



SPECIES VICTIM IMPACT STATEMENTS

GIVING A VOICE TO THE UNHEARD VICTIMS OF ENVIRONMENTAL CRIME

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FROM VISION TO ACTION: A DECADE OF ANALYSIS, DISRUPTION AND RESILIENCE

The Global Initiative Against Transnational Organized Crime was founded in 2013. Its vision was to mobilize a global strategic approach to tackling organized crime by strengthening political commitment to address the challenge, building the analytical evidence base on organized crime, disrupting criminal economies and developing networks of resilience in affected communities. Ten years on, the threat of organized crime is greater than ever before and it is critical that we continue to take action by building a coordinated global response to meet the challenge.



INTRODUCTION

ildlife crimes are regularly perceived as technical breaches of conservation regulations rather than as serious criminal offences that directly impact the species and the ecosystem from which they were removed.¹ When such crimes have been prosecuted in court, the animal victims are habitually marginalized from consideration in sentencing decisions, as jurisdictions largely recognize animals only as legal property to be either confiscated or returned to their owners.² However, the need for sentencing that considers the extent of the harm caused or likely to have been caused to the environment or species is gaining support. The United Nations Office on Drugs and Crime (UNODC)'s Wildlife and Forest Crime Analytic Toolkit identifies problems in deterring wildlife crime offences due to lenient sentences and encourages courts to consider the level of harm caused or likely to have been caused by the offence when determining the necessary penalty.³ This aim is to end the common perception that environmental crime is low risk and high reward.

Academics and civil society organizations, largely working independently, have approached this problem by adapting victim impact statements (which have been used in prosecutions of other types of crime) for use in environmental crimes to represent the needs of species. Victim impact statements have been previously used in cases where the victims come from vulnerable groups, including the families of murdered people, women who have been trafficked and children who have been forced to work as child soldiers or labourers. Their use has therefore given these victims a voice to inform a court of the harm they have suffered, which can be considered by a judge during sentencing. This can help provide closure to the victim or to lay the foundations for restorative justice.

As the animal and species victims of environmental crime are at a fundamental disadvantage because of their inability to speak, these 'species victim impact statements' are designed to give them a similar voice to inform presiding judges of the harm caused to them by wildlife and environmental crimes from a variety of perspectives. These range from an animal rights perspective due to the impact on individual animals from the pain and suffering associated with such crimes; to impacts at the species level relating to habitat destruction and population declines; and up to the environmental level due to damage to ecosystems. Furthermore, there is a precedent for the use of such statements in the sphere of environmental crime, with many jurisdictions accepting them in court to detail the harms associated with pollution offences.⁴ Such an approach would not only act as a deterrent against offending but would also address the interests of the species subjected to the illegal trade and repair the damage to the ecosystems caused by their removal.⁵



A new initiative aims to address the marginalization of animal victims of environmental crimes, such as those targeted by poaching.

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This is an innovative approach that introduces ecocentric concerns into anthropocentric legal systems. It has grown into an effective body of practice, leading to increased sentences for environmental crimes in the countries where academics and civil society organizations promoting this tactic are operating, namely Hong Kong SAR, South Africa and Zambia. These successes prove that this concept can be scaled up to increase the number of jurisdictions using these tools, and can help to increase the effectiveness of the judiciary in deterring perpetrators of environmental crimes.

This 'community tool' report is based on the concept created by the Hong Kong University Species Victim Impact Statement (SVIS) Initiative, which was started by Associate Professor Amanda Whitfort in 2015. The initiative is a collaboration between the University of Hong Kong's Law Faculty and Conservation Forensics Laboratory and Kadoorie Farm and Botanical Garden. It also incorporates the work of other individuals and organizations who have developed similar tools, namely Professor Ray Jansen, a founding member and Africa Chair of the International Union for the Conservation of Nature Species Survival Commission (IUCN SSC) Pangolin Specialist Group in South Africa, and the civil society organization Wildlife Crime Prevention, working in Zambia.

This guide is the result of an analysis of academic reports and semi-structured interviews with those who have successfully used species victim impact statements in the jurisdictions in which they operate. It is designed to aid conservationists, civil society organizations and other interested parties responding to the illegal wildlife trade by explaining the background to species victim impact statements and their associated challenges, providing examples of their successful use in practice and offering guidance on how they can be developed and used in court.



LEGAL BACKGROUND AND ASSOCIATED CHALLENGES

Ithough laws exist to protect populations of endangered species by recognizing that wildlife is something to be conserved,⁷ such legislation gives little regard to the welfare of the species involved or their cultural value to particular communities. Most legal systems regard animals as property with an economic value, and devoid of certain rights, including the legal right to exist, to have a habitat or to be wild. Instead, legal systems focus on defining legal notions of harm and criminality rather than health and well-being. Therefore, when these 'rights' are violated, the animal in question is not considered a victim of crime. As a result, these laws do not protect wildlife for the sake of the animals themselves, but because they represent a natural resource to be managed for the benefit of humans, in the least damaging and most equitable way.

This attitude is echoed in international treaties, which also give little recognition to the welfare of endangered species. In the absence of formal recognition of animals as victims of wildlife crime under domestic and international law, effective judicial responses require that prosecuting authorities and sentencing judges give due consideration to the interests of endangered animals as victims of wildlife crime. However, judges generally lack the specialist knowledge necessary to effectively sentence those responsible for wildlife crime, which regularly results in overly lenient sentences.

Although socially constructed conceptions of who can be formally recognized as a victim have traditionally excluded animals from being represented in court,9 environmental crimes challenge the traditional view of what constitutes a victim, as the harm caused often affects animals either as individuals or as a species. For example, the International Criminal Court, while not recognizing animals as victims because they are not human beings, would allow animals to meet the other required criteria of 'suffering harm as a result of the commission of a crime in the jurisdiction of the court'.¹¹¹ Accordingly, they cannot correctly be regarded as mere 'objects'.¹¹¹ In recent years, the legal conception of what constitutes a victim has also broadened, with courts now recognizing victims even when no conviction has been recorded or prosecuted. This concept of species and ecological justice, in the realm of wildlife crime, expands the notion of harm to give value to the capacity of the individual animal, species and ecosystem to suffer as victims of illegal trade.

As with judges, law enforcement agencies and prosecution authorities suffer from a lack of expertise required to effectively investigate and prosecute environmental crimes, despite a history of capacity-building programmes by NGOs and civil society organizations. In addition, the prosecution of environmental crimes receives less funding than the prosecution of other high-value black market activities.¹²



The prosecution of environmental crimes is under-resourced, which affects how often these crimes are brought to court. Photo: Environmental Investigation Agency

As a result, environmental crimes are frequently not brought to court, and when they are, they are not being viewed as serious crimes.¹³ When cases are prosecuted, judges have difficulty assessing the impact of damage to individual species, ecosystems, cultural settings and the wider environment without expert evidence.

These difficulties are not solely the result of judges lacking expert knowledge, they are also due to limitations in legislation. Unlike human victimhood, which is usually understood as individual (or at most communal), harms to ecosystems are much more complex to define and comprehend because the multiple interactions with other species and the wider environment requires an understanding of interdependencies between elements, feedback effects and tipping points.

There may also be further ramifications for the ecosystem from which a species has been removed, especially in the case of an endangered species. This can result in the disruption of family and social groups as well as population levels, which can be catastrophic for the survival of a species. ¹⁴ In addition, non-target species may be affected by certain capture measures, such as the use of illegal cyanide poisoning, which can affect non-target fish and result in the elimination of top predators. ¹⁵

The lack of scientific data to determine the impact of wildlife crime is particularly pronounced for less understood species, posing a significant problem for courts seeking to assess the extent of cruelty or welfare compromises in the wildlife trade. Where such information does exist, it may be unknown outside of scientific circles. Furthermore, the anthropocentric application of laws has resulted in different values being assigned to species based on perceived victim worthiness, with animals from charismatic megafauna and well-known environmental hotspots receiving greater consideration in sentencing than less understood or attractive species or those from little-known regions. The service of the ser

Despite the suffering caused to animals during the poaching and trafficking stages of the illegal wild-life trade, these harms may not be taken seriously within legal systems unless they can be measured against human principles, including economic, aesthetic and cultural value. This failure to assess the impact of such crimes on species from their perspective (e.g. their ability to find mates, reproduce and learn from older species) limits the ability of a legal system to assess the impact that these crimes have on them. Despite limited recognition of a species' intrinsic value, this does not translate into recognition of the subjectivity of wild animals, except in certain countries such as Ecuador. Secundor of the subjectivity of wild animals, except in certain countries such as Ecuador.

Therefore, when sentencing wildlife traffickers, the penalty for the offence should consider not only the market value of the species trafficked, but also its conservation status and cultural value. This can be seen in Italy, where a combination of the market value of the species and the threat to its conservation is used to determine the level of fine imposed on wildlife offenders.²⁰



EFFECTIVE IMPLEMENTATION

n order to achieve effective judicial responses to wildlife crimes, prosecuting authorities and sentencing judges must give due consideration to the interests of endangered animals as the victims of wildlife offences. Effective sentencing for wildlife crime therefore requires that judges are presented with detailed, admissible and reliable evidence that illustrates the full impact of wildlife offences on the species and individual animals involved.²¹ Depending on the jurisdiction concerned, such evidence may be presented to the court in the form of a physical statement handed to the judge by the prosecution during sentencing, or in the form of an expert witness testifying on behalf of the prosecution.

This section explores how such statements have been effectively implemented by three organizations based in Hong Kong SAR, South Africa and Zambia respectively. Their experiences in implementing species victim impact statements show how different legal systems and the level of their development affect how best to approach the issue with judicial authorities.

University of Hong Kong, Hong Kong SAR

Academics from the University of Hong Kong (HKU) founded the SVIS initiative in the Chinese special administrative region (SAR) of Hong Kong in 2015. Given Hong Kong SAR's status as a wildlife trafficking hub, it was determined that a system needed to be developed to give animals, species and ecosystems a voice in the courts. Despite being a hotspot for wildlife trafficking, prosecutions in Hong Kong SAR are relatively rare and the courts have traditionally handed down very lenient sentences.

In 2016, the initiative prepared 33 statements for local use, and by 2022 this number had increased to 130 separate statements, including those for reptiles, birds, mammals, invertebrates and plant species. In addition to megafauna, statements are also included for commonly trafficked species of turtle, orchid and wood. Each statement is based on up to date and verifiable scientific data, with input for each provided by between two and seven experts. The statements are designed to allow for easy reference by prosecutors and judges in case preparation and for use as agreed facts for sentencing in court. They are continually updated to reflect the latest scientific research, with new species being added on a regular basis.

Figure 1 shows a blank species victim impact statement developed by HKU. The team of law and ecology academics who run the initiative maintain a database of the statements, which can be accessed by prosecuting authorities for use in court when necessary.

DETAILS OF THE SPECIMEN		
Scientific name	Common name	
Specimen description	Quantity	
Trade value estimate	Trade routes	
SPECIES GLOBAL STATUS AND THREATS		
IUCN Red List category	CITES listing	
Range countries	Major threats	
VICTIM IMPACT STATEMENT		
Ecosystem impact through exploitation	Keystone species concerns	
Community impacts	Population depletion	
Food chain effects	Invasive species concerns	
Forensic evidence and tools available	Monetary value in black markets	
Relevant sentencing decisions	Forensic tests available?	
WILDLIFE WELFARE CONCERNS		
Welfare concerns through harvesting and transportation	Fate of the consignments	
DISEASE AND PATHOGEN CONCERNS TO HUMANS	AND LOCAL ENVIRONMENT	
Risk of zoonosis		

FIGURE 1 Template for the University of Hong Kong's species victim impact statements.

The initial 33 statements drafted in 2016 were only a first step. Their effective use depends on the relevant enforcement authorities and prosecutors being trained in how to use them. Within Hong Kong SAR, staff belonging to the Agriculture, Fisheries and Conservation Department and the Customs and Excise Department were trained in how to use the information from the statements to better present wildlife cases in court. At the time, these types of cases were only being heard in Hong Kong SAR's magistrates' courts.

Since then, the Agriculture, Fisheries and Conservation Department, the Customs and Excise Department and the Department of Justice have used species victim impact statements to present wildlife cases in court, resulting in penalty increases of over 2 000% since the initiative began. The reports provide these agencies and departments with accurate and robust scientific data to more effectively prosecute wildlife crimes in court. The judiciary has been particularly receptive to the information provided in these statements and has received training on the scope and purpose of the initiative.

The training of the relevant authorities has ensured that the initiative is self-sustaining, removing the need for HKU academics to participate in each individual case. Instead, their primary focus is on updating the database and conducting regular training sessions. These sessions are increasingly sought after by prosecutors, judges and NGOs outside of Hong Kong SAR who are interested in adapting the HKU template for use in their own jurisdictions.

In 2021, the South African non-profit organization Endangered Wildlife Trust received training from HKU on the design and implementation of the university's SVIS initiative. The Endangered Wildlife Trust, working with 127 species experts from South Africa, Namibia, Botswana and Mozambique, adapted the HKU template to produce its own species victim impact statements in a format suitable for use in the courts of these countries, following the detailed narrative format of a typical affidavit. The resulting regional network of species experts are able to provide expert testimony in wildlife crime prosecutions. Through the use of workshops, the organization also trained 116 prosecutors

on the relevance and use of species victim impact statements in wildlife crime prosecutions and how to use them.²² These prosecutors were provided with the species-specific impact statements and the contact details of southern African species experts to assist them in wildlife crime prosecutions.

In 2022, staff from the Wildlife Justice Commission (WJC) and the Greater Mekong branch of the World Wide Fund for Nature, and judges from the supreme courts of Cambodia, Laos and Vietnam, received training on the use of species victim impact statements. In collaboration with the HKU academics, the WJC legal team in Thailand has since adapted specific statements for use in the Laotian and Thai courts, adding recent seizures in the region and local trade prices. Recent cases in the local courts are also being included to provide context for the judges responsible for sentencing.

IUCN SSC Pangolin Specialist Group, South Africa

The decline in Asian pangolin populations has led to the targeting of African species to meet demand, as evidenced by the large numbers of African pangolins being seized in Asia. The species most commonly found in southern Africa is Temminck's pangolin (*Smutsia temminckii*), which is most frequently trafficked into South Africa from neighbouring countries such as Zimbabwe and Mozambique before being shipped onward to destinations in Asia. This is believed to be due to the relatively weak legislation in South Africa when compared to neighbouring countries, particularly Zimbabwe, which has a mandatory nine-year prison sentence for pangolin trafficking. Under South African law, the species is listed as a threatened or protected species under the National Environmental Management: Biodiversity Act (NEMBA) of 2004.²³

In 2017, to address this issue of lenient sentencing, Professor Ray Jansen, a founding member and Africa Chair of the IUCN SSC Pangolin Specialist Group, began attending court to provide expert testimony with the objective of increasing sentences for convicted traffickers. As the presiding magistrates had limited knowledge of both the species concerned and the relevant legislation, these expert statements aimed to inform the court of the severity of the crimes, their wider implications, the applicable legislation and sentencing precedents. The first of these cases was tried in the Mankweng regional court in northern South Africa and resulted in a three-year prison sentence for the accused. This was a significant achievement as no suspect had previously spent time in prison for a pangolin trafficking offence.



Pangolin smugglers are arrested in Johannesburg as part of a joint operation between the South African Police Service and the Pangolin Counter Poaching Team © Luca Sola/AFP via Getty Images

Unlike prosecutions in Hong Kong SAR, the IUCN SSC Pangolin Specialist Group has predominantly used live expert witnesses to give evidence to the court on behalf of the prosecution, rather than using agreed facts provided to the court for use in sentencing. The magistrates presiding over these cases have preferred this approach as it allows for a better understanding of the transgressions and their wider consequences and allows the magistrate to ask questions of the expert witness if necessary. However, some magistrates have instead requested written statements and, where necessary, asked for witness testimony to answer questions. When the potential sentence is high, magistrates have tended to ask for witness testimony rather than written statements.

The inclusion of these witness testimonies and written statements brought about significant increases in the length of sentences in pangolin-related court cases between 2017 and 2022, with prison time ranging from three to 10 years in 20 cases, with a mean of 6.15 years. Furthermore, the use of expert testimony has made magistrates more aware of the types of evidence available to their courts, leading them to invite species experts in when necessary. This success has also resulted in the development of training materials for both rural law enforcement and the judiciary to increase their awareness of the species protected by South African legislation. A number of live training sessions have been held for the judiciary around the country, particularly in regions where pangolin trafficking is prominent.

Within South Africa, the Ministry of Justice and Correctional Services does not provide guidance to magistrates, instead referring them to legislation interpreted through case law. This has resulted in a vacuum of guidance on sentencing conventions. Therefore, unlike Hong Kong SAR, where the use of species victim impact statements relied on a 'top-down' approach through the Department of Justice, in South Africa the most effective method is to approach local law enforcement officers and prosecutors who are most likely to encounter pangolin trafficking offences. The statements will then become part of the prosecution case, with species experts testifying in aggravation on behalf of the prosecution. This method requires the roll-out of these statements to be handled on a case-by-case basis within South Africa.

The importance of media coverage was highlighted in the South African case study, not only to publicize the sentences so that the increased prison times act as a deterrent effect to potential offenders, but also to educate members of the public who will be more likely to report incidents of pangolin trafficking. This is particularly important as every tip-off recorded where a pangolin has been recovered from the wildlife trade has come from members of the public.

Wildlife Crime Prevention, Zambia

Wildlife Crime Prevention (WCP) is an NGO working in Zambia, helping the Department of National Parks and Wildlife (DNPW) to reduce illegal wildlife trade throughout Zambia and in neighbouring countries. In 2017, WCP started a project to support the effective prosecution and appropriate sentencing of wildlife crime offences in Zambia, in partnership with the DNPW and the country's National Prosecution Authority (NPA). The initial proposal was to develop sentencing guidelines that could be used by the judiciary at the sentencing stage. However, in Zambia there are minimum penalties for serious wildlife crime offences (five years for illegal possession of ivory, rhino horn, pangolin, etc.), and magistrates must impose the minimum sentence for an offence unless aggravating factors have been presented in the sentencing submissions.

Efforts have therefore been focused on developing guidelines for species victim impact statements to be used by public prosecutors at trial and in sentencing submissions. The aim is to give a detailed

account of the harm caused, thus providing a legal basis for magistrates to use their discretion to deviate from minimum sentences relative to the seriousness of the offence.

Victim impact statements have been used in Zambia's courts for other types of crime, but the NGO-led initiative marked the first time they have been used in wildlife crime cases. The NPA is responsible for the effective administration of criminal justice in Zambia and has been involved in drafting the guidance for the impact statements and their trial. Under the Zambian legal system, impact statements must be introduced before the sentencing process, so they are therefore presented during the case through witness testimony and written submissions, and then referred to in sentencing submissions for the magistrate to consider when making sentencing decisions.

The documents that WCP has developed with the DNPW and NPA are intended as guidance documents that can be consulted on a case-by-case basis to help prosecutors and enforcement officers decide how best to present evidence in court to ensure that the evidence used is relevant to the case. The documents are therefore not designed to be used as generic tools, but rather as platforms from which impact statements can be developed specifically for a case.

To ensure that each statement details the harms caused to the species and the environment, WCP suggests using local expert witnesses from local law enforcement or field-based conservation organizations who can speak with authority about the impact of the crime. For example, an ecologist may be able to explain how an illegally hunted lion may have been particularly important to a pride and therefore how its death has resulted in the break-up of the pride and cub deaths (through infanticide). These harms are then presented to the court through questions directed at an expert witness by the prosecution. For this method to be effective, a working relationship needs to be developed between the prosecutors and the expert witnesses so that the prosecutors know who they can call upon for advice when needed. WCP defined success as the sentences handed down by the magistrate being higher than the minimum allowed, with the judgement stating that the reason for the higher sentence was the impact of the crimes.

It is important to note that in the past there has been a backlash against wildlife legislation in Zambia, with some complaining that it protects wildlife over human interests. The political and socio-economic situation in the country has therefore been taken into account in the design of the impact statements. According to WCP, they believe that success is more likely if they can link the damage done to the animal or species to the welfare of the people through the environment and the economy. For this reason, the organization has adopted a broader perspective, incorporating anthropocentric approaches that detail the impact of the illegal wildlife trade on the value lost to the state and its people through economic losses from wildlife-based industries and ecosystem services, in place of a purely ecocentric argument.



DEVELOPING SPECIES VICTIM IMPACT STATEMENTS

he case studies presented above demonstrate that different jurisdictions require tailored approaches to the implementation of species victim impact statements, due to the different roles of national enforcement and prosecution authorities and the requirements of the judiciary. This section explores how these specific factors have affected how distinct species victim impact statements have been produced for particular jurisdictions. It also gives an overview of the different elements of a species victim impact statement and provides a series of strategic questions to aid in their development and implementation.

Different approaches for different jurisdictions

In Hong Kong SAR, experts prepare written statements to be used as admitted facts in sentencing proceedings. The statements are made available in a database that prosecutors from specific departments are trained to use. In South Africa, statements on the impact of environmental crime on species are introduced by species experts, who are called on to give oral testimony in local magistrates' courts during trial proceedings. This leads to a more bottom-up dissemination of the practice, and organizations use media coverage to boost their impact. In both Hong Kong SAR and South Africa, the statements have an ecocentric focus, although the Hong Kong SAR statements include a section on impacts on local communities outside of Hong Kong SAR. In Zambia, however, socio-economic and political factors within the country lead WCP to take a more expansive approach, using anthropocentric methods to achieve ecocentric aims by focusing the statements on the under-appreciated human harms resulting from the illegal wildlife trade. The Zambian judicial system allows the submission of expert witnesses testimony during trials, which can then be included in sentencing submissions by prosecutors and considered by magistrates in sentencing decisions.

Although the successful development and roll-out of species victim impact statements relies on approval and support from national authorities, the extent of this buy-in and the primary agency involved (e.g. enforcement, prosecution or judiciary) can vary considerably between jurisdictions.

In Hong Kong SAR, the structure of the legal system favoured a top-down approach by the Hong Kong administration, which helped to facilitate a training programme with the relevant enforcement and prosecution officers along with members of the judiciary. In Zambia, WCP has worked with the wildlife law enforcement agency the DNPW and the NPA to develop guidelines for impact statements and works closely with prosecutors to use these statements in court. However, the legal system in South Africa has required a different approach to that in Hong Kong SAR and Zambia, with the Department of Justice being reluctant to provide guidance to magistrates. As a result, the IUCN SSC Pangolin Specialist Group ended up working directly with law enforcement and prosecutors on the ground to deliver expert testimony during the trials to speak to the harms associated with the trade, without the involvement of the Department of Justice.

The large number of legal jurisdictions means that there are several different ways of securing the necessary buy-in from national authorities. Organizations should therefore not be discouraged if there is resistance to a particular approach.

Elements of a species victim impact statement

Although each jurisdiction requires a different approach adapted to its specific legal system, an analysis of the species victim impact statements developed for the three countries reveals elements common to all three that should be considered for inclusion. Below is a sample species victim impact statement that lists these different elements and any special considerations that should be taken into account when drafting a statement. As these statements are aimed at those who do not necessarily have an in-depth understanding of the issue, technical and scientific language should be avoided as far as possible.

A statement is made up of six main sections. The first three provide details of the species, the illegal trade and the relevant legislation, while the last three examine the impact of the trade from both an ecocentric and an anthropocentric perspective. Below are brief descriptions of each section along with what should be considered for inclusion. Depending on the jurisdiction, additional sections may be required or some may be omitted.

Details of specimen

This section gives details of the species involved, including its scientific and common names, conservation status (including the estimated number remaining in the wild), range countries and the major threats it faces as a species, in addition to the threat of illegal wildlife trade.

Details of trade

This section gives details about the trade, including how the species is harvested, the known trafficking routes, estimated quantities and the final use of the product, such as pangolin scales being used in traditional Chinese medicine. Where possible, it should give details on how the supply chain operates, including the monetary value at each stage and the methods of concealment.

Legislation and sentencing decisions

In this section a list should be provided of all relevant national legislation along with international treaties and conventions that regulate or prohibit the trade. Be aware that judges or magistrates may



Africa has become a main source of animals and animal parts for the illegal trade in several species, including elephants. © Moment RF/ Getty Images

not be experienced in wildlife crime cases and may therefore not have the knowledge of the relevant legislation. It is also important to list past sentencing decisions so that the judge can refer to these for guidance, if necessary.

Impact of trade on specimen

This section should detail the impact an illegal trade has on a particular species, detailing the physical and emotional harm that is the result of the trade, such as how they are harvested and the pain that this inflicts on individual specimens. Also, a description should be provided of how the loss of a particular animal can directly and indirectly impact other members of a species, for example, due to the loss of parents which affects the intergenerational learning of generations, such as how to hunt.

Impact of trade on ecosystems and environment

Describe the impact on the ecosystems and environment due to the loss of a species at both the harvesting and consumption stages of the supply chain. For example, this can include the impact associated with the loss of a species which helps with seed dispersal, or which helps keep other species populations under control. It can also explore the effects of invasive species into ecosystems which negatively impact local flora and fauna.

Impact of trade on human population

This section takes an anthropocentric approach to the impact of the trade and is concerned with the resulting harms to human populations, including the impact of organized crime on communities that leads to corruption, issues relating to governance and increases in violence. It should also explore how the trade can impact the food chain, an example of which would be the hunting of pangolins that results in damage to soils due to the increased population of ants and due to the decline of one of their predators.

SPECIES VICTIM IMPACT STATEMENT
DETAILS OF SPECIMEN
Scientific name/common name
Number remaining in existence
Range countries
Major threats to specimen
DETAILS OF TRADE
Trafficking routes
Monetary value
Use of specimen and parts
LEGISLATION AND SENTENCING DECISIONS
Relevant national legislation
CITES listing
Other relevant international legislation/treaties
IUCN Red List category
Previous sentencing decisions
IMPACT OF TRADE ON SPECIMEN
Welfare concerns
Fate of the specimen
Population depletion
Impact on wider species population
IMPACT OF TRADE ON ECOSYSTEMS AND ENVIRONMENT
Ecosystem impact
Invasive species concerns
IMPACT OF TRADE ON HUMAN POPULATION
Local community impacts
Effects on ecotourism
Food chain effects
Risk of zoonosis
Human casualties associated with the trade

FIGURE 2 Species victim impact statement template.

Strategic questions

This section details what organizations should consider when developing species victim impact statements to ensure their effectiveness. Organizations developing impact statements should consider how to make such statements a tool that is widely accepted by prosecutors and is used regularly during relevant trials.

Figure 3 lists the questions that organizations should ask when designing their impact statements, and is thus designed to help organizations operating in a very diverse and complex legal field cover all contingencies. The questions are the result of semi-structured interviews with organizations and academics working in the field to understand the processes they have used and the hurdles they have encountered. As each species victim impact statement will be different depending on the jurisdiction and the species involved, and there is no 'one size fits all' approach, the questions are intended to act as a guide for organizations embarking on such a project.

	MEETS NEEDS OF JURISDICTION	1	Are law enforcement agencies and/or prosecuting authorities willing to use the tool as part of a prosecution?
		2	Does the judicial system allow for a bottom-up or horizontal spread of legal practices?
		3	Are there factors that determine how wildlife crime is perceived within a jurisdiction, e.g. excessive poverty, and is the impact of these factors considered?
		4	Is the ministry of justice able to give guidance to the judiciary to use the tool, and is the judiciary willing to do so?
		5	If the ministry of justice is unable to give guidance to the judiciary, have certain courts been identified that deal with higher levels of wildlife crime where the statements could be used?
		6	Has consideration been given to how to manage the political issues associated with an external organization being seen to offer guidance in the legal process?
	STATEMENTS	7	Are the statements based on scientific evidence that will hold up to cross-examination in court if necessary?
		8	Will the courts accept written statements, or do they rely on witness testimony to enter the statements as evidence?
		9	Have the statements been adapted when necessary to ensure that they are relevant to the facts of the case?
		10	Is there a species expert available to testify in court about the harms to the animal, ecosystem and wider environment, and how these relate to human vulnerability?
	MEDIA	11	How is the wildlife crime perceived in the country and is it possible to exploit this to assist with media coverage?
		12	Is there a media strategy in place to report on court cases and sentences where impact statements have been used?
		13	Are there plans to use a public awareness campaign to encourage reporting of incidents of wildlife crime?
	CAPACITY BUILDING	14	Are law enforcement and judicial authorities willing to participate in capacity building programmes relating to identification and legislation?
		15	Is there a strategy in place to encourage enforcement officers and prosecutors to continue to use the statements in the long term?
	_		

FIGURE 3 Strategic questions to ask when developing a species victim impact statement.



APPENDIX 1: UNIVERSITY OF HONG KONG

his species victim impact statement covering multiple species of rhinoceros was produced by the University of Hong Kong's Species Victim Impact Statement Initiative. Details about the initiative are available on their website, along with relevant contact details (see https://www.svis.law.hku.hk).

DETAILS OF SPECIMENS		
From Africa: Ceratotherium simu, Diceros bicornis; from Asia: Dicerorhinus sumatrensis, Rhinoceros sondaicus, Rhinoceros unicornis (all members of the family Rhinocerotidae)		
English – from Africa: white rhinoceros, black rhinoceros; from Asia: Sumatran rhinoceros, Javan rhinoceros, Indian rhinoceros		
Chinese - from Africa: 白犀牛, 黑犀牛; from Asia: 蘇門答臘犀牛, 爪哇犀牛, 印度犀牛		
The horns of the rhinoceros are traded for use in traditional Chinese medicine or for their ornamental value. Horns can also be traded in powder form or small fragments, or as worked products such as sculptures.		
Global estimated number of individuals in 2015: ²⁴ White rhino: 19 666–21 085		
Black rhino: 5 040–5 458		
Indian rhino: approx. 3 557		
Javan rhino: 58-61		
Sumatran rhino: approx. 73		
The minimum number of rhinos poached in Africa was 1 342 in 2015, which was the highest record since 2008, and it represented around 5% of African rhino numbers (5.3% for white rhino and 3.8% for black rhino). The situation is particularly severe for black rhino, as the poaching rate increased by more than double from 2013 to 2015. It is estimated that 2 674 rhino horns were sourced illegally from Africa each year between October 2012 and December 2015. Seizure numbers and volumes varied between information sources: 475 seizures involving approximately 4 179 kilograms, equivalent to about 1 500 individual horns between 2006 and 2017, while TRAFFIC recorded 463 seizure cases of 5 393.23 kilograms (2 376 of horns or horn pieces) between 2010 and 2015.		
US\$30 000-US\$490 000 per kilogram for rhino horn items auctioned by China Guardian Auction House in 2011. ²⁶ Prices rose from US\$4 700 per kilogram in 1993, to around US\$65 000 per kilogram in 2012, worth		
more, per unit weight, than gold. ²⁷		
The wholesale price of rhino horn ranged from US\$30 000-US\$60 000 per kilogram in undercover surveys in China in late 2016. ²⁸		
CITES seizure data suggests that South Africa and Mozambique were the two major exporting countries of rhino horns by weight from 2010 to 2015 (21% and 15% of global seizure volume between 2010 and 2015, respectively). In 2015, 88% of rhino poaching occurred in South Africa.		

Declared
destination of
consignment

CITES seizure data suggests that Vietnam was the major importing country of rhino horns by weight between 2010 and 2015, accounting for 20% of global seizure volume during this period, followed by China (16%) and Hong Kong SAR (3%). Most seizures in other countries (including Hong Kong SAR) involved transit of rhino horns to Vietnam and China, and Vietnamese or Chinese nationals participating in the illegal trade. Vietnam is probably also a transit hub for rhino horn heading to China, as seizures are made on the border between the two countries.

Species global status and threats

Species gional s	status and timeats
IUCN Red List category	Critically endangered: Diceros bicornis, Dicerorhinus sumatrensis, Rhinoceros sondaicus Vulnerable: Rhinoceros unicornis Near threatened: Ceratotherium simum
CITES appendix	I (II for the populations of Ceratotherium simum in South Africa and Swaziland)
Country of origin (natural range)	Ceratotherium simu – native: South Africa; possibly extinct: DRC, South Sudan, Sudan; regionally extinct: CAR, Chad; reintroduced: Botswana, Kenya, Mozambique, Namibia, Swaziland, Uganda, Zimbabwe; introduced: Zambia
	Diceros bicornis – native: Angola, Kenya, Mozambique, Namibia, South Africa, Tanzania, Zimbabwe; possibly extinct: Ethiopia; regionally extinct: Cameroon, Chad, Rwanda; reintroduced: Botswana, Malawi, Swaziland, Zambia
	Dicerorhinus sumatrensis – native: Indonesia, Malaysia; possibly extinct: Myanmar; regionally extinct: Bangladesh, Bhutan, Brunei, Cambodia, India, Lao PDR, Thailand, Vietnam
	Rhinoceros sondaicus – native: Indonesia; regionally extinct: Bangladesh, Cambodia, China, India, Lao PDR, Malaysia (Peninsular Malaysia), Myanmar, Thailand, Vietnam
	Rhinoceros unicornis - native: India, Nepal; regionally extinct: Bangladesh, Bhutan
Major threat(s)	All rhino species suffer severely from poaching for use in traditional Chinese medicine or for ornamental use, which is the main reason for the dramatic decline in wild populations.
	Reduced populations may suffer from low genetic diversity and reduced success in breeding. Habitat loss and degradation have also Influenced population declines, limiting the carrying capacity and hindering the recovery of population levels.
Notes	All members of the family Rhinocerotidae were listed on CITES Appendix I in 1977. The populations of white rhino (<i>Ceratotherium simum</i>) in South Africa and Swaziland were down-listed to Appendix II in 1995 and 2005, respectively, due to increased population size, but only to allow for the trade in live animals to 'approved and acceptable destinations' and for the export of hunting trophies.

Victim impact statement (country of origin), e.g. social/ecological/economic impact to the country of origin

Social impacts

Organized crime

There are indications that large-scale criminal groups are engaged in the poaching of rhino and trafficking of their horns. The UNODC has linked syndicates involved in wildlife trafficking with fraud, tax evasion, extortion, corruption, money laundering and murder. Wildlife crime is known to have financed militants and rebels, fund weapons purchases and has been linked with terrorist activities. The use of advanced technology in poaching activities (e.g. helicopters, night vision goggles, infrared sensors, tranquilizing drugs, high-powered weapons and silencers) establishes the organized nature of the offending, going beyond the capacity of local African villagers. Apart from poaching, theft of stockpiles from governments and private sectors, along with specimens from museums and research institutes are also increasingly reported.²⁹

Human casualties

Between the beginning of 2009 and July 2018, at least 871 rangers were killed by commercial poachers or recognized militia groups in the service of protected areas and wildlife; of these, 327 casualties were in Africa, the hotspot of rhino poaching, and many other injuries and deaths have gone unreported.

Ecotourism

International tourism (including ecotourism) in South Africa contributed 5.7% to the country's GDP in 2016, and tourism has a positive impact on the country, particularly as a way of improving the livelihoods of communities living near the protected areas. Since wildlife is the key to ecotourism, it is widely speculated that loss of the rhino will negatively affect tourism and eventually reduce the income of the local communities.³⁰

Ecology of the species

Rhino horns are made up of solid keratin, which is the same composition as human fingernails. Most rhino species bear two horns, with the exception of the Indian rhino and the Javan rhino, which have one horn.

African rhinos

Black rhino (Diceros bicornis)

There are seven (some studies consider there to be eight) subspecies of black rhino, and three of them are extinct. The majority of the animals can be found in South Africa and Namibia (73% of the population in 2015). Black rhino may live 35–50 years in natural conditions. Males and females reach sexual maturity at five to seven and seven to eight years of age, respectively. The gestation period is 15 months. Calfs (=juvenile rhino) stay with their mothers for two to three years until weaning. The species is a browser, preying on the leaves of shrubs and bushes.

White rhino (Ceratotherium simu)

Two subspecies of white rhino exist: the northern white rhino (*Ceratotherium simum cottoni*) and the southern white rhino (*Ceratotherium simu simu*). The northern white rhino is considered critically endangered or extinct in the wild, according to the IUCN Red List, mainly as a result of poaching. The only two known live individuals are old females, living in captivity in Kenya, indicating that the subspecies will go extinct in the near future. The majority of the latter subspecies can be found in South Africa (90% of the population in 2015). White rhino are the largest of the rhino species. The animals may live 40–50 years. Males and females reach sexual maturity at 10–12 and six to seven years of age, respectively. The gestation period is 16 months. Weaning of the single calf (=juvenile rhino) usually occurs at two months, but suckling may continue for over a year for some individuals, and the mother stays with the calf for two to three years until her next birth. The species is a grazer, preying on grasses.

Asian rhinos

Sumatran rhino (Dicerorhinus sumatrensis)

The remaining populations of Sumatran rhino are restricted to four isolated sites in Indonesia, where some populations number fewer than five individuals. Males and females reach sexual maturity at around 10 and 6-7 years of age, respectively. The gestation period is 15-16 months. Weaning of the single calf (=juvenile rhino) usually occurs at 15 months, and the mother stays with the calf for two to three years.

Javan rhino (Rhinoceros sondaicus)

Only one of the three recognized subspecies of Javan rhino is still extant. Owing to the rarity of the species, there is no information on the longevity or age at sexual maturity of this species, but it is generally believed to be similar to the congener Indian rhino. The extant species only exists in a single population in Ujung Kulon National Park in West Java, Indonesia. The remaining population of the species is at risk from poaching, outbreaks of disease carried by domestic cattle, and potential natural disasters through volcanic activity or a major tsunami.

Indian rhino (Rhinoceros unicornis)

The majority of the populations of Indian rhino can be found in India (90% in 2015), with the rest in Nepal. The life history of the species in the wild is largely unknown. In captivity, the species may live more than 40 years. Males and females usually reach sexual mature at five to six years, and the gestation period is around 16 months. The rhino is the official state animal of India's Assam state.

Ecological impacts

Studies show the white rhino acts as an influential ecosystem engineer, creating and maintaining short grass swards, which alter habitat for other grazers and along with bringing positive benefits for the fire regime. ³¹ Indian rhinos are important seed dispersers, moving large tree seeds from forest canopies to grasslands, increasing the successful rate of germination and recruitment. ³²

Victim impact statement (local), e.g. ecological/social/economic impact to Hong Kong SAR

N/A

Wildlife welfare concern, e.g. specimen's health/transport condition, cruel poaching/slaughtering practice

Most of the animals poached die instantly, as heavy firearms or crossbows are usually used by the poachers with skills to avoid attack by the animals. In some cases, horns are removed from live animals, leaving the animals to die slowly from facial wounds.

Disease and pathogen concern to human and local environment, e.g. carrier of zoonotic disease/pathogen/parasite

N/A



APPENDIX 2: IUCN SSC PANGOLIN SPECIALIST GROUP

elow is a sample statement produced by Professor Ray Jansen, who established the IUCN SSC Pangolin Specialist Group. The statement has been used in multiple prosecutions of pangolin traffickers in South Africa.

Background information required for pangolin poaching incidents in South Africa

here are eight species of pangolin in the world, four in Asia and four in Africa. All pangolin species are severely affected by illegal trade and poaching. Pangolins are currently recognized as the most illegally traded mammal in the world and are under severe threat of extinction. It is estimated that over 1 million pangolins have been poached out of the wild in the last 10 years. The decline in Asian pangolin numbers has led to the African species being targeted. Large quantities of African pangolin scales have been and continue to be seized in Asia originating from Africa. For example, in 2016, 18.92 tonnes of pangolin scales were intercepted, and by December 2017, 46.8 tonnes of scales had been intercepted leaving African shores on route to Asia. In 2018, this volume was close to 40 tonnes of scales, and in 2019, more than 97 tonnes were intercepted leaving Africa. The 2019 trade of scales out of Africa represents more than 150 000 African pangolins. As their number dwindle, pangolins are becoming more difficult for poachers to find, and this has increased the asking price demanded both internationally and locally. In South Africa, the illegal price demanded for pangolins rose from R9 000 in 2009 to R400 000 per live animal in 2017, and in 2018 and 2019, illegal traders demanded more than R1 million for a single live pangolin.

With this background of severe exploitation, it was voted on 28 September 2016 at CITES CoP17 that all eight pangolin species must be up-listed to Appendix I – with no commercial trade allowed. (Article II, paragraph 1 of CITES states that 'Appendix I shall include all species threatened with extinction, which are or may be affected by trade'.)

The species found in southern Africa is the Temminck's pangolin, also known as the Cape pangolin (*Smutsia temminckii* – and referred to in its older classification as *Manis temminckii*). They are most commonly brought into South Africa from neighbouring countries such as Zimbabwe and Mozambique. They are also locally sourced, often in South Africa's Limpopo Province, but more recently in the Northern Cape. They are nationally protected by the NEMBA, Act 10 of 2004 (as amended in 2013). The Temminck's pangolin is nationally listed as a threatened or protected species (ToPS). In addition to this, these animals have often been carried in a sack for up to 14 days without food or water, while being transported to a potential buyer.

During this time, the pangolins are not fed (due to their specialized diet of ants and termites) or given water. They are kept confined to prevent escape and have no access to free movement or natural light. They are sensitive to cold and confinement destabilizes their body temperature. This means that confiscated pangolins are usually found dehydrated, starving and in a generally weakened and compromised state due to excessively high levels of stress. In most cases, the animals succumb and do not survive the ordeal. Accordingly, the animal protection act relating to animal cruelty should be implemented and imposed as well.

Legislation for Temminck's pangolin as a listed threatened or protected species in South Africa

North West Biodiversity Management Act 4 of 2016

68. A person is guilty of an offence if that person contravenes or fails to comply with or contravenes provisions of (a) Sections, 15(1) and (3) 19(2), 21, 22 23, 24, 29, 31, 33, 35, 38, 42, 43, 44, 45 and 50; (b) a notice published in terms of sections 29 and 30; (c) a directive issued in terms of section 34; or (d) a compliance notice issued in terms of section 6(2).

69. A person convicted of an offence in terms of section 68 is liable to a fine not exceeding R10 million or to imprisonment for a period not exceeding 10 years, or to both fine and imprisonment.

Limpopo Environmental Management Act 7 of 2003

117. (1) Any person who is convicted of an offence in terms of this act is liable (a) in case of an offence referred to in (ii) section 35(3), 37, 41(1)(a) and (b), 43(1)(a) and 43(2)(a) in relation to specially protected wild animals, to a fine not exceeding R250 000 or to imprisonment for a period not exceeding 15 years or to both fine and imprisonment and to a fine not exceeding four times the commercial value of the fauna, flora or cave formation in respect of which the offence was committed.

National Environmental Management: Biodiversity Act 10 of 2004: Threatened or protected species regulation

Government Gazette Vol. 574 Pretoria, 16 April 2013 No. 36375 Department of Environmental Affairs, notice 388 of 2013. 104. (1) A person convicted of an offence in terms of regulation 103 of these regulations is liable upon conviction to (a) imprisonment for a period not exceeding 10 years; or (b) a fine not exceeding R10 million; or (c) both fine and imprisonment.

The treatment and conditions that poached pangolin are subjected to is in contravention of the Animals Protection Act 71 of 1962. The following sections are relevant:

2.1 (b) – confines, chains, tethers or secures any animal unnecessarily or under such conditions or under such manner or position as to cause that animal unnecessary suffering or in any place that affords inadequate space, ventilation, light, protection from heat, cold or weather; or

- 2.1. (c) unnecessarily starves or under-feeds or denies water or food to any animal; or
- 2.1. (m) conveys, carries, confines, secures, restrains or tethers any animal -
- (i) under such conditions or in such a manner or position or for such a period of time or over such a distance as to cause that animal unnecessary suffering; or
- (ii) in conditions affording that animal inadequate shelter, light or ventilation or in which such animal is excessively exposed to heat, cold, weather, sun, rain, dust, exhaust gases or noxious fumes; or
- (iii) without making suitable provision for suitable food, potable water and rest for such animal in circumstances where it is necessary; or
- 2.1 (r) by wantonly or unreasonably or negligently doing or omitting to do any act or causing or procuring the commission or omission of any act causing any unnecessary suffering of any animal.

A review of recent African trade in pangolins

The vast majority of trade in pangolins from Africa originates in West and Central Africa. Countries that have been identified as hotspots include Nigeria, Uganda, Ghana, Sierra Leone, the DRC and Cameroon. The scale of this trade has increased exponentially, peaking at 97 tonnes in 2019. This is the equivalent of more than 150 000 pangolins.

If we compare the level of trade between 2016 and 2019, there is a noticeable increase. We are unsure of the reasoning for this; either it is because pangolins are receiving more publicity and people are more actively sourcing them, or because Asian sources are now making Africa a focal point as they struggle to source local Asian pangolins. The same or similar scenario is currently occurring with abalone, elephant, rhino and lion, where the main source for these species is now in Africa. The trade collapsed during 2020 and 2021, as a result of the COVID-19 pandemic and related border closures, but it is on the rise again as borders and trade routes have reopened.

South African trade

A similar trend is taking place in southern Africa, particularly in South Africa. However, the bulk of the trade in this country is not in scales but in live Temminck's pangolins (*Smutsia temminckii*). We are seeing an alarming trend in cross-border trade, particularly from Zimbabwe, which may be linked to the very strict laws and high jail sentences (mandatory nine years) in that country, as opposed to the relatively light sentences historically imposed in South Africa. There are obvious hotspots that coincide with the natural distribution of the species in South Africa, closely associated with migrant labour settlement. Furthermore, there has been an alarming increase in trade recently, with 13 animals retrieved in 2016, 16 in 2017, 46 in 2018, 36 in 2019, 38 in 2020 and 30 in 2021. These numbers are considerable, especially given the restrictions on travel and movement during the pandemic.

Trade in Limpopo Province, followed by Gauteng Province, has accounted for the largest volume in recent years, with trade in the Northern Cape increasing recently.

The data documented here is where the African Pangolin Working Group has been involved either directly or indirectly. I believe that the trade in South Africa has been considerably more than what is presented here.

Outcome of pangolin poaching court cases for 2017–2021.

A number of cases have been continuously postponed, and of those that have been finalized, the majority have resulted in minimal fines. In November 2017, three Zimbabwean nationals received the first ever jail sentence (three years) for poaching and attempting to trade pangolins. In January 2018, a Zimbabwean national received a seven-year jail sentence for the same offence in the Tembisa Magistrate's Court in Gauteng, setting a new precedent for pangolin trade sentencing in South Africa. A further four jail sentences were handed down in 2019 for trading in pangolins, and a new precedent was set in Mpumalanga in August 2019, when a suspect was sentenced to eight years in prison. This term length (eight years) was upheld by the Polokwane High Court on 30 September 2020. More recently, two 10-year jail sentences were handed down in two separate court cases in the Pretoria Magistrate's Court in 2021.

The South African Police Service, together with the National Prosecuting Authority, released a statement in September 2020 that pangolins have experienced the most significant increase in trade out of any other mammal in South Africa. We can clearly see that pangolin poaching has increased exponentially in South Africa and the courts need to send a very strong message to the international community that pangolin poaching and illegal trade will not be tolerated in this country.



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