Conserving biological diversity is a complex task and requires a multi-disciplinary approach. Wildlife trafficking is one of the problems endangering biological diversity. The Convention on Biological Diversity is an international treaty and aims at protecting biological diversity as a whole. It offers instruments that are meant to consider many of the reasons for the decline in biological diversity such as wildlife trafficking. Through domestic implementation the goals of the Convention on Biological Diversity are translated into national guidelines and laws. To successfully prevent wildlife trafficking it is necessary to make use of the full potential of the Convention on Biological Diversity and tackle the problems on the grounds of legal, environmental, as well as ethical considerations.

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I. Introduction

There is widespread agreement that wildlife trafficking and associated forms of ‘wildlife crime’ pose a serious threat to biological diversity. Demand for plants, animal parts and other derivatives threatens thousands of wild species of flora and fauna. One of the pervasive consequences of wildlife trafficking is that numerous species becoming threatened with endangerment or extinction.

A critical component to addressing wildlife trafficking on a global scale is to enhance the protection of biological diversity. This chapter examines the role of the Convention on Biological Diversity in relation to wildlife trafficking. Specifically, this chapter evaluates the present and potential ability of the Convention on Biological Diversity to prevent loss in biodiversity caused by wildlife trafficking. This chapter shows that whether States Parties to the Convention will implement internal measures to prevent and suppress wildlife trafficking primarily depends on the internal politics and priorities of the state in question.

Part II of this chapter provides a discussion of the meaning of biodiversity in the context of the Convention on Biological Diversity. In addition, this part addresses the relationship between biodiversity loss and wildlife trafficking. Part III provides a detailed review of the aims and structural elements of the Convention on Biological Diversity, including its implementation and relationship with other relevant international conventions, especially the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Part IV assesses the current problems which impede the effective prevention of wildlife trafficking, and offers insights as to how the Convention on Biological Diversity may contribute to the international and domestic responses against wildlife trafficking.

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1 UNODC, *World Wildlife Crime Report, Trafficking in Protected Species* (2016) 3.
2 Ibid.
3 Ibid.
4 Ibid.
5 Opened for signature 5 June 1992, 1760 UNTS 79 (entered into force 29 December 1993)
6 Kai Ching-Cha, *Can the Convention on Biological Diversity Save the Siberian Tiger?* (2001) 24(2) Environmental Law and Policy Journal 3, 24.
7 Opened for signature 3 March 1973, 993 UNTS 14537 (entered into force 1 July 1975).
II. Context

1. Protecting biological diversity

Biodiversity under the *Convention on Biological Diversity* refers to the entire range of life existing on this planet, including ecosystems, plants, animals, and micro-organisms. Biodiversity also comprises the diversity of species, the genetic differences between species, and the variety of ecosystems.\(^8\)

Biodiversity provides indispensable services for society.\(^9\) Only the various forms of life and their interrelatedness have made earth habitable.\(^10\) Biodiversity provides essential necessities for human life, such as clean air, water, food, natural medicines, fertile soil, and other natural resources.\(^11\)

There are scientific, economic, and ethical components associated with the protection of global biodiversity.\(^12\) Clearly, from an economic perspective, significant value can be placed on the natural environment in terms of services it provides to humans.\(^13\) The conservation of biological diversity is said to be an economically sound investment.\(^14\) The decline, respectively the permanent extinction of certain species and subspecies comes at much a greater cost in comparison.\(^15\)

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\(^8\) *Convention on Biological Diversity*, art 2(1); Secretariat of the Convention on Biological Diversity, *Handbook of the Convention on Biological Diversity Including its Cartagena Protocol on Biosafety* (3rd ed, 2005) xv.

\(^9\) Secretariat of the Convention on Biological Diversity, *Sustaining Life on Earth, How the Convention on Biological Diversity Promotes Nature and Human Well-being* (April 2000) 3.

\(^10\) Ibid.

\(^11\) Switzerland, Bundesamt für Umwelt (BAFU), *Biodiversität in der Schweiz ist unter Druck* (Web page, 19 July 2017); C Nellemann et al (eds), *The Environmental Crime Crisis, Threats to Sustainable Development from Illegal Exploitation and Trade in Wildlife and Forest Resources*, A UNEP Rapid Response Assessment (2014) 13; Secretariat of the Convention on Biological Diversity (n 8) xv.

\(^12\) BAFU (n 11).

\(^13\) Ibid.

\(^14\) Ibid.

\(^15\) Ibid.
2. The impact of wildlife trafficking on biological diversity

Global biodiversity loss caused by wildlife crimes, including wildlife trafficking, is comparable to other environmental threats such as global warming and pollution. The pervasive impact of wildlife trafficking includes, inter alia, the poaching and killing of wild species of flora and fauna, the introduction of non-native species through transportation, and through the spread of disease carried in wild species and products. The exploitation of the natural environment by humans is directly linked to the endangerment and extinction of many animal and plant species.

All ecosystems depend on the interaction between animals and plants. For example, animals act as carriers of plant seeds by transporting microbes through fur, feathers or digestive tracts. Additionally, water quality, dung removal, the carbon cycle, decomposition and pollination of plants may be affected by the loss of biological diversity. Amphibians, for instance, contribute to high water quality, mammals crush seeds, dung beetles remove dung, worms tend to the carbon cycle, seabirds enable

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16 David Hooper et al, ‘A global synthesis reveals biodiversity loss as a major driver for ecosystem change’ (2012) 486 Nature 105, 105.
17 Anthony D Barnosky, ‘Has the Earth’s sixth mass extinction already arrived?’ (2011) 471 Nature 51, 51.
18 Bradley J Cardinale et al, ‘Biodiversity loss and its impact on humanity’ (2012) 486 Nature 59, 62.
19 See Colin Tudge, The Tree, A Natural History of What Trees Are, How They Live, and Why They Matter (2005) 22; see also Stephen R Kellert and Edward O Wilson, The Biophilia Hypothesis (1993) 33.
20 Daan P van Uhm, The Illegal Wildlife Trade: Inside the World of Poacher, Smugglers and Traders (2016) 20.
21 M R Whiles, ‘Disease-Driven Amphibian Declines Alter Ecosystem Process in a Tropical Stream’ (2013) 16(1) Ecosystems 146, 147.
22 Justin P Wright, Clive G Jones and Alexander S Flecker, ‘An Ecosystem Engineer, the Beaver, Increases Species Richness at the Landscape Scale’ (2002) 132(1) Oecologia 96, 97.
23 Elenor M Slade, Darren J Mann and Owen T Lewis, ‘Biodiversity and Ecosystem Function of Tropical Forest Dung Beetles Under Contrasting Logging Regimes’ (2011) 144(1) Biological Conservation 166, 172.
24 J E Barrett et al, ‘Decline in a Dominant Invertebrate Species Contributes to Altered Carbon Cycling in a Low-Diversity Soil Ecosystem’ (2008) 14(8) Global Change Biology 1734, 1734 – 1744.
decomposition, and birds help pollinate plants. Each creature plays an important role in the proper functioning of an ecosystem. As a result of the interdependencies between all organisms within an ecosystem, the disappearance of one animal species, or the anthropogenous addition of a new species to a particular ecosystem, has critical ramifications.

Furthermore, it is acknowledged that the impact of wildlife trafficking extends beyond environmental consequences. Wildlife trafficking also results in the loss of state revenue and economic opportunities for developing countries. Due to the relationship between wildlife trafficking and organised crime, the profits associated with wildlife trafficking are often obtained by organised crime networks. Wildlife trafficking can thus threaten the economy, livelihoods, good governance, and the rule of law. Ultimately, wildlife trafficking hinders the achievement of sustainable development and environmental sustainability, both of which are objectives of the *Convention on Biological Diversity*.

Risks may also arise through the enactment of regulations governing the legal trade, for example under *CITES*. Such regulations could lead to the aggravation of wildlife trafficking, as the mere existence of a legal market offers options to infiltrate wildlife illegally. Wildlife trafficking is also inevitably linked to concerns surrounding animal cruelty.

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25 Sandra H Anderson et al, ‘Cascading Effects of Bird Functional Extinction Reduce Pollination and Plant Density’ *(2011)* 331 (6020) *Science* 1068, 1068–1071.  
26 See Tudge (n 19) 22; see also Kellert and Wilson (n 19) 33.  
27 Nellemann et al (eds) (n 11) 4.  
28 Ibid.  
29 Ibid.  
30 Ibid.  
31 Ibid.  
32 *Convention on Biological Diversity* art 1.  
33 Ranee Khooshie Lal Panjabi, ‘For Trinkets, Tonics and Terrorism: International Wildlife Poaching in the Twenty-First Century’ *(2014)* 43(1) *Georgia Journal of International and Comparative Law* 1, 15.  
34 Ibid.  
35 Clifton P Flynn, ‘Hunting and Illegal Violence against Humans and Other Animals, Exploring the Relationship’ *(2002)* 10(2) *Society & Animals* 137, 151; Piers Beirne, ‘For a Nonspecieisist Criminology: Animal Abuse as an Object of Study’ *(1999)* 37(1) *Criminology* 117, 124.
The impact of wildlife trafficking are not constrained by state borders.\textsuperscript{36} The continuing decline in species demonstrates that existing control mechanisms such as trade regulations in threatened and endangered species are not adequate to address the ongoing impacts of wildlife trafficking.\textsuperscript{37}

### III. Characteristics of the Convention

#### 1. Purposes and content

The \textit{Convention on Biological Diversity} represents the first global agreement which considers all aspects of biological diversity.\textsuperscript{38} The Convention has been described as the key instrument for the conservation and sustainable use of biodiversity.\textsuperscript{39} States Parties to the Convention commit to undertake national and international measures aimed at the three purposes of the \textit{Convention on Biological Diversity}: the conservation of biological diversity, the sustainable use of its components, and the equitable sharing of benefits arising out of the utilization of genetic resources.\textsuperscript{40}

The \textit{Convention on Biological Diversity} is a framework agreement.\textsuperscript{41} The provisions under the Convention are mostly expressed as overall goals and policies which can be adjusted to domestic legal systems.\textsuperscript{42} Besides substantive provisions, some of which are dealt with in more detail belown, the \textit{Convention on Biological Diversity} also provides for institutional arrangements with regard to further development and for monitoring the implementation of the Convention.\textsuperscript{43} The \textit{Convention on Biological Diversity} provides for three bodies in particular: the Conference

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\textsuperscript{36} Ulrich Beck, ‘Living in the world risk society’ (2006) 35(3) \textit{Economy and Society} 329, 334.
\textsuperscript{37} Van Uhm (n 20) 23.
\textsuperscript{38} Lyle Glowka et al and IUCN, \textit{A Guide to the Convention on Biological Diversity} (2nd ed, 1994) ix.
\textsuperscript{39} Secretariat of the Convention on Biological Diversity (n 8) xv.
\textsuperscript{40} \textit{Convention on Biological Diversity} art 1.
\textsuperscript{41} Secretariat of the Convention on Biological Diversity (n 9) 7; Glowka et al and IUCN (n 38) 1.
\textsuperscript{42} Glowka et al and IUCN (n 38) 1.
\textsuperscript{43} Secretariat of the Convention on Biological Diversity (n 8) xxiii.
of the Parties (CoP), the Subsidiary Body on Scientific, Technical, and Technological Advice and the Secretariat.

2. Implementation

A complex system of processes and instruments for the implementation of the Convention on Biological Diversity has been developed over time.\textsuperscript{44} There is a vast number of different programs of work, guidelines, principles and other Conference of the Parties’ decisions governing the Convention on Biological Diversity.\textsuperscript{45}

States Parties to the Convention on Biological Diversity are obliged to adopt national strategies, plans, or programmes in order to implement provisions of the Convention.\textsuperscript{46} They are required to make adjustments in all relevant sectors that touch wildlife trafficking, as far as possible and appropriate, to make sure to be in line with the Convention’s goals.\textsuperscript{47} Parties fulfil those obligations by establishing National Biodiversity Strategy and Action Plans (NBSAPs). Such plans serve the successful implementation of the Convention’s objectives. They name threats to biological diversity specific to each State Party and necessary steps to counter those threats.\textsuperscript{48} Measures set out in the Convention on Biological Diversity are translated into national action through these plans.\textsuperscript{49} For this reason, the plans are of high relevance for the implementation and achievement of the Convention goals.\textsuperscript{50}

\textsuperscript{44} Elisa Morgera and Elsa Tsioumani, ‘Yesterday, Today and Tomorrow, Looking Afresh at the Convention on Biological Diversity’ (2010) 21(1) Yearbook of International Environmental Law 3, 4.
\textsuperscript{45} Ibid 7.
\textsuperscript{46} Convention on Biological Diversity art 6(a).
\textsuperscript{47} Ibid art 6(b).
\textsuperscript{48} Secretariat of the Convention on Biological Diversity, ‘What is an NBSAP?’ (Web page, undated); see also Convention on Biological Diversity art 7(c).
\textsuperscript{49} Convention on Biological Diversity art 6.
\textsuperscript{50} UNEP, Law and National Biodiversity Strategies and Action Plans (2018) 2.
The Conference of the Parties developed the *Strategic Plan for Biodiversity 2011–2020* and the *Aichi Biodiversity Targets*. These instruments are intended as an inspiration for the parties to put biodiversity-related goals into action. They have, however, been criticised for lacking concrete guidance in developing measures and tools, including legislative instruments, to improve national compliance.

NBSAPs are supposed to define and prioritize targets from the *Strategic Plan for Biodiversity 2011–2020* and the *Aichi Biodiversity Targets* which are of particular importance to the respective country. They outline the required action to meet the identified targets. In addition, NBSAPs should highlight the benefits of biodiversity and ecosystem services regarding human well-being, poverty eradication and national development, as well as the economic, social and cultural values of biodiversity.

It must be emphasised that NBSAPs are not binding legal texts. Moreover, NBSAPs are not static. Their implementation is supposed to be evaluated on a regular basis. Based on the results of such assessments, the information gained must be used to improve NBSAPs. They are subject to constant and ongoing development.

The *Convention on Biological Diversity* further provides for a report mechanism. National reporting aims at providing information on measures taken to implement the Convention and show what impact

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51 UNEP, Conference of the Parties to the Convention on Biological Diversity, *The Strategic Plan for Biodiversity 2011–2020 and the Aichi Biodiversity Targets*, UN Doc UNEP/CBD/COP/DEC/X/2 (29 October 2010).

52 Ibid 6 [1].

53 Morgera and Tsioumani (n 44) 26.

54 UNEP (n 50) 8.

55 Ibid.

56 UNEP, Conference of the Parties to the Convention on Biological Diversity, *Review of the Implementation of Goals 2 and 3 of the Strategic Plan*, UN Doc UNEP/CBD/COP/DEC/IX/8 (9 October 2008) 2 [8(i)].

57 UNEP (n 50) 18.

58 Ibid.

59 Ibid.

60 Ibid.

61 Ibid.

62 *Convention on Biological Diversity* art 26.
those measures have had so far. However, national reports are not individually examined. The Conference of the Parties merely takes a conclusion on the overall results of these reports which are prepared by the Convention on Biological Diversity’s Secretariat. Analysis by the Convention on Biological Diversity’s Secretariat rather focuses on quantity (e.g. the percentage of parties with biodiversity-related legislation in place) than on quality of the reported measures. Generally speaking, it can be said that monitoring national implementation only goes as far as to indicate trends and some best practices but is not used to point out weaknesses of certain states or identify those countries in need of assistance. Inadequate implementation was also one of the reasons leading to the international communities’ failure to meet the global target of reducing the loss in biological diversity by 2010. Reasons thereof range from insufficient efforts of implementation and failing to integrate biodiversity issues into broader policies to the ignorance of underlying causes of biodiversity loss, the insufficient consideration of the real benefits of biological diversity and the failure to integrate the costs of its loss into the planning and managing of every human activity that affects biodiversity in any way. Nearly all of the latest reports had to conclude that biological diversity is suffering from ongoing decline.

Therefore, the Convention on Biological Diversity’s institutional framework is, despite its emphasis on domestic implementation, characterized through the lack of mechanisms to monitor implementation and compliance effectively on the national level.

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63 Ibid; Angus Nurse, Policing Wildlife: Perspective on the Enforcement of Wildlife Legislation (2015) 50.
64 See Convention on Biological Diversity art 26.
65 Ybin Xiang and Sandra Meehan, ‘Financial Cooperation, Rio Conventions and Common Concerns’ (2005) 14(3) Reciel 212, 218.
66 Morgera and Tsioumani (n 44) 9.
67 Ibid.
68 Ibid 11.
69 Ibid.
70 Secretariat of the Convention on Biological Diversity, Global Biodiversity Outlook 4, A Mid-term Assessment of Progress towards the Implementation of the Strategic Plan for Biodiversity 2011 – 2020 (2014) 13; Morgera and Tsioumani (n 44) 11.
71 Morgera and Tsioumani (n 44) 8.
3. Relationship to CITES

Article 22 of the *Convention on Biological Diversity* sets out rules for the application of its provisions in relation to other international conventions. Accordingly, where the *Convention on Biological Diversity* conflicts with another convention, the provisions under the *Convention on Biological Diversity* prevail if exercising another Convention’s provision would seriously damage or threaten biological diversity.\(^{72}\)

There is one international treaty which needs to be looked at more closely in connection with the Convention on Biological Diversity: *CITES* regulates international trade of all species listed in its appendices. It aims at ensuring that trade in wild animals and plants does not threaten the conservation of species.\(^{73}\) *CITES* regulates the trade in over 35,000 animal and plant species by categorizing them into three appendices.\(^{74}\) *CITES* only protects species which are either under serious threat of extinction or are likely to become threatened in the future.\(^{75}\) Species that are not listed under *CITES* and therefore not protected against trade.\(^{76}\)

Collaboration with *CITES* mostly takes place with regard to technical matters. The *Convention on Biological Diversity* does not occupy a strong role regarding enforcement. The experience of *CITES* thereof is a valuable source of knowledge for the *Convention on Biological Diversity*.\(^{77}\)

Wildlife trafficking clearly has negative effects on species conservation which *CITES* is not always able to tackle effectively, mainly based on its one-sided approach to the matter. One of the *Convention on Biological Diversity*’s purposes is to conserve biological diversity as a whole.\(^{78}\) Therefore, the *Convention on Biological Diversity* may step in where the *CITES* is too weak or unsuitable to ensure the effective conservation of species. Notably, there is little empirical proof of whether trade regulations actually help in

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\(^{72}\) *Convention on Biological Diversity* art 22(1); Glowka et al and IUCN (n 38) 109.

\(^{73}\) *CITES* Secretariat, ‘*What is CITES?*’ (Web page, undated).

\(^{74}\) *CITES* Secretariat, ‘How *CITES* Works’ (Web page, undated).

\(^{75}\) Van Uhm (n 20) 38.

\(^{76}\) UNODC (n 1) 13.

\(^{77}\) Richard Caddell, ‘Inter-Treaty Cooperation, Biodiversity Conservation and the Trade in Endangered Species’ (2013) 22(3) *Reciel* 264, 271.

\(^{78}\) See *Convention on Biological Diversity* arts 1, 2(1), 7(c), 8, 9.
conserving species sustainably.\textsuperscript{79} Moreover, \textit{CITES} only sets rules for the international \textit{legal} trade. It does not address illegal activities as such.\textsuperscript{83} Scenarios in which products are illegally traded within one country, meaning not leaving the domestic sphere, are outside the scope of \textit{CITES} as well.\textsuperscript{81} Apart from putting up trade bans for certain endangered species, \textit{CITES} establishes regulations for the legal trade in species not directly threatened with extinction. This can lead to an increase in the illegal trade as the mere existence of a legal market offers options to infiltrate wildlife illegally.\textsuperscript{82} This interplay has the potential to pose a serious danger to the conservation of biological diversity.\textsuperscript{83} In the case of such a conflict emerging between provisions of the \textit{CITES} and such of the \textit{Convention on Biological Diversity}, Article 22 of the \textit{Convention on Biological Diversity} needs to be applied which may lead to the non-application of the \textit{CITES} provision in question.\textsuperscript{84} Economic incentives for conservation and sustainable use, the social background of countries obligated to the implementation of anti-wildlife trafficking laws under \textit{CITES} and the \textit{Convention on Biological Diversity} play a very important role in assuring effective and sustainable conservation.\textsuperscript{85} The integration of these spheres functions as a crucial prerequisite to the effective prevention of wildlife trafficking and is encompassed under the \textit{ Convention on Biological Diversity}.\textsuperscript{86}

\section*{IV. Current challenges}

For one, the mere existence of wildlife trafficking and the ongoing decline of biological diversity indicates that the \textit{Convention on Biological Diversity} did not live up to its goals. Insufficient implementation on the national level

\begin{flushright}
\textsuperscript{79} Van Uhm (n 20) 38. \\
\textsuperscript{80} Ibid. \\
\textsuperscript{81} \textit{CITES} art XIV(2); Van Uhm (n 20) 38; Caddell (n 77) 266. \\
\textsuperscript{82} Khooshie Lal Panjabi (n 33) 15. \\
\textsuperscript{83} Ibid. \\
\textsuperscript{84} \textit{Convention on Biological Diversity} art 22(1). \\
\textsuperscript{85} Rosie Cooney, ‘\textit{CITES} and the \textit{Convention on Biological Diversity}: Tensions and Synergies’ (2001) 10(3) \textit{Reciel} 259, 266. \\
\textsuperscript{86} Ibid.
\end{flushright}
as well as a lack of financial and human resources are key problems. Ultimately, the Convention on Biological Diversity remains a framework agreement. This means, whether or not the necessary action takes place on the domestic level is dependent on the respective domestic instruments as well as the political and moral will on the national level. This in turn requires the acceptance that humans owe a duty towards the non-human species of this planet.87

Where there are human and non-human or ecological interests involved, history proves that non-human as well as ecological interests are perceived as secondary. As a result, legal instruments commonly treat non-human species as property and prioritise human and especially economic interests over environmental issues.88 The issues related to the anthropocentric worldview are endless and represent one of the big challenges also regarding the fight against wildlife trafficking. A State's failure to perform full implementation is therefore often based on economic and political considerations.89 In such cases, the principle of state sovereignty may act as a justification for the states's non-compliance.90 The enforcement of wildlife laws in particular is inadequate in virtually all jurisdictions.91 The main reasons for these circumstances are a lack of sufficient human and financial resources – compared to the resources allocated to mainstream law enforcement agencies – and various conflicts of interests.92

Additionally, wildlife trafficking is often treated as a strictly environmental matter. The existing legislation for wildlife-related crimes often ignores the multi-faceted nature of these crimes and treats them as minor offences.93 As a fact, wildlife trafficking often violates various legal fields, such as tax laws, anti-money laundering laws and may also touch upon organized

87 Ted Benton, ‘Rights and Justice on a Shared Planet: More Rights or New Relations?’ (1998) 2(2) Theoretical Criminology 149, 170–171; see also Steven M Wise, Rattling the Cage: Toward Legal Rights for Animals (2000) 250.
88 Wise (n 87) 251; see also Mark Stallworthy, Understanding Environmental Law (2008) 54; Secretariat of the Convention on Biological Diversity (n 9) 5.
89 Nurse (n 63) 51.
90 Ibid; see also Convention on Biological Diversity art 3.
91 Joan E Schaffner, An Introduction to Animals and the Law (2011) 69.
92 Ibid.
93 Nellemann et al (eds) (n 11) 87.
crime, violence against other humans, trafficking and even funding of non-state armed groups.\textsuperscript{94}

Moreover, wildlife trafficking is often treated reactively, and too little efforts are put into its prevention.\textsuperscript{95} There is proof that law enforcement fails to follow up on wildlife traffickers becoming more and more sophisticated and elaborate in their techniques.\textsuperscript{96}

Further problems are inconsistency of legislations, in sentencing and lack of police priority and inconsistency in policing approach.\textsuperscript{97} Especially crime involving non-endangered species is inconsistently dealt with.\textsuperscript{98}

\section*{1. Ethics and the Convention on Biological Diversity}

Never before did society dispose of so much knowledge on the complexity of the social and mental lives of other animals. Today, humans have the ability to understand at least part of the undeniable interdependence between themselves and other life on this planet.\textsuperscript{99} Nonetheless, human civilization lives in constant contradiction regarding the relation with non-human beings.\textsuperscript{100}

Animals are often only protected when their protection serves a human interest.\textsuperscript{101} The \textit{Convention on Biological Diversity} makes no exception and does not assign any direct rights to non-human species. Originally it was proposed to define biodiversity as a common heritage of humankind.\textsuperscript{102} However, this conception was rejected. Most of the components of biological diversity can be associated with an area of a certain national

\begin{thebibliography}{99}
\bibitem{94} Ibid.
\bibitem{95} Nurse (n 63) 127; Freya A V St John, Gareth Edwards-Jones and Julia P G Jones, ‘Opinions of the Public, Conservationist and Magistrates on Sentencing Wildlife Trade Crimes in the UK’ (2012) 39(2) \textit{Environmental Conservation} 154, 154.
\bibitem{96} Nellemann et al (eds) (n 11) 90.
\bibitem{97} Nurse (n 63) 113.
\bibitem{98} Ibid 171 – 172.
\bibitem{99} Benton (n 87) 151.
\bibitem{100} Ibid; see also Melanie Joy, \textit{Why We Love Dogs, Eat Pigs and Wear Cows: An Introduction to Carnism} (2011) 12; Jonathan Safran Foer, \textit{Eating Animals} (2009) 20.
\bibitem{101} Angus Nurse, ‘Beyond the Property Debate, Animal Welfare as a Public Good’ (2016) 19(2) \textit{Contemporary Justice Review} 174, 175; Benton (n 87) 151 – 155.
\bibitem{102} Glowka et al and IUCN (n 38) 3.
\end{thebibliography}
jurisdiction. Therefore, firm emphasis has been placed on sovereign rights over biological resources. As a result, a state may determine rules for areas within its jurisdiction and the resources found in those areas. On the national level wild fauna and flora is often qualified as resources that should be preserved for the public good and for the benefit of future generations. At the same time, it is being recognized that the conservation of biological diversity is of common concern to humankind. This implies a common responsibility to protect biodiversity.

The Convention on Biological Diversity does address the intrinsic value of biological diversity in its preamble: ‘conscious of the intrinsic value of biological diversity [...]’. However, it is no coincidence that such a notion is integrated in the preamble, which does not form part of the legally binding provisions of the Convention on Biological Diversity. This reflects that even if there is a certain degree of awareness that non-human species deserve protection for their own sake, society is not ready to actually put this concept into practice. In other words, one can say that the notions governing the Convention on Biological Diversity lead to provisions that regulate the use of wild fauna and flora instead of preventing it. Due to the principle of state sovereignty parties to the Convention on Biological Diversity may also individually define what sustainable use of ‘their’ national biodiversity means. That is why the status of wildlife differs from country to country and depends on the cultural background of each state.

2. Inherent value of non-human species

It is generally accepted that human beings have an inherent value. Specifically, such value includes attributes as the capacity to make choices,

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103 Ibid.
104 Convention on Biological Diversity preamble, arts 3, 15; Glowka et al and IUCN (n 38) 27.
105 Convention on Biological Diversity art 4; Glowka et al and IUCN (n 38) 27.
106 Nurse (n 63) 65.
107 Convention on Biological Diversity preamble.
108 Nurse (n 63) 43.
109 Ibid 48.
110 Ibid 41.
personal autonomy and the ability to act purposively. These traits are said to qualify a life to certain rights. Theoretical reason and empirical evidence prove that at least some non-human species can be attributed with concepts as autonomy, preference, benefit, harm, intention etc. Nonetheless, inherent value, which allows human beings to be viewed as right holders, is not granted to non-human species. To treat a matter of similar importance and of an equal demand for protection in a different way constitutes an injustice. In this context this is a form of discrimination also known as ‘speciesism’. It is contended that the effective protection of non-human interests requires non-human species to get recognized as inherently valuable and therefore as right holders. At this point it is important to note that promulgation of a right does not serve the cause if the social environment does not allow the right to be exercised. This notion underscores the importance of involving ethics in working towards a reconstruction of the personal relationship between humans and nature. Ultimately, such a development may contribute to reducing and hopefully eliminating wildlife trafficking.

V. The way ahead

1. Possibilities

The Convention on Biological Diversity provides several instruments which could be helpful in fighting wildlife trafficking. Generally, crime prevention can be exercised on different levels. Primary crime prevention serves to directly protect the potential target. This can involve taking measures which make it physically harder for an offender to commit the crime or to put the necessary structure in place which intends to catch the criminals while they attempt to commit the crime. This form of crime prevention

111 Benton (n 87) 156.
112 Ibid.
113 Ibid 157.
114 Ibid 165 – 166.
115 Nurse (n 63) 132.
may also serve a deterrent purpose by displaying the risks involved in committing an offence.116

To achieve effective primary crime prevention with regard to the illegal trade, it is necessary to identify the circumstances under which the crimes are committed117 and then decide what measures need to be put into place. According to Article 7 of the Convention on Biological Diversity, each party undertakes steps to identify components of biological diversity which are in need of protection in order to contribute to the overarching goal of preserving biological diversity as a whole.118 The Conference of the Parties advises parties to take a step-by-step approach, starting with the implementation of Article 7(a) and (c) of the Convention on Biological Diversity.119

Hence, concerned countries are in a first step held to identify the affected species by illicit trafficking.120 Moreover, other activities which have or are likely to have significant adverse effects on the conservation of biological diversity need to be identified and their impact monitored.121 Accordingly, countries should investigate the methods of poachers, smugglers and other individuals, as well as criminal organizations involved in wildlife trafficking. It should be further analysed what impact such activities have on biodiversity.

In addition, in-situ conservation measures, the exchange of information122 as well as technical and scientific cooperation are of great importance.123 In-situ measures are provided for under Article 8 of the Convention on Biological Diversity. This provision calls for measures ranging from the establishment of a system of protected areas to the rehabilitation of degraded ecosystems and recovery of threatened species, the protection of natural habitats and the maintenance of viable populations of species in natural habitats.

116 Ibid.
117 Convention on Biological Diversity art 7(c).
118 Ibid art 7(a).
119 UNEP Conference of the Parties to the Convention on Biological Diversity, Report of the Third Meeting of the Conference of the Parties to the Convention on Biological Diversity, UN Doc UNEP/CBD/COP/3/38 (11 February 1997) Annex II, 70 [1], 71 [6].
120 Convention on Biological Diversity art 7(c).
121 Ibid.
122 Ibid art 17.
123 Ibid art 18.
surroundings. Of particular relevance in this context are measures such as the establishment of protected areas and corresponding guidelines for the selection, establishment and management of such areas (art 8(a), (b)), the promotion of the protection of ecosystems, natural habitats and the maintenance of viable populations of species in natural surroundings (art 8(d)), the development or maintenance of necessary legislation and/or other regulatory provisions for the protection of threatened species and populations (art 8(k)), the regulation or management of the relevant processes and categories of activities where a significant adverse effect on biodiversity has been determined (arts 8(i), 7(c)), and finally the cooperation in providing financial and other support for measures pursuant to Article 8(a)-(l).

Paragraph (l) concerns the mitigation of threats to biological diversity. Clearly, wildlife trafficking constitutes such a threat. The Conference of the Parties highlighted the importance of the exchange of information with regard to Article 8. Moreover, the Conference of the Parties urged the Parties to use reasonable endeavour for regional and international cooperation in the implementation of this article. Measures under Article 8 are supposed to be part of the NBSAPs.

As biodiversity-related issues, such as wildlife trafficking, are of a global dimension, it is essential that concerned states inform one another about their individual situations and the action they take to solve their problems. Each experience of another involved party contains valuable information for others faced with similar problems. As a matter of fact,

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124 Ibid art 8(m).
125 Secretariat of the Convention on Biological Diversity (n 8) 152; see also Convention on Biological Diversity art 7(c).
126 UNEP Conference of the Parties to the Convention on Biological Diversity, Report of the First Meeting of the Conference of the Parties to the Convention on Biological Diversity, UN Doc UNEP/CBD/COP/1/19 (30 November 1995) Annex II, 54 [3]; Secretariat of the Convention on Biological Diversity (n 8) 120.
127 UNEP Conference of the Parties to the Convention on Biological Diversity, Report of the Second Meeting of the Conference of the Parties to the Convention on Biological Diversity, UN Doc UNEP/CBD/COP/2/19 (30 November 1995) Annex II, 54 [1], [2].
128 Ibid [2]; see also Convention on Biological Diversity art 6.
129 Glowka et al and IUCN (n 38) 92.
130 Ibid.
131 Ibid.
there is a significant information gap between developed and developing countries in particular. Therefore, Article 17 of the Convention on Biological Diversity requires its parties to exchange relevant information.

On a different level, preventive measures may involve addressing social conditions which are linked to a certain type of crime. The Convention on Biological Diversity acknowledges that addressing underlying causes which drive biodiversity loss has been wrongfully disregarded in the past. It is essential that especially NBSAPs consider these factors. This involves the identification and implementation of a system of suited incentives and disincentives under the Convention on Biological Diversity's Article 11, to prevent a loss in biological diversity sustainably. These measures have got to be economically and socially sound.

This provision does not obligate the parties to establish incentive programmes as such. Rather, the obligation is to adopt measures which act as a motivator for conservation and sustainable use of biological diversity.

With every country having its own background, the system of suitable incentives and disincentives may vary from party to party. Each party needs to work out its own comprehensive system of incentives and disincentives which supports the framework of biodiversity related rules, while it eliminates or minimizes incentives that adversely affect biodiversity at the same time.

The most promising mixes of incentives and disincentives seem to be those systems considering quite a number of different policies, levels of

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132 Ibid.
133 Convention on Biological Diversity art 17.
134 Nurse (n 63) 132.
135 Glowka et al and IUCN (n 38) 63.
136 UNEP, Conference of the Parties to the Convention on Biological Diversity, The Strategic Plan for Biodiversity 2011 – 2020 and the Aichi Biodiversity Targets, UN Doc UNEP/CBD/COP/DEC/X/2 (29 October 2010) Annex (5).
137 Convention on Biological Diversity art 11.
138 Glowka et al and IUCN (n 38) 63.
139 Ibid.
140 Ibid.
141 Ibid.
government and levels of action (local, national, and international). At the same time, it is important to note that incentives and disincentives mechanisms are not a substitute for conservation laws and other regulatory techniques, but rather means to support and complement those. The Conference of the Parties has developed recommendations which should help the parties in designing and implementing incentive measures.

Various sources also keep mentioning the importance of integrating the economic value of biological diversity into national planning and accounting. This may lead business and state authorities to pay greater attention to the welfare of nature if its value, and especially the costs of its destruction and necessary compensation thereof, is made apparent. Another approach may involve lowering tax rates on sustainable alternative products and by allocating subsidies to sustainably harvested productions in order to make the sector more lucrative. Through such measures local communities may become more inclined in fostering the protection of wildlife populations.

Above all, crime prevention needs to be addressed in a social context. This includes for example education programmes, as provided for under Article 13, to further consumer awareness of their impact and put social pressure on offenders. A lack of public awareness of the value of biological diversity and its depletion hinders successful conservation. More understanding

142 Ibid 64.
143 Ibid.
144 UNEP, Conference of the Parties to the Convention on Biological Diversity, Report of the Sixth Meeting of the Conference of the Parties to the Convention on Biological Diversity, UN Doc UNEP/CBD/COP/6/20 (27 May 2002) Annex I 77 – 90, 179 – 189.
145 See The Economics of Ecosystems and Biodiversity (TEEB), The Economics of Ecosystems and Biodiversity, Mainstreaming the Economics of Nature: A Synthesis of the Approach, Conclusions and Recommendations of TEEB (2010) 9.
146 TRAFFIC, What's Driving the Wildlife Trade? A Review of Expert Opinion on Economic and Social Drivers of the Wildlife Trade and Trade Control Efforts in Cambodia, Indonesia, Lao PDR and Viet Nam, Discussion Paper (October 2008) 21.
147 Nurse (n 63) 132.
148 Ibid 137.
149 Glowka et al and IUCN (n 38) 68.
for biodiversity-related topics will lead to more support for conservation measures.\textsuperscript{150}

Parties are required to promote and encourage the understanding of the importance of biodiversity and its conservation\textsuperscript{151} by including them in their NBSAPs.\textsuperscript{152} Promotion shall take place in cooperation with the relevant institutions, including non-governmental organisations.\textsuperscript{153} The Conference of the Parties urges its parties to allocate the necessary resources to this area.\textsuperscript{154} The acceptance of the necessary conservation measures shall be furthered, too.\textsuperscript{155}

The propagation through media shall be encouraged and biodiversity-related topics shall be immersed into the educational system.\textsuperscript{156} One way to approach these matters may include discussions of developing a national biodiversity strategy.\textsuperscript{157} This will lead to a biodiversity education action plan.\textsuperscript{158} With this course of action, strengths and weaknesses of the existing educational system with regard to biodiversity knowledge can be identified.\textsuperscript{159} In addition, this will allow for an overview on cultural, traditional and religious values, knowledge and practices of a specific country, which may prove useful in choosing the suitable educational and awareness-raising options.\textsuperscript{160}

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\textsuperscript{150} Ibid.

\textsuperscript{151} Convention on Biological Diversity art 13(a).

\textsuperscript{152} UNEP, Conference of the Parties to the Convention on Biological Diversity, Report of the Fourth Meeting of the Conference of the Parties to the Convention on Biological Diversity, UN Doc UNEP/CBD/COP/4/27 (15 June 1998) 118 [1]; see also Convention on Biological Diversity art 6.

\textsuperscript{153} UNEP, Conference of the Parties to the Convention on Biological Diversity, Report of the Fourth Meeting of the Conference of the Parties to the Convention on Biological Diversity, UN Doc UNEP/CBD/COP/4/27 (15 June 1998) 118 [1].

\textsuperscript{154} Ibid.

\textsuperscript{155} Convention on Biological Diversity 13(a).

\textsuperscript{156} Ibid; UNEP, Conference of the Parties to the Convention on Biological Diversity, Report of the Fourth Meeting of the Conference of the Parties to the Convention on Biological Diversity, UN Doc UNEP/CBD/COP/4/27 (15 June 1998) 119 [3], [4].

\textsuperscript{157} Convention on Biological Diversity art 6; Glowka et al and IUCN (n 38) 68.

\textsuperscript{158} Glowka et al and IUCN (n 38) 68.

\textsuperscript{159} Ibid.

\textsuperscript{160} Ibid.
To sum up, effective prevention of the illegal trade is best achieved through minimising opportunities for illegal activity in combination with the establishment of a suitable system of incentives and disincentives to support the fight against wildlife trafficking as well as raising public awareness of the impact of consumer and producer behaviour.\footnote{\textit{Convention on Biological Diversity} art 13; Nurse (n 63) 139.}

Ultimately, it is important to improve monitoring activity under the \textit{Convention on Biological Diversity}. Especially the report mechanism\footnote{See \textit{Convention on Biological Diversity} art 26.} should involve an examination of the quality of the domestic measures and thus enable the organs of the \textit{Convention on Biological Diversity} to offer support and guidance to those countries where weak compliance has been detected.

\section*{2. Ethical approach}

Ethics plays an important role in combatting wildlife trafficking and ethical arguments need to be considered in the drafting of international and national wildlife policies and strategies as well as legislation in order to ensure the effectiveness of such instruments. Therefore, ethics should have a prominent place in shaping NBSAPs under the \textit{Convention on Biological Diversity}.\footnote{Secretariat of the Convention on Biological Diversity (n 9) 17; see also Josephine Donovan and Carol J Adams, \textit{Beyond Animal Rights} (1996) 101.}

Rights and regulations are important and need to be put in place in order to fight wildlife trafficking. However, rights alone will not change anything if non-human species are mainly perceived as commodities that generate profits and are used in ways that lie in the interest of humans. Many of the problems the fight against wildlife trafficking is confronted with are tied to the anthropocentric worldview, which in turn is linked to ethical considerations of non-human life. To overcome these obstacles, a fundamental change regarding the relation between the human and non-human world is needed.\footnote{Benton (n 87) 171.} This requires deep changes in how humans empathise with non-human well-being.\footnote{Benton (n 87) 171.} Such fundamental change must be accompanied by transforming institutional structures and power
regimes of today’s world. Preventing wildlife trafficking is a multi-faceted quest. Above all, it requires the comprehensive acknowledgment of the inherent value of non-human species which ultimately entitles them to certain rights. What should be aimed at is the human recognition of the beauty and dignity of nature. Hereby a many-sided approach for social, economic and ecological transformation in addition to the legal recognition of the inherent value of non-human species is proposed. The author is aware that this is a lot to ask for. However, the threats and consequences of wildlife trafficking are, as we have seen, numerous and severe. Therefore, a call for drastic action is appropriate. The Convention on Biological Diversity offers many instruments, that have been discussed above, through which this approach could be realized. NBSAPs should include tactics that support and realize interaction and experience with nature on every possible level, like at schools and universities, on the corporate level, with regard to leisure time activities etc. Topics such as ethics, empathy, kindness, sustainability etc. should have a prominent place in shaping NBSAPs.

VI. Conclusion

The long-term prevention of the illegal trade with natural resources calls for a combination of a great number of actions. Supply and demand reduction need to be addressed likewise. This can include deterrence, legal enforcement, behavioural change and the promotion of alternative livelihoods. The NBSAPs constitute the starting point for each country. They must highlight the importance of the prevention of illegal trade in non-human species and acknowledge that only cross-sectoral measures have the potential to lead to permanent solutions. National and international institutions as well as the environmental, enforcement and development sector and stakeholders involved in security and peace

165 Ibid.
166 Ibid.
167 Ibid.
168 Nellemann et al (eds) (n 11) 10.
169 Ibid.
170 Ibid 11.
keeping missions need to work more closely together for the prevention of wildlife trafficking.\textsuperscript{171} Moreover, the role of ethics can no longer be underrated. The fight against wildlife trafficking will not pay out in the long run if society is not willing to rethink and rebuild its relationship towards each other and the remaining nature, including wildlife. Further research in these fields will be needed in order to develop strategies towards building societies that sustain themselves peacefully through living with nature and not against nature. With its almost global participation, its goal to conserve biological diversity as a whole as well as its broad range of possible measures aiming at this goal, the \textit{Convention on Biological Diversity} may work as an engine for this project.

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\textsuperscript{171} Ibid 97.
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