1. Introduction

Over-exploitation is the over-use of wildlife and plant species by people for food, clothing, pets, medicine, sport and many other purposes. Wildlife over-exploitation involves the harvesting of species from the wild at rates faster than natural populations can recover - overfishing and overhunting are both types of over-exploitation. The hunting, trapping, collecting and fishing of wildlife at unsustainable levels is not something new; however, about a third of the world's endangered vertebrates are currently threatened by over-exploitation, and the wildlife trade represents the second-biggest direct threat to species survival after habitat destruction.

The most obvious problem associated with the wildlife trade is that it can cause over-exploitation to the point where the survival of a species hangs in balance. For example, the price of ivory on black markets has skyrocketed, and elephant populations in Africa are being annihilated. At current poaching rates, African elephants could be wiped out within the next decade; and the loss of one species can affect many other species in an ecosystem. Trafficking is also affecting tigers, great apes, sharks and other important species. Most notoriously, a total of 1 020 rhinos have been killed for their horns since the beginning of 2014 in South Africa. The largest number has been in the Kruger National Park, where 673 rhinos have been poached so far this year. A total of 110 rhinos have been poached in Limpopo, 84 in KwaZulu-Natal, 70 in Mpumalanga, 58 in North West and 15 in the Eastern Cape, Gauteng, Free State as well as the Western and Northern Cape lost 10 rhinos among them.¹

2. Roundtable Discussion

The morning of Thursday, 27 November 2014 saw the Catholic Parliamentary Liaison Office host a roundtable on Wildlife Over-Exploitation. The speakers at the event were Ms Magdel Boschoff, who leads the Threatened or Protected Species (TOPS) Policy Development Division at the Department of Environmental Affairs; Mr Paul Gildenhuys, the manager of Cape Nature's Biodiversity Crime Unit; as well as Ms Rynette Coetzee, who leads the Law & Policy Project at the Endangered Wildlife Trust. Ms Boschoff, assisted by Ms Preshantie Naidoo, explored various kinds of legislation such as National Environmental Management Act² (NEMA), National Environmental Management: Biodiversity Act³ (NEMBA), and the Nagoya Protocol. They also explored the concept of bio-prospecting, which is defined as research on, or development or application of, indigenous biological resources for commercial or industrial exploitation. Provincial and national legislation are independent of one another on these matters, and that makes for uniformity complications.

The enormous economic benefit that may be obtained from the exploitation of biological resources has led to international conventions and agreements being formulated, such as the Convention on Biological Diversity, to which South Africa has acceded and is bound. As a result, South Africa promulgated NEMBA which is aimed at combating bio-piracy⁴ and ensuring that indigenous communities share equally and equitably in the benefits flowing from bio-prospecting and indigenous knowledge. Mr Gildenhuys pointed out that when it comes to carrying out the law, "It's not what you know, it's what you can prove." Ms Coetzee stressed that throughout the UN Decade on Biodiversity⁵, governments were encouraged to develop, implement and communicate the results of national strategies for implementation of the Strategic Plan for Biodiversity. This is to be done while taking into consideration a variety of national and intergovernmental factors intended to prioritise biodiversity in broader development
planning and economic activities. But while South African is making progress in this regard, the country is one of the top three biodiversity targets for environmental lawbreakers. This has resulted in species such as the pangolin not only having the distinction of being the world's only scaly mammal, but also the most smuggled mammal. Other problems encountered in the quest to defend biodiversity in South Africa involve our porous borders and capacity issues regarding lack of training in the procedures to be followed when wildlife criminals are apprehended.

The discussion after the presentations navigated issues such as:

- the impact of informal trade in plant species for traditional medicine;
- the role that political will plays in resolving these issues;
- the battles that have been won when civil-society organisations and individuals are involved and fighting;
- ambiguous wording in legislation that often results in the law being interpreted in a way that is favourable for perpetrators; and
- whether it was worth using knowledgeable rehabilitated convicts in the field to help catch other wildlife offenders.

3. Black Market Operations

3.1. The black market

Both legal and illegal exploitation of wildlife has affected the status of the earth's biodiversity for millennia. Wildlife harvesting has met many of the essential needs of human communities for food, clothing, medicine, utilitarian goods, building materials, adornment, entertainment, companionship and income for centuries, especially when conducted in a manner that ensured the continued survival of affected populations and their habitats. Increasingly, however, overharvesting, which is sometimes motivated by greed and vanity and often exacerbated by international trade, has produced dire impacts on myriad wildlife species, especially when simultaneously occurring with habitat loss, pollution and other debilitating forces. Extraordinary biological or commercial extinction of many life forms is now a critical reality throughout the world, jeopardising the very foundations of biodiversity, clouding the future well-being of humans, and requiring exceptional political will, social sacrifice and law-enforcement action to curtail further losses.

The South African government recognizes that the ongoing killing of the rhino for its horn is part of a multi-billion dollar worldwide illicit wildlife trade, and that addressing the scourge is not simple. Most rhino populations are facing serious decline while attempts are made to strengthen holistic and integrated interventions and to find innovative options to ensure their long-term survival. Similarly, central Africa's elephant populations have been annihilated, with forest elephants in the Congo Basin reportedly declining by 76% since 2002. Serious elephant poaching is now occurring throughout Africa, and even celebrated elephant strongholds such as Tanzania's Selous Game Reserve are collapsing. A credible survey conducted in late 2013 revealed that elephant populations that numbered over 100 000 in the mid-1970s, and reportedly still reached over 70 000 as recently as 2007, have plummeted to a measly 13 000 creatures.

3.2. Method of shipping

Since 2009, nearly two-thirds of the large ivory seizures by number, and three-quarters by weight, have been made in connection with containerized shipping through seaports. This is not surprising as container shipping certainly represents the most cost-effective transport option for moving a commodity as heavy as ivory, and the risk of detection is, generally speaking, minimal. Indeed, container shipping presents a major challenge to effective law enforcement, as only a small percentage of the containers in trade are actually subjected to inspection of some description. The infrastructural challenges at African seaports include lack expensive technical equipment, such as cargo scanner machines that can detect what is in containers. Occasionally, illegal packages of ivory are shipped as air freight, although it is far more expensive than maritime shipping; sometimes this is to allow for the internal movement of ivory within Africa to a seaport.

3.3. Methods of detection

Cultivating informant networks and sharing intelligence information in a timely manner plays a pivotal role in the enforcement process because receiving and acting upon intelligence information is behind at least one-quarter of the seizures made. Random routine inspections are the next
most important method of detection. Risk assessment through targeting along with investigations, can be linked to approximately 20% of the seizures, whilst the use of X-rays and sniffer dogs is even more rarely employed when large-scale seizures are made. Certain detection methods that remain undisclosed account for some of the largest wildlife seizures made. Many law-enforcement agencies actually shy away from disclosing their methods of detection in order to safeguard their modus operandi, so these findings should be viewed as symptomatic of the situation.

3.4. Arrests

Anti-poaching activities in the field, and law-enforcement along the rhino horn trade chain, are critical if rhino poaching and the illegal trade in rhino products is to be curbed. South Africa’s record is laudable, in the sense that a steadily increasing number of individuals have annually been detected and arrested through a range of law-enforcement actions. The rate of successful arrests has doubled between 2010 and 2013, and currently nearly one arrest for rhino crime is occurring each day in the country: 344 rhino poaching arrests have been made in 2014, the highest number over the past five years.

Even so, the critical question is whether or not high-value arrests are occurring. The 2012 data on arrests have been broken down into where the individuals rank in terms of the five levels that can be seen in Figure 1. Most of the arrests made are of poachers at the lowest level of the pyramid structure, and the evidence suggests that the high number of arrests has made little to no difference in the rate of poaching, as it continues to increase. It is clear that there is an enormous number of potential poachers available to replace the ones arrested. Identifying those who are directing the crime, not just the endless parade of foot soldiers killing the rhinos and acting as local couriers for the prohibited horn, remains a grave concern.\textsuperscript{7}

![Figure 1: Rhino Poaching Syndicate Hierarchy\textsuperscript{8}](Figure_1_Rhino_Poaching_Syndicate_Hierarchy.png)

**4. Conclusion**

One of Africa’s richest assets is its biodiversity; the knowledge that the people of the continent have developed over centuries regarding the properties of plants, seeds, algae and other biological resources is now coveted by scientists for medicinal, agricultural and other purposes. Multinationals make huge profits from African biodiversity, but do not share these with the communities who discovered, kept and transmitted the knowledge. It is therefore a welcome development that President Jacob Zuma has signed the Intellectual Property Amendment Bill\textsuperscript{9} into law. But it is essential to note the significance of the use language in this Bill. For instance, referring to animals as resources, and thus positioning ourselves as the pinnacle of everything, instead of as part of the environment. In examining the matter of wildlife exploitation, it should be acknowledged that the growing move towards the individual’s satisfaction has led to a disconnection to the world in which we live. It is human deeds that have resulted in countless natural habitats being spoiled and various animal populations being obliterated for collection and
other vain purposes; perhaps keeping in mind that in hurting the environment we consequently hurt ourselves will assist in the enrichment of our efforts of custodianship.

Palesa Ngwenya
Researcher

3. Act 10 of 2004 (the Biodiversity Act).
4. Biopiracy is the theft of biological matter, like plants, seeds and genes. In the absence of laws regulating access to these resources, pharmaceutical, agrochemical and seed multinationals exploit Africa's biological wealth and obtain rights of intellectual ownership to the resources and knowledge of communities.
5. An initiative that serves to support and promote implementation of the objectives of the Strategic Plan for Biodiversity and the Aichi Biodiversity Targets, which were adopted at the 10th Conference of the Parties to the CBD, in Nagoya, Japan, in 2010.
7. Milliken, op. cit.
8. Ibid.
9. The Act is providing a legal framework for protection of the rights of indigenous knowledge system holders and empowers communities to commercialise and trade on indigenous knowledge system to benefit the national economy. The intention of this intervention by government is amongst others to protect indigenous knowledge using the intellectual property system.