

Wildlife Crime and CITES Trade Bans – Applying the Principles of Gladwell (2013)

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In the final chapter (*Part Three: The Limits of Power*) of a stimulating book,¹ Malcolm Gladwell explores the processes that underpin the relationships between crime and punishment and the wrong assumptions that have gone into the development of legislation to combat crime and the measures that have been taken to reduce crime.

The assumptions are very relevant to a topical issue which has grabbed global media attention in recent years – that of wildlife crime (illegal killing and trafficking in wildlife products). The solution to the problem is seen by many as intensification of law enforcement.^{2,3} Under the CITES⁴ Treaty this approach manifests itself in global trade bans, e.g. on ivory and rhino horn.

Gladwell asks the question “What if the relationship between punishment and crime is ... such that ... past a certain point, cracking down on crime stops having any effect on criminals and maybe even starts to make crime worse?” History is replete with examples where powerful governments that have been able to deploy formidable resources against ‘crime’ have failed in their efforts. Gladwell gives a number of case studies where this has happened (pp238-245).

In California in 1994 when the ‘Three Strikes’ law⁵ was passed, advocates of this approach assumed that every extra criminal they locked up and every extra year they added to the average sentence would bring about a corresponding decrease in crime. The protagonists of the law believed that “more” was always better. Gladwell introduces the theory of the inverted-U curve ... “Inverted-U curves are all about *limits*. They illustrate the fact that ‘more’ is not always better and there comes a point, in fact, where the extra resources that the powerful think of as their greatest advantage only serve to make things worse.”

“Let’s start with the first assumption – that criminals respond to increases in the cost of crime by committing fewer crimes. This is clearly true when the penalties for breaking the law are really low. However, there is a big difference between having no penalties for breaking the law and having some penalties. The logic of inverted-U curve is that the same strategies that work really well at the start, stop working past a certain point ... and that’s exactly what many criminologists argue happens with punishment.”

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1. Gladwell M (2013). **David and Goliath: Underdogs, Misfits and the Art of Battling Giants**. Penguin Books, London. 305pp
 2. President Obama’s *Executive Order – Combatting Wildlife Trafficking* released on 1 July 2013.
 3. The *London Declaration on the Illegal Wildlife Trade* published on 13 February 2014.
 4. Convention on International Trade in Endangered Species of Wild Fauna and Flora.
 5. The law states that anyone convicted of a second serious or criminal offence would have to serve double the sentence currently on the books. Anyone convicted of a third offence (and the definition of a third offence included every crime imaginable) would run out of chances entirely and serve a mandatory sentence of 25 years to life. There were no exceptions or loopholes.

“The second assumption implicit in the Three Strikes law is that *every extra year a criminal is behind bars is another year he can’t commit a crime*. This is equally problematic. The average age of criminal when he was convicted of his Third Strike offence was forty-three. Before Three Strikes came along, that man might have served five years and would have been released at the age of forty-eight. With Three Strikes he would serve twenty-five years and get out at sixty-eight. The logical question to be asked is ‘how many crimes do criminals commit between the ages of 48 and 68?’ The answer is not very many. Longer sentences work on young men but, under Three Strikes, all longer sentences do is protect us from criminals who are no longer dangerous.”

“The crucial question is whether there is a point on the crime-and-punishment curve where ‘cracking down’ actually starts to make things *worse*? Clear (2007)⁶ concluded that if you lock up *too* many people for *too* long, the collateral damage starts to out weigh the benefit”.

At this stage that I explore some mathematical expressions that allow the inverted-U curve to produce the effects described by Gladwell.

Firstly, I create an Inverted-U curve using two logistic curves (**Fig.1** next page). The units used on each axis (0-100) are indicative only. The x-axis shows Law Enforcement Effort and covers a range from zero to the maximum which any individual government (or international treaty such as CITES) can bring to bear on crime. The Y axis on the lower figure implies a Law Enforcement Performance (in affecting crime) ranging from zero at each end of the x axis to a peak of 100% when the Law Enforcement Effort is at 50% of its maximum. This point can be moved to the left or right of the graph simply by altering the mean values of the two logistic curves. The shape of the Inverted-U curve can be skewed by changing the standard deviations for the two logistic curves, i.e. if it is suspected that the rate of change of law enforcement performance is greater during the phase of decline, a reduction in the standard deviation of the right-hand logistic curve will achieve this.

To apply the effect of the Inverted-U curve to different crime scenarios requires introducing time as a variable. In **Fig.2** (page 4) I firstly construct a hypothetical curve for the expected increase in crime over 100 years in the absence of any law enforcement. Crime is expressed as an index from 0-100. Wildlife crime (IH) is probably related to human population increase so I have used an exponential curve starting at 20 with the exponent (0.044) chosen so that it gives a value of 100 after 100 years. Next I make the assumption that the law enforcement (LE) curve is related to the wildlife crime curve and law enforcement increases according to a simple geometric relationship with IH –

$$LE = 4 + 0.3 IH^{1.33}$$

– where the constants have been chosen to give an increasing curve for the law enforcement index over the same time period which is slightly higher than that for wildlife crime.

6. Clear T (2007). **Imprisoning Communities: How Mass Incarceration makes Disadvantaged Neighbourhoods Worse**. Oxford University Press.

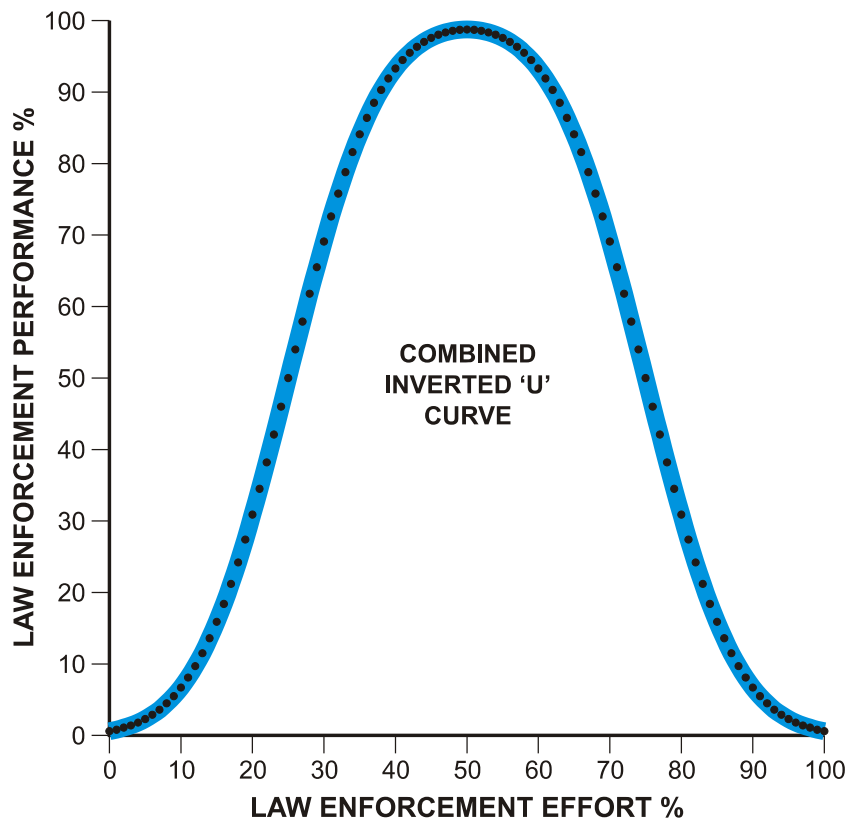
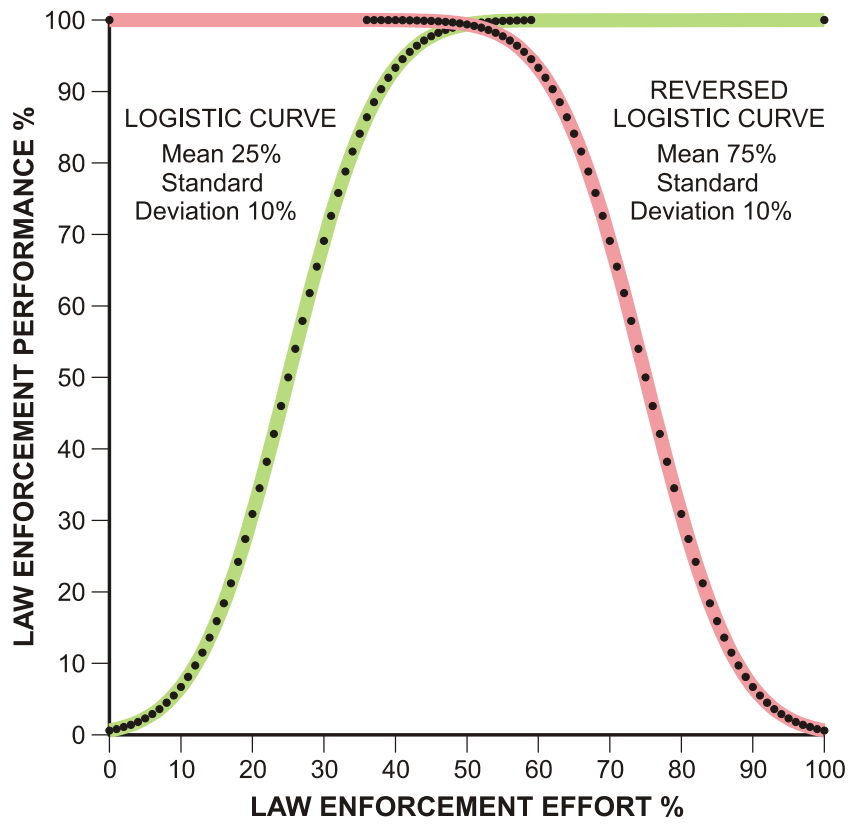


Figure 1: An Inverted-U curve created from two logistic curves

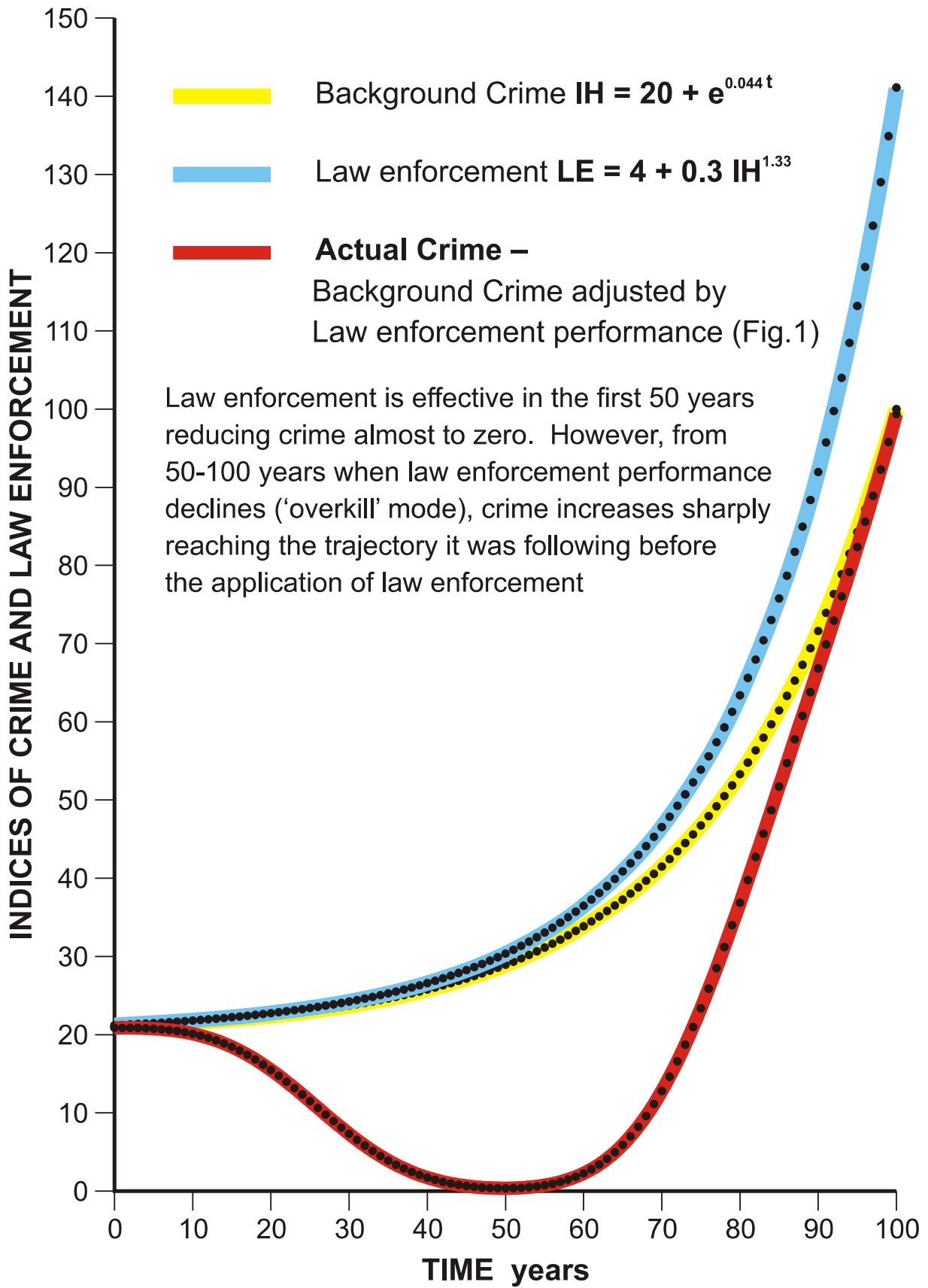


Figure 2: Effect of Law Enforcement Performance on Crime

The values of the law enforcement effort have been inserted into the Inverted-U curve (Fig.1) to give an expected performance over the 100 year time span. This performance value is used to adjust the expected crime index for each year and gives the red curve in Fig.2.

Crime is reduced over the first 50 years of the run reaching almost zero after 50 years. At this stage the law enforcement level has reached Gladwell's "point on the crime-and-punishment curve where 'cracking down' actually starts to make things *worse*." Thereafter crime increases to the level it would be at if there were no law enforcement at all.

This exercise has been carried out to demonstrate that it would not be difficult to simulate the effect of an Inverted-U curve if data were available. The existing CITES trade bans on ivory and rhino horn have followed a very similar trajectory since their inception. In other words, the trade bans have made things worse.

Gladwell's focus is on crime in human society. The situation may be different for wildlife crime. The resources being stolen (e.g. ivory and rhino horn) may diminish with time and result in an apparent reduction in crime unless it is assumed that crime continues unabated at a constant harvest level to the extinction of the resource.

The example of the white rhino in Kruger National Park may be instructive. At the moment the rhino population (some 10,000 animals) appears to be declining very slowly and may be surviving in an uneasy equilibrium between the present level of crime and the level of law enforcement.⁷ The question that arises is whether an increase in law enforcement effort would reverse the decline? I doubt it.

A characteristic of illegal wildlife hunting is that the hunters are usually one jump ahead of the law enforcement agencies. Kruger has thrown huge human resources at the problem (more than 600 men in the field including military forces) and is reaching the point where further budgetary increases may not be approved by government. Nothing here invalidates Gladwell's hypothesis.

The only factor that might break the deadlock is the influence of incentives. A legal trade in rhino horn could (or should) alter the shape of the actual crime curve. The introduction of market economics would change the rules of the game for illegal hunters and traffickers.

In a consultancy for CITES, Martin *et al.* (2012, Background Study)⁸ identified the problems facing the CITES Parties decision-making for elephants and ivory. They found a serious scale mismatch between the global institutions (rules and legal frameworks) governing the management

7. D Pienaar (2013). **Update on Kruger National Park Rhinos**. In: *International Workshop on Community Rhino Horn Farming* (page 32) held in Skukuza, Kruger National Park, hosted jointly by South Africa National Parks and Resource Africa, 17-19 September 2013.

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2851914

8. Martin RB, DHM Cumming, GC Craig DSt.C Gibson & DA Peake (2012). **Decision-making mechanism for a process of trade in ivory**. Consultancy for the CITES Secretariat, November 2011 – May 2012. Results presented at the 62nd Meeting of the CITES Standing Committee in Geneva, July 2012. <https://www.cites.org/sites/default/files/eng/com/sc/62/E62-46-04-A.pdf>

of elephants and ivory and the *de facto* management of elephant and ivory in the field. More specifically there is a mismatch between the institutions attempting to control the trade and the institutions producing the commodity and those moving and marketing it. It is reflected in the “one size fits all” approach taken to managing the illegal trade in ivory.

“The measures taken by CITES and member states almost certainly contributed to reducing levels of illegal trade for the period 1990 to about 2006. Other factors such as improved law enforcement in some countries following the ban may have also contributed. However, given the present rise in illegal killing of elephants in West, Central, and East Africa it is clear that current measures are not containing the present surge in the illegal trade in ivory. The present tendency to ascribe this increase to the sale of stockpiled ivory in 2008 tends to divert attention away from the far more serious problems relating to the inability of African countries to invest in protecting their elephants – **an observation that begs the question of what incentives are there for them to do so?** The focus on regulation without incentives is a central issue that needs to be addressed, a point made strongly by several authors. [my emphasis]

The regulations that are available to CITES and its decision-making mechanisms and processes do not readily lend themselves to developing, or providing, incentives to conserve elephants. In part this is because bans, and intermittent sales of stockpiled ivory, cannot, by their very nature, include potential benefits from sustainable use.”

Marshall Murphree (1996)⁹ has observed the paradox inherent in over-regulation –

“Regulation of use is an essential component for sustainability in use. Prevailing regulatory structures consist largely of a proscriptive and legislative nature imposed by the centre on the periphery, and they have failed to stop negative trends. The profile of the incentive package for regulatory compliance is too often wrong. **Incentive is the fulcrum of regulation.** Regulation usually requires an element of negative incentive proscriptions backed by powers to enforce them. But any regulatory system which relies primarily on negative incentives is, in the long term, in trouble. Enforcement costs are high and the legitimacy of the system in the eyes of the enforced is called into question. History shows that such systems are unstable and that sustainable systems of regulation are those that rely primarily on positive incentives – economic, cultural and institutional – and which are affordable. Hardin's (1985)¹⁰ comment is relevant here: *We must recognize that all control operations incur costs; excessive controls generate their own kind of poverty.*” [my emphasis]

9. Murphree MW (1996). **Strategic Roots and Implementational Evolution.** Address delivered to the workshop *Enhancing Sustainability: Resources for our Future.* World Conservation Congress, Montreal, October 1996.

10. Hardin G (1985). **Filters against Folly.** Penguin Books, New York.

It is tempting to apply the clause “The law is an ass”¹¹ after reading this ... in other words, this is an application of the law that is contrary to common sense. But further elaboration is needed. Murphree does not explicitly state whether he is talking about national laws or global treaties. In fact what he writes is applicable to both in principle. Global treaties are built on a foundation of nation states with their own regulatory systems and, if there are gross disparities in regulatory systems amongst nations, it is unlikely that a successful global treaty can be established. In acceding to an international treaty, any nation state is aware that it may compromise some of its sovereign rights over national resources but is entitled to expect that a high degree of mutual respect amongst the Parties must be present for the objectives of the treaty to be realised. Most nations accede to CITES in order to benefit from an extended system of wildlife law enforcement that goes beyond their national borders.

Scale mismatches (see previous page) occur when global treaties such as CITES become ‘rogue’ institutions that ignore national sovereign rights and attempt to originate and impose new rules born at the global level that are essentially imperialistic. The cognisant reader would immediately respond by (correctly) observing that CITES decisions and resolutions are not made by some hidden international executive body but by the participating Parties themselves under a democratic voting system. And that takes us into the ‘can of worms’ where the question that has to be asked is “to what extent can democracy be practiced when there is no accountability”?

Firstly, all Parties are not equal under CITES in practice. There are 183 Parties in CITES of which 28 occur within the European Union. As a body the EU has 28 votes in the CITES forum which they have elected to exercise as a block vote. Each of the other 155 CITES Parties has one vote per country. When deciding on CITES matters, the EU Scientific Review Group (SRG) votes internally within the EU in advance of CITES Meetings. In this voting the number of votes for each individual member state is weighted by the size of its national population. Under this system six countries (Germany, France, UK, Italy, Spain and Poland) have effectively gerrymandered more than two votes each in the CITES forum. Malta with a population of 400,000 people exercises only one-fifth of a vote. Vanuatu (which is not part of the EU) has a population of less than 300,000 and has one full vote in CITES. It is surprising that none of the Parties has objected to this democratic inequity. However, it raises an even larger question – that of whether the CITES voting system as a whole is completely flawed (Madders *et al.* 2014 p30).¹²

Secondly, some Parties wield undue influence at Meetings of the Conference of the Parties. The United States has only one vote but it is capable of putting pressure on other Parties to align their votes with the US position on any issue, especially when international aid is a possible lever.

11. The expression is of English origin and the ‘ass’ referred to here is the English colloquial name for a donkey. Donkeys have a reputation for obstinance and stupidity that has given us the adjective ‘asinine’. It is the stupidly rigid application of the law that this phrase calls into question.

The phrase is often attributed to Charles Dickens (*Oliver Twist* 1838) but is, in fact, of much earlier origin (c1620). The Phrase Finder: <https://www.phrases.org.uk/meanings/the-law-is-an-ass.html>

12. Madders K, RB Martin & J Sturgeon [Editors] (2014). **Community Rhino Farms**. 56 Pages
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2851914

Thirdly, many developing countries are represented by inexperienced government bureaucrats at CoPs who tend to vote with the majority – influenced by the intense lobbying of the Animal Rights NGOs.

In a national democracy, a parliament of elected representatives decides on the laws of a country and is accountable to the voters for its performance. No similar situation exists in CITES. Trading rules can be imposed without thought for the financial consequences. The costs of managing and protecting large wild animal populations are not shared among the nations of the world: they fall entirely on the sovereign state. Those states that are committed to sustainable use and have encouraged their citizens to derive their livelihoods from wise husbandry of wildlife are at the mercy of an international treaty that can remove the value of their wildlife with a stroke of the pen.

The questionable features of CITES do not stop there. The Articles of the Treaty provide for any Party to take “stricter domestic measures” than those provided for by decisions, resolutions and the listings of species on the Appendices of CITES which, I remind the reader, have been decided by the Parties themselves. Thus a country whose elephant population has been listed on Appendix II should be able to trade in ivory according to the Articles of the Treaty. But another country (say the USA) may refuse to allow those ivory imports under the banner of “stricter domestic measures”. There is an unspoken attitude amongst certain Western Nations that they are enhancing conservation of the species by going further than the decisions of the Parties and implementing unilateral bans. This particularly angers a number of southern African States because it implies that the United States Scientific Authorities know better than (say) the Namibia or Zimbabwe Authorities what will be good for their elephants. There is little point in being a Party to a Treaty where, after agreeing on the rules for trade at a CoP, some Parties return home and refuse to abide by the decision.

Conservation as a Holy Calling

The Animal Rights groups have decided that consumptive use of wildlife is unacceptable behaviour and the enemy of conservation. Brown (2016)¹³ challenges this assumption. It ignores the relationships between humans and wildlife that have existed on planet earth since before the Pleistocene.¹⁴ It has done no favour to the cause of conservation that the use of wild animals and their environments has been placed in a ‘special category’ that departs from the conventional manner in which people handle their day-to-day decisions about the land from which they derive their livelihoods.

13. Brown C. (2016). **The important link between hunting & tourism in Namibia – both working for conservation.** Publ. The Namibian Chamber of Environment. 7pp

14. Surovell T, N Waguespack & PJ Brantingham (2005). **Global archaeological evidence for proboscidean overkill.** *PNAS* 102 (17). 6231–6236

The measure of successful conservation is no more or less than the status of wildlife populations and the ecosystems in which they live.¹⁵ For local people to make rational decisions about their use of natural resources, they need to operate on a level playing field. The conditions affecting their use of wildlife should be no different to those applying to their cattle.

At the national level, Ruitenbeek & Cartier (2001 p17)¹⁶ observe that –

“Where regimes have been imposed by central governments, none of the models (e.g. co-management, private ownership, state control) appear to generate local well-being or resource protection.”

This is equally true of regimes imposed by global treaties.

The following excerpt from V.S. Naipaul (1980 p99)¹⁷ is relevant. When law enforcement breaks down, as it has done with CITES, illegal hunting and illegal trade become easier –

“With their guns and jeeps, these men were poachers of ivory and thieves of gold. Ivory, gold – add slaves, and it would have been like being back in oldest Africa. And these men would have dealt in slaves, if there was still a market. It was to the traders in the town that the army turned when they wished to clear their gold or, more especially, the ivory they had poached. **Officials and governments right across the continent were engaged in this illegal ivory trade which they themselves had declared illegal. It made smuggling easy.**

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15. The Great Elephant Census done in 2014 found 13,000 elephants in Gonarezhou National Park in Zimbabwe. The USA CITES Scientific Authority sent a congratulatory message to the Zimbabwe Parks and Wildlife Authority ... “This is excellent news !” Is it? The Park can only carry 3,000 elephants sustainably.
 16. Ruitenbeek J, & C Cartier (2001). **The Invisible Wand: Adaptive Co-management as an Emergent Strategy in Complex Bio-Economic Systems**. Occasional Paper No. 34, Centre for International Forestry Research, Bogor, Indonesia. 47pp
 17. V.S. Naipaul (1980). **A Bend in the River**. Penguin Books, London. 1980 edition, reprinted 1983.