

Africa's Rhino Poaching Crisis: The Role of Vietnam

E Bwalya and K Shuping
University of Botswana, Botswana

Abstract: The poaching which accounts for the vast majority of rhinoceros' deaths today and the illegal wildlife trade associated with it is now globally recognised as a very serious crime that is threatening the extinction of many endangered animal species in Africa and Asia. The international lucrative illicit trade in rhino horns is one of those crimes involving the dwindling population of one of the most iconic endangered animals still left in the world. The current rhino poaching crisis that began around 2008, continues despite the fact that the numbers of rhinos have slightly gone down partly due to the local and international criticisms against Vietnam, the most popular destination for illegal rhino horn. The African continent has taken some positive steps towards ameliorating the problem which is very complex, and is bankrolled by global organized crime syndicates. This paper uses a theory of change to investigate the problem, stimulate further debate and prompt local and international actors to take actions aimed at the conservation of rhinos for future generations.

Keywords: Extinction, Illegal wildlife trade, Poaching, Rhino horn, Vietnam

1. Introduction

The poaching of African rhinoceros (rhino) for its horn and the illegal trade associated with it represents one of the most noticeable and destructive forms of wildlife crimes endangering the species' extinction within a decade or less (Twigg, 2016; International Rhino Foundation, 2018). Poaching is herein defined as the illegal practice of trespassing on another entity's property with the aim to steal or hunt wildlife without the proprietor's permission. Poaching is one of the prevalent challenges to wildlife conservation. It is estimated that the world has lost about 50 percent of its wildlife in the past 40 years due to poaching for various reasons, unabated habitat loss and environmental degradation (Raxter & Young, 2015). From 2008, the rhino poaching increased to unprecedented levels, and the surge started in Zimbabwe before spreading to other countries in southern Africa, namely, South Africa, Namibia and Botswana by 2019 (Save the Rhino International, 2019). On average, in the past five years, African black (*Diceros bicornis*) and white (*Ceratotherium simum simum*) rhinos have been poached, mostly in the Sub-Saharan Africa, at a rate of three rhinos per day, excluding those harvested for trophies (International Rhino Foundation, 2018). Subsequently, the conservationists and non-governmental organizations appealed to governments and individuals to act urgently to save the endangered iconic rhino species from extinction (Mogomotsi & Madigele, 2017; Nyoni, 2018;

International Rhino Foundation, 2018). As a result of a positive response by some key actors in rhino preservation, the number of rhinos killed every year has gradually decreased since 2014 (BBC, 2019; WildAid, 2020; Save the Rhino, 2019).

The drivers of poaching and the illegal rhino horn trade are numerous, complex, multifaceted, and vary greatly from one location to another depending on the actors. Such drivers include, amongst others, socially-constructed economic, cultural, aesthetic, religious, and medicinal uses and benefits (Lawson & Vines, 2014; 't Sas-Rolfes *et al.*, 2014; Save the Rhino, 2019). Until recently, Vietnam was considered the main consumer of illegal African rhino horn, the international hub for the illegal trade and was severely criticised (Tatarski, 2020; Smith, 2010; Rhino International, 2018). On the other hand, by 2018, South Africa was and still is the epicentre, despite a slight decrease in 2020, of global rhino poaching is home to more than 80% of the world's rhinos, both black and white (Daily News, 2018). Most African countries with rhinos such as Zimbabwe, Namibia and Botswana were also hard-hit by the surge in rhino poaching in the past 10 years (News24, 2020; Phys Org, 2020).

The alarming rate of rhino poaching drew great attention in Africa and from across the globe, leading to calls for urgent action to save the rhinos (International Rhino Foundation, 2018). The prevalent poaching of rhinos amidst intensified

conservation efforts, nationally and globally, also sparked debates on the effective ways of conserving the animal from extinction. Currently, some people are arguing that a minute drop in poaching statistics is a step in the right direction others are calling for the legalization of harvesting and trading in rhino horn. Legalizing the trade refers to the lifting of the Convention on International Trade in Endangered Species (CITES) ban, to allow for the stockpiling and sale of rhino horn and products of other endangered species. The ban means that even though South Africa has been allowed to sell a limited number of horns locally, selling on the international market is still banned, thus making it difficult to make high profit prices (Salem, 2017). The proponents of legalising rhino horn trade contend that sustained conservation efforts have been put in place over the years have not tipped the scales against an impending threat of rhino extinction but official trade would put the poachers and illegal traders out of business because there are enough rhinos, especially in South Africa, to meet the market demand (Bale, 2018; Salem 2018). Critiques counter-argue that legalizing of rhino horn trade may result in a surge on demand as socio-economic reasons for its demand may be resuscitated and even be diversified (Davies-Mostert, 2017). The solution to meeting the needs of both parties may be partial legalization on the sale of rhino horn.

This paper uses a theory of change and argues that Vietnam and the international community can play a more meaningful role in rhino conservation. First, one of the main challenges of protecting rhinos for the future is not just to stop poaching and the illegal trade associated with it, but also to drastically reduce the demand for rhino horn and secure rhino habitats. Second, this paper interrogates concerted approaches, and solutions to the illegal wildlife trade crisis facing Sub-Saharan Africa and the rest of the world. While South Africa, the epicentre of rhino poaching, and Vietnam, the major destination of illegal rhino horn, have put in place some measures to curb rhino poaching and the illegal rhino horn trade, there is more to be done by other actors in the international community to end threat to the endangered rhino species. Finally, this paper hopes to contribute to the current discourse on rhino horn poaching, illegal wildlife trafficking and trade, and argues that given the ongoing debates for and against legalizing rhino products trade, there can be compromises that would to conserving rhinos and create incentives or benefits to rhino affected local communities.

2. Theory of Change in Combating Illegal Wildlife Trade

Using the theory of change in combating illegal wildlife trade (IWT), this paper argues that, poaching of rhinos for their horns is complex, dynamic, and reducing that requires active participation of several stakeholders within and beyond the states that have rhinos. The theory of change has been used in wildlife conservation and it illustrates causal links and sequences of events that can be put in place in order to ensure effective intervention and yield desired outcomes in the fight against IWT (Briggs *et al.*, 2017; Margoluis *et al.*, 2013). According to Briggs *et al.* (2017) "proponents of the theory of change ... focus, to a greater extent, on the stakeholder process of generating a participatory theory of change that enables a better understanding of context and underlying assumptions..." (Briggs *et al.*, 2017:7). The theory of change has proved effective in international development, and can be useful in combating IWT which also transcends national boundaries (Briggs *et al.*, 2017; Valters, 2015; James, 2011). The complexity and dynamism of IWT requires evaluation of assumptions, understanding of the context, most of which are often ignored, as well as managing actions and interventions in an adaptive manner (Briggs *et al.*, 2017).

Furthermore, the theory of change puts emphasis on stakeholder participation which can be helpful to understand rhino conservation challenges and to effect desirable changes to preserve the endangered rhino species. In their theory of change to combat IWT, Briggs *et al.* (2017) argued that community participation is critical to effectively address IWT enablers through, amongst others, "voice and accountability, political stability and the absence of violence and terrorism, government effectiveness, regulatory quality, rule of law and control of corruption" (Briggs *et al.*, 2017:7). Briggs *et al.* (2017), proposed four (4) pathways that can be helpful in the fight against IWT. These pathways include, amongst others: strengthening disincentives for illegal behaviour; putting in place conservation benefits-sharing mechanisms; reducing human-wildlife conflict; and reducing dependency on wildlife resources for income (Briggs *et al.*, 2017). This paper argues that employment of some of these measures can be effective in combating rhino poaching in Africa and to effect changes at the national, regional and international levels in order to save the rhino species.

3. Rhino Poaching and Illegal Wildlife Trade

History shows that human beings have traditionally killed wild animals to satisfy their various desires that include trophy hunting (Christy & Hartley, 2013; French, 2014; Salem, 2018). For instance, Theodore Roosevelt, the former American president who left office in 1909, and his son, are reported to have killed 1,100 wild animals, including 20 rhinoceroses, in Kenya, while Walter Dalrymple Maitland Bell, known as 'Karamojo Bell' a Scottish soldier and explorer, and known as one of the most notorious hunters shot more than 1,000 elephants, hundreds of rhinos, lions, and giraffes (Salem, 2018). Overall, it is estimated that at the beginning of the 20th century, there were about 500,000 rhinos across Africa and Asia, but the numbers declined to between 65,000 and 70,000 by the 1970s, before dropping further down by the mid-1990s (Save the Rhino International, 2015). Empirical evidence indicates that black rhinos are at great risk, because in the 1960s, there were about 70,000 in Africa, but by the mid-1990s their numbers plummeted to as low as 2,500 (Taylor, 2011; Lawson & Vines, 2014; Smith, 2010b).

According to Beech and Perry (2011), human activities, especially poaching, reduced the number of white rhinos in the wild to 50 in the early 1900s. However, due to good conservation efforts, the species have since recovered to just over 4,000, but remain critically endangered (Taylor, 2011; Rhino Conservation Botswana, <https://rhinoconservationbotswana.com/the-poaching-crisis>). By contrast, the white rhinos are estimated to have recovered from less than 100 in the late 19th century to more than 20,000 to date, and this has been described as a "phenomenal conservation success story" largely credited to the combined efforts of the South African government-run national parks, and in recent years, the private-owned game ranches (Taylor, 2011; Save the Rhino International, 2019; Salem, 2018). However, the reality is that despite intensive conservation efforts by both private actors and states, and the enactment of conservation laws and policies, including the controversial policy of "the shoot to kill," adopted by Botswana and some few countries, the poaching of rhinos continues to be a threat to their survival (Nyoni, 2018; Crookes & Blignaut, 2016; Leto & Roberts, 2016; www.iucnredlist.org; Save the Rhino, 2019; BBC News, 2019).

One of the main reasons for current high levels of rhino poaching is the fact that some people in Asia have traditionally prized rhino horn due to its purported medicinal value, even though there is no scientific evidence (AFP News, 2017; Leto & Roberts, 2016). However, as in traditional ancient Chinese medicine texts, the powdered horn is still recommended to cure diseases such as fever and arthritis, high blood pressure, and even cancer (Beech & Perry, 2011). Most Rhino horn in Asia comes from Sub-Saharan Africa where the vast majority of the poaching is carried out by organised crime syndicates that use sophisticated technology and kill many animals without being detected (Milliken, 2014; Lawson & Vines, 2014; Mogomotsi & Madigele, 2017). The surge in poaching started in Zimbabwe in 2008, spread to South Africa, then Namibia and Botswana. Vietnam, which has been one of the conduits for the global trade networks of illegal rhino horn destined for the Chinese market, is the epicentre of the trade (BBC News, 2019; Earth Touch News, 2014).

4. Drivers of Poaching and Illegal Rhino Horn Trade

The poaching figures, in Southern Africa and globally, are generally very well documented by organizations such as Conference of Parties (COP) to the Convention of International Trade of Endangered Species (CITES), National Geographic Channel, Wildlife Watch, the WildAid Reports, TRAFFIC, Poaching Statistics, and Save the Rhino. Consequently, no attempt is made in this paper to reproduce the finding of such reports, suffice to say, although there is a slight drop in the overall rhino poaching in Africa the demand for the rhino horn remains a challenge. In the last two decades the reasons for the dramatic decline in the rhino populations and increase in poaching, include: poverty, civil unrest, political instability, international criminal syndicates, dramatic increase in rhino horn demand and prices, growing size of black markets, and ineffective anti-poaching measures (Crookes & Blignaut, 2016; Tatarski, 2020; Mogomotsi & Madigele, 2017). The weakness in the laws and implementation of regulations regarding wildlife crimes at both the national and international levels, as well as the poachers' willingness to risk their lives for lucrative trade have contributed to the increase in rhino poaching (Lawson & Vines, 2014; Vines Alex, 2014; Raxter & Young, 2015; Musasizi, 2014; Mogomotsi & Madigele, 2017).

Proliferation of small arms and access to advanced technology have exacerbated poaching because the rhino poachers have not only become very sophisticated in terms of equipment, such as using helicopters, automatic weapons, and night vision equipment but operate with military precision (Henk, 2005). The poachers are also using Trans-border crime networks which have immensely contributed to poaching. (Save the Rhino, 2019). In the last decade, more than 7,100, mostly from Southern Africa, were killed, largely due to the demand of wealthy individuals in some Asian countries such as Vietnam, Taiwan and China (www.phys.org; Salem, 2018).

In Botswana which is widely regarded as a safe haven for wildlife and has an estimated rhino population of between 400 and 500, at least 46 rhinos were killed between January 2019 and February 2020 leading to the dehorning of 100 animals (Xinhua, 2020; AFP News, 2020; Benza, 2019). According to Benza (2019), if the situation continues unabated, the unprecedented rate at which rhinos are being killed per month in Botswana could result in the species becoming extinct in that country by the year 2021 (AFP News, 2020). Most of the poaching in Botswana took place in the grassy plains of the northern Okavango Delta, where Moremi Game Reserve is situated. This is a large tourist game reserve where South Africa secretly relocated 100 rhinos for safe keeping (Benza, 2019; AFP News, 2020). This part of the reason there has been a major international outcry since 2014 for Africa to take more responsibility to halt the supply of rhino horns and the illegal trade associated with it (Mahlatini, 2014; Crookes & Blignaut, 2016; Christy, 2014).

The weak and inconsistent law enforcement measures by countries with significant rhino populations have also proved to be a major challenge in efforts aimed at curbing the poaching of rhinos despite some rhino horn seizures in Hong which is known as the major transit point for the Asian market (Tatarski, 2020; Dall, 2020; BBC News, 2019). The weakness in the enforcement refers to a deadly combination of institutional lapses such as corrupt government officials, state security, wildlife industry professionals, private individuals and some business people (Milliken & Shaw, 2012; Oberem, 2019; Salem, 2018). Advocates for an end to the ban on the international trade in rhino horn contend that rearing the rhinos as livestock – which involves

their horns being harmlessly removed and sold – would price poachers out of the game (Salem, 2018). The fact is that even dehorned rhinos have been poached, and some critiques are opposed to the removal of the horn for the sake of money earning (Rhino Rest, 2020).

Evidence from various studies consistently illustrates that another major driving factor in the surge of rhino poaching is the financial benefits derived from rhino horn sales (Oberem, 2019; Salem, 2018; Mohammed, 2015; Raxter & Young, 2015). According to The Earth Report (2014), the total value of illicit wildlife trafficking (excluding fisheries and timber) is estimated as being between US\$7.8 billion and US\$10 billion per year. Rhino horn is one of the much sought-after wildlife products because it fetches very high prices on the black market especially in Asia, and in particular, Hong Kong, China and Vietnam where the demand has skyrocketed due to the burgeoning economies. Earth Touch (2014) observed that in 2014, when the illegal rhino poaching was at its peak due to demand, the estimated price of a rhino horn was US\$ 60,000 per-kilogram. Others have noted that at the pick of the trade the price of rhino horn was as high as \$66,139 per kilogram and in Vietnam it reached a \$100,000 (£67,000) per kg making it even more expensive than gold, platinum, diamonds and cocaine (Mohammed, 2015; Lawson & Vines, 2014). In some cases, after being ground into dust, a rhino horn is reported to fetch as much as US\$75,000 (£50,275) per kilogram on the black market in China, and horns weigh roughly 1 to 4 kilograms (Mohammed, 2015). Raxter and Young (2015) point out that since 2007, rhino poaching is estimated to have increased by 9 000 percent.

The high cost of conserving rhinos has complicated the preservation of the rhino species. The campaign for legalizing the rhino horn trade is now being led by the world's largest private rhino breeder, John Hume, who is South African. Hume was alleged to be on the verge of bankruptcy in 2018 despite the South African government's increase in the number of rhinos for trophy hunting owns 1,626 Southern white rhinos (Salem, 2018). Hume's supporters, including most rhino ranchers, argue that those who oppose the legalizing of the rhino horn trade do not understand the realities and high costs of conservation, and are only interested in the status quo of the rhinos (Oberem, 2019). Hume and others contend legalizing the trade would eventually eliminate

the illegal trade altogether, and the income from the official trade on horn rhino would benefit the government and private landowners (Hanks, 2018). Furthermore, it is argued that the legal trade would encourage more game farmers to keep and breed rhinos and increase the animal numbers and areas under conservation as well as benefit their communities. Proponents of this view contend that there are enough rhino horns from 20 000 animals in South Africa that can produce almost 30 000kg (30 tonnes) per year (Oberem, 2019). On the other hand, Conservation groups criticised South Africa's reopening of the domestic trade on rhino horn, arguing that it risked creating further opportunities for leakage into the illegal trade (Bega, 2019). In the end, the solution may be the partial legalization of the sale of rhino horn.

5. Vietnam and the Illegal Rhino Horn Trade

As noted earlier, until recently, after taking positive steps, Vietnam was being singled out as a consumer and an international hub of high-value products of endangered species such as rhinos, elephants and pangolins partly because for decades Vietnam seemed indifferent to wildlife and the global trade associated with it while the lax government policy facilitated the trade (Tatarski, 2020; Briggs *et al.*, 2017; Dall, 2017). The demand in Vietnam for rhino horn has fuelled poaching in Southern Africa (Milliken & Shaw, 2012; Oberem, 2019; Smith, 2010). The demand over the past decade is driven by a number of factors that include rapid economic growth, increasing levels of disposable income, the cultural association of rhino horn as a symbol of power and wealth by the new emerging wealthy middle-class society, as well as the erroneous traditional belief in the alleged health benefits (Lawson & Vines, 2014; Smith, 2010). Rhino horn is equated to social mobility, success and is also gifted to a family member or potential business partner, or ground into a powder for consumption as a recreation drug to be mixed with water or as alcohol or cure for hangovers. A claim by a Vietnamese cabinet minister that rhino horn had "cured" him of cancer, led to further publicity and demand for rhino horns in that country and its neighbouring states (Smith, 2010). Shortly after the claim, the frenzy led to the price of rhino horn soaring to £35,000 a kilogram, making it far more expensive than gold (Smith, 2010). Further negative publicity for the country occurred after the country's economic attaché, Khanh Toan Nguyen,

was arrested in South Africa in April 2006 while the First Secretary, Vu Moc Anh, was filmed purchasing rhino horn outside the Vietnam Embassy in Pretoria in September 2008 (Save the Rhino, 2012; IUCN/TRAFFIC Report, 2013).

However, in recent years the government of Vietnam, has responded positively to both national and international fierce pressure, and has finally started to shake off its reputation as a hot spot for illegal trade of endangered animal species (Dall, 2017; Save the Rhino, 2016; WildAid, 2018). Many opponents of the government argued that Vietnam had a choice to make between demonstrating real progress against the trafficking of rhino horn into its markets or face the threat of trade sanctions under CITES (Leto & Roberts, 2016). The critics also demanded that the government close a loophole that complicated enforcement efforts and that hampered Vietnam's fight against massive illegal rhino horn trade. One of the first positive steps that the government took to reduce IWT was the burning of seized rhino horns and tusks in November 2016 (Dall, 2017). In addition, the government started seriously working with WildAid in awareness campaigns that resulted with the Vietnamese residents who believed that rhino horn had medicinal benefits drop to just 23% from 66% in 2016 (WildAid, 2018).

It was also found out that fewer people wanted to buy rhino horn after the education campaigns. Influential Vietnamese and international celebrities joined the 'end the slaughter of rhino's campaign' and there have been public efforts to reduce consumer demand (WildAid, 2015). The "Chi" campaign led by TRAFFIC and WWF campaigned that urban men should know that self-esteem comes from within, not from some animal part such as rhino horn (WildAid, 2018; World Wildlife Organization, 2014). The African Wildlife Foundation, Nail Biters campaign and WildAid also had partnered with the local Vietnamese NGO, CHANGE, in the "Stop the Demand" for rhino horn campaign. In addition, when South Africa legalised domestic rhino horn trade, Humane Society International/Viet Nam HSI, appealed to the government to shut down rhino horn auctions over trafficking risk (Humane Society International, 2017). The Vietnam Prime Minister, Nguyen, also joined the celebrities in the save the rhino public service announcements that aired on Vietnamese television and radio stations, and helped to drastically reduce the initial frenzy for the horn's unproven health benefits (Dall, 2017).

Furthermore, the government's commitment to anti-poaching measures has been demonstrated through tougher enforcement of regulations including seizures of rhino contraband. According to WildAid Report (2018), because of improved consumer awareness and more effective investigations in Vietnam and China, the price of rhino horn fell by 70% to roughly half the price of gold and slightly less than cocaine (WildAid, 2014). In the wake of the ongoing COVID-19 pandemic, in February 2020, conservation organizations, based both within Vietnam and abroad, sent an open letter to Vietnamese Prime Minister Nguyen Xuan Phuc to "take strong and sustainable" measures to curtail all illegal wildlife trade and consumption in the country (World Wide Fund, 2020). The Prime Minister responded positively on 6 March 2020 and requested the Ministry of Agriculture and Rural Development (MARD) to enact regulations banning the trade and consumption of wildlife products and present them to the government for review (Tatarski, 2020; Planetary Press, 2020). The move was applauded by NGOs and individuals, including Benjamin Rawson, conservation and program development director at the NGO WWF Vietnam, as a step in the right direction (Planetary Press, 2020).

All the above positive steps that have been taken by the Vietnamese government were perhaps best summed up by Doug Hendrie, an American wildlife activist who has been working in Vietnam for 20 years, when he stated that "If you look at the situation on any given day, Vietnam seems a hell basket for conservation, compare where we are now with where we were just 10 years ago, it seems like we're living in a different country" (quoted in Dall, 2017). Conservationists hope that if Vietnam continues to tighten border security and social pressure is maintained on the government to reduce demand of rhino products, poachers will soon have no market for their contraband (Dall, 2017). However, despite this development which led to a decline in the figures of rhinos being killed, poaching continues in South Africa and other states in Southern Africa, partly because of massive corruption and failure to prosecute poachers and prominent smugglers and failure to share costs of rhino conservation. Without proper measures in place to restrain supply of rhino horn from African states, the demand may be short-lived as illegal wildlife traders may look for new markets in other states with relaxed laws on illegal wildlife trade (Save the Rhino, 2019; BBC, 2019).

6. The International Community and the Rhino Horn Trade

Rhino poaching and trade on rhino horn products requires urgent global concerted multifaceted response. The paper also acknowledges the fact that both South Africa which has the largest number of rhinos in the world and Vietnam the major destination of illegal rhino horn, have recently taken some positive steps towards curbing poaching and the black market associated with it. The same applies to China which has long been the target of international criticism (Hance, 2014; Tatarski, 2020; Hong, 2019). It is also true that the international community, especially non-governmental conservation organisations have played a key role in the process, however, these measures are far from satisfactory because the rhinos are still facing extinction. The measures which have been put in place include public education campaigns, more efficient policing and monitoring the trade on wildlife products, and imposing stiffer penalties for offenders. Many African countries have also pledged to increase penalties for those who poach rhinos while ten (10) nations – including China, Japan, Vietnam and other Asian states have committed to assisting in the reduction of the demand for ivory and rhino horn among their citizens (Mead, 2014).

Since then, the Chinese government has donated a couple of millions of dollars and equipment to individual African states and regional organisations such as the Southern African Development Community (SADC) as part of its contribution to anti-poaching and the illegal wildlife trade (Hong, 2019; Hance, 2014). For example, on the 10th March 2014, China committed \$10 million to support wildlife protection and conservation in Africa (Hance, 2014; Daily Nation, 2013). The recipient countries in southern Africa also committed themselves to rigorously enforce the SADC Law Enforcement and Anti-poaching Strategy (Botswana Gazette, 2016). Even more positive is the fact that Beijing signed a US-China Agreement in 2015 to lead in the fight against the endangered wildlife species (Musasizi, 2014). These events were followed by the UK government which hosted an international conference on illegal wildlife trade on 13 February 2014 (Musasizi, 2014). In the U.S, President Obama signed an executive order to release \$10 million to fight wildlife trafficking in Africa which he referred to as an "escalating crisis" (White House, 2013). However, China's reversal of a ban on rhino and

tiger products in 2018 for non-scientific medical and cultural use attracted criticism and condemnation from wildlife conservationists who argued that the decision would have "devastating consequences" (SBS News, 2018). The critics reasoned that the decision could lead to the risk of legal trade providing cover to illegal trade which had declined after the ban was put in place

On the other hand, the Southern Africa Development Community (SADC) has done little to curb rhino poaching which has been prevalent in the southern Africa for more than a decade. SADC has only gone as far as establishing the SADC Regional Programme on Rhino Conservation (SADC RPRC). The SADC RPRC remains largely unknown and its voice on rhino conservation advocacy is not even heard amongst SADC member states. Individual countries endowed with rhinos have taken it upon themselves to fight the rhino poaching and forge bilateral cooperation to conserve the rhino species and have achieved some success (Phys Org, 2019). However, critics contend that a small drop in yearly rhino poaching numbers does not significantly reduce the imminent threat of extinction hence the need for the international community to play a key role (Bale, 2018; Musasizi, 2014; Smith, 2010). It is correctly argued that from the supply side, Southern African countries have to continue implementing effectively anti-poaching measures with the assistance from international donors who should continue to channel more funding and resources into rhino conservation efforts (Save the Rhino, 2019). The CEO of African Wildlife Foundation (AWF's), Patrick Bergin, believes China has a significant role to play in combating the illegal trade in rhino horns (Musasizi, 2014).

It is also a fact that this is no easy feat because it takes time, which Africa's rhinos do not have, and it is said the forgoing measure have limits when pitted against a lucrative illicit trade (Leto & Roberts, 2016). It is also doubtful that merely equipping game rangers with more sophisticated equipment will significantly reduce poaching and trading in rhino horns, because the experience from Southern African shows that even the use of technology, such as, injecting and poisoning rhino horns and fitting them with GPS, along with the use of the local and U.S. military personnel, has done little to deter poachers (Mahlatini, 2014).

The prevalence of IWT has also sparked unending international debates on rhino horn demand

reduction with a contending group that legalising of rhino horn trade to curb poaching will lead to over-supply of the horn, thus lowering its prices and rendering it a worthless product (Salem, 2018; Twigg, 2019). The opponents of this view argue that the proceeds accruing from rhino horn trade can be used as an incentive for communities and conservationists to protect the rhinos from poachers (Briggs *et al.*, 2017; Twigg, 2019). Furthermore, it is claimed that legalizing the trade will reduce the curiosity that comes with the ban that often tempts people to poach (Davies-Mostert, 2017; Twigg, 2019). Critics believe that legalising the rhino horn trade would lower the price resulting in a surge in IWT and further endanger rhinos (Davies-Mostert, 2017; Twigg, 2019). Hence, as noted earlier in the paper, the need for the partial legalisation of the sale of rhino horn as a compromise solution.

7. Conclusion and Recommendations

It is evident from this paper that the poaching of African rhinoceros' horn and the illegal trade associated with it still remains a serious crisis endangering the species, despite the various positive measures that have been undertaken both on the demand and supply side. This is particularly true with regard to Vietnam, the main destination or demand side for poached rhino horn and the southern African countries that represent the supply side. It is equally important to note that while anti-poaching measures are still a high priority in southern Africa and Vietnam, they need to be complemented by the international community's actions such as: ecological system management, community engagement, capacity building, national and international coordination of rhino conservation programmes. International cooperation of all stakeholders is needed to ensure that there are effective changes in laws, policing, education and providing alternatives to the livelihoods for prospective poachers and all those who are engaged in this illicit global trade (Mead, 2014; Briggs *et al.*, 2017). The US and China should play an active role in these efforts because it is imperative to put in place long-term and sustainable financing for rhino conservation programs to avoid a future catastrophe. There is need to encourage high-level political collaboration between all countries involved to sustain policy measures countering the trade, to uphold international treaties and cooperate on transnational movement of goods.

Finally, the paper is cognisant that it is almost impossible to find a global consensus on an issue on which all parties agree on even when most of those involved believe that the solution is good because all the sceptics cannot and should not be silenced. Lawson and Vines (2014) correctly recommend that there should be a partnership between five vital intergovernmental organizations namely: the CITES Secretariat, INTERPOL, the United Nations Office on Drugs and Crime (UNODC), the World Bank and the World Customs Organization – which is designed to help national governments implement their national wildlife regulations, and can support law enforcement with stronger backing from the international community. This may require the partial legalization of the sale of rhino horn as a solution.

References

- AFP News. 2017. Rhino Horn Smugglers Shift to Jewellery. Available at: <https://nation.com.pk/19-Sep-2017/rhino-horn-smugglers-shift-to-jewellery>. Accessed 19 September 2020.
- AFP News. 2020. 100 Rhinos to be Moved to Botswana for Safekeeping. Available at: <https://www.news24.com/news24/green/news/100-rhino-to-be-moved-to-Botswana-for-safe-keeping-20140212>. Accessed 13 February 2020.
- AFP News. 2020. 46 Rhinos Killed in Botswana in 10 Months as Poaching Surges. Available at: <https://africasustainableconservation.com/2020/02/26/46-rhinos-killed-in-botswana-in-10-months-as-poaching-surges/>. Accessed 24 February 2020.
- Bale, R. 2018. "More Than 1,000 Rhinos Killed by Poachers in South Africa Last Year," *National Geographic*. Available at: <https://www.nationalgeographic.com/news/2018/01/wildlife-watch-rhino-poaching-crisis-continues-south-africa/>.
- Bax, P. 2020. To Save Rhinos From Poachers, Botswana Chainsaws Off Horns. Available at: <https://www.bloomberg.com/news/articles/2020-06-17/botswana-begins-dehorning-its-rhinos-to-halt-surge-in-poaching>.
- BBC. 2019. Hong Kong Seizes \$1m worth of rhino horn at airport. Available at: <https://www.bbc.com/news/world-asia-china-47258340>.
- Beech, H. & Perry, A. 2011. "Killing Fields: Africa's Rhinos Under Threat." Monday, *Time Magazine*. Available at: <http://content.time.com/time/magazine/article/0,9171,2075283,00.html>.
- Bega, S. 2019. SA's Largest Private Rhino Breeder, John Hume, Says Seized Rhino Horns are His Property. Available at: <https://www.iol.co.za/saturday-star/sas-largest-private-rhino-breeder-john-hume-says-seized-rhino-horns-are-his-property-22221195#>.
- Benza, B. 2019. December. Rhino Poaching at Record Levels in Botswana. *Reuters*. Available at: <https://www.reuters.com/article/us-botswana-rhino-idUSKBN1YS0IV>.
- Botswana Gazette. 2016. SADC Votes Shoot to Kill. Available at: <https://www.thegazette.news/latest-news/sadc-votes-shoot-to-kill/16136/#.X3g0cGgzY2w>.
- Briggs *et al.* 2017. Developing a Theory of Change for a Community-based Response to Illegal Wildlife Trade. *Conservation Biology*, 31:5-12.
- Christy, B. & Hartley, A. 2013. "Battle for the Elephants," New National Geographic Special. Available at: <https://www.nationalgeographic.org/education/channel/battle-for-elephants/>.
- Christy, B. 2014. United States Tightens the Noose on the Ivory Trade. *National Geographic*. Available at: <https://www.nationalgeographic.com/news/2014/2/140211-united-states-rules-wildlife-trafficking-ivory-science/>.
- Crookes, D.J. & Blignaut, J.N. 2016. A Categorisation and Evaluation of Rhino Management Policies. *Development Southern Africa*, 33(4): 459-469. DOI: 10.1080/0376835X.2016.1179100.
- Daily Nation. 2013. Kenya gets China support to fight poaching-President Kenyatta. Available at: <https://nation.africa/kenya/news/kenya-gets-china-support-to-fight-poaching-president-kenyatta-887138>.
- Daily News. 2018. Anti-poaching Unit Nabs 365 Poachers in six Months. Available at: <https://www.iol.co.za/dailynews/news/anti-poaching-unit-nabs-365-poachers-in-six-months-16652963#>.
- Dall, N. 2017. How Vietnam Learned To Stop Poaching And Love Its Beasts. Available at: <https://www.ozy.com/around-the-world/how-vietnam-learned-to-stop-poaching-and-love-its-beasts/79150/>.
- Davies-Mostert, N. 2017. Legalising Rhino Horn Trade: Don't Charge in Blind. *The Conversation*. Available at: <https://theconversation.com/legalising-rhino-horn-trade-dont-charge-in-blind-88487>.
- Earth Touch News. 2014. Top 10: Shocking Figures of The Illegal Rhino Horn Trade. Available at: <https://www.earthtouchnews.com/environmental-crime/illegal-trade/top-10-shocking-figures-of-the-illegal-rhino-horn-trade/>.
- French, H.W. 2014. "Confessions of an Ivory Consumer". *The Atlantic Daily*. Available at: <https://www.theatlantic.com/international/archive/2014/11/confessions-of-an-ivory-consumer/382988/>.
- Hance, J. 2014. "China Pledges \$10 million to Combat Poaching in Africa." Available at: <https://blog.nationalgeographic.org/2014/05/13/china-pledges-10-million-in-support-of-wildlife-conservation-in-africa/#>.
- Hanks, J. 2018. Making a Case to Permit the Legal Trade in Rhino Horn. Mmegi. Available at: <https://www.mmegi.bw/index.php?wid=101&aid=475>.
- Henk, D. 2005. The Botswana Defence Force and the War against Poachers in Southern Africa. *Small Wars and Insurgencies*, 16(2):170-191. DOI: 10.1080/09592310500079924.
- Hong, S. 2019. What's China's role in protecting African wildlife? Available at: <https://news.cgtn.com/news/3d3d674e3159444f32457a6333566d54/index.html>.
- Humane Society International. 2017. HSI/Vietnam Calls on South African Government to Shut Down Rhino Horn Auction Over

- Trafficking Risk. Available at: <https://www.hsi.org/news-media/rhino-horn-auction-080917/>
- International Rhino Foundation. 2018. "Rhinos at Risk 2018: Three African Rhinos Poached Every Day for Fifth Straight Year." Available at: <https://rhinos.org/2018-state-of-the-rhino/>.
- International Rhino Foundation. 2018. "State of the Rhino," Available at: <https://rhinos.org/2018-state-of-the-rhino>.
- International Union for Conservation of Nature. 2013. Available at: www.iucnredlist.org.
- IUCN/TRAFFIC. 2013. IUCN/TRAFFIC Report Submitted to CITES Highlights Status, Conservation and Trade in Rhino. Available at: <http://sdg.iisd.org/news/iucntraffic-report-submitted-to-cites-highlights-status-conservation-and-trade-in-rhino/>.
- James, C. 2011. Theory of Change Review. London: Comic Relief.
- Lawson, K. & Vines, A. 2014. Global Impacts of the Illegal wildlife Trade: the Costs of Crime, Insecurity and Institutional Erosion. London: Chatham House.
- Leto, J. & Roberts, C. 2016. Vietnam's Role in Africa's Poaching Crisis Cannot Be Ignored. *Time*. Available at: <https://time.com/4501268/vietnam-africas-rhino-poaching-crisis/>.
- Mahlatini. 2014. Rhino Poaching Threats. Available at: <https://www.mahlatini.com/rhino-poaching-threats/>. Accessed 13 February 2020.
- Margoluis *et al.* 2013. Results chains: a tool for conservation action design, management, and evaluation. *Ecology and Society*, (18):22.
- Mead, D.T. 2014. "Protecting Wildlife Means Educating Humans: An Interview with Jackie Chan." Available at: <https://www.vice.com/en/article/gvygvj/protecting-wildlife-means-educating-humans-an-interview-with-jackie-chan>.
- Milliken, T. & Shaw, J. 2012. The South Africa-Vietnam rhino horn trade nexus: a deadly combination of institutional lapses, corrupt wildlife industry professionals and Asian crime syndicates. Johannesburg: TRAFFIC.
- Milliken, T. 2014. Illegal Trade in Ivory and Rhino Horn: An Assessment to Improve Law Enforcement Under The Wildlife Traps Project. Cambridge: TRAFFIC International. Available at: <https://www.traffic.org/site/assets/files/2544/w-traps-elephant-rhino-report.pdf>.
- Mogomotsi, E.J.G. & Madigele, K.P. 2017. "Live by the gun, die by the gun: Botswana's 'shoot-to-kill' policy as an anti-poaching strategy". *South African Crime Quarterly*, (60):51-59. Available at: <http://dx.doi.org/10.17159/2413-3108/2017/v0n60a1787>.
- Mohammed, O. 2015. "A new census reveals the poaching crisis in Africa is worse than we thought Poaching could lead to the extinction of elephants". *Reuters/Wong Campion*. Available at: <https://qz.com/africa/418923/the-poaching-crisis-is-worsening-in-some-african-countries-to-meet-chinese-demand-for-ivory/>.
- Musasizi, S. 2014. China Joins War Against illegal Trade in Ivory. *The Observer*. Available at: <https://observer.ug/business/79-businesstopstories/29665-china-joins-war-against-illegal-trade-in-ivory>.
- Nyoni, D.T. 2018. "Botswana – shoot-to-kill anti-poaching policy and summary executions". Available at: <https://africasustainableconservation.com/2018/06/20/botswana-shoot-to-kill-anti-poaching-policy-and-summary-executions/>.
- Oberem, P. 2019. Legalising Rhino Horn Trade the Obvious Answer to SA's Poaching Problems. *News24*. Available at: <https://www.news24.com/news24/columnists/guestcolumn/legalising-rhino-horn-trade-the-obvious-answer-to-sas-poaching-problems-20190318#>.
- Planetary Press. 2020. Wildlife Trade to Reduce Risk of Future Pandemics. Available at: <https://www.theplanetarypress.com/2020/07/vietnam-bans-wildlife-trade-to-reduce-risk-of-future-pandemics/>.
- Phys.Org. 2019. South Africa's Rhino Poaching Sees 'Significant' Decline, Minister Says. Available at: <https://phys.org/news/2019-02-south-africa-rhino-poaching-significant.html>.
- Phys.org. 2020. Nearly 50 rhinos killed in Botswana in 10 months as poaching surges. Available at: <https://phys.org/news/2020-02-rhinos-botswana-months-poaching-surges.html>.
- Raxter, P. & Young, R. 2015. "Drones can curb Poaching, but they're Much Costlier than Alternatives." *Geographic Magazine*, 23 May. Available at: <https://blog.nationalgeographic.org/2015/05/23/drones-can-curb-poaching-but-theyre-much-costlier-than-alternatives/>.
- Republic of South African (n.d.). Our Rhino, Our Future, Our Heritage. Pretoria: Department of Environmental Affairs. Available at: https://www.environment.gov.za/sites/default/files/docs/rhinoourfuture_heritage.pdf.
- Rhino Conservation Botswana. 2020. Africa's Rhinos are in Trouble. Available at: <https://rhinoconservationbotswana.com/the-poaching-crisis/>.
- Rhino Rest. 2019. Rhino Horn Price – How much is a Rhino Horn Worth? Available at: <https://www.rhinorest.com/rhino-horn-price/>.
- Salem, H. 2018. "Is farming rhinos the only way to save them?" Available at: <https://www.slow-journalism.com/delayed-gratification-magazine/is-farming-rhinos-the-only-way-to-save-them>.
- Save the Rhino. 2012. Time Magazine Article – Killing Fields: Africa's rhinos under threat. Available at: <https://www.savetherhino.org/poaching-crisis/time-magazine-article-killing-fields-africas-rhinos-under-threat/>.
- Save the Rhino International. 2015. Poaching Statistics. Available at: <https://www.savetherhino.org/rhino-info/poaching-stats/>.
- Save the Rhino. 2016. China and Vietnam Heavily Involved in Global Rhino Horn Trade. Available at: <https://www.savetherhino.org/asia/vietnam/china-and-vietnam-heavily-involved-in-global-rhino-horn-trade/>.
- Save the Rhino International. 2019. Poaching Statistics. Available at: <https://www.savetherhino.org/rhino-info/poaching-stats/>.

- SBS News. 2018. Wildlife Conservationists Condemn China's Reversal of Ban on Rhino, Tiger Products. Available at: <https://www.sbs.com.au/news/wildlife-conservationists-condemn-china-s-reversal-of-ban-on-rhino-tiger-products>.
- Smith, D. 2010. "Africa's Bloody war to save its Rhino". *The Guardian*. Available at: <https://www.theguardian.com/environment/gallery/2010/nov/15/rhino-under-threat-south-africa>.
- 't Sas-Rolfes, M., Moyle, B.J. & Stiles, D. 2014. The Complex Policy Issue of Elephant Ivory Stockpile Management. *Pachyderm*, (55):62-77.
- Tatarski, M. 2020. Vietnam considers wildlife trade ban in response to coronavirus pandemic. *Mongabay News*. Available at: <https://news.mongabay.com/2020/03/vietnam-considers-wild-life-trade-ban-in-response-to-coronavirus-pandemic/>.
- Taylor, J. 2011. "China's Presence in Africa Blamed for Threat to Rhino Populations." *The Independent*. Available at: <https://www.independent.co.uk/environment/nature/chinas-presence-in-africa-blamed-for-new-threat-to-rhino-2184340.html>.
- The Peninsula. 2017. Rhino Horn Smugglers Shift to Jewellery: Report. Available at: <https://www.thepeninsulaqatar.com/article/18/09/2017/Rhino-horn-smugglers-shift-to-jewellery-report#>.
- Twigg, M. 2016. Inside the Twisted Practice of Elephant and Rhino Poaching in Africa. Hong Kong Tatler. Available at: <https://hk.asiatatler.com/life/inside-the-sad-world-of-elephant-and-rhino-poaching-in-africa>.
- Twigg, M. 2019. Call to Legalise Rhino Horn Trade Splits World's Environmentalists. Available at: <https://www.scmp.com/magazines/post-magazine/article/1922798/call-legalise-rhino-horn-trade-splits-worlds>.
- Valters, C. 2015. Theories of Change: Time for a radical approach to learning in development. London Overseas Development Institute.
- White House. 2013. Executive Order – Combating Wildlife Trafficking. Available at: <https://obamawhitehouse.archives.gov/the-press-office/2013/07/01/executive-order-combat-ing-wildlife-trafficking#>.
- WildAid. 2014. "Yao Ming Asks China to Ban Ivory Sales." Available at: <https://wildaid.org/yao-ming-asks-china-to-ban-ivory-sales/>.
- WildAid. 2015. Vietnam's Biggest Pop Stars Come Together for Rhinos. Available at: <https://wildaid.org/vietnams-biggest-pop-stars-come-together-for-rhinos/>.
- WildAid. 2018. World Rhino Day: WildAid Report Shows Dramatic Decline in Rhino Horn Prices. Available at: <https://wildaid.org/world-rhino-day-2018>.
- WildAid. 2020. South Africa Reports Decline in Rhino Poaching. Available at: <https://wildaid.org/south-africa-reports-decline-in-rhino-poaching/>.
- World Wild Fund. 2020. Open Letter to Vietnam Prime Minister Regarding COVID-19 and Illegal Wildlife Trade. Available at: https://wwf.panda.org/_/search_wwf_news/?359931%2FOpen-letter-to-Viet-Nam-Prime-Minister-regarding-COVID-19-and-illegal-wildlife-trade.
- World Wildlife Organization. 2014. Success from Within: New campaign to reduce rhino horn use launched in Vietnam. Available at: <https://www.Worldwildlife.org/stories/success-from-within>.
- Xinhua. 2020. Botswana dehorns at least 100 wild rhinos to protect them from poachers. Available at: http://www.xinhuanet.com/english/2020-06/21/c_139156150.Htm#.