

INTERNATIONAL
RHINO
COALITION

ASSESSING THE RISKS OF RHINO HORN TRADE

A JOURNAL OF ARGUMENTS PRESENTED AT THE APRIL 2014 CONFERENCE IN SOUTH AFRICA



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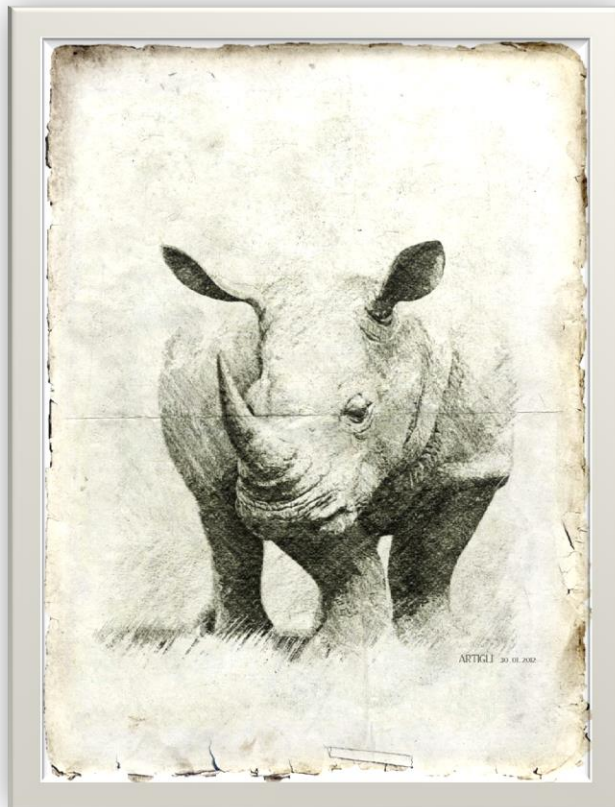
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KEY POINTS SUMMARISING FINDINGS OF THE CONFERENCE

- The premise that legalizing rhino horn trade will make illegal trade unprofitable is neither based on sound economic theory nor supported by solid data
- Trade legalisation will most likely preserve and reinforce the illegal sourcing of horn by enabling market expansion, commerce diversification and laundering opportunities
- Attempts by South Africa to sell its rhino horn cheaply, thereby undercutting the illegal market, will likely fail. As market power is concentrated in the final stages of commercialisation, a legal supply of horn from South Africa will be unable to influence (much less to control) retail prices or final demand
- Legalising trade will simply create two parallel markets – legal and illegal – which will operate alongside each other, as with ivory, reptile skins and numerous other wildlife products
- Surveys in Vietnam have shown that, if trade is legalised, many more people would buy rhino horn
- A basic calculation shows that, even with rhino farming, there would not be enough rhino horn to sustain a legitimised market. Organised wildlife crime syndicates will exploit the legal market by laundering illegal horn through it,
- Rhino horn bans, coupled with effective wildlife law enforcement and field protection, do work when they are properly and comprehensively applied, with no loopholes, and with appropriate penalties for *all* offenders
- There is little appetite in CITES for allowing legal trade in rhino horn. Rather than risk submitting a proposal that will almost certainly fail, South Africa should focus its resources on bringing South African “khaki collar” criminal networks to justice, supporting demand reduction in the consumer States, putting pressure on Mozambique to upgrade its wildlife law enforcement efforts and, above all, discouraging speculators from rhino horn stockpiling within South Africa by stating clearly that it has no intention of submitting a CITES proposal for legal rhino horn trade
- Illegal rhino horn trade will continue unless there is sufficient political will to deal with corruption in the range States, including in South Africa
- The establishment by South Africa of a legal trade in rhino horn would further jeopardise the vulnerable rhino populations of other rhino range States

- If trade is permitted, South Africa will not be able to “put the genie back in the bottle” within a short space of time. Once consumer demand has been stimulated by legal trade, it will be too late
- By continuing to follow increasingly discredited pro-trade policies, South Africa may well end up isolating itself from global opinion that is coalescing around strong calls for no legal trade and stopping both the demand for, and supply of, rhino horn
- History shows that demand reduction campaigns can be highly successful. Legalising trade will work against the demand reduction campaigns being carried out in China and Vietnam.
- Establishing a legal trade in rhino horn will endorse rhino horn as a legitimate medicine and a cure for cancer, thus helping to mislead seriously ill people



CHAPTER 1

ASIAN DEMOGRAPHICS, THE CULT OF THE LUXURY GOODS INDUSTRY AND ITS
AFTERMATH FOR ENDANGERED WILDLIFE.

AUTHOR: DEX KOTZE

1. BACKGROUND

Between 1979 and 1989 Africa lost 600 000 elephants, killed by criminals when a relentless demand for ivory from Asia had the numbers of elephants plummet across central Africa. Today less than 400 000 elephants are left in Africa. The continent is losing 4 elephants every hour. There are less than 20 000 lions left in Africa, of which only approximately half live in the wild, whilst breeding of captive lions make up the rest and are used for the canned lion hunting industry. Pangolins are endangered species that face extinction due to demand from China and Vietnam. There are roughly 25 000 rhinos left in Africa and South Africa is the largest range state, with numbers already below 20 000. We are losing 3 rhinos per day due to the criminal activities of unscrupulous men causing havoc in especially Kruger National Park.

The insatiable demand from Vietnam and China has resulted in over 3500 rhinoceros killed since 2007, often in the most gruesome circumstances when their horns are brutally removed whilst they are still alive. It is no secret that China has emerged as the world's leading driver of illegal trade in ivory ever since CITES approved the once off sale of ivory in 2008. For the first time in Africa's history, large numbers of Chinese are living in Africa, collecting ivory and/or rhino horn and shipping it out to Asia. According to the Kenya Wildlife Service, 90 percent of seized ivory involves Chinese and since 2007 the amount of illegal ivory seized has gone up by 800 percent.

China has already overtaken Japan as the second largest consumer nation of luxury products after the USA. There is more disposable income in China today than ever before and predictions are that China will boast a larger economy than the USA by 2025. For the first time in Africa's history, large numbers of Chinese are living in Africa, collecting ivory and/or rhino horn and shipping it out to Asia.

The status of luxury goods has fueled an obsessive-compulsive behavior for millions in Asia. Over two-thirds of luxury spending by Chinese was made overseas in 2013 and Chinese remain the largest nationality of luxury buyers worldwide, with purchases that make up 29 percent of the global market, according to the China Luxury Market Study from consultancy firm Bain & Company (<http://bit.ly/1b8anoG>).

The explosive growth of Asian economies described below, coupled with an obsessive-compulsive need for luxury goods in these nations do not bode well for any legalized trade in rhino horn. Priced in excess of \$75 000/kg on the black market, it is a *fait accompli* that legal trade in rhino horn will facilitate a surge in demand for the most sought after product in the ubiquitous obsession for status symbols amongst Asian people.

2. POPULATION MATTERS

In 1950 there were 2.5 billion people on planet Earth. Today it is over 7.2 billion. Projections are that 11 billion people will inhabit the earth 36 years from now, peaking at 16 billion by 2100. In 1950 China's population stood at 550 million, growing to 1 billion in 1981. The current population in China, 1.34 billion, will peak at 1.6 billion in the early 22nd century.

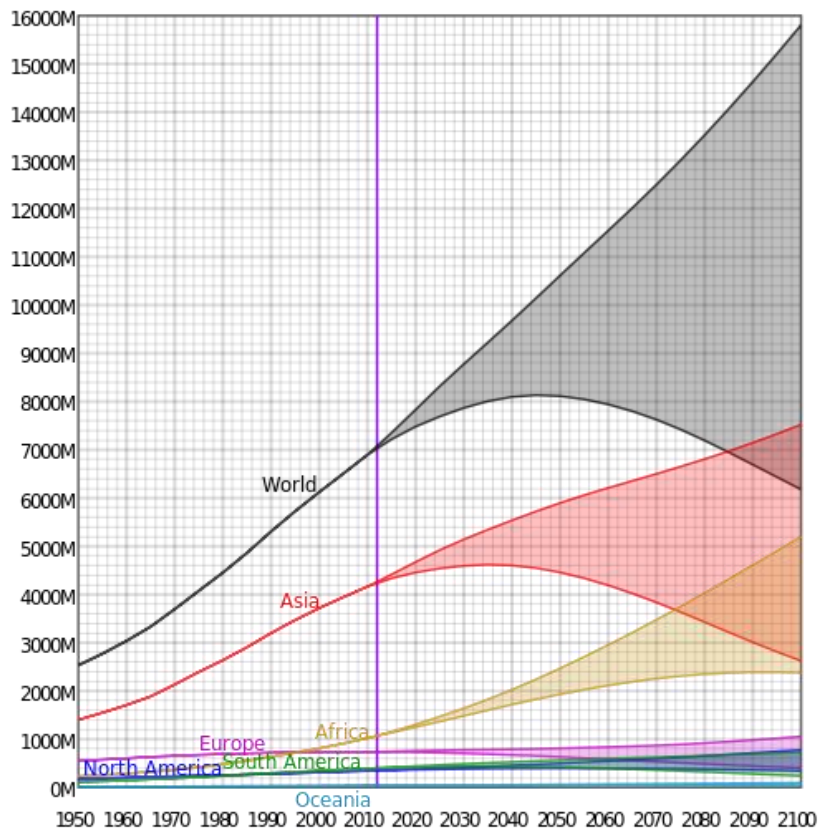


Table 1

3. CHINA'S GDP

There are 5 provinces in China with a greater GDP than South Africa. China's economy has grown exponentially over the last 25 years, of which many were in double-digit figures. At the World Economic Forum in Davos in 2014, Chinese leader Xi Jinping predicted a 7% growth for China over the next 10 to 20 years. In 2014 alone 12 million new jobs will be created. During the 2008 recession, China lost 40 million jobs (in USA it was less than 10 million). The Chinese government is intent on creating a bigger economy less dependent on exports, but focusing rather on domestic consumption. In Davos, Jinping discussed plans to urbanize 60% of China's population by 2020, resulting in 840 million people living in 1st to 3rd tier cities. The greatest potential for domestic expansion lies in urbanization. Only one fifth of the population lived in cities in 1979.

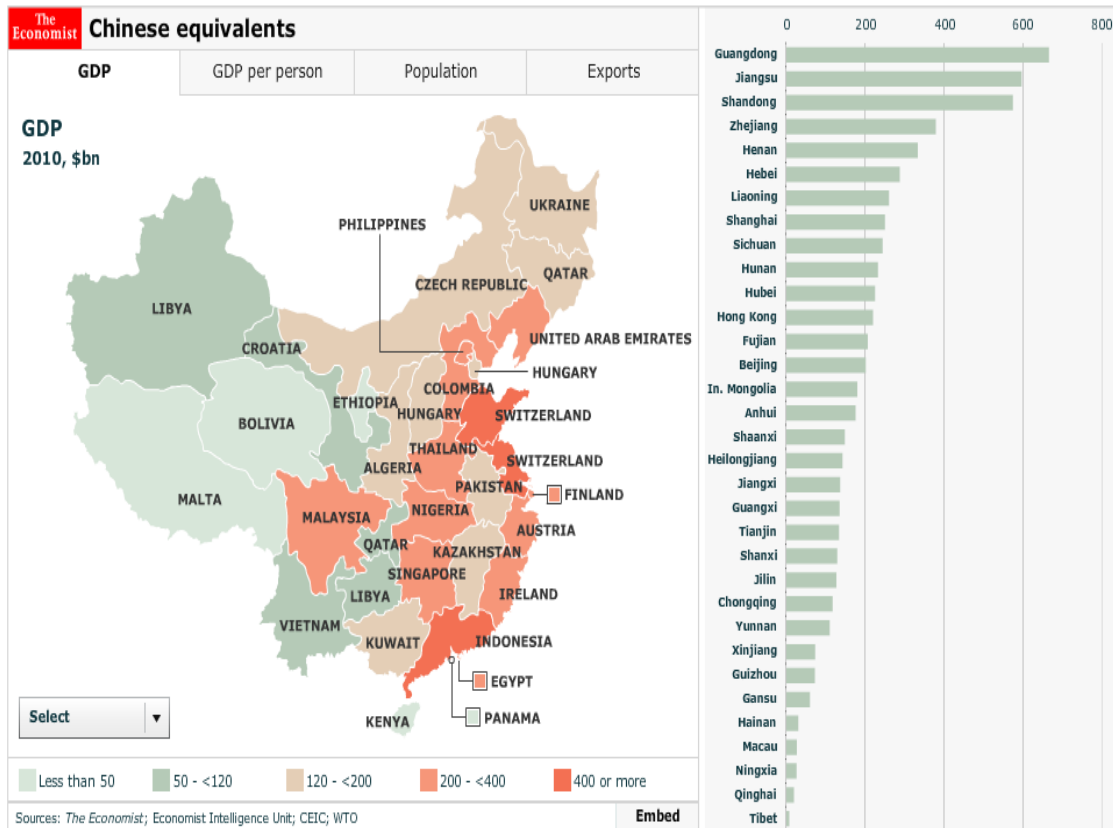


Table 2

4. CHINA’S ULTRA HIGH NET WORTH INDIVIDUALS (UHNWI)

The number of UHNWI is expected to grow 80% until 2023. This will exceed the billionaires in the UK, France, Switzerland and Russia combined. China will add \$1 trillion to the global GDP every year this decade, adding another Germany or Japan to the world by 2023. According to the consulting firm Bain & Co, Chinese luxury shoppers accounted for 28% of global luxury sales in 2013, roughly \$84 billion. China is forecast to remain the world’s biggest luxury goods market by 2020. Of all UHNWI in China, 27% have already emigrated and 47% are considering leaving (Boston Consulting). Wealthy consumers are on average 20 years younger in China than those in Japan or the USA. The luxury market, as defined by consumers, is valued at \$1.8 trillion worldwide.

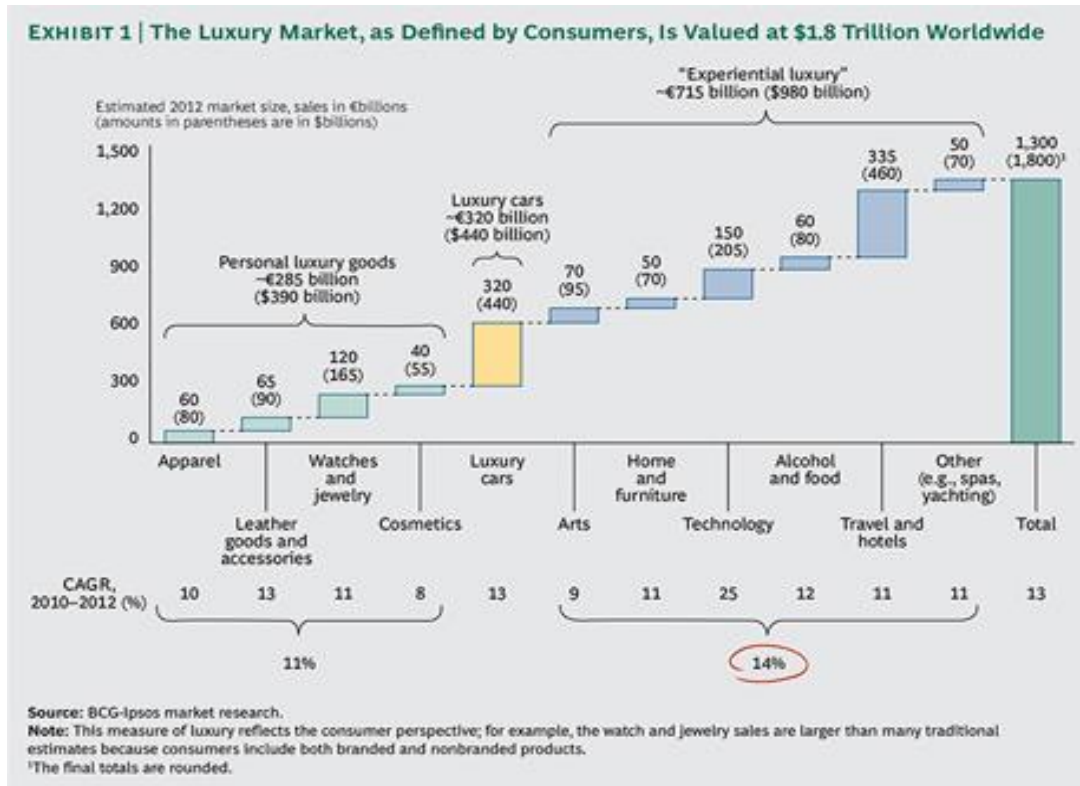


Table 3

5. CHINA'S AFFLUENT MARKET

At 120 million people, China's affluent market is richer than its middle class. The affluent market's buying power tops \$590 billion and is expected to grow to 280 million people by 2020, equal to 20% of the Chinese population. Spending will grow fivefold to \$3.1 trillion, equal to 35% of China's total consumption or 5% of global consumption. Nearly 50% of China's population was not wealthy 7 years ago. This affluent market's consumption is 28% larger than Germany in total.

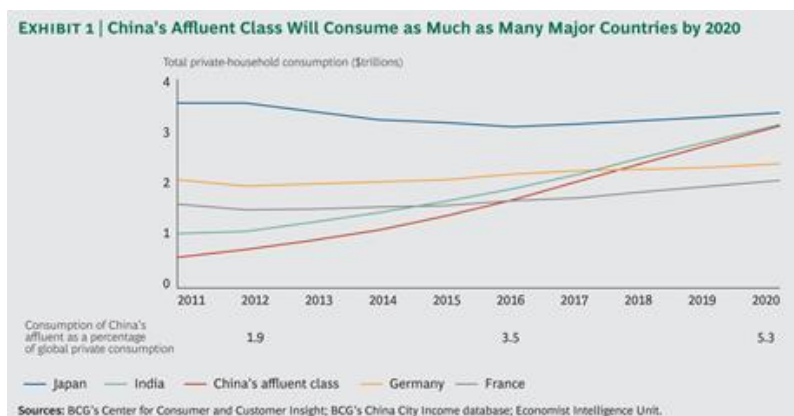


Table 4

6. CHINA'S MIDDLECLASS

McKinsey & Co states that China's middleclass is 250 million people and will grow to 600 million by 2020. Each earn a minimum of \$34 000 a year and 51% will live in cities in the next 8 years. The middleclass contribute 38% to the national GDP in consumption expenditures. In 1981, only 2.4% of students were eligible for university entrance and by 2003 this figure had grown to 52%.

7. CHINA'S DIRECT FOREIGN INVESTMENTS (FDI)

China is the world's largest saver. Capital outflows in 2012 were \$84 billion and is expected to grow to \$1 trillion plus by 2020. China invests heavily into developed countries, creating jobs and infrastructure. Chinese investment at the Royal Albert Dock (near London City Airport) tops \$1.6 billion, aimed at accommodating the Chinese businesses and will create 20 000 jobs. China-Africa trade reached \$198 billion in 2012 (exports \$85bn, imports \$113bn). The cumulative stock investment has grown from \$500 million in 2003 to \$22.9 billion in 2012. Dalia Wanda is investing \$1.09 billion in a luxury hotel in London, planning to do the same in New York and 8 to 10 of the largest international cities. In Australia a \$3.7 billion casino is being built at the Great Barrier Reef. There are well over 2000 Chinese companies deeply invested in Africa.

(<http://www.thebeijingaxis.com/tca/editions/the-china-analyst-sept-2013/201-chinas-increased-presence-in-the-developed-world>)

<http://www.thebeijingaxis.com/tca/editions/the-china-analyst-sept-2013/202-the-growing-global-influence-of-chinese-consumers>

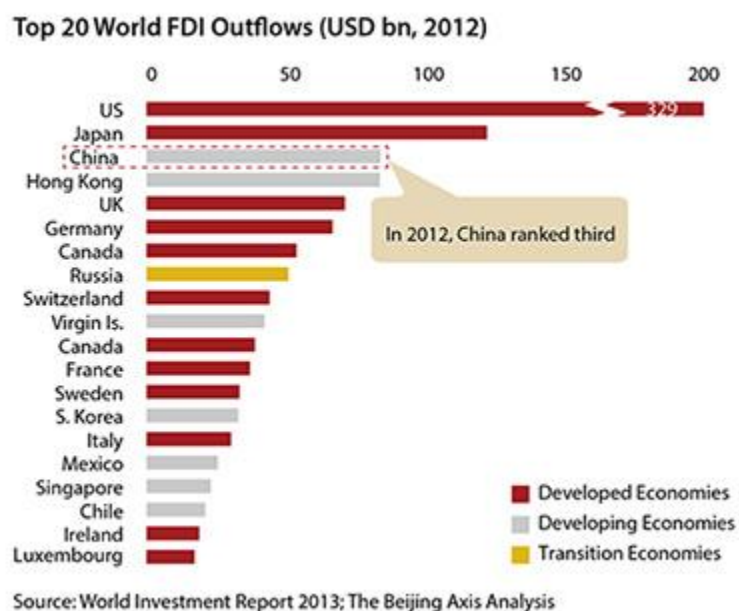
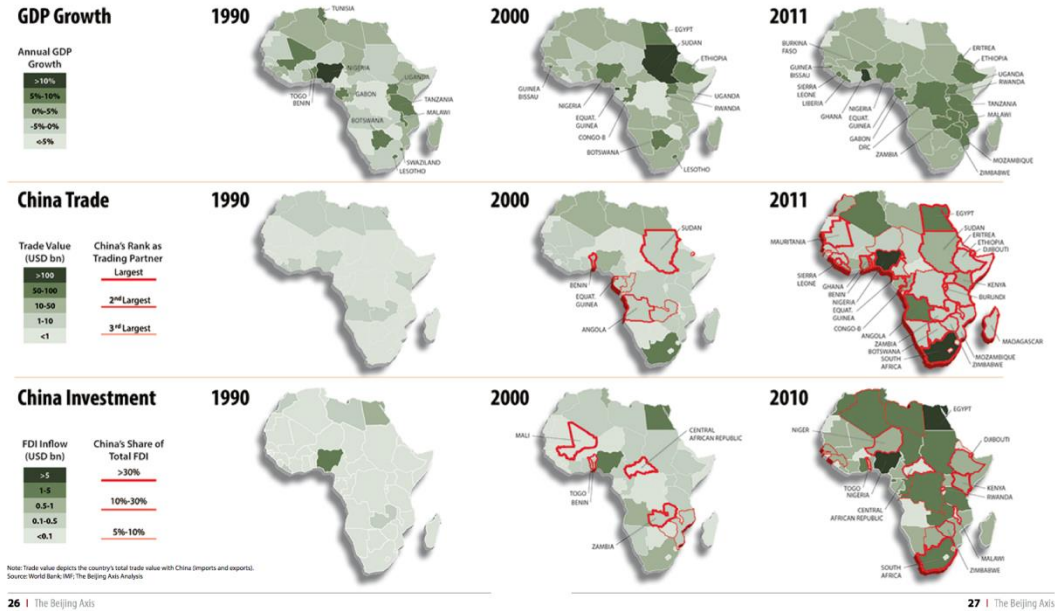


Table 6

Mapping China in Africa's Growth Story

While Africa has certainly benefited from soaring global resource demand, other aspects such as the continent's ongoing infrastructure construction boom as well as its blooming middle class have been key catalysts in driving China's engagement with the region. As depicted in the map below, China's growing presence, as both an investor and leading trading partner, is expected to continue reshaping the continent – and the global economy – for decades to come. *By Beijing Axis Strategy*



26 | The Beijing Axis

27 | The Beijing Axis

Table 7

*<http://www.thebeijingaxis.com/tca/editions/the-china-analyst-oct-2012/139>

8. CHINA'S OUTBOUND TOURISM

Ten million Chinese tourists travelled outbound in 2000. This figure increased to 83 million by 2012. Chinese travellers are one of the highest per capita spenders. Europe's luxury goods brand are benefiting enormously from this.

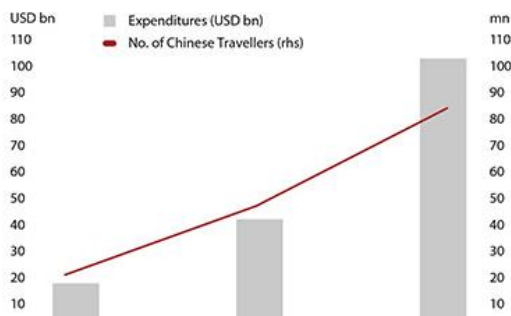


Table 8

9. CHINA'S WORKFORCE

China's labour force is aging. The average worker is 37, but twenty years ago it was 23. The national policy stipulates that the minimum wage is raised 20% per annum. Over 200 million Chinese are over 60 and it will be more than 430 million by 2030. Due to higher wages, many international companies will move manufacturing to ASEAN countries.

10. THE BARE BRANCHES (GUANG GUN)

Since China adopted the one-child policy in 1978, over 300 million births have been prevented. The ratio of male to female births are 119 to 100 and as high as 135 to 100 in some provinces. There are 32 million more males than females under the age of 20, expected to grow to 55 million by 2020. According to the Chinese Academy of Social Sciences, over 55 million men born from 1983 to 2020 will never be able to find a wife. This phenomenon, referred to as China's "bare branches" because they will not be able to provide new branches of family trees if they remain unmarried, could lead to social instability as the large gender gap affects both the labour market and the marriage market. From 2001 to 2003 China's police freed more than 42 000 kidnapped young girls. Other than bride stealing, the gender imbalance could cause many other problems such as increasing crimes. Low status men who have little chance to form families of their own are much more prone to improve their lifestyle through violent and criminal behavior. The gender gap came into existence with the traditional belief of son preferences. Many women adopted abortion due to the one child policy in order to have a son through sex selection. Female infanticide is another factor that caused the imbalanced sex ratio. For men to acquire wives, it is paramount that they acquire status and accumulate assets, can offer education for future children, overseas travel, luxury goods, property and other contributions. It is generally accepted that lower educated men will fall into the category of being unmarried and are also more susceptible to participate in various types of crime.

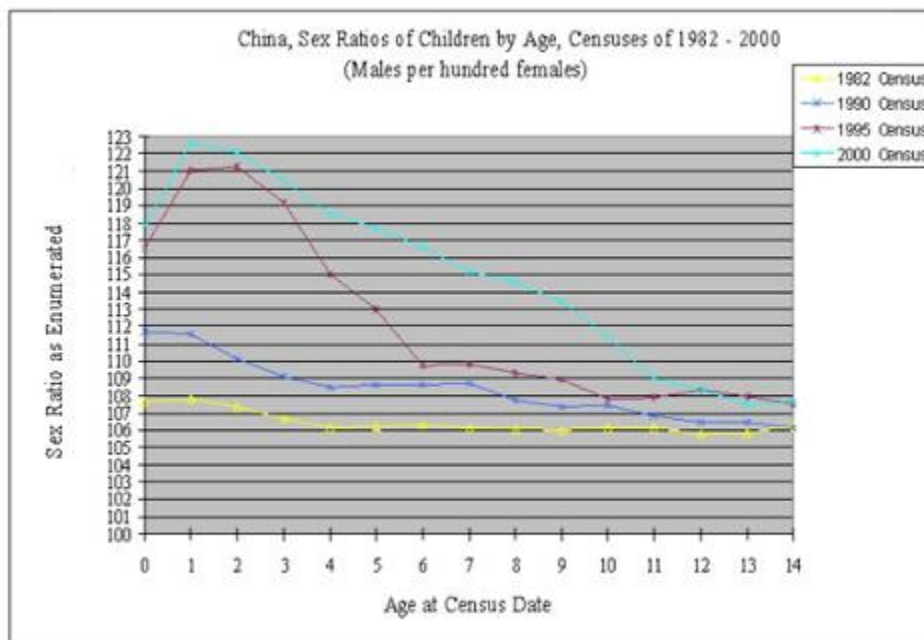


Table 9

*The Impact of China’s Unbalanced Sex Ratio on Pre-Marital Education: A Senior Project submitted to The Division of Science, Mathematics, and Computing and The Division of Social Studies of Bard College by Fang Song

11. ASSOCIATION OF SOUTH EAST ASIAN NATIONS

The ASEAN market is the third largest market after Europe and the North American Free Trade Agreement. Of the ASEAN nations, most are involved illegal wildlife crimes. The ASEAN countries have a combined GDP of \$2.3 trillion (in 2012) and have a population of 600 million people. Laos, Vietnam, Thailand, Philippines, Myanmar, Cambodia are all involved as consumer, transit or trafficking countries. With higher costs associated with China’s labor market in the foreseeable future, manufacturing will be transferred to countries such as Vietnam, who is expected to have the highest increase in growth of UHNWI, projected to increase 166% until 2023. Ho Chi Minh City will have a 173% increase of UHNWI over the next 10 years. ASEAN nations have largely cancelled import/export taxes, instituted free trade agreements and thereby opened its labour market for multi-nationals and ensuring exponential growth.

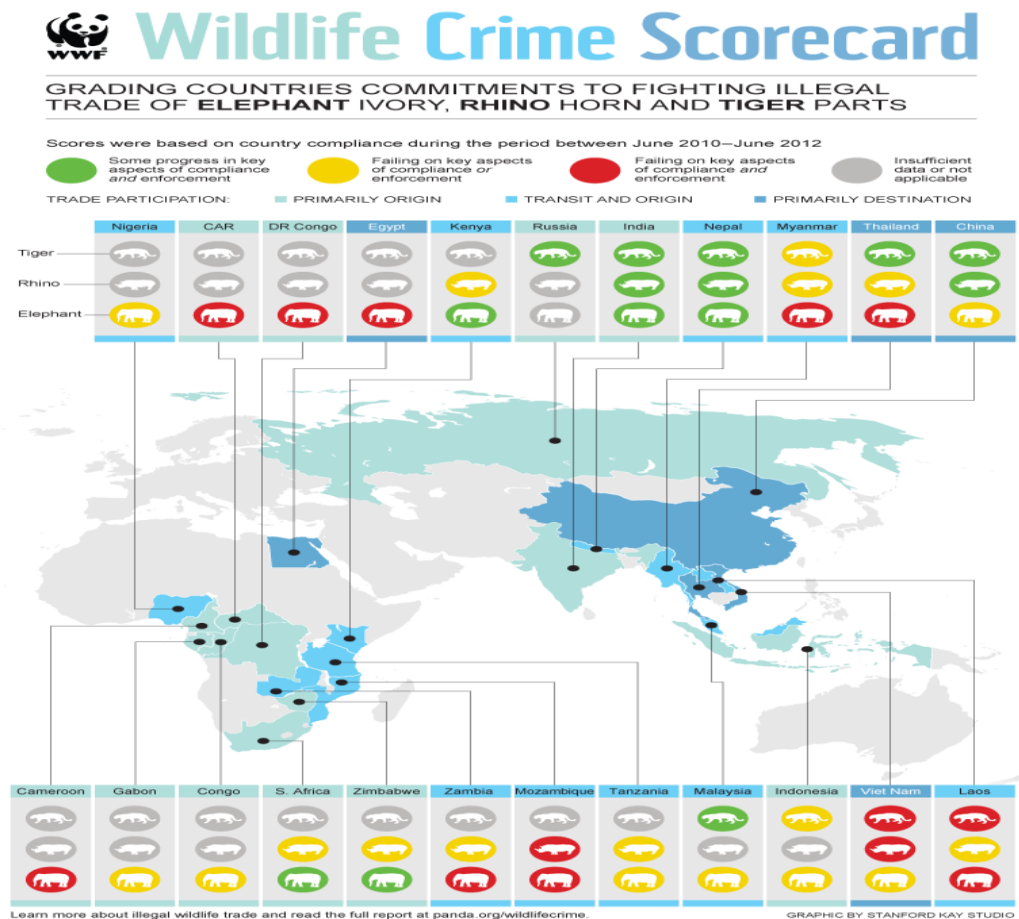


Table 10

12. RHINO HORN CONSUMPTION SCENARIO

In table 11 below, an assumption is made, **if rhino horn was legalized**, that 1, 2 or 5 percent of 5 consuming Asian nations would avail themselves of the product, using 1, 2 or 5 grams of rhino horn per person per annum. Demand would in these scenarios be 14.89 tons, 59.56 tons or 372.25 tons. With population growth by 2025, demand would be 17.03 tons, or 68.10 tons or 425.65 tons. In table 12 a projected harvesting scenario is played out, whereby it is assumed that South Africa's population of roughly 20 000 rhinos would yield 45.5 tons every 3 years, assuming that a generous 65% of rhino populations (13 000) would be of age to be dehorned and that each rhino can yield 3.5kg every 3 years after regrowth. It is also understood that current stockpiles of 18 tons would be used in an initial sale to consumer countries.

Consumption

TODAY		% of Population	1%	2%	5%
		Grams of rhino horn used per year	1	2	5
China	1,300,000,000		13.00	52.00	325.00
Hong Kong	7,000,000		0.07	0.28	1.75
Taiwan	23,000,000		0.23	0.92	5.75
Vietnam	92,000,000		0.92	3.68	23.00
Thailand	67,000,000		0.67	2.68	16.75
Total	1,489,000,000	** Tons PA required	14.89	59.56	372.25
2025		% of Population	1%	2%	5%
		Grams of rhino horn used per year	1	2	5
China	1,462,000,000		14.62	58.48	365.50
Hong Kong	9,600,000		0.10	0.38	2.40
Taiwan	26,000,000		0.26	1.04	6.50
Vietnam	123,000,000		1.23	4.92	30.75
Thailand	82,000,000		0.82	3.28	20.50
Total	1,702,600,000	** Tons PA required	17.03	68.10	425.65

** 1g = 0.000001 tons

Table 11

Harvesting

Harvesting			
Years to re-grow after being harvested		3	
Average weight per horn (kg)		6	
Rhino population (estimate)		20000	
Therefore - assume:			
Number of Rhino's (due to age)		13000	65%
Average weight per harvest (not harvesting all) - (kg)		3.5	
Total tonnes that can be harvested every 3 years		45.50 tonnes	
Or - equating this to a yearly figure - total tons per annum		15.16 tonnes	
		1%	2%
Supply vs. Demand Today in Tons		.27	-44.40
Supply vs. Demand by 2025 in Tons		1.87	-410.49

Table 12

13. CONCLUSION

The criminal activities in wildlife crime, with specific relevance to Africa's elephant and rhino populations are influenced by:

- a. China's economic expansion into Africa
- b. China's phenomenal economic growth over the last 15 years
- c. Vietnam's economic growth
- d. Corrupt officials in range states, transit countries and destination countries
- e. Weak laws pertaining to sentencing perpetrators of wildlife crimes
- f. Weak laws pertaining to bail grants of arrested wildlife criminals
- g. An obsessive-compulsive need for status and luxury goods amongst Asian nations
- h. Lack of political and diplomatic will on an international level
- i. Lack of stringent laws against wildlife criminals in Mozambique
- j. Lack of a Memorandum of Understanding between South Africa and Mozambique

China's proliferation into Africa is still in a rudimentary phase. Already there are hundreds of thousands of illegal Chinese immigrants in various African countries. The majority of arrests relating to wildlife crimes (seizures) involve criminals of Asian origin. Strong law enforcement at international and local levels must be directed at the international crime syndicates. Never before have we needed it more than now, that all politicians and lawmakers, all judges and jurors, all NGO's, initiate and fulfill a comprehensive global education manifesto, accompanied by

extreme punishment for offenders of wildlife crime to eradicate the scourge causing Africa and South Africa's loss of national heritage.



CHAPTER 2

CITES AND SOUTH AFRICA'S PROPOSAL TO LEGALISE RHINO HORN TRADE

AUTHOR: WILL TRAVERS – BORN FREE FOUNDATION

1. IVORY TRADE

My name is Will Travers, one of the founders of Born Free 30 years ago. 40 years ago I saw my poached rhino and my first poached elephant. Sadly an experience to be repeated many times since. I have been to every CITES meeting since 1989 – 10 CITES Conferences of the Parties and almost ever Standing Committee in between. I have seen the ebb and flow....

Let me start by exploring the ivory trade.

In 2008/9 the CITES Standing Committee (which included the British government of the day) approved China as one of two official ivory trading partners (along with Japan), and the sale of more than 100 tonnes of legal ivory went ahead. We campaigned desperately against this but to no avail.

Far from satisfying demand, demand was stimulated and elephant poaching has gone through the roof, the volume of illegal ivory in trade has hit 25 year highs and the price being paid for 1 kilo of illegal ivory is 1000% higher now than the legal sale prices of just a few years ago. Many countries in Africa may lose their elephants entirely as a result. Now we have a similar scenario for rhino.

Proponents of rhino horn trade – the South African government, the Private Rhino Owners' Association, the Professional Sport Hunters' Association and others – say that legalisation will enable them to control the market and generate resources to fight poaching. In my view they are, at best, extremely naïve.

They want to establish a CSO, a Central Selling Organisation - a cartel - which they say would allow them to control the supply of rhino horn and to manipulate demand through price-fixing.

Too much demand, increase the price: Too little demand, reduce the price.

Imagine that they establish an official price of US\$50,000 a kilo. What will the poachers' reaction be? To offer illegal, poached rhino horn at US\$40k a kilo or US\$30k a kilo.

These prices are so fantastical that poor people will continue to be exploited by criminal networks, willing to risk someone else's life to make a killing.

Remember the ivory sales that were supposed to meet demand? It was wrong thinking then – it's wrong thinking now! I can assure you that legal trade is not going to satisfy demand, it's going to stimulate demand, and that demand is going to be met by poaching.

But there is another equally disturbing and more insidious factor in all this. Legalising rhino horn will also legitimise claims made by some that it works as a hangover cure or as a treatment for cancer.

At the CITES Conference in Bangkok in March 2013, I attended a meeting about legalising rhino horn trade, organised by the South African Minister, Edna Molewa, billed as an opportunity for her to listen to the views of the wider community.

The Minister asked for any comments. I raised my hand and briefly set out my fundamental concerns, and then I asked one question. “Do you believe it works?” I said. “Don’t be shy. Raise your hand if you believe that rhino horn works”.

No one moved a muscle. Then, somewhat sheepishly, the panel admitted that they did not believe rhino horn worked....

For me that reveals a shocking degree of cynical exploitation running through this whole issue.

I imagine a Chinese or Vietnamese family a few years from now. Their elderly mother is dying of cancer. The children, hearing that rhino horn is the cure, scrape together their last resources and buy some. Legal, exorbitantly expensive – and USELESS. Their mother dies. They are in poverty. And their tragic circumstances are as a direct result of the blatant exploitation of their vulnerability, ignorance and superstition by those who know better but who are in ‘the business of Rhinonomics’.

I asked preeminent conservation biologist, lawyer and CITES expert, Dr Ron Orenstein for his views concerning the claims that have been made linking the management of vicuña and the harvesting of their wool to the potential management of rhinos and the harvesting of their horn.

These are my questions and Dr Orenstein’s compelling and informed responses.

2. DID LEGAL TRADE SAVE THE VICUÑA?

By the 1960s, massive killing of vicuñas for their wool had reduced a species that once numbered in the millions to only about 10,000 animals. Today, the global population is in the order of 300,000 – a definite conservation success, at least as far as population numbers are concerned. However, what trade proponents fail to point out is that legal international trade in vicuña wool was not restored until populations had rebounded. The population recovery happened under a regime of strict protection and improved enforcement under the terms of the two Vicuña Conventions, signed in 1969 and 1979, and a CITES Appendix I listing. In Peru, vicuña populations had been reduced by 1966 to between 5,000 and 10,000 animals, 1% of their former numbers. The change in the species’ fortune over subsequent years was the result of strict protection. By 1987, populations in the country had risen to 63,223. The enormous rise in Peruvian vicuña numbers – a staggering 1100% by 1994 – happened before international legal trade was allowed.

3. HAS LEGAL TRADE SUPPRESSED POACHING?

Poaching of vicuña remains a serious problem – so much so that, rather than the legal trade having put poachers out of business, poaching has been named as one of the greatest existing threats to the legal trade regime. Over 350 vicuña poached in Peru in one spate around April 10th 2013 and now, a couple of weeks ago, a further 149.

The ex-president of the Lima region’s vicuña breeding association reported in 2009 that “in Lima and Apurímac... 30-40% of the population has been slaughtered. Of the 17,689 animals that existed in the region of Lima in 2000, it is feared the population is now around 10,000”.

Rather than legal trade making intense enforcement efforts unnecessary, these efforts are now essential if the legal trade itself is to survive.

4. ARE THE VICUÑA AND PROPOSED RHINO PROGRAMMES REALLY ALIKE?

Although there are certainly similarities between the existing programs for vicuña and the proposed sale of rhinoceros horn, there are also some fundamental differences. In particular, the vicuña program (at least as originally conceived) is a roundup and harvest of fully wild animals, designed to benefit extremely poor people.

In fact, one of the criticisms that has been made of the way in which the vicuña program has progressed since its inception has been concerns about its increasing monopolization by textile corporations and a shift towards farmed animals, both of which are seen as potentially detrimental to the conservation of the species in the wild. The primary purpose of the legalization of vicuña wool was not to reduce poaching or increase numbers, but to create a system in which poor villagers would live in harmony with free-living wild vicuña populations – a very different objective to that proposed for rhinos which involves largely captive animals held on private land, with the primary beneficiaries being the owners of these animals, at least some of whom are apparently extremely wealthy.

5. WOULD A VICUÑA-TYPE PROGRAMME SAVE RHINOS?

It should be apparent that the vicuña program has not only not eliminated poaching, but that it was never intended to do so. This was always seen as the task of law enforcement. Nor is there any evidence that it has driven down prices for vicuña wool.

Instead, the marketing program was designed to allow poor people sharing the vicuña's habitat to benefit from a conservation success that had already been achieved (and thereby to create a climate for coexistence, shared management and continuing improvement of the species' status).

Though supporters argue that a legal trade will nonetheless reduce poaching by driving down prices, as noted, the vicuña programme, and the ivory trade example, provide no support for this idea.

In short, it is arguable that the vicuña programs are either sufficiently unlike that proposed for rhino to be relevant, or, where they are similar, that they demonstrate both that such schemes are ineffective in controlling poaching, and that they provide a warning that an increasing shift towards commercial farming as a way to deal with the species may harm, rather than assist, in the overall conservation of the white rhinoceros as a truly wild animal.

"We need to join hands and work together to fight these criminals," Minister Molewa recently stated. "These solutions need to be sought in partnership with stakeholders in the rhino and wildlife industries including communities, and with our partners within government especially the enforcement and security authorities in the country."

Recently the Mdluli Tribal Authority received one of five rhino during a ceremonial handover from the Minister. These rhino are being donated by SANParks to the Mdluli Tribal Authority as part of the community's contribution to conserving these magnificent animals.

The Minister said the donation of the rhino to the Mdluli community should serve as an incentive to encourage all communities to help in the fight against rhino poaching. It is hoped that ownership of these animals will promote awareness and increase the wildlife ecotourism potential of the community's land.

"Placing the future of these five rhino in your care enhances the government's belief and policy that the animals in national parks, provincial and private game reserves, are owned by all South Africans. This means that we all need to ensure they are protected for future generations," said Minister Molewa.

I believe that this is a fairly weak attempt to make rhino conservation relevant to some local communities. It will only be able to claim success if all 5 rhino survive. However, with all the publicity attached to the placement of the rhino with this community I fear that this may be simply an advertisement to poachers.

This strategy raises more questions in my mind than it answers.

What resources has the government deployed with the local community to help ensure the safety of these rhino? What equipment, what training of community scouts, what radio comms, night vision, local liaison structures with anti-poaching, police, etc., have been put in place?

What costs have been loaded now onto the local community in respect of protecting these animals? What plans are there to bring tourist dollars to the community in order to make a positive commercial contribution and what infrastructure is in place to service tourists?

And how will success be measured? No rhino poached? Increased revenue at a local level (and by what amount)? Breeding success? Employment benefits?

Who will do the independent cost/benefit analysis?

I cannot state strongly enough that, in my opinion, the plans for rhino and rhino horn trade currently under discussion spell disaster for rhino in the wild in South Africa and possibly extinction in all the other range States.

So if we care about the rhinoceros, the only *sane* decision is to end speculation and discussion about trade in rhino horn unequivocally, universally, and in perpetuity.

There are simply too many of us and too few of them - 400,000 elephants, 30,000 lions, 25,000 rhino, 3,500 tigers.

It's time for us to think differently. Maybe we need to establish World Heritage Species to fund their protection and conservation on a global, non-commercial basis. It's time to park talk of a legal rhino horn trade, get round the table and, together, work to conserve the species, not consume it.

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CHAPTER 3

RHINO HORN AND THE ECONOMICS OF WILDLIFE TRADE: RISKS AND UNCERTAINTIES

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1. THE UNCERTAINTIES

In the aftermath of the current poaching crisis, lifting the ban on international rhino horn trade has been proposed as a means to fight illegal trade. This proposal is based on the premise that a legal supply of rhino horn can make illegal trade economically unviable and thereby reduce poaching to a significant degree. In this note we assess this policy recommendation from the point of view of market analysis.

The uncertainties surrounding current market conditions in the rhino horn market make a strict policy evaluation impossible. But we can assess the premise in terms of the necessary and sufficient conditions under which market processes can be expected to deliver the mentioned result. A robust policy would be one that has the expected effect under a broad range of plausible conditions. In this case, these conditions include a range of assumptions about agent's behavior and market configurations. The underlying economic theory, that is, the relationships linking causes to effects in the workings of market processes, is also a key component of this assessment exercise.

As we will show in this note, the case in favor of removing the trade ban as a policy to reduce poaching is not robust: it only makes sense under highly restrictive and implausible assumptions about agents' behavior, market conditions, and economic relationships. Once any of these assumptions is removed and we consider more plausible factors (like demand expansion, laundering of horn, the existence of market power strategic behavior), the introduction of a legal flow of trade is unlikely to reduce poaching significantly.

The argument in favor of legal trade is based on the premise that illegal markets and poaching activities are a consequence of the scarcity of rhino horn produced by the trade ban itself. The demand for rhino horn is assumed to be large, stable, and relatively insensitive to price movements, meaning that the quantity demanded will persist even at very high prices. Under such conditions of demand, the artificial scarcity produced by the ban stimulates the illegal market, as the existence of very high prices more than compensate the costs and risks of trafficking. Therefore, the argument concludes that introducing a legal trade flow will reduce prices and make illegal supply and poaching not profitable. Trade legalization offers additional benefits, like making changes in quantities and prices easier to monitor. More importantly, a legal trade will generate a source of revenue that can be re-invested to improve security and conservation.

2. THE FLAWS IN TRADE PROPOSALS

The proposition that trade legalization can reduce poaching, has been presented in a series of papers, reports and articles related to a series of endangered species. Although this literature exhibits various degrees of quality, our review has found three major flaws. First, the argument is carried upon poor knowledge and command of economic theory. It relies on highly restrictive assumptions about behaviour and market interactions, suppresses the complexities of price-formation mechanisms, the role of economic structure in determining agent's behavior, and the importance of dynamic phenomena. For example, the main causality mechanism underlying the premise is that the quantity demanded of a good reacts in an inverse way to price movements. However, this type of reaction does not necessarily hold for all markets, all consumers, and all time. As economic theory showed 40 years ago,

even if that type of reaction to price movements is verified for individual consumers, the aggregated reaction of consumers may not necessarily add up to the same result. In addition, other factors like income effects and speculative value can produce that both prices and demand increase simultaneously, *au contraire* to the argument in favour of trade.

Second, the literature in favour of trade is not rigorous in the need to support assertions with hard data. It fails to provide information of market conditions like market size, potential demand, the sensitivity of demand to price movements (or demand *elasticity*), or the prices at which poachers and illegal traders will choose to abandon the market. The value of these variables and parameters is key to the argument, for even in the case where economic relationships prove to be similar to those assumed, a legal trade may still fail if, for example, demand is too large with respect to the legal supply. Based on poor theory and weak on data, the literature in favour of trade tends to be rich in opinions that carry no scientific weight.

A third flaw is the ignorance of the social, economic and institutional context in which trade would take place. Economic decisions involve much more than simple reactions to prices. They also depend heavily on preferences, the range of alternative choices and on the environment created by established rules and norms. For these reasons, market outcomes cannot be forecasted or even understood if the decision environment is ignored.

In our review, we found a small but significant set of scientific literature on the issue of wildlife trade and the effects of legalization on poaching published in specialized, peer-reviewed economic journals. In most part, these papers are comparative statics exercises based on partial equilibrium analysis, a branch of economic analysis. They focus on wildlife species in general, although some of them do include specifications adapted to rhino horn trade. The general conclusion in these papers is that when known risks and conditions are considered, a legal flow of supply may fail to out compete the illegal market and may actually increase poaching.

This literature has identified three types of market configurations under which trade legalization fails to reduce poaching. First, if legalization reduces the social stigma associated with the consumption of illegal products, the legalization of wildlife trade can bring in new consumers and expand the quantity demanded to an extent that poaching is not reduced.¹

3. THE RELATIONSHIP BETWEEN LEGAL AND ILLEGAL MARKETS

A second problem involves the relationship between legal and illegal markets. The trade solution relies on a strict separation of legal and illegal supply of rhino horn. However, when illegal products can be laundered and passed as legal, traffickers can access the market without engaging in dangerous and costly distribution activities. A series of papers have shown that if the costs and barriers to market access for illegal supply are reduced as a result of legalization, the introduction of a legal supply will fail to reduce the level of poaching.² A similar outcome will result if the demand for wildlife products has characteristics that preserve a market niche for illegal supply that the legal supply cannot fulfil, as when products are differentiated. This will be the case of distinct preferences for wild product (against farmed product) or for full rhino horns as opposed to small pieces or grinded horn.

¹ Fisher (2004).

² Abbott and van Kooten (2011), Bulte and Damania (2007), Bulte and van Kooten (1999).

4. SUPPLY STRUCTURES

A third problem is related to the form in which supply structures are organized. Typical factors in determining the structure of supply are the number and nature of agents involved in the extraction, distribution, and selling of rhino horn, the way in which they compete or cooperate, and their alternative ways of behavior. These factors are crucial determinants of the process by which prices are formed. They have been however completely ignored in the literature that favors trade. It has been shown that in the presence of market power (which means that suppliers are not passive price-takers but that can to some extent impose, bargain, or collude to influence, market prices) legalization will likely fail to attain its goal even if it succeeds in reducing prices, because illegal traders could increase poaching to compensate for profit loss, or even outcompete farmers if the costs of poaching are lower than the costs of farming.³ Laundering of wildlife products has been documented over a range of regulatory regimes, and for the cases of tigers, ivory, porcupines, green pythons, vicuña, and orchids.⁴ Even the highly regulated U.S. ivory market was shown to operate with as much as 30% of ivory from illegal sources.⁵

5. THE PRECAUTIONARY APPROACH

This literature recommends a precautionary approach to trade in rhino horn. However, all above mentioned papers, both formal and informal, are based on a specific branch of economic analysis that relies on a deeper set of assumptions about the nature and behavior of market forces. This theoretical approach also has important limitations that must be considered when informing policy design.

6. THE EQUILIBRIUM APPROACH

The equilibrium approach is based on the examination of equilibrium conditions, that is, the values of prices and quantities at which individual agents manage to match their goals in a coordinated way. Somewhat surprisingly to non-economists, this theory does not actually describe market *processes*, but conditions for individual maximization. So to speak, it is as if all the adaptation involved in matching the agent's plans and goals would happen instantaneously, without mistakes or ignorance, in the heads of agents. This theory however, cannot say anything significant about how such equilibrium or coordination arrangements are actually arrived at. Also surprisingly, this theory only works in one-commodity worlds; once more goods are introduced relative prices are problematic. The theory can only examine supply chains actually in a highly simplified way and is fundamentally incompatible with features of modern commercial organizations like the pursuit of new forms of operation, new products, and new markets. Finally, key issues like the existence of uncertainty about market conditions and about other agents' behavior, or the influence of historical developments and cumulative effects, are also incompatible with the formal building of the theory.

In order to more fully assess the possible effects of rhino horn legalization on poaching and illegal activity the dynamic aspects of the market process must be taken in to account. One of such factors is the potential endogenous growth of demand patterns that respond to conspicuous consumption. While the canonical trade argument considers the demand for rhino horn to be stable, taking as a reference small and occasional uses of

³ Damania and Bulte (2007).

⁴ Hemley and Mills (1999), IFAW (2006), Brooks, Robertson, and Bell (2010), Lyons and Natusch (2011), Phelps, Carrasco and Webb (2014).

⁵ Stiles and Martin (2008).

horn regulated by traditional Chinese medicine, there is increasing information that current demand is also driven by values of prestige, ritual codes for gift, and social imitation, particularly in the Vietnamese market. These features describe consumption patterns governed by social emulation, with relative independence of changes in quantities and prices. If this is the case, the dynamics of demand are likely to exhibit so-called endogenous network or cumulative effects, whereby consumption preferences increase as the size of the market does.

7. MARKET DEVELOPMENT

A second aspect to consider is market development, or the emergence of new uses, new products, and new distribution networks. This feature also is supported by emerging evidence of carved rhino horn being manufactured in Vietnam for the Chinese market. Such changes in the features of retail markets have the effect of accelerating demand expansion through the creation of new markets for illegal products.

8. DYNAMICS OF THE SUPPLY SIDE

Finally, dynamic aspects on the supply side are of key importance. The literature in favor of trade fails to consider the crucial fact that illegal trade is carried on by criminal organizations, which hardly respond to the features of standard, price-taking economic agents. As indicated by the information on seizures of illegal transactions, the illicit organizations that trade poached rhino horn also trade in a range of wildlife products. Their operations will be rather similar to what is known in the economics as multi-product firms. These types of firms reduce their unit costs by utilizing common assets in the production of a set of different products. Moreover, the commercialization of their products depends on assets like detailed regional information networks, which cannot be readily developed or acquired. Such advantages will not be readily accessible to legal sources of rhino horn, reinforcing the position of illegal agents at the consumer-end of the market.

9. EVIDENCE FROM OTHER ILLEGAL WILDLIFE MARKETS

Empirical evidence from other illegal wildlife markets show that the supply of these products is undertaken by a multi-layered chain of agents, with different degrees of specialization and bargaining positions. Retail prices of these products are formed through a series of exchanges that add value to the product according to the agent's ability to set prices and control the market. While poachers and illegal hunters normally obtain between 10 and 20% of the final market value, wholesale and retail traders tend to retain between 60 and 70% of the total value of the chain. These are the agents that actually control the illegal wildlife markets. The proponents of trade have simply ignored the need to elaborate on the trade mechanisms by which a legal flow of rhino horn would actually enter the market. Intangible assets based on information networks and market positioning are likely to be retained by the agents that currently dominate the illegal trade; given their advantageous position, these agents are more likely to continue dominating wholesale and retail markets. The legal supply of African rhino horn is thus unlikely to determine and control market conditions and influence retail prices.

Finally, the possibility that a legal supply can reduce prices depends critically on its relative size to demand. Official estimates calculate that South Africa's potential sustainable supply of rhino horn (obtained from natural deaths, de-horning, and broken horn collection) could offer between 2.6 and 3.9 tons of horn annually for 2014 (Department of Environmental Affairs, 2014, p. 73). The few estimates on demand indicate that potential supply is

unlikely to clear the market at low prices.⁶ And here emerges what is probably the main contradiction of the argued trade solution. If demand exceeds supply, the price set by legal horn traders will need to increase in order to reduce the market for illegal products. But by doing that it will fail to achieve its main goal, which is precisely to reduce prices and incentives to poaching. Even when assuming that all the above mentioned factors (stigma reduction, laundering, product differentiation, market development, and competitive advantages on the side of illegal traders) can be controlled in one way or another, an excess demand of a large magnitude will make useless any trade mechanism.

10. CONCLUSION

- The claim that legalization will make illegal trade un- profitable is not robust (its positive effects will not hold for a wide range of plausible conditions)
- Effects of legalizing rhino horn trade are uncertain, but many possible consequences are dangerous and most likely will prevail over positive outcomes
- Under many market configurations, legalization can be expected to preserve and reinforce illegal trade and poaching

REFERENCES

- Abbott, B., & van Kooten, G. C. (2011). Can domestication of wildlife lead to conservation? The economics of tiger farming in China. *Ecological Economics*, 70(4), 721–728. doi:<http://dx.doi.org/10.1016/j.ecolecon.2010.11.006>
- Brooks, E. G. E., Robertson, S. I., & Bell, D. J. (2010). The conservation impact of commercial wildlife farming of porcupines in Vietnam. *Biological Conservation*, 143(11), 2808–2814. doi:<http://dx.doi.org/10.1016/j.biocon.2010.07.030>
- Bulte, E. H., & van Kooten, G. C. (1999). Economic efficiency, resource conservation and the ivory trade ban. *Ecological Economics*, 28(2), 171–181. doi:[http://dx.doi.org/10.1016/S0921-8009\(98\)00048-2](http://dx.doi.org/10.1016/S0921-8009(98)00048-2)
- Damania, R., & Bulte, E. H. (2007). The economics of wildlife farming and endangered species conservation. *Ecological Economics*, 62(3–4), 461–472. doi:<http://dx.doi.org/10.1016/j.ecolecon.2006.07.007>
- Department of Environmental Affairs. (2014). *The viability of legalising trade in rhino horn in South Africa* (pp. 1–108). Pretoria, South Africa.
- Fischer, C. (2004). *The complex interactions of markets for endangered species products*. *Journal of Environmental Economics and Management* (Vol. 48, pp. 926–953). Washington, D.C. doi:<http://dx.doi.org/10.1016/j.jeem.2003.12.003>
- Hemley, G., & Mills, J. (1999). The beggining of the end of tigers in trade? In J. Seidensticker, S. Christie, & P. Jackson (Eds.), *Riding the tiger*. Cambridge: Cambridge University Press.
- IFAW. (2006). *Ivory Market in China -China Ivory Trade Survey Report- International Fund for Animal Welfare*.
- Lyons, J. A., & Natusch, D. J. D. (2011). Wildlife laundering through breeding farms: Illegal harvest, population declines and a means of regulating the trade of green pythons (*Morelia viridis*) from Indonesia. *Biological Conservation*, 144(12), 3073–3081. doi:<http://dx.doi.org/10.1016/j.biocon.2011.10.002>
- Martin, E., & Stiles, D. (2008). *Ivory markets in the USA* (p. 122). Kingsfold, West Sussex and London.
- Phelps, J., Carrasco, L. R., & Webb, E. L. (2014). A framework for assessing supply-side wildlife conservation. *Conservation Biology : The Journal of the Society for Conservation Biology*, 28(1), 244–57. doi:10.1111/cobi.12160

⁶ TRAFFIC's most recent demand survey in Vietnam applied to a random sample of 600 people in two main cities produced a figure of 5% of users and a personal average consumption rate of 1 gram of rhino horn every two weeks. This estimation is hardly representative, but provides at least an idea of the order of magnitude of demand. Considering only a population range of people above 15 years (in order to exclude children) in Vietnam's four largest cities (Hanoi, Ho Chi Mihn City, Haiphong and Da Nang), the potential consumption would reach 4.5 tons a year with a consumption rate of 2% and 9 tons with one of 4%.

CHAPTER 4

THE IMPACT OF A LEGAL IVORY TRADE ON AFRICA'S ELEPHANT POPULATION

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Purpose of the presentation: illustrate the impact of a legal ivory trade on Africa's elephant populations, and the implications for elephants, and other species, particularly rhino, if we pursue trade as the panacea to the current crisis.

Not based on economic models or hypotheses, but in terms of facts and findings based on evidence compiled over decades: evidence, both statistical and visual, some of which has been gathered through on-site investigations into the illegal ivory trade and its impacts on parallel legal markets.

Who is the Environmental Investigation Agency (EIA)? A small UK and US based NGO. Our focus is on international environmental crime and the illegal international trade in wildlife, which covers a broad range of issues including the illegal trade in timber, ozone and climate damaging chemicals and of course illegal trade in Asian Big Cats including Tigers, elephants, whales and dolphins and rhinos, amongst others.

We conduct research, compile evidence, investigate (sometimes covertly), document and present this information to decision makers, governments, and the public to highlight illegal trade. Often this information is disseminated in the form of published reports and filmed evidence. EIA pioneered the use of undercover filming techniques to expose criminal activity and illegal trade as early as the mid-eighties.

<http://eia-international.org>

1. WHERE ARE WE NOW ON IVORY?

- **1970s-80s** - African elephant populations crash due to poaching for ivory
- **1989** – ban on international trade in ivory agreed
- **1990s** – Elephant populations recover in many parts of Africa
- **1999** – one off sale of ivory from Botswana, Namibia, and Zimbabwe to Japan.
- **2007** – decision to develop a “decision making mechanism for international trade in Ivory”
- **2008** – one off sale of ivory from Botswana, Namibia, South Africa and Zimbabwe to Japan and China. This was really a tipping point. It had taken China five years to secure approval as trading partner and despite a wealth of evidence to the contrary, they assured the international community that they had developed a registration and control system for ivory that would ensure NO illegal ivory could enter the legal market. By this time, poaching was clearly on the increase and the international community also believed that by flooding the market with cheap ivory there would be no incentive for illegal traders to

continue operating. This could not have been further from the truth. The ivory was sold at auction for around \$160 per kilo to China and Japan. In China, this ivory was then sold on to the registered traders and dealers for around \$700 – and as much as \$1500 - per kilo. Once it reached the retail outlets, some of this ivory was being sold at around \$7000 per kilo. In 2010, I personally saw a small polished tusk in the Chinese Government friendship store in Guangzhou on sale for \$35,000. <http://eia-international.org/blood-ivory-exposing-the-myth-of-a-regulated-market>

- **2009** – record numbers of elephants poached and an all-time high in large seizures of ivory worldwide. A large seizure represents more than 500 kg, but many of these shipments were several tonnes representing the deaths of tens of thousands of elephants. In the last six/seven years, Tanzania has lost almost 70% of its elephant population - a staggering figure of at least 60,000 animals.
- **2008 – present** – Discussion on “decision-making mechanism” for future trade in ivory continues.

2. KEY FINDINGS OF EIA WILDLIFE TRADE INVESTIGATIONS

(What unsubstantiated economic models fail to take into account)

EIA has conducted hundreds of investigations over the years and across pretty much all continents. Through these investigations we have been able to highlight a number of fundamental principles that apply to illegal wildlife trade.

- Illegal wildlife trade is often organized and serious crime
- Illegal wildlife trade is currently low risk, high profit making the trade attractive for criminals
- Wildlife criminals are aware of CITES decisions and negotiations
- Parallel legal trade is ALWAYS an avenue for laundering
- Corruption and lack of effective governance facilitate the illegal wildlife trade

The international community has specifically recognised the role of organized crime in the context of the illegal trade in elephants, tigers and rhinos and economic trade models fail to recognize the serious implications of transnational organized crime.

Some indications of organised crime include:

- use of violence either against rivals or law enforcement
- multiple shipments of contraband using well-established routes, methods and facilitators
- involvement of criminals with previous convictions for other types of crime
- an organized structure to poaching with use of gangs, supply of vehicles, weapons and ammunition.
- corruption

A great example of how the most well-tested legal trade mechanisms can be easily exploited by organized criminal group is pseudo-hunting for rhino horns in South Africa by the Xaysavang syndicate.

The sheer scale and magnitude of large shipments of seized ivory over the last four years indicate that criminal networks are involved. But it's not a new phenomenon. A good example of organised crime in ivory trade is **the**

2002 Singapore ivory seizure, in which 7.2 tonnes of ivory was recovered from a vessel docked in Singapore. (Series of slides to illustrate the organised nature of the Singapore Case)

3. ILLEGAL WILDLIFE TRADE IS LOW RISK, HIGH PROFIT: CRIMINALS DO NOT FEAR PENALTIES

The pro-trade lobby may argue that effective enforcement has been tried as a solution and this has not worked to reduce poaching and illegal trade. However this is a flawed argument as it assumes that wildlife laws are being effectively enforced. Clearly they are not.

4. WILDLIFE CRIMINALS ARE WELL-AWARE OF CITES DECISIONS

This trader was filmed in November 2010 and refers to the CITES decision to allow the one off sale to China in 2008. <http://eia-international.org/in-cold-blood-combating-organised-wildlife-crime>

5. PARALLEL LEGAL TRADE IS ALWAYS AN AVENUE FOR LAUNDERING

Again from 2010, there are two traders filmed here. One is an illegal trader – and someone who has been operating for a number of years (and has been previously filmed) – the other is a registered trader. Their perception is that around 90% of the ivory on the market place at that time was from illegal sources.

6. CORRUPTION AND LACK OF GOVERNANCE IS RAMPANT

The prevalence of corruption in some range and destination countries strongly supports a complete ban to provide time to “first get your house in order” before enabling parallel legal trade and establishing new markets.

7. TRADERS THEMSELVES AGREE THAT NO AMOUNT OF LEGAL TRADE CAN SATISFY DEMAND FOR IVORY

Again this is from an EIA investigation. One of the arguments to support trade is that having a regular supply of ivory will provide security to the traders. In a sense, that is what the 2008 sale provided. The Chinese government decided to limit the release of their 60 plus tonnes to 5 tonnes a year until 2016/2017. Yet at the CITES meeting last year, the Chinese stated that they required 200 tonnes a year to satisfy the current demand. This demand continues to grow.

To reiterate:

LEGAL ivory trade has not reduced illegal trade and elephant poaching

LEGAL ivory trade has not reduced the prices.

FURTHER, a legal trade in captive (farmed) specimens has not stopped, for example, tiger poaching and the illegal trade in their skins.

Tigers continue to be killed for trade in their parts and products. In 2013 alone, around 80 tigers were identified in the illegal trade – a shocking figure given that there are fewer than 3,500 tigers in the wild across 13 tiger range countries in Asia.

8. BANKING ON EXTINCTION

During an EIA Investigation in China in 2012, we spoke to a tiger trader who is essentially stockpiling skins and suggested that he was encouraged to do so by the government authorities.

9. WHERE WE ARE NOW?

The last two years have seen the continuing trend of poaching and seizures attracting global attention.

10. HOW DO WE FIGHT THIS?

Parallel legal markets present a massive enforcement challenge to those tasked with policing the trade. How to tell if this piece of ivory is legal and this piece is not; is this skin from a captive bred tiger (legal) or from a poached animal (illegal); how can you tell that the powdered rhino horn that you are being offered comes from a legal source? Current permitting and regulation systems clearly do not work.

Legal markets carry a cost. The cost includes administration, processing registration and control systems, producing paperwork and permits, and the cost of implementing and enforcing the system – to ensure that those engaged are compliant. And where they are not, the cost of prosecution and conviction.

Bans also come at a cost. But they are more straightforward and unequivocal. If a product is banned everyone knows that by definition it is illegal. The job of the enforcement personnel – police, customs, trade regulators, and judiciary – is immediately simplified. If it's on sale, it's illegal.

Enforcement is also not simply about anti-poaching on the ground and seizure at the port of exit or entry. There is a gaping hole – a space occupied by middle men and crime bosses. This is where enforcement effort is required. The same methodologies that are applied to other serious organised crimes are tried and tested and need to be applied to wildlife crime. Until we can say that we have identified, disrupted and stopped a wildlife trafficking network, then we have to accept that we are unable to regulate the trade that provides them with the opportunity to perpetrate their crime.

Also just because it is difficult to enforce something does not mean the only solution is to legalise it. By allowing trade you are effectively legitimising criminals, because the same people who are engaged in the illegal trade will then be the traders involved in the legal trade which in turn encourages and increases DEMAND AND FURTHER ILLEGAL TRADE

11. IN SUMMARY

- Did the sale of ivory to china and Japan stop the poaching? No it did not.
- Did the sale of ivory reduce prices and undercut the illegal trades? No it did not.
- Instead of **flooding** the market and reducing the cost of ivory as a means of eliminating poaching to supply an illegal market, the opposite is now the case. Traders, legal and illegal, regularly abuse the system and there is now more illegal ivory on the market place in China than there is legal ivory. This is a fact. The only thing we do not know is exactly how much illegal ivory is hemorrhaging out of Africa and into China.

- Did the authorities implement their “stringent” registration and control system? No they did not. In fact at one CITES meeting the Chinese authorities admitted that they were struggling because their country is so vast.
- Are the Chinese making large numbers of seizures of ivory? Yes they are.
- Are they tackling enforcement at the market level? No they are not.

Nor can parallel legal markets ever be effectively regulated. The much heralded ivory control and regulation system in China has been a monumental failure. And it has finally been acknowledged as such. I have personally been witness to that failure along with other colleagues who have been gathering, compiling and presenting visual evidence of these failures for a number of years now.

It is worth remembering that only 40 or so years ago there was a thriving legal trade in ivory which was out of control. Efforts at regulating the trade failed. And **because** they failed the international ban on ivory was implemented. **Bans do work** – if they are implemented - and if they are not **undermined** by constant pressure and discussion to overturn them. The 1989 ivory ban provided a respite for many elephant populations, allowing them to recover. We are now back to where we were in the eighties – except that we have fewer elephants and we are losing them fast.

The single biggest threat to elephants now is the largest *regulated* market on the planet.

CHAPTER 5

WILDLIFE CRIME ENFORCEMENT RESPONSES OR 'WHY ARE WE STILL FAILING?'

AUTHOR - JUSTIN GOSLING LAW ENFORCEMENT & CRIMINAL JUSTICE CONSULTANT

1. WILDLIFE CRIME

Wildlife crime is often a form of serious transnational organised crime as defined by the UN Convention on Transnational Organized Crime, and also by its characteristics. The economic value of environmental crime, which includes wildlife and forest crimes and trade in chemicals and waste is equal to, or exceeds the GDP of some developing countries.

2. SEIZURES

Occur frequently, invariably take place at border crossings, are conducted by customs officers who have limited national investigatory powers.

The word 'seizure' has become synonymous with enforcement, yet it is a single action in the enforcement chain. We should question what seizures alone actually achieve.

Seizures are often made in drug trafficking and are seen as sign of success. Indeed, seizing illicit drugs, regardless as to whether persons are arrested or prosecuted, is useful, since the drugs are removed from the market, and therefore do not reach the end consumer. It is consumption by drug users where arguably the greatest level of harm occurs, so interdiction prior to the stage prevents that harm from occurring.

Wildlife crime is unique, since the greatest harmful act in the criminal chain arguably occurs at the outset, when wildlife is taken from its natural environment, or killed, or when a tree is felled. Therefore, interdiction occurring after this point does not prevent harm from occurring. Since seizures often happen at the point of trafficking occurring across international borders therefore, the act of seizure alone is not beneficial to preventing that harm from taking place.

Seizures are rarely investigated reactively and therefore rarely lead to the arrest of higher-level offenders. Seizures do not appear to cause detrimental financial impact upon criminals, since shipments continue to come. Seizures alone may drive poaching since the commodity does not reach the market.

3. ANTI-POACHING OPERATIONS

Operations or enforcement against poachers may be ineffective because:

- There are many poachers
- Poachers do not control wildlife crime
- Poachers may include women, children, impoverished individuals

- Arrest and prosecutions are resource intensive in comparison to the impact upon organized crime
- Rangers are put at risk which is arguably not necessary
- There are human rights implications involved in putting rangers and poachers in armed conflict against one another. Wildlife crime is a crime not a war.
- Killing of poachers may be extra-judicial and be outside of a criminal justice approach.

4. DEMAND REDUCTION CAMPAIGNS

These may be ineffective because:

- There are many consumers - millions
- Consumers don't "demand" wildlife – it is pushed upon them by controlling criminals
- Triggers to change behavior must be identified otherwise change may be slow

5. SOLUTIONS

- Target key criminals
- Gather intelligence
- Develop and sustain momentum
- Create a deterrent.

Wildlife crime requires different enforcement strategies to be effective. Having said that, none of the above approaches are "bad" but they must be part of a more comprehensive, holistic strategy that addresses all parts of the criminal chain.

Currently, a disproportionate amount of money and resources are being invested in source and consumption and not towards the criminals at the centre of the crime who are few in number but carry the greatest level of control and responsibility.

In order to target key criminals, use crime scenes to gather forensic evidence on persons involved in crime, particularly DNA and fingerprints. Upload profiles to international databases held by INTERPOL.

6. ILLEGAL & LEGAL TRADE

- Where there is a legal market in any commodity, there will be an illicit trade
- Criminals will launder illicit products into legal markets
- Enforcement officers cannot realistically differentiate licit from illicit commodities
- Most developing nations including those in Asia lack necessary enforcement capacity to control a legal/illegal market
- Legal trade frustrates effective enforcement

7. CONCLUSIONS

- Conduct thorough reactive investigations
- Initiate pro-active investigations
- Use Forensic Techniques
- Use Advanced human intelligence gathering methods
- Use International Databases (Nominal, FP, DNA)
- Address Corruption
- Cease all trade where significant illicit trade exists
- Target the key criminals who control organized crime.

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CHAPTER 6

FLAWED ASSUMPTIONS UNDERLYING CALLS FOR THE LEGALISATION OF THE RHINO HORN TRADE

AUTHOR – SUSIE WATTS, HUMANE SOCIETY INTERNATIONAL

1. PREAMBLE

People who support the legalisation of the rhino horn trade should learn a salutary lesson from the ivory trade.

- In 1999, Zimbabwe complained of having been cheated by the Japanese ivory buyers at the first "one-off" sale of ivory. It was clear that the Japanese traders had formed a cartel to ensure that prices remained low.
- In 2006, a member of the CITES Secretariat stated that the "beauty" of having China involved at the next sale was that the Chinese and Japanese traders would compete in outbidding each other, thus escalating the price.
- In 2008, shortly after the second "one-off" sale, the Botswana press reported that the country had received only half the money it was expecting to receive for its ivory. The other sellers fared no better.
- Research carried out by Brian Christy in China - and published in National Geographic - revealed that the Japanese and Chinese bidders had formed a cartel to keep prices low and to decide in advance which lots would be bought by which company.

The result was that the SADC countries that sold their ivory in 2008 received less than half the price that legal ivory was selling for 18 years earlier, before the ban. Contrary to the political statements made at the time, the ivory auctions of 1999 and 2008 were no triumph for southern Africa or for "sustainable use". In fact, given that it costs tens of thousands a year to store ivory in the correct conditions, it was a financial disaster. But the traders and investors made a fortune from it, and they will do so again if rhino horn is legalised, because that's what they do.

Turning now to the flawed assumptions underlying the rhino horn trade proposal:-

FLAWED ASSUMPTION #1: THE RHINO HORN TRADERS WILL CO-OPERATE WITH SOUTH AFRICA'S PLAN TO UNDERCUT THE ILLEGAL MARKET

South Africa's plan to sell rhino horn legally at a lower price, in order to undercut the illegal market, will backfire badly. There is no incentive for the East Asian traders to keep prices low at the retail end. Rhino horn traders, like ivory traders, have only one interest: the profit margin. Regardless of whether the South African horn is sold to a government, as happened with the ivory, or whether to a central selling organisation, that will not be the end point in the chain. It will have to reach the end user through people who:

- a. are already wealthy enough to buy it
- b. understand the rhino horn market

In other words, it will be sold to the very people who are driving the poaching of rhinos in South Africa right now. Do South Africans *really* want to reward them by selling them cheap rhino horn?

Although most people are aware that much of the illegal trade in wildlife is controlled by organised crime (the Yakuza in Japan, the Triads in China, Taiwan, Singapore and Hong Kong), what many do not realise is that the legal trade in many products is also dominated by these organised crime groups. The shark fin trade is an example. Even before any shark species were listed in the CITES Appendices, it was - and remains - highly secretive and conducted mainly via cash and handshakes, in order to avoid a paper trail

The Takaichi family runs one of the largest ivory trading companies in Japan, and they bought ivory at both the 1999 and 2008 auctions. In 2010, they were in court for trading in illegal ivory. The Poon family, exposed for dealing in huge quantities of illegal ivory in the United Arab Emirates in the 1980s, moved to Hong Kong, where the wealth they had accumulated from poached elephants allowed them to become large-scale shark fin dealers. These traders move easily between legal and illegal trade when it suits them.

Parallel legal and illegal markets exist all over the world. The illegal trades in alcohol and cigarettes are worth billions of dollars globally and trade in wildlife is no different. Recently, the Secretary-General of CITES said that the legal trade in python skins is worth around USD1 billion a year, but that the illegal trade in python skins is also worth USD1 billion, and it threatens to destroy the legal trade.

FLAWED ASSUMPTION #2: RHINO HORN BANS DON'T WORK

While it may not suit the purposes of the pro-trade lobby to admit it, the ban on rhino trade has worked - where it was enforced and supported with appropriate action. In the early 1990s Taiwan was a major importer of rhino horn for TCM purposes. After a highly successful NGO campaign, followed by sanctions from the USA, Taiwan clamped down hard on the trade and, at the same time, China outlawed rhino horn trade and removed rhino horn from its TCM pharmacopoeia.

The result was that poaching dropped precipitously and only increased significantly when the Vietnamese came on the scene.

TRAFFIC graph

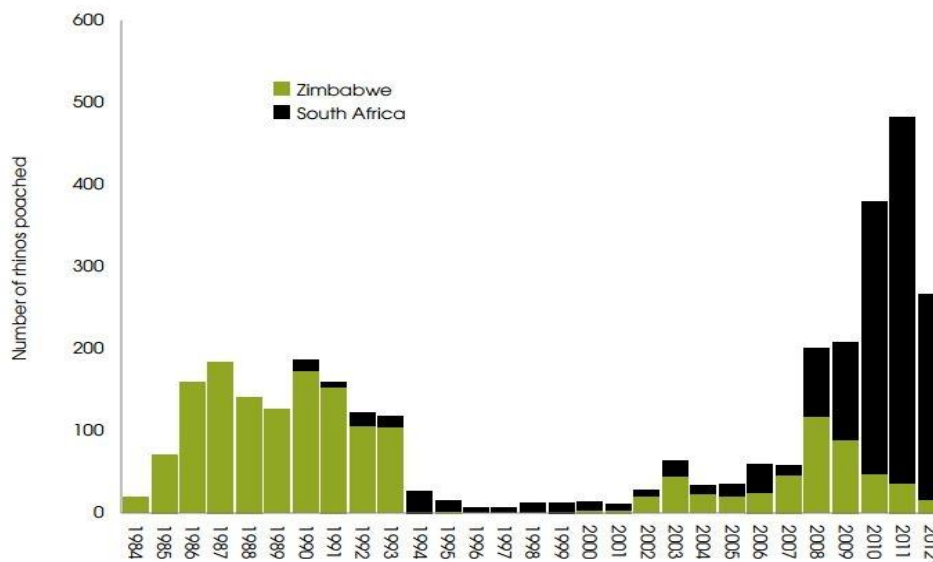


Figure 20 Number of rhino poached by year in Zimbabwe and South Africa from January 1984 – 20 June 2012* (data from N. Anderson, Lowveld Rhino Trust)

The rhino horn market in Taiwan has never recovered from the clampdown in the 1990s.

A ban is not simply a series of words on a piece of paper. South Africa has failed to carry out many of the necessary actions that would support the rhino horn ban. For example:

- while poachers are frequently killed or imprisoned, the more affluent and influential "khaki collar" criminals are usually given bail, or have the charges against them dropped, or turn State's witness and walk away free. The message, as one such individual was heard to boast in his local pub, is that these people are "untouchable". Some are known to have continued trading rhinos while out on bail. One is reported to have had his passport returned to him so that he could travel to Zambia. If the perpetrators think they will always get away with it, why would anyone expect this kind of crime to stop?
- the domestic rhino horn trade was not banned until 2009. This allowed rhino horn to be exported to East Asia, as admitted in the 2014 DEA report, thus undermining the ban.
- the government's constant threats to legalise trade have provided a major incentive to obtain and stockpile rhino horn
- the relaxed attitude towards pseudo-hunting, which began in 2003 but was not acted upon for five years, has ensured the illegal killing of many more rhinos and the entry of many more rhino horns into the east Asian markets
- the failure of South Africa to act upon advance warnings about pseudo-hunters from the Czech Republic has allowed individuals known to be engaged in illegal activity to receive export permits for rhino horn in South Africa as recently as 2012.

If South Africa is serious about banning rhino horn trade, then why has it failed to police the hunting industry, punish major South African offenders or act on advance warnings about pseudo-hunting?

FLAWED ASSUMPTION #3: THERE IS ENOUGH RHINO HORN TO FLOOD THE MARKET

According to the Chairman of the Vietnamese Traditional Medicine Association, patients with less serious illnesses such as flu and rheumatism were prescribed 0.2 grammes of horn per day, to be taken for a month. That's 6 grammes per patient, per illness.

The middle class in China and Vietnam is estimated to number 400-600 million people. Let's take the lower estimate, and assume that only 10% of those people could afford and would want to use rhino horn. Let us also assume an average weight per horn of 4 kgs. If each of those people took only one 6-gramme course of rhino horn "treatment" in a year, that's still 40 million people. We would need 60,000 rhino horns **per year** to supply that demand.

This calculation excludes:

- 1) Potential users in Hong Kong, Taiwan, Singapore, Thailand and Malaysia
- 2) All other uses for rhino horn (high-end gifts, rhino horn jewelry and carvings)
- 3) The purchase and stockpiling of rhino horn as an investment
- 4) Future economic growth areas such as Burma, Laos and Cambodia

5) "Treatments" for more serious illnesses such as cancer and strokes

CONCLUSIONS

- Legalising trade would simply add legally-sourced rhino horn to the illegally-sourced horn.
- It is highly likely that by encouraging "legal" purchases, the market would increase, as would the poaching, particularly as there is not nearly enough to go around.
- The criminals who are currently engaged in trading South African rhino horn would be the most likely beneficiaries of a legal trade.

Bans can and do work, but they have to be enforced and backed up with supportive action, such as punishing offenders and closing legal loopholes.

CHAPTER 7

WILDLIFE TRADE MANAGEMENT IN VIETNAM

AUTHOR - DUONG VIET HONG, WILDLIFE CONSERVATION SOCIETY, VIETNAM PROGRAM.

1. VIETNAM & RHINO HORN TRADE

Vietnam citizens are involved in all three phases of the illegal rhino horn trade, from poaching, hunting to trading.

Examples are pseudo hunting by Vietnamese before 2012, many arrested Vietnamese in South Africa and in Vietnam, and the use of rhino horns in Vietnam.

Any strategy cannot ignore the mounting evidence of Chinese buyers in Vietnam. While it seems Vietnamese consumers tend to take ground rhino horn as a type of medicine, Chinese buyers often seek for bracelets, pendants and other decorative objects crafted from rhino horns in crafting villages in Vietnam.

It's the worst time to even consider legalising trade.

2. ENFORCEMENT

Enforcement is patchy and has yet to effectively target at the network level – the efforts focus mainly on source at present. The current management of wildlife farms in Vietnam is also an example of the inadequate management capacity of wildlife trade.

From 2008 to 2013 there were 19 arrests in Vietnam relating to rhino horn crimes, however only one person was jailed. Obstacles include the requirement to put a monetary value to confiscated wildlife products for a case to be prosecuted, while it's very unlikely to get a confirmed price for an illegal product.

In a survey by WCS Vietnam, 42% farms surveyed admitted to still taking stock from the wild in addition to breeding animals, 50% original founder stock sourced from wild.

3. DEMAND REDUCTION

Demand Reduction efforts started in Vietnam in 2012, and it takes time for the activities to take effect.

The Vietnam government has shown strong commitment to fight rhino crimes in the last 12 months. Loopholes in laws are being closed.

In Jan 2013, Decision no 11 by the Prime Minister of Vietnam banned all non-commercial import of hunting trophies from all countries. This Decision also prohibits all domestic sales of these species and their products, so no trophies can be sold as it was before. The Communist Party issued Guideline 98/2013 regarding awareness raising for no consumption and trade of wild species of fauna and flora.

A circular on the management of hunting trophies is being developed by the Vietnam CITES Management Authority. Another joint circular is also going to be issued to address the obstacle of imposing monetary value to rhino horn and ivory specimen. The Prime Minister has approved the creation of a Forest Police Force to patrol and

manage forests, as well as handle related violations, which is believed to help improve law enforcement of wildlife crimes. On 28 March, 2014 the ministry of Agriculture and Rural Development stated that they were considering the destruction of their ivory stockpiles.

4. VIETNAMESE CONSUMERS

Vietnamese Consumers, particularly the youth, are starting to get the message about rhinos.

Recently trained prosecutors by WCS Vietnam in Ho Chi Minh City in January 2014 led a case that smugglers of 2.4 tons ivory were jailed, this is the first case ended up in jail time in Ho Chi Minh City in Vietnam.

We feel a new level of optimism with new commitment from government agencies, but if the supply side opens up supply, we fear that there'd be no incentive at all for those efforts and Vietnam will make a poor trading partner.

Now is not the time to confuse the Vietnam government. Also law enforcement efforts need to reach beyond the single seizure and arrest in a single country and need to look at the network level.

CHAPTER 8

UNINTENDED CONSEQUENCES OF TRADE IN RHINO HORN ON RHINO RANGE STATES: A KENYAN PERSPECTIVE

AUTHOR – BENSON OKITA, KENYA WILDLIFE SERVICE

1. INTRODUCTION:

The recent upsurges in rhino poaching are linked to deep and fairly complex socio-economic, criminal networks and political factors. Several solutions ranging from proposals to legalise trade in rhinoceros horn to proposals for combination of different strategies have been proposed to address some of these challenges. Legalisation of trade in rhino horn is being considered by the South African government as a solution to curtailing the upsurge in rhino poaching. The South African Government has based its argument on the law of supply and demand; that by flooding the market with horns, prices will go down and thus the incentive to poach would be lowered. The text in the box 1 below, for example, provides alternative arguments to legalization of trade in rhino horn.

2. RHINO POACHING: UNIQUE CHALLENGES

Box 1: Rhino Poaching: Unique Challenges

IN THEIR POLICY FORUM “LEGAL TRADE OF Africa’s rhino horns” (1 March, p. 1038), D. Biggs *et al.* advocated legalizing trade in rhino horn through harvesting horns of 5000 white rhinos in South Africa as the panacea to the current rhino poaching crisis. Their arguments were based on the law of supply and demand and supported by the example of crocodile farming. The law of supply and demand only applies to commodities for which supply is independent of demand. It does not apply specifically to white rhino horn because the market does not differentiate between horns of the five extant rhinoceros species, and therefore the supply exceeds the quantity of horns of the white rhino alone. Because the rhino horn has no medicinal properties (1, 2), drug producers can dilute it at will, making the price formation normally dictated by the law of supply and demand unpredictable. Furthermore, legal access to rhino horn risks reawakening demand in older markets,

In this paper the likely unintended consequences of legalising trade in rhino horn on African and Kenya Rhino and possible solutions are presented.

3. UNINTENDED CONSEQUENCES:

1. Legal access to rhino horn risks reawakening demand in older markets, where demand for rhino horn was prevalent in the 1970s and 1980s and has since decreased. If demand grows again in these markets, indiscriminate poaching may increase putting look-alike black, Indian, Javan, northern white, and Sumatran rhinoceros at higher risks. Already, figure 1 below shows indiscriminate poaching of black and white rhinos in Kenya. Look-alike species are likely to suffer from poaching if trade in white rhino horn as advocated by South Africa is allowed.

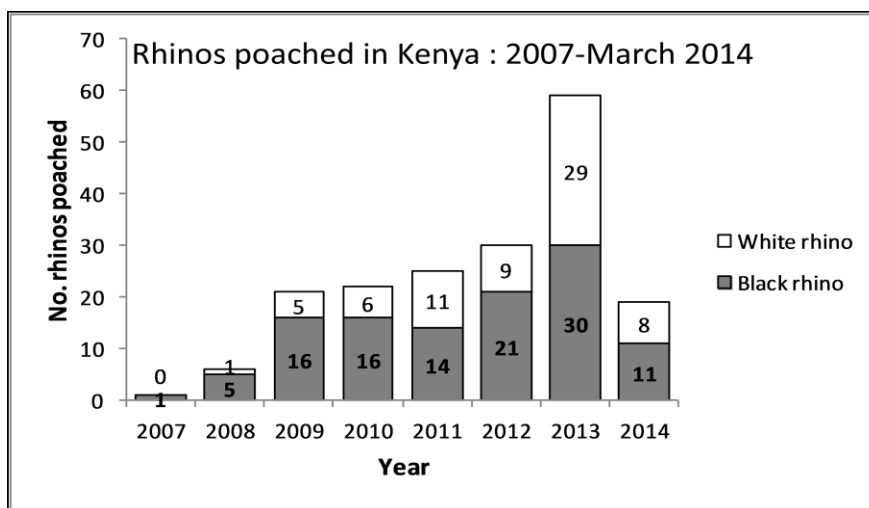


Figure 1: Black and white rhino poached between 2007 and March 2014.

2. If poaching increases, then rhino population in Africa and Kenya will imminently decline. Figures 2 and 3 illustrate the current scenario in Kruger National Park and in Kenya. Figure 3 also demonstrates that with current population decline, Kenya will not be able to achieve its set overall goal which is “to achieve and maintain a 6% per annum growth rate in well-established sanctuaries and a minimum of 5% per annum at national level to attain 750 black rhinos by 2016.” The figure shows that the number of animals in 2014 is as was in 2011 despite the enormous amount of resources and investment that has gone into protecting the animals.

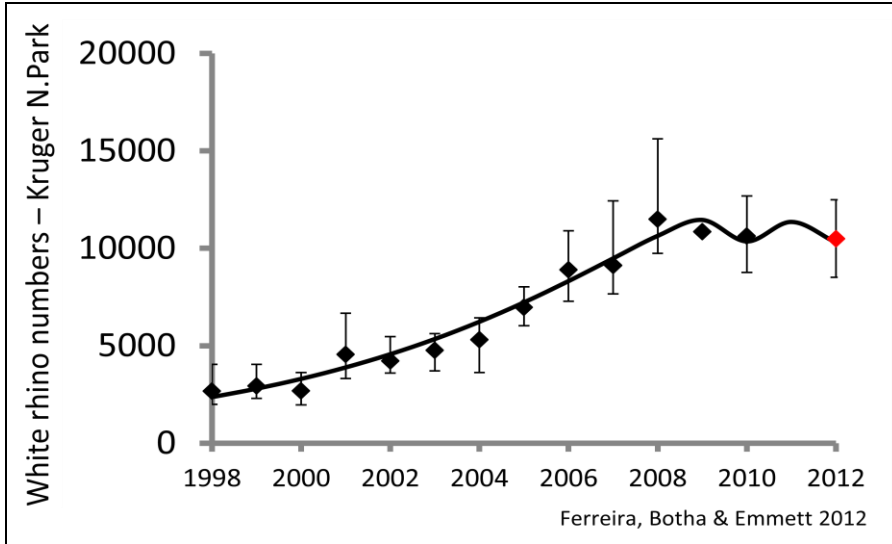


Figure 2: White rhino numbers in Kruger national park showing and eminent decline from 2012 if current poaching rate continues.

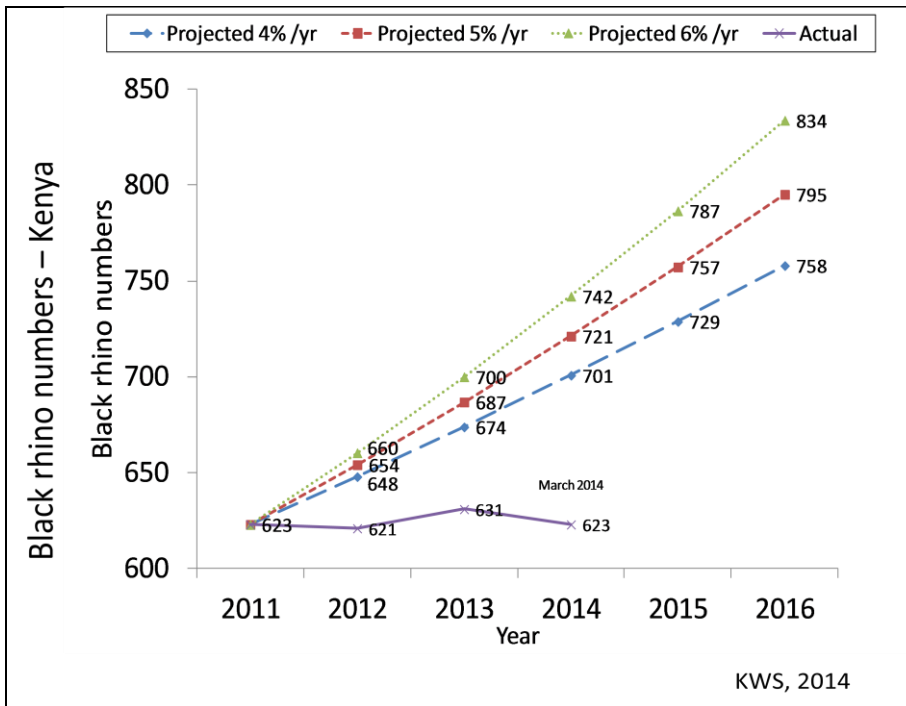


Figure 3: The projected Kenyan black rhino population growth rate for the period of the current 2012-2016 Kenyan black rhino conservation and management strategy. The bold line shows the actual numbers following impact of poaching.

3. Projections based on the current increase in poaching rate of 38.78% increase per year, indicate that even with the highest possible underlying growth rate of 9% for rhinoceroses, the African rhinoceroses are likely to be reduced to near zero by 2020 (Figure 4). Genetic erosion and thus imminent.

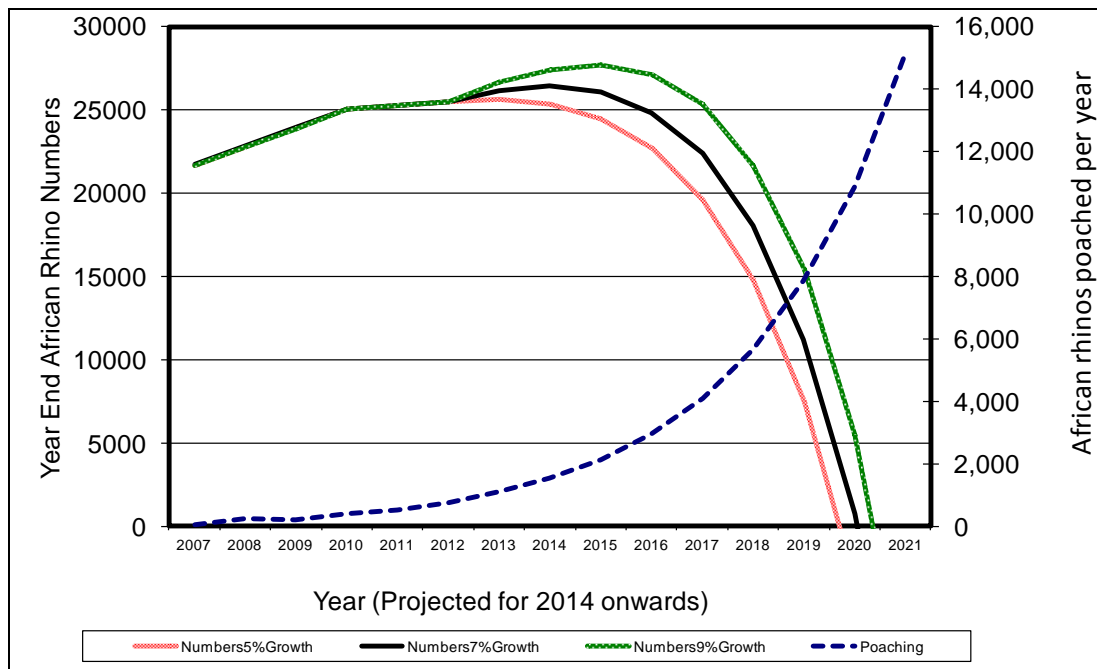


Figure 4: Projected African Rhino Poaching and Rhino Numbers if Poaching continues to escalate as it has done since 2008 (38.76% increase per year) given underlying growth rates of 5%, 7% and 9%. (Graphics by R. Emslie).

4. Under such scenario, Kenya's vision of 2000 black rhinos in the wild would not be realised, thus a set-back for Kenya in terms of range expansion from fenced sanctuaries to large open areas. Some implications associated with this include little protection for larger areas. Other species that depend on this wider protection are likely to suffer from poaching and illegal bush-meat trade. Further this would stifle Kenya's wildlife tourism that contributes 10-12% its gross domestic product.
5. Over time, the risks and costs associated with rhino protection has led to closure of some six private rhino conservation areas between 2010 and 2013. A seventh private rhino conservation area recently expressed inability to sustain the risks and costs of rhino conservation. The effect of these risks and costs are overstretched government resources and disincentive to the private sector in rhino conservation. More so, available safe land for rhino conservation continues to shrink.
6. Corrupt business men and women, politicians, individuals/conservationist including staff charged with protection of wildlife, government and judiciary officials are likely to take advantage of this situation form a cartel to bank on extinction. Mason et al 2012 in their paper titled Banking on extinction: endangered species and speculation report that *"Many wildlife commodities, such as tiger bones, bear bladders, ivory, and rhino horn, have been stockpiled in large quantities by speculators who expect that future price*

*increases justify forgoing the interest income associated with current sales. When supply from private stores competes with supply from 'wild populations' (in nature) and when speculators are able to collude, it may be optimal to coordinate on an extinction strategy (Charles F. Mason,*Oxford Review of Economic Policy |28|No. 1|2012|pp. 180–192|)*

4. ALTERNATIVE SOLUTIONS

1. International trade sanctions to consumer and corrupt rhino range-states should be considered. This could be proposed at CITES meetings. Figure 5 illustrates when trade ban combined with trade sanctions led to a 14 year period of respite from rhino poaching.

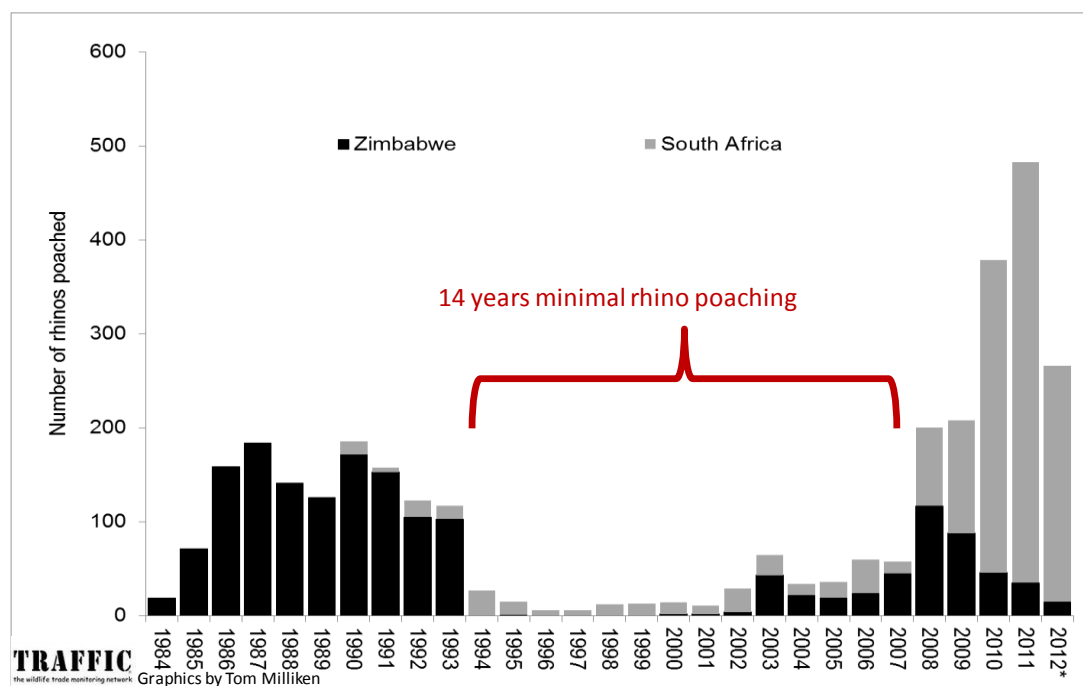
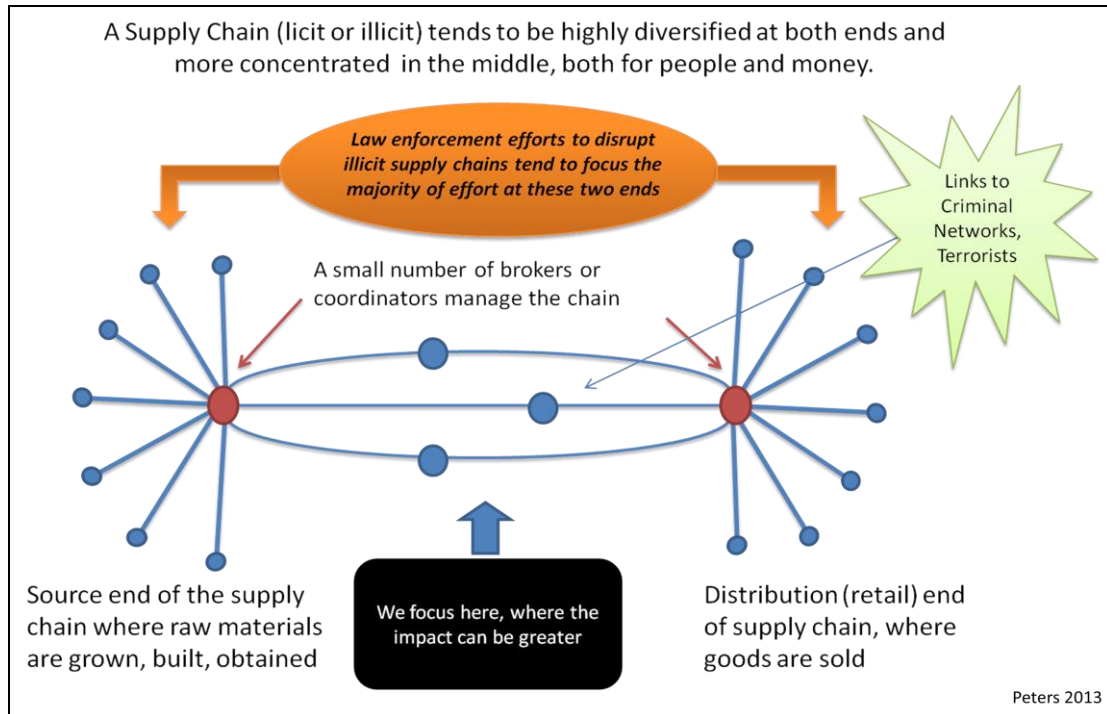


Figure 5: Rhino poaching trend in Africa between 1984 and 2012 showing a 14-years period when poaching was within manageable levels. This is the period when international trade sanctions/threats were imposed on countries that were illegally trading in rhino horn.

2. Figure 7 by Peters 2013, illustrates the need to understand illicit supply chains and financial operations. This is by identifying the linkages between the supplier and the consumer and concentrating efforts to break those linkages.



5. IN CONCLUSION

In conclusion the unintended consequences of legalising trade in rhino horn seem to outweigh the intended benefits. Continued debate on this matter may lead to speculation and further poaching of rhinos. It is therefore important NOT to formally publicise a possible legal trade in rhino horn. Instead, both the pro- and anti-trade groups and conservationists should unite in curbing poaching through other means such as the two examples proposed above.

CHAPTER 9

THE UNINTENDED CONSEQUENCES ON OTHER RANGE STATES – A NAMIBIAN PERSPECTIVE

AUTHOR: MARCIA FARGNOLI, EARTH ORGANIZATION NAMIBIA

1. WHY THE RHINO IS IMPORTANT

The sun is setting and you are sitting by a water hole. In the distance you see a puff of air, warm and made visible against the cool night breeze. As you watch, slowly she walks towards you. She stops and gazes out at the scenery, as if she sees something beyond. She walks to the water hole pauses and catches your eye. The majesty of meeting a rhino in the wild is an unforgettable moment.

Rhinos are one of the great elders of the animal kingdom. Ancient bushman rock paintings in Southern Africa depict rhinos, which have always played an important role in the circle of life. They are prehistoric creatures and according to science they have been around for 50 million years. They represent an ancient wisdom of the beauty of solitude.

The rhino is the symbol of Africa. If we lose the wise elder rhino, we lose the wisdom of Africa.

2. NAMIBIA'S RHINOS

The elder rhino is the guardian of a magical desert land in Namibia. This place is where the last truly free roaming unfenced rhinos exist in the world.

The area they live is charming in its remote, rugged aridity (less than 2 inches of rain per year). All of Africa's iconic wildlife comes together in this magical land. By protecting the black rhino, we protect all the other animals that share the same homeland. The black rhino is the flagship species for conserving the miraculous wilderness that is home to a plethora of unique desert adapted wildlife.

They are Africa's symbol of the wilderness.

Namibia maintains one third of the world's black rhino population. Our desert maintains the last truly free-roaming unfenced black rhino population on the planet and the only desert adapted rhinos. They are critically endangered.

3. RHINOS ARE IN DANGER OF EXTINCTION

Why are they so critically endangered? This is due to the fact that some 96% of the world rhino population had been decimated by humans in a short time period. At the beginning of the 19th century, there were one million rhinos in the wild. By 1970, there were around 70,000. Today there are less than 24,500 in Africa and currently more than two are being killed per day.

Even though rhinos are well built for survival, they were not prepared to face an organized gang of humans with an insatiable taste for greed. The driving force behind the horrific killings of this great animal elder is the very thing

which was meant to protect them. Their horn has been sought after for rumoured and unproven medicinal benefits in Asia. Historically, using rhino horn is a sign of prestige in several Asian cultures.

Due to the demand for their horn, Namibia lost most of its rhino population in the 1970s and 1980s. Now Namibia hosts the last remaining truly free roaming black rhino population on the planet. How quickly can that amount of rhinos be lost? Current statistics show that it took only 2 years to lose the same amount of rhinos that Namibia hosts. We can lose our rhinos very quickly. Black rhinos are one of the rhino species most under threat and they are classified as critically endangered, meaning that they are at an extremely high risk of going extinct in the wild.

4. PRECAUTIONARY APPROACH

A critically endangered species is at a high risk of going extinct if we make any wrong moves now. It doesn't take much to see that we need to look ahead with extreme caution with whatever policy decisions we make. There is very little room for error.

Some say that legalizing the trade in rhino horn is the best way to meet the demands of a growing Asian market, but it's not that simple. The problem is that the end market is massive. The combined population of Vietnam and China alone is over 1.4 billion. It's impossible to meet the demand of even less than 5% of that population because we simply don't even have enough rhinos left on the planet.

5. A GROWING MARKET

To make matters worse, studies have shown that the market is in fact growing. "A recent study in Vietnam, sponsored by the World Wildlife Fund (WWF), reveals that demand for rhino horn may be much larger than previously thought. In addition to consumers of rhino horn, there is a large group of 'intenders' — people who intend to buy rhino horn when they can afford it. The study shows that rhino horn is bought not just for traditional medicinal purposes, but also as a status symbol. Rapid growth in living standards means the number of people who could become consumers of rhino horn is potentially enormous."

What will happen when more people can afford it? With only a total of approximately 28,000 rhino left on the whole planet, what happens if the Asian market increases because we encourage it by legalizing the trade? Rhinos are finite resources that will never be able to meet the demand. It is unsustainable to trade in endangered species and/or their products. Endangered, by definition, means something that is seriously at risk of extinction. It simply cannot be defined as sustainable to remove any animal which is seriously at risk of extinction.

6. SENDING A MIXED MESSAGE

In addition, it has been proven that rhino horn has no medicinal properties and this has been widely publicized in order to educate the end market in Asia. Legalizing trade in rhino horn would send a mixed message to the end market, making it difficult to continue to progress on lessening demand through education in Asia. When we work so hard and spend so much money to convince Asia that it is not medicinal, doesn't it send a very confused message to then try to sell it legally?

It is also unethical to sell a product for its medicinal benefits when it has been proven there are no such benefits.

Finally, legalizing the trade in rhino horn also send a message to local Africans that rhinos are worth more dead than alive. Sending such a message is a very dangerous proposition as it is very likely that an increase in poaching would occur based on this fact alone.

7. CONCLUSION

In Namibia, our Constitution calls for a sustainable environment for current and future generations. Our Environmental Management Act calls upon the government to apply extreme caution when full scientific certainty is unknown. We cannot afford any slight miscalculation and in fact, any miscalculation would go against the terms of our laws.

Have we forgotten already what happened in 2011? The Western Black Rhino went extinct. It is a real possibility that the South-western Black Rhino will go extinct if trade is allowed and any slight miscalculation occurs.

Extinction is forever. Extinction cannot be defined as sustainable.

For Namibia, and for the whole Earth, this is what is at stake: the last truly free roaming black rhinos in the world.

“Sometimes it falls upon a generation to be great. You can be that great generation.” Nelson Mandela

CHAPTER 10

IS THERE A THIRD OPTION?

AUTHOR – IAN MICHLER

A journalist's perspective on how the rhino poaching crisis currently stands and why decision-makers should be considering a third option

1. THE SITUATION TODAY

- There is no apparent improvement in the rhino crisis as poaching statistics remain the barometer for measuring the current state of affairs.
- To date, the solutions have focused on the trade debate with almost everyone falling into either the pro-trade or no-trade camps.
- This has polarized the conservation & wider community, many of whom are involved as activists or financial contributors.
- This polarity has brought about fears of 'conservation fatigue' setting in.

2. SOME CONTEXT TO SITUATION TODAY

- South Africa will remain at the centre of the rhino crisis and trade debate because it carries over 80% of the surviving rhino population.
- The trade debate is framed by the notion of sustainable utilization, which is regarded as the guiding principle for managing our wildlife resources.
- Sustainable use is entrenched in conservation thinking and the constitutions of most agencies and African governments, including South Africa.
- Most South African symposiums & policy reports on the rhino crisis have had legal trade as a primary focus of solutions.
- The South African Government and some within rhino conservation believe there is little more that can be done to curb the poaching – the situation on the ground is often referred to as being 'desperate'.
- Rhino owners and sustainable use groups, many of them with a 'vested interest' have provided government with a cash-flow solution, hence the strong support for trade.
- As a result, up until a year ago legalizing trade was promoted as the only option to the crisis.

3. BUT, THERE IS ANOTHER SIDE

- However, the pro-trade option is now being increasingly challenged both locally and internationally.
- This is based on good science, research and opinion.
- Part of the disagreement stems from differing interpretations of sustainable utilization.
- Despite the polarization, this is a very necessary process that should lead to more informed decision-making.
- As a result, the pro-trade lobby will have to accept that the solution to the rhino crisis is no longer a single option – and they will also have to accept that the no-trade lobby will increasingly be negotiating from a position of strength.

4. CHANGING THE LAW

- In addition, it is important to highlight that trade in horn (other than CITES sanctioned hunting quotas) has been illegal since 1977.
- To change this status, the burden of proof rests with those advocating change not those defending the current CITES position.
- And they must show beyond reasonable doubt that trade will significantly enhance the survival of the species and stop the poaching.

5. AND CAN PRO-TRADE SHOW THIS?

- No, they cannot and for the following reasons:
- The CITES trade ban is not the reason rhino are being killed – instead, the poaching is fuelled by an increasing number of consumers, and this drives the crisis
- We need to bear in mind that this demand is based on pure nonsense, misinformation & myth and this drives the criminal activity - opting for an open market mechanism simply buys into this flawed paradigm.
- In addition, the economic modelling used to underpin trade is increasingly being discredited and is regarded by some leading economists as ‘useless’ and ‘deeply flawed’.
- The lessons from elephants, tigers and abalone for example clearly indicate that legal markets stimulate illegal parallel markets.
- Because of the shortcomings in trade solutions, international momentum is growing against trade with political and conservation efforts aimed at ending both the supply and demand of horn.
- Instead, education, awareness and demand reduction initiatives are being heavily promoted and these are all beginning to have an impact.
- Despite all the evidence, the South African government remains intransigent with its pro-trade position.

6. WHAT THEN DO THE PARTIES AGREE ON?

- Despite the lack of promotion by the pro-trade lobby, education, awareness & demand reduction campaigns are accepted by most.
- No one disagrees with measures to improve policing & prosecution with stiffer sentences.
- And all agree with tighter security, which includes translocation, dehorning, use of the military etc.
- Most also understand that in the past, local communities living alongside parks and reserves were alienated – they must now be involved and become part of whatever long-term solutions are put forward.
- Going forward, all accept that there needs to be greater co-operation between the two sides on the issues they agree on.

7. THE STICKING POINT

- In essence, there is to a greater or lesser degree agreement on almost every issue bar one: the market mechanism

- And the difference boils down to what the impacts will be on the demand side and will trade fuel or stem the poaching?
- This issue is the primary point of contention feeding the polarization, which in turn misdirects efforts - time and resources are being wasted.

8. IS THERE A THIRD OPTION?

- Given the deadlock, is there a case for what the Germans refer to as 'realpolitik' taking place?
- Is there any way of removing government stockpiles, but without resorting to an open market or other conventional trade mechanisms?
- Under such options, horn stockpiles get removed from the system in exchange for conservation funds and long term conservation and policy guarantees.
- A group of respected NGO's and selected wildlife professionals should work with government to further investigate this option.

CHAPTER 11

SAVING THE SURVIVORS – CREATING HOPE FROM HURT

AUTHOR – DR JOHAN MARAIS, WILDLIFE SURGEON, ONDERSTEPSPOORT VETERINARY FACILITY

1. CONSERVING THE SPECIES

2010, 2011, 2012 and 2013 has been four of the worst years on record for rhinos. Poachers in South Africa killed 333, 448, 668 and 1004 rhinos respectively in these few years. The White rhino, which is near threatened at 18,500 individuals, and the Black rhino, which is already critically endangered with just 4,000 individuals left in the wild, is facing an uncertain future. Although thousands of dollars were earmarked for anti-poaching, we lost over 1000 rhinos in 2013!..

As with other wild animals, managerial talk of simply "conserving the species" can miss the point, as if they are to be thought of and cared about only in the collective. But taking the basic numbers -- some 65 000 Black rhino in the 1970's versus a mere 4000 today - this is a species killed off to about 6 percent of its population in the space of half a century.

Two veterinarians (one being a maxillofacial surgeon and the other an equine and wildlife surgeon) therefore took the initiative and started a project called Saving the Survivors (STS), with the aim of looking after and treating animals that have been shot, snared or been disfigured. Approximately 1 in 5 rhinos survive, and our aim is to treat these animals, whether they are adults or orphans, and to give them the best chance of survival. These two veterinarians travel through South Africa and Africa, donating their time and resources to fight the war against rhino poaching. Various companies have also come to the fore to support this initiative and include, Dnata - Dubai, Storz Endoskope - Germany, PPS,

Profmed, Adcock Ingram, Covidien and the South African Veterinary Association. These companies have either donated products, e.g. wound products to use on rhino, or have donated equipment e.g. flexible endoscope to use on and for injured rhino.

2. THE PROBLEMS WE FACE: NO LITERATURE AVAILABLE ON THE ANATOMY AND PHYSIOLOGY OF RHINO

The problem that we face with currently is that there is almost no literature available on the anatomy and physiology of rhino. The only work that has been done extensively on this species is immobilization and the anatomy of the reproductive tract. Two papers exist on the composition of rhino horn, but does not address the issue of where the horn exactly grows from, how big this growth centre is and where this layer is situated. There is also no data available on treatment of rhino e.g. what antibiotics we use, what anti-inflammatories and painkillers we use, at what dosage and for how long. What veterinarians currently do is to extrapolate all this data from horses, as we know that the horse is the closest specie to rhino. However, our extrapolations are bound to be fraud with mistakes as we recently learned. A horse has two flexor tendons at the back of his legs, helping him with propulsion and flexion of the limb. We assumed it is the same with rhino, but had to find out that rhino have only one flexor tendon. This is quite important e.g. with respect to animals that get snare injuries.

Currently we are mapping the anatomy of the head of the White rhino, and will soon start with the front and back limbs of White rhino as well. However, postgraduate students are needed to assist with all of this work and funding is needed for them.

3. OUR SUCCESSES:

We have had good success so far with treatments we have instituted on adult and orphaned calves, again extrapolating wound treatments, antibiotics etc, from horses. Adult rhinos where the horns have been hacked off need follow-up treatment for 9 to 12 months at least before these injuries are sufficiently healed. We have had very good results in this area. Gunshot wounds remain a problem due to the thickness of rhino skin, and we have had mixed results in treating these type of injuries. Snare injuries are easier to treat and sometimes also need follow-up treatment for several months due to the fact that the only tendon is severed and needs to heal which takes time. Calves that are injured or suffers from either fractures or pneumonia commonly needs very intensive treatment over several weeks as well. We currently treat them at Onderstepoort Equine Unit, although we have plans to build a Rhino Hospital with a unit that will specifically be earmarked for these calves that needs intensive treatment 24 hours a day. To give an example, we treated a Black rhino calf of approximately 6 weeks old with a prolapsed rectum and he stayed in the hospital for 4 weeks. These calves needs care on a continuous basis and are even more labor intensive than rearing an orphaned calf. Therefore a hospital that caters for the needs of these sick animals is a must.

Below I include some photographs with annotations of some of the rhino patients we have treated over the last 18 months.

White rhino cow treated In the Freestate:



Two cows treated in Mpumalanga:



White rhino bull treated for septic joint:



Calf treated with fracture:



Calf treated with pneumonia:



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CHAPTER 12

RHINO HORN “THERE IS NEVER THE RIGHT WAY TO DO THE WRONG THING”

KAREN TRENDLER

1. ETHICAL DECISION MAKING

Arguably, rhino horn is currently one of the most valuable natural resources.

One could argue that, composed largely of keratin, it has little value other than to the rhino. But rhino horn is in demand as a commodity equal to drugs and weapons for global crime syndicates raising the debate on legalized trade and production of rhino horn. The poaching crisis has also forced the need for management procedures aimed at reducing the risk of poaching.

The global poaching and illegal wildlife trade crisis presents a complex, contentious, dynamic mix of commodification, rampant commercialization, conservation, criminality, corruption, terrorism, globalization, economics, politics, status, tradition, culture, science and sentiment.

“There is never the right way to do the wrong thing”. This saying cuts to the core of ethics, broadly defined as ‘moral guidelines for conduct’.

Ethical or ethics based decision making provides a means of cutting across a wide range of conflicting issues, needs, responsibilities, compromises and societal values aimed at finding acceptable, considered decisions and actions, balancing conservation, management utilization and welfare of the individual and the greater population.

Ethical decision-making allows us to maintain dignity, integrity and humanity, guiding us to decisions and paths, that whilst not always popular, or in line with specific doctrines, are justifiable and enduring and can withstand vigorous examination - and hopefully ensure the future of rhino conservation.

Ethics based debate requires clear definitions and informed decision making - a challenge given the very nature of poaching and organized crime, culture and tradition, and the dangerous polarization of trade and anti-trade camps currently clouding the horn issues.

2. THE RHINO AND ITS HORN

As mentioned above, the horn probably has the most value for the rhino itself. Rhino evolved with their own renewable ‘multi-tool’. The rhino uses its horn for protection and defense, mark territory, display, digging, pushing, lifting and carrying, breaking branches, rolling etc. The rhino mother uses her horn to protect, defend, guide, lift and break branches for the calf.

The horns have a concave base that sit on a bony protuberance (growth point) on the front of the skull. Underlying the horn base is a large network of sinus cavities and supporting structures. Under natural or free ranging conditions, the horn may break off, become detached or damaged as a result of general use, wear and tear, or fighting. Generally, if the damage is not severe, the horn regrows.

Average growth rate of rhino horn in an adult is 2-6 cm annually and 10 -15 cm in a juvenile or sub adult. Wear and tear may exceed annual growth. The rate of growth, condition and shape of the horn varies according the area, habitat, age, nutritional and health status, wear and tear, and interestingly, individual behavior of the rhino.

Rhino can survive with their horns and the horn can be removed (or harvested) without the need to kill the rhino but these are simplistic statements that ignore the complexity of behavior and survival and do not take into account the realities of both poaching, criminal syndicates or the challenges and implication of management practices and horn ' issues'.

3. CURRENT DEVELOPMENTS AND TRENDS IN RHINO POACHING

Some of this is confirmed and some hearsay.

- The taking of younger rhino and smaller horns is on the increase and confirmed by both carcasses of very young (as young as two weeks) rhino with horns removed at poaching sites and the seizure of smaller horns.
- The belief that horn from a live animal; and or a wild animal has greater potency than that of a dead or captive bred animal possibly contributing to defacing and live removal of horn – this needs to be balanced against the use of drugs, poor shooting and unreliable ammunition and weapons.
- Collateral losses \ casualties not included in the poaching statistics but linked to poaching crisis: rhino dying or being compromised by immobilization, panic or poor management (capture, translocation, moving to smaller bomas for protection and intensive management)
- Unidentified or attempted poachings

Defacing refers to the brutal practice of hacking off the face of the rhino in order to get both horns and the horn bases. This practice will be covered by Prof Marais in his presentation.

4. RHINO HORN: MANAGEMENT, HARVESTING AND POACHING DETERRENT\ PROTECTIVE MEASURES

DEHORNING

Dehorning refers to the management process whereby the rhino is chemically immobilized and the horn cut off above the growth point. Dehorning is used as an anti-poaching tool, for harvesting of horn and for management purposes to prevent injuries with relocations and in captive situations.

DEHORNING AS AN ANTI-POACHING MEASURE

Dehorning as an anti-poaching measure has been utilized with very mixed results. Dehorning essentially removes only two thirds of the horn. The horn base and a small portion of the horn remain. This still has value for the poachers. Horn grows continuously and dehorning would need to be repeated.

INTERVIEWS WITH ARRESTED POACHERS INDICATE THAT:

- The serum that seeps between the horn and horn base is called 'horn pulp' in poaching circles and in demand for 'medicinal' purposes
- Dehorned rhino have been killed by poachers, not just for the horn base but to prevent the need for tracking a dehorned rhino again (risk\ time factor versus reward). Marking the feet with cuts into the pad of dehorned rhino was tried in Zimbabwe as a means of identifying dehorned rhino.
- As a revenge
- The horn from a live and \ or wild animal has greater potency than that of a dead or captive bred animal
- The horn of a rhino that survives a poaching attempt may be in greater demand.
- There are indications that the whole intact horn with concave base is in demand and may demand a higher price
- Removal of horn from a live animal may mean that the rhino will still be around to be reproached when the horn has regrown.

In considering the above points, it should be remembered In the case of highly organized syndicates, horn is ordered and specifications given whilst in other instances the poachers on the ground are not in contact with those higher up the supply chain, or with end users and may be influenced by local culture and beliefs. Opportunistic poachers take what they can get.

The involvement of vets, high schedule immobilization drugs, local capture and wildlife industry operators and the leakage of horn onto the illegal market further complicates the issues around horn.

Dehorning partially transfers the risk from rhino to 'owner ' and there have been a number of armed Contrary to claims that there it is completely safe, there have been a number of deaths associated with immobilization of rhino. If the horn is cut too low, close to or into the growth point, bleeding, infection, cavitation, maggot infestation and compromised or abnormal regrowth may occur. Dehorning for as an anti-poaching tool needs to be repeated every 14 to 18 months. There are costs and practicalities associated with dehorning and due to drug legislation, legal dehorning may only be carried out by a veterinarian.

The aesthetic aspects of dehorning are a consideration. Tourists may not want to see dehorned rhino, whilst others are accepting of the crisis and 'chopped horn' rhino when the reasons were explained.

Dehorning as a protective measure is not a silver bullet or fail proof and has only been successful when combined with a range of other security and anti-poaching measures. It has been effective in high risk and threat situations as a temporary measure.

Dehorning is not practical for large or extensive conservation areas but has some application in smaller managed populations combined with other 'tools'. As with any anti-poaching or protective measure, dehorning may push risk towards properties on which dehorning has not be carried out.

5. DEHORNING AS A HARVESTING TOOL

The same technique is utilized as for poaching deterrent but economically needs to be repeated every 24 months; and is currently being carried out by rhino owners in anticipation of trade opening.

Dehorning is regulated by NEMBA and TOPS.

6. IMPACTS OF DEHORNING ON RHINO

Given that the rhino has a horn for a reason and that the horn is utilized in various ways including maintenance behaviours, it can be assumed that dehorning will have an impact on the rhino.

There is currently insufficient data, time elapsed or scientific studies, to definitively state what the impacts of dehorning are. A dehorned rhino may be more vulnerable to and less able to protect itself against predators.

Dehorning in captive and semi-captive conditions, when all rhino are dehorned, appears to have no significant impact on the welfare or social behavior of the rhino. Problems arise when some are dehorned and others are not.

There is still a need for further, longer term 'trade neutral' research into the impacts of dehorning on 'wild' and captive rhino.

The question has been raised as to whether dehorning has increased the number of defacings but again, inadequate data is available.

7. HORN TREATMENTS

Various techniques involving the infusion of dye, toxic and /or X-ray detectable substances into the horn rendering it less attractive to poachers (and end users) have been attempted.

The best-known and patented procedure developed by Dr van Niekerk and Hems involves the infusion of a dye and anti-parasitic remedy, under pressure into the horn. The dye, the same as that utilized for bank notes in bank heists had some success based on 'smoke and mirrors' and the hype created around the horn treatment. Signage is put on all fences surrounding horn treated properties warning poachers.

There was initial resistance to horn treatments with various reasons given for not supporting the process. But a number of treatments have been carried out and in some areas; reduction of anticipated poaching was seen.

A treated horn seized recently from a poacher indicated that the dye had not spread through the horn and was concentrated only at the infusion site. Further research is needed and underway.

Detractors and critics express concern about the legality of intentionally poisoning a horn that may have negative impacts on the end user but the legal aspects were researched and essentially - you cannot sue your drug peddler for selling you cocaine cut with bicarb when you buying an illegal product and that the toxin used is being used within the regulations under the extra label use allowed on products by veterinarians.

Given the extent and nature of the poaching crisis, horn treatments could be considered as another tool against poaching and a means of devaluing horn and reducing risk. The risks include those of chemical immobilization.

Success of process is dependent 'smoke and mirrors'. As with dehorning, may be effective in small populations; cost and practicality are considerations and may not be effective for larger or extensive areas.

Other techniques that have been tried to devalue horn include drilling multiple holes into the horn and injecting dye. This may devalue horn but carries the risk of weakening the horn structure.

8. HORN REMOVAL

A new and still highly controversial technique has been suggested and is currently under research with mixed results and response whereby the horn growth point or horn bud is completely removed effectively preventing the horn from growing back. There have been some very public 'cow boy attempts' with subsequent complaints to Veterinary Council which have biased public view to this; but further research and development of the technique is being undertaken on by Dr Gerhard Steenkamp with reportedly good results (and under more humane and professional conditions).

Further complicating the horn issues is the question of corruption at local permit issuing level. Permits are required to dehorn or treat a rhino horn. There are firm indications that owner information is leaked from permitting offices to poaching syndicates.

9. INTENSIVE HORN PRODUCTION

Intensive farming of rhino for horn production and harvesting is currently underway. Whilst this may produce a harvestable and ready supply of horn there are other welfare implications and ethical considerations about intensive farming of a non-domesticated animal and activities associated with intensive farming – one being the forced removal of calves to encourage cows to breed more frequently, disease and poaching risks.

As a conservationist with a strong involvement in rhino I would like to see rhino, free ranging in the wild, breeding and doing what rhino should be doing – with their horns intact. But the poaching crisis is forcing us to look at different options, we need to keep open minds, think laterally and remember that 'There is never the right way to do the wrong thing' and we need to push through and find the right way to do the right thing for the right reasons ensuring the continued existence of rhino on the planet.

Bibliography

- Pienaar, D.J and Du Toit J.G. 2005. *White and black rhinoceros*. In: Bothma, J. du Preez and van Rooyen. *Intensive Wildlife production in southern Africa*. Centre for Wildlife Management. University of Pretoria. Van Schaik Publishers. 2005. ISBN 0 62702549 8
- Geldenhuis, J. 1970. *Dehorning black rhino: the Namibian Experience*. *Proceedings of a symposium on rhinos as game ranch animals*. Pretoria: Wildlife Group of the Southern African Veterinary Association.
- Kock, M.D. 1991. *Report on experimental dehorning operation of white rhino in Hwange National Park*. Zimbabwe. Harare: Departmental Report of National Parks and Wildlife Management, Zimbabwe.
- Lindeque, M. 1990. *The case for dehorning the black rhinoceros in Namibia*. *South African Journal of Science* 86:226-227.
- Under Siege: Rhinoceroses in South Africa*. ARA Special Report 31\8\2009
- Kock, M.D. Atkinson, M. *Dehorning Black (Diceros Bicornis) and White (Ceratotherium simum) Rhino*. *The Zimbabwean Experience*. National Parks and Wildlife Management. Harare. Zimbabwe.
- Berger, J. Cunningham, C. *Is dehorning scientifically prudent? Programme in Ecology, Evolution and Conservation Biology 2* Department of Environmental and Resource Sciences University of Nevada (MS-186
- Lindeque, M. (1990) *The case for dehorning the black rhinoceros in Namibia*. *S. Afr. J. Sci.* 86,226-227. Skinner, J. Smithers, R. *The Mammals of the Southern African Sub Region*. New Edition. University of Pretoria. 1990
- Lindeque, M. & Erb, P. (1995) *Research on the effects of temporary horn removal on black rhinos in Namibia*. *Pachyderm* 20,27-30.
- Estes, R.D. *The Behavior Guide to African Mammals, including Hoofed Mammals, Carnivores, Primates*. University of California Press. 1991

- Loutit, B.L. & Montgomery, S. (1994a) Rhino conservation. *Science* 265, 1157-1158.
- Martin, E.D.B. *Rhino Poaching in Namibia from 1980 to 1990 and the illegal trade in Horn*
- Hutton, J. *Arguments for re-opening trade in African Elephant Products from Southern African States with healthy and well managed-elephant populations.*
- Balfour, D & S. *Rhino. The Story of the Rhinoceros and a plea for its Conservation. Struik.1991 ISBN1868251519*
- Africa Geographic. March 2011*
- Player, Ian Dr. *The White Rhino Saga. Collins. 1972*
- Guggisberg, CAW. *SOS Rhino A Survival Book Andre Deutsch*
- Is Dehorning African Rhinos Worthwhile? E.J. Milner-Gulland¹, N. Leader-Williams² and J.R. Beddington³ Ecosystems Analysis and Management Group, Department of Biological Sciences, University of Warwick, Coventry, CV4 7AL, UK ² Department of Wildlife, P.O. Box 63150, Dar es Salaam, Tanzania ³ Renewable Resources Assessment Group, Imperial College, 8 Princes Gardens, London SW7 1NA, UK*
- Various IUCN and CITES documents and reports on wildlife trade and rhino poaching.*
- http://www.rhinosourcecenter.com/ref_files/1190402386.pdf
- <http://www.thezimbabwean.co.uk/2009111826796/opinion-analysis/rhino-de-horned-to-stop->
- Lee, S., C. Hoover, A. Gaski, and J. Mills. 1999. *A World Apart? Attitudes Toward Traditional Chinese Medicine and Endangered Species in Hong Kong and the United States. TRAFFIC East Asia Report. Washington, DC. 80 pp. This report is a compilation of the sociological marketing research undertaken by TRAFFIC and WWF to statistically determine (1) the demographics of the Chinese communities consuming TCM in Hong Kong and the United States and (2) the attitudes of consumers of TCM who use or have used rhino horn, tiger bone, and other products made from endangered or protected species.*
- <http://www.traffic.org/tcm/ChineseMedicine.pdf>
- African and Asian Rhinoceroses – Status, Conservation and Trade*
- A report from the IUCN Species Survival Commission (SSC) African and Asian Rhino Specialist Groups and TRAFFIC to the CITES Secretariat pursuant to Decisions 13.23-25 taken at the 13th meeting of the Conference of the Parties, and further deliberations at the 53rd and 54th meetings of the Standing Committee*
- Richard H Emslie^{1,2}, Simon Milledge^{3,1}, Martin Brooks¹, Nico J. van Strien^{2,1} and Holly T. Dublin^{4,1} (compilers)*
- 1 IUCN/SSC African Rhino Specialist Group (AfRSG). 2 IUCN/SSC Asian Rhino Specialist Group (AsRSG) 3 TRAFFIC 4 IUCN/SSC January 2007*
- Hays, Jeffery Animal Parts and Chinese Medicine 2009*
- World Watch Institute reports Vision for a sustainable world.*
- www.iucn.org, www.cites.org, www.wwf.org, www.sosrhino.org
- Lindsey, P. A. and Taylor, A. (2011) *A study on the dehorning of African rhinoceroses as a tool to reduce the risk of poaching. Report prepared by the Endangered Wildlife Trust (EWT) for the South African Department of Environmental Affairs (DEA). Pienaar, D. J., Hall-Martin, A. J. and Hitchins, P. M. (1991). Horn growth rates of free-ranging white and black rhinoceros. Koedoe 34: 97–105.*

CHAPTER 13**GAME RANGERS ASSOCIATION OF AFRICA****AUTHOR – CHRIS GALLIERS, GAME RANGERS ASSOCIATION OF AFRICA****1. INTRODUCTION**

Africa's resources are becoming more accessible in the era of globalization. Power balances in this regard are rarely equitable and even less sustainable. These wanted scarce resources generally carry high values on illegal markets and it is these prices which creates a point where tension is drawn between risk and reward. The situation is therefore not only increasing the role and responsibility of rangers in Africa, but also the level of risk that they face in carrying out their work.

Rangers today need more than ever, to band together as a community of practice on the frontline of conservation and preservation of the natural heritage of generations to come.

2. THE 'RANGER'

The Term 'Game Ranger' is used loosely and broadly. It encompasses Game Warden, Conservation Officer, and many more protected area positions. Their tasks are multi-faceted and can include the following:

- Ensuring the day to day health and well-being of the game,
- Research and monitoring,
- Game capture and introductions,
- Population management,
- Burning programs,
- Infrastructure and equipment maintenance,

- Public relations,
- Environmental education,
- Local community relations, liaison and involvement.
- Financial controls,
- Human resource planning and administration,

Essentially Game Rangers are the wildlife managers and the field force in Africa, working at the "coal face" of conservation where their prime responsibility is to ensure the territorial integrity and safety of the protected area under his/her management.

Sir Alfred Pease does well to sum up the essence of being a Game Ranger when he said, "We have lived in the best time and seen the wonders of wildlife...and belong to a brotherhood the members of which have memories that cannot be matched...".

As mentioned above, rangers form the frontline in protecting our natural heritage for future generations. Their work is often dangerous, difficult, unappreciated, unrecognized, and unknown. Rangers dedicate their lives to protect what is not theirs, but ours.

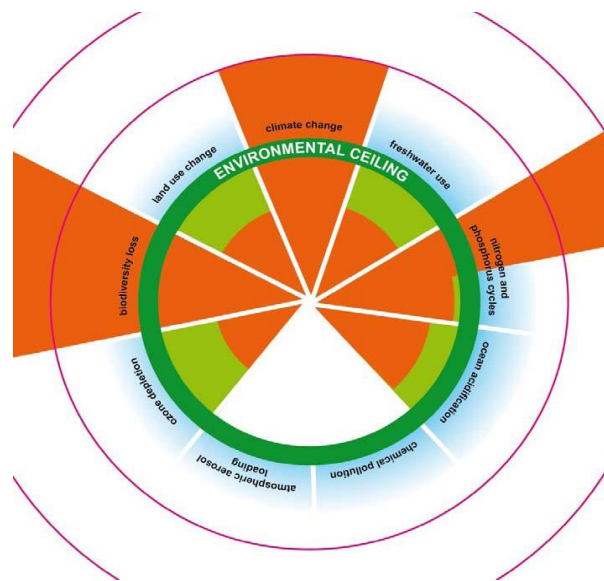


Figure 1: Work done by Rockström at the Stockholm Resilience Centre which shows how the anthropogenic actions are resulting in an unsustainable impact on biodiversity.⁷

Many rangers lose their lives whilst protecting our natural heritage whether it is due to sickness, fire, animal related death or increasingly to armed skirmishes with poachers. In the last year alone almost 60% of the rangers killed were African rangers, These figures are merely the reported deaths and it is thus believed that the figure may be two to three times this as there is no doubt that there are countless others whose tragic deaths have gone unrecorded.

⁷J. Rockström et al (2009b) 'A safe operating space for humanity', *Nature* 461, 23 September 2009



WORLD RANGER DAY 2013 – RANGER ROLL OF HONOUR IN MEMORIAM



Please Note: These names only represent the reported and 100% confirmed deaths of Park Rangers for the last 12 months. The complete figure is likely to be 2-3 times as much. Please report any ranger deaths or injuries to info@thinthreenline.org.au

Figure 2: The IRF ‘Roll of Honour’ recognising the reported ranger deaths between 1st August 2012 and 31st July 2013 (World Ranger Day).

The Patron of the GRAA and world renowned conservationist Dr. Ian Player recognised the crucial role that rangers play in the world today:

“The late Nick Steele who was a game ranger in the iMfolozi and Hluhluwe Game Reserves and ultimately became the director of the Department of Nature Conservation KwaZulu, once made a public statement. He said, ‘Wildlife conservation is the most noble cause in the world today’. I agree wholeheartedly with that statement. All over the world game rangers, both men and women of all nationalities are the thin green line protecting wild areas on our planet. Many have been killed and others wounded this year doing their duty. The national parks, game reserves and natural areas are a lifeline for the sanity of our species. Let us all honour these wonderful men and women who daily put their lives at risk.”

The recent upsurge in rhino and elephant poaching across Africa is making the rangers’ job increasingly difficult. It is a good time to reflect on the daily battle that these men and women face to ensure the protection of our wilderness areas.

They deserve not only our admiration and acknowledgement but our undivided support as they continue to ensure that the roar of the African lion be heard by the children of our children’s children and forever.

3. CHALLENGES OF PROTECTING THE PROTECTED AREAS

INADEQUATE AND EFFECTIVE LEGISLATION

In many cases the legislation offers little protection of rangers. In some cases it favours the poacher.

POOR PLANNING AND CONFLICTING LEGISLATION (NEM PPA)

An example of poor planning can be seen in the image below which shows a large and densely populated settlement adjacent to the boundary of the Kruger National Park. Such densities up against the boundary of a protected area often result in a level of conflict, with rangers and animals. It also becomes a perfect site from which poaching activities can be launched. This kind of development goes against the Protected Areas Act which sets out buffers for protected areas.



INFLEXIBLE BOUNDARIES

Unfortunately with the effects of poor planning and land transforming activities, a protected area can become a resource island. The situation can be exacerbated through the effects of climate change.

NEW WARS AND NEW ENEMIES

The face of a poacher has changed from the near constant poor subsistence poacher to one which is well resourced and capacitated. Most poaching today is for illegal commercial gain, often supplying wildlife products transnationally. Also, it is not just poachers with heavy caliber rifles doing the poaching. In some cases poachers use helicopters and dart guns and increasingly we are seeing the indiscriminate use of poison.

GLOBALISATION – NEGATIVE POWER GRADIENT

The buying power and resources available to the international criminal syndicates makes the offering for poachers in Africa to risk their lives to meet any orders placed an attractive one.

Sufficient Resources for Rangers to be Effective are major challenge in Mali:

- Mali – 24th largest country in the world
- 113 forest reserves, 3 National Parks, 13 Fauna Reserves, 1 Chimp Sanctuary and Birdlife Reserve (Niger Delta)
- 900 rangers in total
- Bourama Niagate– Managing Director Parc National de la Boucle du Baoule et des Reserves Adjacentes has 59 rangers for 2,5m ha with 7 cars and 15 old bicycles as transport in the Park.

4. THE EFFECTS ON PARKS/RESERVES

- There is currently reduced resources and capacity dedicated to maintaining reserve operations. This is no longer a conservation problem yet conservation is having to foot the proverbial bill. This puts pressure on the other necessary functions need to run and maintain an effective protected area.
- Reduced ability to respond to other conservation needs – this is a major challenge where other functions of a ranger are being directed to security tasks and actions, and not to the other key functions needed to effectively run a Protected Area. A good example is where approximately 80% a Section rangers time in Kruger is being spent on rhino anti-poaching issues
- Loss of business: there is potential to loose tourism revenues due to perceived risk (e.g. Tanzania elephant poaching has resulted in a decrease in tourism)

5. THE EFFECTS OF POACHING ON RANGERS

- Extended roles and responsibility (i.e. quasi-military sovereignty protector?)

The GRAA acknowledges the role played by the dedicated field personnel who are attempting to keep this situation under control. The sacrifices that these men and women are making in order to ensure the preservation of our natural resources deserve further recognition and appreciation. The debt we owe these dedicated and brave conservationists and their families can never be repaid.

The GRAA calls on the President of South African to fully acknowledge the onslaught that our rangers are facing while they attempt to protect not only South Africa's rhino but its natural heritage in general.



Professionally trained and armed militia from Mozambique enters South Africa to plunder the country's natural resources on a daily basis. These actions are tantamount to acts of war and such actions are putting not only South African citizens at risk but also one of South Africa's most valuable economic sectors, namely tourism⁸. South Africa's rhino hold significant value within the ecotourism industry as part of the Big 5. The GRAA does not believe it is the rangers' responsibility to defend the borders of South Africa against these armed incursions which aim to slaughter the country's rhino and whoever dares to stand in their defense.

Game rangers operate in a constrained environment in terms of resources and legal boundaries compared to that of the military. The current poaching situation needs to be moved beyond the responsibility of the Department of Environmental Affairs. The financial pressure being felt through the deflection of duty to the Department of Environmental Affairs and ultimately, conservation, needs to be challenged.

We therefore call on the South African government to take a zero tolerance approach to what amounts to total disrespect of the country's borders. We call for an increased South African National Defense Force presence on our borders to maintain their effectiveness in securing the property, economy and citizens of South Africa.

We urge the South African government to address the matter immediately with Mozambique at the highest possible diplomatic levels, with the mandated ministerial departments and to exert severe pressure on the Mozambican government to address the situation. The current disregard by Mozambican citizens of the sovereignty of South Africa's borders cannot be allowed to continue. The situation has escalated from an environmental issue to one of national security. It is time to acknowledge this and act accordingly with the full force of the law.

⁸ Tourism in South Africa accounted for about 8,6% of total GDP in 2011 and provided a total of an estimated 1.2 million direct and indirect employment positions

(<http://www.tourism.gov.za/AboutNDT/Publications/State%20of%20Travel%20and%20Tourism%20in%20South%20Africa.pdf>)

- **SOCIAL IMPACTS** – Rangers are often employed from neighbouring communities. It thus becomes possible for rangers to engage with poachers who may originate from their own communities. In some cases they could end up shooting them. The perceptions of the ranger on him returning home can be negatively influenced through his job. In some cases rangers can actually be intimidated by the criminals in their communities.
- **PSYCHOLOGICAL TRAUMA** - With a war-like working environment, rangers stand the risk of shooting poachers in self-defense. In such cases they may well be criminally charged (for murder) for performing ones duties. Having to work under the fear of being held up for murder is extremely difficult. It is made worse when the ranger does not have the support of his employee. In some cases it is reported that rangers would rather avoid any conflict so that they do not end up having to endure such a traumatic process.
- **TRAUMA TO RANGER’S FAMILY** – ranger’s work hours can be erratic and in some cases the length of time on duty may vary. Sacrifices are continually made by rangers and this can impact on a ranger’s family. Also the increased risk to the life of a ranger adds additional strain on one’s family.
- **DECREASING MOTIVATION** - this can be influenced by the following factors:
 1. Ineffective support – institutional, skills development, legal and political
 2. Weak structures and systems
 3. Overextended – long and varied hours of work
- Low salaries can in some cases lead to a decreases in a ranger’s resilience to being corrupted
- Having a sense of pride for the profession

6. RANGER EFFECTIVENESS

- There is evidence that “more feet on the ground” increases effectiveness.
- IUCN 1 field ranger per 1000ha
- SA labour laws (security vs conservation)
- SA firearms legislation
- Rangers are being effective at their level of influence
- Are they being let down by other crime fighting institutions (local and International)?

Poaching Level	KNP	MNP	GP	MP	EC	LP	NW	FS	KZN	WC	NC	SA Totals	Level Description
Level 1	30	0	0	2	0	9	2	0	18	0	0	61	Poacher
Level 2	0	0	0	0	0	0	0	0	0	0	0	0	Receiver / Courier
Level 3	0	0	0	0	0	0	0	0	0	0	0	0	Courier / Buyer
Level 4	0	0	0	0	0	0	0	0	0	0	0	0	Exporter
Level 5	0	0	0	0	0	0	0	0	0	0	0	0	Buyer / Driver
Total Arrests	30	0	0	2	0	9	2	0	18	0	0	61	

Table 1: The table shows the National Poaching Arrests for 2014 up until 1st April. Only level one poachers have been arrested, which suggests that rangers are being effective in dealing with the threat that is at the level at which they are able to influence⁹.

7. CONCLUSION

- Need to focus on the next 4-years. Trade or no trade we need to start seeing gains made against poaching within this period or else it may not even be available as an option.
- We need effective interventions at every level
- Well trained and capacitated rangers - up-skilling of rangers needs to continue and we need more rangers
- De-fragmentation of anti-poaching work – we need to build up trust across landscapes in order to communicate and share working solutions.
- Demand states – apparent low empathy for animal welfare but more sensitive to the human cost. Can we emphasize this more as it is a war?
- Increase community of practice and shared learning – rangers finding on-the-ground solutions together. The GRAA believes this has significant value both across provincial and international borders. Poachers are not static and can move across these borders to employ their *modus operandi* of choice.
- Financial support as poaching has gone beyond the realm of pure conservation concern and impact. More resources are need or alternative compensation mechanisms (particularly for the private sector) to support the rising cost associated with securing rhinos,
- Efficiency in the way justice is metered out - those that rangers arrest must be dealt with quickly and punitively to send out the requisite message
- Equally there needs to be well trained, resourced and committed people all the way down the prosecution chain that are free from being corrupted
- And finally the full backing from the highest office in every range country and demand country will make the ultimate difference.

⁹ National rhino poaching information from DEA and EKZNW, 1 April 2014

ABOUT THE GAME RANGERS' ASSOCIATION OF AFRICA (GRAA)

The Game Rangers Association of Africa (GRAA) was founded in 1970 as a non-racial, non-political organisation. The Game Rangers Association of Africa is a properly constituted association and has been registered as a non-profit organisation.

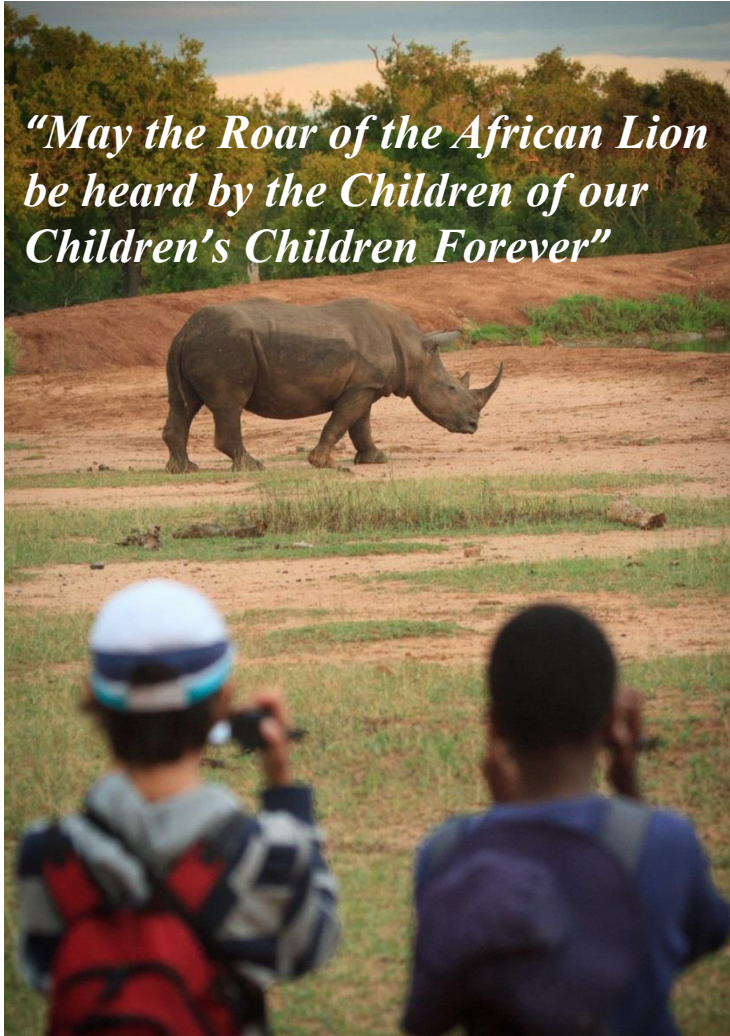
The Game Rangers Association of Africa is a longstanding and well established defined community of practice. The Game Rangers' Association of Africa provides support, networks and representation for game rangers across Africa. The Game Rangers Association of Africa believes that game rangers should operate with pride, and with passion for their profession whilst promoting best management practices in ensuring the conservation of our natural heritage.

The Game Rangers Association of Africa believes that the continued future existence of Africa's wilderness and its wildlife is ultimately and irrevocably linked to the expertise, ethics and motivation of those tasked with the "on the ground" protection and management of this priceless asset. This involves inter alia the conservation of the natural heritage, and the promotion of sustainable utilization of natural resources, ecotourism, community involvement and environmental education.

The Ranger in Africa has many real needs, but without real support and relevant training the Ranger will fail, and Africa's priceless natural and cultural heritage will be lost forever.

The Annual Rhino Awards (2014), which recognises rhino conservationists, will be held on World Ranger Day which is recognised by the International Union for Conservation of Nature (IUCN) on the 31st July.





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CHAPTER 14

SCOPING STUDY ON THE PROSECUTION OF WILDLIFE RELATED CRIMES IN KENYAN COURTS

AUTHOR – DR PAULA KAHUMBU

A study conducted by WildlifeDirect, a Kenya based non-profit organisation reports that Kenya's legal system has led to a culture of impunity within the criminal fraternity which may account for the escalation of poaching of elephants and rhinos and trafficking of ivory and rhino horn. The report titled "Scoping study on the prosecution of wildlife related crimes in Kenyan Courts" will be presented to Kenya's Chief Justice, Dr. Willy Mutunga on Friday 31st of January at his office in the Supreme Court of Kenya. To download the report WILDLIFEDIRECT court study 26.1.14

Although thousands of poachers have been arrested for killing elephants and rhinos in recent years, the study found evidence of only 8 convicted poachers being jailed between January 2008 and June 2013. Despite major seizures of ivory at Mombasa ports, no case in court could be found for this period.

All offenders are bailed at a fraction of the value of the wildlife trophy, even in cases of repeat offenders. 65% of all wildlife offenders plead guilty and penalties on conviction are fines of ksh3 – 40,000. Fewer than 4% of all convicted wildlife offenders ever go to jail. .

Paula Kahumbu, Executive Director of WildlifeDirect who is the lead author of the report says "Our study of wildlife trials in Kenyan courts reveals that we make it easy for poachers and dealers to operate in our country. This leniency in our courts has led to a culture of impunity within the criminal fraternity, and Kenya has become a safe haven for international criminal cartels who control poaching and trafficking in our country. These people are destroying our economy, our heritage and our image. We hope that this study triggers an immediate government response to address the problem"

Once known for its aggressive stand on poaching, Kenya has now been listed amongst the Gang of 8, along with Vietnam, Uganda, Tanzania, Malaysia, Philippines, Thailand and China, as the world's most complicit countries in the illegal killing and trafficking of ivory.

Experts believe that nearly 100 elephants are gunned down each day across Africa to supply thriving illegal ivory markets mainly in the Far East. At this high and escalating rate, WildlifeDirect predicts that elephants will disappear from the wild across most of Africa within ten years.

The scoping study commissioned by WildlifeDirect, looked at court records in seventeen Kenyan courts adjudicating on wildlife related crime between January 2008 and June 2013. Key findings of the study reveal that

- 1) Wildlife crimes are often weakly prosecuted and subsequently are treated as petty crimes and attract very lenient penalties – Magistrates sent only 3.6% of convicted offenders to jail.
- 2) Poor case management is hindering the prosecution of wildlife related crime – 70% of the case files were reported missing or misplaced in the courts

3) Failure to use the full force of the law – despite enabling legislation, under wildlife and other provisions such as the Economic Crimes Act and the Organized Crime Act, wildlife crimes are often prosecuted under the penal code or other less punitive legislation.

Kenya’s new Wildlife Conservation and Management Act 2013 which came into effect on January 10th 2014 aims at address the problem of lenient penalties by imposing a minimum fine of Ksh 20 million or life imprisonment for offenders against endangered species such as elephants and rhinos. The first victim of the law was a Chinese man found with an elephant tusk, while on Transit at Jomo Kenyatta international Airport. He was found guilty and fined Ksh20 million, or a 7 year jail term should he fail to pay.

“Wildlife crimes threaten the very stability, security and economic aspirations of our nation. This report comes at a critical moment of hope for Kenyans, as the new Wildlife Conservation and Management Act becomes operational, but the law alone is not enough, it will remain as impotent as the last one, unless failings in the law enforcement chain from investigations to court are addressed” Philip Murgor – Advocate and Former Director of Public Prosecutions and Board member of WildlifeDirect.

The key recommendations of the report include

- 1) The Office of the DPP to handle charging decisions on all elephant ivory and rhino horn cases.
- 2) Chief Justice to:
 - i. Issue guidance on bail
 - ii. Empower magistrates to actively manage cases from first appearance to conclusion of case.
 - iii. Reform case file management.
- 5) National Council on the Administration of Justice to streamline wildlife trials, to achieve effective inter-agency cooperation
- 6) Chief Justice to designate special wildlife courts to handle cases in priority areas.

The findings of the report are under discussion at the Second National Wildlife Crime Dialogue meeting at Safari Park Hotel on 30th of January organized by the Judiciary Training Institute.

Dr Kahumbu and Mr Murgor with other authors of the report will present their findings to the Chief Justice at 11 am at his office in the Supreme Court on 31st January

Scoping Study on the Prosecution of wildlife related crimes in Kenyan courts; January 2008 to June 2013. 2014.

Kahumbu, P., L. Byamukama, J. Mbuthia, O. Drori. WildlifeDirect Report.

<http://baraza.wildlifedirect.org/files/2014/01/WILDLIFEDIRECT-court-study-26.1.14.pdf>

WildlifeDirect is a Kenyan based conservation charity founded by Richard Leakey and Chaired by John Heminway. Kenyan Board members include Philip Murgor and Irungu Houghton.

Paula Kahumbu the Executive Director. WildlifeDirect recently launched the “Hands Off Our Elephants” Campaign with her Excellency the First Lady Margaret Kenyatta as patron. For more information, visit <http://wildlifedirect.org/> or follow us on Twitter @wildlifedirect

CHAPTER 15 THE CHANGING VALUE OF THE RHINO: A TOURIST PERSPECTIVE

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1. INTRODUCTION

The aim of this paper is to determine how the willingness of tourists to pay and their preference to view the rhino has changed in relation to other species of the Big 5. Nature based tourism is one of the key reasons why tourists visit South Africa. Part of nature based tourism is the Big 5 (lion, buffalo, rhino, elephant and leopard). The big 5 is an established brand and gives South Africa a competitive advantage. Generally species such as the rhino has a consumptive and non-consumptive value. The former is based on the amount that hunters are willing to pay for a species and the non-consumptive is the touristic value of a species. In other words, how much are tourists willing to pay to view or photograph a species. The rhino, which is the species under investigation in this paper, has a tourist, a hunter's, and an illegal value, namely a poaching value. This research and paper only focuses on the tourist value of the Big 5 and how this has changed over a period of three years using the same methodology over the three year period. Very little research on this topic has been conducted despite the fact that tourism is seen as one solution to the problem of poaching and increasing revenue for conservation.

2. METHOD OF RESEARCH

Three surveys were conducted at the Kruger National Park as it is well known for the Big 5 and also is host to the largest population of rhinos in the world. It is also the Park that is the hardest hit by poachers. Kruger Park attracts approximately 1 million tourists per year and the results that are going to be discussed here were collected from 2011 to 2013. Contingent Valuation Method (CVM) was used to determine the amount that tourists were willing to pay to see the Big 5. Tourists also had to indicate not only if they were willing to pay, but how much they were willing to pay per species. For the purpose of this paper only the amount for the rhino is reported.

3. RESULTS

Three aspects of the research will be reported here, namely ranking of Big 5 according to respondents, willingness to pay to view a species (yes/no), and amount persons were willing to pay to view the rhino. Table 1 show the preferences per species and due to the fact that the surveys were conducted during different times of a year, 2011 and 2013 had a high number of domestic tourists and 2012 a high number of international tourists. It is important to remember that the spending of international tourists in National Parks is considerably lower than domestic tourists because they stay for a shorter period of time.

Table 1: Preferences per species of the Big 5

	2011	2012	2013
Lion	2 (25%)	2 (24%)	2 (24%)
Elephant	4 (13%)	4 (12%)	4 (15%)
Buffalo	5 (11%)	5 (10%)	5 (12%)
Leopard	1 (36%)	1 (38%)	1 (31%)
Rhino	3 (15%)	3 (16%)	3 (18%)

From the results the following is evident. First of all, the five species kept their respective positions over the period where the leopard is first followed by the lion and rhino. Secondly, the only species that showed a consistent growth over the period under investigation is the rhino.

Table 2: Mean values

	2011	2012	2013
Lion	590.94	330.34	544.16
Elephant	530.81	149.46	280.15
Buffalo	396.16	134.35	263.19
Leopard	774.40	481.35	710.18
Rhino	585.87	312.65	606.38

According to Table 2 the mean value or amount per species again reveals two important findings. Firstly, that 2012 had the lowest amounts, which confirms the fact that foreign tourists are not willing to pay as much as domestic tourists. Secondly, the only species that increased from 2011 to 2013 was the rhino.

Table 3: Medians

	2011	2012	2013
Lion	200.00	150.00	200.00
Elephant	100.00	100.00	100.00
Buffalo	100.00	67.50	100.00
Leopard	300.00	200.00	300.00
Rhino	150.00	100.00	200.00

Table 3 which reveal the median clearly shows the consistent growth or increase as reported in the tables above. This brings us to the question: what is the non-consumptive value of the rhino? This was determined by using the percentage of people who indicated their willingness to pay to see the rhino which was the following during the respective years: 26.6% (2011), 30.4% (2012) and 36.9% (2013). Based on the percentages of respondents who were willing to pay, the average amounts that respondents were willing to pay, as well as the visitor numbers to Kruger National Park, the non-consumptive value of the rhino ranges from R39.5m in 2012 to R112.4m in 2013.

4. CONCLUDING REMARKS

This research confirms that while poaching continues the non-consumptive value of rhinos are on the increase. The amount that people are willing to pay to see the rhino is significant and it is on the increase. This is evident since the rhino is the only species that showed an increase in willingness to pay and an increase in the amounts respondents were willing to pay. The research also confirms that the Big 5 has a significant value; however, not all tourists are willing to pay to see them. Tourism; therefore, is a major contributor to conservation but not the sole solution to increase conservation funding and to protect the rhino or any other species for that matter. Results furthermore showed that domestic tourists are more willing to pay to see the rhino and this could be explained by the fact that these animals are part of Africa's heritage and an enormous tourism asset.

Based on this research the author recommends that the following actions should be taken. Firstly, greater involvement of all role-players, especially communities – their participation is of paramount importance. Secondly, proper research is required before considering legalizing rhino horn trade which includes the determining of the long-term impact of dehorning on the vulnerability of rhinos in their natural environment

CHAPTER 16

“WHEN THE BUYING STOPS THE KILLING CAN TOO”

WILDAID

95% OF THE WORLD'S RHINOS HAVE BEEN LOST IN THE PAST 40 YEARS

1. BACKGROUND

All rhino species are critically endangered, except the Southern white rhino, which has recovered from around 50 to over 20,000 individuals since the 1960s. The precipitous decline of African rhinos everywhere outside of South Africa was halted in 1993 by tough action from the Convention of the International Trade of Flora and Fauna (CITES), which led to the sanctioning of Taiwan by the Clinton Administration and the banning of domestic sales of rhino horn (international trade ban being in place since 1975) in China, Hong Kong, and Taiwan. This process involved the arrest of rhino horn sellers and a public burning of rhino horn in China and tremendous publicity surrounding the sanctions in Taiwan. Between 1994 and 2008 both Black and Southern white rhino populations grew steadily.

In 2008 poaching started to rise and last year the world witnessed record levels of rhino poaching in South Africa and Zimbabwe with the main markets identified as Vietnam and China. In 2012, a record 668 rhinos were killed for their horns in South Africa. Already by early November 2013, over 860 rhinos have been killed.

During this time legal trophy hunting of rhinos in South Africa was infiltrated by Vietnamese organized crime. Suddenly a large number of rhino horn “trophies” were exported from South Africa to Vietnam and it appears that this was used to develop new markets in Vietnam, which are now being fed by horns from poaching. In addition, increased Chinese economic activity in Africa contributed to an increase in the apprehension of Chinese smuggling rhino horn.

While tens of millions of dollars are spent annually on studying and protecting rhinos in the wild, since the 1993 interventions only a few hundred thousand dollars has been spent on addressing the underlying demand for rhino horn that drives poaching.

2. WHAT IS WILDAID DOING?

In 2013, we launched a three-year campaign to reduce rhino horn demand in China. The kick-off featured new public service messages from longtime WildAid Ambassador Yao Ming and actor/director Jiang Wen that were broadcast thousands of times on nearly two dozen TV channels in the first two months of the campaign.

Moving forward, our goal is to use existing methodology, networks, and contacts from our shark fin campaign to:

Raise awareness in Vietnam and China of the rhino-poaching crisis.

Support Vietnamese lawmakers in banning rhino horn sales and increased enforcement efforts there and in China.

Measurably reduce demand for rhino horn in Vietnam and China.

In addition, messages were recorded with China's leading actress Li Bing Bing, iconic film star Jackie Chan, and American actress Maggie Q, as well as forming collaboration between The Duke of Cambridge (Prince William), sports icon David Beckham, and Yao Ming.

We also developed partnerships with African Wildlife Foundation, Education for Nature--Vietnam, and the National Basketball Association. We continue to liaise with the Chinese State Forestry Administration and are encouraged to see them reach out to all Chinese travelling abroad in a message not to buy rhino horn via Chinese cell phone providers.

In 2014, we will continue to build momentum by creating more new messages and extensive street-level and social media campaigns. Our continuing partnership with Sina Weibo (e.g. China's Twitter) will help spread our messages as we create an editorial board of celebrity ambassadors to share facts alongside their personal views online.

3. THE IMPACT TIMELINE

March, 2013: We compile the "Rhino Horn Demand" report, showing a significant lack of knowledge among China's residents regarding rhino poaching and a strong willingness to ban rhino horn once presented with the facts of the trade.

April, 2013: Together with Yao Ming and the African Wildlife Foundation we launch the "Say No to Rhino Horn" campaign in Beijing.

April, 2013: CCTV and nearly two dozen broadcast stations begin airing several public service messages featuring Yao Ming's recent visit to Africa.

May, 2013: China's leading actress, Li Bing Bing, films a public service message to air in China and Vietnam (release date TBD).

June, 2013: WildAid Ambassador Jackie Chan films a public service message to air in China and Vietnam (release date TBD).

June, 2013: WildAid Ambassador and American actress Maggie Q films a public service announcement to air in China and Vietnam (release date TBD).

September, 2013: Along with our partner African Wildlife Foundation, we officially launch the "Say No to Rhino Horn" campaign in Vietnam.

September, 2013: Along with African Wildlife Foundation, we officially launch "The Sickening Truth" graphic video message online in three languages: English, Mandarin, and Vietnamese.

September, 2013: The Duke of Cambridge (Prince William), sports icon David Beckham, and Yao Ming meet in London to film two public service messages for WildAid (first message released December 2013, second message release date TBD).

September, 2013: We re-launch Yao Ming's blog as he re-visits Kenya to continue filming for "The End of the Wild" documentary to be released in 2014.

October, 2013: WildAid Ambassador, artist, and activist Asher Jay creates the "Blood Horn" and "Africa's Panda's" campaigns for publications in China and an English language social media initiative.

November, 2013: Education for Nature–Vietnam officially joins the “Say No to Rhino Horn” campaign in Vietnam, assisting with broadcast television outreach.

November, 2013: Together with NBA Cares, we launch a broadcast and social media campaign in China featuring Pau Gasol of the L.A. Lakers.

December, 2013: We launch "Fatherhood", a new public service message featuring The Duke of Cambridge (Prince William), sports icon David Beckham, and Yao Ming.

January, 2014: Yao Ming appears on CNN International to discuss the demand for ivory and the elephants he saw killed for their tusks during his visit to Africa with WildAid.

January, 2014: South Africa announces that 1,004 of its rhinos were poached in 2013, a sharp increase from 13 in 2007. An additional 37 rhinos are killed for their horns in the first few weeks of 2014.

4. LINKS TO ONLINE MEDIA:

www.wildaid.org/media

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