Mapping political will within South Africa's Illegal Wildlife Trade policy system: A complexity thinking analysis

By

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ABSTRACT

This study sets out to generate a new approach to analysing the level of political will that drives South Africa's illegal wildlife trade (IWT) policies. It uses complexity thinking to conceptualise the country's policy making process as a complex system and then maps the feedback loops that a range of international and local actors and policies produce. This information and a more specific interpretation of political will were then used to develop a series of causal loop diagrams (CLDs) to assess the wider systemic impact of these interactions.

The CLD analyses found that political will does indeed exist within the South African IWT policy system and that these policies and the political interests of policy makers often overlap. Moreover, this study found that the inaction of individual policy enforcement officers effects the level of political will throughout the system. Consequently, this inaction retards the system's adaptability and allows the illegal trade to flourish.

To build and sustain political will towards curbing IWT, this study finds that policy makers at all levels should build appropriate human and technical capacity. It proposes that by properly incentivising and training officials, policy makers will be able to garner sufficient political will to ensure the effectiveness of current policies.

Keywords

Political will; Illegal wildlife trade; Wildlife conservation; Complexity thinking; South African wildlife policies; Causal loop diagrams; CONSIDEO MODELER software.

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DEDICATION

For my dearest Mom and Dad

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List of Acronyms

AU	African Union
CAADP	Comprehensive Africa Agriculture Development Programme
CAR	Central African Republic
CBD	Convention on Biological Diversity
CITES	The Convention on International Trade in Endangered Species of Wild Fauna and Flora
CLD	Causal Loop Diagrams
DAFF	Department of Agriculture, Forestry and Fisheries
DEA	Department of Environmental Affairs
DEFF	Department of Environment, Forestry and Fisheries
DRC	Democratic Republic of the Congo
EFTA	European Free Trade Association
EU	European Union
EWT	The Endangered Wildlife Trust
FATF	Financial Action Task Force
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
GEF	Global Environment Facility
IATA	International Air Transport Association
IANC	International Academy for Nature Conservation
ICD	International Classification of Diseases
IFAW	International Fund for Animal Welfare
IFAW	International Fund for Animal Welfare
IMO	International Maritime Organisation
INTERPOL	International Criminal Police Association
IPBES	Global Assessment Report on Biodiversity and Ecosystem Services of the Intergovernmental Platform for Biodiversity and Ecosystem Services
IPPC-FAO	International Plant Protection Convention
IUCN	International Union for Conservation of Nature
IWT	Illegal Wildlife Trade
MAPU	Marine anti-Poaching Unit
MIKE	Monitoring the Illegal Killings of Elephants
MIKES	Minimising the Illegal Killing of Elephants and Other Endangered Species
MSME	Micro-, Small, and Medium-sized Enterprise
NDF	Non Detrimental Findings
NEMA	National Environmental Management Act
NEMPAA	National Environmental Management Protected Areas Act
NGO	Non-Governmental Organisation
PIDA	Programme for Infrastructure Development in Africa
SACU	Southern African Customs Union
SADC	Southern African Development Community
SADC	Southern African Development Community
SADC EPA	Economic Partnership Agreement between the European Union and Southern African Development Community Group

SAPS	South African Police Service
t/a	Trading as
TAM	Traditional Asian Medicine
TRAFFIC	Non-governmental Organisation working on wildlife trade
UK	United Kingdom
UN	United Nations
UNCAC	United Nations Convention Against Corruption
UNEP	United Nations Environment Programme
UNFF	UN Forum on Forests
UNFI	UN Forest Instrument
UNGA	United Nations General Assembly
UNODC	United Nations Office on Drugs and Crime
UNTOC	United Nations Convention against Terrorism and Organized Crime
WAPFSA	Wildlife Animal Protection Forum South Africa
WHO	World Health Organisation
WTO	World Trade Organisation
WWF	World Wildlife Fund
WWF	World Wildlife Fund

Chapter 1

Introduction, Aim and Scope of Study

1.1 Background

There are several academics, non-profits and international organisations across the globe studying the ecological, cultural and economic benefit of preserving wildlife. Most of these studies document the potential economic boosts the sector can provide to tourism, job creation and sustainable development. In South Africa, for example, a 2016/2017 report calculated that 6.7 million tourists visited the country's national parks with the wildlife industry contributing around ZAR3.1 billon to the country's Gross Domestic Product (GDP) and supporting some 65,000 permanent jobs (SANPARKS, 2017).

Economic benefits aside, populations of many iconic species continue to be threatened by the illegal trade in wildlife pets and products, the multiplying effects of climate change and the culturally driven demand for their medicinal use. Statistics from the World Wildlife Fund (WWF) show a 60% decline of vertebrate species populations between 1970 and 2005 across the African continent (Banasiak et al., 2019). Many protected areas are underfunded and must cope with a "dynamic interplay of growing populations, poverty, civil unrest and the remnants of colonial and recent political injustices" (Banasiak et al., 2019: 6).

South Africa has managed, despite its complicated wildlife conservation history, to retain significant wildlife populations – the country has more than 95,000 species of plants and animals including the Big Five. These holdings have also, unfortunately, fuelled the country's status as a significant supplier of illegal wildlife products. Illegal Wildlife Trade (IWT)[1] is a global market that was estimated to be worth over $300 billion in 2005 (Roe, 2008; TRAFFIC 2008) annually which compares to the illicit trade in humans, narcotics, weapons and counterfeit products.

[1] IWT is the "unlawful activities associated with the commercial exploitation and trade of wildlife specimens (living organisms or harvested parts thereof)" ('t Sas-Rolfes et al., 2019: 203).

Given its local and international legislative commitments, South Africa has led wildlife conservation efforts in the region and sub-continent by actively participating in several multilateral environmental agreements including the *Convention on International Trade in Endangered Species of Wild Fauna and Flora* (CITIES), the *Convention on Migratory Species* and the *Convention of Biological Diversity* (CBD) and, in 2017, produced its own National Integrated Strategy to Combat Wildlife Trafficking (NISCWT).

Since 2010 reports linking South Africa to seized shipments of illegal wildlife and its derivatives has fixed media and political attention on this market and the country's role as a facilitator. International law enforcement agencies have seized some 1,208 kg of ivory, 1,190 kg of rhino horn and 7,76 kg of tiger bones and skin (Banasiak et al., 2019). This, coupled with coverage of police corruption (Aucoin and Donnenfeld, 2017; Environmental Investigation Agency, 2017) and the growing informal illegal wildlife trade (SANPARKS, 2017) have further fuelled this interest. Much of this attention, however, has focused on the security implications of IWT since the market has close links to global organized crime syndicates, armed insurgency groups, and the illegal human trafficking and small arms trade (Humphreys and Smith, 2018; Small Arms Survey, 2015).

The country has, nevertheless, developed a policy and legislative framework for the sustainable conservation and use of wildlife. Besides the international treaties that South Africa is party to, the country has enacted domestic legislation to manage conservation efforts. As the WWF documents:

- The *Game Theft Act* of 1991 (that established the ownership rights of wildlife found on a fenced in areas);
- Section 24 of the *South African Constitution* of 1996 (enshrines everyone's right to an environment that is not detrimental to their and future generations' health and well-being);
- the *National Environmental Management Act* of 1998 and its amendments (NEMA ensures the country meets its international obligations and effectively enforces international provisions);

- *NEM: Protected Areas Act* of 2003 (NEMPAA governs how socio-economic development relates to the conservation of national, provincial and local protected areas on private or communal land);
- *NEM: Biodiversity Act* of 2004 (NEMBA and its amendments in 2009 and 2013 outlines an ecosystem approach to conservation management that balances the benefits of biological resources);

These policies have influenced South African conservation and crime prevention strategies — particularly those aimed at curtailing poaching and the local *muthi* (term for traditional medicine in Southern Africa) and bushmeat markets. But the dramatic increase in the reported number of poaching incidents and the growing multi-billion-dollar market for illegal wildlife products and their derivatives suggest that these provisions have had limited success.

Sara Oldfield (2003) points out that over the years policies regulating illegal wildlife trade have been constrained by different political processes by excluding the livelihoods and economic needs of local communities marked by an over emphasis of technical scientific data, and, most importantly for this study, a lack of political will to enforce enacted provisions. In addition, these policies are often hived off into separate areas with little regard for their affect and interrelationship with other polices that regulate persistent socio-economic challenges such as poverty, climate change and the outbreaks of infectious diseases.

1.2 Research objectives

The aim of this study is to investigate *why current South African policies are unable to curb IWT by measuring the level of interest, or political will, present within the policy system*. This analysis seeks to track various interrelated actors that influence the market for illegal wildlife products and aims to develop an understanding of how those interests affect the political will of policy makers and those charged with implementing policy provisions.

In analysing the political will that drives these policies, this study uses complexity thinking to conceptualise the South African policy making process as a complex system — a system that should co-evolve to respond to different factors and actors. Complexity thinking, an approach

that is drawn from the natural sciences and based on the principles of systems theory, accounts for the dynamic interaction of a range of international and local policies and actors. This thesis aims to map these interactions by showing the various feedback loops and assess their wider systemic impact using causal loop diagrams.

The objectives of the study, therefore, are to develop a functional base to understand the political will within the IWT policy system. This thesis recognises political will as a complex multifaceted system that adapts to the action and inaction of policy makers who are motivated by their own personal attitudes, organisational constraints and a specific socio-political environment. As such political will is conceptualised as the resources that have been committed to deliver on the policy promise to manage IWT which, in turn, creates an unpredictability within the system. For this reason, the study accounts for the actors and initiatives that already exist within the system to identify leverage points that can be used to sustain the will needed to manage the policy system.

The study's main research question is *what dynamics drive the South African IWT policy making process*. In doing so, it seeks to establish:

1. Illustrating the truly complex nature of the broader IWT policy system from a South African perspective by tracing the number of policies enacted at the international, regional and national and sub-national levels, actors and their interaction.

2. Identify what constitutes political will within the policy system and the effect this will has on the system's ability to respond and adapt to emergent behaviour. To illustrate this effect through causal loop diagrams (CLDs).

1.3 Literature overview

Since the latter half of the 20th century academic research published in a wide array of disciplines has sought to contextualise broader conservation issues for stakeholders involved in the IWT policy making process. This overview (a more focused analysis is provided in chapter 2) shows how scholars from different disciplines have studied IWT policy. Most have

assessed policy implementation and enforcement provisions as well as the impact of policy measures concentrating on topics that include: the growing call for an inclusive approach to combatting wildlife trafficking that involves communities and international collaboration; used networking analyses to trace trade routes and pivotal players in the market; considered the militarisation of poaching and wildlife protection; and, have also paid attention to the manner in which consumption behaviours can be changed.

While these scholars have suggested that IWT is a complex problem, they have used the term in its metaphorical sense rather than a methodological one. This is largely because their studies have focused on policies that have already been enacted and which are based on a narrative that pushes animal welfare and the need to conserve nature for the economic spinoffs it can attract (Oldfield 2003). To support these twin motives, researchers such as Clark Gibson (1999) and Sara Oldfield (2003) and others cited in this study have echoed the need for policies to show a greater political and collaborative commitment and the need to allocate significantly more financial, human and military resources. Despite heeding these calls, the problem of IWT remains and is growing. Clearly, a new approach is needed – one that changes how the policy problem is studied.

1.3.1 Inclusive approach to combatting IWT

In studying CITIES policies and their implementation in Nepal, Buddhi Ratna Dongol (2011), for instance, determined that there are many similar interrelated variables that influence policy development and implementation. As an environmental studies scholar, Dongol used a policy implementation analysis framework and found that there is a demonstrable link between the growing number of illegal traders (that are unlikely to be arrested and punished) and the unrecognised needs of local communities.

Authors such as Greg Stuart-Hill et al. (2005), Jessica Kahler et al. (2012), Dilys Roe et al. (2015), Rosie Cooney et al. (2013) and Francis Masse et al. (2017) have studied the effect of including community interests and leaders in policy development and monitoring initiatives. Jacob Phelps et al., for example, plotted a theory of change that identified four pathways for community-level action that "…strengthen disincentives for illegal behaviour, increase

incentives for wildlife stewardship, decrease costs of living with wildlife, and support livelihoods that are not related to wildlife" (Phelps et al., 2016: 5). Core to each of these pathways, and a key finding for the proposed study, is the need for all IWT stakeholders — including local communities, civil society, governments at various levels, enforcement agencies and donors supporting the wider conservation effort — to be aware of each other and to come to terms with the actions each is pursuing.

1.3.2 Tracing routes and key players

There have also been calls to increase international cooperation and multiagency collaborations at national legislative levels. For instance, the work of Visara Kraiwatanapong (2017) considers a network-based approach to try and understand the dynamics and potential for cooperation between organisations in the hope of improving governance and regulation implementation in countries in Southeast Asia (Kraiwatanapong, 2017).

Other scholars such as Lydia Yeo (2016), Daan Van Uhm (2016) and Rebecca Wong (2019) have focused on network-based research which has also traced the illegal online and offline global trade operations that exist and have established key nodes and factors that drive and support IWT. Nikkita Patel (2015), whose discipline is epidemiology and biostatistics, used her quantitative findings to map how these trade networks could be destabilised using targeted educational messages. But as useful as the research is, she acknowledges that her work merely begins to understand the complex relationships at work and she hopes her research will prompt further studies into how regulatory and enforcement agencies can intervene.

These findings do provide a good foundation for this study, essentially making a strong case for including intergovernmental organisations and transnational non-state actors in the analysis. Their inclusion helped this study broaden the policy's problem definition and made it more adaptable.

1.3.3 Promoting green militarisation

The fact that prominent civil society groups such as the WWF push governments for more resources has prompted numerous researchers to investigate the effect of policies promoting 'green militarisation' and its method of using military hardware and trained personnel to protect endangered species. Although not specifically relating to South Africa, Rahab Chege (2015), Jasper Humphries et al. (2018) and Elizabeth Lunstrum (2014) found that the illegal ivory trade has, in effect, militarised poaching and wildlife protection. This assessment builds on a wealth of studies that document the use of the military to combat poaching efforts of which Eustace D'Souza (1995) and Catherine Darst et al. (2013) are examples.

1.3.4 Reducing demand with information campaigns

Policies and their implementors also recognise the destabilising role information campaigns can play. This is perhaps why several scholars have examined how much money has been raised for initiatives aimed at cultivating respect for conservation efforts and biodiversity – although not specifically in South Africa. Eduardo Gallo-Cajiao et al. (2018), for example, found that since 2009 some $4,790,634 was raised via crowdfunding platforms with 30% used for "persuasion" initiatives.

Still others have focused on campaigns aimed at shifting consumption behaviours with initial studies understandably focusing on Southeast Asian countries, specifically Vietnam and China who host the largest markets for such goods. Academics such as Tim Haas and Sam Ferreira (2018) have tried to ascertain how decision making models can be adapted to help change the belief systems of poachers (Haas and Ferreira, 2018). Others such as Diogo Verrisimo (2018) have used "grey literature" to identify 236 behaviour change campaigns to assess their affect. Sean Rudman (2019) even studied how games were used to assess and possibly change hunter behaviour. His results were not encouraging – he found that devaluing animals was of little deterrence, with hunters choosing to "kill" devalued commodities despite the negative impact this decision would have on the environment, local communities and the potential social stigma they would engender. Given the aim of this study, these findings informed the proposals for the South African regulatory process.

Scholars including Kristal Maze et al. (2016) have also used grey literature to help them study the success of initiatives that make a broad case to protect 'our national asset'. While the concept of a 'national asset' might test well in marketing focus groups, there is still a need to operationalise the concept into a message that will assist with policy development that motivates successful implementation. In an effort to do so, scientists like Darcy Ogada (2014) have studied measures that teach local communities to appreciate the ripple effects poison and synthetic pesticides have on wildlife, particularly in southern Africa. Such studies discuss a range of poisoning methods and the illegality of hunting wildlife using poison but also register how poorly this legislation is communicated, policed and enforced. They also note that the message is too broad and too removed from local communities' daily needs to make much of an impact. It is therefore apparent that more needs to be done and a different approach needs to be adopted.

1.3.5 South African related research

There are some authors who have specifically examined the South African regulatory framework, although from an essentially legal and law enforcement perspective. The most recent analysis was conducted by Neil De Wet (2015) who assessed the legal suitability of measures enacted to regulate the illegal trade in rhino horn. He found that the legislation itself was adequate but that the law was inadequately enforced because there were no real provisions built into the legislation to hold enforcement officials accountable.

Melanie Berry (2019) concluded with a similar finding when she assessed the organisational perceptions of local law enforcement organisations in South Africa, Australia and the United Kingdom. For her study the sample organisations registered varied reactions to the regulations with each group noting that there should be a greater interrelationship between the different levels of law enforcement agencies. This is similar to what a recent examination by Greg Warchol and Michael Harrington (2016) concluded regarding the Southern African illegal abalone trade. On the same topic, Chelsea Cohen (2019) also noted that although CITIES helped to raise awareness of IWT amongst legislators, the convention itself lacked domestic consensus and determination to enforce its measures largely because local communities on the Cape Flats decided to support the trade to ensure their economic survival. This is a theme

Rosaleen Duffy et al. (2015) have studied and successfully identified the links between poverty and illegal wildlife hunting – a key factor mentioned in several studies.

While there is a wealth of research documenting the rise of a militarised approach to curb poaching in South Africa by the likes of Ros Reeve and Stephen Ellis (1995) Gary Kynoch (1996) Wendy Annecke and Mmoto Masubelele (2016) and Glasson (2020), on the downside, scholars have not specifically assessed the country's anti-poaching information campaigns and their effect on policy. This, as pointed out in the work of Natalia Banasiak et al. (2019), has been the purview of NGOs like the WWF whose reports to donors catalogue their respective campaigns to help officials identify illicit wildlife products, their efforts to teach the broader public about the local *muthi* trade, and the information they distribute to the traveling public about conservation more broadly. This analysis reflects a certain bias, which is understandable given their need to ensure the organisation's sustainability.

What this literature overview points to is the need for IWT policy to adopt a wider problem definition – one that appreciates the intractable nature of the illegal trade and one that is broad enough to allow the policy to adapt to uncertainty and respond to changing circumstances. This is the main concern and focus of this study.

1.4 Research approach

Political scientists have concentrated on using conventional theories as methods to explain the effects of wildlife protection policies. Clark Gibson used institutionalism underpinned by rational choice theory to understand the political economy of wildlife policy in Zambia, Zimbabwe and Kenya (Gibson 1999). His study compellingly describes the policy process in these three countries by highlighting their understanding of wildlife conservation as a political commodity that brings both profit and power (Gibson 1999: 4). But this interpretation relies on and reinforces the fact that individuals within the policy process equate profit with power – a natural predisposition for a rational choice theorist. His work generally claims that the ills embedded in the wildlife conservation policy process can be solved with "greater political will, better information, better equipment, better staff, and more money" (Gibson 1999: 6). In other words, his conventional theoretical method concludes that the policy making system

needs to process feedback from stakeholders efficiently and respond appropriately.

This study uses Gibson's observations as a starting point and researches the South African IWT policy making process using (as mentioned above), a complexity thinking approach. Where the rational choice theoretical method focuses on political choices that are based on fundamental self-interested drives such as maximising personal profits, a complexity paradigm approach finds that politics emerges from the interactions of multiple "interdependent but individual agents" that operate within "evolving institutional formations" (Harrison, 2006: 2).

This research shows, as Paul Cairney (2012b: 346) suggests, that complexity theory can trace the various competing interests within a specific policy making arena and map the behaviour of this complex system. Using complexity thinking as a theoretical methodology, therefore, offers a more nuanced interpretation of human behaviour and its interaction with policy proposals which provides a clearer picture of the IWT policy conundrum. It also shows how the South African policy making system can track and be sensitive to the often-profound effect of a seemingly small change.

Social scientists such as David Byrne (1998) and Robert Jervis (1998) have supported applying complexity thinking as a method to study public policy and policy making institutions, while Robert Geyer and Samir Rihani (2010) and Graham Room (2011) have all tested its usability and found it capable of generating different problem recommendations for policy makers. There is some argument, however, about the way complexity can be used but all agree that policy making systems behave in complex adaptive ways and that this determines how they should be studied (Cairney, 2012a: 125-6; Mitchell, 2009: x).

For this reason, this study argues that the South African policy making process should be regarded as a complex system that relies on the political will of legislators to adapt and implement policy and curb IWT. In this context, political will means that policy makers agree to allocate appropriate resources such as equipment, staff, and money to implement the various policy provisions. This means that policy makers must first understand and appreciate the feedback provided from a range of stakeholders including law enforcement officials, trade

bodies, medicinal practitioners and conservation agencies. This research uses this data to see how this information could be packaged to sustain the political will needed to adapt the policy and ensure the capacity to implement it accordingly.

Thinking in this manner forced the study to trace the interactions between South African, regional and international IWT policies and the diverse range of actors that inform them. It allows the researcher to map these interactions to identify patterns, see how policy making behaviour self-organises, and observe how various key figures and definitions emerge and are sustained.

This thesis conceptualises the policy environment as a living system, a web of diverse agents that constantly interact with each other and the environment to produce a perpetual state of flux. These agents, despite being diverse, have the freedom to choose their behaviour which makes the system complex because, among other things, the system manages many different feedback loops that are not bound to a rigid set of rules. This is why complex systems are considered to be "adaptive" and capable of producing surprise outcomes. But they may also be stimulated by a few very simple actions that could produce radically different results.

This thesis maps the web of human feedback and its impact on decision making which is why it required a more flexible method – a method that would appreciate South Africa's unique social and political context and illustrate the complexity that exists within the policy system. Consequently, the study adopts a qualitative approach to build a causal loop model, one that is based on primary and secondary sources. The research also uses complexity thinking to develop a set of thematic indicators to understand how IWT and related regulatory policies that South Africa has enacted react and interact.

Ultimately, the analysis maps three areas to appreciate the complex and adaptive nature of IWT:

- IWT-related policy measures – those that have been enacted at the international, regional and various national levels;
- Intended system performance – to map the feedback loops these various policies create; and the,

- Actual system performance – to assess the systemic effect of political will using causal loop diagrams.

To help assess this third area, how policy is used and applied by system agents, secondary sources were used to specifically establish the functions of the policy. Establishing these functions developed a context for these policy instruments. It also helped the study establish how policies are positioned and manipulated by various agents (Prior, 2008). Secondary material in this instance included media releases, websites, research papers which offered different perspectives of the policy (Prior, 2008; Rapley 2007). This assessment established each policy's function by assessing its purpose, the agenda it advocates and how the initiatives are integrated into the various networks.

Causal loop diagrams (CLDs) were then used to map the direction, degree and effect of political will throughout the policy system. The CLDs helped to develop an understanding and interpretation of the interactions, relationships, delays and feedback mechanisms generated within the IWT policy system. In mapping the interactions between variables and influences, the CLDs offer a practical way to understand and express the system's cause-effect linkages and the conundrums that emerge. The study develops this dynamic by using the various policy levels eventually illustrating the true complexity of this policy system and the systemic effect that specific indicators of political will have.

As Figure 1 below depicts, the South African IWT-related policy system is indeed complex with policies interacting with each other to create a range of feedback loops. The figures contained within the directional arrows also show the degree of political will that flows throughout the complex system and maps the broader effect of this political will. This figure and its components will be unpacked in an incremental manner in chapters, specifically chapters 4 and 6, that follow.

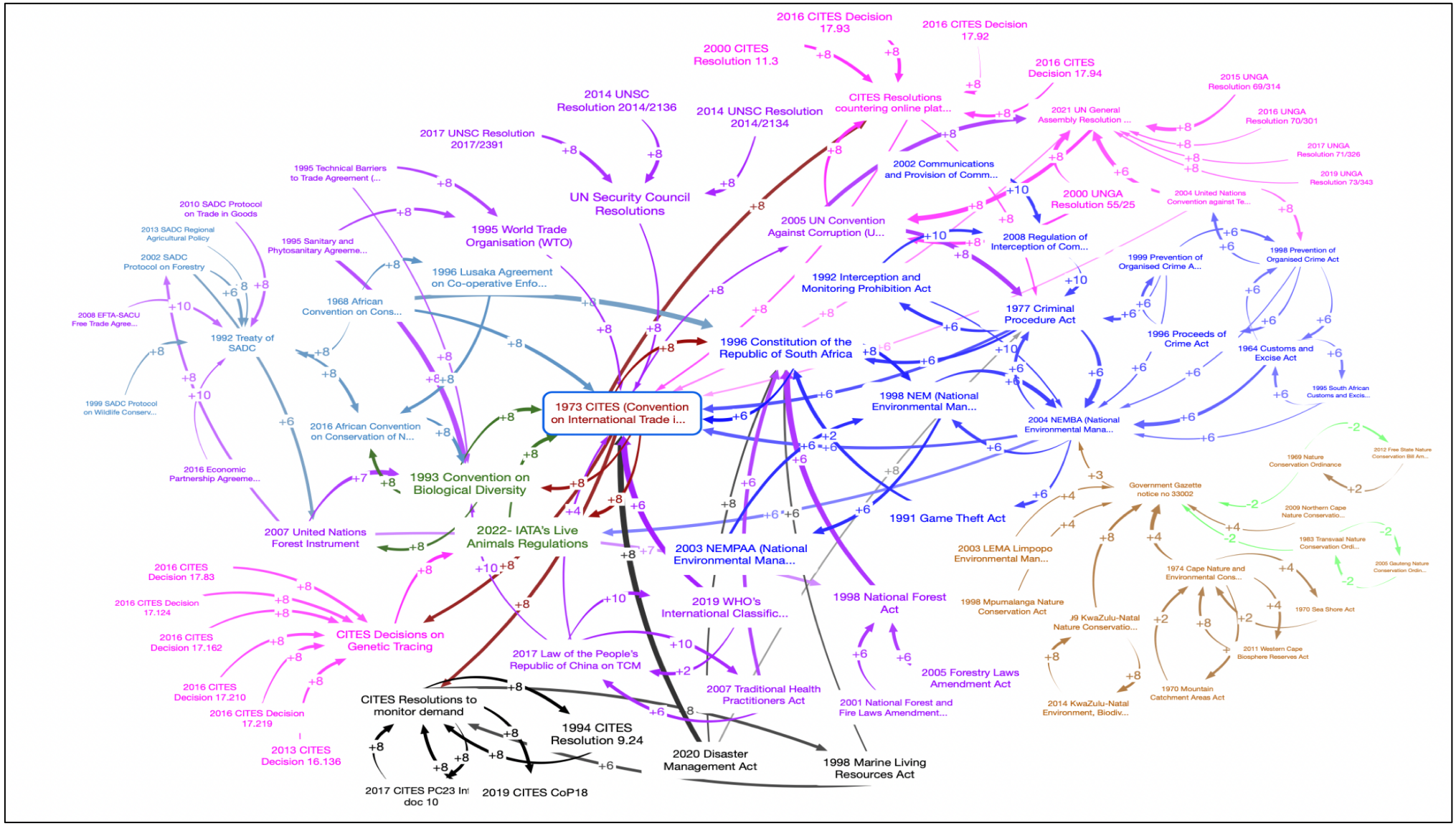

Figure 1 *The CLDs indicating the degree and direction of political will between all policies covering each example of emergent behaviour.* The researcher developed the figure using the CONSIDEO MODELER software.

1.5 Outline of chapters

Chapter 1 introduces the study by establishing the scope of IWT and South Africa's role in both supporting and regulating it. It details the aim of the study, explains why it is important, provides an overview of what has been written on the topic of IWT and outlines complexity thinking as the method adopted for the policy framework analysis.

Chapter 2 presents a focused literature review of research that studies IWT. It outlines the highly adaptive nature of the illicit trade and discusses how scholars from a range of disciplines have studied its growth. In doing so the chapter outlines three key themes that guide the body of the study – the geopolitical shifts caused by political, demographic and economic needs; the affects science and new technology have on information collection, analysis and action; and the trends that drive demand for IWT products.

The framework that the study uses to analyse the South African IWT policy making system is discussed in chapter 3. It begins by explaining how political will has been studied and defines a list of indicators for the subsequent study. The chapter also explores complexity thinking and develops an understanding of the approach's key concepts such as non-linearity, emergence, feedback loops, uncertainty, and path dependencies. It defines the policy system as complex and uses these concepts to develop indicators of political will amongst several key actors.

Chapter 4 discusses the international, regional, national and provincial policies that are aimed at regulating wildlife trade. It pinpoints key definitions, principles and themes such as crime prevention and enforcement strategies, efforts to promote conservation and the broader concept of biodiversity, and policies that address emerging socio-economic and geopolitical dynamics that influence the IWT environment.

The indication of political will present in South Africa's IWT policy system is explored in chapter 5. It describes initiatives that support policies at all levels and aim to mitigate IWT. These include efforts to enforce anti-poaching initiatives, attempts to regulate the smuggling of poached wildlife, curbing corruption within trade and policy systems, campaigns to reduce

consumer demand and prevent the processing and distribution of wildlife products.

Chapter 6 uses the indications listed in chapter 5 and the specific indicators of political will developed in chapter 3 to analyse how South African policies incorporate and respond to emergent behaviour within the IWT environment. The chapter uses CLDs to assess the effect of political will throughout the system.

To conclude the study, chapter 7 presents the research findings and outlines various recommendations to develop a more adaptive policy system that sustains the political will needed to effectively implement South Africa's IWT regulations.

1.6 Contribution to scientific knowledge

Research on the growing IWT policy problem has relied on a linear perspective that does not account for the dynamics of IWT and the political will and interaction of multiple international and local actors. To address this problem, this study generated a new approach to IWT policy analysis one that employs complexity thinking and appreciates the coevolving nature of the illegal trade. This approach helps to understand the South African policy dynamic and can also be used by other countries that are working through this problem. This new framework will also add to the broader domain of policy analysis.

Chapter 2

The Illegal Wildlife Trade: A Focused Literature Review

2.1 Introduction

Rising consumer demand, especially from East Asia, has certainly drawn attention to the IWT along with news of sizable consignment seizures and celebrity-driven media campaigns. Unfortunately, most of this attention is drawn towards large charismatic mammal species such as rhinos, elephants and tigers. The smaller pangolins, helmeted hornbills, rosewood trees, sharks, sea turtles and abalone are also studied, but not to the same degree (Warchol, 2004; Nijman, 2010; UNODC, 2016). Flora, on the other hand, have been largely ignored by researchers studying IWT even though, as Diogo Verissimo and Anita Wan (2018) point out, they are the most trafficked CITES listed species with the highest market value.

This literature review outlines the highly adaptable nature of IWT that draws on several interlinking issues and tactics which have been studied by scholars from a range of disciplines. Conservation scientists dominate the research and focus primarily on: tracing the impact IWT has on biological systems; determining consumer motivations based on the system's patterns and characteristics; and, understanding the effectiveness of different mitigation efforts. This is perhaps why scholars of all stripes have used these sub-headings to precipitate their own studies.

For instance, conservation biologists (Dutton et al., 2013) and resource economists (Fischer, 2010) worry about the impact IWT has on biodiversity, while lawyers (Bowman Davies and Redgwell, 2010; Wandesforde-Smith, 2016) and criminologists (van Uhm, 2016; Kurland et al., 2017) are keen to delineate and sanction IWT activity. Then there are those scholars who are specifically interested in interrogating the reach and impact of multi-lateral agreements such as CITES and its provisions (Hutton and Dickson, 2000; Sand, 1997b; Oldfield, 2003; Reeve, 2002). Policy analysts (UNODC, 2016; Felbab-Brown, 2017) and social scientists, on the other hand, tend toward a broader remit and search for patterns and connections between biodiversity loss and its effect on society. Their focus is on contextualising the trade's supply

chain and the policy governing it across physical and jurisdictional geographies.

Each field has clearly studied IWT from its own perspective, but their findings overlap, intersect and influence each other confirming the impression that the trade produces a dynamic system that responds and self-organises to survive and thrive. While there have been several key international and national policy efforts aimed at curtailing this market, their effectiveness, as this literature review shows, appears to be marginal. Indeed, some authors have made the case that these very policies perpetuate the trade they look to stop.

For the past 12 years conservationists and natural scientists have conducted an annual *Horizon Scan for Conservation and Environmental Issues* to identify emerging problems and their potential affect. Previous scans have dissected topics such as the nature and impact of microplastic pollution and the consequences of synthetic meat, both of which the media subsequently pushed to raise public awareness, encourage greater research and spur conservation support (da Costa, 2018; Mattick, Wetmore and Allenby, 2015). The 2019 scan conducted by Nafeesa Esmail and her colleagues was geared towards identifying IWT's system dynamics and the conundrums that future policies will likely need to manage. According to their study, the following themes dominate the literature: tracing consumer demand for illegal wildlife products; gauging the influence socioeconomic and geopolitical contexts, especially the role China has on this black market; and, technology and its effect on biological, financial and information processing (Esmail et al., 2019). This literature review breaks these three themes down into four areas, namely: describing the nature of the trade; the global effect of IWT; tracing the trade system; and, the current attempts to curb the trade.

This chapter will use these four broad themes to illustrate how different fields and stakeholders analyse illegal wildlife trade. Besides discussing academic publications, the chapter also refers to specific policies and reports from intergovernmental and non-government organisations to contextualise the topic. These findings are then distilled into four main issues that govern the data collection in chapters 4 and 5 and the subsequent analysis in chapter 6.

2.2 The nature of the trade

IWT is primarily framed as a natural resource management issue. This is perhaps why researchers for the past century have studied the trade from various economic perspectives including: exhaustible resources (Hotelling, 1931), fishery economics (Gordon, 1954; Scott, 1955), and forestry economics (Samuelson, 1976). In addition, economists such as R.H. Coase (1960) and Harold Demsetz (1967), identified some 60 years ago that the economic and social significance of property rights would determine the conservation incentives available to custodians, managers and harvesters. This is a trend that is discussed later in this chapter but one that prompted researchers such as Colin Clark (1973) to establish that demand would inevitably outstrip the sustainable resource harvesting of marine and terrestrial species, a finding he (Clark, 2010) later confirmed using mathematical bioeconomic methods.

As part of a concerted effort to understand what encourages consumers to buy illegal wildlife products, economists also found that the market is driven by the need: for subsistence or to eat as delicacies – such as wild birds, shark fins and dried abalone (Shepherd and Shepherd, 2010; Forero, 2006; Papp, 2008; To et al., 2006); to display as fashion accessories or luxury items – such as ivory, leopard and crocodile skins and pangolin scales (Martin and Stiles, 2004); to keep as pets – such as parrots, tortoises and macaques (Broad et al., 2003); as acts of retaliation against wildlife that prey on communities and their livestock and/or decimate crops (Omondi et al., 2004); or for use as alternative or traditional Asian medicines (TAM). While all these drivers persist, TAM has become a thriving business and uses a variety of animal parts for its products such as tiger bones and genitals, bear gallbladders, deer foetuses, elephant skins, antelope horns, rhino horns, and snakes (Martin-Smith et al., 2003; Li and Wang, 1999; Bradley Martin, 1983).

Recent research into IWT has tended towards the more pragmatic assessment of economic and social motivations (TRAFFIC, 2008) that sustain the trade and emphasise the criminal nature of each of the actors (Moreto, 2018). At an individual level, theorists have modelled decision making by using microeconomic methods with utility and rational choice theories

(Michie and Johnston, 2012), decision theory (Gintis, 2014) and the psychological theory of planned behaviour (St John, Edwards-Jones and Jones, 2011).

Economists have also relied on stated preference methodologies to contextualise the trade-offs wildlife consumers weigh (Hinsley, Verissimo and Roberts, 2015; Shairp et al., 2016), while scientists dissect the biological impact such substitutes may cause. Marketing and consumer psychologists such as Steven Greenfield and Diogo Verissimo (2019) and Gayle Burgess (2016) have also tried lending their insight to the study of IWT consumers, while Amy Hinsley, Diogo Verissimo and David Roberts (2015) attempted to see how utility theory could dissuade consumers. Mirko Moro and colleagues (2013) used a similar frame to study efforts aimed at disincentivising poachers.

Non-economists, on the other hand, are keen to understand the appeal of certain taxa and wildlife products so that they can track threats to future species. The trade in specific species has interested scholars such as geographers Esmond and Chrysee Bradley Martin (1983) whose analysis of rhino products was one of the first to study a single aspect of the trade. Besides illustrating the many medicinal qualities that make rhino products so sought after, they also emphasised educating the Asian market about the impact of their consumption. Another study, and one of the first attempts to use science to inform policy, was supported by the Ivory Trade Review Group and asked biologists to forecast the trade's impact on elephant populations (Caughley, Dublin and Parker, 1990; Milner-Gulland and Mace, 1991). At the same time economists attempted to extrapolate the likely effect of an ivory trade ban (Barbier et al., 1990). The economists interestingly contradicted their science colleagues, warning that a trade ban would likely drive prices higher and further increase demand.

Legal scholars such as Adrian Lopes (2015) and criminologist Daniel Nagin (2013) found a similar trend. They noted that product prices were not as important as once thought. The James McNamara led study (2016) added to this line of thought finding that, in some instances, harvesters were not motivated by higher prices at all. Instead, and somewhat perversely, they found that restricting the supply of a species made a species more desirable (Chen, 2016). Conservation scientists refer to this as the Anthropogenic Allee effect (Courchamp et al., 2006) and recognise the economic principles that underpin it (Hall, Milner-

Gulland and Courchamp, 2008). Other so called supply-side interventions spawned studies that investigated the theoretical efficacy of managing ivory stockpiles (Kremer and Morcom, 2000), legalising illegal trade (Fischer, 2004), the possible effect of wildlife farming (Bulte and Damania, 2005; Abbott and van Kooten, 2011), the impact of limited ivory sales (Bulte, Damania and van Kooten, 2007) and the vexed role of speculators (Mason, Bulte and Horan, 2012). Unfortunately, these theoretical studies have generally not generated enough empirical research to support their assertions. This is an indication that containing supply may not be an appropriate response to IWT, a finding that is often used by supply chain actors to contest trade bans (Hübschle, 2017). This is discussed later in this chapter.

Environmental scholars are also keen to understand the demand for Haiwei (dried seafood) and medicinal plants. Haiwei products include dried shark fins, seahorses, abalone, sea cucumbers and bony fish species which are all under threat of being over harvested according to Steven Purcell and his colleagues (2018). Moreover, Boon Pei Ya (2017) found that the trade and consumption culture resembles that of the broader IWT, but it has its own specific appeal given its tonic properties and collection and investment value. Medicinal plants are also in high demand with some 50 000 species traded in their raw and refined forms and about 4 000 species that are now threatened according to Uwe Shippmann, Danna Leaman and A.B. Cunningham (2002). Kristine Stewart (2003), moreover, has cited the dramatic declines for the *Prunus africana* in Cameroon while Amy Hinsley and her colleagues (2017) claimed that the *Dendrobium* orchids in Southeast Asia were also under threat. Around 80% of plants used in TAM are wild harvested, mostly without a clear sustainability guideline (Li et al., 2015). Yet, as Josef Brinkmann (2014) found, while cross-border trade of plants is fairly common, only a small number of florae are listed under the CITES Annexures. In addition, many plants are traded in refined forms as ingredients which are difficult to trace. This has led to CITES signatories calling to exempt items such as orchid derivatives (CITES, 2015) and allow their unrestricted trade. The challenge this poses to conservation efforts is still not fully understood.

Coupled with this issue is the concern that fauna specimens will be replaced by species that are under-researched and come from unknown locations. The species that are not currently tracked are also in danger of becoming convenient targets because they are accessible and

their trade is unregulated (Lindenmayer and Scheele, 2017). This is complicated by the fact that, with open access to online data platforms, the habitat and attributes of new species are published for traffickers to target (Ratsoavina et al., 2015). Indeed, Bryan Stuart and his colleagues (2006) found that such platforms have received enquiries by potential buyers, which encouraged organisations such as the International Commission on Zoological Nomenclature to protect species by removing key data form its open access platforms. Bestsy Yaap and her colleagues (2012) and Jian-Huan Yang and Bosco Pui-Lok Chan (2015) also describe how some academic articles have withheld locality information from their descriptors.

Environmentalists are also concerned about the effects of rapid population growth, urbanisation (Boratto and Gore, 2018) and increased agricultural demands on the planet's natural habitat. The obvious implications for biodiversity loss notwithstanding, there is also a concern that there will be an increase in substitutes for wildlife products to replace tiger parts and timber which will, in turn, increase demand for analogue species[2]. For security studies scholars, this expansion also effects the food security of societies in source countries which, given the increased globalised nature of the economy, will ripple throughout the globe. With more pressure to procure and preserve scarce resources, the likelihood of human-wildlife conflict will rise along with acts of wildlife crime (Kideghesho, 2016). Martin Van Ittersum and his colleagues (2016), furthermore, suggest that the demand for food will keep pace with a growing population reaching close to three times more than what is produced now. This will inevitably bring humans and agricultural land closer to wildlife areas and will spike wildlife crime, as it has in the past, say Mariel Harrison and her colleagues (2015). Under these circumstances, Duan Biggs et al. (2016) found that rural communities living close to wildlife often resent the money spent to protect them while they themselves struggle to mitigate the loss of their livelihoods.

[2] For conservationists an 'analogue species' is an animal that can act as a substitute for a species that is unavailable and help restore an ecosystem.

2.3 Globalisation and its effect on IWT

It is virtually impossible to accurately gauge the size of this trade because of its clandestine nature. Nevertheless, the United National Environment Programme (UNEP) and INTERPOL estimate its value to be between US$7 and $23 billion per year "growing at 2-3 times the pace of the global economy" (UNEP and INTERPOL, 2016: 4; Fukushima et al., 2021) making it the fourth largest international criminal syndicate on record (WWF, 2017).

The scramble to verify these estimates seems to explain why the topic is dominated by case study research keen to assess the trade in specific species and/or regions (Underwood, Burn and Milliken, 2013) or use available data to establish the size of the market (UNODC, 2016). The latter have also been criticised for their reliance on nationally generated seizure data from high-income countries that have the resources to provide better enforcement and reporting (Underwood, Burn and Milliken, 2013). In addition, customs agents may unwittingly contribute to these detection and reporting biases by not flagging species that are easier to conceal (Symes et al., 2018) or because they are unable to identify a regulated species by its scientific or common names as listed on the schedule. Attempts have been made to correct this underreporting by borrowing methods from other disciplines, such as Will Symes and his colleagues' (2018) use of gravity-underreporting models, the results of which, as 't Sas-Rolfes et al. (2019: 204) mention, are still limited.

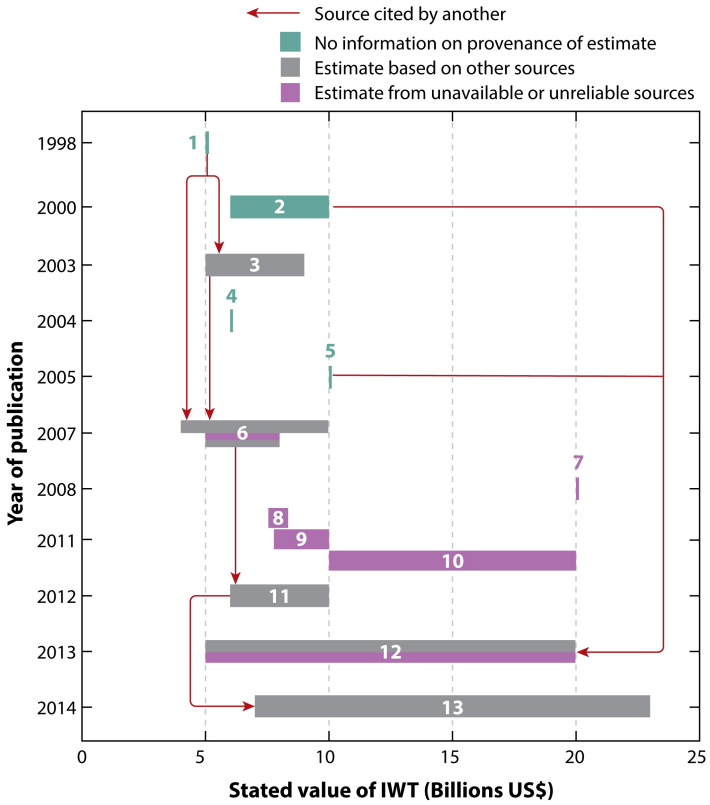

Figure 2 Value of IWT (’t Sas-Rolfes et al., 2019: 205)

On an international level, CITES Article VIII[3] requires all parties to submit annual reports that disclose the number of permits issued, the number of species/products traded and the source and destination countries. This data is available via the CITES Trade Database (Robinson & Sinovas, 2018), but it does have some inherent flaws. Parties, for instance, use different codes and terminology for products resulting in discrepancies across the reporting matrix (Harfoot et al., 2018). This explains, to some extent, why the exact scope of the legal and illegal trade is under-explored (Fischer, 2004).

The trade flows also create opportunities for invasive species to translocate and, in doing so, corrupt the planet’s biodiversity, potentially endangering human health (Rosen and Smith, 2010). The cross-border movement of animals and humans, for instance, has introduced alien species into different ecosystems often altering these systems as new species vie for essential

[3] The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) was adopted on 1 July 1975. It is the international policy standard that seeks to manage the trade of over 35,000 flora and fauna species (Bowman, 2010: 484; Smith, 2010: 144). Protected species are listed in one of three appendices which may contain whole groups of species, a specific subspecies, or a geographically separate population of a species. This policy and its provisions are discussed in detail in chapter 4.

resources such as water. As a result, the World Trade Organisation's (WTO) 1995 *Agreement on the Application of Sanitary and Phytosanitary Measures* undertook to govern food safety and the health and hygiene of flora and fauna transport and trade. While it allows its 164[4] member countries to set their own specific standards, it does require that these are informed by scientific evidence, international guidelines and do not unjustifiably discriminate against their trading partners. This Agreement works to support the provisions of the 1952 *International Plant Protection Convention* (IPPC), a multilateral Treaty overseen by the UN's Food and Agricultural Organisation[5], which seeks to prevent and control the spread of pests endemic to imported flora. The IPPC has since developed the *International Standards for Phytosanitary Measures* (ISPMs) to govern: pest surveillance; regulate and assess the risks of imported species; inspection of phytosanitary conditions; pest management and quarantine measures for imported flora; emergency response procedures for exotic pests; and, provides guidelines for export certification.

In South Africa policies such as the 2004 *National Environmental Management: Biodiversity Act* (NEMBA) and the 2014 *Alien and Invasive Species Regulations* were enacted to ensure biological resources are conserved, sustainably used and the benefits shared equitably and mitigate the threat alien species pose. However, despite these protocols, sanitary and phytosanitary issues are still not perfectly aligned to those required under CITES as the growing bushmeat[6] trade demonstrates. Local consumption of bushmeat has grown to unsustainable limits in areas of West and Central Africa largely in response to increased economic hardships. Julia Fa, Dominic Currie and Jessica Meeuwig (2003 and 2009) and Noëlle Kümpel, Tamsyn East, Nick Keylock, J. Marcus Rowcliffe, Guy Cowlishaw and E. J. Milner-Gulland (2007) have shown that, depending on location (there is a certain status to eating more exotic species) and animal type, bushmeat consumption in these areas are between 30% and 80% of the inhabitant's protein consumption. In addition, the increasing poverty levels within these areas, have pushed communities to trap and supply bushmeat to a wealthy, and often international, elite (Kümpel, 2007: 73).

[4] This figure represents the number of countries who were members of the WTO in 2020.
[5] The UN's FAO has 194 member countries as of 1 May 2020 (FAO, 2020).
[6] Bushmeat refers to food products derived from wild animals (e.g. duikers, rats, porcupines and monkeys), specifically those found in tropical areas. West and Central Africa are key bushmeat markets.

The wet markets[7] where this bushmeat is sold have also been sites of new zoonosis transmissions. Andrés Gómez and Alonso Aguirre (2008) first raised the likelihood of IWT being responsible for introducing new pathogens into the human population forcing societies to confront epidemics such as SARS and Ebola (Nasi et al., 2017; D'Odorico et al., 2017; Callaway, 2016; Swift et al., 2007) and possibly the more recent COVID-19[8] pandemic (Maron, 2020). But while each outbreak has caused public panic, none was of the scale and impact of the COVID-19 pandemic, which will undoubtedly affect countries, particularly poorer nations, for the foreseeable future.

CITES members have considered the bushmeat question at the last seven CoP meetings and formed the Central African Bushmeat Working Group which, in 2011, forged a partnership with the Convention on Biological Diversity (CBD). But their efforts are somewhat restricted because the CBD is geared toward regulating trade which does not necessarily align to CITES' need to protect humans and wildlife from the phytosanitary risks that the bushmeat trade presents. Apparently, international agreements provide only limited protection.

2.3.1 China and its role in IWT

The scope and breadth of IWT makes the trade a geopolitical force – one that primarily engages the political and economic might China has worked hard to develop. The country's role in financing much of Africa's military, infrastructural and economic development has made it a formidable trade partner and a key player across the continent. Its influence has also not waned despite its apparent role in the devastating COVID-19 pandemic.

While there are several aspects that drive demand for IWT products, political scientists and security studies scholars are keen to understand the affect China's rising influence through

[7] A wet market is an open-air market with stalls selling fresh meat, fish and produce and other perishable goods. Although not all wet markets sell wildlife products or bushmeat, the terms 'wet market' and 'wildlife market' are often conflated (Maron, 15 April 2020).

[8] SARS-CoV-2 or COVID-19 is a zoonotic virus that was discovered in Wuhan, China in December 2019. It is highly contagious and spread rapidly across the globe causing unprecedented lockdown measures by each country in an effort to contain the spread. The virus attacks the respiratory system with severe cases resulting in death (Centres for Disease Control and Prevention: 4 November 2021).

international aid and investment has had on the trade. Since 2000, China has spent more than $81 billion in international aid with a large portion committed to the African continent (Dreher et al., 2017). The support for Chinese businesses to expand and invest beyond the country's borders is another feature of the country's growing international influence (McDonald, Bosshard and Brewer, 2009; Gonzalez-Vicente, 2012). These states struggling to support their economies find these monies appealing because they are unencumbered by the political and economic rigour stipulated by Western sources of capital — for example, Environmental and Social Impact Assessments (ESIA) that could affect the implementation of development projects (Johns et al., 2014) or fundamental human rights riders.

This influence has also affected the trade in illegal wildlife specimens. For instance, their investment and the launch of China's hard infrastructure development programme, the so-called *Belt and Road Initiative*, has opened new trade routes with the rest of Southeast Asia, Africa and South America (Chatzky and McBride, 2020). This new reach means an increased trade in both legal and illegal wildlife and their derivatives. It also means that wildlife and the habitats they occupy will need to be sacrificed to facilitate increased production and infrastructure.

According to Haroon Bhorat and Finn Tarp (2016), poor infrastructure has cut the continent's economic growth by 2% and private sector productivity by at least 40%. However, while the new free trade and migration initiatives ushered in by the African Union (2018) were supposed to benefit the continent's bottom line, it could also facilitate an increased flow of IWT from African source countries to Asian markets (Lezen, 2012). Instruments such as the *Free Movement of Persons Protocol* (2018), the *African Continental Free Trade Agreement* (2018) and the *Programme for Infrastructure Development in Africa* (African Union, 2010) planned to develop necessary energy, transport, ICT and water infrastructure, all of which will affect the ecology of the region. In addition, and as has been the case in the European Union, easing border restrictions will make tracking IWT more difficult and further hamper policy and criminal enforcement (Sina et al., 2015). Carolina Roca da Silva (2018) seems to be a lone voice arguing instead that these free trade initiatives allow for greater oversight and enforcement collaboration that will help keep wildlife trafficking in check — the Africa-Trade in Wildlife Information eXchange (TWIX) network is one such example.

Another key factor driving IWT and China's role in it, is the political appeal and cultural importance of TAM. Always a key feature of Chinese culture, TAM's appeal declined with the advent of antibiotics after World War II. Its recent rise, according to Gabriella Zanzanaini (2016), is linked to China's fervent nationalist narrative and an expanding and increasingly affluent middle class (Oaster, 2017). Domestic Chinese policy, as Arthur Goldgaber (2012) and Annie Xianghong Lin and her colleagues (2018) found, have also pushed demand for TAM products. Policies such as *Opinions on Supporting and Promoting the Development of Traditional Chinese Medicine in 2009*, the 2016 *Outline of the Strategic Plan on the Development of Traditional Chinese Medicine (2016-2030)* and the *Traditional Chinese Medicine "Belt and Road" Development Plan 2016-2020* (Wang and Liu, 2018) illustrate this approach. It is safe to assume that growing the TAM market will add to the threat already facing flora and fauna species.

2.3.2 Impact of technology

The technological development that underpins our increasingly globalised economy has been both a boon and a burden. Its ability to connect people across the planet and enable them to trade has allowed new markets to flourish and helped older ones adapt. Black markets of all descriptions have exploited the political and economic advantages of this technology to facilitate their business, turning small time supply chains into international smuggling operations overnight (Naim, 2012: 100). Accustomed to conducting their business in the shadows, black marketers such as wildlife traffickers have adapted to social media platforms and a complex labyrinth on the dark web, as Elizabeth Beardsley's (2006) limited study of sales platform eBay showed. Her one-week survey of the internet site found that over 9,000 wildlife products were put up for sale, a finding that was supplemented by IFAW's wider investigation of eBay to track the illicit trade of a specific list of species (IFAW, 2012). In 2009, the results of this study pushed eBay to institute a worldwide ban of all ivory (legal or otherwise) sold on its platform. At the time, eBay was the most popular trading site; its popularity has since been eclipsed by several localised platforms most of which are not as accessible to the wider public. There are a number of similar studies (Kitade, 2017; Sung and Fong, 2018; IFAW, 2008 and 2018) that have since been conducted which have also helped

stakeholders trace the syndicate networks and their partners.

The move to embrace digital trade routes has spawned the need to enact international enforcement measures that can be applied across legal jurisdictions. But, more importantly, according to Dorothy Denning (2001: 283) it means that more personnel who are trained to keep pace with an ever evolving cyber-based syndicates will need to be recruited and funded.

Opening borders and the renewed efforts to promote international commerce have also inspired new travel loopholes for traders to exploit. Globalisation has encouraged countries, particularly those with developing economies, to relax their visa restrictions and look to improve their transportation infrastructure to support tourism and trade, inadvertently facilitating access for poachers and wildlife traders (Asch, 2013: 80). The effect has had direct and indirect implications on the environment. The forests in the Congo Basin, for example, have been developed to support commercial logging. In the process, vulnerable species such as the bonobo and chimpanzee have been trapped and traded further diversifying the domestic bushmeat market and threatening the long-term survival of primates in the region. They have also created opportunities for criminal syndicates to turn a profit as they launder the proceeds made from illicit wildlife trades (Andreas, 2002: 46). The new roads and commercial infrastructure have eaten into the natural habitat forcing many animals to find alternate migration routes and find new sources of food and water.

IWT has consequences that will affect the wealth, health and well-being of our immediate future and that of the generations to come. The World Bank (2019) estimates that governments lose between $7 - $12 billion each year in potential fiscal revenues that are not collected thanks to the illegal trade in timber, fish and wildlife. Wildlife crimes cost local communities around $70 billion per year, further deepening poverty and inequality and threatening political stability in source countries (World Bank and AES, 2016). There is also the harm these activities cause to the environment by destabilising the planet's sustainable ecosystem and hastening climate change (White, 2008; MEA, 2005, WWF, 2012, Zimmerman, 2003). Poachers, for example, damage environments by felling trees (Geist and Lambin, 2002; Pimm and Raven, 2000) and using snares, poison and dynamite (McClellan et al., 2008). This accelerated habitat loss may also contribute to a sixth mass extinction where up to 100,000

species go extinct annually (Barnosky et al., 2011; Ceballos et al., 2015).

Criminologists and legal scholars have also characterised IWT as a wildlife crime and produced studies that examine the acts as green crimes. Intrinsically linked to these definitions is the sense that these are serious crimes that 'predicate act' i.e. criminal activity that relies on more serious offences such as money laundering. Political ecologists, on the other hand, use these findings to conflate global security concerns with biodiversity loss to push for increased green militarisation[9] which conservationists believe undermines their preservation efforts and harms local communities (Vucetich et al., 2015).

Monitoring the complex trade network has fascinated those who study transnational organised crime syndicates (Warchol, 2004; UNODC, 2016; Zimmerman, 2003) and corruption (Smith et al., 2015). Their focus has tended towards tracing transactions and assessing their implications (Moyle, 2009) in an effort to unravel the intricacies of their largely hidden online markets (Hinsley, 2016). Organisations such as the UNODC (2018) have also investigated how IWT encourages money laundering and identified possible measures that could be put in place to counter this criminal network and enhance corporate accountability (Haenlein and Keatinge, 2017; SAMLIT, 2019).

Furthermore, the financial operations of this market have evolved along with the improvements to information technology and its infrastructure. Cathy Haenlein and Tom Keatinge (2017) have discussed the benefits of using new technology to track, trace and disrupt financial transactions. This ability has helped authorities map the activities of these criminal syndicates and build better prosecutable cases. The use of new technologies that automatically detect wildlife products is also increasing. Julio Hernandez-Castro and David Roberts (2015) and Amy Hinsley and her colleagues (2016), for example, have described how

[9] Esther Marijnen (2017) defines green militarisation as using soft counter-insurgency approaches to conservation and to address dynamics of violent conflict or what Bram Büscher and Maano Ramutsindela (2015: 2) call 'green violence': 'the deployment of violent instruments and tactics towards the protection of nature and various ideas and aspirations related to nature conservation'.

difficult it is to trace online wildlife trafficking because these platforms are often private, use pseudonyms and other secret codes, and operate within legal ambiguities straining the already scarce resources of enforcement agencies. Other studies (Roberts and Hernandez-Castro, 2017; INTERPOL, 2017) have also documented how syndicates favour encrypted communication networks and the secrecy of the dark web. While wildlife conservationists such as Yu Xiao, Jing Guan and Ling Xu (2017) have studied the move to mobile payment systems, cryptocurrencies and closed social media groups. Interestingly, they note how traders continued to operate with impunity despite being sanctioned by enforcement agencies, fuelling the claim that monetary penalties are in fact non-deterrents.

2.3.3 IWT and its role in promoting global insecurity

As will be discussed later in this chapter, crime syndicates have exploited political instabilities and the economic desperation of poorer countries to diversify their supply chains and grow their market share despite the efforts of international law enforcement agencies. It is also somewhat ironic that this sector's growth may have been encouraged by the European Union and its open border policies (Warchol et al., 2003) despite the bloc's laudable efforts to restrict illicit trade among members (European Commission, 2016).

IWT has also seemingly funded organised insurgency groups and terrorist activities (Lawson and Vines, 2014; Wyler and Sheikh, 2008: 7). The media have intimated that the Lord's Resistance Army (LRA) used illicit ivory trading (Kahumbu and Halliday, 2015) to finance its terrorist initiatives while Liana Wyler and Pervaze Sheikh (2008: 23) have also mapped the proximity of suspected terrorist safe havens to areas of high biodiversity. While this is not conclusive proof of a link, Wyler and Sheikh (2008: 23) use the figure below to show areas of vulnerability where terrorists can exploit porous borders and weak states. As Figure 3 shows, biodiversity hotspots are marked in red with the South African coastline and the Kruger National Park listed among these areas. These zones are in geographic proximity to known terrorist havens along the East African corridor as well as the Trans-Saharan and west African region. The Arabian Peninsula, Northern Caucasus, Afghanistan and Pakistan, Guatemalan-Chiapas border, the Colombian border, Argentina/Paraguay/Brazil Tri-Border Area, and the Sulawesi-Mindanao Arc are circled as other known terrorist havens.

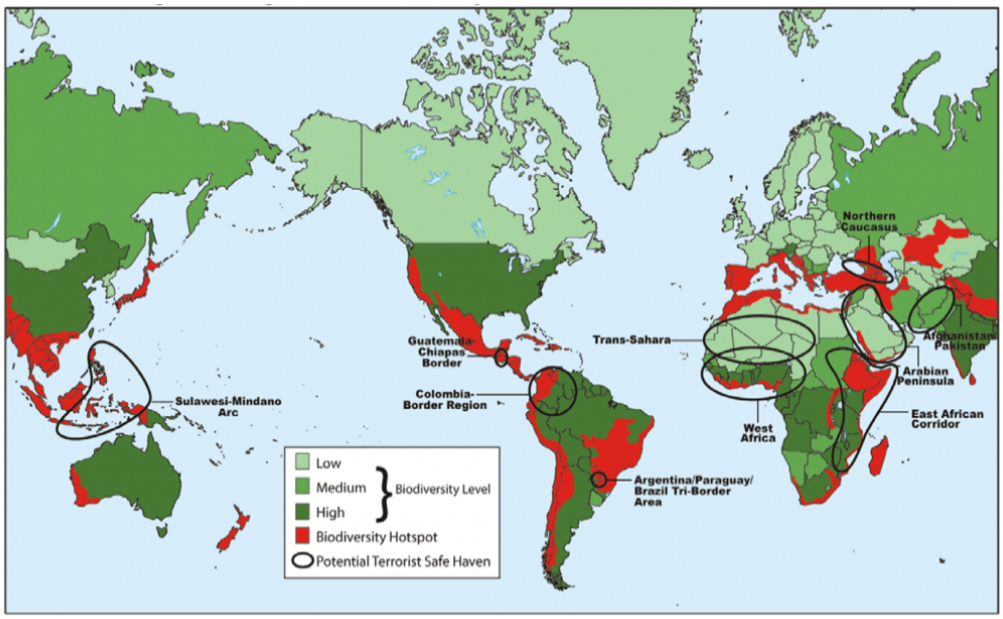

Figure 3 Regions of Biodiversity and Selected Terrorist Safe Havens (Wyler and Sheikh, 2008: 23)

Moreover, reports from India in 2007 connected Al-Qaida to poaching incidents in the Kaziranga reserve (Levy and Scott-Clark, 2007), and Al-Shabaab allegedly poached elephant in Kenya to fund its activities (Stewart, 2013; Keating, 2013).

2.3.4 The question of governance

Maladministration and poor governance systems are also factors often blamed for encouraging IWT and its associated industries (Biggs et al., 2016; Weru, 2016). Curiously though, some of the most robust policy measures enacted to curb this trade can be found in countries such as Botswana, Namibia and South Africa where corruption reportedly hampers the efficient delivery of services at all levels (Nelson, 2009). According to Fred Nelson's (2009) findings, political and economic elites in these countries were less likely to control and benefit from natural resources such as wildlife.

There are, however, cases where an overwhelming bureaucracy creates opportunities for enterprising individuals to circumvent the system (Mbaku, 1996). A 2021 report by the South African Anti-Money Laundering Integrated Task Force (SAMLIT) noted that "officials from

SANPARKS, DFFE, SAPS, SIU as well as a municipality appeared in various STRs/SARs[10], as facilitators in abalone, rhino poaching and other wildlife crimes" (SAMLIT, 2019: 30). This suggests that local politicians and other government officials frustrate conservation interventions to protect those constituents that benefit from IWT. Jafari Kideghesho's (2016) study in which he interviewed park officials in Tanzania, found that 75% of this sample cited political interference as a primary challenge to IWT regulations. These allegations were also reported to the Parliamentary Committee on Land, Environment and Natural Resources, whose inquiry later found a range of government officials guilty of protecting poachers who paid for the privilege to hunt (Kideshesho, 2016).

Corrupt activities underpin sustained poverty and inequality in poorer nations especially those with weak governance institutions (Bannon and Collier, 2003; Asch, 2013). This "unlawful use of public office for private gain" (Smith and Walpole, 2005) has also been blamed for hamstringing broader conservation efforts and, as mentioned throughout this literature review, enables IWT to flourish. These effects combine to raise national and global security concerns with national resources stretched across three fronts – to contain pathogens and ensure the health and safety of indigenous species, to mitigate the economic effects of these measures, and to prosecute purveyors that drive the illicit trade (IFAW, 2008). With wildlife traffickers sharing the same smuggling routes, tactics and personnel as the international drug, firearm and human trade (IFAW, 2008; Vince, 2002) it is no wonder they target weak states to source, transit or market products. Money laundering, bribes, extortion and patronage grease the wheels of national enforcement authorities (WWF, 2012) especially those controlling trade transit points (Asch, 2013; Gooch, 2011: 34).

Legal scholars and non-governmental organisations have pushed for stiffer sanctions to deter corrupt practices and raise ethical standards among officials, legislators and the judiciary, but it is difficult to dislodge a system that supports and is handsomely supported by wildlife traffickers. The will to voluntarily curb a very lucrative source of income is hard to find.

[10] In this report STRs refers to Suspicious Transaction Reports and SARs refers to Suspicious Activity Reports. These reports were generated by financial institutions and were assessed as part of this Task Force's research methodology.

2.4 Tracing system dynamics

2.4.1 IWT supply chain

Wildlife trafficking has encouraged the growth of a complex web of actors. From community-based trackers to poachers to armed non-state actors to international criminal syndicates to legitimate authorities to consumers – the network is a transnational enterprise with far reaching effects. Political Science researchers and law enforcement task forces have tried to establish the scope of the trade networks, the drivers that encourage the trade and looked to understand the power relationships involved in sustaining the market. Much of this work depicts IWT as a well organised series of syndicates that source and traffic specimens and by-products to consumers primarily those located in Asia.

Jacqueline Schneider (2008) explains that the market for illegal fauna and flora falls into different categories based on the monetary value of the goods i.e. the illegal timber trade, caviar trafficking, drug-related smuggling, trade in skins, furs and TAM and specialist specimen collections. These goods are moved from range or supply states through, sometimes multiple, transit countries to predetermined markets. For definitional purposes, range states are countries, such as South Africa, where wildlife can be found in numbers. Their ability to supply the transnational market makes the country a prime target for illegal traders and other stakeholders. So-called transit countries, such as Australia and its transport routes to Asian markets, are used as a pipeline to accommodate processing, re-packaging and the transfer of bulk items, often via different modes. These tactics are used to evade law enforcement agencies and circumvent the permit system that CITES requires all its signatory countries to honour. Traders, therefore, typically prefer to target states with complaisant border controls, legislation and enforcement officials. Finally, the so-called destination countries sport physical or virtual markets where illegal wildlife and assorted by-products are sold.

2.4.2 Actors in IWT

There have also been different attempts to trace the actors that facilitate this illicit trade. Rebecca Tailby and Frances Gant (2002), for instance, tried a stage-based approach as they

documented the illegal trade of abalone, while William Moreto and A.M. Lemieux (2015a) introduced a product-based framework to trace actors involved in the trade. A more recent study by Jacopo Costa (2021) used a social network analysis to trace the trade network from East Africa to Southeast Asia, while Andrea Moshier, Janna Steadman and David Roberts (2019) used a similar framework to assess how UK-based actors keen to curb the trade communicate and respond to an ever-evolving market. These different studies do indicate that the number and role(s) of the people involved in trafficking species vary based on the anticipated consumer, the specific characteristics of the products and the capacity of the actors already part of the supply chain. Domestic trade, for instance, can be as simple as the study by Guy Cowlishaw, Samantha Mendelson and J. Marcus Rowcliffe (2005) found in Ghana's bushmeat trade where only two suppliers (professional hunters and part-time farmer hunters), a wholesaler, market trader and a café owner were needed before the product was sold to the consumer. But the domestic market can also require a more complex supply chain to overcome unique contextual challenges. Emmanuel De Merode and Guy Cowlishaw (2006) found that the Democratic Republic of Congo's domestic bushmeat trade required at least ten actors or more to supply urban-based consumers and this was further complicated during periods of political instability and military action. While Jacob Phelps, Duan Biggs and Edward Webb (2016) found that at least 10 types of actors, most of them specialist harvesters, transporters, retailers and launderers, are needed to traffic CITES-listed ornamental orchids from Myanmar to internationally based consumers. The structure of the supply chain also determines its resilience to context and enforcement interventions (Ayling, 2013).

Broken down into its simplest form the supply chain operates from those that harvest or supply product through an intermediary that facilitates the trade to consumers.

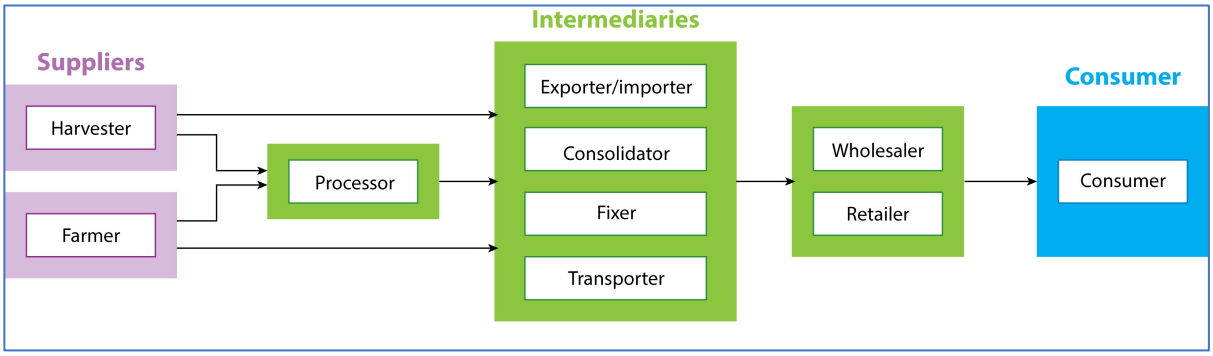

Figure 4 Figure 4: IWT Supply Chain ('t Sas-Rolfes et al., 2019: 206)

Identified as the organisation's key facilitators, middlemen or traders act as wholesalers and brokers between the various actors i.e. suppliers, processors, transporters, and sellers (Broad, Mulliken and Roe, 2003). These lynch pins are typically locally based individuals with useful connections to suitable suppliers and sympathetic officials and their storage and logistic capabilities make them indispensable to the underground operation.

Perhaps the most researched group of actors are the trade's suppliers. Several studies have profiled poachers, detailing their use of different hunting techniques and some very sophisticated equipment (Eloff and Lemieux, 2014; Wasser, 2008). These range from darting equipment, to silenced weaponry with night vision scopes to sophisticated drones and tracking software that can triangulate specific species as well as those employed to protect them. But perhaps the most interesting finding is the vastly different motives for their actions which include: necessity or subsistence consumption, commercial gain, cultural practices, religious beliefs, boredom, protection from or retaliation against property destruction, rebellion or thrill killing, trophy hunting and research (Tailby and Gant, 2002; Zimmerman, 2003; Moreto and Lemieux, 2015b; von Essen et al., 2014).

Besides poaching, Corné Eloff and A.M. Lemieux (2014: 21) also describe how illicit by-products, such as rhino horn, can be supplied by "the very people responsible for 'protecting'" them. As detailed later in this chapter, in South Africa pseudo-hunting has become a popular way for conservancies to leverage their herds on the legal and illegal markets (Ayling, 2013; Milliken and Shaw, 2012; Eloff and Lemieux, 2014). Pseudo-conservation also feeds the supply chain through either mismanaging legal rhino horn stockpiles, humanely removing rhino horn to purportedly fund conservation efforts, or stealing samples from museums, safari lodges, game reserves and taxidermies (Milliken and Shaw, 2012).

The dark web and social media platforms have allowed traffickers to obscure their sales, buyers and stock once the product has left the source country (IFAW, 2021). Mapping the trade networks has shown how these traders manipulate the legal prescripts and specific testing facilities meant to regulate supply (Wasser, 2008). For example, depending on consumer preferences, species are often processed to facilitate their transport. In instances

where live specimens are not required, a middleman will contract a processor with very specialised knowledge to package a specimen for easy export and ensure its saleability (Wyatt, 2013: 6). Skilled processors are also capable of concealing key characteristics of by-products to circumvent legal or regulatory controls and facilitate transport (Moreto and Lemieuz, 2015a: 311). Tea leaves, as described later, have been used to stain ivory and make it appear older to counter legislative restrictions (UNODC, 2020: 121; Leaker and Isiche, 2004a).

Middlemen also contract a very complex network of operators or 'mules' (IFAW, 2013) to smuggle specimens within and across borders. Their techniques range from concealing articles on their person or in their luggage to hiding specimens as part of large legal shipments routed via land, air and sea – customs officials do not usually scrutinise large shipments as carefully making it easier to use these consignments to cover illegal product (TRAFFIC, 2015). Transporters have also smuggled both wildlife and drug products with live animals and their derivatives used as containers to hide narcotics – this was the case in Kenya where drugs were found in ivory shipments (The Economist, 2017; McConnell, 2017; IFAW, 2008). The US Fish and Wildlife Service has also had cases where drugs were sewn into living animals and secreted in animal hide and bone (Speart, 1993) and there have been instances where endangered species were used as legal tender for drugs and arms purchases (Warchol et al., 2003; Smith, 2015; Global Initiative against Transnational Organized Crime, 2021).

Sellers are the last actor in the supply chain. They are charged with marketing specimens via established physical or virtual wet markets (Hastie and McCrea-Steele, 2014) and supplying legitimate collectors or restauranteurs (Saffron, 2002).

2.4.3 Transnational crime syndicates emerge

The idea that subsistence hunters and the occasional entrepreneur are responsible for wildlife crime has now been supplanted by reports and studies that outline the amount of money wildlife specimens and their by-products can fetch. With growing consumer demand and an insufficiently supervised market, it is not surprising that transnational criminal entities, as described by Elizabeth Bennett (2011) and Vanda Felbab-Brown (2011), have used their

existing trafficking infrastructure to source and supply a very profitable Asian market.

The seizures of large caches of illegally sourced ivory, for instance, hint at the sheer scale of this illicit enterprise (Miliken et al., 2012). Transporting such large quantities requires a sophisticated organisation as well as access to financial and logistic expertise. As Debbie Banks and her colleagues (2007) have broadly sketched, the illegal trade of ivory from Africa to Asia seems to involve an intricate network of individuals, shell companies and smuggling routes that cross multiple African borders and Asian ports.

Sam Weru (2016) also showed how the smuggling network follows a simple but established system where middlemen are contracted by trafficking patrons to source poachers able to deliver the required specimens. The patron then uses a middleman whose public and private sector connections help facilitate the transport of specimens across borders to either virtual or physical markets. As mentioned, public attention concentrates largely on the trade of large charismatic species and their derivatives such as ivory and rhino horn, and to some degree on the plight of the pangolin and its scales (‘t Sas-Roelfes, 2019). This is understandable given the media reports and a plethora of documentaries that give voice to these mammals (David Attenborough’s BBC documentary series such as *Wildlife on One* and *Wildlife on Two (1977-2005)* and The Planet Earth franchise (2001—). There is also an increasing trend to study the effects of this illicit trade on flora and other fauna and abalone fishing is one example.

In South Africa, abalone or *Haliotis midea* (perlemoen in local parlance)[11], has been part of the diet of many poor fishing communities. Asian cultures consider this marine snail an aphrodisiac which helps fuel a very lucrative trade between South Africa and China — they have fetched as much as US$3,000 per kilogram on Hong Kong markets (Lau, 2018: 29). Since the 1990s the South African coast has seen more than 2,000 tonnes of abalone poached annually making the trade worth around $60 million per year. The trade has grown in recent years due to a unique combination of social-economic circumstances that Jonny Steinberg (2005) and Kimon de Greef and Serge Raemaekers (2014) attribute to four key factors.

[11] Abalone is a gastropod or marine snail that is found in temperate water environments. They cluster in kelp forests and rocky reefs and help stablise the marine ecosystem (Steinberg, 2005).

Firstly, from a policy perspective, the end of apartheid terminated the sanctions that had strangled the country's economy. South Africa's rapid re-integration into the global economy spurred a dramatic increase in legal cross-border trade that customs controls were not fully equipped to handle. This made it easier for transnational organisations to move contraband products, such as abalone, without being detected (Steinberg, 2005; de Greef and Raemaekers, 2014).

Secondly, the new democratic South African dispensation did not rise to all its optimistic hype — especially for residents of poor and underemployed fishing communities. Economic and political reform in these areas was slow and further hampered by policies that reduced fishing permits in line with revised fishing quotas. Abalone poaching, therefore, provided much needed income for these communities from boat skippers, divers and carriers to underaged lookouts that enable middlemen to fence the product (de Greef and Raemaekers, 2014).

Thirdly, the rapid economic growth in Asian countries also meant that these consumers had more disposable income to spend on high-end goods such as threatened and endangered species (TRAFFIC, 2008; Duffy, 2010: 155-187; IFAW, 2008; Taylor et al., 2014; Zanzanaini, 2016; Oaster, 2017). A fourth factor is that increased demand, combined with the steady depreciation of the South African currency, meant that both legal and illegal exporters could make more money from their abalone catch. Keen to take advantage of the increased value of the product, a sophisticated network of criminal syndicates connected to mainland China, Hong Kong and Taiwan used their established infrastructure and contacts with Cape Town gangs to source live product in exchange for methaqualone and methamphetamine (Global Initiative against Transnational Organized Crime, 2021; de Greef and Raemaekers, 2014).

There are a number of international and local organisations working to curb the abalone trade — the Marine Anti-Poaching Unit (MAPU), the Department of Agriculture, Forestry and Fisheries (DAFF), South African Police Service (SAPS), the World Wildlife Fund (WWF) and Cape Nature for instance — by motivating a series of policing manoeuvres and policy recommendations. Their efforts have yielded some noteworthy arrests and convictions (TimesLive, 2021; News24, 2021) but the illicit trade persists nonetheless, and tonnes of

abalone slip through unprotected borders to stock Hong Kong markets each year (Lau, 2018).

The trajectory of South Africa's abalone trade, both legal and illegal, illustrates the path dependent context that underpins the nature and circumstance of the country's broader illicit wildlife trade.

2.5 Trying to curb an open system

An overarching concern for all stakeholders is developing measures to conserve the planet's biodiversity which is why CITES and other global conventions have been enacted over the years.

Given their funding appeal, conservationists have understandably chosen to focus their advocacy efforts on curbing the trade of large, charismatic species from the African continent to Asian markets. Consequently, they have largely ignored smaller and lesser known species, particularly flora, and their wider ecological value (Esmail et al., 2019: 8). For instance, proposals to substitute animal products in TAM formulations with primarily plant-based derivatives (Li et al., 2016; Chen, 2017) were mooted long before conservationists and scientists determined the ecological sustainability of these alternatives. Erwin Bulte and Richard Damania (2005) argued that these products would be cheaper and would therefore reduce the need for illegal harvesting. While the Amy Hinsely led study (2017) found that orchid species seem to be a favoured substitute as traditionally used species decline. They noted a marked increase in *Eulophia* species for Ayurvedic medicine and *Dendrobium* species in TAM formulations.

Another suggestion that has been tried and studied is the introduction of incentives to communities, but these depend on the community's legal property claims and resource rights. Understanding who has a claim – the state, specific communities or private landowners and, depending on the circumstances, how these incentives are distributed to ensure socioeconomic and ecological survival are questions still under examination. It is a complex calculation that has had some success. In Namibia, conservancies managed by local

communities have benefited by permitting small-scale trophy hunting of lion and elephant and their efforts have encouraged species populations (Naidoo et al., 2016).

Some conservationists also argue that financing and encouraging farms to breed species for legitimate harvest and trade can only benefit local communities. They argue that such initiatives create work for community members in the tourism and hospitality sectors and that the number of storage and transport enterprises will inevitably help uplift individuals and their broader communities (Nisbet, 2000). With these micro-enterprises there will also be a need for greater education and training to further develop these regions and the quality of life in these communities. This is a compelling argument to be sure, but these efforts run the risk of growing black market demand and tempting legitimate farmers to leverage their stocks across legal and illegal markets, which will be discussed later in this chapter.

2.5.1 Measures to manage supply

Several measures have been mooted to prevent the irreversible exploitation of wildlife species. In 2008, the international non-governmental organisation, TRAFFIC, outlined several possible factors that supported the trade in illegal wildlife and their by-products. Among these was the often cited rising affluence of consumers in India and Asia (TRAFFIC, 2008; Duffy, 2010: 155-187; IFAW, 2008; Taylor et al., 2014). For the most part measures to control the trade have relied on enacting and enforcing policy provisions on shipments from source countries such as South Africa. But since the trade relies on a rising demand and variable consumer preferences, organisations such as the WWF have moved to try and lower demand by teaching consumers about the penalties of being caught with such products and about the harmful impact their consumption has on the environment. A recent article by Robin Naidoo, Daniel Bergin and Jan Vertefeuille (2021) determined that people who were aware of COVID-19 were less likely to buy wildlife. Additional efforts have looked to replace sea turtle shells with synthetic sources in the manufacturing of sunglasses and other jewellery and vilified anyone sporting animal pelts as part of their fashion accessories (IFAW, 2021). As valuable as these efforts are they do fly in the face of cultural traditions and form the basis for many claims of impinging on a nation's sovereign rights to support itself and its people – a well-used argument at CITES' CoP meetings.

The 2008 TRAFFIC report also blamed the rising poverty indices in source countries for forcing vulnerable communities, especially those surrounding protected wildlife areas, to find alternative forms of sustaining themselves. In an examination of individuals involved in rhino poaching in South Africa's Kruger National Park, Jasper Humphreys and Michael Smith (2014: 802) suggest that these individuals hailed from poorer communities in Mozambique and were involved solely for their own economic gain. However, in their study, Rosaleen Duffy and Freya St John (2013) showed that the increased demand from wealthier consumer countries encouraged individuals from poor communities to become poachers and that these individuals would otherwise not be involved.

There are other factors and their interplay with poverty must also be included in a broader assessment of IWT. The 2013 African Elephant Summit (CITES Secretariat et al., 2013) is a good example of confirming that the level of unwillingness to manage resources responsibly and enforce policy provisions encouraged demand for elephant by-products. This is also a factor that has also been raised in academic studies (Gibson, 1999). Indeed, as Rosaleen Duffy (2017) determined, the legislative framework in places such as Mozambique which until recently considered rhino-related offences as misdemeanours, indirectly spurred poaching in South Africa's protected areas. Such legislative loopholes encouraged the perception that poaching was a low-risk and high reward endeavour. According to Duffy (2017), poaching in South Africa had the added benefit of being a form of resistance for many Mozambican communities who felt dispossessed by the imposition of these protected wildlife sanctuaries and aggrieved that they were no longer able to enjoy the resources these lands had provided for generations. Corné Eloff and A.M. Lemieux (2014), moreover, found that poaching incidents in the Kruger National Park were concentrated near roads close to the Mozambican border. To catch perpetrators and hopefully prosecute these offenders, Eloff and Lemieux suggested strengthening the somewhat porous border region using expensive technology such as remote sensors, gunshot detectors, unmanned aerial systems and drones to alert rangers of suspicious activity. Regular ranger patrols, vehicle and license plate monitoring and regular searches at park exits have also been suggested as local, although costly, deterrents (Eloff and Lemieux, 2014).

2.5.2 Dissuading demand

Understanding how social norms affect individual choices and how these choices interact with policy has also generated some interesting interdisciplinary debate.

The complex dynamics that feed the human desire to increase affluence and influence is another area that the TRAFFIC report (2008) identified. These dynamics have been factored into several interventions looking to target the broader supply chain from poorer communities to urban consumers to higher and more powerful groups. Efforts have looked to reduce consumer demand (Challender et al., 2014) which have led to a number of other studies keen to understand consumer preferences, beliefs, social norms and lifestyles to inform new recommendations (Arthur and Wilson, 1979). The issue of bushmeat in South America and sub-Saharan Africa has been a popular research topic (Wilkie and Godroy, 2002; Wilkie et al., 2005) as has a more recent assessment of potential substitutes (Drury, 2009).

As mentioned in chapter 1, Tim Haas and Sam Ferreira (2018) have tried to ascertain how decision making models can be adapted to help change the belief systems of poachers. While Diogo Verrisimo (2018) identified 236 behaviour change campaigns to assess their affect and Sean Rudman (2019) studied how games could be used to assess and possibly change hunter behaviour. It is, therefore, important that policy – still widely touted as the most likely measure to mitigate the trade – looks to respond to human and monetary elements in addition to conservation advocates and the science that underpins the planet's biodiversity.

Attempts to shift consumer demand have had mixed success largely because IWT actors are entrepreneurial and agile enough to find new avenues through which to promote their products. Trade bans have yielded short- and medium-term successes as the abalone example illustrates. But actors have also been able to leverage the marketing potential of both a substitute and the value of a scarce product to overcome market losses (Kitade and Toko, 2016) in addition to using misinformation to benefit their bottom line (Milliken and Shaw, 2012).

Demand reduction campaigns have largely recycled the same standard model which inevitably reduces their effectiveness. Steven Greenfield and Diogo Verissimo (2019) and Alegria Olmedo, Vian Sharif and E.J. Milner-Gulland (2017) describe how they rely on anecdotes and personal experience instead of consumer-based research or behavioural theory. They also lament the fact that these campaigns are not tailored to specific audiences offering instead very generic messaging. Moreover, while celebrities are often recruited to lend credibility to these campaigns and can certainly play a part in shaping behaviour, there is not enough research into their true strategic effectiveness (Duthie et al., 2017).

Social media platforms can also play a key role and either drive or deter IWT (Nekaris, Campbell, Coggins, Rose and Nijman, 2013). Researchers have established that they connect the various actors within the trade networks (Hinsley, Lee, Harrison and Roberts, 2016) while also advertising and facilitating transactions for IWT products (Yu and Jia, 2015; Xiao et al., 2017; Gomez and Bouhuys, 2018; Sy, 2018). With trade activity not regulated by these platforms – as the eBay study mentioned earlier confirmed – it seems as if this medium will continue to milk the profits of this illicit trade. There are efforts to use the platforms to dissuade demand (Challender et al., 2014) and broaden support for policy changes using tactics similar to those of public health campaigns. In addition, campaigns such as the 'Cecil movement'[12] (Macdonald et al., 2016) have also played on society's conscience to garner widespread support for banning trophy imports (Pratt and Hirst, 2017).

As with political campaigns across the world, actors throughout this market have also found a use for misinformation. On a policy level decision makers have a limited capacity to interrogate and interpret complex scientific research (Jones and Baumgartner, 2005). As chapter 3 discusses in more depth, without the ability to interrogate a study's methodological basis it is difficult for policy makers to determine whether the findings accurately reflect the nature of the problem. As a result, legislators often rely on third party's such as NGOs, with their own agendas and expertise, to parse these studies into digestible recommendations that make for good soundbites and convenient planning hooks. This interplay between policy

[12] Cecil was a lion that was killed outside a national park in Zimbabwe in 2015 by an American trophy hunter. The lion was a protected animal and his death sparked global ire and drew attention to the issue of trophy hunting.

makers, NGOs and the media are where misconceptions arise. Thomas Maguire, Cathy Haenlein and Michael Smith (2016) described, for example, how an unsubstantiated report written by Andrea Crosta and Kimberly Sutherland in 2016[13], of the NGO Elephant Action League, linked the terrorist group Al-Shabaab to the ivory trade. Maguire and colleagues (2016) then found that 115 articles were subsequently published on this topic with 48 of them citing this report as their source and a further 16 relying on circular coverage of this report. There is currently no evidence to prove that this report and its media coverage directly influenced the direction of policy, but it does show how quickly unsubstantiated assertions can be interpreted as fact and potentially dictate where resources are spent. While these tactics can certainly influence policy development and implementation, conservationists worry that they can also skew policy responses (or lack thereof) and misdirect much needed resources.

2.5.3 Crime prevention strategies

Authorities are keen to redress IWT's reputation as a low risk and high reward endeavour. For this reason measures that target the profits of organised crime have been prioritised by CITES signatories.

The collaborative work organisations such as the UNODC and APG (2017) have undertaken to monitor illicit money is one example. Using anti-money laundering software and intelligence gathering, these organisations have identified and continue to learn more about the trade network and the individual actors involved. The UNODC and APG (2017) report found that financial institutions have used their surveillance infrastructure to track drug trafficking and terrorism money flows and not IWT largely because they were unaware of the extent to which these traders use formal financial systems.

In South Africa, the 1996 *Proceeds of Crime Act* was significantly amended by the 1998 *Prevention of Organised Crime Act* to curb money laundering and gang activity. The country's lawmakers also enacted several policies to assist investigators track the nature and extent of

[13] All trace of this report and of the NGO Earth League international has since been removed.

these crimes starting with the 1992 *Interception and Monitoring Prohibition Act* that responded to the increased use of "advanced telecommunications technologies". To better equip enforcement officers to sift through anonymising tools, legislators then passed the 2002 *Regulation of Interception of Communications and Provision of Communications-Related Information Act* (ROICA) which was subsequently amended in 2008 by the *Regulation of Interception of Communications and Provisions of Communications-Related Information Amendment Act* to help authorities monitor illegal mobile phones and sim cards.

The *Criminal Procedure Act 1977,* specifically Subsections 1 and 2, allows the South African Police to enter, search or seize specimens that are identified in a warrant. The Act allows the police to enter a premises where there are reasonable grounds to suggest that an offense is being or likely to be committed and seize the specimen. While there are a few exceptions to these rules, section 20 does allow the police relatively broad powers to seize goods. Officers must suspect or be able to confirm an offence – whether committed within South Africa's borders or elsewhere. The extra-territorial dimension allows South African authorities to intervene in illegal wildlife trades by intercepting specimens in jurisdictions where other authorities may not have standing – this makes them potentially valuable players in curbing illicit activities. However, South African law does not allow officers to request blood and tissue samples of a specimen to confirm the species or its ancestry DNA (Hosken, 2017; Stop Illegal Fishing). This means that South African authorities may not be able to scientifically verify the information used to apply for a permit or certification, which could hinder a successful prosecution.

These policies have influenced conservation and crime prevention strategies in South Africa — particularly those aimed at curtailing poaching and the local *muthi* and bushmeat markets. But the dramatic increase in the reported number of poaching incidents and the growing multi-billion-dollar market for illegal wildlife products and their derivatives suggests that these provisions have had limited success.

2.5.4 Testing to help enforcement

The commitment to uphold international corporate social responsibility values (Economy and Levi, 2014; Brautigam, 2015; Laurance, 2018) and improve trade traceability (Wu and Sadovy de Mitcheson, 2016) has forced conservation advocates and scientists to adapt their approaches. The need to develop accurate testing facilities is an important factor in both enforcing policy provisions and subsequent prosecutions. However, as mentioned earlier, its expense and technical expertise make it prohibitive for most developing nations – especially source states that are generally the main suppliers of the illegal trade.

Identifying the origin of a specimen helps investigators determine whether it is a native or imported sample and helps them check for its CITES listing and determine a potential biosecurity threat to humans and the country's specific biosphere. A morphological examination is usually enough for law enforcement and customs officials, but in cases where the specimen is highly processed (Wozney and Wilson, 2011), for instance by-products that have been manufactured for medicinal use or where distinguishing features have been obscured, more specific tests must be conducted. Traders often mishandle or obscure key identifying features in the hope of delaying and inconveniencing customs officials to the point where they simply allow the specimen to cross their borders. Eggs are a perfect example of this practice (Coghlan et al., 2011). In some instances eggs can be identified using residual feathers attached to their shells, but this technology is expensive and as a result is not widely used (Dove, 1999). It is also possible for the eggs to be incubated and hatched to accurately identify the specimens, but this too is time consuming and presents a potential biohazard (UNODC, 2017).

Although very expensive, there is also the possibility of using DNA testing to ascertain not only the species but also the geographic origin of the specimen (Ogden et al., 2009). Determining the origins can help officials identify the legality of the shipment – whether the trader is legitimate or a poacher posing as such (Wasser et al., 2004), potential sites of illegal exploitation (Wasser, 2007) and can even help repatriate seized flora and fauna (Velo-Anton, 2007). Scientists Joe Parker and his colleagues (2018) have studied advancements in genetic

technology and portable testing devices that make them cheaper to access especially for under-resourced customs authorities who need to trace the identity and origin of a species. This capacity is essential for criminal prosecutions and to help monitor trade activities. However, the success of this technology relies on the willingness for all stakeholders to enforce CITES and enact complementary domestic policy provisions to curb illegal trade. There seems to be an increased willingness to pursue DNA testing with more CITES parties legislating provisions that allow sampling to take place.

2.6 The Effectiveness of mitigation measures

According to the World Bank (2016) some US$1.3 billion was used to curb IWT between 2010 - 2016, with around 46% or $609 million invested in protected area management, mostly across Africa and Asia. Unfortunately, the limited research that is available suggests that protected areas are only marginally effective at achieving their conservation and social goals. As James Watson, Nigel Dudley, Daniel Segan and Marc Hockings (2014) found, this is largely because these areas are poorly resourced and therefore poorly managed producing a feedback loop that encourages corrupt behaviour that inevitably hampers effective law enforcement and criminal prosecution. As an example, Ray Hilborn and his colleagues (2001) found that anti-poaching efforts have reduced incidents but only where there are adequate resources. Many source countries, say Robert Smith and his colleagues (2003) lack the necessary human commitment and hardware to be effective which Lauren Coad, James Watson, Jones Geldmann and Neil Burgess (2019) blame on limited state and donor financing.

Moreover, past efforts to research and regulate IWT have been led by three primary players i.e. the US, UK and the European Union, as the examples listed throughout this thesis show. The perception is, therefore, that IWT is an issue driven by foreign interests (Sebunya, 2017) that are keenly aligned to former colonial powers. Their interest and funding have, after all, dominated the policy debates of the past decades.

But given the ineffectiveness of previous approaches there is clearly a need for other perspectives from different disciplinary fields and geographic locations. The trade's geopolitical importance has also shifted international power dynamics making it more

important for advocates to incorporate Asian and African political voices and their demand for natural patrimony, sovereignty and self-determination. In addition, policy evaluation reports repeatedly mentioned the need to integrate more community engagement in policy implementation measures (Cooney et al., 2017).

International NGOs have argued that increasing regulations at national and international levels will mitigate this trade and restore the planet's delicate biosphere. But there are also those, such as the rhino ranchers in South Africa, who have made a case against excessive regulation and gone so far as to argue for a lifting of local and international trade bans. Citing the substantial benefits wildlife trade provides as sources of food, medicine, fuels, construction material as well as leisure and cultural traditions, they argue that a sustainable legal trade can mitigate habitat loss by providing monetary incentives to struggling communities and supporting locally based conservation projects (Broad, Mulliken and Roe, 2003; Cooney et al., 2015). In this way wildlife trade under a regulatory framework such as CITES can become a renewable resource and support the UN Sustainable Development Goals. This argument has garnered a great deal of criticism of CITES' effectiveness especially when evaluating the trade data for rhino and elephant products ('t Sas-Rolfes, 2000; Trouwborst et al., 2017).

Nevertheless, as an international treaty governing wildlife conservation, CITES is perhaps the most successful. Its basic principles and management structure have been substantively supported by the treaty's signatories and has also allowed better enforcement of the policy measures (Ong, 1998). However, better does not mean perfect and in the years since David Ong's study, research has shown that much depends on how each signatory country chooses to implement the Convention. This variable 'political will' is what helps this trade thrive (WWF, 2014).

In their study Swanson (1994) and Stoett (2002) dissected how CITES interacts with other international conservation institutions. They found that while both actors have great potential, to be truly effective the two need to combine their habitat and species conservation approaches. International lawyers (Wandesforde-Smith, 2016) and scholars, such as Young (2002), who are more broadly interested in environmental governance have also described

an institutional incongruity between global governance institutions and those that operate on a national and local level. However, very few researchers have specifically explored this inconsistency within an IWT context.

It is true that the Convention has an internal review process that allows the CoP and Secretariat to recommend measures to improve the treaty's effectiveness. But even these combined measures grant individual signatories some latitude in how they interpret them. In other words, signatories are allowed to object to the "intrusive" nature of the Secretariat's reports into infractions.

The short-term economic gains that the trade offers far outweigh the longer-term environmental consequences. This is why national and international political will to enforce provisions have ebbed over the years (Nijman, 2010). On a local level, wildlife trade (illegal or otherwise) is a career opportunity that puts food on the table for starving communities bordering protected nature reserves. The market has also created additional industries to facilitate storage, transport, manufacturing, industrial production, marketing and the business of managing the import and export of flora and fauna and their by-products. Many of these businesses operate legally and pay tax on the profits they earn from their role in the trade. This income supports the national fiscus as well as individual communities starved of legitimate opportunities. Add to this the growing global demand for illegal wildlife and their by-products and one can see why the trade has evolved within developed and developing nations (Nijman, 2010).

Recent years have also seen initiatives that try to dissuade traders by increasing the risk of detection and the penalties imposed should they be caught with illicit materials. In another example of how various fields and studies intersect and influence each other, conservation scientists have used economic theories to assess the implications of illegal harvesting or poaching (Leader-Williams and Milner-Gulland, 1993). Their findings determined that potential fines and imprisonment are less effective poaching deterrents than patrols that could detect and stop illegal activity early (Milner-Gulland and Leader-Williams, 1992). Border patrols have also introduced sniffer dog units to provide the proof needed to successfully prosecute offenders (Conciatore, 2018). Such units have had some well publicised successes

in recent years including Operation Thunder 2021, a month-long campaign against wildlife and timber trafficking that involved customs, police, financial intelligence units and wildlife and forestry enforcement agencies in 118 countries (INTERPOL, 2021).

In concert with policy provisions these dissuasion efforts have made some progress in curbing the trade but it is not enough to save several species from extinction or restore the biodiversity that is similarly threatening our planet's survival. Conservationists are pushing for stronger measures to be enforced, which means building sufficient political commitment, to regulate supply on a national and international level.

2.6.1 Policy paradox

There is also a very interesting conundrum playing out within the fight to save species from extinction. As indicated above, evidence seems to suggest that in some cases CITES has in fact increased demand for illegal wildlife products. Under CITES provisions, for example, Japan successfully lobbied to legitimately sell its ivory stocks in 1999 and again in 2008 (Grossmann, 2010). While there is some debate about how such sales fuel a renewed push for a legal ivory trade, they also added some grist to the argument that CITES is only as effective as its signatories allow — if signatories can negotiate permission to carry out activities that clearly contravene the purpose of the Convention, then how useful is the treaty?

This is a vexed question and means that policy makers and conservationists need to be wary of the nuances policies like CITES, that are enacted at the national and local levels, must delicately balance. These nuances shape the political commitment of key policy making stakeholders and must be factored into what this thesis maintains is a complex policy system that should adapt and self-organise in response to actions taken throughout the system. On the issue of ivory sales, for instance, in 2010 Botswana, Namibia, South Africa and Zimbabwe all held sanctioned auctions of their ivory stockpiles with the proceeds, some $15 million, benefiting elephant conservation initiatives (Fischer, 2014). While Kenya very publicly destroyed its ivory cache in an attempt to show a harder line to those caught trading in IWT (Alden and Harvey, 2016). Kenya's neighbour, Tanzania, destroyed $50 million worth of ivory because its sale was rejected by CITES (Salam and Salam, 2019; Sheldrick Wildlife Trust, 2010). In a move that was meant to reaffirm the government's commitment to curbing and

combatting demand, Hong Kong – a major transit point for ivory smugglers especially those feeding demand in mainland China – destroyed 28 tons of illegal ivory (Laccino, 2014; Conciatore, 2018).

This tussle between permitting stockpile sales and destroying them is a topic that has been similarly debated and one whose cost/benefit analysis may also shape the commitment of policy makers. On the one hand economists argue that authorising ivory sales will increase supply, drive the market price down and temper consumer demand and the need for poaching (Alden and Harvey, 2016). On the other hand, decreasing supply by destroying caches may increase demand for a rare commodity along with its price and concomitant profits – effectively giving illegal traders the upper hand (Moyle and Stiles, 2014).

Another complication is that CITES allows the legal trade of specimens that were acquired prior to being listed in the Convention. This means that ivory from African elephants that pre-dates 1989 and Asian elephants that pre-dates 1975 may be legally traded provided there is documentation (which can be forged) proving the date of acquisition (Bandow, 2014). This legitimate trade seems only to spur demand and desirability (Bandow, 2014).

Added to this, the International Fund for Animal Welfare's (IFAW) 2004 study of the ivory trade found that traders in Hong Kong and China were circumventing CITES regulations by staining the ivory with tea or tobacco and registering the products as antiques (Leakey and Isiche, 2004a). In 2004, when the report was issued, it was not possible to identify the true age of ivory or when it was carved (Leakey and Isiche, 2004b). Since then countries with substantial resources have been able to conduct DNA testing to trace the history of the product, but such tests are not universally available and do not in themselves pose a significant deterrent.

A further complication is where, in some cases, national legislation does not necessarily compliment international restrictions. Thailand is an example of this type of policy incongruity. Although domestic trade in all wild elephant products has been illegal since 1960 this precludes the sale of ivory from domesticated Thai elephants. This loophole in national policy has apparently been used to circumvent internationally enacted restrictions because it

is too difficult and expensive to verify the ivory source. It is clearly up to individual countries to address these types of incongruities. China, for instance, chose to end government-sanctioned ivory trade in 2017, effectively shutting down all carving factories and retailers (Bale, 2017). That same year the UK banned all raw and worked ivory sales including removing the previously mentioned historic exemption. Various states in the US have also started enacting similar legislation.

2.6.2 Species recovery and the effect of trade bans

Christine Fuchs (2008) has claimed that CITES is highly effective, but as Diana Weber and her colleagues (2015) suggest more data that systematically assesses the impact of listing species under one of the three appendices is needed to verify Fuchs' findings. Nevertheless, there are species-specific studies that show trade bans of appendix I species, in concert with conservation efforts that incorporate local communities, have reduced trade and encouraged species survival with populations of African elephant, the southern white rhino and the one-horned rhino steadily increasing (WWF, 2015; Eloff and Lemieux, 2014; Lemieux and Clarke, 2009; Mcallister et al., 2009). Critics, however, suggest that CITES and its associated policies tend to contribute to species declines instead of facilitating their recovery ('t Sas-Rolfes, 2010 and 2012). This is coupled with the fact that there is still little data evaluating the effects of CITES-inspired policies on many threatened species (Phelps et al., 2010; Parsons et al., 2010). In fact population recoveries are similarly affected by habitat loss and human-animal conflict which work independent of trade bans (Leader-Williams, 2003; Jachmann, 2003).

Adding to this is the complex and adaptive nature of the black market that policy makers and their trade bans tend to ignore (Challender et al., 2015a and 2015b; Rosen and Smith, 2010; Hall et al., 2008). As has already been mentioned, there is evidence to suggest that trade bans may increase the value of endangered species on the black market effectively intensifying poaching activities rather than curbing them (MacMillan and Han, 2011; Pires and Moreto, 2011; Hall et al., 2008; Courchamp et al., 2006; 't Sas-Rolfes, 2000). Indeed, this feedback loop has also played out in South African conservancies. A 2013 count revealed that about one quarter of the country's white rhino population was housed within the protected confines of private conservatories. To further boost the species' environmental and economic

importance, the government expanded the role of private reserves and offered financial incentives for those keen to bolster their herds and encourage tourism, trophy hunting and live sales. This period of relative growth and stability for the species ran parallel to another adaptive system whose effects are playing out in the current climate. According to Tom Milliken and his colleagues (2012), a 'pseudo-hunting' scheme was established and through it ranch owners and veterinarians colluded to take advantage of these conditions.

As the population of rhino increased, their value at legal live auctions dropped. This increased the demand for illegal rhino horn and caused a price spike on the black market. Through the system, ranch owners could profit from 'allowing' poaching on their reserves and then using some of their illegal profits to restock their populations with cheaper live rhinos available at KwaZulu-Natal Parks Service auctions. And, using legally obtained hunting permits between 2007 and 2012, sport hunters were allowed to hunt and export specimens with some of these proceeds used to conceal illegal exports of rhino horn. Responding to this scheme the South African government amended the *Threatened or Protected Species Regulations* in 2013 to curb hunting permits, a move that panicked markets in Vietnam and Thailand and further increased its value on the black market. With more to gain, poachers redoubled their activities. But when the South African government responded by banning sport hunting by Asian nationals in 2012, a year later saw a significant increase in the number of permit requests from Czech nationals who were presumably used as fronts for rhino specimen exports (CITES, 2013: 6).

Another example is the illegal shellfish market, which along with much of the illegal wildlife market, temporarily collapsed in 2020 after the world went into an unprecedented lockdown to counter the spread of Covid-19. As Kimon de Greef (2020) describes, abalone stock worth about US$32,000, was discarded because demand evaporated forcing the price from $45 to $22 per kilogram. Anti-poaching groups, noted how syndicates adapted to the restrictive circumstances by stockpiling dried specimens expecting prices and demand to surpass their pre-pandemic levels (de Greef, 2020).

Therefore, some authors conclude, as Duan Biggs, Franck Courchamp, Rowan Martin and Hugh Possingham (2013) and Michael Bowman (2013) have, that trade bans are too simplistic

a response to such a dynamic system. And while these bans can yield good short-term results, in the longer term they could simply encourage poaching and intensify wildlife trafficking (Conrad, 2012). Further complicating this situation further is the fact that while CITES purports to limit international trade it relies on national laws to regulate the domestic market which may be larger than most assume (Piers, 2012; Pires and Moreto, 2011; Du Plessis, 2000).

The effectiveness of international policies relies on a number of interlinked factors. At the top of this list is the apparent unwillingness to enforce CITES and the associated national policy provisions (Rosen and Smith, 2010). As detailed earlier in this chapter this noncompliance seems to stem from a number of intersecting problems including corruption, limited resources, flagging political commitment, which is intrinsically linked to the vicissitudes of the domestic political environment, and the fact that local communities are ambivalent about their role in the conservation of these species (Leader-Williams, 2003; Martin, 2000).

2.7 Conclusions

There is a rising demand for illegal wildlife products to fulfil cultural practices, display social markers and fit political agendas. This literature review categorised these three themes into the following areas: describing the nature of the trade; the global effect of IWT; and, tracing the trade system.

The fourth area, and the focus of this dissertation, is to curb IWT; to use policy to enact appropriate regulations that work to block this supply chain. Stronger international agreements as developed under CITES have, in South Africa, been paired with firm national legislation and coordinated enforcement strategies to control and sanction the trade. To be effective, these sanctions need to be enforced which requires resources and a high level of political will, both of which form part of the policy's historical context which in turn influences the policy's effectiveness.

It also seems as though stronger restrictions and the inability to enforce them have had the concomitant effect of raising demand and black market prices for high-value species which simply encourages poaching activities. A possible counter to this trade cycle or system is the

idea of decentralising policy and its provisions to communities and landholders and further incentivising conservation and investment. Such suggestions could potentially threaten the private interests of influential elites and policy makers given that these individuals could lose ready access to easy payoffs. This has been the case in wildlife-rich countries such as Tanzania, Zimbabwe and Mozambique where such initiatives have generally been thwarted.

To try to push the government and their enforcement agencies to act, international funders have funded awareness campaigns to explain the dangers of consuming bushmeat and the environmental impact of the trade. However, raising awareness of these factors are not likely to gain traction within communities that are literally starving and where the sole source of employment is to track and trace species to feed local and foreign markets. Concerns about the beauty of nature cannot compare to immediate hunger and clearly, we cannot rely on the law to curb this trade on its own.

An issue that is emerging is the need to build the political will needed to effectively address IWT. However, conservation scientists perceive political will to be a binary concept with it either being present in the shape of action that occurs, or not. They, and many NGOs, see motivating political leaders to allocate mostly financial resources as a challenge and an under-examined area. While they are correct that more research should be conducted, they limit their scope to the financial need instead of expanding it, for example, to include a dedicated push to enact and enforce regulations that incorporate the affect a wider range of stakeholders and factors exert.

Imperfect enforcement of policy measures, system-wide corruption, a persistent client base and the characteristic resilience of a black market make the prospect of eliminating IWT virtually impossible. This is perhaps why those keen to mitigate the trade have settled for actions that reduce, rather than eliminate, activity to biologically and socio-economically sustainable levels. A range of measures have been explored which include substituting TAM ingredients to curtail illegal harvesting to developing technology so that illegal products can be better detected and regulated to changing the behaviour of consumers.

't Sas-Rolfes and his colleagues (2019: 210) echo Brian Walker, CS Holling, Stephen Carpenter and Ann Kinzig's study (2004), citing that these affects "take place in the context of complex adaptive social ecological systems, in which there are multiple positive and negative feedback effects, both biophysical (e.g. climate interactions) and anthropogenic." It is in this context that this thesis chooses to examine IWT and the effects of South Africa's own policies.

Given the limited success of CITES and other initiatives, this literature review has shown how more and more organisations and authors are looking for new avenues to solve the IWT problem and are exploring more interdisciplinary approaches. For example, attempts have been made by organisations such as the OECD to use systems analysis (Ramos et al., 2020), an intrinsic part of complexity thinking, as a way to identify blind spots and overcome certain hurdles. In light of this relatively untraversed territory, this thesis looks to expose such blind spots within a South African context. It also explores how the various path dependencies and feedback loops discussed in this chapter can be used to manage, instead of solving, this growing trade.

Chapter 3

Political Will and Public Policy: Towards Visualising their Cause and Effect

3.1 Introduction

As discussed in the previous chapters, several authors (Carbonetti, Pomeroy and Richards, 2014; Malena, 2009; Post et al., 2010; Quah, 2015) have tied the success of policy initiatives to a vague description of 'political will'. Scholars studying conservation-related topics and their intersection with IWT cite a similar reason for the trade's growth (Gibson, 1999; Esmail et al., 2020; Kideghesho, 2016). While it is certainly possible to rationalise poor policy implementation in this manner, none of these authors adequately explain what they mean by the term 'political will'.

The relationship between policy and stakeholder commitment is under-explored; there are very few studies that systematically analyse political will and its determinants (Malena, 2009; Woocher, 2001). The Stockholm International Peace Research Institute's report (2000), for instance, finds that policy makers prefer to bemoan the absence of political will rather than suggest measures to motivate commitment. Indeed, Linn Hammergren (1998: 12) calls political will "the slipperiest concept in the policy lexicon" since it is only ever defined by its absence. This might be because there is no common understanding of what constitutes political will, which also makes it difficult to blame it for a policy's inefficiencies. If true, this argument could potentially dilute the findings put forward by Clark Gibson (1999), Jafari Kideghesho (2016) and Nafeesa Esmail and her colleagues (2020) who seem to assume that political will resides solely in a central body of policy makers. This is perhaps why Lori Ann Post, Amber Raile and Eric Raile (2010: 654) suggest that a "pragmatic, systematic definitional approach focused on outcomes could be productive in making political will empirically useful and [an] actionable concept".

To develop a synthesised and functional base, this chapter details the existing definitions of political will and identifies some common elements. It also establishes why scholars tend to connect political will to (un)successful public policies before outlining how commitment is in fact present throughout the policy development process. With this established, the chapter

then argues that more can be understood about the dynamics of political will within the IWT policy process if it is analysed as a complex system. To do this, the chapter introduces how complexity thinking and the use of causal loop diagrams (CLDs) can help map the direction, degree and effect of political will throughout the system.

3.2 Defining political will

Will is, theoretically, the ability to act with volition (i.e. reasonably, morally and logically) instead of choosing to act instinctively or impulsively. Certain volitional inducements, such as norms and values, laws, customs and institutions, are typically used to guide or motivate this will and persuade someone to act in a particular manner. The dynamics of this varied human intervention constitutes a complex system that must adapt to each decision a stakeholder chooses to pursue. The political system and its constituent parts must, therefore, negotiate its stakeholders' wilful actions and the incentives that drive them.

The fact that political will is an overly used but insufficiently understood concept makes it an ideal rhetorical tool to explain policy failures, which is why Post, Raile and Raile (2010) sought to make political will an empirically useful and actionable concept. They attempted to identify approaches that would produce practical strategies to build commitment towards implementing policies more generally. As they and other authors point out, there are several questions that researchers need to assess, for instance (Post et al., 2010; Malena, 2009: 17): whether political will is a universal concept; whether it is understood to be a binary or continuous concept; how scholars practically conceive and measure commitment; to what degree political will relies on institutional or individual capacity; and, importantly, what factors influence commitment.

Most research have, as this study will, defined political will in terms of a specific public policy issue. In assessing efforts to build constituencies and public support in rule of law programmes in Latin America for USAID, Hammergren (1998) suggested that implementing viable reform programmes relied on the political will of stakeholders. While Carmen Malena (2009: 17) describes it as a "demonstrated credible intent of political actors" that includes a wide range of stakeholders from leaders who are elected or appointed to civil society

representatives to lobbyists.

Lawrence Woocher's (2001: 169) work tried to broaden the conceptual framework used to study political will by identifying specific factors that either strengthened or diluted commitment to a policy. His analysis of policies aimed at preventing conflict and war atrocities found that there are three preconditions for what he calls "adequate action": intelligence predicting a probable conflict; an institutional capacity to act; and the will to implement necessary policy measures (Woocher, 2001: 182). Given these preconditions, Woocher believes that forging political will centred on the information and strategies used by government actors to make their decisions.

Woocher chose to use the three models of government decision making developed by Graham Allison and Philip Zelikow in their book *Essence of Decision*[14] (1999) to operationalise his theory. Each model emphasised a key factor that he said shaped the level of commitment a policy could expect. The rational actor model holds that a government uses strategic calculus to balance the costs and benefits of different policy objectives and outcomes. A second model is constrained by a government's culture, objectives and standard operating procedure and a third, governmental politics model, factors in the manoeuvres of all participants and their unique preferences in the process (Woocher, 2001: 185; Allison and Zelikow, 1999; Allison, 1968: 2-3).

Derick Brinkerhoff's (2000: 1) analysis of anti-corruption efforts, conversely, produced this more operational definition of political will: "the commitment of political leaders and bureaucrats to undertake actions to achieve a set of objectives and to sustain the costs of those actions over time". Another of Brinkerhoff's (2010: 2) studies proposed an analytical framework for measuring political will that included seven components: a cohort of local decision makers; a genuine choice of technically sound policies (exercising a choice is an indication that there is a willingness to act) there are government actors that consult and communicate with civil society and private sector stakeholders; there is public support for the

[14] This book built on Graham Allison's 1968 RAND corporation paper and his PhD thesis which explored three conceptual models of decision making using the Cuban Missile crisis as a case study.

policy and the fact that resources have been allocated towards the initiative's goals; enforceable sanctions are written into the policy to ensure compliance; the policy is implemented consistently over a long period and with adequate capacity; and, there is a monitoring and evaluation system in place that is capable of adapting to emerging circumstances.

Brinkerhoff's assessment, like that of Woocher, seems to imply that political will is built from the top down because it is tied to the action (both positive and negative) of government actors. As Leslie Holmes (cited in Ankamah and Manzoor, 2018) argues, political will also hinges on political capacity or their ability to muster and control the bureaucracy to physically implement policy. He finds that "unless leaderships can secure their staffs' support for the policy, it is likely to remain mere rhetoric" (Holmes, 2016: 145). Francesca Recanatini (2011) came to a similar conclusion in her World Bank study of seven countries' anti-corruption efforts finding that support from senior political leaders, middle management and the greater bureaucracy is also necessary.

In a democracy, policies cannot survive unless there is also commitment from actors operating on the ground – such as civil society organisations, community representatives and local business owners – who implement policies and monitor and report on its wider affect. These reports should ideally reflect the true social, political and economic environment and inform any decisions policy makers choose (Brinkerhoff, 2010: 3). The link between government action and civil society's input, says Brinkerhoff, indicates the level of responsiveness and transparency of a particular administration (Brinkerhoff, 2007: 116).

Carmen Malena's work to support greater participatory governance compliments Woocher and, to a certain degree, Brinkerhoff's findings. Malena's (2009: 19) attempt to shape a conceptual framework of political will, however, finds that such commitment is generated and nurtured by three mutually reinforcing elements — *political will* where actors genuinely want to act, *political can* because they have the capacity and resources and *political must* which is shaped by the social, political and economic environment.

Unlike Woocher and Brinkerhoff who emphasise the role of government actors, Malena finds

that actors who shape *political want* can either be natural or converted actors. Her so-called natural type includes those whose beliefs and values predispose them to support specific political actions while the converted actors will want to act if they see it to be within their best interests (Malena, 2009: 20). Actors who are confident that there are sufficient skills, resources, and systems (including legal and regulatory frameworks) to act, those who *political can*, will do so with substantially more vigour. Finally, Malena's third element of *political must* echoes Brinkerhoff's idea of socio-political pressure generated by lobbyists and displays of public opinion i.e. demonstrations, rallies, petitions, and social media campaigns (Malena, 2009: 22).

Malena also acknowledges that political will is dynamic, complex and unpredictable because it is influenced by a range of individual, organisational, relational and social factors. Regardless, she finds that it is indeed possible to identify the concept even if these three elements are absent (Malena, 2009: 19). To illustrate this complexity and highlight how the various factors interconnect, she developed a multidimensional schematic of political will.

Ultimately, Malena argues that political will depends on individual political actors since they are present throughout the policy making process. Individuals play an important role from preparing and implementing policy to detecting where it falls short and how it affects various stakeholders to suggesting mitigating actions. Influencing their will or motivation is key and any tactics to do so must tap into their personal beliefs and values, experience, education and relationships. However, if one is to influence political will at the organisational level, then Malena reiterates the characteristics Woocher outlined years earlier. The pre-established patterns of behaviour that embody an organisation's culture, mandates and procedures supersede rational considerations, what will later be described as a path dependency. Factors that Melena (2009: 24) says shape the relational level of political will seem to again mirror those Woocher described in his governmental politics model — to corral a range of actors

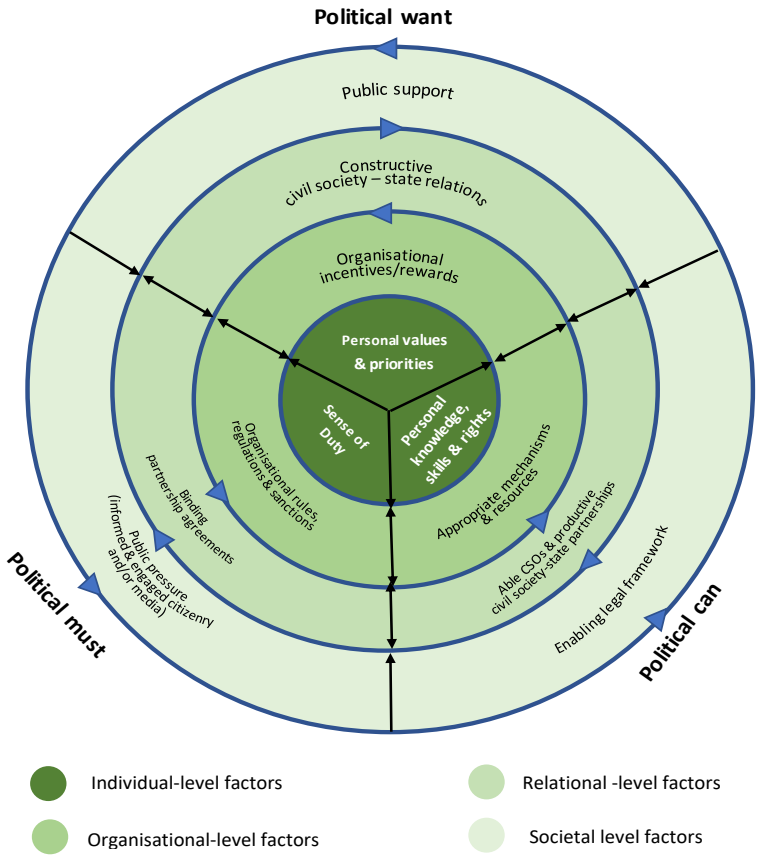

Figure 5 Key Elements of Political Will (Melena, 2009b: 8)

with different positions and persuade them to agree on a common course depends on transparency and the level of trust between the parties. Furthermore, creating an environment of social trust and social capital requires a steady flow of information from policy makers to enforcement agencies to individual citizens who are affected by these decisions.

Each of these authors define political will as the degree to which key decision makers commit valuable resources to a policy solution (Post et al., 2010: 659) and each identifies overlapping factors that shape such commitment. According to Post et al. (2010: 658-659) political will is determined by the outcomes and expectations of influential political actors, the authority, capacity and legitimacy of key decision makers, and the complex environment in which decision makers find themselves. These factors lay the foundation for a more detailed description of political will that can be divided into four sub-conceptual areas each linked to a set of factors that influence the will to act (Table 1): a set of decision makers who hold a common understanding of a social, often intractable, problem; who are committed to

supporting a solution; and, who agree on a potentially effective policy to solve the problem. Clearly, political will is more than simple rhetoric.

This discussion has shown that political will reflects a complex multifaceted system that adapts to the action or inaction of policy makers who are motivated by their personal attitudes, organisational constraints and a specific socio-political environment. In fact, the concept offers an interesting analytical perspective through which to interpret the dynamics of political decision making and can help us develop solutions to policy problems, in this case the seemingly intractable problem of illegal wildlife trade.

Table 1 Analysing Political Will (Post et al., 2010: 660)

DEFINITION COMPONENT	OPERATIONALIZATION	ASSESSMENT TARGETS
(1) Sufficient set of decision markers	Set of actors capable of approving, implementing, and enforcing public policies.	Institutions and factions
(2) With a common understanding of a particular problem on the formal agenda	(a) Use of similar frame and terminology. (b) Status as "problem" on formal agenda.	(a) Commonality and convergence in statements of decision makers with regard to problem. (b) Importance and prominence of decision makers discussing problem; volume of discussion.
(3) Is committed to supporting	Distribution and strength of specific decision maker preferences.	• Incentives and disincentives for political actors (institutional, electoral, and others); • Allocation of analytical sources; • Credibility and obligation of statements (based on reputational costs); • Position of key constituencies (domestic and international) and accountability relationships; • Bargaining mechanisms; • Cultural characteristics and constraints.
(4) Commonly perceived, potentially effective policy solution.	(a) Use of similar frame and terminology; (b) Avoidance of known sources of ineffectiveness; (c) Capacity for policy effectiveness.	(a) Commonality and convergence in statements of decision makers with regard to proposed solution; (b) Non-use of short-term "fixes", knowingly ineffective policies, and diversionary tactics; (c) Funding commitment; (d) Inclusion of potentially effective sanctions and enforcement mechanisms; (e) Implementation resources and support of implementers.

3.3 Political will and public policy

As chapter 2 demonstrated, IWT is a complex social problem that affects a range of stakeholders. Policies that aim to address the illicit trade intersect with different government departments, such as Trade and Industry, Environmental Affairs, Health and Justice have had to balance the needs of endangered species, the environment, civil society organisations and the livelihoods and well-being of vulnerable communities. Stakeholders within the policy making system use the process to plan and direct appropriate government resources towards solving a specific public problem. The policy development process, therefore, is "a social system [that] has a shared recognition of a particular problem and resolves to address the situation in a particular way through sustained collective action" (Raile et al., 2014: 105). Within this system, political will is assumed to be the intent that drives a group of people. Public policy is then seen as the result of the political will of a group of stakeholders meeting the public will of the communities affected.

There are several different definitions of public policy but scholars seem to agree that it involves: some description of government action (even if it is nothing) that responds to a real world need to achieve a particular goal that an actor/s carry out (Smith and Larimer, 2009: 3). Its study has interested scholars from a variety of fields ranging from medicine to the natural sciences to the social sciences. Each of these disciplines have focused their interest on a specific component of the policy making process. For instance, the policy cycle (Colebatch, 2009), the community impact polices have, the networks that organise to support or oppose policy proposals, identifying various individual or institutional actors involved in the process, the decision making gambits employed by these actors, and analysing the vicissitudes of the implementation process. To show how theory has developed through these studies, the next section discusses a few of the more prominent research approaches emphasising how the different fields relate to the concept of political will.

3.3.1 The policy cycle: The traditional approach, a simple system

Harold Lasswell (1956) was the first to suggest that the policy process is a series of successive stages presented as a cycle where one stage builds from another in a natural progression (see

Figure 6). The cycle begins by setting clear objectives informed by policy research that considers the nature and context of the problem before proposing possible policy options and strategies. Armed with a set of options, stakeholders formulate a strategy and select an appropriate course of action. Once the policy has passed through the legislative process it is implemented and its provisions enforced. Another set of actors then undertake to monitor and evaluate the policy's effectiveness before suggesting possible changes to counter unforeseen effects. The cycle then loops around to start again.

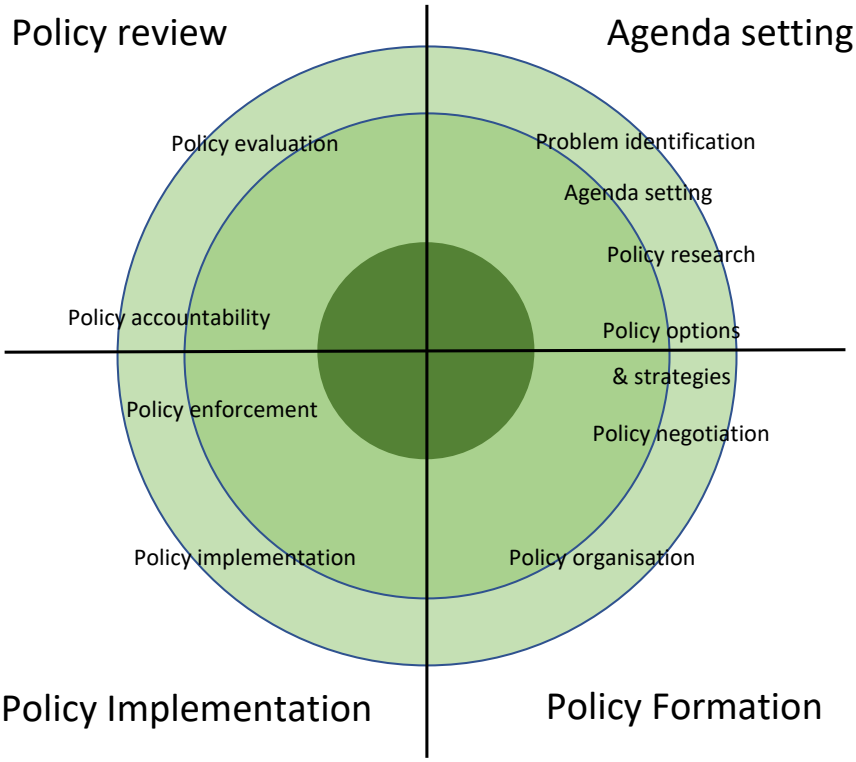

Figure 6 The Policy Cycle (https://www.geostrategis.com/images/policycycle.jpg)

Each of the stages of the cycle have been studied to different degrees. Those interested in how agendas are decided trace the manner in which problems are defined and then lobbied to government representatives (Pillay et al., 2013; Schroth et al., 2020). Scholars interested in how policy is designed typically focus on public perceptions of the policies, how power is distributed as a result of the initiative and what values and social groups are represented (Stoutenborough et al., 2013; Jepson et al., 2017). Once a policy is put in the field, researchers representing a range of disciplines assess how it was enacted (Smith, 2009) before those interested in assessing its affects attempt to explain the reasons for its success or failure

(Antimiani et al., 2016). At each point in the cycle one can assess the direction of political will characterised by the volitional action of policy agents and actors from academics to community leaders to the media to civil society organisations to business owners to government office holders. This interpretation of the policy process develops an initial understanding of how political will can be forged among policy actors at each stage and given their particular context.

3.3.2 Indicators that demonstrate political will

DeQuincy Lezine and Gerald Reed (2007: 2012) in their study of public health policies identified how political commitment is forged at each point in the process. Acts of political will, say Lezine and Reed (2007), are present when researching the policy problem and using this data to set a policy agenda. Such acts include scheduling public hearings on the issue, commissioning civil society organisations and academics to prepare research reports, funding additional studies to investigate under-explored aspects of the issue, and involving affected communities to discuss the problem and recommend their own locally driven solutions. An administration that casts a wider research net is often seen as more committed to the matter and to its solution. Lezine and Reed (2007) identified moves to recruit influential personalities to spearhead initiatives, establishing a task force to consider possible tactics, raising public awareness through a media campaign with interviews, social media posts, opinion articles and holding public forums all of which demonstrate serious intent to address an issue.

The degree to which this input is incorporated into the overall policy strategy is another indicator of political determination. Key evaluative markers for this stage include establishing an interdisciplinary team of government representatives and members of different civil society groups, appointing a leader with political prowess to facilitate the process, adequately funding and staffing the initiative, encouraging policy entrepreneurs to design and locate the strategy within the local and international political and economic context, and the willingness to allow different groups to take responsibility for implementing the strategy (Post et al., 2010; Lezine and Reed, 2007).

Once the strategy has been mapped out, the next phase assesses whether there is sufficient

support to implement the policy's provisions. This phase requires environmental scans and community-specific analyses to assess the formal and informal requirements of local leaders and communities. Analysts also look to see how to approach decision makers from local, provincial and national departments that intersect with the planned policy for their assessments before implementing the strategy.

When the strategy leaves the drawing board, analysts typically look to measure the degree of inter-agency and community cooperation. They also consider the effect of media information campaigns, the policy regulations themselves, and how easy they are to understand and regulate and whether funding, training and technical assistance continues. With the policy in the field, the next set of indicators assesses the stakeholders' sustained willingness to pursue the intervention through a monitoring and evaluation process. They consider when these evaluations were submitted, whether they were assessed by the inter-agency and community committee, and to what degree the effects are incorporated into policy amendments. This feedback loop also measures the degree of accountability at each level of implementation, whether officials and community members targeted to implement the policy are fully aware of the specific provisions and lastly, whether the policy is sustainably resourced in terms of human capacity and financial commitments.

This linear process is how researchers and policy analysts have typically viewed and assessed the policy making process. But, if we look at policy making as a complex and dynamic system that reacts to actors at different levels and contexts, breaking the system down in only four parts will limit the results.

This thesis argues that more can be understood about the dynamics of political will within the IWT policy process if it is analysed as a complex adaptive system. While the study acknowledges that the process does indeed incorporate these phases, it maintains that the system does not work in such a neat linear fashion. Rather, it loops around to counter effects that rise from different actors at different points throughout the system.

3.4 Describing and adapting for complexity

Besides attributing the failures of the policy process to a lack of political will, analysts also blame the process for being 'complex' – without ever really defining what they mean by the term. Complexity is another concept scholars seem unable to adequately define (Johnson, 2009; Rescher, 1998) because the term means different things to different disciplines (L Johnson, 2009; N Johnson, 2009). This next section introduces the concept of complexity as something more than a rhetorical tool, especially when it is used in the field of policy studies.

While often used in a metaphorical sense, complexity theory grapples with the change processes within interrelated systems (Cronbach, 1988; Holland, 1988). This theory is used in both the physical and social sciences and "…seeks to understand how agents self-organise and then how they continually use feedback to produce emergent behavior" (Wolf-Branigin, 2013: 175). This theory appreciates non-linear dynamics, traces how a phenomenon changes and can be influenced by initial systemic conditions (Warren et al., 2008). Complexity is built on underlying structures that in turn rely on underlying patterns (Wolf-Branigan, 2013) and can help researchers understand life as a living system with all its relationships, patterns, processes and context (Capra, 2005).

A complexity approach helps policy researchers distinguish between order and chaos, random acts and those that are predetermined, an equilibrium and anything but, and analysis as opposed to syntheses (Wolf-Branigan, 2013). Policy research also tends towards experimental designs and usually settles for less rigorous theoretical approaches with researchers choosing to isolate key characteristics, mechanisms and interactions in the policy system. But these aspects alone do not provide sufficient insight into how the system as a whole interacts with other systems and how it evolves (Gilbert and Troitzsch, 2005).

Natural scientists and mathematicians such as Fritjof Capra (2002) have used complexity as a mathematical language in a bid to understand non-linear phenomenon from a holistic perspective. But as a concept complexity is influenced by our innate personal and disciplinary biases. The natural sciences have tried to limit this influence with experimental designs, but policy researchers are only able to employ such designs within certain limits i.e. policy

researchers input their qualitative and quantitative data into policy simulation models such as causal loop designs (Rwashana et al., 2014; Haraldsson, 2020) and agent-based simulations (Gilbert and Troitzsch, 2005).

According to Casti (1994: 278) “no system live[s] in isolation” and therefore a policy analyst must appreciate the social, political, economic and ecological systems in which their policy problems operate — in this instance, the system that purports to curb illegal wildlife trade. The interaction of these multiple systems and sub-systems produce system-wide behaviours that further adapt to the patterns that emerge. Examining these interactions and adaptations has revealed specific system trends and assuaged the unpredictability or randomness of the policy approach (Ogula, 2008). In theory, policy researchers using complexity thinking are better able to anticipate reactions to policy interventions and design more effective strategies before policy is enacted to prevent system failures and promote more sustainable policy solutions.

As a system that is open to an infinite number of inputs (a so-called open system) the policy making process attracts different actors (also called agents) that exchange information through direct and indirect feedback loops (Cilliers, 2000). As a result, the system adapts and has a memory that affects behaviour throughout it. To study such dynamics, complexity thinking uses concepts that track how productive systems emerge and how they can be sustained (Miller and Page, 2007).

Traditional policy research methods study the policy system by attempting to reduce it to smaller discrete components. In doing so they ignore parts of the system and sever the connections between different constituent parts. Isolating the policy’s intent and how that interacts with different agents potentially limits their understanding of the system and the patterns that emerge (Casti, 1994). It also ignores the fact that actors are independent and can choose to be interdependent as they respond to other actors and environmental, policy and social cues (OECD, 2009).

Social scientists have long debated the value of systems thinking and system dynamics to explain political behaviour (Cairney, 2012a: 113-114; Cairney and Geyer, 2017) and whether

an anti-reductionist or post-positivist perspective can yield useful explanations (Fischer and Forester, 1993). As described earlier, the policy making process has traditionally been studied as a simple system, a policy cycle focusing on a core group of actors working through a step-by-step process. The policy environment, however, includes multiple decision making centres whose jurisdictions overlap and interact with other systems and actors or influencers. To improve the policy making system analysts have attempted to determine how sensitive it is to change and the likely system-wide effects of such change (Geyer and Rihani, 2010; Hallsworth and Rutter, 2011; Sanderson, 2006, 2009; Room, 2011; Geyer, 2012). For this reason, this study conceptualises policy making power as it pertains to IWT, as being dispersed throughout the policy making environment relying on degrees of political will that are shaped by different actors and systems.

The next section provides a brief overview of complexity thinking and includes a discussion of several core tenets and how these have been applied to the discipline of political science of which policy studies is an important branch. The purpose is to introduce how complexity thinking and its insights can deepen our assessment of the policy making process (Miller and Page, 2007), specifically the dynamic and adaptive social landscape within which IWT policies interact. This approach recognises and illustrates how different agents compete for resources such as political power, human resources and money while cultivating better proactive thinking and preparedness (Lissack, 2013). To do so, this study uses complexity thinking and an explorative research design to map patterns, trends, spatial relationships, structure, system interactions and evolution (Wolf-Branigin, 2013).

3.4.1 Applying complexity thinking to Political Science

In the 1990s, complexity theory was used to counter the idea that rational choice theory, as used by Clark Gibson (1999) in his account of rhino poaching policies in Southern Africa, was the only and most complete way of explaining policy actions. Authors have since started to move beyond the simplistic notion that 'positivism' and its essentially quantitative and reductionist research methods were enough to explain the political and social actions of a society (Geyer and Rihani, 2010: 5). While these reductionist techniques could be used to understand issues like electoral behaviour, stating that all political actions could be reduced

to a simple cost/benefit analysis that operates within an orderly legal structure, they do not explain why intractable policy problems such as IWT persist. As a result, authors such as Graham Room (2011: 6-7), Erik Hans Klijn (2008: 314) and Robert Geyer and Samir Rihani (2010: 74-75) found that political events are unpredictable given the number of actors involved and that this produces a degree of uncertainty and ambiguity that cannot be controlled by policy makers. These authors pushed for political behaviour to be studied in a more 'holistic' manner that they felt complexity theory provided.

There is some debate about the theoretical coherence within the complexity field and its applicability to political and policy studies. Some political analysts have applied the precepts using a 'hard sciences' methodological design and produced mathematical models such as agent-based scenarios. Other researchers, such as Paul Cairney's (2012) earlier work, underlined the need to understand the field in relation to policy concepts since much of its conceptual framework is borrowed from established approaches such as institutionalism, incrementalism and implementation. That said, policy researchers have used complexity thinking to supplement existing theoretical discussions. Cairney's (2013) subsequent approach towards evolutionary theory and John Kingdon (1984, 1995) and Frank Baumgartner and Bryan Jones (1993, 2009) use of multiple streams analysis and punctuated equilibrium theory are some examples.

3.4.2 Framing complexity

To frame complexity thinking for this study, there are a few key concepts that should be discussed. The most important, given the theory's systems thinking roots, is understanding that complexity thinkers often refer to different types of systems, each with their own characteristics i.e. a simple system, a complicated system, a complex system and, what this thesis will develop, a complex adaptive system. After outlining these different systems, this chapter presents the six core tenets complexity thinking uses to study behaviour in complex adaptive systems. These were used to collect data for this study's analysis of the IWT policy making process.

Different types of systems

All systems have two or more elements which interact producing a specific behaviour. In a simple system such behaviour is predictable and controllable because there are a limited number of inert components. Such systems allow researchers to study the relationship between cause and effect, a definable number of interactions and feedback loops, determine the limited number of variables, are characterised by centralised decision making and can be disassembled (Casti, 1994). The traditional approach for most policy researchers including those studying illegal wildlife trade have viewed the IWT policy process as a simple system, which this thesis argues is inaccurate.

A complicated system, on the other hand, is composed of a labyrinth of interconnected parts. Mapping a complicated system is possible, although with some degree of difficulty, at the macro level where behaviour can be described using statistical or probabilistic methods. For the most part analysing these systems is predictable because they assume that policy systems operate in a linear fashion. A complex system differs fundamentally from a complicated system. It is a web with a diverse number of parts or agents that are both interdependent and interrelated, making the parts greater than the whole. The number of moveable parts makes the system very difficult to understand, describe, manage and/or change (Magee and de Weck, 2004). Complex systems 'pulse with life' because they are dynamic and allow complex phenomenon to emerge and produce patterns and structures instead of standard statistical bell curve distributions (Page, 2009).

The descriptor complex adaptive system is often used interchangeably with the term complex system because both produce dynamic, nonlinear interactions that exceed the sum of their constituent parts. Both systems yield negative and positive feedback loops that effect their ability to produce change (Ramalingam et al., 2008). A complex system, however, does not adapt to the environment in which it operates; actors or elements within the system adapt but the system itself does not (Wolf-Branigin, 2013). By contrast complex adaptive systems, and the actors that are a part of it, learn and evolve based on the feedback cycles (Page, 2009; L Johnson, 2009).

Core tenets

A complex system is the first tenet and is made up of multiple parts that are interdependent and interact with each other. Through this interaction these parts share information and influence each other to produce effects that affect the entire system. For this study, these multiple parts are represented by the different policies enacted at the international, regional and local levels.

The dynamic nature of these interactions and their effects produce either negative or positive feedback loops that either support or dissuade actions in a 'non-linear' manner. These loops produce the second tenet that, behaviour within a complex system is impossible to predict.

These feedback loops emerge once policies interact with actors and other systems and either support or hinder a policy's implementation and effectiveness. When looking at decision makers and their ability to process policy-related data, Baumgartner and his colleagues traced the impact an action has on the broader system — often noting that small actions produce larger effects and not the other way around (Jones and Baumgartner, 2005; Baumgartner and Jones, 1993, 2009; Baumgartner et al., 2014). These studies have, as mentioned in chapter 2, found that decision makers have limited time and ability to process information which is why they ignore most of the data presented. Ignoring information, especially policy evaluation and analysis reports, for long periods of time is what Baumgartner and his colleagues call negative feedback. Positive feedback behaviour, on the other hand, is when these decision makers engage such information and offer their own perspective in return. What Baumgartner's studies of these feedback loops have found is that there is almost no central control over a policy agenda and by extension, a degree of political will is used at various moments throughout the legislative process to prioritise policy action.

The conditions used to initiate the system, influences all actions within it and creates the initial momentum. It also determines the third tenet, a system's path dependency. Systems, including policy systems have a history that substantively affects their willingness to act. In other words, the reason and manner policy and its implementing institutions were formed are embedded in a particular system. These memories inevitably dictate the cost of changing

direction at global, national and local levels. If the cost is too exorbitant, it becomes very difficult to sway decision makers to change direction or paths (Pierson, 2000; Room, 2011: 7-18). This 'path dependency' also influences the rules that govern the systemic behaviour often making them equally difficult to change. Policies are, therefore, written using previous legislation as a template and tend to repeat the same standard provisions. In addition, most public expenditure is earmarked to support routine activities which most policy makers have lost interest in monitoring (Rose, 1990; Hogwood and Peters, 1983; Lindblom, 1979). As a result, policy researchers must determine when a decision is made, or the 'critical juncture', because this may shape the degree of political will and, consequently, a policy's path.

In the fourth tenet, new behaviour emerges when local actors and systems interact and implement policies based on their locally defined rules. According to Michael Lipsky's (1980) analysis of 'street-level bureaucracy' such behaviour is characterised by how local actors use their own judgement and professional training to implement rules that are often vague, contradictory or impossible to realise within a certain context. The decisions these local actors choose feeds back into the overall implementation process affecting how policy is implemented and eventually creating new problems that grow unwieldy and prompt officials to recommend adaptations. In this study local system refers to the South African policies that have been enacted in response to the agreements signed at international and regional levels.

This 'emergence' occurs regardless of whether the central governing entity controls the system with its own rules (Cairney, 2009; Butler and Allen, 2008; Klijn, 2008). Despite the central governing body's attempt to control implementation through measures such as linking financial disbursements to cumbersome performance indicators, centrally controlled governance is largely impossible. Using a rule-based approach at the exclusion of all other approaches provides a very narrow understanding of the policy problem.

Forcing governing structures to manage emerging circumstances is a growing concern in a South Africa where community cries for service delivery are regularly paired with media reports of corruption. This struggle to maintain order and accountability is exacerbated by attempts to install a range of new public service delivery functions that demand more from the central government and private sector actors. This interdependence between a central

governing body and implementing organisations naturally produces self-organising networks that operate, as Lipsky (1980) mentioned, more pragmatically adapting policy to reflect their own unique context (Rhodes, 1997: 50). They must also adjust their definition of policy success and evaluation and therefore shape emergent behaviour.

The fifth tenet suggests that policy implementation relies on the actions of those actors based at the local level and how their feedback is processed by policy makers at the legislative 'centre'. According to complexity thinking, policy makers can focus on certain parts of the system and influence other areas without realising the broader effect. Geyer and Rihani (2010: 39), and to some degree Jones and Baumgartner (2005), further discuss the idea that there are 'strange attractors' that perpetuate regular patterns of policy making behaviour, despite the feedback that is received, encouraging what is termed the potential for 'policy instability'. These periods of 'punctuated equilibria' are interrupted by short bursts of change.

Jones and Baumgartner (2005: 7) illustrate this non-linear dynamic in their study of policy makers and their ability to process information. For these authors "collecting, assembling, interpreting and prioritizing signals from the environment" primarily from interest groups, the media or public opinion polls overload policy makers who are already working under various constraints. They are forced to simplify their decision making environment which means they ignore much of this input (producing negative feedback) and only study a few important items (positive feedback) before deciding how to act. The longer policy makers ignore issues the more likely there will be prolonged periods of equilibrium where policy does not change despite data from policy implementors. By engaging with evaluation reports and requests from local actors, policy makers are more likely to change provisions and produce policy 'punctuations'.

Understanding which issues make it onto a policy maker's agenda, therefore, helps researchers understand how political will is shaped. There needs to be a critical mass of attention in the guise of ideological support, party politics and incentives or inducements to shape a legislator's willingness to act and force a positive feedback loop (Jones and Baumgartner, 2005: 19-20 and 48-51). Once reached, the critical mass produces a sizable but infrequent punctuated burst of action that, in turn, produces unpredictable results (Jones and

Baumgartner, 2005: 20). This burst of attention becomes self-reinforcing and attracts new approaches and new actors to collect and process data, whose intervention ultimately causes friction (Jones and Baumgartner, 2005: 52 and 69). This study maps these interactions and shows where, when and why there was the will to attract new policy approaches.

Lastly, to understand the true complexity of intractable problems requires an interdisciplinary group of scholars to tease out different perspectives and present a more holistic, and less individualistic, plan of action (Mitchell, 2009: x). Complexity thinking offers an important base for the natural and social sciences to talk about policy. In a world rife with falsehoods and conspiracy theories, there is a need to integrate more verifiable science into our policies and this will need experts who can understand and translate technical details into actions that can yield substantive change. Previous attempts to integrate social science methods in the form of rational choice theory and behaviouralism have been difficult for the natural sciences to implement (Room, 2011). Complexity thinking, on the other hand, offers the disciplines a common language and purpose upon which both can build and develop new insights into the policy process and help it adapt to its evolving environment (Cairney, 2012b). This is an aspect that is explored further in chapter 6.

In using complexity thinking to study a particular policy system, Paul Cairney (2012a: 126), Ian Sandserson (2006 and 2009) and Geert Teisman and Erik-Hans Klijn (2008: 288) found four aspects that this study incorporates. Firstly, since there are multiple actors interacting with each other at multiple points in the overall policy environment it is difficult to isolate behaviour that is governed by specific legal precepts. For this reason, a policy that produced tangible results in one context will not have the same success in another, therefore, establishing a neat formula for success is next to impossible. Secondly, the capacity to self-organise and produce emergent behaviour limits the ability to definitively predict the effect of an action. Thirdly, the context within which local actors must work to implement policy is unstable and prone to rapid changes. Actors must act and adapt to keep up, which often requires more than one policy strategy. And fourthly, the actors do tailor “their own perception of what they want and how to behave” based on their specific context (Teisman and Klijn ,2008: 289).

Since policy implementation interacts with other systems and involves more actors than a select number of officials, a top-down implementation model will not produce the desired policy results. Instead, those implementing policy provisions must adapt policies in response to the dynamic interplay (Teisman and Klijn, 2008: 284). For Eve Mitleton-Kelly (2003: 41) the system's ability to self-organise and adapt to changes in its environment or produce emergent behaviour means that the system, including the actions of individual actors, must be studied as a whole. Any attempt to reduce the system to constituent parts may obscure vital information and hamper a policy's ability to adapt and succeed.

3.5 Research approach

In their attempt to shape global and national policies, scholars have managed to build moderately proactive policy responses that accommodate a degree of uncertainty (Esmail et al., 2019). Individual states have used international agreements such as CITES as a standard to help them regulate the illegal market ('t Sas-Rolfes et al., 2019). These agreements developed some technical and broader enforcement capacity but, as this thesis shows, their success hinges on the direction and degree of the state's commitment and their ability to leverage information quickly.

The complexity, covert and dynamic circumstances of this IWT market mean that policies must incorporate the insights of a range of fields. For instance, in destabilising nature's biodiversity, studies have found the potential for similar upheavals within the political and economic context (Felbab-Brown, 2017) ripple into an intensifying human-wildlife conflict (Riskas, Tobin, Fuentes and Hamann, 2018; Gumbo, 2019). The previous chapter's literature review illustrated the need for policies at international, regional and national levels to help curb IWT. It further highlighted that each of these policy interventions propose to solve a symptom of IWT – for instance, the rising demand from affluent Asian populations which was targeted with demand reduction campaigns aimed at resetting consumer priorities. By focusing on such symptoms, the policies have failed to address IWT holistically and never tackled the root causes of the trade, which is perhaps why the trade persists. However, if we treat IWT as a complex adaptive problem that involves multiple factors and actors that are

interrelated and need to be targeted simultaneously, then the illicit trade may not be as intractable as it is currently depicted (Richardson and Pugh, 1981; Sterman, 2001).

This thesis, therefore, maps the South African IWT policy system using the principles of complexity thinking. The study analyses the different linkages, interactions, feedback loops and processes that make up this adaptive system. By using a causal loop mapping technique, the study shows the direction and degree of political will that shapes these interactions and illustrates how the policy system adapts to cope with its effect as well as changes in other parts of the system. As chapter 6 explains, these changes depend on history (or path dependencies) and a context that often resists change and the challenges new directions bring. Intervening in a system, by introducing a new policy for instance, always produces a ripple effect that affects other parts of the system.

This study, therefore, used an exploratory research design to:

1. Visually map the IWT policy system by modelling casual loop diagrams (CLDs) with the CONSIDEO MODELER software[15] and using qualitative data and rough assumptions to compare the degree and direction of political will (Neumann, 2011 and 2014); and,
2. Use these qualitative models to identify how the different policies are integrated into the international, regional and local policy framework and whether there are key leverage points where political will towards managing IWT can be maximised in the short, medium and long term.

3.6 Developing causal loop diagrams

Causal Loop Diagrams (CLDs) help synthesise theoretical concepts and have been used to assess policy development strategies (Haraldsson, 2020; Cavana and Mares, 2004; Richardson, 1997). They have also helped researchers develop an understanding and interpretation of the interactions, relationships, delays and feedback mechanisms generated within a complex adaptive system such as a policy system. In mapping the interactions

[15] The software was designed to help researchers visualise and analyse complexity (Neumann 2014). In other words, the decision making software allows researchers to map the causal interconnections of four or more factors using qualitative data.

between variables and influences, CLDs offer a practical way to understand and express the system's cause-effect linkages and the conundrums that emerge. An influence, described in this thesis as political will, has a direction (which is shown using an arrow) and a degree (which is represented by a figure along the arrow). If the degree of influence changes the variable in the same direction a (+) is used and if the variable changes in the opposite direction, then a (-) is used. For instance, if variable A produces the planned change in variable B, then this is a positive change ($A \xrightarrow{+} B$). If the planned change does not happen or pushes variable B in the opposite direction, then this is indicated as ($A \xrightarrow{-} B$).

A feedback loop occurs when the influence arrows connect a variable to itself via a series of other variables. CLDs typically express two types of feedback loops — balancing and reinforcing loops as illustrated in Figures 7 and 8. Balancing loops indicate that there is an attempt to solve a problem or achieve a goal. They are sometimes referred to as neutralising loops because the cause-and-effect cycle aims to counter a change by pushing a variable in the opposite direction.

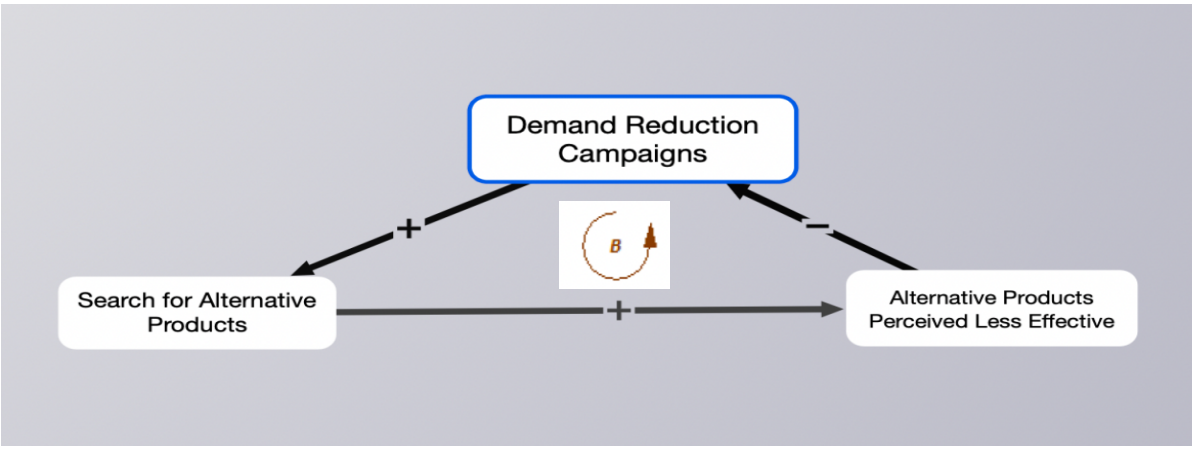

Figure 7 Example of a Balancing Loop developed using the CONSIDEO MODELER software

The example in Figure 7 shows a balancing loop whose goal is to decrease demand for IWT products. As more demand reduction campaigns are launched more pressure is placed on consumers to shift their buying habits, they then start searching for alternative products which consumers, unfortunately, do not perceive to be as effective. This perception lowers the effectiveness of the demand reduction campaigns as consumers revert to their previous habits and buy products that are now probably more expensive.

A reinforcing loop, on the other hand, represents a growing action where each variable amplifies the effects of another — when they produce desirable effects, they are called *virtuous* cycles but *vicious* cycles when they produce negative consequences. Figure 8 is an example of a reinforcing loop or a virtuous cycle where demand reduction campaigns are so successful, they reduce the number of IWT products sold, which in turn lowers the price and demand for such goods and disincentivises wildlife poaching.

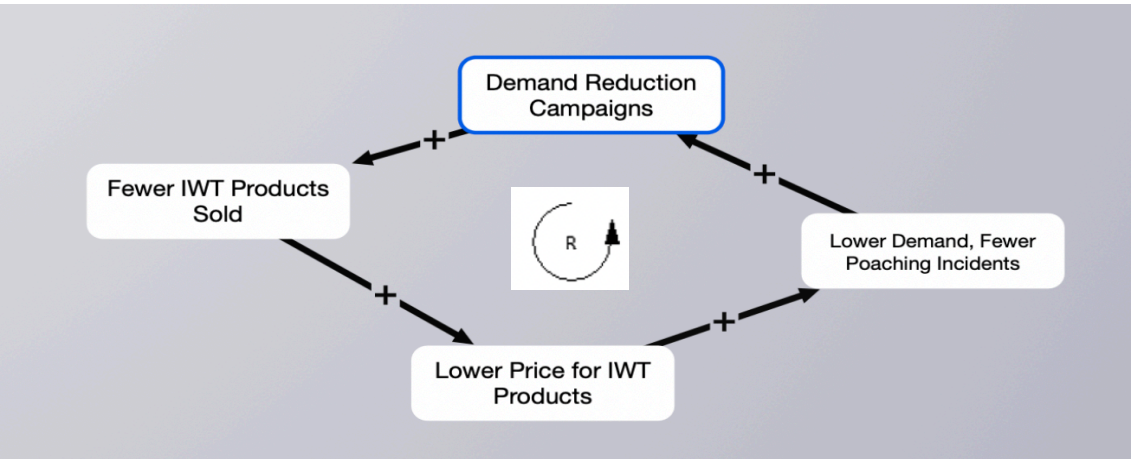

Figure 8 Example of a Reinforcing Loop developed using the CONSIDEO MODELER software

3.7 Data collection

As mentioned in chapter 2, the literature studying IWT revealed three broad areas that future policies will need to manage. These are:

1. Gauging the influence of the socioeconomic and geopolitical context;
2. Technological innovation and its effect on biological, financial and information processing; and,
3. The effect of misinformation on policy development and implementation.

These three themes form the foundation for this study's policy analysis. For each theme, data was collected on the current international, regional and South African policy context, as well as the actors and institutions working within this context and across a number of diverse disciplinary fields.

To identify the key indicators for the CLDs the following questions were posed:

1. When was the policy enacted?
2. What is the goal of the policy?
3. Does the policy use a similar structure and layout to another policy?
4. Who are the actors and/or institutions involved in the policy and its implementation?
5. What are the economic, technological and political conditions?
6. Does the policy target an area of IWT that is still relevant?

To identify short- and long-term possibilities of the policy matrix, the degree of political will was roughly weighted using the following indicators, drawn from the earlier discussion on political will:

1. The importance and prominence of decision makers involved in policy discussions;
2. The presence of a policy enforcement mechanism with incentives and disincentives for implementing the policy;
3. To assess the capacity for the policy's effectiveness the following indicators were developed:
   a. Whether human resources were committed to implement the policy
   b. Were suitable financial resources committed to the policy's implementation
   c. Whether milestones were integrated into the policy implementation initiative or were they developed ad hoc and appended as an addendum
4. To assess the capacity for the policy system's willingness to adapt to new policies and agreements, the following indicators were developed:
   a. Whether a monitoring and evaluation mechanism was appointed/established to support the policy's implementation
   b. Whether this mechanism was suitably funded
   c. Whether regular reports were received from the monitoring and evaluation team
   d. Whether new policy recommendations were debated as part of the legislative process
   e. Whether new policy recommendations were enacted.

This thesis purports to understand how political will manifests at different stages within the policy system. For this reason, the study uses the above variables to estimate the political will, conceptualised as the resources that have been committed to deliver on the policy promise to manage IWT, and visualise their effect within the system.

3.8 Conclusions

This study maintains that vague descriptions of political will are imprecise and affect a proper analysis of the complex and adaptive IWT policy system. Using the principles of complexity thinking the research design develops a better understanding of the nature of political will within the South African policy matrix. It also contends that political will is exercised in a direction and at varying degrees by policy stakeholders.

This chapter outlined how political will has been studied and highlighted that will or the ability to act with volition depends on norms and values, laws, customs and institutions. It discussed how measuring motivation, in a policy context, relies on how a policy problem is defined and on understanding the level of institutional and individual capacity to implement its provisions. This capacity, ultimately, influences the policy's ability to respond to the broader political and economic context. Also discussed was the role played by those who implement the policy, including civil society organisations, community representatives and local officials, was also discussed as was their ability to monitor the policy's general effectiveness and present their evaluations. Their evaluative actions are also seen as an indicator of an administration's transparency and whether policies change to reflect these findings demonstrates the system's adaptability. It further argues that political will is complex, dynamic and therefore unpredictable because it is shaped by different societal, institutional and individual factors.

In assessing this responsiveness, the chapter also outlined the potential benefits of interpreting the policy process as a complex adaptive system rather than as a simple linear cycle. This starts with redefining the policy problem not as something that needs to be solved but rather as a system that needs to be managed. As the previous chapters have pointed out, IWT is a large and lucrative business that benefits a number of people within the supply chain. This profitability makes the stakeholders more resilient and able to respond to circumstances

such as measures to contain the spread of disease, such as SARS or Covid-19, and sanctions for those caught trafficking. If this is how the IWT market is able to respond, then it is reasonable to assess the regulatory system's responsiveness. Theoretically, if policy researchers use complexity thinking then they can build a more responsive system that anticipates reactions to policy interventions.

To do so, these analysts need to appreciate the dynamics of a complex adaptive system, since this is how IWT operates. This includes being able to track the elements and agents whose actions are interdependent and interrelated and whose sheer number make the system difficult to describe and manage. Also discussed in this chapter were the core concepts of complexity thinking which include the non-linearity of a system, the nature of emergence and feedback loops, the elements of path dependency and policy punctuations. Complex adaptive systems evolve in response to their environment and produce new patterns or feedback loops. This study assesses the IWT policy system to see whether it too is an adaptive system capable of evolving at the same pace as the market it means to counter.

The chapter also discussed the merits of using causal loop diagrams to trace the effect actions and actors have on political will. The CLDs are able to map the degree and direction of political will within the South African IWT policy system and illustrate how local level policy measures interact with international and regional policies. Ultimately CLDs offer a practical way to understand and express the system's cause-effect linkages and the conundrums that emerge.

The next two chapters will use the broad themes identified in the literature review (i.e. the geopolitical shifts caused by political, demographic and economic needs; the affects science and new technology have on information collection, analysis and action; and, the trends that drive demand for IWT products) and the indicators of political will developed in this chapter to capture appropriate policy data. These indicators assess: the importance and prominence of decision makers involved in policy discussions; whether a policy enforcement mechanism with incentives and disincentives for implementing the policy was established; if human resources were committed to the policy's implementation; whether suitable financial resources were committed to the policy's implementation; if milestones were integrated into the policy implementation initiative; the presence of a monitoring and evaluation mechanism;

if this monitoring mechanism was suitably funded; whether regular reports were received from the monitoring team; if new policy recommendations were debated; and, whether new policy recommendations were enacted.

Chapter 6 will then analyse this information using complexity thinking and chapter 7 will identify possible leverage points within the policy system that can help future policy provisions match the illicit trade's constant evolution.

Chapter 4

IWT Policy and Intended Feedback Loops

4.1 Introduction

The previous chapter discussed how stakeholders within the policy making system work to direct resources towards solving a problem such as IWT. It described a system of stages that do not always follow a linear process, but one that helps to define a specific policy problem, identify various actors, and develop a policy strategy before implementing and monitoring its effects. Finally, it determined that the system's success depends on the degree and direction of political will whose indicators it could delineate.

Policy is conceptualised as legislation and includes decisions passed under key international and regional agreements. Such decisions include those taken at: CITES meetings that specifically relate to IWT; various United Nations (UN) bodies where results were passed; inter-governmental bodies such as the World Trade Organisation (WTO) and the World Health Organisation (WHO); regional organisations such as the African Union (AU)[16] and the Southern African Development Community (SADC)[17]; and, South Africa's national and provincial legislation. It does not include the many strategic plans such as the Sustainable Development Goals (SDGs), China's Belt and Road Strategy, the AiChi Targets, and industry self-regulating mechanisms such as the Coalition to End Wildlife Trafficking Online and the International Consortium on Combating Wildlife Crime. These strategic initiatives have been developed *from* policy and this study sees them, instead, as indicators of political will. They will, therefore, be included in the subsequent chapter to determine the dynamics – the degree and direction – of political will.

[16] It is worth noting that both the AU and the SADC have policies that purport to regulate trade in wild species but, despite its membership, South Africa does not automatically adopt these policies as part of its own regulatory framework. It is true that signing and ratifying an international instrument such as CITES makes the provisions binding, but bilateral or multilateral agreements need to be incorporated in domestic legislation before they can be enforced (Kotze and du Plessis, 2006: 2).

[17] Established in 1992, this is an inter-governmental organisation that is headquartered in Gaborone, Botswana. Its purpose is to enhance socio-economic cooperation and integration among its 16 member states. This culminates in agreements intent on promoting peace and security in the region as well as liberalising intra-regional trade, developing general economic capacity and establishing a free trade area within the SADC region (Khamfula and Huizinga, 2004).

Whereas chapter 3 discussed the usefulness of CLDs and their ability to map interactions and relationships, this chapter visually presents the policies that target IWT and their *intended* feedback loops.

Policy data was collected under the three broad themes that policies will need to manage, as the literature review mentioned, namely: understanding how geopolitical shifts shape IWT-related policy; how policies encourage scientific and technological innovation to curb the illicit trade; and, how information influences demand for IWT-linked products (see chapter 2). It is also important to understand that in one way or another all policies originate from and intend to circle back to CITES and its various provisions, some more directly than others. For this reason, a select description of CITES and its objectives is supplied at the outset.

This chapter also outlines the policies that interact with CITES at the regional, both the African Union (AU) and the Southern African Development Community (SADC), and national level within South Africa. To identify which policies to include in this analysis a number of criteria had to be met. These included establishing: when a policy was enacted; the goal of the policy; the stakeholders involved in the policy design and implementation; the economic, technological and political conditions underpinning the policy intervention; and, whether the policy targeted a relevant area of IWT.

As the various figures and narratives in this chapter show, this matrix is complex and dynamic, and the international and regional interaction influences South Africa's domestic policy agenda. However, these diagrams only show positive feedback loops because this is what policy makers and the legislation they enact *intends* to create. The next chapter will adjust this impression and show what is in place and the effect these actions, or inactions, cause throughout the IWT policy system.

4.2 A brief history of IWT policy

Conservation advocates and scientists recognised the likely consequences of IWT at the turn of the last century and started developing agreements, policies, protected parks,

enforcement units and public awareness campaigns to mitigate the effects and rally support (Bowman, 2010:483). Perhaps the most significant example of this is the *Lacey Act* of 1900 which the US enacted to contain the illegal procurement and trade of certain fish, wildlife and plants. The law has been updated over the years to expand its reach from ostensibly regulating national commerce to restricting trade across state, federal, tribal and foreign law (Alexander, 2014: 3). The latter includes species protected under CITES as well as illegally logged timber.

The year 1900 also saw the first international legislative attempt to curb the wildlife trade with the *Convention Designed to Ensure the Conservation of Various Species of Wild Animals in Africa which are Useful to Man or Inoffensive* (Sand, 1997a; Walsh, 2005). Geared towards managing hunting, this policy also contained some trade-related measures but the initiative did not receive widespread support and was not adopted (British Parliamentary Papers, 1900). The *Lacey Act* did however inspire other multilateral agreements aimed at managing the international wildlife trade of specific species. These included: the *Fur Seal Convention* (1911), the *Convention for Protection of Migratory Birds* (1916) and the *Convention on Regulation of Whaling* (1946) (Huxley, 2000; Couzens, 2013).

The next attempt at a multilateral agreement was the 1936 *International Convention Relative to the Preservation of Fauna and Flora in Their Natural State*. This agreement was adopted by the European colonial powers largely because it did not stipulate ratification by all signatories. Like its 1900 predecessor, the 1936 agreement meant to manage wildlife exploitation but included additional measures to cater for export licenses and imposed certain import restrictions (Walsh, 2005). However, this agreement was not enforced because colonies across the African continent gained their independence and focused on other political, social and economic priorities.

The matter of wildlife trade was only rekindled again in 1968 with the *African Convention on the Conservation of Nature and Natural Resources*. This Convention targeted trade in endangered species by: restricting wildlife hunting and capturing; managing specimen and trophy trafficking; researching the depletion of flora and fauna species to design better policies that prevented species extinction; and, committing signatories to providing timely

information and legal action to protect the continent's environment and natural resources. These provisions were indicative of the changing political climate towards endangered species and their associated by-products – a climate that would eventually culminate in what is now known as CITES, in the 1970s.

4.3 Key international, regional and national policies governing IWT

There are several policies that attempt to manage the trade in wild flora and fauna at the international, regional and, in this instance, the South African national level. These policies interact with each of the three specific themes already mentioned but to avoid unnecessary repetition, their provisions are outlined in this section.

4.3.1 International policies

At the international level there are three key policies that work to manage IWT. These are the *Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)*, the *Convention on Biological Diversity (CBD)* and *IATA's Live Animals Regulations*, which will be discussed in this order.

Agreed to in March 1973, CITES was eventually adopted on 1 July 1975 after ten countries ratified the agreement. The policy is at the heart of all regulations aimed at controlling the trade in wild flora and fauna. To date 184 parties are signatories to the multilateral agreement, which seeks to manage the trade of over 35,000 flora and fauna species (Bowman, 2010: 484; Smith, 2010: 144). Protected species are listed in one of three Appendices which may contain whole groups of species, a specific subspecies or a geographically separate population of a species.

Appendix I of CITES prohibits commercial trade of species that are threatened with extinction and trade in hunting trophies or for scientific or educational purposes, which is only allowed under exceptional circumstances. Appendix II lists species that are not under imminent threat of extinction but whose populations need to be carefully managed to ensure their survival. Specific permits are issued to prevent illegal transactions and to track the trade of legitimate samples. But before they are, traders must prove that they have procured specimens legally

and in a manner that does not threaten the species' natural ecosystem. To determine the effect on wild populations a trader must produce a Non Detrimental Findings (NDF) assessment that is then assessed by the relevant export and import managing authorities before they can grant the permit(s).

One or more CITES parties can also request that trade of a particular species be controlled. In such instances, the species is listed under Appendix III to monitor its international trade. This Appendix is the least understood and appears only to require an export permit from the country that has included the species on this list (CITES, 2003). While there seems little to gain from this stipulation, states may use this provision to ensure that global customs controls safeguard their specific populations from illegal traders (Favre, 1989: 77). However, this does require that customs officials know which species are regulated and the scientific and common names for each, a demand that is often difficult to enforce. Countries could also use this provision to alert other states and organisations to a potentially threatened species, a possible first step in making a case for the species to be listed under Appendix II. In 2000 the UK, for example, asked for the basking shark to be included under Appendix III and, in 2003, used this listing to motivate on behalf of the European Community for the species to be listed under Appendix II (Mundy-Taylor and Crook, 2013: 56).

CITES' signatories form a central decision making body or Conference of Parties (CoP) and meet every two to three years together with NGOs and other stakeholders to discuss the effectiveness of their safeguarding measures. While all provisions enacted under CITES and its various appendices aim to protect the planet's wild flora and fauna, there are some decisions that specifically relate to managing the evolving nature of IWT. These will be discussed later in this chapter under each of the three themes identified in the literature review.

The other policy, the *Convention on Biological Diversity* (CBD), entered into force in December 1993 and is considered the primary international instrument for conserving biodiversity. Its adoption signalled the first time the international community formally committed to ensuring the "fair and holistic treatment of…our planet's…rapid and continuing loss of biodiversity" (Glavovic, 1995: 17). The CBD provides a framework of action and is driven by three principal

objectives: conserving the planet's biological diversity (listed in Articles 6-9, 11 and 14); the sustainable use of this biodiversity (outlined in Articles 6,10 and 14); and the equitable distribution of benefits these natural resources yield (detailed in Articles 15, 16, and 19-21).

Although the CBD does not specifically regulate trade, its conservation programmes do address trade, if somewhat obliquely (Dexel, 2003). As Article 2 suggests, the CBD's mission is to develop the sustainable use of wild and threatened flora and fauna and implies that limiting the procurement of such species will preserve them for future generations and the well-being of the planet. CBD signatories are also committed to national conservation strategies, plans or programmes that support this objective under the Convention's Article 6. Article 8 enforces *in-situ* or protected areas meant to preserve and conserve species under threat while Article 9 promotes *ex-situ* or external measures that supplement *in-situ* regulations. Examples of this type of assistance include funding conservation efforts and rehabilitation facilities for endangered species.

The third policy that is relevant to this discussion is *IATA's Live Animals Regulations*. These Regulations provide for the safe and humane transport of live animals via commercial airlines and are updated annually to reflect CITES decisions. It includes measures that clearly outline: the shipper and carrier's responsibilities and their role in combatting illegal trade; each country's national transport regulations; services offered by each carrier; how animals should be prepared and sustained during transport; cataloguing requirements that are necessary for shipping (i.e. taxonomy, description and size); required transport certifications and checklists for each specimen; container requirements to ensure maximum comfort for the specimen; all CITES documentation with lists of each country's management authorities; and, the health status of the specimen being transported.

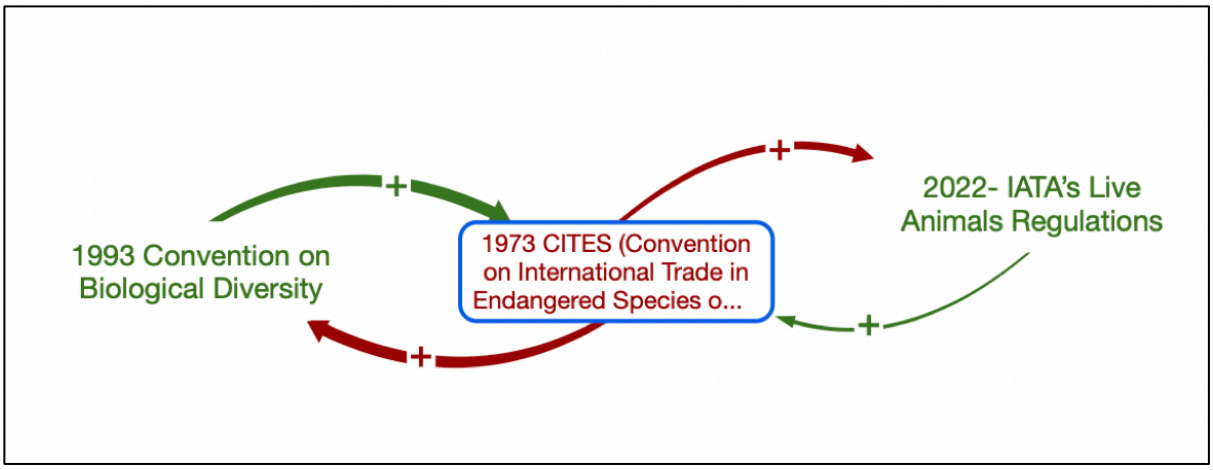

Figure 9 Feedback loop between the two main international policies of CITES, the CBD and IATA's Live Animals Regulations (in **green**). The researcher developed the figure using the CONSIDEO MODELER software.

As previously described, CITES is the root of all policy provisions geared towards managing IWT which is why this study places it at the centre of the diagrammatic representations that appear in this chapter and the next. Its provisions drive and are in turn influenced by other policies that target IWT specifically or tangentially. Figure 9, for instance, illustrates the simple and positive feedback loops that ostensibly exist between CITES and the CBD, and CITES and the *IATA's Live Animals Regulations.*

4.3.2 Regional policies

There are only a few regional policies that address IWT on the African continent, with the previously mentioned 1968 *African Convention on Conservation of Nature and Natural Resources* being key. This 1968 policy was considered the most advanced treaty of its time and, according to Achim Steiner (2004), its provisions influenced the trajectory of environmental law on the continent. However, the treaty needed to be updated and the scope broadened to keep pace with international environmental legislation. In 2003, the revised treaty (with the same title) was adopted but it only entered into force in July 2016 and was signed by 44 of the 55 AU member countries[18].

[18] The 11 countries that have not signed the Convention are: Algeria, Botswana, Cameroon, Cape Verde, Egypt, Eritrea, Malawi, Morocco, Mauritius, Seychelles and Tunisia.

Of specific interest for this study is the treaty's Article IX that echoes the provisions outlined in the CBD. This Article calls for *in situ* conservation of flora and fauna species for sustainable use and *ex situ* conservation measures to conserve specific habitats. These provisions seek to protect domestic species by controlling the trade of exotic species and genetically modified organisms.

Article XI is also pertinent to this study because it "regulates domestic trade, possession and transport of specimens and products [in line with a country's] domestic law and international obligations" (Steiner, 2004: 10). Its purpose is to support the enforcement of CITES permit provisions across the continent and to spur national legislation with substantive punitive measures to restrict domestic trade in endangered species. This Article also encourages parties to cooperate bilaterally and sub-regionally to curb IWT and highlights initiatives such as the *1996 Lusaka Agreement on Co-operative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora* of which South Africa is a signatory.

At a sub-regional level, the Southern African Development Community (SADC) recognised that wildlife resources could potentially affect the economic and environmental development of its members. These concerns are reflected in the *Treaty of the Southern African Development Community* which was enacted in 1992 and then subsequently amended in 2001, 2007, 2008 and 2009. The Treaty also recognises the value of the region's wildlife and acknowledges that conserving the region's broader natural resources requires good management. In support of these objectives and those stipulated in CITES, the CBD and the original *African Convention on Conservation of Nature and Natural Resources,* 14 members signed the *SADC Protocol on Wildlife Conservation and Law Enforcement* in 1999. The Protocol purported to standardise regional approaches to managing the sustainable use and conservation of wildlife. This included: exchanging information pertinent to wildlife management; promoting law enforcement activities within, between and among signatories; establishing transfrontier conservation areas to share scarce resources; build broader national and regional conservation capacity; and, to facilitate greater community-based conservation management. SADC members also enacted the *SADC Protocol on Forestry* in 2002 to protect and manage the region's forests and encourage legal harvesting and trade in forest products.

The 2013 *SADC Regional Agricultural Policy* links to the CBD and CITES provisions and guides regional and national level agricultural policy. The policy links to a number of different sectors including the forestry sector given its contribution to food and energy security as well as containing invasive forest species that could affect the biodiversity of the region.

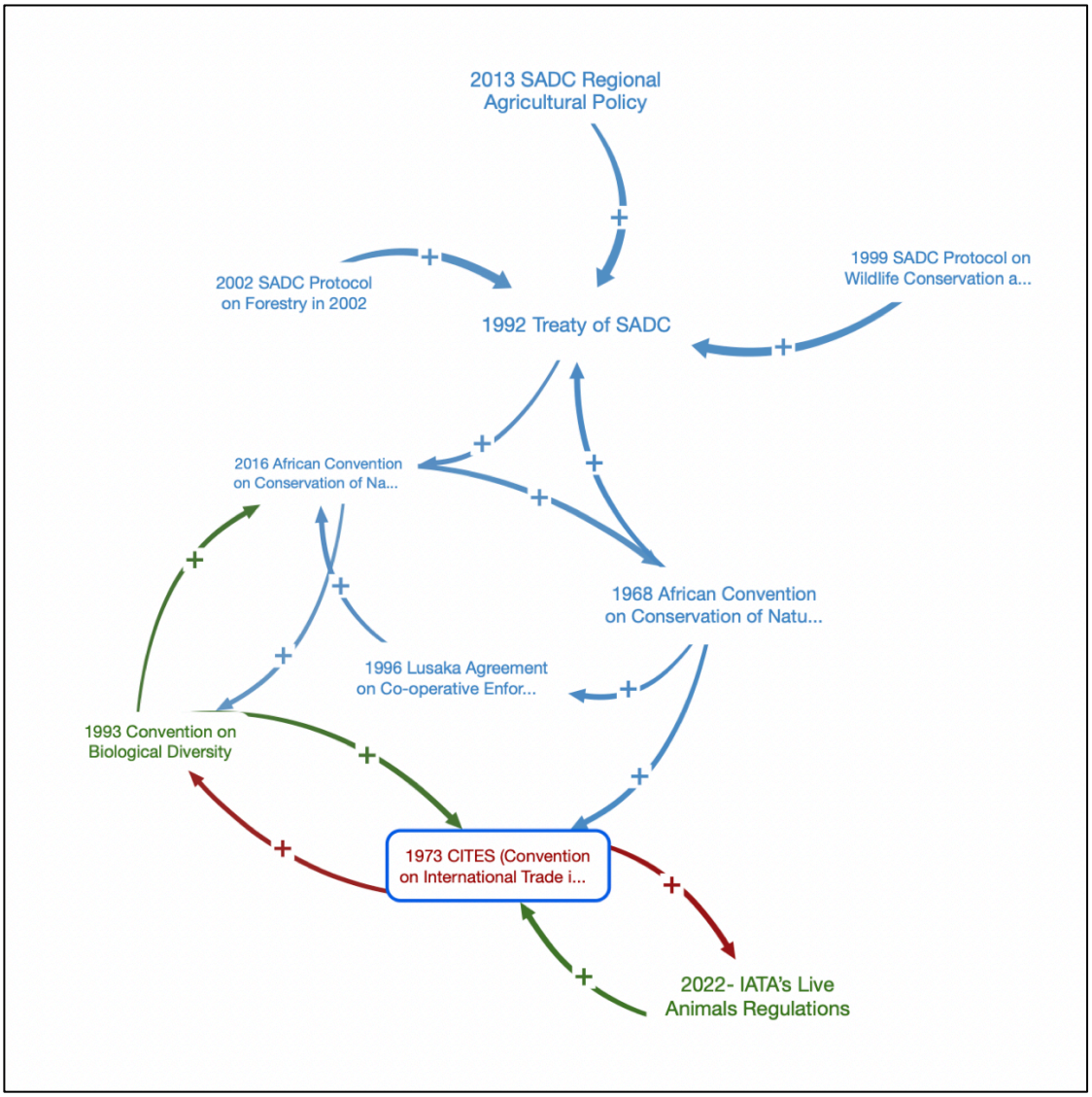

Figure 10 Feedback loops between core international and regional agreements (in **blue**). The researcher developed the figure using the CONSIDEO MODELER software.

As Figure 10 illustrates, the degree of complexity grows within the policy matrix once the regional agreements are added to the three international policies. Instead of there being only two feedback loops there are now six different loops, which show how policies interact with each other at various periods within the system. The figure illustrates the intended policy feedback between: CITES and the CBD; CITES and the *IATA's Live Animals Regulations;* the

CBD and the 2016 *African Convention on Conservation of Nature and Natural Resources;* the 1968 and 2016 *African Convention on Conservation of Nature and Natural Resources* and the 1996 *Lusaka Agreement on Co-operative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora*; the overarching feedback loop between the 1968 and 2016 *African Convention on Conservation of Nature and Natural Resources,* CITES, the CBD, that includes the 1996 *Lusaka Agreement on Co-operative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora*; and, the loop and its effects are then extended to include the effect of the sub-regional policies the 1992 *Treaty of SADC* and the two associated protocols the *SADC Protocol on Wildlife Conservation and Law Enforcement* (1999), the *SADC Protocol on Forestry* (2002), and the *SADC Regional Agricultural Policy*.

4.3.3 National policies

The CITES's provisions do not directly apply to individual national legislation. Instead, it offers a legal and implementation framework for signatory nations to tailor according to their specific domestic policy arena. In South Africa's case, the government has enacted its own domestic legislation to manage conservation efforts.

Enacted a few years before the country's post-1994 democratic Constitution, the *Game Theft Act* of 1991 was designed to protect the ownership of free-roaming "game" and regulates "the theft and wrongful and unlawful hunting, catching and taking into possession of game" (Game Theft Act, 1991: Preamble). Under this law, to prove ownership the landowner must produce a certificate of "adequate enclosure" verifying that the animal was or is fenced in a reserve. This law effectively allows landowners to hunt and give permission for others to hunt animals on their land. It also grants private reserves the right to promote trophy hunting among other activities. Restricting the natural movement of animals, however, runs counter to the CBD and will purportedly upset the country's ecological balance and affect the planet's biodiversity for generations to come.

Some five years later the 1996 *Constitution of the Republic of South Africa,* the law that supersedes all other laws, attempted to acknowledge this affect. However, while the precept promotes the ideals of democracy and enshrines basic human, societal and administrative

rights, it does not specifically include rights that protect wildlife. It does, nevertheless, mention the overall survival of wild animals and the protection of biodiversity in Section 24:

> Everyone has the right--
>
> a) to an environment that is not harmful to their wellbeing; and
> b) to have the environment protected, for the benefit of present and future generations, through reasonable and other legislative measures that –
>
> i. prevent pollution and ecological degradation;
> ii. promote conservation; and
> iii. secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development (Constitution of the Republic of South Africa 1996).

By including this provision within the Constitution, policy makers signalled the country's commitment to environmental law and protecting South Africa's common heritage (Paterson and Kotze, 2009: 150). This provision also limits protection of the country's ecosystem to the extent that it benefits humanity but does not acknowledge the broader impact on the environment's flora and fauna.

To enforce Article 24 of the Constitution and protect the rights of all persons to access a safe environment, the *National Environmental Management Act (NEMA)* was enacted in 1998. This policy's objective was to regulate national departments and their effect on the environment (Kotze and du Plessis, 2006: 30). It also stipulates that their actions to preserve biological diversity should balance the needs of previously disadvantaged communities. The policy includes a description of the types of fora that should be constituted, their composition and function as well as the need for inter-governmental co-operation (National Environmental Management Act 107 of 1998). It, therefore, regulates the activities of state and non-state actors to properly protect the environment.

In 2003, *National Environmental Management: Protected Areas Act (NEMPAA)* made it possible to declare and manage protected areas (Feris, 2006: 18) to ensure the conservation of threatened and rare species. Under the Act's Section 38, the South African National Parks

(SANParks) was tasked with managing these nature reserves and restricting public access while promoting tourism and participating in pertinent research programmes.

Perhaps the most significant national policy for this study is the 2004 *National Environmental Management: Biodiversity Act (NEMBA)* that was enacted to protect threatened species and ensure their survival, especially those that are traded on international markets. Section 56 requires the Minister of Water and Environmental Affairs (now known as the Minister of Environment, Forestry and Fisheries) to issue a list of nationally protected species that are either endangered and/or at risk of extinction (National Environmental Management: Biodiversity Act 10 of 2004*)*. The list was published in 2007 as the South African Government's *Threatened or Protected Species List* or ToPS while the *Threatened or Protected Marine Species Regulations* (Marine TOPS) was published in 2017.

Under NEMBA's auspices, the South African National Biodiversity Institute (SANBI) was established to research, monitor and champion the country's biodiversity and assist with protecting species that are listed as threatened or protected. In essence, the Act and SANBI help enforce international agreements such as CITES, the CBD and the *IATA Live Animals Regulation* by gathering scientific data that informs the permit process. The Act further prohibits certain activities involving listed species including: catching, capturing and hunting in a controlled environment with the use of an immobilising agent or gin trap or where the hunter does not have a written affidavit certifying a valid hunt. Moreover, NEMBA regulates the purchase, acquisition, supply and export of listed animals. The Act is amended by CITES Regulations and South African authorities publish lists of protected species under Schedule I, II and III of NEMBA, which are automatically amended to match the CITES Appendices (National Environmental Management: Biodiversity Act 10 of 2004).

Under CITES all imports, exports and re-exports of protected species are subject to a permit or licensing system which is managed within individual countries by a Management Authority and an advisory entity called the Scientific Authority (CITES, 1973). The Management Authority grants permits and certificates aligned to CITES provisions and, through the Scientific Authority, communicates with the CITES Secretariat and other signatory parties.

This means that each country's Management Authority must comply with these CITES provisions (CITES, 1973):

- Articles III, IV and V which govern how permits are issued;
- Article VI that seeks to manage how permits are cancelled or retained and whether re-export certificates can be approved given the specimen's corresponding import permits. These specimens must also be marked, where possible, to develop an evidence chain;
- Article VII that stipulates the exemptions for a specific specimen;
- Article VIII which grants the Management Authority's permission to confiscate live specimens; and,
- Article IX that provides the correct communication protocols for liaising with the Secretariat and other signatories.

Through the Office of the Minister, the Department of Environmental Affairs (DEA) – renamed the Department of Environment, Forestry and Fisheries (DEFF) in 2019 – is the legislated Management Authority in South Africa. Accordingly, the Minister must carry out the duties mandated in NEMBA and CITES and enforce international agreements, file necessary reports and coordinate any trade related implications of a species with the Scientific Authority (CITES, 1973). For its part, the Scientific Authority advises:

- Whether permits can be granted once it has determined the effect trade will have on a species' survival;
- The viability and impact of ranching operations, nurseries and captive breeding proposals, paying specific attention to the conditions under which these facilities are to be established; and,
- Identifying species that have been seized.

Together the Management and Scientific Authorities authorise permits for species listed under the CITES Appendices I, II and III (CITES, 1973). However, only the Management Authority can grant applications for export, and this is only if they satisfy the following

requirements:

- The specimen has been legally acquired;
- In instances where live specimens are being shipped, these arrangements must ensure the health and well-being of the animal and conform to the *IATA's Live Animals Regulations*;
- The Scientific Authority has indicated that trading the species, if listed under either Appendices I or II, will not compromise the species survival; and,
- For Appendix I listed species, an import permit has been issued by the country of destination.

Permits are necessary for the species to be imported into South Africa. Traders' intent on importing Appendix I listed species must also supply documentation that the proposed recipient can: adequately care for a living specimen; will not use the specimen primarily for commercial gain; and, if the specimen is being transported through South African borders, that the country of destination has issued the necessary import permit and the country of export has provided an export permit or re-export certificate. Appendices II and III listed species only require valid export permits or re-export certificates from the country of export or a certificate of origin. Furthermore, for the DEFF to grant a re-export certificate the trader must: prove that the imported specimen was lawfully obtained according to CITES Regulations; for live specimens, arrangements should be made to ensure the health and well-being of a live specimen as described by *IATA's Live Animals Regulations*; and, produce an import permit for a live specimen if it has been listed under Appendix I.

Besides granting permits, the DEFF must also ensure that permits presented are valid and meet the legal prescripts. For example, the export or re-export documentation is not older than 6 months and import permits for Appendix I species are not older than 12 months. Since permits are non-transferrable, the permit holder is responsible for ensuring that the customs authority cancels or retains the permit once it is used.

NEMBA also clearly outlines what is considered an offense (National Environmental

Management: Biodiversity Act 10 of 2004):

- No valid permit to import, export or re-export of CITES listed species;
- Illegally acquired CITES listed species that are being offered for sale or displayed to the public;
- Attempting to falsify or mislead authorities during the permit application process;
- Tampering with marks used to identify specimens;
- Preventing Enforcement Officers from completing their duties;
- Intentionally withholding information pertaining to the specimen;
- Forging or tampering with a permit or certificate;
- Attempting to use false documentation to secure a permit; and,
- Intentionally falsifying statements or reports to secure a permit or certificate.

The statute also prescribes penalties for first time offenders ranging from a ZAR 5 million fine to a maximum five-year prison sentence. It also stipulates that subsequent convictions can see individuals pay up to ZAR 10 million in fines and be incarcerated for a maximum of ten years. Repeat offenders may be permanently banned from applying for permits to trade CITES listed species.

Any goods imported, stored or exported that do not comply with the provisions listed under the 1964 *Customs and Excise Act* – which is still the foundation of South Africa's import/export controls – can be forfeited and this includes vehicles used to transport illegal goods (Customs and Excise Act 91 of 1964). Because there are no further penalties under this law it is less of a deterrent. Nevertheless, officers are allowed to seize goods, including wildlife specimens, for future prosecution under NEMBA while they are under customs' control. Under the 1996 *South African Customs and Excise Amendment Act* offenders can face additional charges with convicted individuals forced to pay fines up to ZAR 20,000 (or treble the value of the goods if this is greater) and/or be jailed for up to five years (South African Customs and Excise Amendment Act 44 of 1996).

NEMBA does, however, provide an exception to these rules. An individual is allowed to trade if they can provide an affidavit stating the specific purpose of the transaction (i.e. purchase,

sell, supply or export a specimen) that also clearly states that the animal will not be used for illegal hunting activities. If this exception cannot be proved then the offender is subject to an additional fine of up to ZAR 100,000.00 and/or five years in prison (National Environmental Management: Biodiversity Act 10 of 2004).

There are several different criminal provisions that work in concert with the NEMBA provisions. For instance, the *Criminal Procedure Act* (CPA) enacted in 1977 governs how criminal investigations and trials, among other procedures, are to be managed. The CPA does, however, allow for the Minister of Justice and Constitutional Development to designate peace officers capable of making arrests for specific crimes. Such allowances have been granted to SANParks officials, as well as the Environmental Crime Investigation Unit, effectively extending enforcement mechanisms beyond the South African Police and potentially increasing the likelihood of stemming IWT.

The CPA also allows the South African Police relatively broad powers to enter, search or seize specimens that are identified in a warrant. It also allows the police to enter a premises where there are reasonable grounds to suggest that an offense is being or likely to be committed. There are a few exceptions to these rules. Police officers, for instance, may enter a premises without a warrant if they believe a warrant will be issued and if evidence will be destroyed or removed. The CPA also allows officers to seize items if they suspect or are able to confirm an offence – whether the offence is committed within South Africa's borders or elsewhere. This extra-territorial dimension allows South African authorities to intervene in illegal wildlife trades by intercepting specimens in jurisdictions where other authorities may not have standing and makes them potentially valuable players in curbing illicit activities. However, South African law does not allow police officers to request blood and tissue samples of a specimen to confirm the species or its ancestry DNA (Hosken, 2017; Stop Illegal Fishing, 2017). This means that South African authorities may not be able to scientifically verify the information used to apply for a permit or certification.

Authorities are also keen to quash IWT's reputation as a low risk and high reward endeavour and measures that target the profits of organised crime have been prioritised by CITES signatories including South Africa. The 1996 South African *Proceeds of Crime Act* was

significantly amended by the 1998 *Prevention of Organised Crime Act* to curb money laundering and gang activity. The 1998 Act also prohibits any person from assisting or benefiting from the proceeds of an unlawful activity while the 1999 *Prevention of Organised Crime Amendment Act* determines that it is an offence to acquire or use property derived from illegal activities. Where a person is convicted of such offences the 1998 Act stipulates that they are liable for a maximum fine of ZAR 100 million or imprisonment of up to 30 years (Prevention of Organised Crime Amendment Act 24 of 1999).

South African policy makers have also enacted several policies to assist investigators track the nature and extent of these crimes. These began with the 1992 *Interception and Monitoring Prohibition Act* which responded to the increased use of advanced telecommunications technologies. To better equip enforcement officers to sift through anonymising technologies, legislators passed the 2002 *Regulation of Interception of Communications and Provision of Communications-Related Information Act* (ROICA), subsequently amended by the 2008 *Regulation of Interception of Communications and Provisions of Communications-Related Information Amendment Act*, to help authorities monitor illegal mobile phones and sim cards. However, before a judge can hear a request to monitor a communication device, the investigators must convince the court that there are factually compelling circumstances.

Combining these three levels of policy makes the matrix more complex and the feedback loops discussed above and illustrated in Figure 11 show how policies interact with each other at the national, regional and international level. At the national level, South African conservation law circles back to the 1996 *Constitution* and the various *National Environmental Management Acts,* which in turn feeds back into the CITES CoP discussions. The regular CITES CoP meetings and the amendments that CoP decisions produce, clearly effect provisions described in: the CBD and *IATA Live Animals Regulations* at the international level; the 2016 *African Convention on Conservation of Nature and Natural Resources* and the *SADC Treaty* and its associated Protocols at the regional level; and, the broader *National Environmental Management Act* and the various policies that determine and regulate criminal behaviour at the national level. There also appears, as described earlier in this section, to be an effort within South Africa to curb IWT with nine policies contributing to curtailing aspects of criminality associated with the trade.

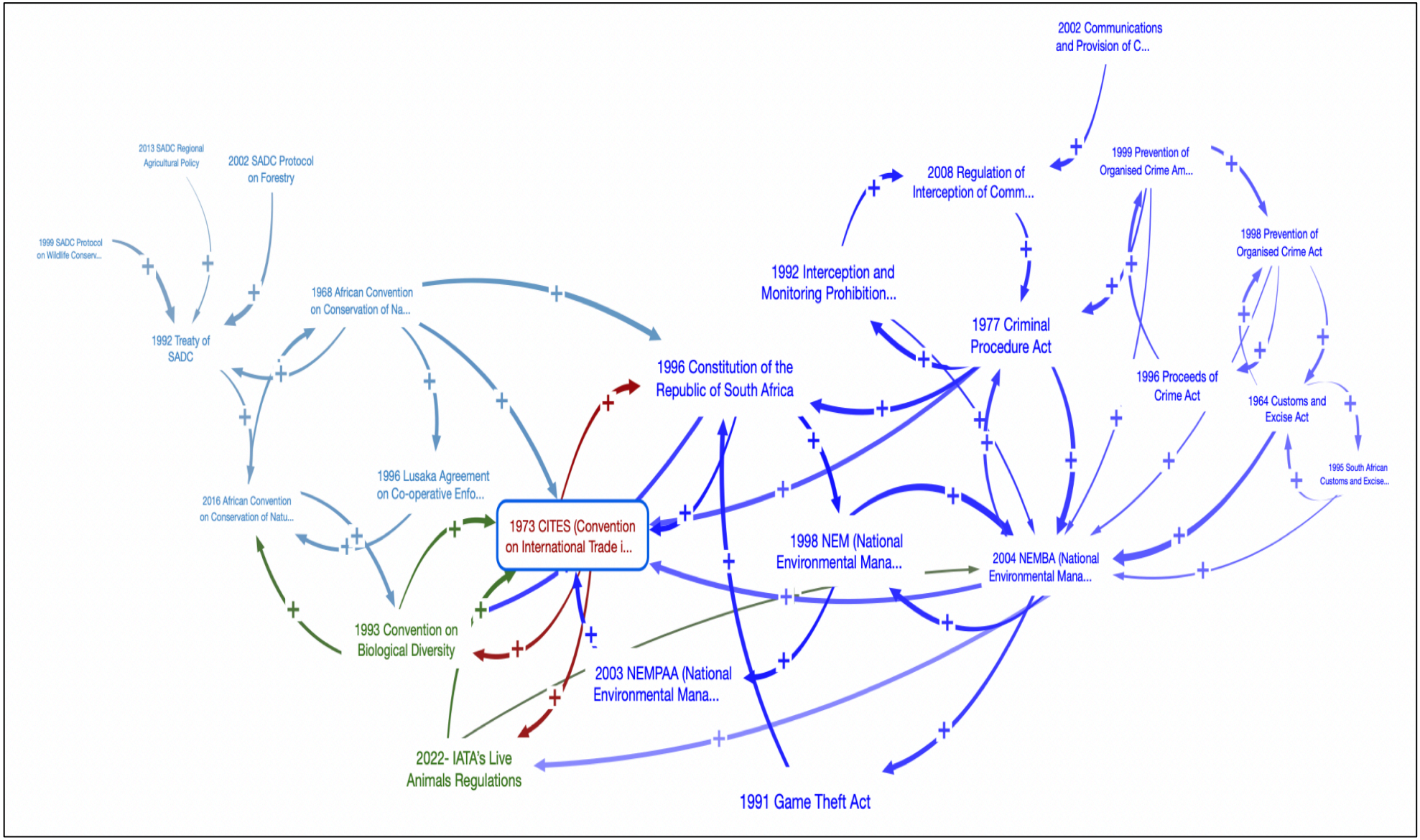

Figure 11 Feedback loops between South African National policies and core international and regional agreements (in **dark blue**). The researcher developed the figure using the CONSIDEO MODELER software.

4.3.4 Provincial policies

There is an additional government notice that links to the NEMBA provisions discussed earlier and helps to regulate the trade of listed animal species. The 2010 *Government Gazette notice no 33002* designates a Provincial Management Authority as the body responsible for monitoring how permits are issued and ensuring that they are in line with NEMBA and the CITES Appendices.

South Africa's nine individual provinces have their own issuing authority and policies to support national conservation legislation and international agreements. These provisions work in concert or in place of NEMBA. Some are many decades old and therefore there is no uniformed approach to managing conservation related regulations at the provincial level. This can potentially obstruct efforts to enforce these provisions, especially those governing permits (CER-EWT, 2018: 43). In addition, most provinces expect the same issuing entity to promote tourism while also enforcing an environmental protection agenda that is, at times, contradictory. The notable exceptions are the Western Cape, KwaZulu-Natal and Mpumalanga whose legislation is enforced by a specific statutory body that reports to the provincial MEC for environmental conservation.

Table 1 List of Provincial Policies relevant to IWT (Source: CER-EWT, 2018: 43; CER, 2022)

Province	Provincial Legislation	Issuing Authority
Limpopo	Limpopo Environmental Management Act (2003) (LEMA)	Limpopo Department of economic Development, Environment and Tourism (LEDET)
Mpumalanga	Mpumalanga Nature Conservation Act (1998)	Mpumalanga Tourism and Parks Agency (MTPA)
KwaZulu-Natal	KwaZulu-Natal Nature Conservation Management Amendment Act (1999)	KZN Nature Conservation Board t/a Ezemvelo KZN Wildlife (EKZNW)

Province	Provincial Legislation	Issuing Authority
	KwaZulu-Natal Environment, Biodiversity and Protected Areas Management Bill (2014)	
Western Cape	Cape Nature and Environmental Conservation Ordinance (1974)	Western Cape Nature Conservations Board (t/a CapeNature)
	Western Cape Biosphere Reserves Act (2011)	
	Sea Shore Act (1970)	
	Mountain Catchment Areas Act (1970)	
Eastern Cape	Nature Conservation Ordinance (1974)	Eastern Cape Department of Economic Development, Environmental Affairs and Tourism (DEDEA)
Gauteng	Transvaal Nature Conservation Ordinance (1983)	Gauteng Department of Agriculture and Rural Development (GDARD)
	Gauteng Nature Conservation Ordinance (2005)	
North West	Transvaal Nature Conservation Ordinance (1983)	North West Department of Rural, Environmental and Agricultural Development (READ)
Northern Cape	Northern Cape Nature Conservation Act (2009)	Northern Cape Department of Environment and Nature Conservation (DENC)
Free State	Nature Conservation Ordinance (1969)	Free State Department of Small Business Development, Tourism and Environmental Affairs (DESTEA)
	Free State Nature Conservation Bill Amendment (2012)	

There are a few common provisions that appear across all provincial legislation including:

- Requirements for hunting protected animals;

- A list of prohibited methods and weapons that can be used to hunt animals;
- The fact that landowners are entitled to hunt animals without a permit, and authorise others to hunt, on their own land;
- Controlling the methods and weapons used to fish;
- Stipulations governing how land should be fenced;
- Specific regulations to protect indigenous plants and limit non-endemic species;
- A list of self-protection provisions that authorise action against damage-causing animals; and,
- A description of offences and the penalties to be imposed.

The 2003 *Limpopo Environmental Management Act*, for instance, governs the province's: protected areas, hunting of fauna, establishes Wildlife Councils, inland fishing and aquatic systems and indigenous flora. It also requires adherence to CITES and other international protocol such as developing environmental impact reports and managing environmental pollution. Under the Act, all wildlife translocators must be registered (Limpopo Environmental Management Act 7 of 2003).

Mpumalanga province together with the Limpopo Province, hosts the renown Kruger National Park relies surprisingly on an Act that was last updated in 1998 — the *Mpumalanga Nature Conservation Act*. The Act is one of the most detailed policies and pays special attention to hunting and catching protected and problem game, the illegal possession of elephant tusks and rhino horns, the trade of live game, the survival of aquatic ecosystems and the sustainable treatment of indigenous plants. It also requires the compulsory registration of game traders (Mpumalanga Nature Conservation Act 10 of 1998).

KwaZulu-Natal and the Western Cape provinces have some of the most recent policies with the 1999 *KwaZulu-Natal Nature Conservation Management Amendment Act* and the 2014 *KwaZulu-Natal Environment, Biodiversity and Protected Areas Management Bill* currently in effect along with the 2021 *Western Cape Biodiversity Act*. Although the provincial premier assented to the latter Act in December 2021, it is still to come into force. Until it does the Western Cape uses provisions enshrined in the 1970 *Sea Shore Act,* the 1970 *Mountain*

Catchment Areas Act, the 1974 *Cape Nature and Environmental Conservation Ordinance,* and the 2011 *Western Cape Biosphere Reserves Act*. As already mentioned, both provinces have established special provincial management bodies under these policies to manage and protect environments that have extensive coastlines, marine life, mountain catchment areas and biodiverse reserves.

In the Eastern Cape province, the *Draft Eastern Cape Environmental Management Bill* was published for public comment in 2019. A normal period of 60 days governs this process but as of April 2022 there has been no further progress towards ratifying this policy. The existing policies are based on the *Cape Nature and Environmental Conservation Ordinance No 19 of 1974*. The delay in passing the 2019 Bill seems to contradict the national government's international commitment to conservation especially given the diversity, size and vulnerability of this province's protected areas.

Known more as South Africa's economic hub the Gauteng province does have some significant flora and fauna reserves to protect. The province's legislature has been slow to update its policies relying instead on the 2005 *Gauteng Nature Conservation Ordinance* which used the *Transvaal Nature Conservation Ordinance No. 12 of 1983* as its base. The latest attempt to update this law has been the 2014 *Draft Gauteng Nature Conservation Bill*, but this has not yet been passed.

The North-West province's policies are also based on the 1983 *Transvaal Nature Conservation Ordinance*, but this province has been more proactive about protecting endangered species within its boundaries. It has banned canned hunting and has expressed a need to conserve its ecological and biodiversity needs. Provisions aimed at protecting the latter are included in the *North-West Biodiversity Management Act* which was published in 2016 but has still not come into force (North-West Biodiversity Management Act 4 of 2016).

The 2009 *Northern Cape Nature Conservation Act* forms the basis of this province's conservation efforts. The policy came into force in 2012 and is also based on the 1974 *Cape Nature and Environmental Ordinance*. It is one of the few provincial laws to specifically mention its role in enforcing CITES provisions to ensure the sustainability of flora and fauna

including aquatic biota (Northern Cape Nature Conservation Act 9 of 2009).

Finally, the Free State province has developed its conservation regulations based on the 1969 *Free State Nature Conservation Ordinance*. Under this Ordinance, wild animals are allowed to be bred within the province and without a permit (Free State Nature Conservation Ordinance No 8 of 1969). The province's most recent policy, the 2012 *Free State Nature Conservation Bill Amendment*, governs trophy hunting of lion and black and white rhinos and managing the bontebok population within the province (Free State Nature Conservation Bill Amendment No 106 of 2012).

Figure 12 below illustrates how South Africa's provincial polices intend to interlink with the *National Environmental Management Act*s, specifically NEMBA, and together manage IWT. The provincial acts are meant to streamline the conservation process and help locally-based law enforcement officials implement national, regional and international policy provisions. It is interesting to note, and this will be discussed in greater detail in the next chapter, that some of these policies are considerably older than the national, regional and international acts they purportedly enforce and influence.

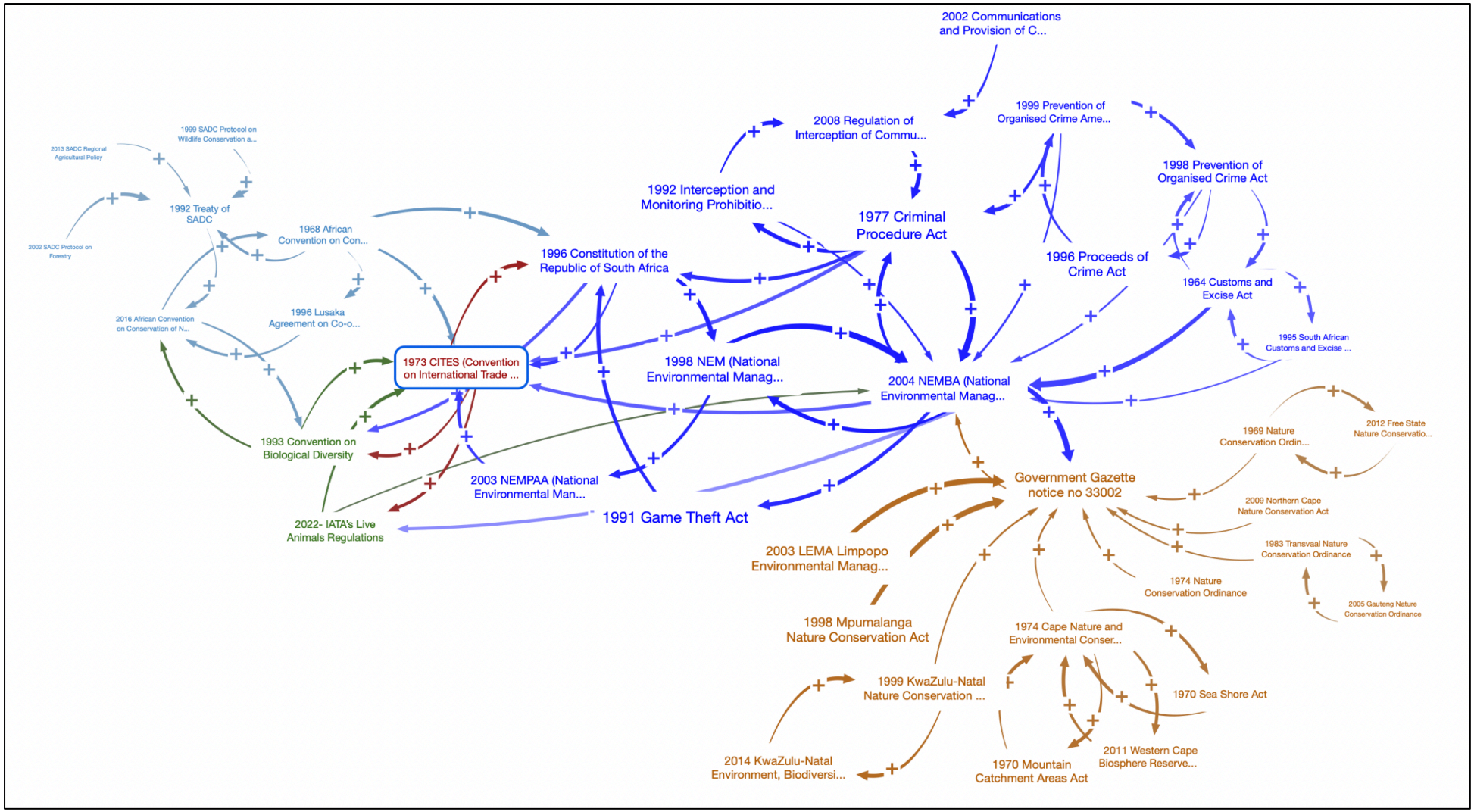

Figure 12 South African Provincial policies and their relationship to national, regional and international policies (in **brown**). The researcher developed the figure using the CONSIDEO MODELER software.

The next section outlines the policies that are enacted at the international, regional, and at South Africa's national level under the three themes identified in chapter 2 (i.e. the geopolitical shifts caused by political, demographic and economic needs; the affects science and new technology have on information collection, analysis and action; and, the trends that drive demand for IWT products). The purpose here is to set out these policies, their background and how their interaction contributes to the complexity and adaptability of the IWT policy system. The next chapter discusses their implications in greater depth.

4.4 Theme 1: Geopolitical shifts and IWT-related policies

The trade in illegal wildlife, as with many other intractable problems, responds to shifts in geopolitical dynamics. A key factor influencing these shifts is China and its growing role in the global economy. Using its economic might, the country has pursued policies that would market its traditional medicines and increase its trade and economic influence within developing countries such as South Africa. Other factors that also shape geopolitics are the increased risk of human-wildlife conflict and the rise in political and socio-economic instability that has concomitantly increased IWT. The policies enacted to address these areas are described below.

4.4.1 Promoting political support for TAM and increasing IWT

There are a number of different initiatives that fall under this very broad theme. The first is the renewed vigour behind China's push to promote Traditional Asian Medicine (TAM)[19] and the products it requires.

In 2010, UNESCO inscribed acupuncture and moxibustion on its Representative List of the Intangible Cultural Heritage of Humanity. In addition, the Huang Di Nei Jing (Yellow Emperor's Inner Canon), a key text and the earliest one written on Traditional Chinese Medicine (TCM), (UNESCO, 2011a) and Ben Cao Gang Mu (Compendium of Materia Medica, the most complete

[19] Some texts refer to Traditional Chinese Medicine (TCM), but this seems to isolate the medicinal discipline and benefits to China alone. Traditional formulations and practices that fall under this umbrella, however, also originate in other countries within Southeast Asia, which is why a more generic term of Traditional Asian Medicines (TAM) is used.

text on TCM, (UNESCO, 2011b) were both included in the organisation's "Memory of the World Register". Since 2012, around 30 policies and measures have been issued to promote the development of TCM in China (Wang et al., 2020: 1). The *Law of the People's Republic of China on TCM* which came into force in 2017 pledges support to preserve TCM as an intangible heritage and for the "development of the traditional Chinese medicine undertaking, and protecting the health of the people." It further states that "The state shall support TCM foreign exchange and cooperation, and promote international transmission and application of TCM" (Wang et al., 2020: 6). Such promotional support has raised the profile of TAM across the world and seen Tu Youyou win the 2015 Nobel Prize. It has also influenced several key international organisations and stakeholders to take a closer look into incorporating TAM and its potential effect on IWT into their initiatives.

The WHO is one of those organisations that has warmed to the practice of TAM, especially between 2006 – 2017 under Director General Margaret Chan Fung Fu-Chun. Western-trained scientists worry that these moves were made without a rigorous evidence-base and used randomised controlled clinical trials to guide them. This argument was raised again in 2019 when the WHO included Chapter 26 on TAM in its *International Classification of Diseases* (ICD-11). This is an international influential document that determines how doctors diagnose conditions and whether insurance companies will cover the ensuing treatments. Chapter 26 of the ICD will help scientists continue their research into the effects of TAM, but it will also spur the development of new markets for states, pharmaceutical companies and the like (in 2018 it was estimated to be worth around US$ 50 billion) and potentially place greater pressure on endangered flora and fauna (Cyranoski, 2018; Nature, 2019).

At a national level, the 2007 *Traditional Health Practitioners Act* established an Interim Traditional Health Practitioners Council of South Africa to regulate "the safety and quality of traditional health care services" and to manage "the registration, training and conduct of practitioners, students and specified categories in the traditional health practitioners profession" (Traditional Health Practitioners Act, 2007: 2). The Act came into force in 2008 and recognises TCM practitioners under its aegis but does not mention those practitioners that are trained using Classical Chinese Medicine techniques – the more classical training relies on the less standardised medium of a master-student tutelage.

The drive to source wildlife for TAM products has been paired with other Chinese international development policies such as its Belt and Road initiative mentioned in chapter 2 and discussed at greater length in chapter 5. This is particularly important for IWT and means that international, regional and national policies and stakeholders need to control the impact on the environment's biodiversity. An effort to do this began with the CBD.

4.4.2 Trade policies and their effect on IWT and conservation

In 1948, the *General Agreement on Tariffs and Trade* (GATT) multilateral agreement, of which South Africa was a founding member, promoted international trade and reduced or eliminated trade barriers such as tariffs or quotas between 1948-1995. The Agreement aimed to eliminate quantitative restrictions imposed on imported and exported products traded between member states. Promoting these free trade corridors could, as Christine Crawford (1995: 555) suggests, promote conservation goals but there were GATT members who did not see the same potential. This is perhaps why environmental advocates continue to voice reservations that global trade bodies may sacrifice long-term domestic environmental protection laws in favour of short-term economic gains (Kelemen, 2001: 622). Instead, they argued for rules that would maintain competitive international trade but allow nations to protect their own environments (Mikesell, 2007: 7). At their insistence, Article XI was incorporated into the GATT as an exception to allow countries to apply trade restrictions to protect human, animal and plant life.

Article XI also states that these restrictions on agricultural or fisheries products do not extend to products that are legally permitted to be produced and exported. This was an attempt to acknowledge that trade quotas provide more protection for species than tariffs because it is very difficult to exceed a mandatory export quota. To implement this article, member states had to prove that trade in a product would be harmful to the domestic environment with appropriate "scientific evidence" (GATT Secretariat Report, 1992: 16) regardless of where the product was sourced.

In 1995, the World Trade Organisation (WTO) was established to be a much stronger

enforcement mechanism. While GATT proposed a set of rules that member nations agreed to uphold it did not provide a supporting structure with the capacity to enforce these rules. Members took advantage of this deficiency and negotiated selective trade agreements that ultimately fragmented the parties. While the WTO generally incorporates GATT's multilateral agreement settlement mechanism, it is an intergovernmental organisation with its own staff and based in its own headquarters. Nevertheless, countries such as China have used the WTO to push support for developing countries, specifically those that are also rich sources of wild flora and fauna to supply the growing TAM market.

China joined the WTO in 2001 to ostensibly take advantage of the trading routes and rates that the organisation facilitated. In doing so China hoped to improve the living standards of its one billion people and benefit from the increased trade profits that globalisation promised. The US and its Western allies hoped that by including China in the WTO fold, they could push for the country to continue opening up its socialist-planned economy and embrace a more democratic disposition. China's political system, however, remains one of the most rigid in the world and is bolstered by its burgeoning economy, which in 2020 was ranked second largest in the world having assisted 400 million people out of extreme poverty. While its entry into the WTO has lowered consumer prices worldwide and increased corporate markets and profits, it has also cost many labour union members in the manufacturing sector their jobs. By 2009, China became the world's largest exporting nation making it also one of the most influential nations on the global stage (Tan, 2021). Since then, the country has leveraged its economic gains to build partnerships with poorer nations who have natural resources that support the expansion of its technological and medicinal markets.

Despite China's ascension to the WTO, the organisation's pursuit of sustainable development to protect and preserve the environment has risen on its agenda (Oxley, 2001: 1). This has forced members to adopt measures that protect and restrict trade in endangered flora and fauna species. For instance, the WTO works in concert with CITES and its requirements for valid export permits. If a county persistently flaunts these provisions, as Vietnam's continued trade in rhino horn seems to suggest, then member states can apply Article XIV paragraph 1 of the CITES Convention which completely prohibits all trade in wild species with the offending country (Brack and Gray, 2003).

The *Technical Barriers to Trade Agreement (TBT)* and the *Sanitary and Phytosanitary Agreement (SPS)* both adopted in 1995 are two additional WTO agreements that purport to protect the environment and relate to the CBD. These agreements recognise member state's rights to protect their ecosystems but allow them to do so according to their own standards. Through the TBT Committee members can review specific trade concerns, including regulations or procedures that affect their ability to trade with another country. It allows a member to determine the scope and implementation of another member's regulations and discuss ways to mitigate potentially detrimental effects. These discussions also allow members to assess the effectiveness of the TBT Agreement specifically its "transparency, standards, conformity assessment and good regulatory practice" (WTO, 2022).

The *United Nations Convention Against Corruption* (UNCAC) is another international instrument that has been used to counter IWT activities. Adopted by the UN General Assembly in 2003 and entered into force in 2005, the UNCAC is the only legally binding international anti-corruption multilateral treaty. The treaty aims to strengthen punitive measures that counter corruption by tracing illegal transactions by IWT actors. To do this, UNCAC operates through international cooperation and shared technical assistance which also serves to strengthen international and national law enforcement agencies and promotes judicial cooperation. Within South Africa, the UNCAC feeds into the CPA loop that incorporates several different law enforcement provisions.

At a sub-regional level and growing out of the 1992 *SADC Treaty*, three free trade agreements have opened up trade corridors and lowered or eliminated tariffs on agricultural goods that include wild flora and fauna. While these agreements do facilitate economic gains within the region these relaxed measures can also encourage IWT activities as described in chapter 2.

The *SADC Protocol on Trade in Goods* (1996 and amended in 2010) is an agreement between SADC member states and intends to reduce customs duties and other barriers to trade on imported products. In 2008, this regional free trade agreement was achieved allowing 85% of intra-regional exchanges to be traded duty-free. The 15% of trade, constituting the "sensitive list", was largely liberalised from 2009 to 2012 among 13 of the 16 SADC member states.

Angola is in the process of acceding to the free trade agreement; the DRC and Comoros have not yet acceded (SADC 2022).

The *EFTA-SACU Free Trade Agreement,* which came into effect in 2008, is a Free Trade Agreement (FTA) between the Southern African Customs Union (SACU) and the European Free Trade Association (EFTA), which comprise of the Republic of Iceland, the Principality of Liechtenstein, the Kingdom of Norway and the Swiss Confederation. This FTA governs the trade of industrial goods (including fish and other marine products) and processed agricultural products between the parties as well as basic agricultural products covered by bilateral agreements with individual EFTA States.

Finally, the *Economic Partnership Agreement between the European Union and Southern African Development Community Group* (SADC EPA) has been provisionally applied since 2016 and will enter into force once it is ratified by all EU member states. This agreement was originally meant to be a comprehensive partnership covering trade in goods, services, investments, competition, intellectual property and public procurement, and specific development support that the EU was to provide SADC EPA states. The final agreement, however, only covered goods (including agricultural products, provisions for tariffs, rules of origin, and customs and border management) and development provisions related to quality infrastructure development.

4.4.3 Increased risk of human-wildlife conflict

The UN Conference on Environment and Development adopted the “Forest Principles” in 1992. This spurred the UN Economic and Social Council to develop an intergovernmental policy forum and functional commission called the UN Forum on Forests (UNFF) in 2000. Governments, international organisations, and actors from a range of internal fora participate in this Forum. In 2007, the UNFF adopted the *United Nations Forest Instrument* (UNFI), a non-legally binding instrument to manage all types of forests. Of relevance is the special mention made in Article VI (7) to “strengthen the capacity of countries to address forest-related illegal practices, including wildlife poaching, in accordance with domestic legislation, through enhanced public awareness, education, institutional capacity-building, technological transfer

and technical cooperation, law enforcement and information networks" (United Nations Forest Instrument A/RES/70/199 of 2015). This is particularly relevant to mitigate the effects economic and infrastructure development has on human-wildlife conflict and the growth in IWT as mentioned in chapter 2.

This particular instrument strengthens international and national "political commitment and action" (United Nations Forest Instrument A/RES/70/199 of 2015) to conserve and sustainably manage forests to achieve international development goals such as those contained in the CBD, the 2002 *SADC Protocol on Forestry* and CITES.

In 1998 the *National Forest Act* was enacted to protect and promote sustainable forest growth in South Africa because "natural forests and woodlands form an important part of the environment and need to be conserved and developed according to the principles of sustainable management" (National Forest Act 84 of 1998: Preamble). The Act's main provisions have remained despite amendments by the *National Forest and Fire Laws Amendment Act* (2001), the *Forestry laws Amendment Act* (2005) and the Commencement of section 18 of the *National Forests Act* (2009). Besides prohibiting destruction of natural forests, the Act (1998) outlines how these areas can be protected while curbing deforestation. It also goes into detail about how these areas can be managed together with community forestry agreements, by establishing a National Forests Advisory Council and the National Forest Recreation and Access Trust, and by appointing forest officers with the authority to search, seize and arrest offenders.

4.4.4 Political and socio-economic instability that drives increased IWT

In the wake of intensified violence in the eastern part of the Democratic Republic of the Congo (DRC) and Central African Republic (CAR) UN investigators targeted the armed group, the Lord's Resistance Army (LRA), and found that ivory was the group's "preferred conflict resource" which it procured by poaching elephants in the DRC's Garamba National Park (Barron, 2015: 2019-220). Consequently, the 2014 UN Security Council linked political instability with wildlife trafficking through Resolution 2014/2136 to renew sanctions against the DRC and Resolution 2014/2134 to impose new sanctions on individuals involved in IWT in

the CAR. At the time these resolutions, to quote WWF's species programme manager Wendy Elliott, "illustrated the high priority that the Security Council places on ending human pain and regional instability that accompany these environmental crimes" (WWF, 2014). They also recognised the fact that many of the elephants poached during that period were in conflict zones in Central Africa where the proceeds were used to finance armed groups and intensify ongoing political instability. These decisions were followed in 2017 by UN Security Council Resolution 2017/2391 that reinforced the role illegal trade in natural resources (including wild flora and fauna) played in continuing terrorism and political instability in the Sahel.

The *SADC's Protocol on Wildlife Conservation and Law Enforcement* (1999), referred to earlier, is particularly relevant to this study. Its scope is to promote the sustainable use of wildlife, but it also stipulates that each member state is responsible for their own conservation and sustainability efforts. As chapter 2 illustrated, South Africa has a history of hoping that legal hunting would stymie IWT while it used the proceeds from legal hunting to fund its broader conservation efforts. The 1994 initiative was one such attempt and proponents cite this move as a successful approach to protecting endangered species such as the white rhino (Damm, 2005). By 2018 the white rhino population had recovered from 1,800 to 18,000 (Challender and Cooney, 2016), but this period also coincided with the lowest demand for rhino horn on record (Milledge, 2008) so it is inaccurate to credit legalised hunting as the sole mitigating factor. Nonetheless, the Protocol's provisions do allow members to use unconventional measures to curb IWT. As Mark Shaw (2012) indicated, such measures could include donating rhino horn stockpiles in South Africa to Asia in an attempt to mitigate demand.

Article 3 of the *SADC Protocol* requires members to adopt policy and legal measures to ensure environmental conservation. And in a bold move Article 4 advocated for transfrontier conservation areas to promote wildlife conservation efforts. The Peace Parks Foundation, founded in 1997 by Anton Rupert, former President Nelson Mandela and Prince Bernhard of Lippe-Biesterfeld in the Netherlands, is an initiative designed to meet this provision and will be discussed further in chapter 5. According to Article 6, members must also enact measures to manage the trade in wildlife products and sanctions to dissuade illegal activities.

Figure 13 depicts the policy feedback loops discussed under this first theme of geopolitical

shifts. It overlays the specific thematic policies described – using a purple colour code – upon those international, regional and local policies identified in this chapter. The resulting directional arrows show where these policies intersect with each other adding yet another layer of complexity to the policy matrix.

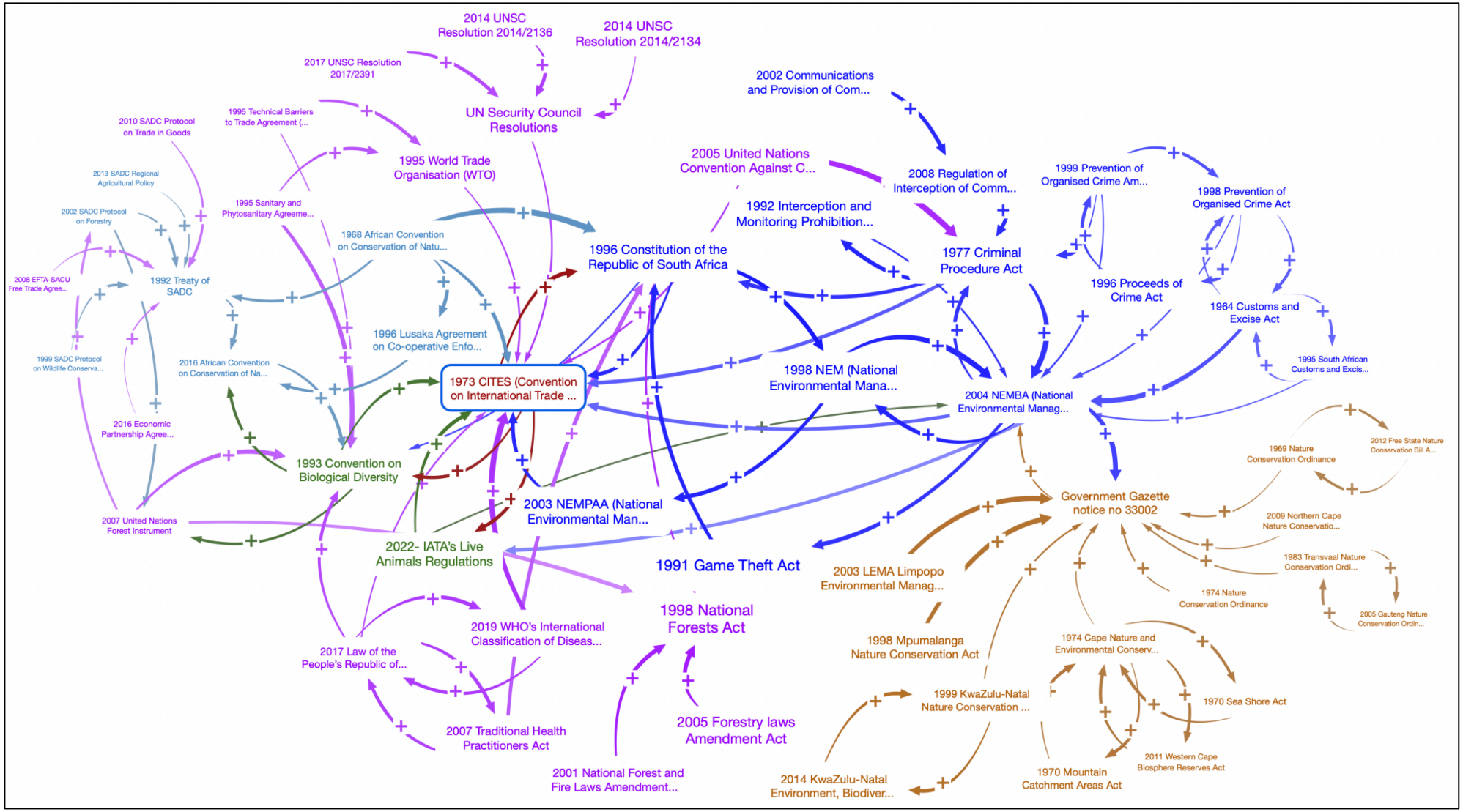

Figure 13 Geopolitical shifts and IWT-related polices (in **purple**). The researcher developed the figure using the CONSIDEO MODELER software.

4.5 Theme 2: Policies encouraging innovation to curb IWT

Policing wildlife crime has become a technological endeavour with a wide variety of intelligence gathering techniques being incorporated into policy at all levels. These tactics include: developing new technologies that can genetically trace species to their place of origin; gathering intelligence on supply chain actors through social media and online activity; and, tracing financial transactions.

4.5.1 Specific decisions to genetically detect and trace threatened species

A key aspect of the CITES regulations is the ability to identify and apprehend those traders who contravene the policy's provisions. This is exceedingly difficult for a number of reasons some of which CoP17 and its decisions tried to address. For instance, CITES Decision 17.83 states:

> The Secretariat shall, subject to external funding:
> c) in consultation with identified laboratories, and in collaboration with ICCWC partner organizations and the ICCWC Wildlife Forensics Advisory Group, compile an electronic directory of laboratories that... are able and willing to carry out wildlife forensic analyses upon request from other countries (CITES Decision 17.83, 2016).

This resolution was reinforced by several other decisions aimed at improving member states' ability to genetically test cheetahs (17.124), ivory (17.162), sharks and rays (17.210), bread palms (17.219) and for the trade in sturgeons and paddlefish (16.136 (Rev CoP17)). But it remains a challenging and costly exercise.

These decisions relate directly to *IATA's Live Animals Regulations* which, as mentioned earlier, is a set of comprehensive regulations that are updated annually and govern the expedient and safe transport of animals including protected species.

4.5.2 Counter growing IWT market on online platforms

The CoP11 meeting held in Gigiri in 2000 adopted a number of resolutions specifically aimed at curbing corruption, wildlife crime and cybercrime, and its ability to facilitate IWT. The meeting also resolved to involve the youth and rural communities to enforce policies that support curbing IWT while improving measures to identify and trace CITES listed species.

CoP11 also generated CITES Resolution 11.3 where Parties agreed to additional measures to "reduce further the illegal trade in species" covered under CITES provisions (CITES Resolution 11.3, 2000). The CoP15 meeting held in Doha in 2010 tasked members to assess and report on the online presence and pattern of wildlife trade of CITES listed species. At the 2016 CoP17 meeting in Johannesburg, CITES Resolution 11.3 was revised to capture the urgency of the problem and stated that all parties should "recognize the seriousness of illegal trade in wild fauna and flora and identify it as a matter of high priority for their national law enforcement agencies" (CITES Resolution 11.3 (Rev. CoP17), 2016). This included understanding the links this trade had developed with online platforms and enacting appropriate law enforcement mechanisms to effectively police these sites.

Under CITES Decisions 17.92 and 17.93 (CoP17) all parties agreed to contact social media organisations to discuss their platform's role in wildlife cyber-crime and then to update their legislation to incorporate measures to counter these trends. CITES Decision 17.94 pledged that the Standing Committee would "form a working group on wildlife cybercrime that includes both producer and consumer countries and those with large internet companies, non-governmental organizations with expertise, lawyers, and other relevant experts" (CITES Decision 17.94, 2016).

4.5.3 IWT Law enforcement and financial investigation

UN General Assembly Resolution on Tackling Illicit Trafficking in Wildlife adopted Resolution 75/311 in 2021 and affirmed the body's previous resolutions – Resolution 69/314 (2015), Resolution 70/301 (2016), Resolution 71/326 (2017) and Resolution 73/343 (2019) – each of which cited the impact IWT has on the broader environment. The 2021 Resolution recognised

the link between wildlife and financial crime and the effect these illegal financial flows have on a country's stability and echoed earlier calls to "adopt effective measures to prevent and counter the serious problem of crimes that have an impact on the environment, conservation and biodiversity, such as illicit trafficking in wildlife and wildlife products" (UNGA 73/343 of 2019). The 2000 UN General Assembly Resolution 55/25 recognised the need for stronger measures to combat "criminal activities [such] as money-laundering, corruption, illicit trafficking in endangered species of wild flora and fauna, offences against cultural heritage and the growing links between transnational organized crime and terrorist crimes" (UNTOC, 2004: 2). This Resolution tasked the UN Office for Drug Control and Crime (UNODC) to draw up a legal framework, the *United Nations Convention against Terrorism and Organized Crime* (UNTOC), that could promote "cooperation to prevent and combat transnational organized crime more effectively" (UNTOC, 2004: 5). In 2004, the UNTOC entered into force with South Africa as a signatory and is now the main international instrument used to regulate transnational crime. It has three supplementary protocols, also known as the "Palermo Protocols", regulating human trafficking, migrant smuggling and the illicit manufacturing and trafficking of firearms.

Of particular interest to this study, in 2014 the UNTOC's 7th Congress of Parties hosted the UNODC photographic exhibition on rhino poaching and its impact in South Africa. It was at this meeting that members realised the role the UNODC's Global Programme for Combating Wildlife and Forest Crime could play and the support the programme could offer regional and national law-enforcement actors to poaching and IWT (UNODC, 2022). This was echoed in the UN Security Council's 2014 realisation that political instability, particularly on the African continent, was intrinsically linked to wildlife trafficking[20].

UNCAC, discussed earlier in this chapter, is also intrinsically linked to supporting more financial investigation of the IWT trade system. And these international policies link to South African's national crime prevention policies that include the 1998 *Prevention of Organised Crime Act* and its *Amendment* in 1999, the 1996 *Proceeds of Crime Act* and the overarching 1977 *Criminal Procedure Act*. These links are all depicted in pink in Figure 14.

[20] See earlier discussion under political and socio-economic instability that drives increased IWT

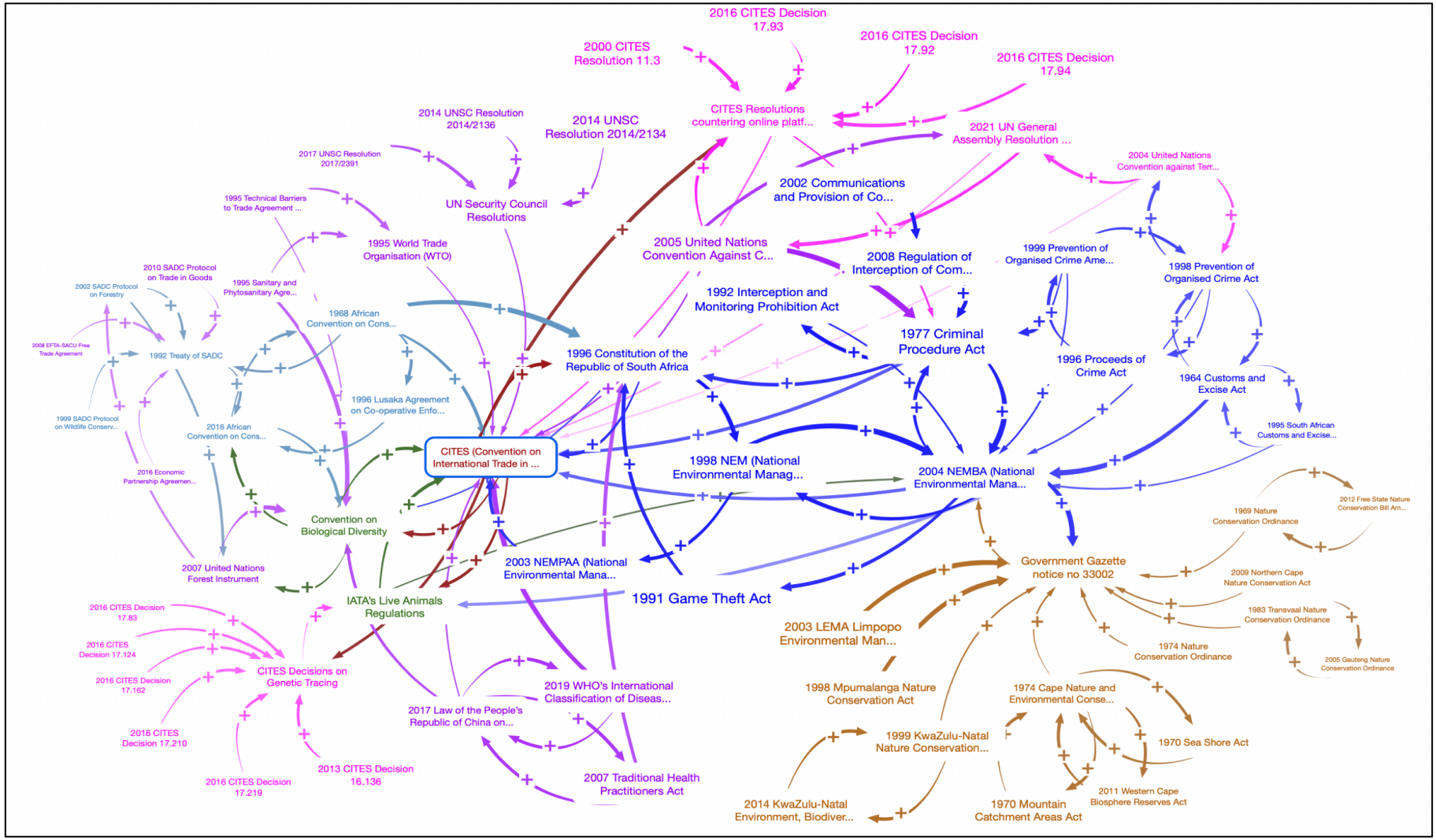

Figure 14 Policies that encourage scientific and technological innovation to curb IWT (in pink). The researcher developed the figure using the CONSIDEO MODELER software.

4.6 Theme 3: Changing trends in demand and information

There has been a move to increase demand for unregulated marine species through the trade in Haiwei (or dried seafood) and substitute species. The demand reduction campaigns discussed in the literature review have also attempted to shift consumer behaviour away from medicines that rely on unsustainable supplies, but these campaigns will form part of the next chapter's analysis. For now, it is important to document the policies that intend to shape consumer demand.

4.6.1 Expanding demand for Haiwei in China and for Chinese communities

At the 2019 CITES CoP18 meeting in Geneva parties voted to include sea cucumbers and shortfin and longfin mako sharks as Appendix II listed species. These species joined other shark and seahorse breeds that have already been listed under CITES Appendices. Their inclusion acknowledges the increased demand for these species as part of China's Haiwei industry.

CITES through the 2017 23rd meeting of the *Plants Committee Information Document 10*, also began to pay more attention to the growing effects of unregulated and illegal trade in wild medicinal plants, which also relates to provisions set out in the CBD. CITES decisions have similarly highlighted, as mentioned in chapter 2, the increased demand for substitute species and products. The 1994 CITES Resolution 9.24, which was amended again by CoP17, resolved to create and maintain accurate documentation of these substitute species to ensure their long-term sustainability.

The literature review noted that South Africa's coastal waters are a rich source of marine wildlife including abalone. In an effort to manage the illegal trade in such specimens South Africa enacted the *Marine Living Resources Act* 18 of 1998 which intends to protect the country's marine ecosystem and provide sustainable use, including trade, of marine life. The 1998 *Marine Living Resources Act* and its amendments establish institutions to manage the commercial and local fishing industry and marine conservation efforts. The Act prohibits fishing methods that do not promote sustainable use – for example the use of explosives,

cyanide and bottom trawling – and it outlines punitive measures. Part 3 of the Act outlines management plans and fishing priority areas and stipulates governing "high seas fishing" (Marine Living Resources Act 18 of 1998: Part 3). It also establishes marine protected areas in Stilbaai, Amathole, Prince Edward Island and Pondoland.

4.6.2 Misinformation in policy and practice

The broader role misinformation has played in recent years is cause for concern, especially when it comes to lobbying for species protection as discussed in chapter 2 and when navigating the effects of IWT and health threats associated with this trade. Conservation advocates, who inform policymaking processes, have relied on scientific evidence to make their case for curbing IWT. However, without robust research, even their policy proposals can become susceptible to misinformation. The 2013 NGO report discussed in the literature review that made unsubstantiated claims Crosta and Southerland published in 2016 linking Al-Shabaab, a terrorist group, to the ivory trade is one example[21].

As already mentioned, the *Constitution of South Africa* (1996) means to protect human rights including the freedom of speech. This particular tenet has been threatened in recent years with a surge in fake and inflammatory messaging that has threatened the very fabric of democracy. Although there are no specific international or regional policies enacted to control the spread of mis- and disinformation, South Africa's legislative measures during the Covid-19 pandemic do offer an illustrative example of how to manage such behaviour.

In 2020, the South African government recognised the potential harm mixed messaging could have on its ability to manage the Covid-19 pandemic and enacted Regulation 11(5) under the 2020 *Disaster Management Act: Regulations Relating to COVID-19* criminalising the distribution of "any statement through any medium including social media, with the intent to deceive" (Disaster Management Act: Regulations Relating to COVID-19 R480 of 2020). Punishment under this regulation was an unspecified fine, up to six months imprisonment or both, and the Minister of Communications and Digital Technologies was also able to instruct

[21] The report and all trace of the NGO Earth League International has since been removed.

service providers to remove fake news about the pandemic from their platforms and several individuals were arrested.

Figure 15 depicts these additional policies – in black – and overlays their influence on the larger policy matrix further illustrating the true complexity of the system. Besides illustrating how CoP Resolutions loop back to purportedly reinforce CITES' regulations, the diagram also shows how local policies such as the 2020 *Disaster Management Act: Regulations Relating to COVID-19* interacts with other local policies like the 1996 *Constitution* and the crime prevention provisions embedded in the CPA.

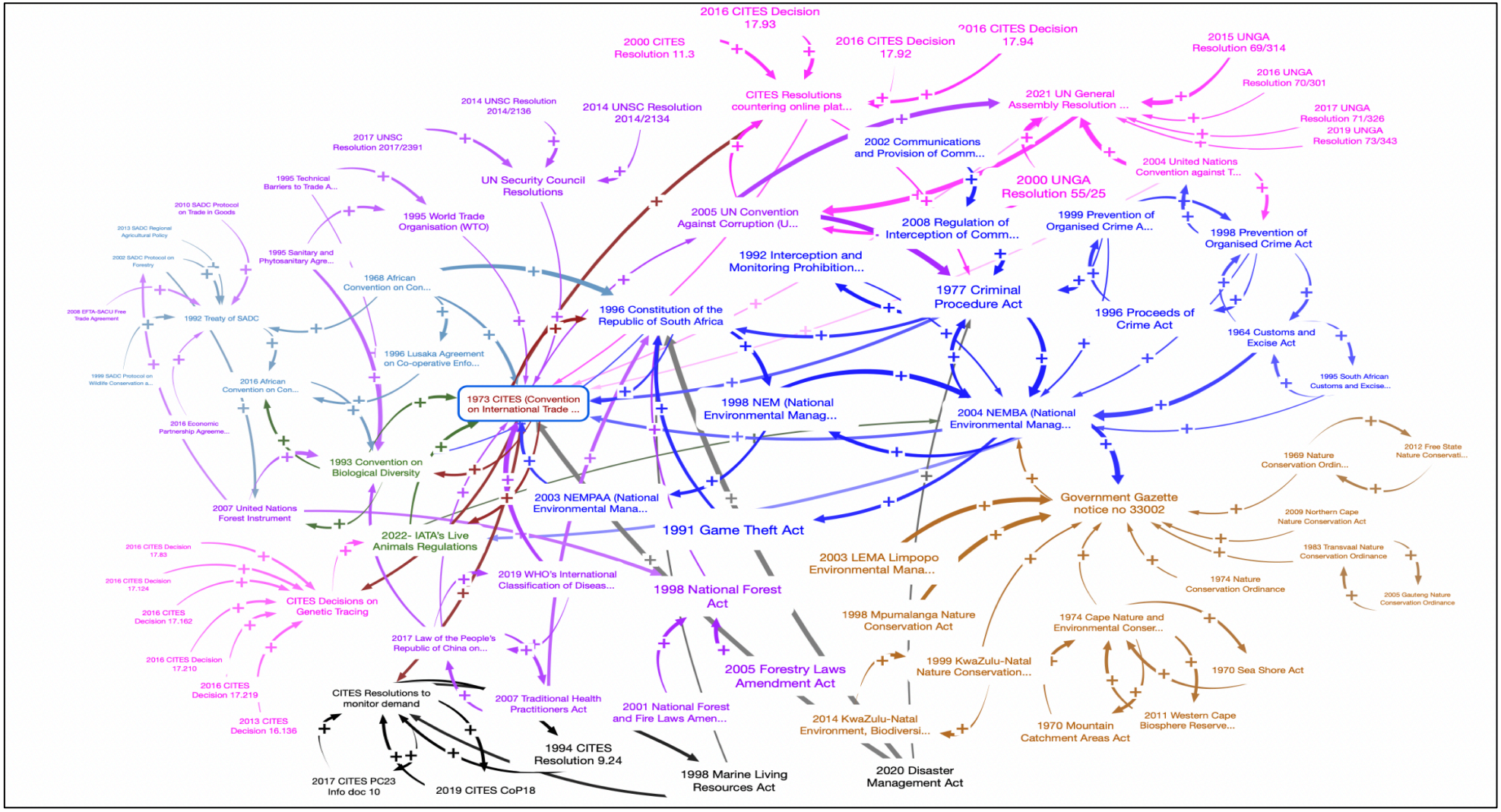

Figure 15 Using Information to influence demand for IWT- linked products (in **black**). The researcher developed the figure using the CONSIDEO MODELER software.

4.7 Conclusions

This chapter has illustrated the interaction of 80 policies that have been enacted on the international, regional, sub-regional, national and provincial levels. At the core of the IWT policy system is CITES which is supported by other international policies such as the CBD and the annually updated *IATA's Live Animals Regulations*. These policy instruments work in concert with the regional initiatives, both across the continent and within the sub-regional SADC alliance, such as the 2016 *African Convention on the Conservation of Nature and Natural Resources* and the 1992 *Treaty of SADC* and its specific Protocols that cover wildlife conservation, forestry management, trade and agricultural policy.

At a national level, South African policy makers have enacted legislation purporting to ensure fundamental human rights that guarantee freedom of expression and protect wild animals and the country's rich biodiversity. The latter initiative is embedded in the 1996 *Constitution of South Africa* and the various *National Environmental Management* policies, which in turn, interact directly with the CBD, CITES and other international and regional instruments. CITES and the CBD do stipulate, however, that enforcement of their provisions relies on the capacity and personnel of individual states and their respective environmental and criminal legislation. The South African national policies in turn rely on provincial law enforcement bodies to fund and implement these provisions. Unfortunately, several of these provincial laws are decades old with the Free State for example, relying on the 1969 *Nature Conservation Ordinance*.

As each diagram has shown, the degree of complexity clearly grew as each level was added to the policy matrix and its purported influence is mapped throughout the system. While each of these feedback loops are represented here as positive cycles (i.e. reinforcing the intended positive effect of ending IWT), the next chapter explores how this feedback can be used to determine the true impact of causality and its potentially negative or negated impact. By incorporating various measures, the causal loops illustrated in the next two chapters will estimate the degree and direction of political will in curbing IWT.

Chapter 5

Indications of Political Will at International, Regional, National and Provincial Policy Levels

5.1 Introduction

This thesis set out to develop a functional base to understand the dynamics of political will within the IWT policy system. Previous chapters discussed how scholars currently define 'political will' and identified some common elements. They also established that scholars narrowly define such commitment as the acts of a central body of policy makers without determining the degree and effect of the commitment that is present throughout the policy development system.

Data gathered for this study was predominantly from secondary sources including journal articles, newspaper articles, institutional strategies, websites and other reports. Given the open nature of the IWT policy system, indications of political will were collected by selecting information that was "necessary and sufficient, but not exhaustive" (Brinkerhoff 2015: 5). The collection process was also purposive since there is limited specific research on the concept of political will and its link to policies looking to control the illicit wildlife trade.

This chapter uses the indicators outlined in chapter 3 to discuss the presence of political will within the South African IWT policy system that was illustrated in chapter 4's reinforcing feedback loop diagrams. These indicators of political will assess: the importance and prominence of decision makers involved in policy discussions; whether a policy enforcement mechanism with incentives and disincentives for implementing the policy was established; if human resources were committed to the policy's implementation; whether suitable financial resources were committed to the policy's implementation; if milestones were integrated into the policy implementation initiative; the presence of a monitoring and evaluation mechanism; if this monitoring mechanism was suitably funded; whether regular reports were received from the monitoring team; if new policy recommendations were debated; and, whether new policy recommendations were enacted.

The CITES Convention is at the heart of all efforts to manage IWT, which is why this study traced the strategies and additional policies that support and enforce its provisions. This chapter's data collection discusses how CITES and its Secretariat operate and who funds its work, both are considered indications of political will. Beyond this structural aspect, CITES' provisions have also been embedded in other internationally aligned strategies such as the CBD's Aichi Targets and the UN's SDG objectives. Additional regional as well as the South African national and provincial initiatives that have been designed to support CITES are also discussed under separate sections in this chapter.

5.2. Political will to support international policies governing IWT

Chapter 3 noted that one indication of political will is whether regular meetings are convened with senior decision makers and other key actors to discuss policy and possible amendments. Within the CITES structure, every two to three years signatories form a central decision making body or Conference of Parties (CoP) meet with NGOs and other stakeholders to discuss the effectiveness of their safeguarding measures. The agendas for these CoP meetings rely on the prevailing international political context and how Parties lobby each other to either support or block proposals.

The EU and the voting decisions of the 2010 CoP15 meeting in Doha is an interesting case in point. Under normal circumstances the 28 members of the EU which still included the UK typically voted as one block (CITES, 2013). At the Doha meeting, the UK broke with its European allies to vote in favour of further protections for the Atlantic Bluefin Tuna. The species is caught largely in international waters with nearly 80% of the catch servicing the demand for sushi (Jones, 2010). At the time, it was battling a sharp increase in demand, warming oceans and then, a month after the Doha meeting, also had to contend with the BP oil spill that contaminated a key breeding ground. Nevertheless, the EU partners did not agree on the need to protect the species and were irritated with the UK's very public show of dissent (Jones, 2010).

Another key indication that effects the degree of support offered towards CITES and its

preservation initiatives revolves around how the body and its activities are funded. Indeed, adequate and sustainable financing is one of the ten indicators of political will discussed in an earlier chapter because it establishes the resources that are available to implement a policy. In this case, the CITES Secretariat, the various CoP meetings, various sub-committee meetings and the standing and other permanent committees are all financed through the CITES Trust Fund. The Fund itself receives contributions from those countries who are CITES signatories at levels that are determined by the UN. Other entities such as the European Commission and individual countries looking to support specific initiatives have also contributed additional funds.

The role civil society organisations play in ensuring the success of CITES is another indication of the system's political will. According to Article XIV, the CITES Convention cannot override measures designed to protect customs, public health and quarantine laws. Given the complexity and range of these measures, countries need help to manage and monitor policy compliance. On an international level, actors such as the International Maritime Organisation (IMO), the International Union for Conservation of Nature (IUCN) and the Secretariats of Conventions, provide the CITES Secretariat with essential expertise to support these efforts (Haas, 2014: 13). Non-governmental organisations (NGOs) such as the World Wildlife Fund (WWF), TRAFFIC, The Endangered Wildlife Trust (EWT) and the International Fund for Animal Welfare (IFAW) also provide pertinent advice. They also use their research and considerable experience with implementing CITES regulations to raise awareness and spur debate around key problems at CoP meetings. Again, these are all indications of political will as outlined earlier and in chapter 3.

Also working to support CITES provisions is the *Strategic Plan for Biodiversity 2011-2020,* which was adopted in 2010 at the Nagoya meeting in the Japanese Aichi Prefecture. The Plan provides an overarching framework on biodiversity for the entire UN system, including the CBD, and all stakeholders charged with managing biodiversity and policy initiatives. As signatories, parties agreed to revise their national biodiversity strategies, a clear indication of political commitment by member states which included South Africa.

The Plan includes the Aichi Biodiversity Targets that centre around five strategic goals:

- Addressing the underlying causes of biodiversity loss with four specific targets aimed at promoting the concept and its effects at national and local levels;
- Promoting sustainable use of nature and natural products with six targets designed to reduce pressure on atmospheric, marine and terrestrial ecosystems such as forests;
- Safeguarding ecosystems, species and genetic diversity with three targets to protect threatened and domestic species;
- Ensuring that all human beings, through three targets, are able to benefit from sustainably managed ecosystems; and,
- Developing capacity and the commitment towards implementing the Strategic Plan for Biodiversity with four targets ensuring participation at all levels including communities and a knowledge management system.

In addition to the Aichi Targets, a meeting of the 2015 UN General Assembly adopted Resolution 69/314, which recognises the outcomes of CITES CoP16 and commits member states to firmer action to IWT. This commitment resulted in the 17 Sustainable Development Goals (SDGs) adopted at the 2015 UN Sustainable Development Summit.

The impact of IWT is specifically recognised in SGD 15's targets which state:

15.5 "Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species" (UN, 2018: 16);

15.7 "Take urgent action to end poaching and trafficking of protected species of flora and fauna and address both demand and supply of illegal wildlife products" (UN, 2018: 16); and,

15.c "Enhance global support for efforts to combat poaching and trafficking of protected species, including by increasing the capacity of local communities to pursue sustainable livelihood opportunities" (UN, 2018: 17).

The 2021 UNGA Resolution, discussed in chapter 4's policy feedback loops, also linked its call

to the SDGs and, while not explicitly stated, the resolution seems to echo SDG 15.7.

A 2012 WWF report also noted that IWT undermines local economies, legitimate opportunities for employment, encourages corruption and deprives governments from recovering the tax revenue they need to sustain and develop their society and achieve the ideals of the SDGs. Hollie Booth and her colleagues (Booth et al., 2021: 2) maintain that IWT, "has direct positive and negative contributions to the '5Ps' of the SDGs (People, Prosperity, Peace, Partnerships and Planet), and indirect contributions via SDG interactions, feedbacks and policy Interventions".

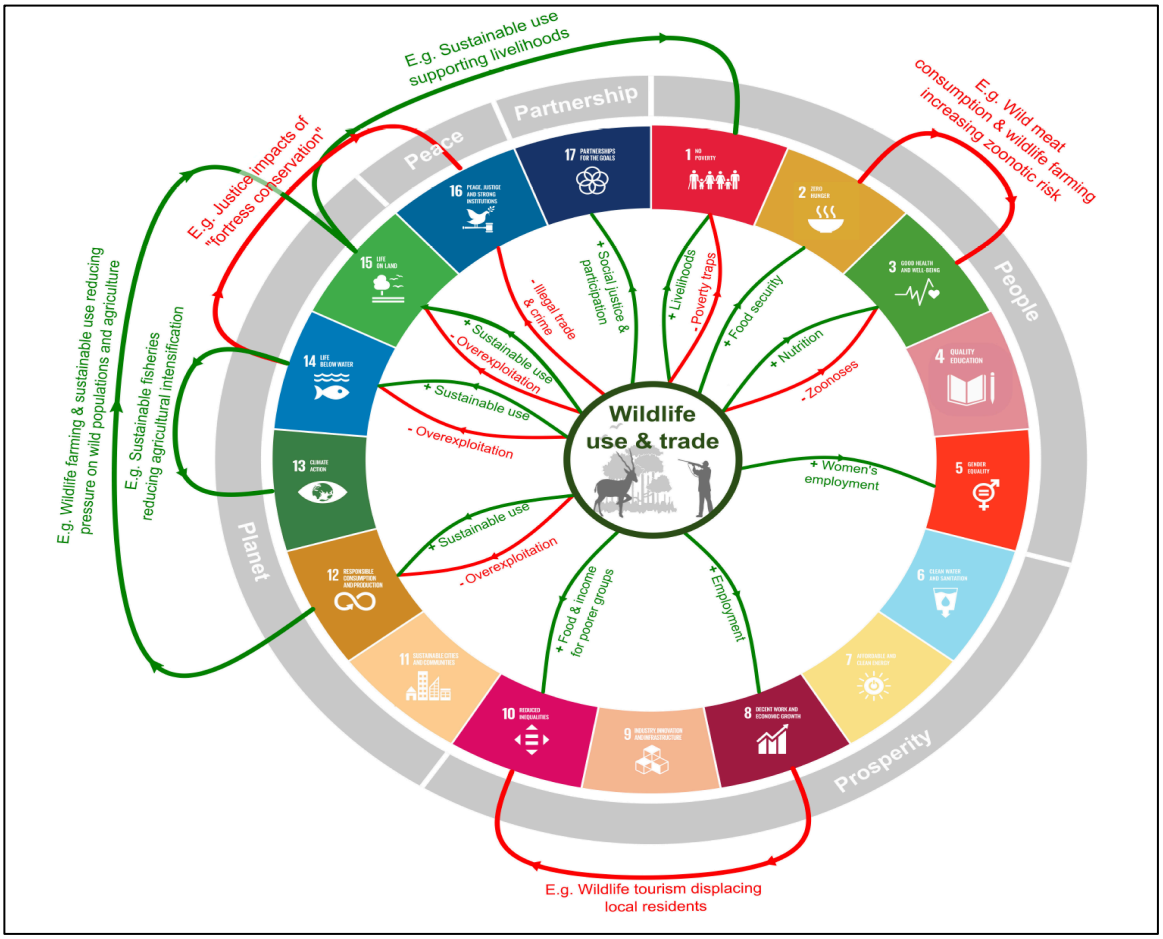

Figure 16 Examples of positive (green) and negative (red) contributions of wildlife trade to the SDGs (Booth et al., 2021: 3)

As illustrated in Figure 16, several other SDG goals and targets address or are affected by IWT. These include:

- **SDG 1: To end poverty** — targets "equal rights to men and women, and in particular

the poor and the vulnerable, to economic resources, as well as ownership and control over land and natural resources" (UN, 2018: 1). Poverty is a major challenge across the African continent that is fuelled by a lack of infrastructure, agricultural development, desertification, deforestation and climate change. Given the few legal economic and agricultural opportunities that exist for communities, particularly in source countries, insecurity is a common reason cited for individuals choosing to participate in poaching operations and IWT. The lure of short-term cash gains that the trade promises can be used to feed a family or community and often supersedes long-term environmental considerations and the legitimate use of wildlife resources.

- **SDG2: Zero Hunger** — purports to "[e]nd hunger, achieve food security and improved nutrition and promote sustainable agriculture" (UN, 2018: 2) while also interlinking with other goals such as promoting sustainable agriculture and supporting small farmers (under target 2.3), entrenching gender equality (SDG 5), ending rural poverty (SDG 1), reducing inequality (SDG 10), developing healthy lifestyles (SDG 3), and implementing policies to sustain tourism and promote local culture and products (SDG 8 Target 8.9). Tourism, for instance, contributes between 5 to 10% of a nation's economy (UNEP 2014) and wildlife tourism is particularly important for source countries, contributing some 60% of their annual revenue (UNWTO, 2015). An elephant has been calculated to be worth around 76 times more alive than dead — in 2013, it was estimated that the black-market value of one elephant tusks was worth US$21,000 but over its lifetime that same elephant could generate around US$1.6 million in tourism (David Sheldrick Wildlife Trust, 2014). IWT and the poaching operation that supplies it threatens the long-term survival of the tourism industry and the employment it generates.

- **SDG 3: Good Health and Well-Being** — purports to ensure "healthy lives and promoting well-being for all at all ages" (UN, 2018: 3). While there is no explicit reference to IWT and its contribution to manufacturing traditional medicines, this goal does commit to reducing maternal mortality, ending AIDS, tuberculosis, malaria and other communicable diseases and reduce mortality rates from non-communicable disease — all of which TAM claims to be able to address. Given the impact of the

COVID 19, SARS and Ebola outbreaks, this goal has become more important to stop the proliferation of wet markets and the possibility of germinating zoonotic outbreaks that threaten human health and well-being.

- **SDG 8: Decent Work and Economic Growth** — promotes “sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all” (UN, 2018: 8). This target includes the need to encourage employment opportunities for vulnerable groups, specifically women, the urban low-income and poor residents as well unemployed rural dwellers. As illustrated in the Ghana bushmeat trade discussed earlier, this goal can produce unintended consequences that also compromise the objectives listed in SDGs 1 and 10.

- **SDG 10: Reduced Inequalities** — of specific importance is 10.B: “Encourage official development assistance and financial flows, including foreign direct investment, to States where the need is greatest, in particular least developed countries, African countries, small island developing States and landlocked developing countries, in accordance with their national plans and programmes” (UN, 2018: 10). This provision links to SDG 1 and is something that the New Partnership for Africa’s Development (NEPAD), launched in 2001, seeks to address. It relates to IWT because successful policy implementation and evaluation require substantial capital and human resources that most developing countries cannot afford.

- **SDG 11: Sustainable Cities and Communities** — aims to "make cities and human settlements inclusive, safe, resilient and sustainable” (UN, 2018: 11). Promoting sustainable human settlements was originally included in the Millennium Development Goals and in Chapter 7 of Agenda 21, which was published after the UN Conference on Environment and Development held in Rio de Janeiro in 1992. It aimed to achieve sustainable development by 2000 from the local level with governments enacting their own policies to support this comprehensive action plan. In doing so, Agenda 21 advocated for adequate shelter for all, improved infrastructure access, planning and management, as well as developing sustainable energy and transport systems. These and the eventual SDG 11 also affect the nature and potential risk of

human-wildlife conflict as more land is reclaimed and forests are decimated as more infrastructure is built. Since almost half of the 200 UNESCO natural heritage sites across the world are affected by IWT, the illicit industry threatens to thwart SDG target 11.4 of safeguarding our cultural and natural heritage (TRACIT, 2019: 123).

- **SDG 14: Life below Water** — proposes to "[c]onserve and sustainabl[y] use the oceans, seas and marine resources for sustainable development" (UN, 2018: 14). This objective appreciates how important the planet's ecosystem is to human well-being and requires that marine resources be managed and used in a sustainable manner. Of particular importance here, is the illegal trade in marine species such as sharks, abalone and sea cucumbers which CITES sought to regulate at CoP 17.

- **SDG15: Life on Land** — over and above what was outlined earlier, this SDG encourages member countries to "protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss" (UN, 2018: 15). This links to the CBD and the Aichi Biodiversity Targets, which are discussed at greater length in this chapter. It also has direct bearing on the need to regulate the bushmeat trade and the trade in illegal timber that is exacerbated by the urbanisation and that promotes human-wildlife conflict.

- **SDG 16: Peace, Justice and Strong Institutions** — this provision appreciates new and emerging social, economic and environmental challenges and promotes international efforts to incorporate a science-policy interface. In 2012, the Rio+20 conference established an "intergovernmental high-level political forum" to build "on the strengths, experiences, resources and inclusive participation modalities of the Commission on Sustainable Development" (OECD, 2019: 16-17) This high-level political Forum on sustainable development is the UN's main platform for such endeavours and provides political leadership, guidance and recommendations. But IWT and its prodigious growth hinders achievements under this goal. It, for instance, encourages illicit financial flows, funds insurgent groups, muddies institutional transparency with corrupt behaviour and generally circumvents the rule of law at

international, regional and national levels (OECD, 2019: 16-17; CITES CoP 17, 2016; May, 2017).

- **SDG 17: Strengthen implementation and global partnerships** — aims to "[e]nhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the sustainable development goals, including through North-South, South-South and triangular cooperation" (UN, 2018: 17). An important expression of political will, this provision aims to support governments and stakeholders through initiatives that support micro, small, and medium-sized enterprises (MSMEs), workshops and online training courses, monitoring mechanisms and effective partnerships. This is particularly important for regulating IWT because local authorities and communities need support to implement the various policy provisions.

CITES has also recognised the effect of IWT in wild medicinal plants and listed these species in the 2017 PC23 Information Document 10, which also relates to provisions set out in the CBD. These measures are supplemented by SDG 15 and its goal to promote sustainable life on land and involve a range of stakeholders. These include international multilateral and intergovernmental bodies (e.g. CBD, CITES, WTO, FAO, WHO, UNEP), the regional and national pharmaceutical market and labelling regulators, national importation regulators and customs agencies. There has also been a marked shift in demand for substitute species and products to replace ingredients such as rhino horn. Other examples include lion and leopard bone in place of tiger parts, the growing medicinal and edible orchid trade in place of traditional plant species and the increasing use of *Eulophia* species used in Ayurvedic medicine and *Dendrobium* species used in TAM (Hinsley et al., 2017). CITES has listed analogue or look-a-like species in recent years to thwart their unsustainable harvesting and export. These initiatives involve additional stakeholders such as national biodiversity and scientific authorities, the national and international transportation industry, international multilaterals and agreements (e.g. CBD, CITES, CMS, AU, WTO and IUCN) as well as intergovernmental, regional and bilateral trade bodies.

The CITES CoP meetings in 2017 and 2019 recognised that the rising demand for seahorses,

shark fin, abalone and sea cucumbers as part of the growing popularity of Haiwei, affected marine ecosystems around the world (WWF Hong Kong, 2018). In conjunction with SDG 14 and its aim to "end illegal and unreported fishing and destructive fishing practices" (UN, 2018: 14), various actors are involved in trying to contain the threat. Provincial and national governmental bodies in the main TAM markets (e.g. Chinese central, Guangdong and Guangxi provincial, Hong Kong SAR and Vietnamese governments) including law enforcement agencies and biodiversity and scientific authorities. Other private sector members, particularly industry bodies for Haiwei (e.g. Guangzhou Dried Seafood and Nut Industry Association), have been involved as have regional and international multilaterals and intergovernmental bodies, including trade and fisheries bodies (e.g. FAO Code of Conduct for Responsible Fisheries, Regional Seas Conventions).

Also in 2017, and through the UNFF, the UNGA adopted the first *UN Strategic Plan for Forests (2017-2030)*. This plan features six Global Forest Goals and 26 associated targets to be reached by 2030. Broadly speaking, the six goals include: reversing forest loss, enhancing forest-base benefits, increasing sustainably managed forests, mobilising financial resources, promoting governance frameworks such as the UNFI, and enhancing international cooperation. Perhaps the most significant provision is the target to increase the planet's forest area by 3% or 120 million hectares, a challenge each member state voluntarily agreed to implement. In addition, Annexure I focuses on the effect illegal activities have on sustainable forest management across the African continent.

The inextricable link between trade and the sustained growth of forests and the broader environment is a key feature of a number of trade policies and agreements. Together, these measures aim to manage the effect commerce and related policies have on the ecosystem and vice versa. They also control how trade measures can help achieve specific environmental policy targets. As inspiring as these initiatives are, their success relies on the degree of commitment various stakeholders invest. An indication of their political will can be seen in the over 30 different multilateral environmental agreements and over 200 global treaties that regulate cross-border environmental matters. These include: the Basel Convention (which manages the trade of hazardous materials); the Montreal Protocol (that bans trade in certain ozone depleting substances); the Rotterdam Prior Informed Consent Convention (that

manages trade in chemicals and pesticides); the Cartagena Protocol on Biosafety (which restricts import of some genetically modified organisms); and, the Stockholm Convention on Persistent Organic Pollutants (that bans the "Dirty Dozen" group of organic pesticides that includes DDT and dieldrin).

Trade is one evaluative marker of political will. Another is the ability to investigate and prosecute acts of malfeasance and corruption. The United Nations Convention Against Corruption (UNCAC), for instance, is an international multilateral treaty that aims to reduce misconduct and was adopted by the UNGA in 2003 following negotiations among UN member states. It recognises the complex nature of corruption and includes incidents where political power is misused, private and public sector embezzlement and money laundering. The Treaty also appreciates the need to counter such corruption through international cooperation that pursues preventative measures and strengthens law enforcement and judicial cooperation to, among other things, recover assets. While the UN Office on Drugs and Crime (UNODC) is responsible for enforcing the treaty, UNCAC also assists civil society and NGOs research, train and facilitate public access to such information. In 2006, the UNCAC Coalition, a global network of some 350 civil society organisations based in over 100 countries, committed to implementing and monitoring UNCAC. As organisations dedicated to greater transparency, these organisations work at a national level and contribute to the regular UNCAC review process.

The United Nations Convention against Transnational Organized Crime (UNTOC or the 'Palermo Convention') was also adopted by the UNGA in 2000 and came into force in 2003. It was the first convention to fight transnational organized crime. Initially it targeted illicit trade in human beings and terrorism but in 2014 its remit expanded to include wildlife smuggling. The International Consortium on Combating Wildlife Crime (ICCWC) is another partnership that combines five inter-governmental organisations — CITES, Interpol, the UNODC, the World Bank and the World Customs Organisation — to support regional networks and national wildlife enforcement agencies. The Consortium was formally established in 2010 and works to build operational and technical capacity that will help local and regional agencies arrest and prosecute wildlife criminals. This includes access to globally mandated databases and the use of secure communication channels to help keep enforcement agencies abreast

of developments in real-time. ICCWC partner agencies are also able to assist with coordinating multi-national operations that target illegal trade and smuggling.

Some 15 years later, in 2018, 20 banks agreed to enforce money laundering laws. As part of this agreement, colloquially known as the Mansion House Declaration, parties pledged to gather intelligence on traders involved with poaching threatened species. This collaboration between financial institutions to stem illicit financial flows is one measure intent on promoting SDG 16 and reinforcing strong institutions.

Yet another example is the Financial Action Task Force (FATF) Recommendations which standardises regulations to curb money laundering, terrorist financing and other actions that threaten the integrity of the international finance system. First enacted in 2012, the FATF Standards were amended in 2022 to include Recommendations and their Interpretive Notes so that its provisions can be clearly understood across legal and financial systems. This transparency provides a framework within which countries and international organisations such as the IMF and the World Bank can act against the illicit use of their financial systems (FATF, 2012-2022). The FATF concentrates on curbing the illicit financial flows of terrorist organisations which, as mentioned in the literature review, reportedly use IWT to finance their operations.

5.3 Political will to support regional policies governing IWT

To further extend international policies and agreements, there needs to be an alignment at the broader regional level. The goals of SDG 17 were designed to do exactly that as they were meant to support and guide broader conservation and sustainable development commitment at the regional and sub-regional level. The objective was to support governments, private sector partners and civil society stakeholders as they enacted their own measures to contain illegal trade while bolstering sustainable economic development for their citizens. This section highlights some of the key strategies, partnerships and financiers that support the continent's efforts to manage IWT and discusses what has been implemented within SADC. There certainly is political will within the region to address environmental concerns but these have also had to compete with other political and economic priorities.

The continent has struggled to boost its agricultural output and promote greater food and economic security. In 2003, for instance, the African Heads of State and Government signed the *Maputo Declaration on Agriculture and Food Security* which advocated for a pan-African programme to develop agricultural production and food security. This programme became known as the Comprehensive Africa Agriculture Development Programme (CAADP). It pushed African states to increase what their national budgets spent on agriculture to a minimum of 10% and raise production by at least 6%. Some 44 states have signed the CAADP and 39 states, including South Africa, have formulated national, agriculture and food security investment plans. The CAADP embodies the AU's core principles to promote African/local land ownership, transparency and accountability, mutual partnerships and inclusiveness, and to advocate for institutional and policy reforms.

Of particular interest here is the provision to mitigate the increased potential for human-wildlife conflict by building national legislative capacity to address forest-related illegal practices such as wildlife poaching (CAADP, 2003: 54). This involves implementing projects across the continent that promote other forms of food and economic security rather than concentrate on illegal logging and wildlife trafficking activities. For instance, there are several programmes that complement the CAADP and show a healthy degree of political will on the continent for managing this problem. They include initiatives that have been enacted since 2003 under the New Partnership for Africa's Development (NEPAD):

- African Biosciences Initiative (ABI) that develops biological applications to increase agriculture production;
- Agriculture and Food Insecurity Risk Management (AFIRM) Programme that seeks to manage the risks farmers and other stakeholders must navigate;
- Agriculture Technical Vocational Education and Training (ATVET) that purports to teach essential skills and technical innovations within the agriculture sector;
- The Climate Change Programme that aims to help African states cope with the effects of climate change by building national, sub-regional and continental capacity;
- The Food and Nutrition Security Programme that is working to improve nutrition

across the continent; and,

- The Fish Governance and Trade Programme that wants to improve sustainable returns from Africa's fisheries.

The Africa Forest Landscape Restoration (AFR100) Initiative is another strategy meant to regain 100 million hectares of land, by 2030, that has been compromised by deforestation or degraded forests across the continent. It contributes to the targets set by the Bonn Challenge[22], the African Resilient Landscapes Initiative[23], the AU's Agenda 2063[24], the SDGs – specifically SDG 2, 11 and 15 – and the CBD. AFR100 is a partnership of 31 African governments and several financial and technical partners including the World Bank, the Swedish International Development Cooperation Agency, the German Federal Ministry of Economic Cooperation and Development and the German Federal Ministry of Environment, Nature Conservation and Nuclear Safety as well the Global Environment Facility. There are also a number of private sector partners who contribute significant funding to this initiative including Green World Ventures, Moringa Partnership, Permanian Global, NatureVest, Form International, Terra Global Capital and the Green Fund.

The CAADP also works to strengthen state capacity to address forest-related illegal practices, including wildlife poaching in a manner aligned to specific domestic legislation. The African Union Sustainable Forestry Management Programme Framework also supports the AU Agenda 2063 and its target of protecting forests from degradation and deforestation and increased incidents of human-wildlife conflict. It links with the SADC Forestry Strategy (2020-2030) described below and aims to develop technical and financial partnerships amongst member states.

At the continental level, South Africa is one of 31 countries to ratify the African Continental Free Trade Agreement (AfCFTA). This is a trade agreement that aims to establish a single continental customs union and market for goods, services and investments. Its purpose is to improve broader socio-economic development by making the continent more competitive.

[22] A global commitment to restore 150 million hectares of land by 2020
[23] An initiative to promote integrated landscape management
[24] A continental strategy to promote economic prosperity and sustainable development led by African citizens

The AfCFTA also addresses key policy measures including sanitary and technical barriers to trade. As the literature review mentioned, the free flow of legal goods and the elimination of non-tariff barriers that are necessary to promote a Free Trade Area, also increase the flow of illicit goods and make it harder for monitoring organisations to track. The AfCFTA officially commenced in 2021, while strict COVID-19 restrictions were still largely in force, but the World Bank anticipates that it will still boost intra-Africa trade and generate $450 billion by 2035 (World Bank, 2020). This is seen to work in tandem with the African Union's Agenda 2063 and the SDGs. In January 2022, the Pan-African Payments and Settlements System (PAPSS) was established allowing companies in Africa to pay their partners and beneficiaries in their local currency. This additional measure will streamline cross-border transactions for all stakeholders including governments, banks, corporates, small enterprises and individuals. But it will also affect cross-border payments related to IWT and may even make it easier for the IWT supply chain to operate.

At the sub-regional level, Article 3 of the *SADC Treaty* requires members to adopt policy and legal measures that ensure environmental conservation which includes containing IWT. Good examples of this are the *SADC Regional Indicative Strategic Development Plan* and the *SADC Regional Programme for Rhino Conservation* which require members to co-operate at an inter-governmental level to protect wildlife in the region and combat IWT (Du Toit, Brooks and Emslie, 2006: 6). This regional programme linked to the *Protocol on Wildlife Conservation and Law Enforcement* (1999) and was also supported by the SADC Law Enforcement and Anti-Poaching Strategy (LEAP) (2016-2021) which monitors rhino populations while raising public awareness of the species' plight and the illegal trade in rhino horn.

Another protocol, the *SADC Protocol on Trade in Goods,* is aimed at liberalising intra-regional trade by creating mutually beneficial arrangements geared towards improving investment and productivity in member states. This Protocol is monitored by the Trade Monitoring and Compliance Mechanism and eliminates non-tariff barriers while measuring the needs of Free Trade Areas. It is also supported by the SADC Green Economy Strategy and Action Plan for Sustainable Development published in 2015. This latter strategy was meant to mitigate energy and economic vulnerabilities by helping member states adapt to climate change and promote environment-saving initiatives including protecting the sustainable development of

flora and fauna species. Both Protocols link to the *SADC Regional Agricultural Policy* which was adopted in 2013. To implement these, SADC member states adopted the SADC Regional Investment Plan (2017-2022). Among other things, the Plan purports to control illegally harvested and traded forest and fisheries products through surveillance and monitoring systems while promoting legal cross-border trade and sustainable forest and fisheries management.

In support of these efforts, the Southern African Customs Union (SACU), comprised of South Africa, Lesotho, Eswatini, Namibia and Botswana, was formed to preserve favourable trading conditions and protect employment in each of these countries. The 2002 SACU Agreement also negotiated duty-free movement of goods between member states and a common external tariff on goods imported from other countries. While these agreements primarily cover trade in traditional goods and services, they do incorporate some measures that align with international policies such as CITES, the CBD and the *IATA Live Animals Regulations* in an attempt to curb IWT.

To support the *SADC Protocol on Forestry* (2002), the regional body developed its own Forestry Strategy (2010-2020) to ensure "a vibrant and evolving forest sector that contributes significantly to rural development, poverty reduction, industrial progress and vital environmental services" (SADC Forestry Strategy 2010-2020: 4). The strategy links to relevant international policies such as the CBD and its Aichi Targets, the SDGs and other regional initiatives connected to SADC's Strategic Programme Areas. These include efforts to manage: climate change; develop legal intra-regional trade in forest products through the SADC regional forest law enforcement, governance and trade (FLEGT) programme; and, to reinforce trans-boundary forest and fire management initiatives. South Africa is also currently negotiating a bilateral fire management agreement with Eswatini; reducing emissions from deforestation and forest degradation through the REDD+ programme; and, the JICA / SADC Project on Forest Conservation and Sustainable Management of Forest Resources in Southern Africa (2015-2020) (African Natural Resources Centre, 2021: 4; SADC Forestry Strategy 2020-2030: 1). The Strategy also outlined key monitoring and measurement indicators and proposed developing a Secretariate to raise funding and to implement this strategy along with several Specialist Working Groups. In revising the strategy to manage the region's forests

between 2020-2030, the SADC acknowledged that its original approach was inadequately promoted to member states and did not adequately explain the Secretariate's role. It also acknowledged that there were no tangible financial and human resources allocated to the strategy (SADC Forestry Strategy 2020-2030: 1).

In a bold move, Article 4 of the *SADC Protocol* advocated for transfrontier conservation areas to further promote wildlife conservation efforts. The Peace Parks Foundation, founded in 1997 by Anton Rupert, former President Nelson Mandela and Prince Bernhard of Lippe-Biesterfeld in the Netherlands, was an initiative designed to meet this provision. The Foundation purports to restore critical ecosystems that transcend man-made boundaries to "regenerate natural and cultural heritage vital to enabling and sustaining a harmonious future for man and the natural world" (Peace Parks.org, 2022). The Foundation helped to create the Greater Limpopo Transfrontier Park between South Africa and Mozambique, the Ais/Richtersveld Transfrontier Park between Namibia and South Africa, the Kgalagadi Transfrontier Park between Botswana and South Africa, and the Limpopo/Shashe Transfrontier Park between Botswana, South Africa and Zimbabwe. The idea of the parks is laudable but there have been several issues with managing them which is also required of the *SADC Protocol*. Jones (2010) cites the increased trafficking of rhino horn as a primary effect of this initiative, thanks in part to the irreconcilable difference between conservation and rural livelihoods. As mentioned in the literature review, the resentment these parks have created within communities along the South African / Mozambique border, who view these lands and their yields as part of their cultural heritage, is compounded by the somewhat uneven enforcement of illegal trade penalties. Mozambique only very recently enacted laws that consider trade in rhino horn an illegal and punishable offense (Duffy, 2017).

5.4. Political will to support national and provincial policies governing IWT

Under CITES, the CBD provisions and as a member of the African Union and SADC, South Africa must enact national and provincial measures to manage the trade in wildlife and enforce sanctions to dissuade illegal activities. As discussed in the previous chapter, these measures stem from Section 24 of the *Constitution of South Africa* (Act 108 of 1996), which anchors all policies in South Africa including those aimed at protecting the country's biodiversity and the

survival of wild animals. This section of the Constitution certainly depicts South Africa's commitment to protecting the country's common heritage (Paterson and Kotze, 2009: 150), but does not acknowledge the broader impact humanity has on the environment. To fill this gap, the courts have tied the welfare of animals to the biodiversity and conservation interventions effectively expanding the country's legal scope. The rulings by the Pietermaritzburg High Court[25] (2009), the Supreme Court of Appeals (2014[26] and 2014[27]) and the Constitutional Court[28] (2016) are such examples.

Also discussed at length in the earlier chapter, South Africa has enacted NEMA and NEMBA as key regulatory measures to protect the country's environment and wildlife resources. Under NEMA's provisions the country did increase the intelligence security and awareness of the rhino horn trade. There are also specific initiatives that aim to implement NEMA and NEMBA's provisions and link these to international and other regional initiatives including the UN's SDG commitments. These include:

- the *White Paper on the Conservation and Sustainable Use of South Africa's Biological Diversity of 1997*, which recognised the need to manage those ecosystems that exist outside of formally protected areas;
- *National Biodiversity Strategy and Action Plan 2005* (2015-2025), a long-term plan of action aimed at conserving South Africa's biodiversity;
- *National Biodiversity Framework 2008* (2019-2024), which governs the efforts of organizations and individuals involved in conserving and managing the country's biodiversity;
- *National Protected Area Expansion Strategy (NPAES) of 2008.* NPAES and its 2016 amendment outline a cost-effective approach to expanding the ecologically protected

[25] Natal Zoological Gardens (Pty) Ltd and others v Ezemvelo KZN Wildlife and others, Pietermaritzburg High Court, case number 5945/09 (judgment delivered on 13 August 2009) placed the need to recognise wildlife welfare on record.
[26] Lemthongthai v S (849/2013) [2014] ZASCA 131 25 September 2014 at par 20 connected the welfare of animals to biodiversity and conservation.
[27] Macrae v The State, Supreme Court of Appeal, case number 93/2013 (judgment delivered on 28 March 2014) also cited the need to recognise wildlife welfare.
[28] [2016] ZACC 46 at pars 57 and 58 connected animal welfare to broader environmental rights.

areas in the country;

- the *Biodiversity Economy Strategy 2016 – 2030,* which purports to grow wildlife and the bioprospecting industries within the country; and,
- Specific provincial biodiversity strategies and protected area expansion strategies.

NEMA and NEMBA also make provision for fora to monitor and evaluate the implementation of their provisions. Through NEMA, the DEA and provincial and municipal environmental departments are able to employ environmental enforcement officials, also called Environmental Management Inspectors (EMIs) to inspect, monitor and enforce compliance (Paterson and Kotze, 2009: 162). These EMIs are not able to prosecute cases in court but they can work closely with the South African Police Service (SAPS) and are able to seize evidence while investigating or searching a crime scene and enforce aircraft surveillance.

Since the 1990s Environmental Management Cooperation Agreements (EMCAs) have also been a popular policy tool used to improve environmental performance (Fischer, 2008). Under NEMA's provisions the South African government pursued such agreements with game farmers and other private entities. The agreement with the Paramount Group to provide air support to track poaching syndicates in the Kruger Park was one such example. Another was the 2013 appointment of retired Major General Johan Jooste as head of Special Projects for the South African National Parks. His role was to oversee the anti-poaching operations within the Kruger Park as part of a "multipronged strategy agreement" to combat poaching and illegal trade (Baline, 2013). Jooste's military experience along the Angolan border during the apartheid era was thought to be an added advantage but given the continued prevalence of poaching this move seems to have had marginal results. Furthermore, as useful as these EMCAs were purported to have been, they were not binding and allowed private parties to withdraw without notice or penalty (McDonald, 2002).

There are also a few additional official notices that highlight the government's commitment to preserving the environment and the wildlife it sustains. *Government Gazette Notice no 36096* incorporated the Biodiversity Management Plan for Black Rhinoceros in South Africa for 2011-2020. Developed according to the 2009 National Norms and Standards for the Development of Biodiversity Management Plans for Species, its goal was to ensure the long-

term survival of the African rhino in the wild. The Plan was particularly concerned with protecting black rhinos and hoped to achieve a 5% growth rate of the species per annum. It also suggested using mechanisms such as biological management and monitoring personnel, security and protection, economic and social sustainability to achieve its goal. Its priority measures were to identify effective law enforcement, criminal investigations and prosecutions while improving relations with regional partners. This, it acknowledged, required funding sufficient staff, ground surveillance, and equipment to counter poaching syndicates.

Equally important was developing specialised crime scene investigators to properly process the scenes and track incidents to improve criminal prosecution of traffickers. This included the South African National Joint Operational and Intelligence Structure (NATJOINTS) which developed a network of provincially-based priority committees and teams of investigators. Their combined intelligence was logged with the Central Priority Crime Knowledge Management Centre and helped to inform additional policing measures such as visible patrols and unmanned drone rangers (Mapanye and Chipu, 2012: 26; Serino, 2012). The South African Revenue Service (SARS) Tax and Customs Enforcement Investigators have also worked closely with the International Consortium for Controlled Deliveries in Wildlife Crime (ICCWC) to investigate illegal species exports. Also involved in the investigation and seizure process are the South African Police Service, Interpol, National Wildlife Crime Reaction Unit, SANParks, the DEA/DEFF, the National Prosecuting Authority and the South African National Defence Force.

Another example of an official notice is the *Government Gazette Notice No 35248* published in 2012. This notice changed the norms and standards governing rhino trophy hunting to ensure that the subsequent export of rhino horn conformed to South African Law (Department of Environmental Affairs, 2012). Under Section 3 hunting permits can only be awarded once South African authorities verify the applicant's membership of a recognised hunting association and their place of residence to ensure it allows rhino hunting trophies. Section 2 also required each removed horn to be tagged with a microchip and, depending on its size, marked with indelible ink. The microchip and a picture of the horn must then be logged into the national TRAFFIC database. The notice also stipulates that an EMI be present

during the hunt and whilst the trophy horn is prepared and processed by a taxidermist for export (Department of Environmental Affairs, 2012). Furthermore, to prevent a hunter from shaving the horn, Section 3 requires the taxidermist to weigh the horn and report this to the authorities. Section 3 also prevents smuggling by prohibiting the trophy from being exported in hand or personal luggage.

Besides the commitment to conservation and countering IWT that these measures illustrate the South African government has also tried to enact measures to counter political instability that rising economic inequalities bring. At a national level the Trade and Investment Framework Agreement (TIFA) is one example of a bilateral agreement designed to promote trade and economic opportunities between South Africa and the US. This Agreement establishes a bilateral forum to discuss key policy areas such as the African Growth and Opportunity Act, the Trade, Investment and Development Cooperation Agreement, trade and investment opportunities, non-tariff barriers, infrastructure development and, particularly relevant for this study, sanitary and phytosanitary measures that meet the IATA and WTO standards already discussed.

South Africa's relationship with China also includes the 2006 Memorandum of Understanding (MoU) which promotes bilateral trade and economic and technological cooperation. This MoU amends the 1964 *Customs and Excise Act* to accommodate its provisions. Among the products that are governed under this MoU are the trade in wild flora and fauna to support the TAM industry. An additional MoU was signed in 2013 to reaffirm the principles and provisions of CITES and the CBD and other relevant international conventions to safeguard the environment – "the wetland and desert ecosystems and wildlife conservation" (Memorandum of Understanding between South Africa and China on Co-operation in the Fields of Wetland and Desert Ecosystems and Wildlife Conservation, 2013: Objective). The MoU includes provisions to support broad research and technical collaboration, sustainable development initiatives, and "to address issues of mutual concern, including wildlife trafficking and law enforcement" which includes rhino poaching and preserving sustainable plant and marine resources (Memorandum of Understanding between South Africa and China on Co-operation in the Fields of Wetland and Desert Ecosystems and Wildlife Conservation, 2013). The financial costs of pursuing these collaborative efforts are primarily the

responsibility of each party. The Forum on China-Africa Cooperation (FOCAC) has, since its 2015 meeting looked to bolster its support for "green development". The 2018 FOCAC Summit also prioritised environmental protection and clean-energy projects through the Belt and Road initiative (BRI) as well as wildlife conservation. Conservationists, nevertheless, criticise the BRI for funding large-scale infrastructure developments and extractive industries that increase greenhouse gas emissions, promote deforestation and promote the trade in indigenous species to support the TAM trade (Walters, 2021; Kleinschroth et al., 2019). They also blame the country's authoritarian policies for repressing the true effect of IWT and climate change.

South Africa is also a member of the Financial Action Task Force that benchmarks effective legal, regulatory and operational measures to manage money laundering, terrorist financing and other threats to the financial system. The *Financial Intelligence Centre Act 38 of 2001* (FICA) brings the country's national law in line with FATF standards and requires that financial institutions monitor the activities of "politically exposed, prominent or influential people and their families and close associates" (Financial Intelligence Centre Act 38 of 2001) and establish from whom these persons are paid.

The South African government has also acknowledged the economic potential of a legal trade in flora and fauna species and has tried to incorporate the sustainable growth of these wild products within its biodiversity management plans. In 2013, the government launched the National Development Plan 2030 to both redress past socio-economic imbalances and boost the country's flagging economy. To help implement this Plan the government piloted the fast results delivery programme called Operation Phakisa in 2014. Under this initiative collaboration sessions, called Labs, were convened with key members of the public and private sectors, academia and relevant civil society organisations to target, plan and actively manage how these plans are implemented.

During the Biodiversity Lab convened in 2016 the legal wildlife economy was identified as a potential growth point. According to the Lab's projections, an additional 15,600 jobs could be created contributing around R215 million with a growth rate of approximately 10% per annum to 2030. The Lab developed 15 initiatives to help transform and grow the legal wildlife

economy while also promoting products and their economic and medicinal benefits. Among these are: using the uMfolozi Biodiversity Economy Node as a pilot transformation project; implementing wildlife industry standards; an electronic wildlife permitting system with a centralised database; and, 're-positioning' the Wildlife Forum to be an interdepartmental / industry collaboration platform able to push the benefits of a wildlife economy (Department of Planning, Monitoring and Evaluation, 2016).

To be successful nationally designed frameworks such as the Biodiversity Lab need to find a foothold at the provincial level. This means that provincial managers, like their national counterparts, need to appreciate the value in both an economic and conservationist sense, that the environment and its flora and fauna contribute (Jayanathan 2016: 40). This should help provinces develop strategies that reflect the socio-economic realities that communities within their province face while also encouraging a sustainable conservation outlook. Regrettably, this appreciation is not always prevalent given the small number of community-based initiatives that exist to halt the trade in illegal flora and fauna.

The provincial Eastern Cape plan published in 2014, for instance, targets marked socio-economic improvements for the province by 2030. It does not mention anything specific about managing trade in flora, fauna and fisheries despite the importance of its land and marine environments. This is also reflected in the fact that the law governing the environment was enacted in 1974 and that the administering body combines environmental affairs with tourism and economic development. Similar circumstances can be seen in the Free State, Gauteng, North West, Northern Cape, Limpopo and Mpumalanga provinces – although the last five provinces are governed by more recent legislation that was passed more recently, as in the last 30 years. Much of the Free State's legislation, however, is based on an Ordinance passed in 1969.

The legislation governing the Western Cape and KwaZulu-Natal was passed even more recently and these provinces have also managed their rich landscapes, animals, marine, and agricultural resources with detailed Environmental Implementation Plans that have produced annual assessment reports since 2013. Financial and technical resources have been allocated from Provincial budgets and private sector donors to monitor the environmental impact of

trade and infrastructure growth. CapeNature and Ezemvelo KZN Wildlife, for instance, are the respective provincial bodies charged with conserving the province's biodiversity as well providing research, education and training facilities. These provincial efforts address the needs of both the conservationists and environmentalists. They also show how provinces can and should develop their own Provincial Growth and Development Plans to include appropriate institutional frameworks that are aligned to the NDP and integrate international and region strategies such as the SDGs and the Aichi Targets.

5.5 Conclusions

This chapter used the broader conceptualisation of political will developed in chapter 3 to describe the presence of political will at the international, regional and national levels. This conceptualisation factors in the several indicators of political will that depict these aspects: the inclusion of senior decision makers and other stakeholders in policy discussions; the presence of a policy enforcement mechanism that is suitably resourced with appropriate targets; and, whether a monitoring and evaluation mechanism exists that has the capacity to generate data and debate new measures to mitigate unintended consequences.

The data contained in this chapter represents the political will that supports policies governing IWT at the international, regional and South African national and provincial levels. These policies and the supporting measures this chapter explored clearly establish a common base of political will within the IWT system. Indeed, at the international, regional and national policy levels there are numerous strategies and initiatives that work to enforce policy provisions. These indicators of political will monitor and evaluate policies with the intention of forcing legislation to adapt and evolve to interrupt, and hopefully end, IWT supply chains.

Given that the policies outlined in chapter 4 hinge on the actions of individual stakeholders, it was necessary to unpack the key efforts that these actors have developed. It is also important to note that within the South African context, the success of IWT-related policies depend on what is enacted and implemented at the provincial and local level. Except for Kwa-Zulu-Natal and the Western Cape, provincial-based policy instruments are outdated and poorly resourced. This may hamper the degree and direction of political will that flows

throughout the system and potentially compromise the overall effectiveness of efforts to curb IWT.

The next chapter builds on these findings to explore the effect such political will has on IWT through the three key themes identified in the literature review (i.e. the geopolitical shifts caused by political, demographic and economic needs; the affects science and new technology have on information collection, analysis and action; and, the trends that drive demand for IWT products).

Chapter 6

Assessing Political Will and its Effects on the IWT Policy Matrix

6.1 Introduction

The literature review in chapter 2 identified three themes that policy will need to manage if IWT is to be curbed. They are: the geopolitical shifts caused by political, demographic and economic needs; the affects science and new technology have on information collection, analysis and action; and, the trends that drive demand for IWT products. These themes interact with each other, with different policy systems, and build on the same base of international, regional and local policies. For this reason, this thesis perceives the IWT policy system to be an open one. As such, this chapter uses the complexity thinking concepts discussed in chapter 3 – non-linearity, punctuated equilibrium, emergence, self-organisation and path dependency – and causal loop diagrams (CLDs) to illustrate and explore the effect of the pollical will underpinning the IWT policy system. The three themes were then used to identify five examples of emergent behaviour that has forced policy to adapt. These are: economic inequality; promoting TAM; human-wildlife conflict; genetically detecting and tracing threatened species; and, changing trends in demand and information. The CLDs illustrate these dynamics and illustrate how constituent parts of this policy system interact.

To demonstrate this policy system's complexity the previous chapter discussed several indications of political will by collecting data on the context, actors and institutions working within a specific area. The current chapter uses these indications to identify the presence of ten specific indicators of political will, first described in chapter 3 and then again below, to assess the effect this commitment had within the IWT policy system and to gauge the system's responsiveness or adaptability. The presence of these ten indicators, or lack thereof, was then inputted into the CLDs to explore how each factor shaped the degree and direction of political will within the system. The indicators identified are:

1. The importance and prominence of decision makers involved in policy discussions;
2. Whether a policy enforcement mechanism with incentives and disincentives for implementing the policy was established;

3. If human resources were committed to the policy's implementation;
4. Whether suitable financial resources were committed to the policy's implementation;
5. If milestones were integrated into the policy implementation initiative;
6. The presence of a monitoring and evaluation mechanism;
7. If this monitoring and evaluation mechanism was suitably funded;
8. Whether regular reports were received from the monitoring and evaluation team;
9. If new policy recommendations were debated; and,
10. Whether new policy recommendations were enacted.

Based on the arguments developed in chapter 3, this thesis maintains that political will always exists. On occasion this will manifests in a positive direction as a tangible action, such as participating in a strategy development session, or in a negative direction when no discernible action is evident. The fact that there is no action means that one or more actors within the system have *chosen not* to act for one reason or another. Their choice, in other words, is still an act of will and its consequences ripple throughout the system. To estimate this affect, the data collection table included in Appendix 1 indicates the presence of a political will indicator with a +1 and the absence with a -1. Using this coding protocol the CLDs illustrate the direction political will flows for each proposed policy and roughly weights the degree of that commitment to show the adaptive effect that the ten indicators create. In instances where a policy receives input from multiple sources, such as the *Constitution of South Africa* (1996), the political will measures of these inputs are averaged and the output degree adjusted accordingly.

6.2 Political will and its indicators

One of the key concepts of complexity thinking is that a system, in this case the IWT policy system, has a memory which determines the system's path. This 'path dependency' determines the adaptability of the broader system and ultimately shapes the political will of actors to respond to circumstances that emerge. The conditions used to initiate CITES in 1973 created the initial momentum to control IWT and manage conservation efforts that prompted, at the international level, the CBD to be enacted in 1993 and the annual updates of the *IATA Live Animals Regulations*. At a regional level CITES influenced a revision of the

African Convention on the Conservation of Nature and Natural Resources in 2016 and inspired the various Protocols that have developed from the *SADC Treaty* (1992). Within South Africa, CITES has also influenced the structure and provisions listed in the NEMA (enacted in 1998 and amended several times, the last being in 2014) and NEMBA (enacted in 2010 and amended as recently as 2014). This is why this study places CITES at the centre of the IWT policy system and considers it to be the foundation of all related policies including those that manage political, economic, health and environmental issues. It, consequently, influences all actions within this system and creates a policy path and a dependency. This dependency influences actors' motivation to curb IWT and ultimately shapes the policy system's ability to cope with circumstances that emerge as a result of an action or inaction that takes place at another juncture. The discussion that follows provides several examples of this emergent behaviour and explains their systemic effect and impact on the geopolitical dynamics that shape IWT.

A key indicator of political will is the capacity to design and adapt policy provisions. There should be, for instance, financial resources to fund data collection and policy development sessions as well as the administration of the process. CITES-related projects, conferences and the Secretariate are all funded by specific nations. The UK-funded Darwin Initiative[29] (UK Government, 2022) assists biodiverse countries with limited financial resources to meet their objectives under different biodiversity conventions such as CITES. That project also funded the London 2014 Conference of global leaders to counter illegal wildlife trade and mitigate the extinction of several iconic species (Department for Environment, Food and Rural Affairs, 2014), and the meeting produced the London Declaration that advocated for:

- More research into the scale and effect of environmental, political, social and economic implications of IWT. It also included a call for more research investigating the illegal wildlife market and trade dynamics as well as the effect of current measures to curb the trade;
- Tangible support to implement existing policy provisions to combat and prevent illegal

[29] The Darwin Initiative awards grants to projects aimed at conserving biodiversity and reducing poverty in specific low- and middle-income countries. These projects are typically capacity building initiatives that also encourage evidence collection to use as best practices (https://www.darwininitiative.org.uk).

trade;

- Proper acknowledgement of the Global Environment Facility (GEF) and its efforts to address poaching across the African continent; and,
- A UN recognised 'Group of Friends' network against illegal wildlife trafficking (UK Government, London Conference on the Illegal Wildlife Trade, 2015).

In the post-BREXIT era it is likely that the British government will use funds such as the Darwin Initiative to maintain the UK's role and relevance in the broader field of conservation. Similarly, the European Commission has supported the Minimising the Illegal Killing of Elephants and Other Endangered Species (MIKES) initiative that uses data collected under the Monitoring the Illegal Killing of Elephants (MIKE) project. The MIKE project funded the tracking of elephant populations and strategy development to manage these numbers within elephant range states (CITES, 2014). The European Commission's EUROS 12.3 million (European Commission, 2014) support for MIKES' enforcement provisions is another attempt to influence how elephant and other endangered species located across the world are managed.

An additional indicator of political will in the IWT policy system is the role civil society organisations play in managing illicit trade. Environmental or animal welfare groups have successfully supported national services protecting ecosystems and wildlife in the process (Daut, 2015). And as advocates, they have designed information campaigns to teach communities and tourists about the effects of the wildlife trade (Daut, 2015) and partnered with grassroots organisations to curb smuggling efforts (TRAFFIC, 2014). Such campaigns have also contributed to reducing demand for products such as ivory (UNEP, IUCN and TRAFFIC, 2013) and will continue to be key features of dissuasion efforts, especially in emerging markets (Traverner, 2013). Their approaches have, unfortunately, been limited to developing global conservation awareness and trying to change social and cultural practices. Moves have also even been made to link these campaigns to social support initiatives aimed at uplifting local communities. As Peter Zahler and his colleagues (2004) note, such efforts hope to provide a legal and viable alternative income to that offered by poachers and other traffickers. These initiatives seem to have had an effect on policy developed in the US and UK with both countries working to ban ivory products (Lowther, 2018). However, NGOs must also contend

with their own needs and so work according to their own agendas. It pays for them to attract vital funding from corporations, funding agencies and individuals by using provocative imagery to depict the impact of this illegal trade (Verissimo et al., 2018). After all, if this trade did not exist neither would many of these organisations.

As mentioned in earlier chapters, CITES and the CBD are admirable policies that contain some important provisions to conserve and sustain the planet's endangered flora and fauna. To enforce their provisions both policies rely on member states to enact their own legislation and impose punitive sanctions on traffickers.

In response, CBD signatories, as an example, have committed to national conservation strategies, plans or programmes that support this objective under this Convention's Article 6. According to Du Toit and his colleagues (2006), the SADC Regional Programme for Rhino Conservation (2005) is an example of such an initiative. They are also a key reason why South Africa's rhino populations recovered towards the end of the last century (Emslie and Brooks, 1999: v). Both plans sought to reassess the country's rhino populations and eventually determined measures to conserve herds by translocating animals to protected areas such as the KwaZulu-Natal's Hluhluwe-Imfolozi National Park (Emslie and Brooks, 1999: 7 and 52).

The CBD's Article 8 enforces *in-situ* or protected areas meant to preserve and conserve species under threat. In South Africa this has prompted the establishment of protected areas to conserve such species and mandate that appropriate management strategies be developed and implemented. Notable examples include the African Rhino Programme established in 1997 and the Black Rhino Range Expansion Project established in 2003, which coordinates the WWF's investment in rhino conservation. These efforts translocated black rhino from saturated provincial parks to private reserves that were equipped to breed and protect them (Emslie and Brooks, 1999: 8). In theory these measures should have limited poaching and reduced supply to the illegal wildlife market. In addition, Article 9 of the CBD promotes *ex-situ* or external measures that supplement *in-situ* regulations. Examples of this type of assistance include funding conservation efforts and rehabilitation facilities for endangered species. In fact, under this Article, American philanthropist Howard Buffet allocated R255 million in 2013 to counter rhino poaching (Fletcher, 2014).

The SDGs describe an ambitious transformational agenda to be achieved by 2030 and, as then CITES Secretary-General John Scanlon said, were "a powerful expression of political determination to end these highly destructive crimes" (CITES, 2015). The SDGs appreciate the role IWT has played in pushing many species towards extinction and depleting natural heritage foci for many countries. This is why protecting wild flora and fauna, and the ecosystems they rely on, have been embedded in these targets. The illicit trade also undermines good governance and, to quote former UK Foreign Secretary William J. Hague, "drives corruption and insecurity, and undermines efforts to cut poverty and promote sustainable development" (Hague, 2014; TRACIT, 2019: 121). IWT threatens the broader economic and environmental sustainability and prevents many of the SDGs from being realised including: SDG 1 (end poverty), SDG 2 (zero hunger), SDG 3 (good health and well-being), SDG 8 (decent work and economic growth), SDG 10 (reduced inequalities), SDG 11 (sustainable cities and communities), SDG 14 (life below water), SDG 15 (life on land), SDG 16 (peace, justice and strong institutions) and SDG 17 (strengthen implementation and global partnerships).

However, Booth et al. (2021) warn that policies aimed at containing IWT can contribute to achieving the SDGs but could also have unintended consequences that will affect other policy and SDG imperatives. They cite the example of regulating the bushmeat market in Ghana that is primarily managed by women. Should policies ban this market without installing additional provisions to mitigate the losses these women will likely incur, the policies will inevitably compromise Ghana's ability to achieve its SDG 5 (gender equality) goals and result in the system needing to cope with new emergent behaviour.

CITES and the CBD have developed several initiatives at international, regional and local level that address the effect the environment has on the broader geopolitical dynamic. This indicates that there is a high degree of commitment at all levels with senior representatives invited to contribute to these policy discussions.

These include senior representatives from: the African Forest Forum (AFF); African Union; FAO Forestry and Timber Section; African Forestry and Wildlife Commission (AFWC); national

governments providing humanitarian aid and support (including USA, Sweden, Germany and others) and those with a vested interest in the region (i.e. China, Russia, Cuba); national government departments such as the South African Ministry of Trade and Industry and the Ministry of International Relations and Cooperation. Other actors in the process include financial institutions and investigation units, the private sector including state-owned and private enterprises; regional communities and unions (e.g. AU, CEN-SAD, ECOWAS, SADC, SADCC, EAC, ECCAS, IGAD, COMESA, UMA); international multilaterals and intergovernmental bodies (e.g. CBD, CITES, FAO, WTO); international and national development aid agencies and development finance institutions (e.g. GEF, World Bank and UN Agencies); NGOs with a vested interest such as WWF, TRAFFIC and, the Wildlife Animal Protection Forum South Africa (WAPFSA), which is a voluntary collaborative network of a further 28 organisations that work to protect "wild animals, wild animals held in captivity, biodiversity and the environment" (Wildlife Animal Protection Forum South Africa, 2022).

The plans also provide a detailed set of milestones and require member states to present reports on their progress and challenges. Stakeholders can also suggest provisions for member states to consider adopting at the international level. All updates in the CITES provisions and the species that are listed in the various Appendices are also sent to IATA for inclusion in their annual *Live Animals Regulations* and are reflected, in South Africa's case, in NEMA and its various amendments.

However, and perhaps rightly so, there is a great deal of policy implementation that is left up to individual member states. On the one hand, while these international policies do offer some resources to aid implementation, states would consider it a political imposition if such measures were foisted on them. It is also simply impractical for CITES, the CBD and the UN to provide human and financial resources for every single state to support the implementation process. While these three organisations have Secretariats to assist with essential administration and communication between stakeholders, they do not have the resources or specialised capacity to implement the provisions at the local level. These limitations also extend to the incentives that they can feasibly supply to stakeholders within this system. In addition, while stakeholders are required to present regular reports on their progress and challenges, there is not much more the Secretariats can do besides provide a public forum for

stakeholders and the media to debate and evaluate issues that emerge. These policies, ultimately, rely on member states to enact national and provincial legislation and concomitant strategies to enforce these provisions.

Nevertheless, the CITES Convention itself represents a highly positive measure of political will within the system since only one of the indicators is not present. To determine the causality link, this study combines the positive and negative political will scores to produce a rough estimate of 8 in the positive direction (i.e. 9 (positive) -1 (negative) = +8). This score illustrates the reinforcing causal loop of political will between the CITES, the CBD and *IATA's Live Animals Regulations* as illustrated in Figure 17 in green and red.

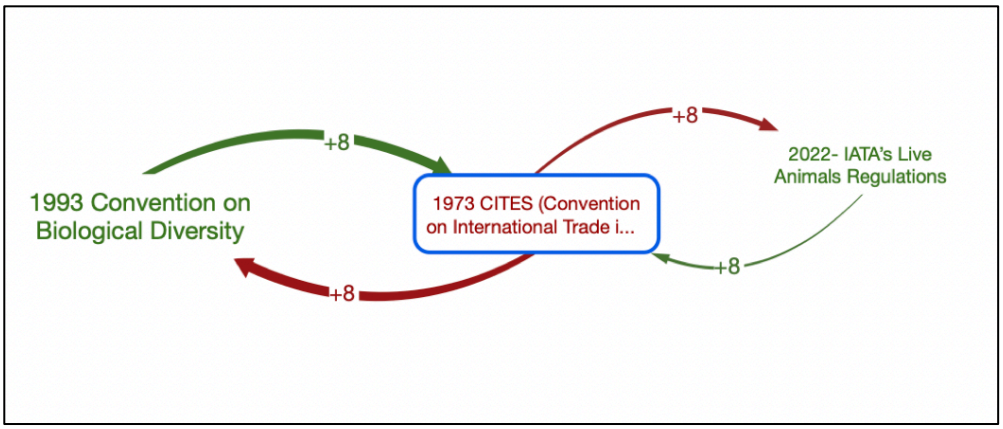

Figure 17 Reinforcing CLDs at the international policy level. The researcher developed the figure using the CONSIDEO MODELER software.

Like their international counterparts, similar assessments can be made of regional initiatives and for the same reasons. At a regional level, the same list of prominent decision makers that provide policy and implementation input at the international level, participate in regional initiatives. This indicates that there is certainly an attempt to formulate regional strategies to promote economic opportunities and food security in an environmentally sustainable manner. The plans discussed in chapters 4 and 5 also include milestones that are reported on regularly to gauge the degree of implementation by member states. These measures are incorporated into CAADP as well as the different SADC Protocols which further indicates that a high degree of political will exists at the regional level.

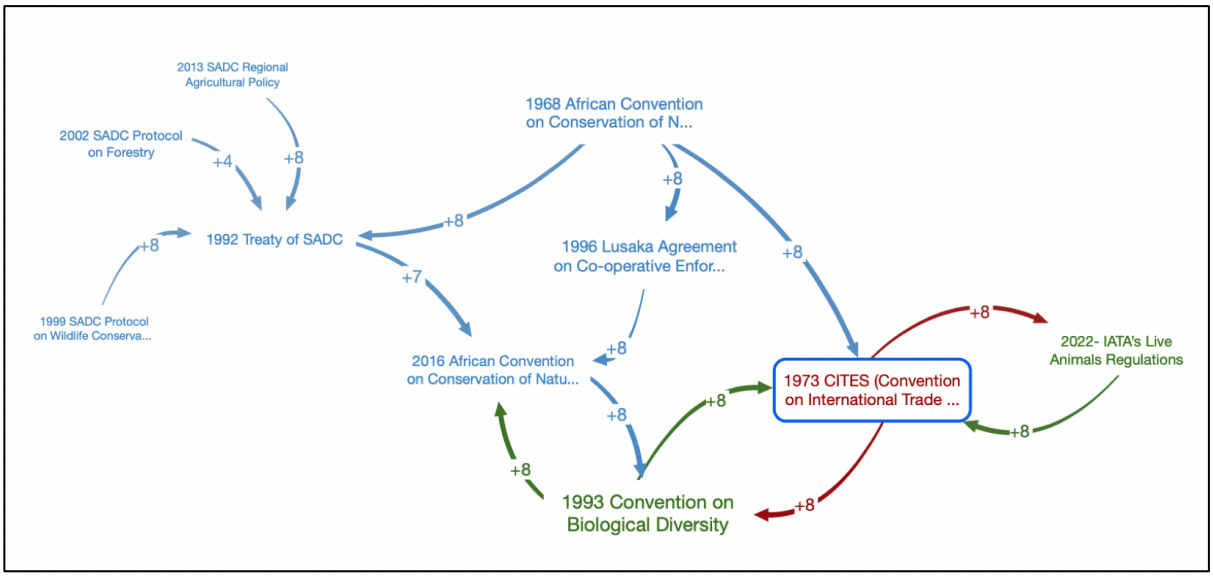

Figure 18 Reinforcing CLDs between regional (in light blue) and international policies (in **green** and **red**). The researcher developed the figure using the CONSIDEO MODELER software.

As illustrated in Figure 18, this produces a series of reinforcing causal loops at the regional level (in light blue). Consequently, there is a positive degree of political will evident at the regional level with a commitment scoring +8 with 9 out of the 10 indicators present. The *SADC Protocol on Forestry* (2002) is the exception, scoring only +4 on the scale because it lacks a policy enforcement mechanism that has adequate funding and human resources. This indicates that the political will to respond to emergent issues at the regional level reinforces international level instruments. Again, when these policies interact with each other, CITES, the CBD, and *IATA Live Animals Regulations*, they retain their +8 scores.

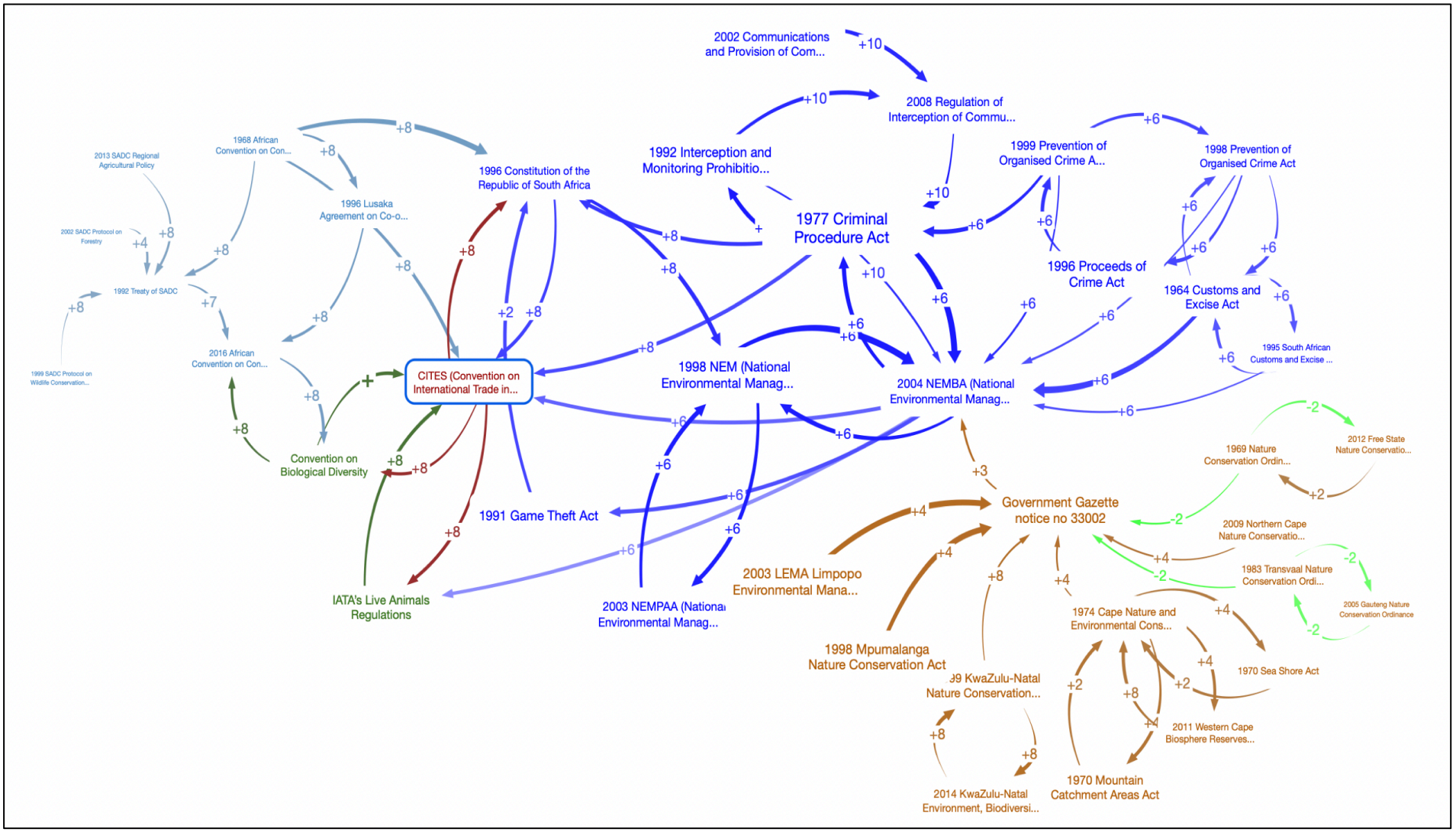

Figure 19 CLDs illustrating South Africa's national (in **dark blue**) and provincial (in **brown**) policies and negative CLDs (in **green**). The researcher developed the figure using the CONSIDEO MODELER software.

The strategies at a national level reflect South Africa's political and economic priorities. These plans incorporate benchmarks and have also received some administrative support to assist with implementing their provisions. On the political will scale, these national level indicators also rank high – an 8 out of a possible 10 and are indicated in dark blue in Figure 19.

A significant drawback is the fact that implementation on the ground relies on individual provincial and municipal strategies and the poorly resourced projects that NGOs and researchers are able to conduct. The provisions outlined in the South African *Government Gazette Notice No 35248* (2012) should manage the export and trade of illegally obtained wildlife products. Figure 19 denotes that the degree of political will that flows out of the *Government Gazette Notice No 35248* (2012), a +3, and into NEMBA (2004 and its amendments) represents the average political will inputs from the seven provinces. This lower degree of output reflects a few factors. Firstly, these provisions depend on the proficiency of individual SAPS personnel and associated law enforcement services such as customs officials. Customs officials need to know the common and scientific identifiers for each species which requires adequate training and, more importantly, an individual commitment to uphold the law (see chapter 2). Both require significant financial resources and, at the individual level, the ethical motivation to enforce the law must supersede the short-term gain a bribe brings.

Secondly, and as already discussed (see chapter 5), all but two provinces – the Western Cape and KwaZulu-Natal – have been slow to enact legislation with some relying on policies that date back decades. This drawback has a significant systemic effect on how political will is assessed because it indicates that there are no inducements as well as limited human and financial resources at the local level to implement the strategy. The slow enactment of new policy to address emerging issues also indicates that the local level policy system has stagnated and reached a period of equilibrium, what complexity thinkers term a punctuated equilibrium (Jones and Baumgartner, 2005: 20). This combines to produce the negative or 'vicious' feedback loop that Jones and Baumgartner (2005) described in chapter 3.

There are also no tangible monitoring and evaluation systems even though such provisions are stipulated within each provincial legislation. This inability to manage information about

the environment contributes to perpetuating IWT at the local level and compromises how international and regional protocols are integrated into the decision making process. At the provincial level, apart from the two outlying provinces, this produces low scores ranging from +4 to -2 as seen in brown in Figure 19. While the positive commitment yields a series of reinforcing CLDs, the -2 scores for the Gauteng and Free State policies produce two of the few balancing CLDs noted in this study. This is because both provinces have legislation that is dated and lack the human and financial resources needed to implement their precepts.

To account for the positive anomalies of the Western Cape and KwaZulu-Natal, both of which have proposed new legislation in the past five years. The Western Cape's effort is currently waiting to be enacted – and they will fund implementation and monitoring mechanisms through their provincial budgets and in conjunction with private donors. They also continue to publish regular reports documenting their progress and setbacks. In both these instances, there is substantial commitment to preserving the flora and fauna species and their broader ecosystem, which is why their scores are higher and produce reinforcing CLDs as a result.

From the policies implemented at the various levels and the demonstrated effect of the political will that supports each, emerge several issues that have forced policy and the actors to adapt. This emergent behaviour develops in response to the need to mitigate economic inequality, the drive to promote TAM, the increasing incidents of human-wildlife conflict, technology that is making it affordable to genetically detecting and tracing threatened species and the ever changing trends governing information and the demand for wildlife. The CLD and the discussion that follows illustrate the complexity of these dynamics and how constituent parts of this policy system interact.

6.2.1 Economic inequality

This study understands economic inequality as the uneven distribution of income and opportunity between source and destination states, on the international level, and within South Africa itself i.e. between wildlife conservancies and the communities that live in the immediate proximity. As the literature review described, there is a concerted effort to design policy based on scientific data produced from a range of stakeholders. This is certainly

important but it represents a single perspective and does not account for the variability of how individuals involved in IWT self-organise to perpetuate the illicit trade in response to very real threats such as physical and food insecurity.

The argument that limiting trade in certain endangered species directly effects the livelihoods of poorer communities is one example that emerged during CoP8 (CITES, 1992). According to documents from this meeting held in Kyoto in 1992, poorer economies successfully argued that they relied on the value chain that trade in wildlife encourages. They also cited the fact that environmental protection and conservation efforts have the concomitant effect of deepening economic inequality and allowing dangerous and destructive wild animals to threaten the physical security of poor communities (CITES, 1992).

South Africa, as an example, had a vested interest in protecting vulnerable species while also allowing trade in others. The substantial economic impact of elephant trophy hunting is such an example according to Peet van der Merwe (2018) and the research he and his colleagues Melville Saayman and Riaan Rossouw (2015) conducted. They found that hunters spend double the money of tourists who come to bird watch, view game or hike trails. In fact, trophy and biltong hunters contributed a combined ZAR13.6 billion (US$909 million) in direct contributions in the 2016/2017 season alone (Saayman and Rossouw, 2015). The lobbying effort to support these seemingly antithetical positions at CoP meetings is a crucial indicator of political will and responding to it demonstrates the adaptive processes at play.

To illustrate the point further, Geneva hosted CoP18 in 2019 where decisions were expected to “directly effect biodiversity, people’s livelihoods and national economies” (Rosen et al., 2019: 1). This meeting again discussed the role local communities should play in conservation and connected it with the contentious issue of perpetuating the trade in elephants, ivory and rhino horn. This discussion emphasised the diverging views of conservation among parties and what emerged was a deeper “African divide”. SADC representatives, for instance, argued that CITES curbs “national sovereignty and the rights and needs of local communities living with wildlife to use those resources” (Rosen et al., 2019: 28). The parties, nevertheless, agreed that the survival of poor communities must work in conjunction with ensuring the survival of the planet and her precariously balanced ecosystem. For this reason, CITES attempts to allow

trade in species, but only to a degree that does not threaten their survival or devastate the biodiversity the species ensures.

To respond to the plight of rural and indigenous communities, CoP18 adopted an amended resolution that encouraged parties to consult rural communities in the various national implementation processes, especially ahead of CoP meetings. Parties were also asked to compile case studies that demonstrated sustainable use and the effect of wildlife trade on the livelihoods of these communities and species conservation for further debate (Rosen et al., 2019: 28). While this issue has been discussed at most CoP meetings since 1992, it took around 27 years for the member parties to take tangible action to address the matter. In terms of political will, this indicates three effects. Firstly, the central body of stakeholders do indeed debate issues that perpetuate IWT. Secondly, while well intentioned, it takes time for this central body to respond to an emergent issue. And thirdly, because the responsiveness of the central body is slow, one has to acknowledge that political will needs to empower local actors to determine the most appropriate way to adapt to circumstances that emerge.

These findings do not come without their own emergent behaviour. The CITES Convention depends on the cooperation and commitment of each of its individual signatory parties, which includes the domestic laws that they enact to implement the Convention's provisions (IANC, 2004). However, this legislative commitment varies across the member parties and creates instability and emergent behaviour within the policy system. Where there is no supporting legislation enacted, for instance, officials are forced to use general laws governing conservation, customs and international trade to guide their enforcement activities which are often not compatible with the Convention. Some parties are in various stages of developing local measures (CITES, 2011) and others have laws that only cover parts of the Convention. This is further complicated by the ease with which traffickers are able to forge documentation (Brown and Swalis, 2005: 5), which is part of a much wider system of corruption (Wyatt, 2017). The CLDs in Figure 20 below, illustrate the effect this behaviour has on political will within the broader IWT policy system.

6.2.2 Promoting TAM

China's concerted political and economic desire to push TAM as a viable alternative to western healthcare is one issue that has emerged and has forced IWT policy to respond. The WHO's Director-General Margaret Chan Fung Fu-Chun led this effort producing the 2007 WHO Report on Traditional Chinese Medicine. This report determined, among other things, that policies at the international, regional and local level should ensure that such products were produced from sustainable sources. The organisation's *Traditional Medicine Strategy: 2014-2023*, published in 2013, is another key instrument that aims to help member states and other stakeholders integrate and regulate traditional and complementary medicine products and practitioners (WHO Traditional Medicine Strategy, 2013: 11). These efforts also link to the CITES provisions and purport to achieve SDG 3 and its goal of promoting good health and well-being, even though there is no explicit reference to traditional medicines.

South Africa is the third largest centre of biodiversity with over 20,000 indigenous plant species and a veritable range of animal, marine and microbial species that are used in TAM formulas (Christie and Ngubeni, 2020). Recognising this and the potential economic contribution South Africa's biodiverse economy could yield, the government convened the Biodiversity Lab described in the previous chapter. In determining the value of a legal wildlife economy the group found that the bioprospecting commercial industry, which involves locating, harvesting and extracting living or dead indigenous species or derivatives, could be potentially profitable.

They projected that between 6,200 - 9,200 new jobs and a GDP contribution of up to R1.7 billion could be gained by growing 25 plant species of 'strategic importance'. These include species such as: raw *Aloe ferox* (bitter aloe) and *Harpagophytum procumbens (*Devils claw) which are used internationally in pharmaceutical products; *Hoodia gordonii* and *Adansonia digitata* (Baobab) common ingredients in the international nutraceutical market; and, *Sclerocarya birrea* (marula) and *Citrullus lanatus* (Kalahari melon) that the international cosmeceutical market uses. In addition, the lab mentioned the key role bioprospecting plays in supplying 771 plant species to the Traditional African, Indian and Chinese medicinal sector, which is estimated to be worth R2.9 billion per year (Mander et al., 2007: 189). In fact in 2011,

this industry exported approximately R322 million worth of product which would only improve as the South African Rand weakened against international currencies (Department of Forestry, Fisheries and the Environment, 2022).

In addition, 2014 also saw the Oceans Economy Lab (also under the auspices of Operation Phakisa) convened with 180 delegates from national and provincial government departments, the private sector, civil society, labour unions and academics participating. The Lab recommended an inter-departmental initiative to be led by the DEA that would target six growth areas because of their potential to drive economic growth and create much needed employment. These included: the Department of Transport's Marine Transport and Manufacturing initiative; Department of Mineral Resources' Offshore Oil and Gas Exploration operations; the Department of Public Works' Small Harbours Development; and, of interest for this particular study, the Department of Agriculture, Forestry and Fisheries Aquaculture project and the DEA's Marine Protection Services and Ocean Governance operations (South Africa's Ocean Economy, 2014). Each initiative included a set of specific legislative and implementation benchmarks and the Aquaculture and Marine Protection governance initiatives featuring specific management markers for sustainable abalone, trout, salmon, blue ocean mussels, and oyster farming.

While there is certainly a concerted commitment to grow these areas for their economic contribution, this positive push could affect South Africa's environmental balance. Scientists and conservationists are understandably concerned that this economic-boosting initiative will cause a negative or vicious feedback loop to emerge and place even more pressure on species that are already endangered. This is one instance where the South African Constitutional provisions to "secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development" (Constitution of the Republic of South Africa, 1996) represents positive political will but could generate emergent behaviour that could cost the environment, the economy or both dearly.

The *Law of the People's Republic of China on TCM* (2017) taps into the financial opportunities' bioprospecting creates. Together with investment from the BRI the provisions within the WHO's strategy to integrate TAM into mainstream healthcare and the requirements listed

under South Africa's T*raditional Health Practitioners Act* (2007), the policy moves in a positive direction and registers a perfect +10 on the political will scale with all ten indicators present. This indicates that China certainly has the ability and will to promote TAM. However, this will is stymied when it interacts with the *WHO's International Classification of Diseases* (ICD-11) (2019) and the T*raditional Health Practitioners Act* (2007). The former policy relies on other initiatives such as the T*raditional Health Practitioners Act* (2007) to enforce its provisions because it lacks the general capacity; it scores a +2 on the political will scale. The latter is an older policy that has no financial capacity to evaluate how its policy provisions have been implemented and is not able to enact new measures, and scores a +6 and, as seen in Figure 20, reduces the degree of political will in the CLD that incorporates CITES and the CBD to +4.

6.2.3 Human-wildlife conflict

Another issue that has emerged and forced the IWT policy to adapt is the prevalence of human-wildlife conflict. Nimmi Seoraj-Pillai and Neville Pillay (2016: 2) pointed out, South Africa is a "country of dualities" with wealthy and profitable industries operating alongside underdeveloped sectors. This is true of the agricultural sector that facilitates both commercial and subsistence farming often in the same geographic region (Seoraj-Pillar and Pillay, 2016: 2). In its 2011 report Statistics South Africa found that commercial farms were largely spread across three provinces, namely the Free State with about 10,000 farms, the Western Cape with a further 8,300 farms and the North-West with 7,500 farms (Lehohla, 2011). This is compared to the 2.9 million households that are involved in some type of subsistence agriculture and are often not in ideal soil or climactic conditions. Over the years, South Africa's agricultural sectors have had to contend with low rainfall, decreasing soil fertility, and greenhouse gas emissions from poultry, red meat and dairy production. The resulting drought and famine have placed further pressure on the country's struggling economy, which in turn contributes to an increase in human-wildlife conflict. Seoraj-Pillar and Pillay (2016: 3) cite the example of the Chacma baboon's, *Papio ursinus,* damage to timber plantations in Mpumalanga Province that increased during the 1982/1983 and the 1993/1994 droughts; to sustain themselves, the animals fed on commercially farmed pine trees. In addition, elephant, baboons and lion and leopard attacks on crops and people were also reported (Viollaz et al., 2021; Seoraj-Pillar and Pillay, 2016; Spenceley, 2008).

The South African *National Forest Act* (1998) and its amendments are a starting point towards managing forests and containing incidents of human-wildlife conflict. To help implement these provisions, there has been some effort to recruit members to serve on the National Forestry Advisory Council (the last call for nominations being issued in June 2021 (Department of Forestry, Fisheries and the Environment, 2021) and a Secretariat has been established under the authority of the Director-General of the Department of Forestry, Fisheries and the Environment. In addition, a group of 11 corporate forestry companies, 1,100 commercial timber famers and 20 000 small-scale growers that together control 93% of the country's total plantation area, formed the organisation Forestry South Africa. This entity's members collaborate to research and protect against pests and disease, manage environmental issues such as human-wildlife conflicts, and provide education and training at the community level. Forestry South Africa is a self-funded private organisation that purports to provide data to support policy amendments that balance socio-economic benefits with environmental concerns.

The WTO provisions, forestry-aligned legal trade and cross-border conservation strategies at the international and regional level all encourage significant economic and food security. However, the *UN Forest Instrument* (2007) and the *SADC Protocol on Forestry* (2002), for instance, both rely on the *National Forest Act* (1998) and its 2001 and 2005 amendments to enforce its provisions at the member state level. The international and regional policies record a +8 on the political will scale but the South African policy does not have the financial capacity to evaluate how its provisions have been implemented. It is, therefore, not able to enact new measures and scores a +6 effectively reducing the degree of political will in this CLD. As Figure 20 (below) illustrates, the policy does feed into the South African *Constitution* (1996) whose will is measured at a +8, but it contributes to the reduced degree of will that feeds back into CITES and other international and regional policies and effects the adaptability of the IWT policy system.

There are a few policies that register a maximum score of political will, that is +10. The policies that encourage free trade i.e. *EFTA-SACU Free Trade Agreement* (2008) and the *Economic Partnership Agreement between the European Union and Southern African Development*

Community Group (2016 -) both score the maximum. Also registering +10 are three of the South African national-level law enforcement policies i.e. the *Interception and Monitoring Prohibition Act* (1992), *Regulation of Interception of Communications and Provision of Communications-Related Information Act* (2002) and the *Regulation of Interception of Communications and Provisions of Communications-Related Information Amendment Act* (2008). In all instances, this score reflects that all ten indicators of political will are present. The three law enforcement policies on the other hand score the maximum because they have built-in monitoring and evaluation mechanisms that do not rely solely on human capacity and force the public to comply. When these policies interact with each other and CITES, they retain their perfect scores. When they interact with policies that score lower than them, then they lose some degree of political will. For example, when the *EFTA-SACU Free Trade Agreement* interacts with the *SADC Treaty* its degree of political will drops to +8.

6.2.4 Genetically detecting and tracing threatened species

As discussed in the previous chapter, CITES Decision 17.83 purports to develop and maintain a directory of laboratories capable of conducting wildlife forensic analysis. Often visual identification of an illegal specimen is confused with morphologically similar species that are unprotected. This Decision was reinforced by several other decisions aimed at improving member states' ability to genetically test: cheetahs (17.124), ivory (17.162), sharks and rays (17.210), bread palms (17.219) and for the trade in sturgeons and paddlefish (16.136 (Rev CoP17)). Ultimately these decisions also reinforced SDG 15, which pushes governments to share genetic material to better manage the planet's ecosystems. It also aims to work in concert with SDG 17 and facilitate partnerships with all stakeholders to develop and tailor technology to detect illegal specimens. In some instances, local authorities are able to work with larger government agencies such as the UK's National Wildlife Crime Unit (NWCU) and the US Fish and Wildlife Services. These agencies gather data and intelligence that can inform tactical and strategic operations across borders and coordinate efforts with other law enforcement agencies that are suitably equipped to arrest offenders (Wellsmith, 2011).

Initiatives such as short unique sequences or DNA "barcodes" that differentiate between species will help this process. The sequences can be stored in a GenBank & Barcode of Life

Database but to start such a database requires around US$100,000 before the cost of sending samples away for forensic analysis is added. However, technology is slowly reducing these costs. The highly accurate qPCR and Nonopore Sequencing technology has brought the price of a portable field test kit down to around $1,000 and now laptops or handphones can be used (Tomaszewicz Brown et al., 2020; Tyler et al., 2018). Moreover, disposable sample preparation devices and ambient temperature stable kits can overcome those with minimal training in sequence DNA from docksides, marketplaces and customs offices (Alam, 2016; Palminteri, 2017a; Palminteri, 2017b).

Within South Africa, the RhoDIS database project spearheaded by the Veterinary Generics Laboratory at Onderstepoort and the University of Pretoria was an early example of EMIs (discussed in the previous chapter) collaborating with law enforcement officials. The database purported to log the DNA samples of all South African rhino in an effort to help enforcement officials trace the origins of rhino horn trade, legal or otherwise. Another tracking system, the SADC-TWIX website, was developed to track the seizure of illegal specimens' data and is a closed system that only participating enforcement agency personnel can access. Interestingly, according to the website, this platform is solely sponsored by European donors i.e. Deutsche Gesellschraft für Internationale Zusammenarbeit (GIZ) and WWF (France) and does raise the question of how committed organisations in SADC are to mitigating this trade.

There are a few self-regulating mechanisms that have been founded to support the CITES Decisions 11.3 (Rev. CoP17), 15.57, 17.92 – 17.94 and the campaign to manage IWT. The Coalition to End Wildlife Trafficking Online (OWLET) is one such initiative. Launched in 2018 by WWF, TRAFFIC and IFAW, the Coalition aims to "unite the tech industry to standardize prohibited wildlife policies, train staff to better detect illicit wildlife products, enhance automated detection filters and educate and empower users to report suspicious listings" (The Coalition to End Wildlife Trafficking Online, 2021: 2). According to its 2021 progress report, the 47 Coalition members have blocked or removed some 11,631,819 posts and listings of wildlife and wildlife derivatives and developed a database of over 2,500 known search terms in various languages that is used to increase automatic detection. These companies have also followed through on their e-learning training and awareness programmes with OWLET and the support for the citizen science Cyber Spotter programme.

The seventh UNTOC Congress of Parties, in 2014, hosted the UNODC photographic exhibition on rhino poaching and its impact in South Africa. It was at this meeting that members realised the role the UNODC's Global Programme for Combating Wildlife and Forest Crime could play and the support the programme could offer regional and national law-enforcement actors to poaching and IWT (UNODC, 2022). UNTOC now has three supplementary protocols: *Protocol to Prevent, Suppress and Punish Trafficking in Persons, especially Women and Children*; *Protocol against the Smuggling of Migrants by Land, Sea and Air*; and, the *Protocol against the Illicit Manufacturing and Trafficking in Firearms*.

Building from the UNTOC initiative, the lobby group The Global Initiative to End Wildlife Crime has prepared what they hope will be the fourth protocol, the *Protocol against the Illicit Trafficking in Specimens of Wild Fauna and Flora* to the UNTOC that regulates the illicit trafficking of specimens of wild fauna and flora. To date, the Global Initiative to End Wildlife Crime has published a second briefing paper in which they propose the form and content of this fourth Protocol. According to their proposals, it would "criminalize intentional illicit trafficking of … any whole or part of a wild animal or plant…in violation of an applicable international agreement or any domestic or foreign law" (The Global Initiative to End Wildlife Crime, 2022). The Protocol would also commit State Parties to assist with real time information exchange, reliable document verification procedures, enhancing border controls, appropriately training enforcement officials, and actively discouraging demand for illegal specimens.

On the other hand, even though the FATF Recommendations only explicitly mention environmental crime, such as the "trafficking of protected species of wild fauna and flora" (FATF 2012-2022: 121) some 20 pages before the end, it is nevertheless an important international standard that South African policy makers used to develop the South African Anti-Money Laundering Integrated Task Force in 2019 (SAMLIT, 2021). The SAMLIT task force allows law enforcement and local and international financial institutions registered in South Africa to pool their resources to counter financial crime (SAMLIT, 2021: 2). In 2020, the task force established an expert working group to investigate financial flows linked to IWT, a criminal operation that has self-organised and grown because financial institutions could not

specifically identify IWT-related flows. Often these transactions mimic other criminal operations and are co-mingled with other commodities such as sugar, maize or fuel and legitimate businesses that often trade in cash (SAMLIT, 2021: 3). The working group also suspected that, in South Africa, informal schemes such as Hawala[30], barter trade, casino chips and cash transactions are used to hide these illegal transactions. This makes it difficult to trace and analyse the complex network of actors involved in the supply chain. Nevertheless, Caroline Edey van Wyk (2022), who works for Investec, an investment banking firm and partner in SAMLIT, has touted the initiative's success hailing the arrest of 12 suspects and the seizure of 78 rhino horns and other ivory products.

There are clearly a number of stakeholders working within this sector. In addition to the Coalition to End Wildlife Trafficking Online and the Global Initiative to End Wildlife Crime, there are also industry self-regulating mechanisms that include social media platforms and closed networks (e.g. Facebook, YouTube, Instagram, Twitter, Chinese equivalents e.g. WeChat, Weibo, QQ, iqiyi, and other online communication platforms). The power of individual members of the public have also acted to counter IWT. A good example is the role aviation sector personnel play in reporting and stopping IWT through Wildlife Sentinel, a mobile reporting app developed by Crime Stoppers International and the USAID ROUTES Partnership (ROUTES, 2021). National governmental bodies, including law enforcement agencies, FIUs, regulators, asset recovery agencies, financial institutions and other reporting entities, international law enforcement agencies, multilaterals and intergovernmental bodies, e.g. FATF, INTERPOL, UNODC, FATF-style regional bodies (Eastern and Southern African Anti-Money Laundering Group, Asia / Pacific Group on Money Laundering) have all been involved in mitigating illegal financial flows. This all indicates a highly positive level of political will as indicated in Figure 20's reinforcing CLDs (in pink). The exception is the *United Nations Convention against Terrorism and Organized Crime* (2004) which interacts with the South African *Prevention of Organised Crime Act* (1998) and associated initiatives and consequently loses some of its impetus to score a +6 on the political will scale.

[30] Hawala is an informal value transfer system that is not based on the movement of cash or wire transfers between banks. It instead relies on the performance and honour of a huge network of money brokers.

6.2.5 Changing trends in demand and information

Over the years conservation policy has endeavoured to rely on scientific evidence to help it adapt and change to new circumstances. Despite the best intentions policy makers are pressured to make decisions without verified evidence or must rely on research that is poorly designed using inappropriate methods or sample sizes. These studies can mislead policy makers who are already battling with information overload as Baumgartner and his colleagues' research described (Jones and Baumgartner, 2005; Baumgartner and Jones, 1993, 2009; Baumgartner et al., 2014) (see chapter 3). It also encourages an interplay between market participants, NGOs, policy makers and the media. The 2013 unsubstantiated report by the unregistered NGO Elephant Action League linking Al-Shabaab to the ivory trade, mentioned in chapter 2 is one example (McConnell, 2014; Crosta and Sutherland, 2016).

National, regional and international research institutes, international multilaterals and intergovernmental bodies (e.g. UNODC, CBD, CITES, IUCN) have started to broach this issue. But work in this area is still in the early stages. For instance, the African Commission on Human and People's Rights is supporting efforts by the African Union and its members states to monitor and manage the spread of fake news, especially on social media platforms. However, these initiatives must not purposely curtail a citizen's ability to express themselves or limit access to accurate information particularly during elections and times of crisis (Majama, 2021). While there is a high commitment towards mitigating the effects of misinformation, this is a delicate balance that is taking time to resolve. These efforts are captured under the *Disaster Management Act* (2020) and register a political will score of +6 producing a reinforcing CLD as seen in Figure 20.

CITES parties have also considered factors such as habitat destruction hastened by climate change, natural resource prospecting and trade values increasing demand as reasons for a species extinction. Introducing alien species into an environment could also potentially deplete precious water reserves and could cause the collapse of a complex and interrelated ecosystem should one species become extinct (OECD, 2000).

The 2019 CITES CoP18 meeting in Geneva recognised the importance of protecting new

species (Rosen et al., 2019: 1). Using IPES's Global Assessment Report on Biodiversity and Ecosystem Services (2019), the meeting chose to list 57 new species including several vanishing marine species and established a database to manage illegal trade data collected through CITIES' annual illegal trade reports.

Countries have also exploited loopholes in the CITES Convention, choosing to interpret the law literally in an attempt to circumvent its provisions. The fact that CITES only requires countries to report international trade in general has allowed some members to label species as part of domestic shipments, effectively under-reporting the true level of trade and under-valuing the exact impact of the trade on a species. The various customs bureaucracies are another vulnerable to interpretation. From different terminology for countries of origin to ill-defined standards of how trade volume is measured — using weight or numbered headcount — countries are able to fudge data making crosschecking import and export sources virtually impossible.

Then there is also the influence of those countries, often major consumers of illegal specimens and products, who are not parties to CITES. While in some instances they do house laundering operations that support the illegal industry and obscure the true international trade volumes of species (OECD, 2000), the number of these countries is decreasing as the number of signatories increases. But the deterrent for such practices is limited to what some consider to be relatively light forfeiture penalties (Brooks, 1993). Although criminal prosecution is an option under most penal codes, monetary fines and stock seizures are by far the most popular form of sanction because they are more cost effective and negate the need for lengthy trials with judges that are not necessarily trained to appreciate the subtleties of each case (Barry, 2011). But these fines, as outlined in chapter 4 under the section on South African National Policies, pale compared to the estimated market value illegal wildlife specimens can fetch. Some argue that forfeiting precious stock is enough to dissuade offenders, but often such trades are obscured by adulterated or forged permits and certificates (Oldfield, 2013: xx) which, if detected, are often treated as minor administrative breaches.

CITES and the WTO have both attempted to respond to this emergent behaviour by enacting

provisions that are meant to monitor illegal trade, IWT in particular. But these provisions are only able to pinpoint culprits or track the number of poaching incidents. They are useful but neither of these aspects attack the core drivers of IWT and so their preventative measures are only marginally useful. UNCAC is another international treaty that is meant to counter corruption by tracing illegal financial transactions and strengthening punitive measures against traffickers. These instruments work in concert with the AiChi Targets that promote infrastructure development and the UN Forest Instrument and the UN Strategic Plan for Forests (explained in depth in the previous chapter) both of which look to preserve and protect forests. All these initiatives link to: SDG 1 to reduce poverty, SDG 8 to promote sustainable economic growth, SDG 9 build safe cities that are resilient and sustainable, and SDG 10 to reduce inequalities by encouraging foreign direct investment and development assistance.

The 2013 CoP16 meeting in Bangkok highlighted another key issue, the fact that management authorities in importing and exporting countries, such as South Africa, inadequately enforce CITES regulations (CITES Conf 11.3, 2013: 1). This lack of action compromises all efforts to monitor and manage international wildlife trade and contravenes recognised oversight provisions. All parties were charged with bolstering their individual trade enforcement efforts and, in an attempt to combat forgery, verify the origin and veracity of all import certificates especially those from management authorities whose systems have been identified as flawed (CITIES Conf 11.3, 2013: 3; Brown and Swails, 2005: 3).

Despite this commitment, by the 2016 CoP17 summit in Johannesburg there was a marked increase in reported cases of illicit activity which motivated an unprecedented number of attendees to participate in the meeting (Rosen, 2016). The landmark Johannesburg summit built on discussions started at CoP16, discussed key concerns including corruption, cybercrime, tracking illicit trade, managing legal acquisitions and captive breeding (Scanlon, 2016). These gains were tempered by a call to resume trade in certain species such as the African elephant and various species of shark. The consumptive-use block for the African elephant, for example, cited using the additional excise revenue from this legal trade to fund conservation incentives for local communities and expand the capacity of enforcement and customs agencies. The effect of such proposals is outlined in the earlier discussion of South

Africa's 2017 decision to lift the domestic ban on rhino horn trade (see chapter 2).

Increasing urbanisation and its concomitant socio-economic effects has also increased IWT demand. This is something SDG 15 and its goal to "enhance global support for efforts to combat poaching and trafficking of protected species, including by increasing the capacity of local communities to pursue sustainable livelihood opportunities" (UN, 2018: 15) addresses. National governmental bodies, specifically educational bodies, international development agencies, multilaterals and intergovernmental bodies (e.g. UNICEF, UNEP, UNDP, ICLEI) all work to mitigate this issue, which have already been described in some depth. The CLD in Figure 20 shows that a fairly stable degree of positive political will, a +8, in each of the policies involved highlighted in pink.

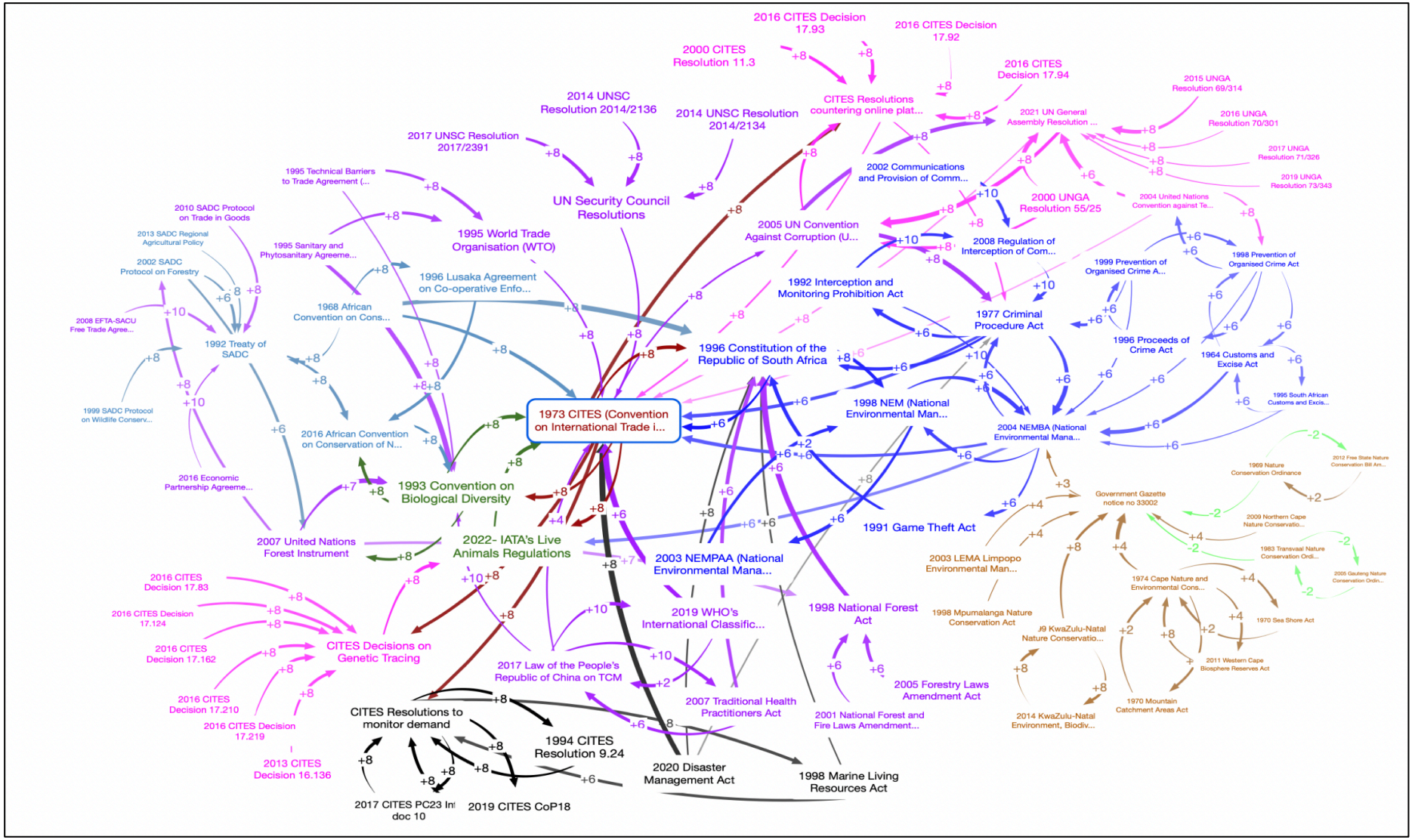

Figure 20 CLDs indicating the degree and direction of political will between all policies covering each example of emergent behaviour. The researcher developed the figure using the CONSIDEO MODELER software.

6.3 Conclusions

This chapter and its CLDs have illustrated that a high degree of political will exists within the broader IWT policy system and specifically as it relates to the South African case study. The sheer number of policies that have been enacted dilutes the assumption that political will resides only within a central body of policy makers. Instead, as this study shows, there is a significant amount of political commitment to correct current environmental and illegal trading trends from policy makers at the international, regional and national levels. It is at the provincial or community level where the commitment is significantly less. This is because these policies must rely on the will of private and community donors to fund and manage initiatives; no resources are committed from other policy levels.

In conjunction with the table in Appendix 1 (which identifies the presence of the ten specific indicators of political will developed in chapter 3), chapter 6 discussed the effect of the different levels of political will and was also able to contextualise this effect by using the concepts of complexity thinking that were described in chapter 3. Besides illustrating the concepts of punctuated equilibrium and self-organisation, chapter 6 also explored how these actions produced emergent behaviour that forced policy and specific actors, but not necessarily the IWT policy system, to adapt. The evolving policy provisions enacted by UNCAC to trace IWT-related financial flows and interrupt a very sophisticated supply chain is one such example. As are the attempts Forestry South Africa employs under the auspices of the *UN Forest Instrument* (2007), the *SADC Protocol on Forestry* (2002) and the *National Forest Act* (1998) and its amendments to promote a legal and sustainable trade in forest-related products.

This chapter also used the CLDs to map the emergent behaviour of political will in response to economic inequality, the geopolitical effect of TAM, the increased prevalence of human-wildlife conflict, the need to develop affordable techniques to genetically detect and trace threatened species, and to mitigate the changing trends in demand and information. The CLDs also illustrate the ripple effect non-action by local law enforcement officials has on the degree of political will found throughout the system.

The higher degree of negative will at the provincial level will be discussed in the final chapter as will the long term affect this has on the policy system. The final chapter will also identify potential leverage points that can be used to change the trajectory of political will and improve policy response and effectiveness.

Chapter 7

Leveraging political will within South Africa's IWT policy system

7.1 Introduction

The objective of this thesis was to develop a functional base to understand the dynamics of political will within the IWT policy system. It established that there was a concerted effort at the international, regional, and within South Africa's national and provincial policy levels to manage the illegal trade in wild flora and fauna. The study used complexity thinking to do two things: to demonstrate the complex nature of the broader IWT policy system from a South African perspective; and, to determine what constituted political will within the policy system and the effect this will had on the system's ability to respond and adapt to emergent behaviour. CLDs developed using the CONSIDEO MODELER software illustrated this effect and offered a very visual way to identify points of leverage that can be used to sustain the will needed to manage the policy system.

This final chapter reviews the data discussed throughout this study and highlights several leverage points that can be used to motivate greater adaptability within the system and manage IWT.

7.2 Appreciating the complexity of the IWT policy system

IWT has been labelled an intractable problem that resists attempts to manage it at all policy levels. Studies such as those conducted by Clark Gibson and more recently Nafeesa Esmail and her colleagues have blamed this resistance and the growing market for IWT on the complex nature of the problem and a lack of political will – two concepts they also never specifically define (see chapter 2).

This study aimed to address this problem by illustrating the number of legislative measures enacted to curb IWT and show how they interact with each other to form a complex policy system within which political will definitely exists. In the process, it found that the 'complexity' that is blamed for the persistence of IWT means significantly more than the

expedient placeholder it often resembles. As this thesis demonstrated, the sheer number of policies – 80 were discussed – and the number of moveable parts that interact and produce unpredictable behaviour makes this, as chapter 3 discussed, a complex policy system. The dynamics of political will within this matrix adds to the complexity with decisions made at various junctures and by different actors. As a result, this study considered the IWT policy system to be an open one in which political will exists as a complex mix of initiatives and policy instruments that aim to protect the environment, improve economic opportunities and foster greater political stability.

Developed to discourage communities from participating in the IWT supply chain, chapter 4 described how these instruments were predominantly present at the international, regional and national policy levels. While chapter 5 showed that there are several indications of political will, the IWT policy system's success nevertheless relies on the motivation and inclination of individuals to implement these provisions – specifically locally-based law enforcement officials and community members. Unfortunately, the data collected showed that these policies have treated communities as collectives, motivating these large groups with messaging that advocates for heritage preservation and long term economic gain. Though these are noble pursuits, they also ignore the effect venality, and the lucrative but short-term monetary value wildlife trade offers individuals within local communities.

7.3 Appreciating political will within the IWT policy system

Benjamin Carbonetti, Robert Pomeroy and David Richards and Carmen Malena (see chapter 3) have tied policy success to the concept of 'political will'. However, as this study has argued, this concept is insufficiently understood. This imprecision makes political will an ideal rhetorical tool to explain policy failures largely because, as discussed in chapter 3, it is generally defined by its absence. Their mistake, however, is that they seem to assume that political will resides solely within a central body of policy makers when, as this study has shown, a much broader conceptualisation is apparent, especially within the IWT policy system. As chapter 6's assessment of emergent behaviour discussed, countering economic inequality cannot rely on the responsiveness of a central body of decision makers. By their very nature, such bodies are slow to make decisions which means that local actors are left to manage immediate problems on their own and should, therefore, be encouraged to

determine the most appropriate response.

Furthermore, when civil society's actions culminate in policy amendments, such as those seen in CITES' Appendices, then they are certainly a valuable indicator of political will and answerability. Unfortunately, by relying on civil society research, which in this case comes from mostly natural scientists and conservation-related organisations, policy tends to be skewed in favour of science and neglects the very human needs that drive IWT and policy implementation.

Chapter 3's discussion of DeQuincy Lezine and Gerald Reed's work, on the other hand, attempted to identify how political commitment is forged at each point in the policy development process. Their findings helped Carmen Malena form a broader conceptual framework to assess political will and found that three mutually reinforcing elements – political will, political can and political must – encouraged its development. Together these authors informed the specific indicators this study used to assess the actions (or inactions) of political will present in the IWT policy system.

This broader conceptualisation was used to identify indications (in chapter 5) and assess these using specific indicators (in chapter 6) of political will throughout the IWT policy system. To gauge their systemic effect, CLDs were developed by determining the presence of these indicators. They factored in the inclusion of senior decision makers and other stakeholders in policy discussions, the presence of a policy enforcement mechanism that is suitably resourced with appropriate targets, and whether a monitoring and evaluation mechanism exists that has the capacity to generate data and debate new measures to mitigate unintended consequences. The presence, or absence, of these indicators were then incorporated into chapter 6's CLDs and illustrated the degree and effect of political will. Scheduling public hearings such as the 2016 UNDOC's meeting to discuss rhino poaching, commissioning environmental scans from academics similar to Nafeesa Esmail and her colleagues' 2019 horizon scan, and the work published by civil society organisations such as WWF and TRAFFIC are examples of these indicators. Funding additional studies to investigate under-explored aspects of IWT, such as SAMLIT's study to trace the trade's financial flows, and involving affected communities to discuss IWT and recommend their own locally driven solutions were

also cited as indicators of political will. Whether policy regulations were easy for officials to interpret and implement and whether funding, training and technical assistance were present were also considered as part of the CLD development. In chapter 6's analysis, this last indicator was hardly present and is the principal reason most policies did not score higher on the political will scale. It also accounts for the negative scores assessed at each policy level and the balancing CLDs that are present at the provincial policy level.

In this analysis, political will flowed in a positive direction when there was some form of action, and in a negative direction when nothing discernible could be found. An important finding is that political will exists regardless of the direction, because even when no action was apparent the delay fulfils the political agenda of at least one stakeholder, usually one well-placed within the IWT supply chain.

7.3 Findings

The data produced in this study indicates that the IWT policy system is complex but that it is slow to adapt to emerging issues because it follows a linear or stepwise process. Furthermore, the plethora of policies that have been enacted at all levels overwhelms the capacity of individuals to enforce these provisions. In other words, these policies are only marginally effective because there is poor capacity on the ground to implement them. This finding reinforces the call that bodies such as the UN Environment Programme and scholars such as Paul Cairney and Rosie Cooney and her colleagues (see chapter 2) have made to integrate policy into the deployed environment and to continue to develop it as the environment changes.

Nevertheless, this study has shown that there is a healthy degree of political will within the system, concentrated at the international, regional and national levels (see chapters 5 and 6). The CLDs also determined that there was almost no central control over the international policy agenda, with policy proposals being pushed forward at CITES CoP meetings, for instance, by different parties with specific agendas. The UK's push at CoP15 in Doha, which was a very public show of dissent against its EU partners, to include Atlantic Bluefin Tuna as a CITES Appendix III listing is one example mentioned in chapter 4. Another is the 2014 UNTOC CoP meeting which spurred the Global Initiative to End Wildlife Crime to draft a fourth

protocol to commit signatories to exchange information in real time, provide consistent document verification procedures, enhance border controls, train enforcement officials and actively discourage demand for illegal specimens (see chapter 5). By extension, actors at the international level have used a degree of political will at various moments throughout the legislative process to push for specific policy action to force the system, however slowly, to adapt to emerging circumstances and behaviour.

In much the same way as Miller and Page mentioned in chapter 3, the IWT policy system definitely has a memory. The system's memory adds to its sluggishness to adapt and integrate new policy interventions. CITES and its provisions, despite being nearly 50 years old, underpin all IWT policies and policy instruments from the UN and its Security Council to the General Assembly Resolutions that link IWT to terrorism to the revised *African Convention on the Conservation of Nature and Natural Resources*. In the process, it was also shown that these policies determined the shape and form of South Africa's NEMA policies to regulate the legal trade of wild flora and fauna. It is clear that the conditions used to initiate CITES created the initial momentum to control IWT and manage conservation efforts. It also influenced all actions within this system creating a policy path and a dependency that persists. At a provincial level, policies like the 1983 *Transvaal Nature Conservation Ordinance,* for instance, have been used as a template for subsequent provincial legislation such as the 2005 *Gauteng Nature Conservation Ordinance* and the 2012 *Northern Cape Nature Conservation Act*. As a result, measures such as establishing a monitoring and evaluation mechanism have been copied into the newer policies without considering key practicalities such as whether adequate financing and the concomitant training has been provided, especially at the provincial level, to ensure proper implementation.

It was also shown that this will is driven by policy measures that consider scientific data aimed at protecting the planet's ecosystem and each nation's heritage, in this case South Africa's distinct cultures. The apparent absence of political will at South Africa's provincial policy level reverberates throughout the policy system and affects implementation at all levels. In this way, the relatively small inaction produced a larger effect confirming Baumgartner and his colleagues' findings that were discussed in chapter 3.

Since policies at the provincial level have been shown to be relatively dated, policy makers have delayed addressing new research, especially data that would force a change in regulations. It is clearly evident that this inaction has produced a period of equilibrium resulting in a negative input into the system that manifested as negative political will in the CLDs. Chapter 6 made it clear that in seven of the nine provinces IWT-related policy has reached such an equilibrium with no significant policy being enacted in the last 20 years. This equilibrium is partly to blame for the persistent threat of rhino poaching in provinces such as Limpopo and Mpumalanga which host the Kruger National Park. Another example provided was the weaknesses identified in the original SADC Forestry Strategy 2010-2020 which supported the 2002 *SADC Forestry Protocol*. As discussed in chapter 5 and 6, in revising the strategy to manage the region's forests between 2020-2030, SADC acknowledged that its original approach was inadequately promoted to member states and did not explain the Secretariat's role. It also acknowledged that there were no tangible financial and human resources allocated to the strategy.

The analysis in this study has shown that in each of these areas there are clear indicators of negative political will and these present distinct leverage points that subsequent strategies should focus on understanding and improving.

7.4 Leverage points to motivate system adaptability

Numerous academic studies have tried to bridge the gap between theory and application by offering policy makers useful insights to improve their efforts. This study is no different. This analysis found that the policy environment includes multiple decision making centres instead of one core group as Gibson (chapter 2), for instance, assumed. Each of these centres also brings their own jurisdictional boundaries and interests that tend to overlap. For this reason, this study recognises that policy making power within the IWT policy system is dispersed throughout the environment and that political will is, therefore, shaped by different actors and the interaction with different systems. This presents an important leverage point that will help force a degree of flexibility and accountability into the system.

The South African government has historically tied itself to the perception of progress, be it economic, political or social. This has proven to be a successful campaign formula during

election cycles and has kept the ANC-led government in power for almost 30 years. It is therefore understandable for the government to cling to the 'top-down' centralised implementation model instead of diffusing power within the system. According to Paul Cairney as indicated in chapter 3, a central governing body's efforts to tightly control every aspect of the implementation process hinders the ultimate success of the policy. It instils a degree of rigidity and produces a reinforcing feedback loop that simply amplifies existing path dependencies and weaknesses within the policy system. Perhaps the most notable weakness identified is the inability to incentivise local law enforcement officials to apply policy provisions as they are stipulated. As Geyer and Rihani (see chapter 3) suggest, a softer management approach that empowers local actors to determine the best actions and adaptations given their specific context might yield better results.

Another possible tactic would be for lobbyists to link their policy proposals to similar and successfully implemented initiatives that have encouraged individual action or responsibility. For instance, a strategy that has produced some success within the corporate sector are the initiatives launched by Nedbank, called the Nedbank Affinity savings/investment account that is linked to the WWF Nedbank Green Trust, and Woolworths[31] through its *My Planet* reward card. Both companies have incentivised their staff, shareholders and customers to support rewards programmes that are aimed at funding environmental organisations and their work to mitigate environmental challenges. These initiatives have been enacted without the express authorisation of the national government and have achieved a great deal of good publicity and assisted a number of valuable programmes. In citing such a success, lobbyists can reinforce or at the very least remind policy makers of the lessons learnt in past 'bottom-up' studies and the goodwill these generated.

This links to another leverage point that this study has repeatedly identified – the fact that policies do not integrate implementation strategies at the local level. This effectively hampers the degree of support at a crucial point in the policy system. To register a score of political will here, this study searched for evidence of environmental scans and community-specific analyses that assess the requirements of local leaders and communities. Very few were found

[31] This rewards programme is led by Woolworths but also partners with other corporates such as Engen, loot.co.za, WorksheetCloud and Netstar.

outside of the Western Cape and KwaZulu-Natal provinces and this inaction rippled throughout the system and contributes to the exponential growth of IWT within South Africa. This raises the question of why the needs and motivations of local, provincial and national department decision makers are absent. One can blame, and authors such as Robert Smith and his colleagues (see chapter) have, the expense of building appropriate human knowledge and capacity to identify and trace traded specimens. But what should also be considered is who benefits from making sure that illegal specimens go undetected. In other words, the benefits that government and law enforcement officials receive needs to be appropriately addressed. Chapters 5 and 6 show that their inaction not only allows the illegal trade to flourish but it also provides other, often financial, trade-offs. In this policy system, corruption is viewed as an illegal act that needs to be tracked, prosecuted and punished. However, there is no attention given to how to replace this source of income which officials have become accustomed to receiving. This is one question that policy experts, although cognisant of, do not seem able or willing to engage.

This links to yet another leverage point which is the emphasis placed on incorporating scientific findings, specifically conservation and ecosystemic data, into policy meant to manage IWT. Integrating scientific data is essential, but so too is accounting for the variability of humans and their needs. If these provisions are to be successfully implemented, policy and the strategies that drive them must incorporate the punitive provisions to manage IWT alongside a few provisions to curb certain human attributes. Legal scholars and non-governmental organisations have pushed for stiffer sanctions to deter corrupt practices and raise ethical standards among officials, legislators and the judiciary. But they have found that it is difficult to dislodge a system that supports, and is handsomely supported by, wildlife traffickers making the will to voluntarily curb a very lucrative source of income hard to find.

The social and economic context of local law enforcement officials, not just the communities they police, also drives their inaction and affects the entire policy system hindering its ability to respond and adapt at the local level. For this reason it is argued that policy development strategists need to appreciate the role venality and vanity plays in perpetuating IWT. These strategists need to design instruments that will temper these negative human traits – specifically within local officials – while encouraging individuals to respond, that is to act and

to be answerable, to develop a reinforcing feedback loop that grows systemic accountability. Clearly, the higher the commercial value of a species the more difficult it is to sustain the political will to enforce CITES. Consequently, the political will to manage IWT is ultimately a question of value in the economic sense and values in the more moral sense.

Yet another leverage point is motivating provincial and municipal policy makers and the communities they serve to debate evaluation reports and change policy provisions, such as allocating funds from provincial budgets to support IWT-related policy implementation. In doing so, this would produce a 'punctuation' of action as Jones and Baumgartner suggest and force a positive feedback loop (see chapter 3). This burst of action will effectively attract new approaches and new actors to collect and process data and force the policy system to adapt to the evolving tactics employed by the IWT supply chain. To push this policy punctuation other stakeholders will need to develop a critical mass of attention that appreciates the intricacies of internal party politics and offers incentives or inducements to shape a legislator's willingness to act.

The research also illustrated how implementing the various IWT policies produced unintended consequences elsewhere in the system. The effect of advocating for substitute species for tiger bones in TAM formulations, for example, has the concomitant effect of raising the market value for tiger bones. This reinforces Sanderson's finding referred to in chapter 3 that complexity studies are unable to specifically predict whether a policy achieves the change it intends. As a result, policy makers need to redefine success and be more open to experimentation and sensitive to the findings pilot projects produce. In fact, this study also argues that policy makers must be prepared to accept that there will be mistakes or 'errors' in the policy design which will require quick action that adapts to new circumstances. Failure should be removed from the policy makers vocabulary as they look to maintain the political will (in the form of reinforcing causal loops) to adapt policies at a pace that matches the rapidly evolving illegal wildlife trade.

7.5 Contribution of the study to scientific knowledge

In investigating IWT and the policy that intends to manage it, researchers have relied on traditional methodological approaches that study policy making process as a linear process

that moves mechanically from agenda setting activities to policy formation to policy implementation and eventually to the review phase. These stages are indisputable components of policy making but they do not always follow each other in a neat, pre-determined manner. In other words, such assessments do not account for the dynamics of IWT and the political will and interaction of multiple international and local actors.

To address this problem, this thesis uses complexity thinking to develop a new approach to IWT policy analysis. In using complexity thinking concepts, the approach traces the presence and effect of political will within the system. The complexity thinking approach adds to the broader domain of policy analysis and is directly applicable to the South African policy dynamic. It can, however, also be used by other countries that are working through this same problem.

7.6 Future Research

This study has painted a broad account of the policy making environment or complex system that encompasses the illegal wildlife trade. It shows how this sub-system of the larger policy making environment operates and maps how policy interacts and adapts. While it has illustrated the adaptive nature of the IWT policy system it also suggests that there is additional scope for further, more interpretive study, that studies how actors adapt to their environment and how these perceptions shape the decisions they take. Such a study could look to combine periods of observation with multiple interviews of practitioners and would be able to appreciate the importance and limits of political will given each actor's specific context.

APPENDIX 1

Data collection

International Policies

Policy	Important Decision Makers	Policy Enforcement Mechanism with dis/incentives	Human Resources Committed	Financial Resources Committed	Milestones Integrated as part of policy	M & E Mechanism established	M & E Suitably Funded	Regular M & E Reports received	New Recommendations debated in policy process	New Measures enacted	Total
Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (1973)	1	-1	1	1	1	1	1	1	1	1	8
Convention on Biological Diversity (1993)	1	-1	1	1	1	1	1	1	1	1	8
IATA's Live Animals Regulations (updated annually) (2022)	1	1	1	1	1	1	1	1	-1	1	8
CITES Resolution 11.3 (2000)	1	-1	1	1	1	1	1	1	1	1	8
CITES Decisions 17.124 (2016)	1	-1	1	1	1	1	1	1	1	1	8
CITES Decisions 17.162 (2016)	1	-1	1	1	1	1	1	1	1	1	8
CITES Decisions 17.210 (2016)	1	-1	1	1	1	1	1	1	1	1	8
CITES Decisions 17.219 (2016)	1	-1	1	1	1	1	1	1	1	1	8
CITES Decisions 17.83 (2016)	1	-1	1	1	1	1	1	1	1	1	8
CITES Decisions 17.92 (2016)	1	-1	1	1	1	1	1	1	1	1	8
CITES Decisions 17.93 (2016)	1	-1	1	1	1	1	1	1	1	1	8
CITES Decisions 17.94 (2016)	1	-1	1	1	1	1	1	1	1	1	8
CITES PC23 Info doc 10 (2017)	1	-1	1	1	1	1	1	1	1	1	8
CITES Resolution 9.24 (1994)	1	-1	1	1	1	1	1	1	1	1	8
CITES CoP18 (2019)	1	-1	1	1	1	1	1	1	1	1	8
UNGA Resolution 55/25 - Combat financial crimes through United Nations Convention against Terrorism and Organized Crime (2000)	1	-1	1	1	1	1	1	1	1	1	8
UNGA Resolution 69/314 - UNGA Resolution on Tackling Illicit Trafficking in Wildlife (2015)	1	-1	1	1	1	1	1	1	1	1	8
UNGA Resolution 70/301 - UNGA Resolution on Tackling Illicit Trafficking in Wildlife (2016)	1	-1	1	1	1	1	1	1	1	1	8
UNGA Resolution 71/326 - UNGA Resolution on Tackling Illicit Trafficking in Wildlife (2017)	1	-1	1	1	1	1	1	1	1	1	8
UNGA Resolution 73/343 - UNGA Resolution on Tackling Illicit Trafficking in Wildlife (2019)	1	-1	1	1	1	1	1	1	1	1	8
UNGA Resolution 75/311 - UNGA Resolution on Tackling Illicit Trafficking in Wildlife (2021)	1	-1	1	1	1	1	1	1	1	1	8
UNSC Resolution 2014/2134 (link IWT to terrorism) (2014)	1	-1	1	1	1	1	1	1	1	1	8
UNSC Resolution 2014/2136 (link IWT to Terrorism) (2014)	1	-1	1	1	1	1	1	1	1	1	8
UNSC Resolution 2017/2391 (2017)	1	-1	1	1	1	1	1	1	1	1	8
United Nations Convention Against Corruption (2003)	1	-1	1	1	1	1	1	1	1	1	8
United Nations Convention against Terrorism and Organized Crime (2004)	1	-1	1	1	1	1	1	1	1	1	8
United Nations Forest Instrument (2007)	1	-1	1	1	1	1	1	1	1	1	8
WTO's Technical Barriers to Trade Agreement (1995)	1	1	1	1	1	1	1	1	-1	1	8
WTO's Sanitary and Phytosanitary Agreement (1995)	1	1	1	1	1	1	1	1	-1	1	8
Law of the People's Republic of China on TCM (2017)	1	1	1	1	1	1	1	1	1	1	10
WHO International Classification of Diseases (ICD-11) (2019)	1	-1	-1	-1	1	1	-1	1	1	1	2

Regional Policies

Policy	Important Decision Makers	Policy Enforcement Mechanism with dis/incentives	Human Resources Committed	Financial Resources Committed	Milestones Integrated as part of policy	M & E Mechanism established	M & E Suitably Funded	Regular M & E Reports received	New Recommendations debated in policy process	New Measures enacted	Total
African Convention on the Conservation of Nature and Natural Resources (1968)	1	-1	1	1	1	1	1	1	1	1	8
Lusaka Agreement on Co-operative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora (1996)	1	1	1	1	1	1	-1	1	1	1	8
African Convention on the Conservation of Nature and Natural Resources (Revised) (2016)	1	-1	1	1	1	1	1	1	1	1	8
Treaty of the Southern African Development Community (1992)	1	-1	1	1	1	1	1	1	1	1	8
SADC Protocol on Forestry (2002)	1	-1	-1	-1	1	1	1	1	1	1	8
SADC Protocol on Trade in Goods (1996 & 2010)	1	-1	1	1	1	1	1	1	1	1	8
SADC Regional Agricultural Policy (2013)	1	-1	1	1	1	1	1	1	1	1	8
SADC Protocol on Wildlife Conservation and Law Enforcement (1999)	1	-1	1	1	1	1	1	1	1	1	8
EFTA-SACU Free Trade Agreement (2008)	1	1	1	1	1	1	1	1	1	1	8
Economic Partnership Agreement between the European Union and Southern African Development Community Group (2016 -)	1	1	1	1	1	1	1	1	1	1	8

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South African National Policies

Policy	Important Decision Makers	Policy Enforcement Mechanism with dis/incentives	Human Resources Committed	Financial Resources Committed	Milestones Integrated as part of policy	M & E Mechanism established	M & E Suitably Funded	Regular M & E Reports received	New Recommendations debated in policy process	New Measures enacted	Total
Game Theft Act (1991)	1	1	1	-1	1	1	-1	1	-1	-1	8
Constitution of the Republic of South Africa (1996)	1	1	1	1	1	1	1	1	1	1	8
National Environmental Management Act (1998)	1	1	1	-1	1	1	-1	1	1	1	8
National Environmental Management Act: Protected Areas Act (2003)	1	1	1	-1	1	1	-1	1	1	1	8
National Environmental Management Act: Biodiversity Act (2004)	1	1	1	-1	1	1	-1	1	1	1	8
NEMBA Ammendment (2010)	1	1	1	-1	1	1	-1	1	1	1	8
NEMBA Ammendment (2011)	1	1	1	-1	1	1	-1	1	1	1	8
NEMBA Ammendment (2014)	1	1	1	-1	1	1	-1	1	1	1	8
Threatened or Protected Species List (2007)	1	1	1	-1	1	1	-1	1	1	1	8
Threatened or Protected Marine Species Regulations (2017)	1	1	1	-1	1	1	-1	1	1	1	8
Government Gazette notice no 33002 (2010)	1	1	1	-1	1	1	-1	1	1	1	8
South African Customs and Excise Act (1964)	1	1	-1	1	1	1	-1	1	1	1	8
South African Customs and Excise Amendment Act (1995)	1	1	-1	1	1	1	-1	1	1	1	8
Criminal Procedure Act (1977)	1	1	-1	1	1	1	-1	1	1	1	8
Proceeds of Crime Act (1996)	1	1	-1	1	1	1	-1	1	1	1	8
Prevention of Organised Crime Act (1998)	1	1	-1	1	1	1	-1	1	1	1	8
Prevention of Organised Crime Amendment Act (1999)	1	1	-1	1	1	1	-1	1	1	1	8
Interception and Monitoring Prohibition Act (1992)	1	1	1	1	1	1	1	1	1	1	8
Regulation of Interception of Communications and Provision of Communications-Related Information Act (2002)	1	1	1	1	1	1	1	1	1	1	8
Regulation of Interception of Communications and Provisions of Communications-Related Information Amendment Act (2008)	1	1	1	1	1	1	1	1	1	1	8
National Forest Act (1998)	1	1	1	-1	1	1	-1	1	1	1	8
National Forest and Fire Laws Amendment Act (2001)	1	1	1	-1	1	1	-1	1	1	1	8
Forestry Laws Amendment Act (2005)	1	1	1	-1	1	1	-1	1	1	1	8
Marine Living Resources Act (1998)	1	1	1	-1	1	1	-1	1	1	1	8
Traditional Health Practitioners Act (2007)	1	1	1	-1	1	1	-1	1	1	-1	8
Disaster Management Act (2020)	1	1	1	-1	1	1	1	1	1	1	8

South African Provincial policies

Policy	Important Decision Makers	Policy Enforcement Mechanism with dis/incentives	Human Resources Committed	Financial Resources Committed	Milestones Integrated as part of policy	M & E Mechanism established	M & E Suitably Funded	Regular M & E Reports received	New Recommendations debated in policy process	New Measures enacted	Total
Limpopo Environmental Management Act (2003)	1	1	-1	-1	1	1	-1	1	1	1	**8**
Mpumalanga Nature Conservation Act (1998)	1	1	-1	-1	1	1	-1	1	1	1	**8**
KwaZulu-Natal Nature Conservation Management Amendment Act (1999)	1	1	1	1	1	1	-1	1	1	1	**8**
KwaZulu-Natal Environment, Biodiversity and Protected Areas Management Bill (2014)	1	1	1	1	1	1	-1	1	1	1	**8**
Cape Nature and Environmental Conservation Ordinance (1974)	1	1	-1	-1	1	1	-1	1	1	1	**8**
Western Cape Biosphere Reserves Act (2011)	1	1	1	1	1	1	-1	1	1	1	**8**
Sea Shore Act (1970)	1	1	-1	-1	1	1	-1	1	1	-1	**8**
Mountain Catchment Areas Act (1970)	1	1	-1	-1	1	1	-1	1	1	-1	**8**
Transvaal Nature Conservation Ordinance (1983)	1	1	-1	-1	1	1	-1	-1	-1	-1	**8**
Gauteng Nature Conservation Ordinance (2005)	1	1	-1	-1	1	1	-1	-1	-1	-1	**8**
Northern Cape Nature Conservation Act (2012)	1	1	-1	-1	1	1	-1	1	1	1	**8**
Free State Nature Conservation Ordinance (1969)	1	1	-1	-1	1	1	-1	-1	-1	-1	**8**
Free State Nature Conservation Bill Amendment (2012)	1	1	-1	-1	1	1	-1	-1	1	1	**8**

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