

HOW TO IMPROVE WILDLIFE PRODUCTION IN SOUTH AFRICA

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Abstract

The factors that hamper the wildlife industry are discussed and recommendations are made that can possibly improve the industry. The biggest problem is that the wildlife industry is fragmented into a production camp (agriculture) and a conservation camp (environmental). The fact that the nine provinces that govern nature conservation have not got a tool in place to coordinate the industry leads to further fragmentation. The following departments are involved; nature conservation, agriculture and veterinary, and if spread over nine provinces gives a total of 27 bodies that must communicate with the private sector. The shortage of information because of fragmentation leads to following questions that must be answered on a national level to manage a National asset;

- * What is the size of land utilized by game ranching and wildlife reserves?
- * What is the size of the different veldtypes utilized by game in SA?
- * What is the distribution of different game species (GIS) in SA?
- * What is the distribution of diseases (GIS) in SA?
- * What is the number of the different animal species in SA?
- * How many animals of which species are sold alive every year?
- * How many animals of which species are hunted every year?
- * How many animals of which species are culled for meat every year?
- * How many people work in the game ranch industry?

A Central Database is discussed as a solution and managed by the Wildlife Industry Trust.

Historical Background of Game Ranching

The first record of a farmer fencing part of his farm to protect animals is described by FitzSimons in (Skead, 1980, Vol. 1, pp 547.) as follows. *“It appears that in 1837, Mr. Alexander van der Byl of the farm ‘Nacht Wacht’ enclosed 6 000 acres (2 428 ha) of ground on the western side of the Karsriver about 10 km of Bredasdorp town. Twenty-seven bontebok were first enclosed at a stocking rate of about one bontebok per 89 hectares. The camp was enclosed partly with galvanised wire and iron strands, partly with a stone wall at partly by the Kars River which runs in an arc until reaching ‘Nacht Wacht’ where it becomes marshy for 14 km until flowing into Zeekoeivlei, 15 km south of Bredasdorp before entering Zoetendalsvlei, 8 km further on its course and 22 km from*

Bredasdorp.” This 27 bontebok increased to 180 animals over an 80 year period. Pienaar (1990) states that 300 farms of 200 farmers protected the game on their properties in the Transvaal by announcing it in the Government Gazette (Staats Courant). This includes 62 farms in the Lydenburg-, 57 Waterberg-, 43 Pretoria- and 23 Wakker-stroomdistrict. One such farm Rolfontein (Staats Courant No. 476 of 3 June 1873 p 3) of Robertson in the Wakkerstroomdistrict, from where he send wagons to Pietermaritzburg to collect barb wire and to the Lowveld wooden posts to fence 500 morgen for his horses during 1867. This was the first fenced camp in the eastern Transvaal and the game soon found it as a safe haven and multiplies quickly.

Wallace (1896) stated the following of the eland, “*The eland in the wild state is generally supposed to be ‘extinct’ in Cape Colony, Natal, Orange Free State, Griqualand west and the Transvaal and almost all countries watered by the tributaries of the Limpopo west of the Matabele country, but is reported to exist in Griqualand east, on the spur of the Drakensberg.*” It has been domesticated in the Cape Colony as shown by the photograph (**Figure 1**) below, probably the first record of farming with eland in the literature.

Eras of Game Conservation in South Africa (Du Toit, 2007)

- * 1652 – 1850. Hunting and travellers collecting specimens for museums of the interior. Scientists described animals.
- * 1851 – 1930. Removed wild animals to establish farms and (hunters/traders)
- * 1901 – 1930. Proclamation of the first National Parks and establishing of law enforcement; Act on National Parks (Conservation)
- * 1931 – 1960. Breeding of endangered species in National Parks/Provinces
- * 1961 – 1980. Improvement of capture techniques and introduction of first populations of animals on private property.
- * 1981 – 2000. Private sector plays a prominent role in conservation.
- * 2001 – Current. Selection of good genetic material and intensive wildlife production.

The above eras deal with the major influences that had affected the numbers of wildlife in southern Africa. First were the early collectors of specimens for museums who described the animals scientifically to the world. This was followed by commercial hunting that nearly wiped out wildlife in southern Africa. The National Parks Act helped to save endangered species like the Cape mountain zebra (*Equus zebra zebra*), black wildebeest (*Connochaetes gnou*) and the bontebok (*Damaliscus pygargus pygargus*) in collaboration with farmers. These success stories illustrate the importance of the farmer’s role in conservation. Other factors that have had a negative effect on the numbers of wildlife, were diseases like the control measures of ngana, that nearly killed 800 000 head of animals, and the outbreak of rinderpest that wiped out 4 000 000 head of cattle. During 1966 there was an estimated 600 000 head of game left in South Africa. Three main factors lead to the increase of game numbers since the sixties, namely ownership of animals, the animal withdrawal scheme and improved scientific techniques in the capture, translocation and introduction of wildlife into new regions.

The growth of the game ranch industry can be measured by the total of game ranches in the country. During 1965 there were four fenced game ranches in former north-western Transvaal. Forty years later there are 5061 farms registered in nine provinces with exemption permits for the keeping of game. This equates to a thousand fold increase of ranches over a forty year period. The registered farms with exemption permits registered in the different provinces are as follow; Limpopo 2480, Northern Cape 986, Eastern Cape 624, Northwest 340, Mpumalanga 205, Freestate 180, KwaZulu-Natal 92 and Western Cape 82 (Van der Waal & Bekker, 2000). The current estimation is 9 000 game farmers in South Africa. The utilization of agricultural land use in South Africa can be seen in **Table 1**.

Since 1964 there was a shift in animal numbers as illustrated in **Table 2**. The numbers of farm animals (cattle, sheep and goats) dropped drastically; cattle dropped with 4.2 million, sheep 11.7 million and goats 2.06 million, totalling nearly 18 million animals. If these farm animals were replaced with wildlife it can be assumed that there are today the wildlife equivalent of 18.6 million farm animals on game ranches in South Africa, assuming carrying capacity has stayed the same.

History of training of veterinarians

The following information is an abstract from, www.nda.agric.za/vetweb/history:

The Dutch East Indian Company was established in the Cape as a source of fresh supplies for passing ships, but for more than 200 years, there was no permanent veterinarian in South Africa. During this period visiting British military veterinarians were the only representatives of the profession in this country.

During 1870 after an outbreak of babesiosis in Natal efforts were made to establish a state veterinary service to control this destructive disease. In 1874 a colonial veterinarian, Samuel Wiltshire, MRCVS, was appointed to help and prevent this disease, with his head office in Pietermaritzburg.

During 1876 the Cape of Good Hope also appointed a colonial veterinarian, Prof. William Catton Branford, MRCVS. His attempts to control diseases appear to be more successful. He recorded the difference between lung sickness, tuberculosis, glanders, sheep-scab and mange. However, diseases locally known as "Galzieckte (gall sickness), Vermeerzieckte (vomiting sickness), Lamzieckte (botulism), Dikkop (tribulosis), Meltzieckte (anthrax) and Hartwater (heartwater) were totally unknown to him. He was very conservation minded and made several far-reaching recommendations to the Cape of Good Hope government when he left the country in 1879:

- * *All cases of glanders to be destroyed and buried.*
- * *A closed season for hunting birds to be introduced to give them a chance to breed.*
- * *The burning of the veld to be prohibited.*

Apart from our own indigenous pests and plagues, a number of diseases were introduced into South Africa from overseas;

1854: Lung sickness was brought to the Cape Colony by a bull imported from Holland. During 1881 a large-scale outbreak of lung sickness amongst Angora goats was traced back to a consignment of Angora goats imported from Somerset West the previous year by H. David & Co. The eradication of the disease consisted of the slaughtering and destroying the 6 162 goats with a total value of £ 2 878.

1892: Rabies was brought to South Africa from England by an Airedale terrier. The disease was quickly transmitted to the local dogs and from there it spread to wild animals and it is currently endemic to certain regions in the country.

During 1892 Dr. Duncan Hutcheon, who succeeded Prof. Branford, was hoping that foot-and-mouth disease in the then Bechuanaland and Griqualand West would not spread further to the Cape. However, during the following year the disease was spread by slaughter cattle transported by rail from this region and by 1894 it had apparently already spread to all four provinces.

By the end of the 19th century a State Veterinary Service had become a matter of great urgency for the South African livestock industry. The Veterinary Department of the Orange River Colony was established in 1896 after the outbreak of Rinderpest, when Dr. Otto Henning was seconded to take charge of control duties in this regard. In the Zuid-Afrikaansche Republiek (Transvaal) a Veterinary Department was only established in 1897 with the appointment of Sir Arnold Theiler.

During the Anglo-Boer War (1899) 125 military and 240 civilian veterinarians came to South Africa with the British army. After the end of the war in 1902 many of these veterinarians remained behind in South Africa to form the core of the veterinary departments of the various colonies. Some of these veterinarians also began to practice privately and this can be regarded as the origin of private practice in South Africa.

During 1908, shortly before Union (1910), the Veterinary Departments of the four provinces merged to form the Veterinary Services of the Union of South Africa. Dr Arnold Theiler was the first Director of the new Division of Veterinary Services. The aim of Veterinary Services was to combat the unique animal disease problems of the country. It was soon clear that two identities were needed to achieve this aim. Firstly a research institute was necessary to provide expertise in and medicines against animal diseases. Secondly a government organization was needed that had the legal competence, funds and staff to control and eradicate existing diseases and to prevent diseases from being imported from abroad. Veterinary Services would also apply itself to the promotion of animal health in general and the improvement of animal production.

Important historical events of veterinary science training in South Africa;

** 1891: The government of the Cape of Good Hope opened the first veterinary research laboratory in Grahamstown.*

** 1897: The governments of the ZAR and Natal established two more laboratories at Daspoort and Allerton respectively.*

- * 1899: *The Medical and Chemist's Act was introduced in Natal, which provided for the registration of veterinarians.*
- * 1903/4: *The municipalities of Johannesburg, Durban and Cape Town appointed veterinarians.*
- * 1908: *Research Laboratories at Onderstepoort started with research.*
- * 1919: *The Transvaal University College in Pretoria invited Dr. Arnold Theiler to establish a Faculty of Veterinary Science in South Africa at Onderstepoort and became the first dean.*
- * 1920: *Training of veterinarians in South Africa was officially launched and the first students who qualified in 1924, were J.I. Quinn, J.G. Williams, C.E. Maré, W.J.B. Green, J.H.R. Bisschop, G. Martinaglia and P.S. Snyman.*

Training of wildlife veterinarians

The training of veterinarians in South Africa is based on the concept that graduates are able to treat animals on a multi-species basis. Specialization only takes place at a post-graduate level. During 1988 the first training of wildlife veterinarians started under the sponsorship of the Price Forbes Chair in wildlife diseases, under Prof. David Meltzer. Training was aimed to educate clinicians, but with the huge demand for the capture of wild animals, short game capture courses were initiated to also train private veterinarians. The increase in veterinary knowledge of wildlife subjects, such as parasitology, necessitated the implementation of a master's level research projects as well as a specialist clinical qualification, both of which were developed at the Faculty of Veterinary Science, Onderstepoort, University of Pretoria (FVS). Between 1988 and 2006, 8 MMed.Vet.(Fer) students and 15 MSc students qualified in the Wildlife Unit at the Faculty. The training of more than 150 private veterinarians in the chemical capture wild animals was also done at this Unit during the same period (Du Toit, 2007). During 1990 Dr. Eddie Young became the first private wildlife veterinarian in South Africa, followed in the same year by the author (J.G. du Toit). Currently, more than 100 veterinarians do wildlife work in South Africa, while more than 100 veterinary students finish their studies each year at FVS, still the only veterinary school in South Africa.

Wildlife Production Systems

* Cultural hunting industry

The culture of the Boer is to hunt and from there the well known words, "Die Boer en sy Roer" (The farmer and his rifle (*sic*)). Hunting for food can never be classified as a sport, since this constitutes a cultural action rather than a sport. Therefore, it is not surprising that the cultural (recreational) hunting industry makes the biggest contribution towards the South African wildlife economy. In a study done during 2005 by the Northwest University (Institute for Tourism and Leisure Studies), questionnaires were sent to 18 000 local hunters. It was found that a cultural hunter in South Africa spends about R11 622 per annum on animals and a further R4 130 on secondary expenditure (accommodation, meat processing, rifles, etc.). The study also indicated that the cultural hunting industry in South Africa harvests about 1 million animals per year and that South Africa has about 200 000 cultural hunters. This means that the turnover in this hunting industry is about R3.1 billion per annum (R2.3 billion for animals and R0.8 billion for secondary expenditure).

The study (Northwest University, 2005) indicates that, at least 35 different species were hunted, the most popular being springbok (29% of all animals hunted), impala (19%), blesbok (13%), kudu (8%) and warthog (8%). This sub-sector is not united in the sense that it is served by two identities. The first being the South African Hunters and Conservation Association (SAHCA), which is the oldest and largest hunting association in South Africa, with a membership of approximately 22 000 cultural hunters. The second being the Confederation of Hunting Associations of South Africa (CHASA) representing 13 hunting associations with a collective membership of approximately 15 000 hunters. Together, the two identities represent at least 37 000 hunters. Adding the local hunters not belonging to any hunting association, the number of cultural hunters in South Africa is estimated at 200 000 (Anon., 2006). The government does not contribute to the hunting industry because South African law does not permit hunting in National Parks.

* Wildlife capturing and translocation industry

The Wildlife Translocation Association (WTA) is a voluntary association of professional wildlife capture units and associated role-players in South Africa that was established in the early 1990's. It currently has 53 registered members and represents more than two-thirds of the active wildlife capture units in South Africa. Its members are drawn from both the private sector and government service, and it is the only organisation in South Africa that represents these wildlife capture units. The association is recognised at both national and provincial levels by conservation authorities and anyone who wishes to tender for government contracts must be a member of the WTA.

Wildlife translocation occurs locally and internationally. Local role-players such as the private sector capture units, SA National Parks, provincial capture units, zoos, private wildlife veterinarians and wildlife ranchers are all involved in the movement of live wild animals internationally and locally. South Africa exports wildlife to the rest of the world and imports indigenous and exotic wild animals from other countries. There are no official figures available, but it is estimated that about 70 000 animals are captured and translocated annually in South Africa. The estimated turnover generated by capture operations varies between R750 million to R900 million. These figures, however, include the value of wildlife captured, because capture operators become the owners of the animals while they are in transit (Anon., 2006).

* Trophy hunting industry

The Professional Hunters Association of South Africa (PHASA) was established in 1978. Currently it is the official mouthpiece of the professional hunting industry in South Africa and is the largest professional hunters association, not only in Africa, but also in the world. Currently PHASA has over 1 100 registered members and in reality represents the commercial hunting industry. When 1 100 professional hunters represent R500 million and 37 000 cultural hunters represent R2,3 billion of the monetary value of the game industry in South Africa it is clear that the trophy hunting industry is commercial hunting (Anon., 2006).

PHASA states that South Africa has become one of the hunting world's greatest destinations, attracting about 7 500 foreign hunters in 2005, mainly from Europe and the United States of America. South Africa offers the greatest variety of animal species that can be hunted in one country, including Africa's "Big Five" - lion, leopard, African buffalo, African elephant and white/black rhinoceros. The value of animals harvested by trophy hunters (overseas hunters) is approximately R410 million per annum. Together with secondary expenditure (e.g. accommodation and travel) of approximately R100 million, the value of the trophy hunting industry is estimated at over R500 million per annum. In 2005, professional hunters hunted about 40 000 animals in South Africa (Anon., 2006).

* Taxidermy industry

The South African taxidermy industry is serviced by two bodies, namely the Taxidermy Association of Southern Africa (TASA) and Commercial Taxidermists and Game Skin Tanners of South Africa (CTGSTSA). Taxidermy Association of Southern Africa was established in 1980 and currently has 70 members. CTGSTSA was established in 1994 (when it broke away from TASA) and has 20 members. TASA represents the so-called smaller taxidermists while CTGSTSA represents the so-called bigger taxidermists. Each of these organisations has approximately 50% of the market share. The contribution of the taxidermy industry towards the South African wildlife economy is estimated at R200 million. Some of the wildlife hunted elsewhere in Africa is also processed in South Africa, but the extent of this is not known (Anon., 2006).

* Game auctions

Table 3 shows that despite the recent increase in the number of game ranches, the national parks and provincial reserves provided about 23% of the wildlife that was sold on auctions in South Africa. In monetary terms, the wildlife sales from the private sector was responsible for 60% of the turnover on the game auctions and produced 77% of animals sold (Anon. 2006). During 2010 there were 56 game auctions held in South Africa and a total of 15 000 animals were sold with a turn over of R316 million (Cloete, 2011).

* Game meat industry

Game ranching in South Africa is ideally suited for the production of game meat, provided that the correct slaughtering techniques are followed and cooling facilities are available. However, the extensive nature of game ranching makes the harvesting of wildlife much more difficult compared to domestic livestock. More mobile abattoirs, passive capturing techniques, improved carcass handling, product descriptions and meat processing facilities are needed. Red meat abattoirs are also not allowed to slaughter wildlife at the same facility as domestic livestock. The general opinion within the game ranching industry is that the requirements for local abattoirs are too strict. South Africa has five game meat export abattoirs, namely Camdeboo in Graaff-Reinet, Swartland in Malmesbury, Mosstrich in Mosselbaai, Krugersdorp and Westville in Port Elizabeth. Approximately 450 tons of game meat is exported per annum, mainly to Europe. The value of these exports is approximately R15 million (R33/kg). About 1 350 tons of game meat (three times the amount exported) are consumed locally (Anon., 2006). For the

export market, it is important for South Africa to brand its game meat and distinguish it from products originating in other countries. The quality of game meat and the environment wherein it is produced makes it an ideal product to market as being organic.

Summary of the monetary value of the game ranch industry

The monetary value of the game ranch industry is summarized in **Table 4** below. The tourist industry (non consumptive) is not reflected in this summary.

Problem Statement

Information about the wildlife industry is most commonly derived from *ad hoc* studies and/or projects. Furthermore, the wildlife industry is fragmented into a production camp (agriculture) and a conservation camp (environmental), with no consolidated information management tool to serve the industry between the nine South African provincial governments. In each of these governments, both environmental (nature conservation) and agriculture (with a separate section for veterinary controls) departments control the wildlife industry, Thus, no less than 27 bodies that must communicate with the private sector and coordinate regulation of the industry.

Solution Recommended

A solution to this maze of regulatory controls, would be to create an independent trust to maintain all data related to the wildlife industry on behalf of all the role players.

The purpose of a Central Database

- * The gathering of sound statistical information to enhance decision making
- * To identify and support research topics that is relevant to the well-being of the industry.
- * To have readily available denominator data to quantify disease spread and risk and hence improve the ability to control disease outbreaks in or from wildlife.

The possible role players who indicated that they are willing to participate in such a project can be seen in **Table 4**. The South African Breweries with a sponsorship of R1 million in partnerships with the South African Veterinary Foundation agreed during 2010 to implement a Central Database for wildlife in South Africa.

Recognition by Government of a Central Wildlife Information Management System (CWIMS)

The South African Department of Agriculture published a policy on game farming for public comment in 2006 (Notice 874 of 2006 section 5.1.2.) This included a statement on a National game farm and animal database: *“Accurate information and statistics (human resources, skills, budget and equipment) is essential for effective long and short term planning and management. This will require effective liaison and linkages between institutions collecting information and statistics such as Statistics SA, Agricultural Statistics, Customs and Excise and other organizations within the industry and would best be coordinated by the lead Department. This should include a detailed geo-referenced database of all game farms.”* No mention is made on how this idea must be implemented, but most importantly, it is recognized by Government.

The National Environmental Biodiversity Act (NEMBA) instructs the South African National Biodiversity Institute (SANBI) to “*collect, generate, process, coordinate and disseminate information about biodiversity and the sustainable use of indigenous biological resources, and establish and maintain databases in this regard*”.

A CWIMS involving all role players will only work under the following conditions;

- The CWIMS must be controlled by a neutral body
- Data ownership should remain with the relevant role player and always treated as confidential
- Information releases should only contain aggregated data to the level where it ensures anonymity for individuals
- There must be no political affiliations attached to the CWIMS
- The CWIMS participation must have incentives for farmers/game owners
- The SA government must also submit their data to the CWIMS get a complete perspective of the industry. The farmers must have a choice to submit their information under the Department of Agriculture or the Department of Environmental Affairs

Implementation of Central Database

A proposal is currently being drafted to the minister of agriculture to implement the aforementioned CWIMS under the ANIMAL HEALTH ACT (Act No 7 of 2002) as a Animal Health Scheme under;

Article 16. (1) *The Minister may by notice in the Gazette establish a scheme in respect of any controlled purpose or for the improvement of animal health.*

(2) *The Minister may under subsection (1) establish different schemes in respect of different kinds of animals, different animal diseases or parasites, different classes of persons and different areas.*

Opportunities of a CWIMS

- Create a neutral instrument represented by government and the private sector through the formation of a Trust
- Data on an integrated system available to all stakeholders
- Standardized data that could be used for research purposes
- Avoid duplication and save money through innovative use of technology and self-administration. Aid forensic analysis through genetic identification database
- Horn from rhino registered the genetic identification database can genetically matched and verified as legal, and hence pave the way for a controlled trade mechanism
- Such a CWIMS can be expanded to include domestic animals and identify important wildlife-livestock interfaces for risk mitigation

Conclusion

The wildlife industry in South Africa has evolved considerably during the last century, becoming a full blown commercial industry with very strong linkages to conservation. It has however proven to be a very difficult industry to regulate, due to its roots in

conservation, commercial agriculture and trade. This could however be alleviated by creating a support structure for the industry to enhance communication and exchange between these diverse domains, which will not only improve its regulation, but also greatly improve its efficiency and ability to contribute even further to the national economy as well as the natural asset of the continent.

Table 1: Landuse in South Africa

Land Sector	Hectares	Total (%)
Government protected areas	7 500 000	6.1
Private wildlife ranches	20 500 000	16.8
Total under conservation management	28 000 000	22.9
Total agricultural land	100 600 000	82.2
Total area of South Africa	122 340 100	100

Table 2: Change in Animal Numbers

	CATTLE	SHEEP	GOATS	GAME
1964	12 243 000	39 717 000	5 667 000	575 422
2007	8 000 000	28 000 000	2 500 000	18 016 000
Change in numbers	-4 243 000	-11 717 000	-2 056 000	+18 591 422

Table 3: The Contribution of Government and the Private Sector to Game Auctions

SECTOR	ANIMALS SOLD	(%)	TURN OVER (ZAR)	(%)
Government	4 117	23.43	36 980 333	39.53
Private ranchers	13 452	76.57	56 568 967	60.47

Table 4: Monetary value in Rand of the Wildlife Industry South Africa

Sector	Value (ZAR)	Percentage
Recreational hunting industry	3 100 000 000	66
Translocation (capture)	750 000 000	16
Trophy hunting industry	510 000 000	11
Taxidermist	200 000 000	4
Live animal sales (auctions)	94 000 000	2
Meat production	42 000 000	1
TOTAL	4 696 000 000	100

Table 5: Database Registers for the Wildlife Industry

NAME REGISTER	ORGANIZATION	COMPLETED	DOMAIN REG.
Antipoaching	SAPS	X	www.antipoaching.co.za
Plant	SANBI	X	www.plantregister.co.za
Bird	SAW	X	www.birdregister.co.za
Game	WRSA	X	www.wildregister.co.za
Fish	?	X	www.fishregister.co.za
Hunt (Amateur)	SAHCA	X	www.huntregister.co.za
	CHASA	X	www.huntregister.co.za
Hunt (Professional)	PHASA	X	www.huntregister.co.za
Taxidermy	TASA	No	www.taxidermyregister.co.za
	CTGSTASA		www.taxidermyregister.co.za
Biobank	OP VGL	X	www.biobank.co.za
Permitonline	DEA	X	www.permitonline.co.za
Capture Drugs	MCC	X	www.drugregister.co.za
Poison	AVCASA	X	www.poisonregister.co.za
Disease	DoA	X	www.diseasecontrol.co.za
Translocation	WTA	No	None (translocation)
Game auction		No	None (auction)



Figure 1: Domestication of eland in 1896 (Source, Wallace 1896)

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ACRONYMS	
SAPS	South African Police Services
SANBI	South African National Botanical Institute
SAW	South African Wingshooters
WRSA	Wildlife Ranching South Africa
SAHCA	South African Hunters Conservation Association
PHASA	Professional Hunters Association South Africa
TASA	Taxidermy Association South Africa
CTGSTASA	Commercial Taxidermy Game Skin Tannery Association South Africa
OP VGL	Onderstepoort Veterinary Genetic Laboratories
DEA	Department Environmental Affairs
MCC	Medicine Control Council
AVCASA	Association Veterinary Crop Associations South Africa
WTA	Wildlife Translocation Association
DoA	Department Agriculture
SAVF	South African Veterinary Foundation
SAB	South African Breweries
OVI	Onderstepoort Veterinary Institute