Rhino and elephant poaching affects various Southern African countries. Despite recent reductions in rhino poaching in Namibia and South Africa, it remains a concern. In response, the government of Botswana has implemented a controversial ‘shoot-to-kill’ policy, targeting poachers. We believe this has reduced poaching in Botswana, relative to most African countries. Private rhino conservators from neighbouring South Africa have relocated some of their rhinos to Botswana. This commentary piece discusses the militarisation of conservation as a viable conservation policy. It argues that anti-poaching is comparable to the war on terror. It reviews Botswana’s shoot-to-kill policy and its justification in international law, specifically with regard to war and armed combat. It adopts an exploratory methodology to reflect on the effectiveness of Botswana’s policy, and considers whether it can be adopted by other countries, particularly South Africa, to combat poaching. It concludes that shoot-to-kill is an effective deterrence to poachers when implemented alongside long-term conservation management interventions.

Illegal poaching in Africa poses serious threats to biodiversity, including the possible extinction of species. Between 1970 and the early 2000s, the population of African elephants (*Loxodonta Africana*) is estimated to have declined by 50%. The recent Great Elephant Census found that elephant populations declined by 30% between 2007 and 2014, at the rate of 8% per year, as a result of poaching. The continent recorded an estimated 67% decline in black rhino (*Diceros bicornis*) between 1960 and the early 2000s. More than 6 000 rhinos have been poached in South Africa since 2007. Statistics released in February 2017 showed a 10.3% year on year decline in rhino poaching. Although commendable, 1 054 rhinos were still killed in South Africa in 2016, and another 1 175 in 2015.

In response to wildlife crime, some countries have declared a ‘war on poaching’. The government of Botswana in 2013 announced that it had devised and implemented a controversial ‘shoot-to-kill’ policy, targeting suspected poachers. Despite there being no
government document outlining this position, it does not make it any less a policy. Public policy is generally defined as what the government of the day chooses to do or not to do. It is an authoritative course of action, as pronounced, adopted, written or arising from practice, on various socio-economic issues of public interest that hinge on value and resource allocation of a given nation. Botswana is home to almost a third of Africa’s elephants, and depends on wildlife for tourism, which is the second largest contributor to its gross domestic product. In 2016 Lindsey et al. suggested that Botswana’s megafauna conservation efforts were some of the world’s most successful.

This commentary piece contributes to the debate on green militarisation by arguing that it is a legitimate conservation strategy. It reflects on the efficacy of Botswana’s ‘shoot-to-kill’ policy, its effects on communities neighbouring parks, and on cross-border relations. It asks whether this policy should be adopted by other Southern African states, particularly South Africa, to combat poaching.

**Findings and discussions**

**Economics of poaching**

Several market-based approaches have been proposed to reduce the incentive to poach or to lower the prices of ivory and rhino horn. One proposition is the lifting of the Convention on International Trade in Endangered Species (CITES) bans to allow for the stockpiling and sale of ivory at lower prices so as to reduce cases of illegal hunting of endangered species. According to opponents of this argument, the price received by poachers for ivory and rhino horn would increase where rhino and elephant hunting remain illegal. Another market-based solution is to increase the non-poaching wage rate of local communities living near or around wildlife parks and to increase the economic cost to poachers by increasing fines and prison sentences. This approach assumes that most poachers are members of local communities. It has been posited that poaching and trafficking of ivory and rhino horns are directly and indirectly linked to poverty. However, these market-based strategies have failed to reduce poaching in Southern Africa. Poaching rates have continued to rise, despite the threat of fines and prison terms.

In northern Botswana, where most of the country’s wildlife is found, rural communities derive benefits such as cash income, employment in the wildlife industry, hunting and food from wildlife. However, studies in northern Botswana indicate that these communities still have negative attitudes towards wildlife and conservation institutions. In our view, this is due to poorly managed human–wildlife conflicts, and rural communities’ belief that government prioritises conservation over human welfare.

The adoption of green militarisation in the form of a ‘shoot-to-kill’ policy has created tension in northern Botswana, where communities have complained of frequent raids by the Botswana Defence Force (BDF). Nonetheless, we believe these militarised responses effectively reduce poaching. For instance, Botswana had 1.12% of Africa’s rhino in 2015, but accounted for only 0.1% of mortalities between 2013 and 2015. On the other hand, South Africa was home to 79.32% of rhinos but accounted for 89.6% of mortalities. Similarly, 88% of African rhino poached since 2010 have been killed in South Africa.

Wildlife is regarded as a ‘common-pool’ resource in Botswana due to its non-excludability characteristics. That is, it is difficult, if not impossible, to exclude people from utilising such common resources. The non-excludability of common-pool wildlife resources poses a threat to their sustainability, and could lead to their depletion.
negative attitudes towards wildlife conservation in rural communities may indicate that green militarisation is a means to an end and not an end on its own. In 2010 Ostrom argued that the optimal management of common-pool resources such as wildlife requires a participatory approach between indigenous people and state governments.\(^{20}\) The lack of success in including communities affected by poaching may doom conservation efforts to failure. Green militarisation should thus be implemented alongside other conservation efforts. However, these other strategies appeared not to deter poachers, hence the adoption of the ‘shoot-to-kill’ policy.

**Militarised conservation and anti-poaching**

The militarisation of anti-poaching is not a new phenomenon in Africa. High incidences of poaching in the 1970s and 1980s exerted pressure on some African governments to resort to military responses to poaching.\(^{21}\) The use of military and para-military personnel and techniques in the pursuit of conservation and/or anti-poaching has been described as green militarisation.\(^{22}\) Similarly, green violence is defined by Büscher and Ramutsindela as ‘the deployment of violent instruments and tactics towards the protection of nature and various ideas and aspirations related to nature conservation’.\(^{23}\)

According to Lunstrum, the militarisation of conservation in South Africa came about through the state’s interest in securing both its borders and its natural resources.\(^{24}\) This resulted in government anti-poaching warmongering, which framed poaching as threatening national security and ‘the reputation, eco-tourism industry, and the public image of South Africa’.\(^{25}\) However, such measures are expensive, and may alienate local communities.\(^{26}\)

Lunstrum has discussed the militarisation of conservation in South Africa in relation to the Kruger National Park.\(^{27}\) She suggests that an arms race between poachers and anti-poaching forces has led to over 300 suspected poachers being killed between 2009 and 2013.\(^{28}\) She believes that military-type operations in Kruger are comparable to other conservation efforts around the world.\(^{29}\) Lunstrum traces the birth of green militarisation to the 1980s, when various African governments first provided rangers with militarised training, lethal weapons and permission to use deadly force.\(^{30}\) She believes this led to the framing of wildlife as part of an expanded moral community and of poachers as ruthless and morally lacking, garnering support for shoot-on-site policies and endangering people who might not be poachers.\(^{31}\)

One critic of ‘shoot-to-kill’ policies, Neuman, argues that the militarisation of conservation in Africa juxtaposes issues of morality and human rights with the responsibility to protect wild animals and, in so doing, forces policymakers to choose between two moral ‘goods’.\(^{32}\) In essence, he argues that for ‘shoot-to-kill’ policies to be morally justifiable, an entire species must be threatened with extinction. Noting that there is no philosophical position in environmental ethics that justifies the taking of human life in defence of non-human species, he suggests that only a radical reordering of moral standing could justify shooting on sight.\(^{33}\) He believes that describing parks as war zones normalises deadly violence against humans, in defence not of human life but of wildlife.\(^{34}\)

As with any idea, there are those opposed to green militarisation. In addition to those already mentioned, anti-militarisation positions claim that it fails to address the underlying causes of poaching, namely the global trade networks and demand from end-user markets.\(^{35}\) Nonetheless, we support militarisation when implemented with complementary alternatives.\(^{36}\) For instance, with regard to the above misgivings, we hold that it is one thing to claim
that green militarisation is not going to help conservation, and quite another to call such efforts immoral, unjust and inhumane.\textsuperscript{37} We believe parks are war zones and that rules and principles of war ought to be implemented.

\textbf{Focus on ‘shoot-to-kill’ policy}

Botswana turned to the BDF to support anti-poaching operations in the late 1980s. The BDF’s involvement and success is threefold: 1) it has largely ended the megafauna poaching in northern Botswana, by either deterring or intercepting the poachers; 2) its disciplined and pervasive presence has re-established a perception of security among a population once very sensitive to armed poachers and among a jittery international tourist clientele; and 3) the rise in militarised conservation has been justified by non-governmental organisations (NGOs), states and the private sector, which argue that the survival of key species is threatened by the recent and rapid rise in highly organised poaching.\textsuperscript{38}

One justification for Botswana’s ‘shoot-to-kill’ policy, ‘[T]o send a clear message to say, if you want to come and poach in Botswana, one of the possibilities is that you may not go back to your country alive.’\textsuperscript{39} In essence, this policy is intended to deter poachers by threat of death. We believe that the ‘shoot-to-kill’ policy indicates that government considers poaching an act of war. This might be because implementing sustained enforcement action such as trade bans to protect highly valued CITES-listed species is ineffective.\textsuperscript{40} ‘Shoot-to-kill’ models are cheaper to enforce.\textsuperscript{41}

Conservation has become a ‘just war’ that supports shoot-on-sight policies.\textsuperscript{42} Such extra-judicial killing of human beings without trial is almost unheard of, and usually only permitted in self-defence (where the person poses an immediate threat) or to save lives.\textsuperscript{43} Arresting poachers does not always stop criminal syndicates. Rhino poaching has continued to rise in South Africa, despite increased arrests.\textsuperscript{44} Close to three decades ago, researchers claimed that the only ways to increase the cost of poaching were: 1) implementing the ultimate penalty of a ‘shoot-to-kill’ policy with its implications for justice and human rights; and 2) improving the detection rate of poaching and illegal trade in protected animal species.\textsuperscript{45} After the introduction of a ‘shoot-to-kill’ policy in Zimbabwe in the late 1980s the country’s elephant population increased from 52 000 to 72 000.\textsuperscript{46}

Notwithstanding the controversies surrounding the ‘shoot-to-kill’ policy, it has been used in various countries without significant outcry from the international community.\textsuperscript{47} It has in fact received public support from various quarters.\textsuperscript{48} This might be partly due to the philosophical narrative that the ‘taming’ of ‘barbarians’ and dissenters, in this case poachers, becomes all the more urgent when there are emergencies that threaten the life and power of the dominant opinion holders, thereby requiring exceptional measures, such as the temporary suspension of normal ways of doing things.\textsuperscript{49}

According to the minister of environment, natural resources conservation and tourism, Botswana has gained a reputation of being the final haven for endangered species, attributable to the country’s attitude towards poachers.\textsuperscript{50} The government of Botswana, through various forums and utterances of the minister responsible for environmental conservation, has confirmed the existence of such a policy stance. The minister has publicly stated that his government has adopted a policy of shooting and killing poachers where necessary.\textsuperscript{51} Such pronouncements, followed by practice and the ensuing inaction by law enforcement agencies, give credibility to these utterances and the existence of such a policy.
The right of states to use deadly force against suspected criminals is limited by both domestic criminal procedures and international law. The right to life is protected in terms of Section 4(1) of the Constitution of Botswana, which provides that no person shall be deprived of his or her life intentionally except in execution of the sentence of a court in respect of an offence under the law in force in Botswana of which he or she has been convicted. In Botswana, ‘shoot-to-kill’ policy is arguably justified in terms of Section 4(2)(d) of the Constitution, which provides that a person shall not be regarded as having been deprived of his or her life in contravention of Section 4(1) of the Constitution if he or she dies in order to prevent the commission by that person of a criminal offence, or if he or she dies as the result of a lawful act of war.

It is hence submitted that death sustained during anti-poaching activities should be reported in terms of Section 3 of the Inquests Act and an investigation should be carried out accordingly to determine whether the shooting was justifiable. This allows checks and balances to ensure that suspected poachers who surrender are not killed unjustifiably. If a determination is made that the killing is not justifiable in terms of Section 4(2)(d), the director of public prosecutions is empowered by Section 21 of the Inquests Act to pursue criminal proceedings against those responsible for the murder. The provisions of the Inquests Act or any other law do not discriminate on the basis of nationality. The same procedure should be followed whether the victims are citizens or foreign nationals. This process has to precede the repatriation of bodies in the case of foreign nationals. Although game scouts or rangers are empowered to shoot and kill poachers, they must exercise the authority lawfully and justifiably.

‘Shoot-to-kill’ is particularly interesting when considered in relation to the laws of armed combat. These allow agents of the state to kill the enemy. We provide justifications for classifying anti-poaching efforts as war. Where poachers are apprehended or surrender to anti-poaching agents, the normal rules of criminal law and procedure are followed and the suspects are afforded the constitutional right to a fair hearing and presumption of innocence.

Botswana’s anti-poaching efforts have not gone unnoticed. In terms of clause 5.1 of the 2016–2021 Southern African Development Community Law Enforcement and Anti-Poaching Strategy (SADC LEAP), member states observe that ‘patrols require adequate arms and ammunition capable of matching that of poachers’. It is our view that ‘targeted actions’, coupled with weapons of war, are nothing but a ‘shoot-to-kill’ policy, packaged in politically correct language, indicating support for the targeted killing of poachers. We believe that a ‘shoot-to-kill’ policy is the only anti-poaching method that clearly signals that wild animals deserve to live.

In the next section we argue that international law allows for such a policy in certain instances.

**Target killing under international law**

International humanitarian law, or the law of armed conflict, regulates the conduct of states during armed conflict. However, modern conflicts are drastically different from those envisioned when this law first evolved. Modern conflicts, such as the ‘War on Terror’ or the ‘war on poaching’, between states and non-state actors have resulted in new military tactics, such as targeted killing. The war on poaching has been presented by conservationists from the international community as a just war and a serious threat to peace and security in terms of Chapter VII of the United Nations Charter. The narratives and discourse of wildlife crime have become increasingly belligerent on the international policy stage. The war model has commonly been adopted as a result of...
the security implications posed by poaching and trafficking, which are compared with the threat of terrorism. This increasing tendency to discursively frame poaching via reference to terrorism resonates with wider conceptual approaches to environmental security.

Having established a philosophical and moral basis for declaring anti-poaching efforts a ‘war’ under international law, rules of engagement in wartime are applicable, including exceptions to ordinary principles of criminal procedure. Based on the proposition that anti-poaching is a war *sui generis*, states are justified in using extraordinary approaches in protecting their resources, including wildlife. In war, the main obligation of the government to its citizens is to safeguard the state’s territorial integrity. Laws of armed combat apply equally to citizens and foreigners. Therefore, states acting on verified intelligence should be able to kill their targets.

It has been noted that targeted killing is acceptable under international law governing warfare. The concept of targeted killings is often referred to as ‘assassination’ or ‘extrajudicial execution’. This is not advisable, as they are value-laden terms connoting immorality and illegality, and may prejudice any debate. In this commentary we do not discuss the morality or ethics of ‘shoot-to-kill’.

Targeted killings are controversial in international law. Opponents argue that such killings contravene Article 6(1) of the International Covenant on Civil and Political Rights, and therefore contravene international human rights law. Proponents argue that the law applicable should not be international human rights law, but rather international humanitarian law. This argument is anchored in the jurisprudence of the International Court of Justice, which stated that law applicable to armed conflict, as the *lex specialis* for the conduct of hostilities, determines the test of what is the arbitrary deprivation of life. In terms of international humanitarian law, civilians lose their protected status and may be targeted under the law of belligerent occupation, applicable to international and non-international armed conflict, if they take part in hostilities.

We accept the position of international humanitarian law or the law of armed conflict as applicable to anti-poaching efforts. As such, targeted killings or ‘shoot-to-kill’ policies are legal. Therefore, Botswana’s policy can be copied and implemented by other jurisdictions in terms of international humanitarian law. The following section proposes how this can be applied in South Africa.

**Lessons for South Africa**

South Africa is home to the largest population of rhinos in the world and is a poaching hot spot. This has forced the relocation of some wildlife to Botswana and Australia for safekeeping. Innovative anti-poaching interventions to make rhinos less attractive to poachers, such as dehorning or introducing dye or poison to rhino horns, have had limited impact and huge cost implications. South Africa has also struggled with the growth of organised crime more broadly. The country seems unable to deal with sophisticated criminals, including poachers and wildlife traffickers.

Notwithstanding the high numbers of poachers arrested in South Africa, prosecution remains a challenge. Most apprehended poachers are acquitted. Where poachers are convicted, they are mainly low level rather than kingpins. Consequently, it has been projected that African elephants and rhinos could be virtually extinct by 2020, unless poaching is considerably reduced.

In light of the above, South Africa is encouraged to seriously consider the adoption and implementation of Botswana’s ‘shoot-to-kill’ policy. It is our view that the current generation has a duty to protect rhinos and safeguard them from possible extinction. It is worth noting that
‘shoot-to-kill’ policies are not foreign to South Africa’s police service. This policy can also be applied to other enforcement agencies. The ‘shoot-to-kill’ policy in South African legislation is traceable to Section 49 of the Criminal Procedure Act of 1977, which originally applied to situations in which it was deemed justifiable for the police or any arresting authority to use lethal force. The enabling provision was amended to align it to the new democratic Constitution of South Africa, but it only came into force in 2003.

The amended section, which is arguably the legal framework for ‘shoot-to-kill’ policy in South Africa, has not been challenged in court, and thus it remains part of South African legislation. It has been observed that the 2003 redefined Section 49(2), which is aligned with the provisions of the Constitution of the Republic of South Africa, extends the powers of arrestors beyond mere common law private defence. A subsequent amendment in 2012 upholds the right of the arrestor to use reasonable deadly force in compliance with Section 49(2)(a)-(c). Some believe these powers allow police to shoot to kill.

It is hence our view that South Africa’s legislative framework allows for anti-poaching forces to be empowered to shoot at poachers if it is in the interest of their safety and the security of the endangered species. To the moralists, such a position is very difficult to accept; however, we argue that it is a necessary evil, considering the obligation to protect rhinos from extinction. It appears that poachers will do anything to ensure that they kill these animals, unless they are made aware of the possibility of their own death in the process.

**Conclusion**

We have argued that ‘shoot-to-kill’ is a useful policy tool in the conservation of endangered species in Africa. Despite the reservations of some, we argue that Botswana’s impressive elephant and rhino conservation record is due to its ‘shoot-to-kill’ policy, which deters poachers. This commentary does not discuss the rule of law or human rights perspectives related to ‘shoot-to-kill’ in significant detail, nor does it discount the usefulness of other conservation methods. However, it argues that for those methods to be effective, they should be implemented alongside the ‘shoot-to-kill’ policy.

We implore the government of South Africa to implement the SADC resolution on the adoption of a ‘shoot-to-kill’ policy. The country’s current legislative framework, we believe, allows law enforcement agencies to use force, including deadly force, where appropriate. It is incumbent on all states to definitively support conservation. ‘Shoot-to-kill’ policies must be implemented in the short to medium term while other conservation models are explored, and maintained once other strategies are implemented. Arguably, the only thing Botswana is doing differently to South Africa is to use a ‘shoot-to-kill’ policy. We believe that Botswana has demonstrated that its policies, especially ‘shoot-to-kill’, deter poachers in general and rhino poachers specifically.  

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**Notes**

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