VulPro Annual Report 2019



VulPro NPC Vulture Programme for the Conservation of Vulture Species in southern Africa Registration No. 2011/127419/08 [Section 14, Companies Act 2008] PBO 930038988

Contents

Executive Summary	3
Accomplishing the mission of VulPro	3
Chairman Summary	
Performance Reviews	
Rescue and Rehabilitation	4
Age and reason for admission	5
Other Facilities	6
Cape Vulture Monitoring	6
Monitoring Tree Nesting Vultures	7
Ex-Situ Breeding for Population Supplementation	7
Powerline Surveys and Mitigation	8
Vulture Restaurants	10
Community Outreach, Interaction and Education	11
Media Interest/Social Media	12
Research Projects	12
Publications	14
Administrative	15
Board, Staff, Volunteers, Students	15
Travel	
Costs	
Fundraising and Sponsors	17
Funders and Sponsors	17
Sustainability	17
VulPro Wealth Link Investment Summary	18
List of Tables and Figures	
Table 1: Birds rescued and rehabilitated by VulPro in 2019	5
Table 2: Summary of the rescue and release data from 2010 to 2019	5
Figure 1: Reason for admission for all vultures rescued in 2019	6
Table 3: Number of breeding pairs of Cape Vultures at monitored colonies in 2019	7
Table 4: Breeding counts of tree nesting vultures at monitored sites in 2019	7
Figure 2: Maps of the movements of 2 captive bred Cape Vultures released in 2019.	
Table 5: Summary of our captive breeding success in 2019	8
Table 6: The number of powerline incidences reported by VulPro in 2019	9
Figure 3: Map of powerline incidences around 50km conservation buffer zones	10
Figure 4: Map of known vulture restaurants in southern Africa	11
Table 7: Number of people VulPro has directly interacted with in 2019	11
Table 8: The VulPro Board, 2019	15
Table 9: The VulPro Team, 2019	15

Executive Summary

2019 Has brought more awareness and attention to the plight of our planet and the devastation we find Mother Earth in. We at VulPro are incredibly proud to play a small roll in making positive changes towards one of the most important species we share our environment with. Not only are we seeing the devastation of extreme weather conditions throughout the globe, we too are seeing the devastation human greed is having on our limited natural resources. Vultures are at the forefront of human greed through the poaching epidemic of rhinos, elephants and lions to the trade in vultures for cultural and witchcraft practices. All too many vultures have been lost at the hands of mankind during 2019. VulPro is working tireless and around the clock to attempt to curb these losses to the species before the downward trend cannot be overturned. Through our multidisciplinary and adaptive management approach, we continue to reach for the stars and save Africa's vultures and we cannot do this alone without the help of each and every one of you. VulPro together with myself personally, are incredibly grateful for your unwavering support and commitment towards OUR vultures in which we share this beautiful and most precious planet with. We are indebted to you and your organization and words of thanks cannot adequately describe our appreciation to YOU.

This report highlights and showcases, once again, VulPro's commitment to the Cause and with your help, we continue to pledge and dedicate our lives to saving as many vultures as we possible can. We vow our continued all-encompassing approach to making an immediate and lasting difference to all African vulture species now and into the future.

Kerri Wolter, CEO

Accomplishing the mission of VulPro

"To advance knowledge, awareness and innovation in the conservation of African vulture populations for the benefit and well-being of society"

For 13 years we have been pursuing these important goals; saving Africa's vultures by building on our unparalleled experience in the field and collaborating with other organisations to further enhance our impact. We are continuously working towards this mission statement by:

- Providing valuable rescue and rehabilitation services for vultures and other raptors
- The breeding of non-releasable vultures for our ex-situ conservation efforts
- Monitoring populations of Cape Vulture colonies throughout southern Africa and populations of both African White-backed and Hooded Vultures in South Africa.
- Management of vulture restaurants and nationwide collaborations with landowners
- Continual targeted community outreach, interaction and educational programmes
- Raising awareness and educational activities with stakeholders
- Involvement in and supporting of vital research projects
- Collaborating with other NGO's and governmental organisations on vulture related conservation activities both on a local and international scale
- Publications of our research and conservation actions through various forms of media

Chairman Summary

As 2019 closes and we start the next decade, VulPro as an organization grows from strength to strength. What started as a small organization from the passion of one person, has now expanded to an organization that is actively monitoring 50% of the wild breeding population of Cape vultures. This in addition to undertaking an extensive breeding programme with a colony of captive non-releasable birds as well as caring for numerous injured birds with the ultimate aim of release when possible. Another major success for VulPro has been the incorporation of validated scientific research in the protection of endangered vulture species. This is evident by the number of organization and university students that are assisted by the organization, which now includes the Max Planck Institution, one of the top research organizations in the world. Another important aspect in protecting an endangered species is educating the public to ensure that a healthy natural wild population is maintained. As for previous years, VulPro has managed to reach a large number of people especially school children, who will undoubtedly play a major role in the future protection of the species. Nonetheless despite the positive contributions made by VulPro, Southern African vultures still remain under serious threat from poisonings, power line injuries, starvation and climate change. Through your continued support of VulPro, you can be assured that you are ensuring that an iconic African species is protected.

Prof Vinny Naidoo

Performance Reviews Rescue and Rehabilitation

Rescue and rehabilitation remain VulPro's top priority, with every single individual counting towards the safeguarding of these endangered and critically endangered birds. Most birds rescued by VulPro are victims of anthropogenic activities, predominantly powerline collisions/electrocutions, however some birds are also brought in relating to weather conditions, lack of food and the occasional bumpy landing. The release and integration of rehabilitated birds is imperative to achieving our mission to saving Africa's vultures. In 2019 a total of 40 vultures were successfully rehabilitated and released, bringing our total for the past 13 years to 338 vultures returned to the wild.

As of 31 December 2019, VulPro now houses 246 birds, several of which are being monitored for release, just a marginal increase from 235 birds in 2018 demonstrating the effectiveness of our rehabilitation efforts at returning birds to the wild. Whilst our priority is to rescue vultures, we have also seen a number of other birds of prey admitted to the centre, many of which have very serious injuries making them difficult to rehabilitate. In February 2019, VulPro was also home, temporarily, to 43 Lesser Flamingo's, as we assisted with the greater Kimberly Flamingo Rescue Operation.

VulPro's rescue and release programme, along with the provision of veterinary care, are instrumental in our efforts to bolster wild populations. Each year we are returning more and more birds to the wild, with a survival rate of over 75% and release rate of 43% for all vulture species in 2019.

The average cost for feeding all of our captive and rehabilitated vultures is R27,060.00 per week, not including the daily operational and staffing costs. Alongside this, the provision of food at both the VulPro and Nooitgedacht restaurants costs an additional R6000.00 per week.

Species	Rescued	Released	Died	Euthanised	Transferred	Resident
Cape Vulture	73	33	10	6		29
White-backed	19	6	2	2		10
Vulture						
Lappet-faced	1	1				1
Vulture						
Black-chested	5			2	1	3
Snake Eagle						
Lesser	43	37	6			
Flamingo						
Other	11		1	4	6	
Total	165	77	19	14	7	43

Table 1: Birds rescued by VulPro in 2019 and the subsequent rehabilitative action taken.

Spe	Year										
Ορι	.0103	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
	Rescued	30	39	58	46	72	75	73	108	120	93
Vultures	Released	13	15	31	24	15	21	16	72	48	40
Valtaroo	Success Rate	43%	38%	53%	52%	21%	28%	22%	67%	40%	43%
	Rescued	14	17	15	13	8	22	9	24	14	59
Other	Released	4	7	6	7	9	12	3	2	4	37
Birds	Success Rate	29%	41%	40%	54%	100%	55%	33%	8%	29%	62%

Table 2: Summary of the rescue and release data from 2010 to 2019 for vultures and other birds.

Age and reason for admission

Of the 93 vultures rescued in 2019:

- 27% had some form of mechanical injuries other than collisions
- 19% due to collisions
- 5% due to electrocutions
- 6% of all vultures admitted were victims of poisoning
- 32% of rescues were due to weather ailments resulting in starvation, weakness, dehydration and seizures due to heat stress
- 7% were reported grounded and released soon after
- 4% unknown

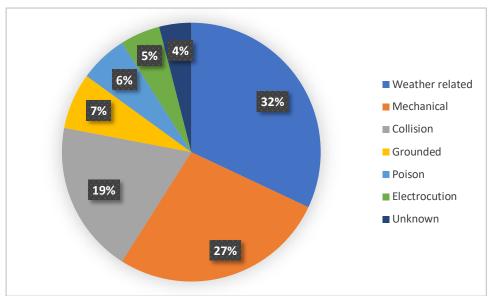


Figure 1: Chart displaying the reason for admission for all vultures rescued by VulPro in 2019.

Other facilities

VulPro strongly believes in effective cooperation between organisations and facilities to maximise the conservation impact that we have, and as such some resident birds may be loaned to other facilities and vice versa. VulPro currently has 5 adult Cape Vultures on loan at NZG Pretoria as part of a national breeding programme.

Cape Vulture Monitoring

VulPro monitored 7 Cape Vulture breeding colonies throughout 2019, totaling over 2,241 breeding pairs, approximately half of the global population. Whilst the number of breeding pairs increased at 3 colonies, 4 of the colonies showed slight decreases in numbers. Of these 4 declining colonies, the Moletjie colony in the Limpopo Province is at a high risk of extinction due to frequent anthropogenic disturbances, with only 1 breeding pair remaining. We are unsure if these decreases are in fact population decreases or decreases specific to colonies and as such, we are investigating the potential movement of breeding birds between sites and whether this extirpation could indicate migration to other colonies which are now showing increasing numbers.

There is also good news for the Magaliesberg. Preliminary surveys and tracking data indicate the potential re-establishment of the historic Robert's Farm colony. We have observed 3-5 individuals roosting there throughout 2019 and we will continue to monitor this site closely throughout 2020, with high hopes that this colony might be re-established in the near future. Additionally, a pioneering collaboration with the Max Planck Institute of Animal Behaviour has allowed us to deploy 20 GPS tracking devices on Cape Vulture nestlings from the Skeerport colony for the first long-range life history study on Cape Vultures. This study will improve our understanding of nestling to fledgling movements through to adulthood, providing insight into behaviours, survival, mortality rates, ranges and the migration of birds between colonies.

	2018			2019		
Colony	Number	Succes Mid-Season		Number	Succe Mid-Season	ess Final
Manutsa	631	76%	- IIIai	737	100%*	- IIIai
Kransberg	793	54%	-	757	106%*	-
Skeerport	316	-	45%	287	-	79%
Noitgedacht	151	-	45%	145	-	74%
Soutpansberg	196	86%	-	225	87%	-
Moletjie	5	140%*	-	1	100%	-
Mannyelalong	85	94%	-	89	96%	-
Total/Average	2,177	90%	45%	2,241	98%	77%

Table 3: The number of breeding pairs of Cape Vultures at each colony monitored and their success rates for both 2018 and 2019, showing the population increase/decreases for each colony this year. *Greater than or equal to 100% due to greater number of active nests observed in the second period than breeding pairs in May/June

Monitoring Tree Nesting Vultures

Annual tree nesting surveys of both the critically endangered African White-Backed Vulture and Hooded Vulture were conducted at 6 sites in South Africa. Research is undertaken at each of these sites, monitoring breeding pairs, lead levels and the marking and satellite tracking of captured birds to target recognised areas of data deficiency for these species. With little being understood about their biology, life history, ranges and threats, the IUCN list both of these species as "critically endangered", the highest category of conservation concern. The systematic surveys undertaken by VulPro contributes to enhancing our efforts of implementing more effective and efficient conservation actions. Highly sensitive to changing land use and management, the data we collect is designed to facilitate direct comparisons between the breeding activities on highly contrasting areas, researching localised threats and helping us to implement the most relevant and efficient mitigation strategies for the studied species.

Location	Number of	Active Nests	Success		
Location	June/July	September	Mid-Season	Final	
Boikarabelo	39	21	53%	-	
Khaya Ndlovu	29	13	45%	-	
Omega Game Farm	30	22	73%	-	
Curly Wee Piggery	2	2	100%	-	
Olifants River PGR	40	27	-	68%	
Madikwe	-	30	-	-	
Total	131	115	68%*	68%	

Table 4: Breeding counts of African White-backed and Hooded Vultures at monitored sites in 2019 *Mean mid-season success rate, excluding Madikwe

Ex-Situ Breeding for Population Supplementation

Starting on a high note in March 2019, 7 juvenile vultures from our 2018 breeding season were taken to our soft-release enclosure at the Nooitgedacht Cape Vulture colony on the Magaliesberg Mountains, spending some time interacting with the wild vultures with minimal human contact to help acclimatize them to natural conditions and behaviours at the colony prior to a full release in April. All seven captive-bred individuals were released with tracking devices, with four devices still operational at the end of 2019. Unfortunately, one Cape Vulture juvenile was found electrocuted in November 2019 in the North West Province while the fates of two other individuals are unknown due to device failure. One of the African White-backed Vulture fledglings has slowly been exploring around Hartbeespoort while the map below shows the impressive distances of two of the released Cape Vulture juveniles from March to

December 2019 as they foraged all across southern Africa going as far as Angola and Zambia.

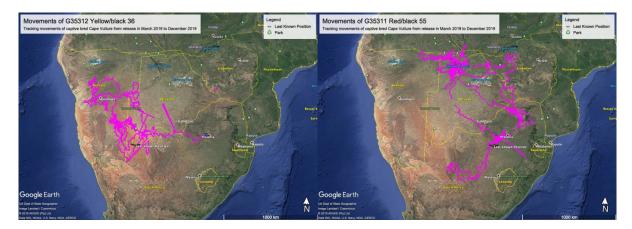


Figure 2: Map depicting the movements of 2 captive bred Cape Vultures released from VulPro in 2019.

2019 has once again proven to be a successful year for our ex-situ breeding programme, with 38 eggs laid by our 21 breeding pairs. However not all eggs were fertile or survived, with 11 Cape Vultures and 2 African White-backed Vulture chicks hatching, with a success rate of 34%. We are absolutely delighted to say that we have 13 young vultures here at VulPro ready for release in 2020. In addition, 2019 was also the first year in which our White-headed Vulture pair and one of our Lappet-faced Vulture pairs produced an egg, although both proved infertile. We have noticed repeated copulation attempts by two of the three Lappet-faced Vulture pairs and we hope 2020 will bring new hope to the species through captive breeding.

	2018	2019
Number of Breeding Pairs	21	21
Eggs Laid	35	38
Number Hatched	11	13
Number of Chicks Fledged	7	13
Ready for Release	7	13
Released	7	-

Table 5: Summary of our breeding success from non-releasable Cape Vultures and African White-backed Vultures in 2018 and 2019.

Powerline Surveys and Mitigation

The expansion of South Africa's outdated and poorly maintained powerline network preserves its status as the greatest threat to our wild vulture populations in the country. Injuries from electrocutions and collisions are often fatal, with less than 20% being able to be released due to the severity of their injuries. Dangerous, unmitigated powerline structures are common throughout South Africa, and without continued work to encourage and motivate their mitigation, they will continue to devastate wild bird populations unchecked.

VulPro continues to work hard undertaking over 110 kilometers of powerline surveys in 2019, 54 more than in 2018, throughout South Africa with particular emphasis on the Eastern & Northern Cape, Gauteng, Limpopo and North-West Provinces. These areas are amongst the worst areas affected by powerlines, however it is absolutely integral to expand and increase our survey efforts continually to improve our understanding of the problem on a national scale.

During 2019, 45 separate incidences affecting 50 Cape Vultures, 12 African White-backed Vultures, 2 Lappet-faced Vultures and 13 other birds were reported to and by us. This represents a slight increase from the 62 reported to us in 2018. Of the 77 total birds reported,

46 resulted in fatalities, of which 65% were from electrocutions. It is however, important to note that whilst the number of reports have decreased, it is unknown exactly how many vultures are affected due to survey efforts. Despite working to increase survey efforts and raise awareness, the number of reports we receive is a conservative estimate relative to the actual number of vultures killed by power lines each year.

At the core of our work to tackle this threat is our continued collaboration with Eskom, working together to report incidences and influence mitigation efforts to better protect vultures. 298 incidences have been reported to Eskom, which has resulted in the mitigation of 249 structures and a further 45 are pending mitigation in 2020. Our increased cooperation with Eskom is integral to the successful implementation of conservation strategies, and we are proud to be fostering a lasting relationship with our national electricity power utility company.

In addition, VulPro is working with Eskom by co-supervising an international postgraduate student to further our understanding of high-risk areas for vulture powerline mortalities. Sarah Aspenström-Oguguo's thesis investigated trends in Cape and African White-backed vulture powerline incidents to identify unsafe hotspot areas in South Africa. Data from incidents was collated with a number of factors that may affect the danger posed to vultures, such as home ranges from tracking data, local land use, flight altitude, proximity to colonies and feeding sites and water sources. Preliminary results indicated that most incidents occurred in the vicinity of restaurants and colonies, where vultures were flying at lower altitudes and actively selecting powerlines as roosting sites. This will help target mitigation efforts more effectively and maximise the impact that we can have to ensure safe powerlines especially in the proposed safe buffer zones around vulture colonies and feeding sites.

Species	2018	2019
Cape Vultures	60	50
White-backed Vultures	1	12
Lappet-Faced Vultures	0	2
Other Species	1	13
Total	62	77

Table 6: The number of incidences reported by VulPro for each species over the last two years.

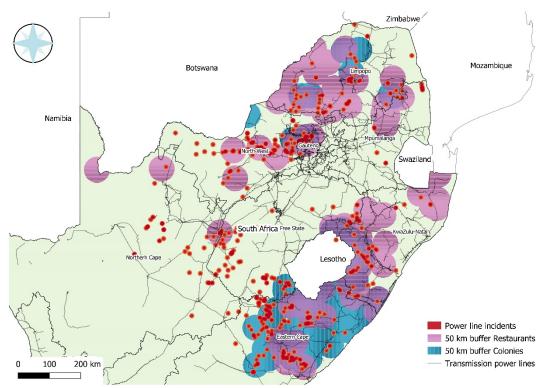


Figure 3: Map of powerline incidences around the recommended 50km conservation buffer zones around colonies. Credit: Sarah Aspenström-Oguguo MSc Thesis.

Vulture Restaurants

Vulture restaurants (artificial supplementary feeding sites) are of ever-growing importance in the changing, fragmented landscapes of southern Africa. As natural food sources grow scarcer and farming practices more industrial, it is harder for vultures in the wild to find safe food. The consistent provision of safe, toxin-free food helps to support hundreds of vultures in localised pockets, with many restaurants seeing upwards of 200 visitors regularly. VulPro maintains and supplies 2 restaurants, one on site and the other at the Nooitgedacht colony, whilst also working to ensure good communication and relationships with farmers and landowners operating artificial feeding sites independently. We are continually seeking to further and improve these relationships, fostering a network of well managed feeding sites across southern Africa. The support that we provide includes advice and assistance to establish and manage these sites effectively in a manner that benefits all stakeholders – both the vultures and the landowners. This is achieved through regular site visits, circulation of appropriate information, guidelines and protocols to all relevant parties.

At the close of 2019 there are 237 known artificial feeding sites in southern Africa, of which 142 are active regularly. We are working to maximise the effect of vulture restaurants on the overall populations, aiming to target areas where they are most needed.

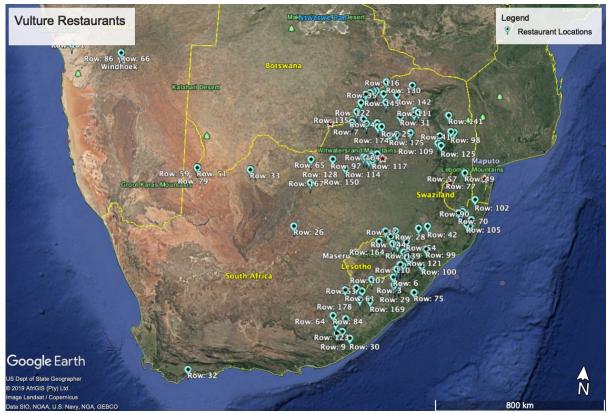


Figure 4: A map of the known vulture restaurants in southern Africa as of 2019.

Community outreach, interaction and education

Education is one of the key building blocks we use to lay the foundations for the future of vulture conservation, operating to achieve both short- and long-term objectives, helping us to connect with and inspire another generation of conservationists. As such, it is absolutely imperative that we continually seek to expand our outreach and education programmes, reaching as many people as we possibly can to ensure the future of Africa's vultures. VulPro aims to educate, inform and foster a respect towards vultures in every individual that we can connect with, fighting the misconceptions surrounding vulture species in southern Africa. As such we are working on the ground with communities in targeted areas, as well as students, volunteers and fellow conservationists to imbue them with our passion for vultures and train them with the necessary knowledge and skills to help protect rather than persecute vultures.

Type of Outreach						
Measurable Outcome	Volunteers	Tours	Talks	Schools & Educational bodies		Total
Number of Events	-	33	14	17	3	67
Number of people	31	256	>492	>783	18	>1580

Table 7: The number of people VulPro has directly interacted and connected with, educating and training them about vulture conservation in 2019.

Through our work with primary schools and scout groups to university students, VulPro has directly impacted over 1580 people, influencing them in a unique way to encourage respect for the environment, potentially providing the spark to start a burning lifelong passion for nature in these students.

Furthermore, in our endeavour to motivate a change of attitudes within the citizenry, our tours and talks have reached over 740 people, alongside our social, written, audio and visual media outputs directly impacting hundreds of thousands of individuals in 2019. This widespread impact gives out a positive message to the general public, raising awareness and concern throughout the populace to motivate long-term changes in attitudes. We need to reach the leaders of today to lay strong foundations for vulture conservation in future generations, so that we ensure a brighter future for all vultures across the globe.

Noteworthy events in 2019:

- Debra Toor's "Skype in the Classroom" programme, presenting educational segments on vultures locally and internationally, has reached over 150 students this year, with this amazing initiative bringing together like-minded individuals to share in the importance of vulture conservation and benefit from their communal experience.
- VulPro has hosted 31 local and international volunteers, working in various countries around the world, training them and equipping them with many transferable skills not only for vulture rehabilitation, but to also improve husbandry, raise awareness and rehabilitate other raptors as well.

Media Interest/Social Media

VulPro has been able to attract substantial media attention through its activities including presentations, written media, site tours, school programs, workshops, volunteer training and particularly social media. Alongside this VulPro has also appeared in a variety of other media throughout the year, with 11 radio interviews and 4 television appearances, including a 20-minute documentary produced for CNN that reached hundreds of thousands of viewers in the 5 day period in which it was aired. Additionally, a short 30 second video clip promoting VulPro was played when individuals logged onto the WiFi at one of South Africa's International Airports, gaining over 45 000 views. VulPro also implemented the use of a digital media billboard, located in a busy section of one of South Africa's capital cities, reaching over 35 000 people per day for the past annum, amounting to over 12 775 000 people reached.

By the end of December 2019, VulPro has amassed an even larger following on its social media pages, this includes the VulPro Facebook page having 13,362 followers, the Twitter account having 1,254 followers, the Instagram page having 1060 followers and on average the VulPro website has over 9,300 visitors per month. Kerri Wolter's personal Facebook page has 5000 followers.

Research Projects

VulPro draws upon over 13 years of experience in research and active conservation work to maximise our impact, however we are continually seeking to improve in every aspect of our work and tackle the changing threats to vultures. Research is an integral part of our conservation efforts to bridge the long-maligned divide between conservation researchers and practitioners and as such, we strive to improve our understanding of vultures and the localised and national threats facing them to better implement effective conservation action. Utilising 13 years of rehabilitation data, tracking movement analysis, ongoing veterinary and pharmaceutical research, studies on survival and mortality rates, possible impacts of fitment of GPS transmitters on individuals' survival, life history studies and re-sightings we ensure that we are always providing the best possible care for all birds and targeting our efforts where they are needed most.

Alongside our own research, we also support many graduate and post-graduate projects where we can see a benefit to vulture conservation. In recognition of our scientific

contributions, VulPro was invited to attend the first ever European Vulture Research Conference where we presented our rehabilitation work to share our findings with other vulture conservation organisations not just in Europe, but globally. VulPro was also invited to attend the 10th annual Oppenheimer Conference, where over 350 delegates from various international conservation organisations met for talks, presentations and networking opportunities.

We are continuing and expanding the following research projects and protocols:

- Continuing to monitor and record re-sightings of tagged individuals in our re-sightings database, with 41,075 re-sightings since 2004 including repeat individuals. In 2019 an additional 5,420 re-sightings have been recorded. This extensive database gives us insight into aspects such as survival, dispersal and the effects of different marking methods on survival. We are in the process of analyzing this data alongside tracking data to improve our understanding of these variables. During 2019, a total of 86 vultures were fitted with SAFRING, and coloured leg bands, including captive bred, rehabilitated, and wild birds.
- Wild captures and marking were undertaken regularly at Omega Game Reserve, Olifants River Private Game Reserve and here at VulPro. When captured, coloured leg bands are fitted alongside SAFRING leg bands and blood samples are taken for research into blood-lead levels before the birds are released back into the wild, or returned to their nests. During 2019 a total of 43 individual vultures were processed, contributing to our ongoing lead research and marking for future resightings/monitoring.
- GPS tracking and ground truthing: In 2019, 24 individuals were fitted with tracking devices, including 20 nestlings from the Skeerport colony in a collaboration with the Max Planck Institute of Animal Movement. We are currently monitoring the movements of 41 Cape Vultures, 10 African White-backed Vultures, 1 White-Headed Vulture and 1 Lappet-Faced Vulture fitted with previously sponsored tracking devices from Cellular Tracking Technology and Max Planck. Using the data collected from individuals fitted with tracking devices we can assess factors such as survival, dispersal, foraging patterns, breeding sites, areas of high utilization and facilitate comparisons between the behaviours of captive bred and rehabilitated birds post-release together with comparing these to wild birds. Analysis of the data gathered may help us to target areas of high utilization for threat mitigation efforts and improve our understanding of the life history of these birds.
- Analysis comparing the effects of wing tags and leg bands is in the processes of completion, in collaboration with the Max Planck Institute of Animal Behaviour in Germany. We are excited to share the results of this study in the very near future.
- Investigating the blood lead levels of vultures in captivity to establish baseline levels due to environmental sources whilst also collecting blood samples from wild and rescued individuals for comparative studies in collaboration Prof Vinny Naidoo (University of Pretoria).
- Our revised Vulture Rehabilitation Manual was published in April 2019, helping to better equip vulture conservationists worldwide with updated procedures and protocols to improve the care given to and success rate of vulture rehabilitation projects.

Post-graduate studies that we are supporting:

 VulPro continued to undertake calcium research in collaboration with Prof Vinny Naidoo and Lauren Havenga, as part of Laurens PhD at the University of Pretoria Veterinary Sciences.
 Twelve birds in total were selected for the study, which entailed blood draws throughout the day after each individual was administered with either a dose of calcium or calcium mixed with fat. Captive bred Cape Vulture fledglings were also taken for x-rays as part of the ongoing calcium study at the start of 2019.

- Christiaan Brink at the University of Cape Town had his first publication of his PhD accepted in collaboration with multiple NGOs including VulPro to quantify the impact and use of vulture supplementary feeding sites in South Africa and their use as a conservation tool.
- Sarah Aspenstrom submitted her Masters thesis at the Napier Edinburgh University investigating the distributions of vulture-power line incidents throughout South Africa in collaborating with Eskom using VulPro's tracking data and incident reports. We aim to distribute the findings of this study and continue to collaborate with Eskom to utilise this data to implement more effective, targeted mitigation efforts of this major threat.
- VulPro's tracking data is being used by the University of Cape Town, post-doctoral researcher,
 Dr. Megan Murgatroy, to create collision-risk models of wind turbines and raptors in South Africa.

Publications

The sharing of our findings with the public and other vulture conservationists is one of VulPro's priorities, helping to foster best practice and raise awareness of our work and the threats faced by vultures in South Africa. Throughout 2019 the following papers/manuals have been published or submitted for publication approval:

Adawaren, E.O., Mukandiwa, L., Chipangura, J., Wolter, K. and Naidoo, V., 2019. Percentage of faecal excretion of meloxicam in the Cape Vulture (*Gyps coprotheres*). Comparative Biochemistry and Physiology Part C: Toxicology and Pharmacology 215, pp.41-46.

Hirschauer, M.T., Wolter. K. and Forbes, N.A., 2019. A review of vulture wing anatomy and safe propatagial tag application methods, with case studies of injured vultures. *Journal of Wildlife Rehabilitation* 39(3), pp.7-13.

Tucker, M.A., Alexandrou, O., Bierregaard Jr, R.O., Bildstein, K.L., Böning-Gaese, K., Bracis, C., Brzorad, J.N., Buechley, E.R., Cabot, D., Calabrese, J.M. and Carrapato, C., Chiaradia, A., Davenport, L.C., Davidson, S.C., Desholm, M., DeSorbo, C.R., Domenech, R., Enggist, P., Fagan, WF., Farwig, N., Fiedler, W., Fleming, C.H., Franke, A., Fryxell, J.M., García-Ripollés, C., Grémillet, D., Griffin L.R., Harel, R., Kane, A., Kays, R., Kleyheeg E., Lacy, A.E., LaPoint, S., Limiñana, R., López-López, P., Maccarone, A.D., Mellone, U., Mojica, E.K., Nathan, R., Newman, S.H., Noonan, M.J., Oppel, S., Prostor, M., Rees, E.C., Ropert-Coudert, Y., Rösner, S., Sapir, N., Schabo, D., Schmidt, M., Schulz, H., Shariati, M., Shreading, A., Silva, J.P., Skov, H., Spiegel, O., Takekawa, J.Y., Teitelbaum, C.S., van Toor, M.L., Urios, V., Vidal-Mateo, J., Wang, Q., Watts, B.D., Wikelski, M., Wolter, K., Žydelis, R., and Mueller, T. 2019. Large birds travel farther in homogenous environments. *Global Ecology and Biogeography* 28(5), pp.576-587.

Venter, J.A., Martens, F.R. and Wolter, K., 2019. Conservation buffer sizes derived from movement data of breeding adult Cape Vultures (*Gyps coprotheres*) in South Africa. *African Zoology* 54(2), pp.115-118

Wolter. K., Hirschauer, M.T. and Forbes, N.A., 2019. Vulture Rehabilitation Manual Version 2.0. *VulPro NPC*, available at: www.vulpro.com/publications [updated April 2019].

Brink, C.W., Santangeli, A., Amar, A., Wolter, K., Tate, G., Krüger, S., Tucker, A.S., and Thomson, R.L. 2019. Quantifying the spatial distribution and trends of vulture supplementary feeding sites in South Africa and their potential contribution to vulture energetic requirements. *Animal Conservation* (Accepted).

Hirschauer, M.T., Wolter, K., Howard, A., Rolek, B.R., and McClure, C.J.W. 2019. Population growth rates in northern Cape Vulture (*Gyps coprotheres*) colonies between 2010 – 2019. Bird Conservation International. Submitted.

Howard, A., Hirschauer, M.T., Monadjem, A., Forbes, N., and Wolter, K. Rehabilitation injuries and release rates of Cape Vultures (*Gyps coprotheres*) and African White-backed Vultures (*Gyps africanus*) in South Africa. In preparation for submission.

Administrative Board, Staff, Volunteers, Students

VulPro has been managed by CEO Kerri Wolter as an independent NPC since 2011. Kerri has done this with the support of the Chairman, members of the board and her staff. The tables below outline the members of the board and the current staff at VulPro.

Name	Role	From
Prof. Vinny Naidoo	Chair	2013
Adv. Matthew Welz	Legal advisor	2013
Robyn Howes	HR & Marketing	2014
Magda Kets	Legal consultant	2019
Beryl Wilson	Research	2017
Charlton Forsyth	Business management and fundraising	2017
Craig Nattrass	Operations	2017
Kerri Wolter	CEO	2011

Table 8: The VulPro Board 2019

Name	Role	Status
Kerri Wolter	CEO	Permanent*
Charne Wilhelmi	Administration, fundraising and field work	Permanent*
Obert Phiri	Operations manager	Permanent*
Notice Phiri	Driver and maintenance	Permanent*
Charles Banda	Maintenance manager	Permanent*
Esther Mapope	Domestic affairs	Permanent*
Livingstone Mapope	Grounds Keeper	Permanent
Alexandra Howard	Head of Research	Permanent*
Kate Webster	Eastern Cape representative and field work	Permanent

Table 9: The VulPro Team 2019

*salaried

Due to the limited funds available to conservation organisations and the ever-growing challenges that we face, VulPro is heavily dependent upon the hard work of both local and international volunteers. VulPro also relies on collaborating institutes to fund important research projects that assist our conservation efforts. VulPro is incredibly grateful and appreciative of the people and organisations that have contributed immensely to the successful operation and growth of VulPro throughout 2019.

Travel

Travelling long distances is unfortunately a necessary part of VulPro's conservation efforts, from daily upkeep of the captive birds to research in the field and rehabilitation. In 2019 travel has been undertaken for the following activities:

- Carcass collection for feeding purposes
- Rescue and rehabilitation efforts

- Management, supervision and visits to vulture restaurants
- Operation of the release site enclosure at Nooitgedacht
- Required travel to undertake research projects and field work activities
- Transportation of critical birds for veterinary services
- Educational visits to schools, clubs, and other venues for our outreach work
- Attending meetings and conferences regarding all aspects of vulture conservation
- Vehicle service and maintenance

In 2019 VulPro has travelled a total distance of 115 000 kilometers in South Africa alone, not including any international travel.

Costs

Operating at the cutting edge of vulture conservation incurs many costs, broken down into:

- Operating expenses
- Accounting fees
- Administration and management fees
- Audited remuneration
- Bank charges
- Consulting and professional fees
- Captive breeding
- Cost of Conservation
- Cost of flamingo rescue
- Delivery expenses
- Depreciation
- Employee costs
- Fines and penalties
- Gala Dinner Expenses
- General Expenses
- Hire
- Insurance
- Lease rentals on operating lease
- Moto vehicle expenses
- Monitoring costs
- Postage
- Printing and stationary
- Profit and loss on sale of assets and liabilities
- Rehabilitation
- Repairs and maintenance
- Secretarial fees
- Security
- Staff Welfare
- Subscriptions
- Telephone and fax
- Training
- Transport and freight
- Travel-local
- Vet/Hospital costs

Fundraising and Sponsors Funders and Sponsors

VulPro is exceptionally grateful for and humbled by the continued enthusiastic support and commitment from our friends, sponsors, donors, adoptive "parents", family members, volunteers and supporters. This incredible support has allowed VulPro to continue to achieve its goals each year, aiding us to conserve and stabilize vulture populations across southern Africa.

As always, we are especially grateful to our long-standing donors and sponsors:

- Auckland Zoo
- Blair Drummond Safari Park
- Boikarabelo Coal Mine
- Cellular Tracking Technologies
- Cheyenne Mountain Zoo
- Cleveland Metroparks Zoo and Zoological Society
- Columbus Zoo and Aquarium
- Colchester Zoo
- Dallas Zoo
- Detroit Zoological Society
- DHL Supply Chain
- Fresno Chaffee Zoo
- GH Braak Trust
- Hans Hoheisen Charitable Trust
- Jacksonville Zoo and Gardens
- John Ball Zoological Society
- LUSH
- Max-Planck-Gesellschaft
- Natural Encounters inc.
- Rufford Foundation
- Road to Race Wraps
- Roger Williams Park Zoo
- Sacramento Zoo
- . Sean Living Creatures Trust
- Siemens Healthineers
- The Hawking Centre, UK
- The Tusk Trust
- Wild Heart Wildlife Foundation
- Wilhelma Zoological and Botanical Garden, Stuttgart
- · World of Wings Bird of Prey Centre, Scotland
- Zoo Atlanta
- 3M

Through the MySchool/MyVillage/MyPlanet programme from Woolworths our supporters may help us at no monetary cost to themselves, as the programme raises money for schools, charities and conservation projects such as ourselves in South Africa. We are very grateful to all those who have chosen to donate to us as their selected charity through this scheme.

Sustainability

Our long-term strategy of being a sustainable organization continues and remains integral for the continuation of our important work conserving vultures. As such, we place huge emphasis on forming long-term collaborations and partnerships to continue our work.

VulPro like other non-profit organizations and charities need to ensure we remain innovative in competing for funding. The sustainability of an organisation depends upon its annual budget and the "right" people to carry out its mission. Public-private partnerships help in addition to various diversified funding. We will invest in resources to drive innovation to remain sustainable.

In addition to preserving our long-term relationships, VulPro is also developing easy ways for donors to give back in a very personal way. They are able to see and feel the difference that they are making- either through our bird releases, feeding programs, adoptions or simply visiting our Centre and experiencing these special birds.

VulPro Wealth Link Investment Summary

The highlight is that from a net investment of R4.78m from inception we now have an investment worth R5.36m or in other words an overall growth of R579 000, in some very tough years market wise. Put differently, this represents a growth across the period of 12.1%. I am happy with this, especially when we consider that our strategy is somewhat conservative with a target inflation of plus 2-3%.