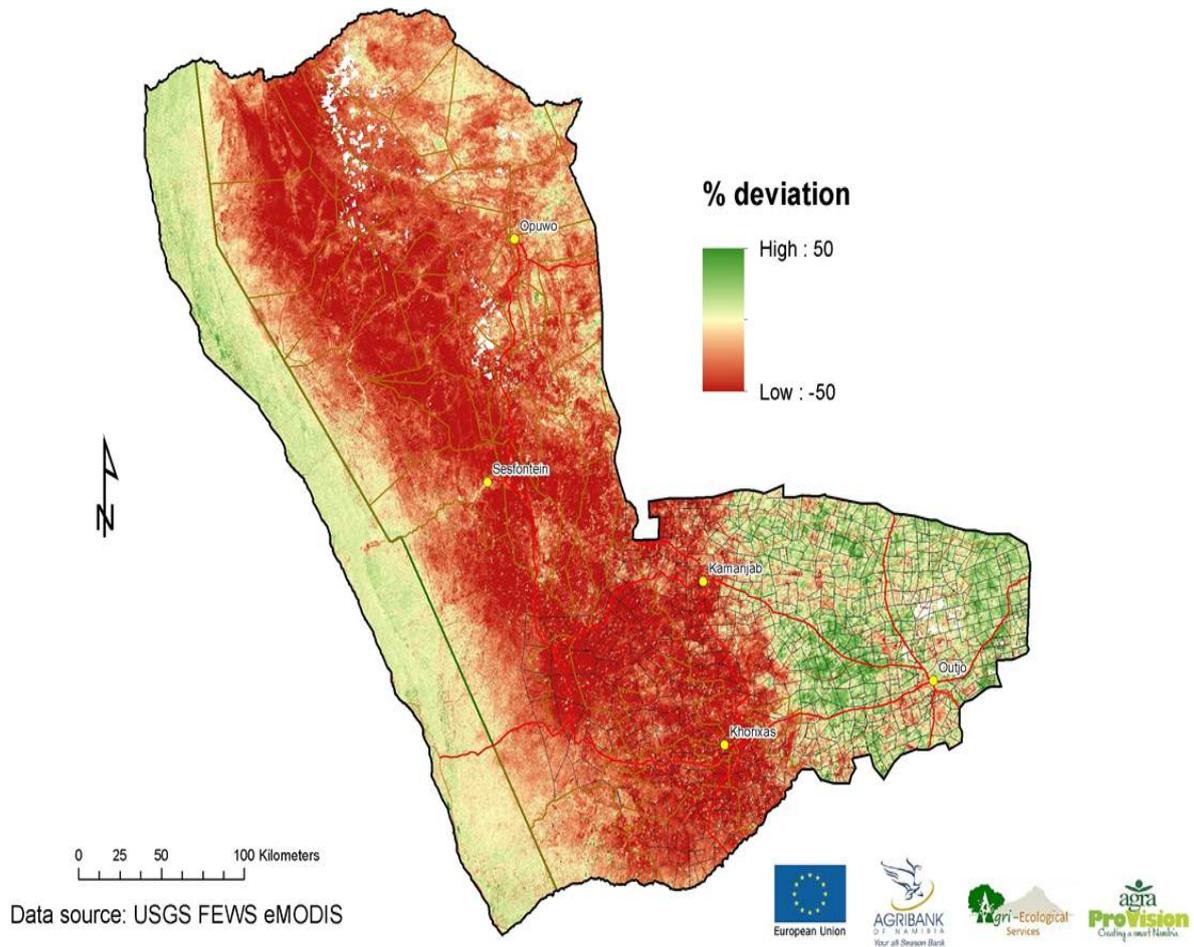


Figure 1: NDVI image for long-term averages

As was to be expected, the estimates derived from the annual fixed route game count show that prey species numbers in the Kunene Region are still very low as opposed to 6 years ago (as per the posters on NACSO website);

Table 1: Prey species numbers in Kunene

	Oryx	Springbuck	Hartmann's zebra
2014	17 627	79 364	20 133
2019	6 605	61 190	8 695

The 2019/20 rain season in the north west has been less than favorable and these figures are unlikely to increase significantly in the next year. There will be challenges for predators and conservation practitioners alike during this period.

In the last year, IRDNC launched an innovative program to buy cattle in the worst affected lion range areas. Funds were raised and a total of 356 (N\$712 000) cattle were purchased from farmers in these drought-stricken areas through the Cash for Carcasses initiative. The effect of this will be three-fold;

- Remove a significant number of cattle from the veld
- Give farmers a much-needed cash injection at ground level
- Reduce human lion conflict incidents and losses by removing cattle from the veld

This was a huge success with farmers being tremendously grateful. At all times care was taken to emphasize the fact that it was conservation supporting the farmers in their time of need.

In the below metrics and in particular in the Table 2 below, there is a definite tapering off of livestock losses in the last few months of this period. We ascribe this to four factors;

- The presence of and work done by our Teams.
- The decrease in overall numbers of livestock. Due to drought, Cash for Carcasses project and Human Wildlife Conflict mitigation measures.
- The first scattered rains of the season fell further east and north attracting farmers away from the hotspot areas.
- The grazing in many hotspot areas was depleted causing some farmers to move.

The Early Warning System progresses steadily. Perhaps the biggest limiting factor is getting collars onto lions in key areas. These areas are rugged, mostly inaccessible and the lions tend to be shy and difficult to work with. We are also in the process of developing maps with information on geo-fence violations and EWS tower triggering events as a means of reporting and monitoring. Initial maps are promising but need further work. We are also looking at developing a better way of monitoring and assessing effectiveness of “response”. IRDNC’s MEL officer is developing a system with a database for ease of monitoring and reporting.



Figure 2: EW logger erected at Otjatjondjira, Anabeb

	2018								2019												2020					
	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Totals
Response to incidents	3	3	6	12	3	21	8	8	8	8	8	9	10	13	18	15	18	10	4	10	19	23	26	14	7	284
Patrols & Monitoring			4	18	8	13	17						10	9	12	14	9	14	16	10	13	11	6	10	11	205
Cattle killed			5	35	1	5	3	2	10	17	9	4	17	35	42	32	10	6	1	5	0	0	0	0	0	239
Donkeys/horses killed		1		7				1	0	2	4	2	7	3	2	1	11	0	0	3	4	0	0	0	0	48
Small stock killed			18	5	7	28				3		2	3	3	11	25	54	0	0	5	26	0	6	0	36	232
Lions killed			1			3					3	1	1		4		1	0	0	0	0	0	0	0	1	15
Community and planning meetings		3	12	3			6					15	6	5	7	8	8	4	5	5	5	3	3			98
Training events for CGG and farmers													4	7	10	1	0	2	0	2	0	1	3	2		32
Collaring events														3			2	1						0	1	7
Translocations, # lions moved in brackets						1					1						1							0	1	4

In summary

As per our grant application, the three immediate strategies identified were:

- 1) Increasing desert lion monitoring and data-sharing capacities
- 2) Intensifying HLC mitigation measures
- 3) Increasing community oriented HLC prevention efforts and benefit flows

“This new phase of desert lion conservation will only be successful if these three approaches are mutually reinforcing. The **immediate priority is to decrease HLC and increasing tolerance and the flow of lion-derived benefits to Kunene communities** living with desert lions to minimise the killing of lion in retaliation to livestock killings by lion. **Long-term success is defined as retaining desert lion population viability and growing community support** through evidence-based management for shared desert lion and community benefit”.

Point one has certainly improved since the start of this program. This due to increased presence in the field of our Team and the very important training and mobilization of community-based rangers or guards. The implementation of the Early Warning System has resulted in an increased number of collared individuals and the resultant movement data has increased monitoring coverage.

Point two is progressing well with the EWS Towers being manufactured and deployed in hotspot areas. The challenge here is to get more collars on key individual lions to improve the effectiveness of the system. Innovative ways of representing data from the EWS is being explored, see below map images. Predator proof kraals are being erected as and when funds are available. Our Team have been very pro-active in assisting farmers to move livestock out of “danger” areas.

These three strategies are pivotal in the long-term conservation and viability of the desert lion population. It is also imperative that these strategies be continual and ongoing.

The area we cover is huge and we were perhaps somewhat naïve thinking we could develop a Team that will be able to timeously respond to every Early Warning trigger or geo-fence violation. Our Teams have placed a great importance on training “first-responders”, farmers, CCG’s and MEFT staff in immediate actions or response. We have held two training sessions with communities and MEFT in the safe handling and use of fireworks as a mitigation measure.



Figure 3: Training to Ministry staff and Community Game Guards on the use of and safety of fireworks as a tool when managing a human lion conflict incident



Figure 4: Fireworks training

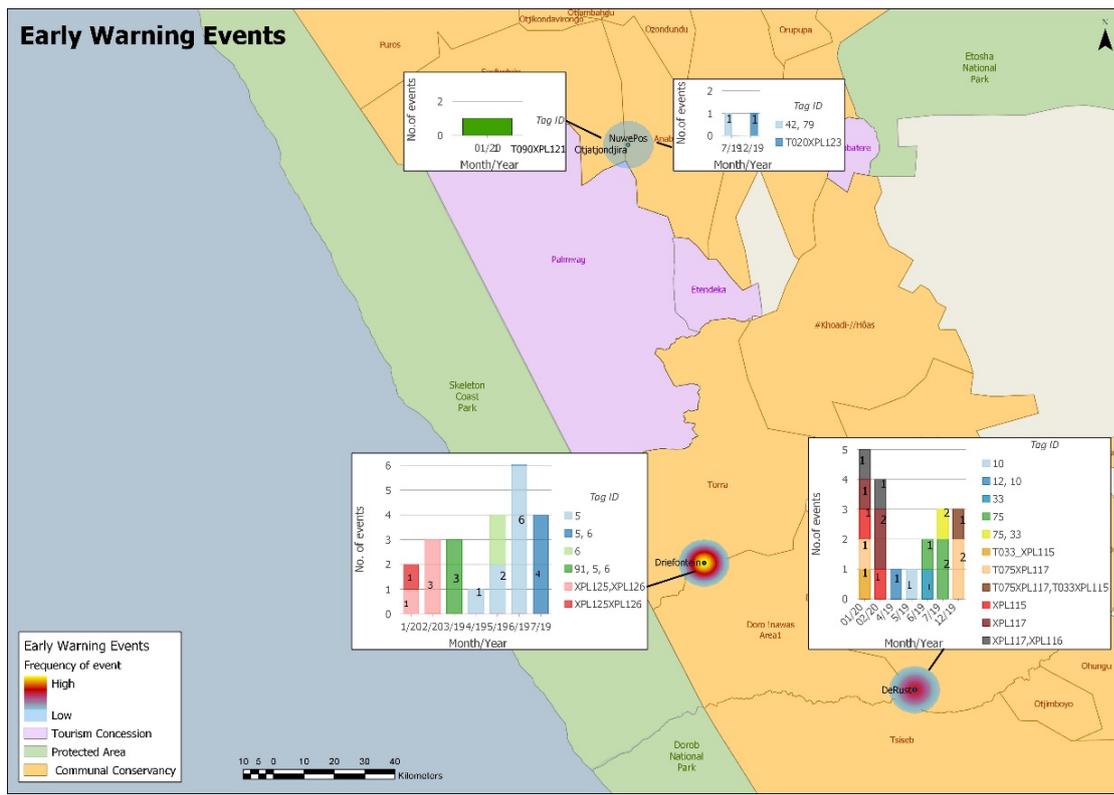


Figure 5: Diagram showing Early Warning Events

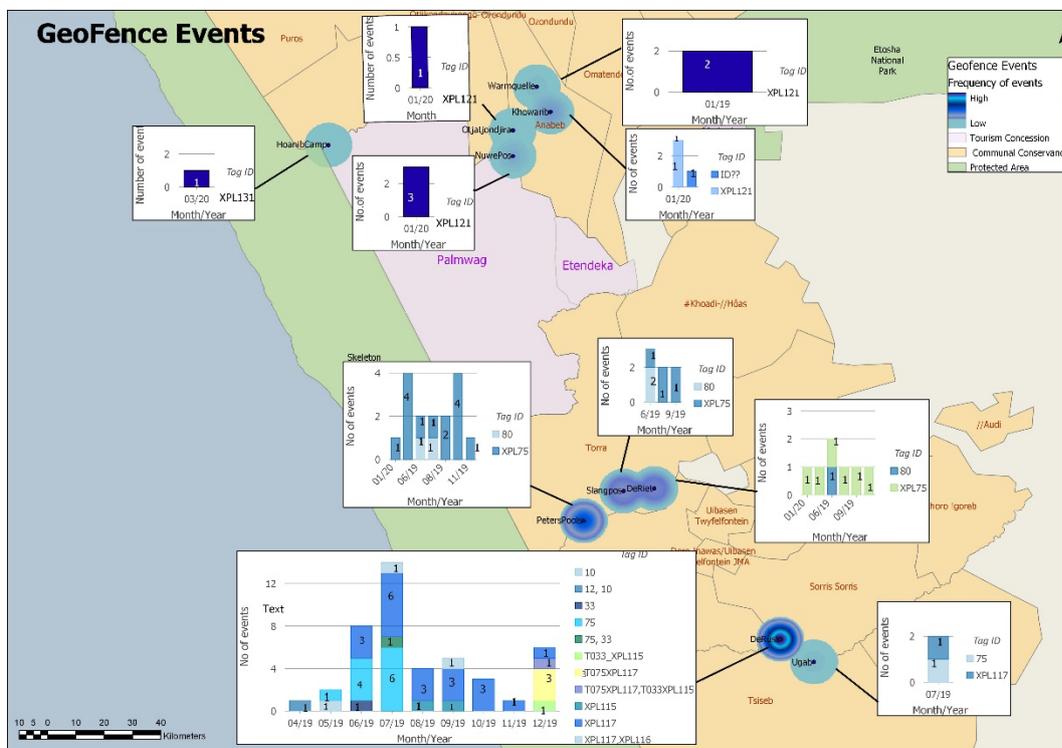


Figure 6: Diagram showing GeoFence Events

Anabeb cubs

Late 2019 persistent drought forced the last remnants of wildlife to vacate the western areas of Anabeb Conservancy, the areas around Mbakondja and Nuwepos completely denuded of grass. This was devastating for XPL121, a lioness who gave birth to a litter of cubs in July 2019. She had three cubs, two females and one male. The pressure on XPL121 to feed her increasingly hungry and demanding cubs must have been relentless. Gradually, in her search for prey, she moved eastwards, ever closer to the farms situated just west of Khowarib.

In July 2019, a satellite collar was fitted to XPL121 to monitor her movements. Unfortunately, by last week of January 2020, the collar malfunctioned and stopped transmitting GPS positions. This just as XPL121 started marauding the farmers last dwindling livestock. Over the next few weeks, XPL121 killed some 8 donkeys and 12 small stock.

IRDNC, MEFT, the CGG's and DLC put in a massive amount of extended time and effort to reduce the loss of livestock. Despite this effort, there was really no place for her to go.

Sadly, almost inevitably, XPL121 was shot and badly wounded on the 9th February 2020. Teams carefully followed her tracks through the mountains for 9 days before finding where she eventually died.

Now, the challenge became the eight or nine-month-old cubs! Too young to hunt and fend for themselves. Their future looked bleak and it seemed certain that they would inevitably die. It was decided that the cubs would be monitored on an ongoing basis. IRDNC and a Team of Anabeb CGG's embraced the task wholeheartedly. The cubs' area of activity centred on the place where their mother had died. An area not accessible by vehicle and monitoring entailed long hikes in the mountains.

The monitoring teams saw the cubs on several occasions and monitored the steady decline of their condition. After much debate, the Conservancy, under the able chairmanship of Ovehi Kasaona, decided to do whatever they could to ensure the cubs survival. MEFT contributed some wildlife, but the bulk of meat for the cubs came from livestock purchased locally. The Team had to carry this up into the mountains to a site where the cubs could find it.

This incredible situation persisted until well into May 2020. Sadly, one of the female cubs did not survive. Things came to a head in the second week of May when the two remaining cubs killed a goat at a farm west of Khowarib. An irate farmer insisted that a final solution be found. With the assistance of IRDNC, the Conservancy and MEFT a private institution was approached, and the two remaining cubs were darted and moved to a sanctuary in central Namibia.

The commitment of the Conservancy, the Game Guards and the teams involved was unwavering. Anabeb conservancy and its chairperson Ovehi Kasaona are commended for an amazing effort – true conservationists at heart.



Figure 7: Anabeb cubs sedated ready to be moved to a sanctuary

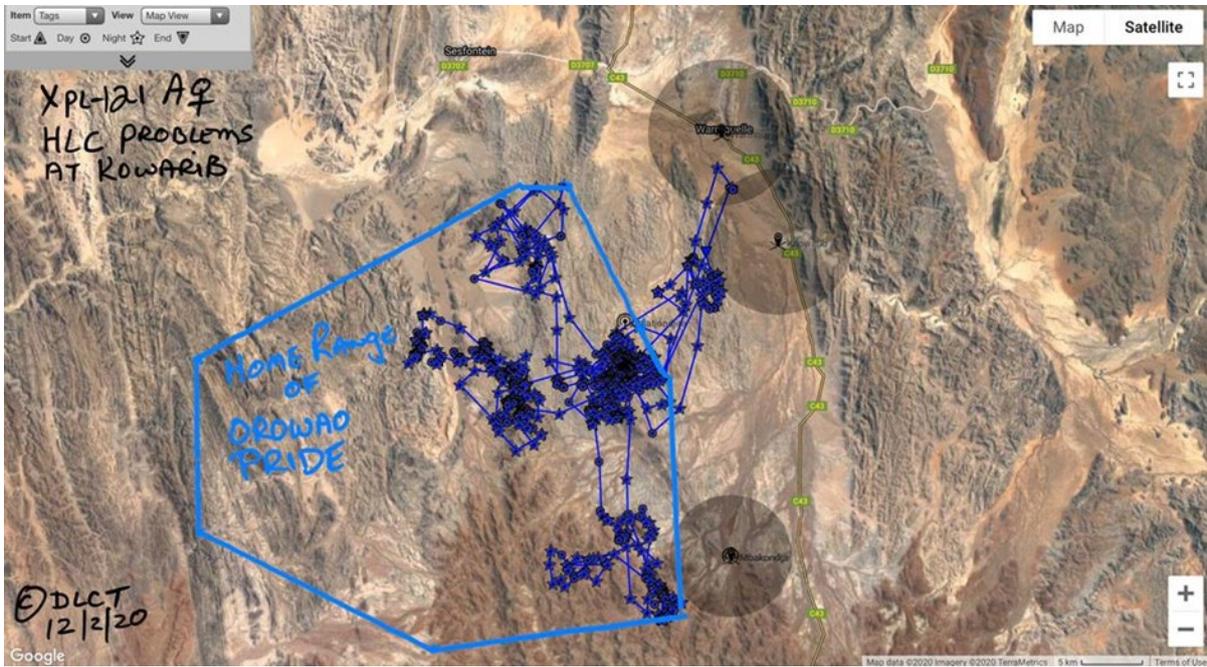


Figure 8: Movements of the lioness shot in Anabeb

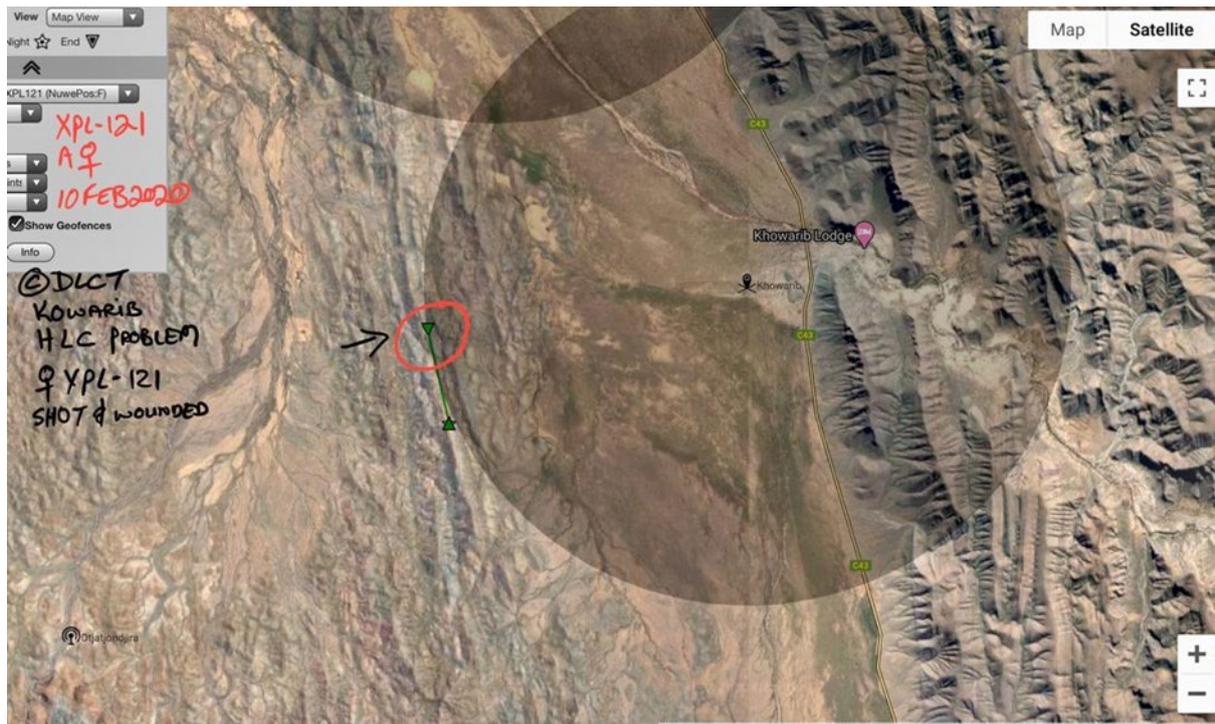


Figure 9: Movements of the lioness shot in Anabeb

Major challenges

With regard to point three, we have learned over time that it is not realistic to think our Team can respond to each and every call-out, geo-fence violation or triggering of Early Warning Tower. The area is simply too vast for this to be effective. Thus, the emphasis on training local rangers, guards and farmers as “first responders”. It is very difficult to collect any accurate data on this, but this seems to be very promising.

Putting new collars on individuals and replacing older collars is certainly a challenge. The terrain is daunting and the lions in these areas generally shy. There is no immediate solution to this, just keep working.

Increasing community-oriented efforts and involvement is majorly dependent on building and maintaining relationships with multiple sectors of the communities. We have found that it is critical to have sound relationship with the regional and local government structures and political structures. Bitter experience has shown that, at this level, a lack of understanding of our objectives, role and activities can lead to a dangerous undermining of this and other programs.



Figure 10 : Cattle carcass killed by lions at Derust, Tsiseb

Financial Report



NCE Grant Agreement (1 June 2018 - 30 May 2020)
Kunene Lion Support Programme
Establish and maintain a field based Rapid Response Unit
Final Financial Report

	Budget	Actuals Total Project	Variance	Variance %
OPENING FUND BALANCE	-	-	-	-
INCOME				
Funds Received	875,000.00	875,000.00	-	-
	875,000.00	875,000.00	-	-
EXPENSES				
Human Resources	481,250.00	488,439.86	- 7,189.86	101.49%
Travel	315,750.00	318,868.00	- 3,118.00	100.99%
Consumables	54,000.00	44,698.16	9,301.84	82.77%
Other Expenses	24,000.00	24,055.00	- 55.00	100.23%
	875,000.00	876,061.02	- 1,061.02	100.12%
Net Surplus / (Deficit)	-	- 1,061.02	1,061.02	
CLOSING FUND BALANCE	-	- 1,061.02	1,061.02	