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Illegal Wildlife Trade through the lens of the European Union

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Mestrado em Estudos Internacionais

Orientador:
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Dedicado à minha mãe,

uma rosa no deserto.

És força.

És arte.

Resumo

O comércio ilegal de vida selvagem é uma das indústrias ilegais mais lucrativas do mundo, envolvendo vários intervenientes em redes de tráfico complexas e polivalentes. Melhorar a aplicabilidade prática das regulamentações atuais e otimizar os meios de prevenção, deteção e combate deste tipo de atividade são respostas razoáveis para o problema. Este estudo propõe apresentar uma visão abrangente das estruturas oficiais imersas no tema da proteção da biodiversidade e discutir a eficácia dessas mesmas estruturas. A UE está no centro do estudo, centrando-se no caso prático dos pangolins para testar a sua eficácia na preservação das várias espécies. Entidades como CITES, IUCN, WWF e UNEP são apresentadas e contrastadas entre si, visto que são reconhecidas como atores transnacionais que interferem direta ou indiretamente nas decisões locais e da UE. Através dos dados recolhidos observou-se que não foi possível prevenir nem evitar o aumento do risco de extinção dos pangolins, apesar dos esforços de monitorização, partilha de dados e melhoria da legislação.

Palavras-chave: Comércio de vida selvagem; Tráfico de vida selvagem; Rotas de tráfico internacional; Tráfico de pangolim; Regulamentação europeia; União Europeia;

Abstract

The illegal wildlife trade is one of the most profitable illegal industries in the world, involving several actors in complex and multipurpose trafficking networks. Improving the practical applicability of current regulations and optimizing the means of prevention, detection, and combat of this type of activity are reasonable answers to the problem. This study aims to present a comprehensive view of the official structures immersed in the topic of biodiversity protection and discuss the effectiveness of these same structures. The EU is at the center of the study, focusing on the practical case of pangolins to test its effectiveness in preserving the various species. Entities such as CITES, IUCN, WWF and UNEP are presented and contrasted with each other, as they are recognized as transnational actors that directly or indirectly interfere in the EU and local decisions. Through the data collected, it was noticed that it was not possible to prevent nor avoid the increase of the extinction risk for pangolins, despite the efforts on monitoring, data sharing and legislation improvement.

Keywords: Wildlife trade; Wildlife trafficking; International trafficking routes; Pangolin trafficking; European regulation; European Union.

Table of Contents

Resumo iii
Abstract v
Glossary of Acronyms ix

Introduction 1

CHAPTER 1
Definitions, Governance and Historical Marks: Literature Review 3
1.1 Wildlife Trafficking: The Definitions Dilemma & the Pangolin Case, an Example of Wildlife Protection Failure 3
1.2 The Awakening for Nature Conservation: Historical Overview 8
1.3 Global Environment Protection in the 21st Century: The Governance Dilemma 13

CHAPTER 2
Research Plan and Methodological Considerations 17

CHAPTER 3
Biodiversity Preservation in the European Union: Assessments & Discussion 21
3.1 Overview of the EU regulations for Biodiversity Preservation: Sources, Criteria & Repercussions 21
3.2 Pangolin Trafficking Routes: A Chronicle of Transnational Relations 25
3.3 Illegal Wildlife Trade: European Union as a Global Actor? 29

Conclusion 41

Bibliographical References 45

Appendix Section 51
Appendix A – Siamese rosewood smuggling network 52
Appendix B - List of Pangolin Species and their native areas 53
Appendix C - Red List Assessment of Pangolin Species as of Version 2023-1 55
Appendix D - Overview of Pangolin classifications through the revisions of the IUCN Red List 56
Appendix E - Overview of Pangolin classifications through the revisions of the CITES Appendices 57
Appendix F - Overview of Pangolin classifications through the revisions of the EC Regulation 338/97 58
Appendix G - Overview of pangolin reports with EU countries as Importer, between 2010 and 2022, Based on CITES Trade Database - version 2023.1 59

Glossary of Acronyms

A / D

- CBD – Convention on Biological Diversity
- CSD – United Nations Commission on Sustainable Development
- CITES – Convention on International Trade in Endangered Species of Wild Fauna and Flora

E / H

- EC – European Council
- EEA – European Environment Agency
- EU – European Union
- EUROPOL – European Union Agency for Law Enforcement Cooperation
- FFI – Fauna & Flora International
- GEG – Global Environmental Governance
- G20 – The international forum of the 20 world's largest economies

I / L

- IATA – International Air Transport Association
- ICC – International Criminal Court
- ICCWC - International Consortium on Combating Wildlife Crime
- ICJ – International Court of Justice
- IOPN – International Office for the Protection of Nature
- IUCN – International Union for Conservation of Nature
- IUPN – International Union for the Protection of Nature
- IWT - Illegal Wildlife Trade

M / P

- NGO – Non-Governmental Organization
- OHCHR – United Nations High Commissioner for Human Rights

Q / T

- ROUTES Partnership – Reducing Opportunities for Unlawful Transport of Endangered Species
- SDGs – Sustainable Development Goals
- SPWFE – Society for the Preservation of the Wild Fauna of the Empire
- TRAFFIC – Trade Records Analysis of Fauna and Flora in Commerce

U / Z

- UK – United Kingdom
- UN – United Nations
- UNCED – United Nations Conference on Environment and Development
- UNEP – United Nations Environment Programme
- UNESCO – United Nations Educational, Scientific and Cultural Organization
- UNODC – United Nations Office on Drugs and Crime
- USA – United States of America
- WWF – World Wildlife Fund

Introduction

Within the Wildlife Trade, both legal and illegal activities coexist, operating through similar channels and sometimes even mixing with each other. As mentioned by the US Department of State (2021), 'Wildlife trafficking is a serious transnational problem that threatens security, economic prosperity, the rule of law, long-standing conservation efforts, and human health'.

Wildlife trafficking can take place across international borders as well as domestically and it has been growing, currently being 'of the most profitable criminal activities worldwide, with devastating effects for biodiversity' according to the European Commission (n.d.-a).

This study intends to briefly address the global problematic of biodiversity preservation and analyse the role of the various transnational actors involved in the control and regulation of wildlife trade, with special focus on the European Union. Europe currently has a prominent position in trafficking networks, as it is a destination market, an intermediary in transit to other regions and also the origin of some species illegally traded. (European Commission, n.d.-a)

Despite its circumscribed geographic presence, the European Union is a key factor in combating wildlife trafficking, given that its guidelines and restrictions directly interfere in the global trade circuits and routes.

The primary objectives of this dissertation include: (1) Deepen historical knowledge regarding the transnational actors involved in biodiversity preservation and the solutions adopted throughout history; (2) Present an overview of theoretical concepts that impact the perception of extinction risk in species, that end up limiting the understanding of what is legal or nor; (3) Present the complexity of the current regulatory and control structures; and (4) Analyse the effectiveness of these solutions by studying the case of pangolin trade through the European Union.

Pangolins are the most internationally trafficked wild mammals, of which the EU is not the usual origin or destination. Therefore, having the EU at the center of some of their commercial circuits is somewhat illogical at first glance, but not in reality. Since all of the eight species of Pangolins are endangered and their trade is internationally recognized as illegal, their presence was used as a starting point to study the possible existence of omissions in the legislation and control structures in force. In the last chapter it is possible to compare the evolution of the EU regulation with the evolution of pangolin trade controls, by comparing data collected from official reports and other publications from recognized bodies, such as CITES, IUCN and ROUTES.

CHAPTER 1

Definitions, Governance and Historical Marks: Literature Review

This chapter aims to provide a comprehensive literature review on the concepts of Wildlife Trafficking and Global Environmental Governance, buy presenting the problematic of definitions, the connections between the main transnational actors on the biodiversity preservation and their role in the European Union regulation.

The chapter is divided in 4 sections: (1) Section one presents the context of illegal wildlife trade as a recognized crime and explores the ambiguity between legal and illegal wildlife trade, focusing on the pangolin trade by agglomerating a restricted list of species that are not, or should not, be subject to this ambiguity; (2) Section two provides a historical background on the evolution and dynamics between the existing biodiversity preservation structures; Section three describes the governance of those structures in the 21st Century; and (4) Section four focuses on the European Union and its biodiversity preservation projects.

This information allows the discuss of the results with a deepen knowledge of the international relations implied and a better understanding of the transnational limitations of the study.

1.1 Wildlife Trafficking: The Definitions Dilemma & the Pangolin Case, an Example of Wildlife Protection Failure

The illegal activities that somehow harm the environment for personal benefit, of individuals, groups, or companies, that are initiated from the exploitation, damage, trade or theft of natural resources, are considered environmental crimes, Illegal Wildlife Trade being one of them. (Nellemann et al., 2016)

The concept of wildlife in the commercial sphere refers both to living beings and also to lifeless bodies, whether whole or in parts, in the original format or transformed, and even derived products, which are regulated or protected by national and/or international laws. (Mozer & Prost, 2023)

Wildlife trade is linked to flora, fauna and funga, aquatic or terrestrial, and the process itself varies and includes multiple actors between the point of origin and its final destination. Among these actors, suppliers, intermediaries, and consumers stand out, although the chain

can have several segments and levels, becoming increasingly complex as it becomes transnational. (‘T Sas-Rolfes et al., 2019)

Therefore, controlling wildlife trafficking requires an active view of the various activities associated with it: (1) the capture, poaching or obtention of specimens, generally at the origin of the circuits; (2) the smuggling processes, which may be divided into several stages, including operations at local level or involving international export/import; (3) forms of processing and transformation of wildlife, which can occur before, after or even during the transport process; (4) and finally the possession, collection and consumption, at the level of sales markets and final consumers. Although it appears that circuits have a specific logic, they can, however, become very complex, with several intermediaries and involving other types of crime and activities in the same circuits. (Mozer & Prost, 2023)

Wildlife trafficking is a broad and ambiguous topic, but part of the problem is based on questions of definition, which interfere not only with the creation of adequate regulations, but also with their practical applicability. Trade also frequently fluctuates between what is legal or not, since the same product, or living being, can have both connotations, depending on factors such as: the place where it was obtained, the species involved, the date or process of capture, among others... A product or exploitation of a certain living being may be legal in one jurisdiction and illegal in another, depending on the characteristics and details associated with that capture. The complexity of these factors ends up hampering the work of the entities responsible for controlling and monitoring international commercial activities. (‘T Sas-Rolfes et al., 2019)

The notion of *Fauna* itself is not consensual and its broader interpretation includes animals, plants and fungi. In regulatory terms, these organisms are considered Fauna when alive or dead, in whole or in parts, and also as derivatives or ingredients. *Wildlife Trade*, on the other hand, includes all activities related to the human harvesting, exploitation, transport, commercial exchange and end use of wildlife. The ambiguity of the definition of *Illegal Wildlife Trade* makes its measurement complex and imprecise. However, the numbers obtained tend to be collected locally, being consequently subject to the availability and resources of each country, sometimes based on unreliable sources and/or methodologies, which influences their credibility. ('T Sas-Rolfes et al., 2019)

Thus, wildlife trade becomes an interdisciplinary topic, which gives rise to not only commercial and political discussions (related for example to economic sustainability and political stability, where the impact on biodiversity brings risks to development), but also ethical discussions, since it involves living beings. Despite that, the wildlife trade appears

inevitably associated to the environmental cause, either because it is included in transnational environmental protection agreements, such as the European Green Deal and the Biodiversity Strategy for 2030, or because the investment in its regulation comes from the same actors dedicated to environmental issues, such as the United Nations Environment Programme.

Furthermore, Illegal Wildlife Trade generates an estimated annual value of 7–23 billion USD, being one of the most profitable illegal industries in the world, and impacting governments annually with a loss of 15 million USD in tax revenues. However, a rigorous assessment on the real profits and volumes of trade is difficult and often based in estimated values. Despite the lack of accuracy in the numbers, this is already an internationally and locally recognized crime in many countries. (Mozer & Prost, 2023)

As mentioned before, wildlife trade often fluctuates between legal or illegal, depending on multiple factors, making it possible to have different perceptions for the same species, depending on the country from which the data is collected, or the evolution on the number of individuals, which translates in changes in its preservation measures at local or international level.

Only 0.25% of the global wildlife trade originates from cultivated sources. So, the rest of the 99.75 % comes from wild origin, with profound impact on the biodiversity preservation, either due to illegal trade, or due to unsustainable legal trade. (Mozer & Prost, 2023)

Among the various trafficked living beings around the world, the Pangolins are the wild mammals with the highest number of individuals trafficked internationally, especially among Asian countries. Differently from that of other wild beings, the trade of Pangolins is internationally recognized as illegal, including body parts and derivatives. (Heinrich et al., 2019)

Pangolins are an elusive and little-known species, often mistaken for reptiles despite being scaly-skinned mammals. They curl in a ball when they are in a dangerous situation, as a form of protection given the hardness of their scales. (WWF, n.d.-b).

The Pangolins belong to the *Manidae* family and comprehend eight different species present in Africa and Asia: (1) the *Manis culionensis*, also known as Philippine pangolin or Palawan pangolin; (2) the Manis javanica, or Sunda pangolin; (3) the *Smutsia gigantea*, also known as *Manis gigantea* and Giant Ground Pangolin or Giant pangolin; (4) the *Manis pentadactyla*, or Chinese pangolin; (5) the *Phataginus tricuspis*, also known as *Manis tricuspis*, White-bellied Pangolin or Tree pangolin; (6) the *Manis crassicaudata*, or Indian pangolin; (7) the *Smutsia temminckii*, also known as *Manis temminckii* or Temminck's pangolin; and (8) the *Phataginus tetradactyla*, also known as *Manis tetradactyla*, Black-

bellied Pangolin or Long-tailed pangolin (IUCN Red List, 2023 - from b to i). For more details, please refer to Appendix C – *Red List Assessment of Pangolin Species as of Version 2023-1:* For the purpose of this table, the assessment dates and evolution of each species were retrieved from its specific page on the IUCN Red List website (IUCN Red List, 2023).

In short, the pangolins' native areas are African and Asian countries, especially the areas of Central and Oriental Africa, China and border countries, India and the islands between the Indian and the North Pacific Ocean. For more details, please refer to Appendix B - *List of Pangolin Species and their native areas*.

Pangolin products have been used in traditional Chinese medicine for thousands of years, but they are also implicated in other types of activities. Regarding illegal activity in general, the main sectors responsible for the exploitation of wildlife are: fashion, decoration, accessories, jewelry, exotic pets, traditional medicine and wild food, often consumed as delicacies or status symbols. (UNODC, 2016; UNODC, 220; and Mozer & Prost, 2023).

Traditional medicine is a global concept that is often confused or associated with traditional Chinese medicine specifically. However, regions such as Africa, the Caribbean, Latin America, Australia, Northern America and Europe are also already known consumers. (Mozer & Prost, 2023)

Pangolins have a great importance in traditional Chinese medicine, and the meat is generally used as a tonic and as a stimulus for blood circulation and lactation in pregnant women. In African countries, such as Nigeria, the pangolin is seen as a cure for almost everything, even psychological problems. (UNODC, 2020)

Image 1: *Example of Pangolin.*
Photograph by © Dr Sanjay K Shukla / WWF-International. (WWF, n.d.-b)

The risk of extinction of pangolins is recognized internationally and the population is seen as declining in recent decades. However, problems in measuring the status of species create obstacles to their conservation and make support measures difficult. (UNODC, 2020)

All of the eight species of Pangolins are endangered, therefore, listed on CITES Appendix I and considered protected species in most states. As of the 2019 publication of the Red List, four of these species are considered Critically Endangered (species 1 to 4), the other two are considered Endangered (species 5 and 6) and the other two are Vulnerable (species 7 and 8). For more details, please refer to Appendix B - *List of Pangolin Species and their native areas*. (CITES, n.d.-c and IUCN Red List, 2023-b to i).

Both CITES - Convention on International Trade in Endangered Species of Wild Fauna and Flora - and the Red List are projects of the IUCN - International Union for Conservation of Nature, as it will be explained later in this chapter, however, their results are not necessarily the same.

While the IUCN Red List is a critical dataset, with publications based on the criteria of abundance, distribution, habitat, and ecology of the species; the CITES is a convention in which its amendments are discussed and negotiated between its parties. The results published by the IUCN Red List are used by CITES Parties in their proposals to amend the CITES Appendices, that have local impacts through the enforcement authority of the States directly or indirectly affected by them. (CITES, 2022)

The IUCN Red List divides the status of the species preservation into seven levels: (1) LC – Least Concerned, when the population is stable; (2) NT – Near Threatened, when likely to become a threatened category in the future; (3) V – Vulnerable, when facing high risk of extinction in the wild; (4) EN – Endangered, when facing a very high risk of extinction in the wild; (5) CR – Critically Endangered, when facing extremely high risk of extinction in the wild; (6) EW – Extinct in the Wild, when its survival is only possible in captivity; and (7) EX – Extinct, with no reasonable doubt that the last individual has died. Furthermore, the Red-List also defined two additional levels for NE – Not evaluated and for DD – Data Deficiency. (IUCN, 2023-j; and Explorers against Extinction, 2023).

On the other (complementary) hand, CITES only divides species in three categories: (1) Appendix I, which includes species threatened with extinction, its trade permitted only in exceptional circumstances; (2) Appendix II, which includes species not necessarily threatened with extinction, but having the need for a controlled trade; and (3) Appendix III, referring to species that are protected in at least one country which has asked other CITES Parties for assistance in controlling the trade. (CITES, n.d.-d)

Despite all efforts to create a global and standardized approach to the problematic of biodiversity protection, the concepts previously described also end up being dependent on local recognition, largely influenced by governance structures and political visions over time.

1.2 The Awakening for Nature Conservation: Historical Overview

The concept of wildlife protection is often understood as a chapter of environmental policies, being linked to biodiversity concerns and subsequently impacting the wellbeing of humans. However, this concept took a while to be built and its shape is still being modeled to this day. Understanding the evolution of the governance model and responsible entities, provides a clearer view on the struggles and constraints that wildlife protection implies.

In the eighteenth century, deforestation began to be linked with environmental changes. But it was in 1865 that Britain's oldest conservation body was founded. Under the name of 'Commons Preservation Society' and currently known as 'Open Spaces Society', it was marked by the efforts of Edward North Buxton – the grandson of the leader of the anti-slavery movement, Sir Thomas Fowell Buxton – a hunter engaged in the preservation of species for the sake of the sustainability of said recreative activity. (Open Spaces Society, 2022; and Prendergast & Adams, 2003).

Buxton's arguments were aligned with the 'Convention for the Preservation of Animals, Birds and Fish in Africa' of 1900, born from the 'International Conference of the African colonial powers' in London, with the participation of representatives from other countries, such as Germany, France, Portugal, Spain, Italy and the Belgian Congo. (Prendergast & Adams, 2003; and W. M. Adams, 2004)

The world's oldest international conservation organization was born three years later, in 1903: the SPWFE – Society for the Preservation of the Wild Fauna of the Empire, known since 1995 as FFI – Fauna & Flora International, deeply motivated by the colonial environmental concerns of the British Empire. The focus, however, was still on the economic factor that would imply the scarcity of natural resources, due to the loss of species of commercial and recreational interest, mainly coming from Africa. The FFI still operates as an international wildlife conservation charity till the present day. (Prendergast & Adams, 2003; and FFI, n.d.)

Despite the international dimension of the previously mentioned conferences and agreements, they still focused on wildlife and environmental conservation as a localized topic

that could be driven by external actors or have consequent effects elsewhere, but not necessarily with the notion of transnational impacts.

In 1922 the 'International Council for Bird Preservation' was born, also known as 'BirdLife International', which was the first known entity that brought biodiversity as a transnational issue, however focused on a specific segment of the biosphere. (Holdgate, 1999)

In 1928, from an intergovernmental conference held in Switzerland in 1913, resulted the creation of the 'Office international de documentation et de corrélation pour la protection de la nature' in Belgium, which in 1934 was renamed as IOPN – International Office for the Protection of Nature. (UIA, n.d.)

In the following decade, several initiatives were born, including the 'Convention Relative to the Preservation of Fauna and Flora in their Natural State' of 1933. It entered into force in 1936, aiming to preserve natural fauna and flora of certain parts of the world, focused on the regulation of hunting/collection of species and recuperation of areas in Africa to be used as national parks and reserves. (Ecolex, n.d.).

However, a drastic turning point in global environmental consciousness took place during the Cold War, between 1947 and 1991, largely due to the competitiveness between the USA and the Soviet Union (not only but also) in terms of ecological policies, looking at the impacts from the environmental issues at that time. The Global Awareness coming from the Cold War led to the implementation of more laws/measures, although many of them perished in the post-war, in the 90's. (Laakkonen et al., 2016)

> *After the Second World War the United Nations and its agencies were created, and some of those agencies - notably FAO, the United Nations Food and Agriculture Organization, and UNESCO, the United Nations Educational, Scientific and Cultural Organization - promoted and supported action to develop and use natural resources wisely. They were supported by governments and had money to disburse.*
> (Holdgate, 1999)

In 1948, using documentation transferred from the previously mentioned IOPN the IUPN – International Union for the Protection of Nature was created, it focused on the documentation and sharing of information related to the protection of Nature and it was considered as the only international organization concerned with nature protection as there was little awareness for that problematic, despite the existence of numerous other entities within the same scope at local level. Later in 1998 it was converted to IUCN – International

Union for Conservation of Nature and Natural Resources, also known as The World Conservation Union, which still holds an important role until the present day. (Holdgate, 1999; UIA, n.d.; and IUCN, n.d.)

In 1961 a new fundraising initiative took place, with the purpose of helping IUCN activities, leading to the creation of the WWF – World Wildlife Fund, currently known as World Wide Fund for Nature. With this increase of funds and the commitment of passionate individuals, in 1963, the IUCN drafted the CITES – Convention on International Trade in Endangered Species of Wildlife Fauna and Flora (also known as Washington Convention), which entered into force in 1975, after being accepted by the representatives of 80 countries. One year later, in 1964, the IUCN founded the Red List of Threatened Species, also known as the IUCN Red List or Red Data Book, which identifies species of high conservation concern, often referred in national legislation. (CITES, n.d.-a; and WWF, n.d.-a)

After the creation of the IUPN (now IUCN), the Stockholm Conference of 1972 can be highlighted as a major event as it settled multiple international environmental agreements and the consequent creation of the UNEP – United Nations Environment Programme, the first major milestone in the institutionalization of environmental governance on a global scale. Despite being the oldest global conservation body, the IUCN joined forces with the UNEP for financial sustainability, being its nature conservation aide by providing regular reviews of the state of world conservation and maintaining a global list of protected areas and species, through CITES and the Red Lists. Currently CITES is hosted by the UNEP and regulates the trade of thousands of species to prevent overexploitation. (Holdgate, 1999; Poole, 2012; CITES, n.d.; and UNEP, n.d-a;b)

Near 1980, the WWF and the IUCN joined forces to create the TRAFFIC – Trade Records Analysis of Fauna and Flora in Commerce, which is active to this day in the role of advisor to governments and intergovernmental processes, bringing together stakeholders, public, private, and civil society, being part of the Cambridge Conservation Initiative created in 2007. (Lopez-Claros et al., 2020; TRAFFIC, n.d.-a; and Cambridge Conservation Initiative, 2023)

In 1991 the U.S. and other Northern donor nations established the GEF – Global Environment Facility and entrusted its management to the World Bank. Then, in 1992, twenty years after the Stockholm Conference, the UNCED – United Nations Conference on Environment and Development, also known as Earth Summit in Rio; Rio-92; and Eco-92, took place (Horta, 1998 and Najam et al., 2006). It counted with the participation of political leaders, diplomats, scientists, the media and NGOs – Non-Governmental Organizations from

179 countries, focusing n the impact of human socio-economic activities on the environment (UN, n.d.-a).

The UNCED also staged the CBD – Convention on Biological Diversity, which officially entered into force in 1993, still being to this day the international legal instrument for diversity conservation, ratified by 196 nations (UN, n.d.-b). All together with UNCED, the 'Global Forum' of NGOs was also held in Rio de Janeiro. The UNCED brought a series of Conventions and enabled the creation of the CSD – United Nations Commission on Sustainable Development, that was later substituted by the SDGs – Sustainable Development Goals in 2015 (SDGs, n.d.-a; and UN n.d.-a).

After the UNCED multiple initiatives took place around the globe, with the purpose of "officialising" the commitment with the environment and penalize those who did not respect the predefined rules. However, the impact of these initiatives was often questioned due to lack of authority or applicability. For example, in 1993, the International Court of Justice created a chamber for Environmental Matters, but it has never been used. Moreover, 1 year later, NGOs established the International Court of Environmental Arbitration and Conciliation, which was only applicable in a voluntary way. (Dahl & Karlsson, 2021)

A few years later, in 1997, the Kyoto Protocol made a new attempt to unite efforts in the environmental cause, focusing on the main polluting countries, but without success (Dahl et al., 2020). Knowing that poverty is a driver of disinvestment in environmental policies, does not mean that Developing Countries are the least worried or the most polluting ones (Poole, 2012).

In 1999 the Swiss Federal Office for the Environment and the Canton of Geneva opened the International Environment House, a two-building complex with offices of various environmental and sustainable development organizations, secretariats and institutions. This project is still currently active in present days, being coordinated by the UNEP. (Geneva Environment Network, n.d.)

More attempts have occurred since then, such as: (1) the World Summit on Sustainable Development in 2002, also known as Earth Summit 2002 or Rio+10; (2) the UN Conference on Sustainable Development in 2012, or Rio+20; (3) the Paris Agreement in 2015, discussed during the UN Conference on Climate Change and often referred to as Paris Accords; as well as (4) the adoption of the UN 2030 Agenda in 2015, in which the SDGs were launched (Lopez-Claros et al., 2020). The SDGs recognize the interrelation between humans and the planet, as well as the dependence of human well-being on a healthy environment (UN Chronicle, 2021).

As of 2024, a total of 17 topics are considered in the SDGs, Wildlife being part of the 14th and 15th goals: “Life below water” and “Life on land” (SDGs, n.d.-a).

Furthermore, one of the latest projects on combating wildlife trafficking was the creation of ROUTES Partnership – Reducing Opportunities for Unlawful Transport of Endangered Species – in 2015, which addresses wildlife poaching and associated criminal activities worldwide. It was funded by the U.S. Government and is coordinated by TRAFFIC, with the support of WWF. The partnership includes entities from the transport sector that included the Airports Council International, the Center for Advanced Defense Studies and the International Air Transport Association (IATA – which also signed a Memorandum of Understanding with CITES in 2015). Within a specific period between October 2015 and September 2020, the goal of the ROUTES Partnership was to disrupt wildlife trafficking by reducing the use of legal transportation supply chains, which would improve data and analytics on wildlife trafficking and simplify law enforcement. (ROUTES, n.d.-a; USAID, 2018; and IATA, n.d.)

The growing recognition of the link between human rights and the environment has recently led to what has been considered to be the greatest historical advance in the environmental cause. History took a new turn in 2021, when the UN Human Rights Council, through the resolution A/HRC/RES/48/13, recognized the human right to a healthy environment. The text, proposed by several countries – Costa Rica, Maldives, Morocco, Slovenia and Switzerland – was approved with 43 votes in favour and 4 abstentions: Russia, India, China and Japan. At the same time, through a second resolution ‘A/HRC/RES/48/14’, the Council increased its on the impacts of climate change on human rights, establishing a Special Rapporteur specifically dedicated to this issue (OHCHR, 2021).

In 2022, it was expected that at the 49th session of the UN Human Rights Council even more advances would be made in terms of environmental preservation, however the focus was inevitably given to the War in Ukraine, which also implied serious environmental losses: looking at the risk of nuclear contamination, either by the occupation of nuclear power infrastructures, or the possible use of nuclear weapons. However, still under the auspices of the 1992 Convention on Biological Diversity, States are negotiating a new Global Biodiversity Framework, with targets for 2030. (UNEP-OHCHR Bulletin, 2021)

1.3 Global Environment Protection in the 21st Century: The Governance Dilemma

Many negotiations took place around the world having the environment as just one component, which made the environmental protection strategy even more complex, with no clear division of responsibility and limited progress. As a solution to this problem, the idea of creating a GEG – Global Environmental Governance arose, focused on global environmental protection, but without ceasing to look at problems at a national level (Najam et al., 2006).

There were several attempts to apply environmental rules on a global scale, with new entities being created as a way of avoiding direct association with governments and making these entities more impartial and independent. However, their independence is repeatedly called into question, given that these same entities end up being associated to the countries that host them and/or for being dependent on funds from the states that finance them.

The fact that bodies at the G20 – the international forum of the world's largest economies – were involved in the GEG negotiations, raised questions in the international field (Dahl & Karlsson, 2021). Another unfavourable aspect was the fact that the final actors were not fully represented at an international decision level, that means: civil society groups/local communities, despite the proximity with UNEP, which generated discredits and entropy (Najam & Halle, 2010).

The GEG remains ambiguous and insufficient when looking at the size of urgent and serious environmental needs. Governments around the world tend to continue with the perception that environmental protection agreements are circumventable and unilateral, based on voluntary adherence and without effective punishment of the infractions committed. Even Human Rights are not consensual and still raise doubts as to their scope and applicability (Ingdahl, 2021).

However, when looking at biodiversity preservation, there are three main pillars with global focus: the IUCN, the WWF and the UNEP, which end up being interconnected by the projects they host or finance, in a strategy of symbiosis that led them to have visibility and recognition in this area. In image 2 it is possible to have a general overview of the connections between these entities and projects, that persist to this day. Both UNEP and WWF provide financial support to IUCN, which translates into investment at the level of CITES, Red List and TRAFFIC, which in return provide practical data on a global scale.

Nowadays, the UNEP is the leading global environmental authority that sets the global environmental agenda, promotes coherent implementation of sustainable environmental development within the UN system and acts as an official advocate for the global environment

(UNEP, s.d.-c). Together with OHCHR – High Commissioner for Human Rights, the UN's leading body on human rights, they also work in the agenda of environmental human rights (OHCHR, s.d.-a;b).

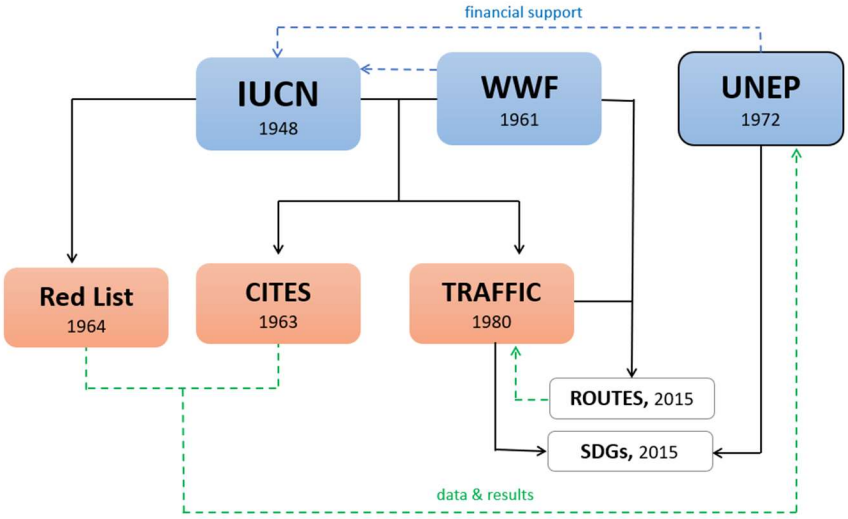


Image 2: *Global pillars on the biodiversity preservation of the 21st century. The blue lines refer to the financing flows between entities, having WWF and UNEP as financial support of IUCN. The dark lines refer to the links at the origin of the 2nd line entities: Red List, CITES and TRAFFIC. The green lines refer to the provision of results and data. Two projects are also pointed out due to their pertinence: ROUTES and SDGs, due to their impact on a global scale. The main actor appears to be UNEP with influence in all the other entities.*

However, UNEP presents itself as a program, which is different from an autonomous organization: this means that UNEP itself depends on external structures for its survival, including for legal and funding aspects, which questions its effectiveness and leads to comparison or empirical association with other projects with similar objectives, undermining its authority (Poole, 2012).

> *The reality is that existing institutions are incapable of rising to the challenges of a rapidly changing world because they were designed for another era. Indeed, the United Nations itself and the associated infrastructure of specialized agencies, which were created to attend to a variety of global problems, find themselves increasingly unable to respond to crises, sometimes because these agencies lack the appropriate jurisdiction or mandate to act, sometimes because they are inadequately endowed with resources, and often because, within the limits of existing conceptual frameworks, they simply do not know what to do. (Lopez-Claros et al., 2020)*

Looking again at the problematic of independence and impartiality, the headquarter choices of the different entities have an impact. The UNEP is based in Kenya but has several addresses around the world, such as UNEP's Europe Office located in Switzerland (UNEP, n.d.-d). On the other hand, the IUCN itself is based in Switzerland, together with the WWF and CITES. The CITES Secretariat is administered by UNEP with its functions described in Article XII of the text of the Convention (CITES, n.d.-b). Furthermore, the IUCN, through its local office in the United Kingdom, manages the Red List project (IUCN, 2023-k). Concerning TRAFFIC, it presents itself as a non-governmental organisation operating in 15 locations across five continents (TRAFFIC, n.d.-a), but it is also based in the UK, with links to the US government, from where the ROUTES project emerged, in partnership also with WWF from Switzerland.

So, we ended up having Switzerland as the main destination for entities that want to define themselves as impartial or globally embracing, given Switzerland's own history of impartiality. To note that, as mentioned before, the International Environment House is also located in Switzerland and coordinated by the UNEP.

Other entities appear in the current global paradigm, as possible agents in the GEG: the ICJ – International Court of Justice and the ICC – International Criminal Court. The ICJ is the official UN court since 1946 and commonly referred to as the "World Court", it is responsible for disputes under the topics of sovereignty boundaries and maritime disputes, trade, natural resources, human rights, treaty violations and treaty interpretation (Inside Justice, 2009). On the other hand, the ICC is an independent court since 2002, which can prosecute individuals, but limited to international crimes of genocide, crimes against humanity, war crimes and aggression (Dahl & Karlsson, 2021).

In other words, it is difficult to resort to these authorities regarding non-compliance with regulatory environmental treaties. However, with the inclusion of the Human Right to a healthy environment, a door is opened for the ICJ to act more effectively in situations of environmental impact, given the inherent impact on human rights. Nevertheless, in the impossibility of applying global rules regarding environmental preservation and biodiversity protection, the local laws of the different states provide solutions, ideally translating the criteria and guidelines defined by the conventions signed and ratified by these same states.

CHAPTER 2

Research Plan and Methodological Considerations

Wildlife trafficking is a transnational problem in which international relations are implied, which justifies its relevance on the field of International Studies. Furthermore, to give this study a real pertinence to the present days, only reports and regulations from the last two decades were considered. Regarding the territorial scope of this study, the regulations of the European Union were considered, as they are directly applicable to a wide list of countries (its Member States), but still have external influence and repercussions.

Through the analysis of information published by official entities and NGOs, plus diverse literature, this research pretends to: (1) Present an overview of the concept of Legal/Illegal Wildlife Trade, as well as highlight the paradox between the adopted definitions and the practical applicability of transnational laws; (2) Deepen historical knowledge regarding the transnational actors involved in biodiversity preservation and the solutions adopted throughout recent history; and (3) Analyse the efficiency of these solutions in the case of Pangolin trade through the European Union, by comparing the evolution of European Union regulation with the data collected from reports and official publications of other official entities.

As mentioned before, wildlife trade often fluctuates between legal or illegal, depending on multiple factors, making it possible to have different perceptions for the same species, depending on the country from which the data is collected, or the evolution on the number of individuals, which translates in changes in its preservation obligations.

To reach conclusions on the effective results of EU regulations for wildlife conservation, without entering the paradox between the definitions of the terms of legal and illegal, this dissertation focuses on Pangolin trafficking routes, having EU countries as intermediaries or part of the circuit. Differently from other wild beings, the trade of pangolins is internationally recognized as illegal for all its eight species, as they are all endangered, which mitigates the risk of having variations in the data results collected. Furthermore, being the most internationally trafficked wild mammals, the pangolins are especially relevant for this study as they are not EU native species nor is the EU their main trade destination.

As primary sources for this study, regulation from the EU, as well as official publications and reports from international institutions and NGOs, recognized by the European Union for its relevance on the topic of wildlife conservation and biodiversity protection, were used.

In order to provide substantial literature review and support the data collected, secondary sources were also considered in the present study, mainly articles from various authors with relevant work in the fields of environmental conservation, wildlife trade and protection, environmental governance and history.

As a way of presenting concrete numbers of the pangolins received by Europe and to know their main trafficking routes, an extensive research was done through official reports published by the EU, reports from recognized entities, and local reports from both the origin and destination countries of these species, as well as from European countries where cases of trafficking have been found.

It was taken in consideration that finding specific statistics on wildlife trafficking of pangolins, having Europe as an intermediary or part of its circuit, depends on sources such as: (1) UNODC, the United Nations Office on Drugs and Crime, which provides information on wildlife trafficking around the world, having publications such as the "World Wildlife Crime Report"; (2) EUROPOL, the European Union's law enforcement agency, with information on police operations related to wildlife trafficking in Europe; (3) the IUCN, with special focus on its project Red List; (4) CITES, which monitors international trade of endangered species, including reports on seizures and statistics related to illegal wildlife trade; (5) Wildlife conservation NGOs such as WWF and TRAFFIC, which provide reports and data on wildlife trafficking; and (6) National government agencies, responsible for law enforcement and wildlife protection in European countries, with local data and reports on wildlife trafficking.

Studies with academic relevance about pangolin trade are not abundant or not easily accessible, due to language constraints. Reports from the origin and destination countries are often available in the local language and when researching these sources, it was important to assess the credibility and timeliness of the information presented.

Estimates of the number of trafficked wild beings vary and are often based on seizures by authorities, reports from wildlife conservation organizations, and other sources. Methodological constraints appear when estimating their numbers, since they vary between publications and are often based on the apprehensions by authorities, reports from multiple wildlife conservation organizations and other sources. Furthermore, when comparing publications from different states, it must be considered that internal factors may imply differences in results. Additionally, many trafficked individuals can go undetected due to the clandestine nature of the illegal wildlife trade.

Another limitation is related to the fact that the results found refer to a period of almost a decade, making it difficult to compare with studies limited to an exact period. In addition,

the limitation increases when trying to cross the evolution on the number of individuals trafficked with the evolution of the European legislation itself, with the purpose of perceiving the real impact they had over time. As an example of the difficulty in crossing data, the 8 updates to Council Regulation EC nº 338/97 between 2010 and 2018, which took place during the same study period described by Heinrich et al. (2019). In addition, European regulations are extensive, with the latest version of Council Regulation EC nº 338/97 on May 5th, 2023 having a total of 149 pages in its English version, focused on wild living beings as a whole.

With reference to the Appendix section, six tables were created to illustrate data collected from the literature review and the results presented in the discussion:

Appendix C – *Red List Assessment of Pangolin Species as of Version 2023-1:* For the purpose of this table, the assessment dates and evolution of each species were retrieved from its specific page on the IUCN Red List website (IUCN Red List, 2023).

Appendix D – *Overview of Pangolin classifications through the revisions of the IUCN Red List* : For the purpose of this table, the assessment dates and evolution of each species were retrieved from its specific page at the IUCN Red List website (IUCN Red List, 2023);

Appendix E – *Overview of Pangolin classifications through the revisions of the CITES Appendices*: For the purpose of this table, the Appendices' amendments adopted at each Conference of the Parties were compared in order to establish a historical overview of the classification evolution of the pangolin species. Due to the successive changes in the reports' design, it was not possible to clarify all the dates from which the amendments were valid. So, comparisons were made using the date corresponding to the last day of each Conference of the Parties (CITES, n.d.-e);

Appendix F – *Overview of Pangolin classifications through the revisions of the EC Regulation 338/97*: For the purpose of this table, the Annex amendments adopted by the European Council were compared in order to establish a historical overview of the classification evolution of the pangolin species (EUR-Lex, 2023).

Appendix G – *Overview of pangolin reports with EU countries as Importer, between 2010 and 2022, Based on CITES Trade Database - version 2023.1*. The present work

is an unofficial translation for which the publisher accepts full responsibility. It includes trade data involving countries that were EU Member States at the time of the trade (i.e. the year range of the query). Where the year range includes a country's year of accession to/exit from the European Union, all trade relevant to the search query reported for that country and year will be included within the search results even if the accession/exit date was partway through that year (CITES, n.d.-f ; and CITES Secretariat and UNEP-WCMC, 2022).

CHAPTER 3

Biodiversity Preservation in the European Union: Assessments & Discussion

Despite the apparent limited scope of the EU in terms of the effective guidance and application of wildlife protection rules in its Member States, the EU ends up being a global player by funding and cooperating with IUCN and other projects within the same topic.

This chapter aims to present and interpret the results obtained from the research carried out on wildlife trafficking, with special focus on the illegal pangolin trade, by contextualizing the role of the EU in trafficking routes and discussing the effectiveness of the multiple actors involved, through data comparison.

It is divided in three sections: (1) The purpose of the first section is to provide an overview of the current state of European regulation, with regard to laws and projects to protect biodiversity, specifically in the context of controlling and preventing illegal trade of wild species. Thus, it is intended to compare what exists in the European Union, with what has been recognized internationally as standard or ideal; (2) The second part focuses on pangolin trafficking, showing the relation between the multiple actors within the trading circuits, as a way of understanding the specific dynamics of pangolin trafficking and the relevance of each actor, framing the weight of EU regulation in the pangolin trafficking circuits; and (3) The last part provides data comparison between reports from the EU, the CITES and the IUCN on the extinction risk of pangolins, as an example of how the dynamics between institutions may influence the optimization of preservation measures, without necessarily having positive impacts on the field.

3.1 Overview of the EU regulations for Biodiversity Preservation: Sources, Criteria & Repercussions

The EU considers itself a global actor when it comes to environmental and biodiversity protection, through the prevention of illegal trade in species. This role was reinforced by joining CITES in 2015, which brought uniformity with the outside world and provided local enforcement authority of the CITES norms. From that moment on, the species present in their annexes, and therefore subject to extra protection criteria, became a part of EU concerns, even

if these same species are not part of their list of native species. However, all the member states of the EU were already parties of CITES when the EU established its partnership. (European Commission, n.d.-a; and Mozer & Prost, 2023)

Before going deeper on the subject, it is important to distinguish the difference between regulations and directives. According to the official definitions of the EU, a "regulation" is a binding legislative act that must be applied in its entirety, while a "directive" is a legislative act that sets out a goal that one must achieve, without necessarily mentioning how to do it (European Union, n.d.). So, national legislation must be adapted or supplemented to follow the necessary enforcement provisions of EU regulations (ERA, n.d.).

In terms of Biodiversity protection, the EU Community legislation is based in two main Regulations and three supporting Directives, mentioned here chronologically but enclosed in greater detail in the following paragraphs: (1) Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds; (2) Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora; (3) Council Regulation EC 338/97 of 9 December 1996 on the protection of species of wild fauna and flora by regulating trade therein – the Basic Regulation; (4) Commission Regulation EC 865/2006 of 4 May 2006 laying down detailed rules concerning the implementation of EC 338/97 – the Implementing Regulation; and (5) Council Directive 2008/99/EC of 19 November 2008 on the protection of the environment through criminal law.

The first European legislation dedicated specifically to biodiversity preservation was the Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds, also known as ‘the Birds Directive’, which is no longer into force since 2010, after being repealed by the EC Directive 2009/147/EC of 30 November 2009 on the conservation of wild birds, updated in 2019 for the last time and still into force. (EUR-Lex, 2010 and EUR-Lex, 2019)

Thirteen years later, the second and one of the most important directives published for the protection of biodiversity was the Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora, also known as ‘the Habitats Directive’ since it is focused on the conservation of natural habitats and of wild fauna and flora in the European territory of the Member States to which the Treaty applies. Its last update was in 2013 and it is still into force presently. Similarly to the Birds Directive, the Habitats Directive requires all Member States to establish a strict protection regime for species listed in Annex IV, referring to animal and plant species of community interest in need of strict protection. (EUR-Lex, 2013; and European Commission, n.d.-e)

As already mentioned before, the EU joined CITES in 2015. CITES is still implemented in the EU through a set of regulations, known as the 'EU Wildlife Trade Regulations', directly applicable in all its member states, in order to adapt CITES requirements to local needs: (1) the Council Regulation EC 338/97 of 9 December 1996 on the protection of species of wild fauna and flora by regulating trade therein – the Basic Regulation, with its own list of Annexes – and (2) the Commission Regulation EC 865/2006 of 4 May 2006 laying down detailed rules concerning the implementation of EC 338/97 – the Implementing Regulation. (ERA, n.d.; European Commission, n.d.-a; and EUR-Lex, 2023).

The annexes of the EC Regulation 338/97 are divided into four sections, intrinsically linked to the CITES annexes: (1) Annex A, including all the species from CITES Appendix I and some species from CITES Appendix II and III for which the EU has adopted stricter domestic measures; (2) Annex B, with all other species from CITES Appendix II and some of the species from CITES Appendix III; (3) Annex C, which includes all other species from CITES Appendix III; and (4) Annex D, with some species from CITES Appendix III, plus other species included in other specific EU regulations. (European Commission, n.d.-a)

It is important to note that EC Regulation nº 338/97, along with its annexes, introduces exceptions based on reservations from its Member States and also includes other non-CITES species (European Commission, n.d.-a). So, it is not possible to say that the EU regulations are a copy of the CITES orientations, since the EU remains autonomous in the decision of inclusion/exclusion of species covered by its regulation.

In 2008 the EU Council published the Directive 2008/99/EC on the protection of the environment through criminal law, with the purpose of supplementing the existing administrative sanction system with criminal law penalties. Its Member States had to transpose the Directive into national law by December 2010. (EUR-Lex, 2008 and European Commission, n.d.-d)

The mentioned Directive 2008/99/EC based its considerations of 'protected wild fauna and flora species' on 'the Birds Directive' 79/409/EEC, 'the Habitats Directive' 92/43/EEC and EC Regulation nº 338/97, thus being an aggregating point between the various community legislations, complementing them with the weight of criminal law penalties. Under the Directive 2008/99/EC, the trading, killing, destruction, possession or capture of specimens of protected wild fauna or flora species, including parts or derivatives, is considered an offence. (EUR-Lex, 2008)

Other EU rules that are relevant to the illegal trade in wildlife include: (1) the EC Regulation 1005/2008 of 29 September 2008, also known as 'IUU Regulation' with the

purpose of deterring and eliminateing Illegal, Unreported and Unregulated fishing; (2) the EC Regulation 1010/2009 of 22 October 2009 with detailed rules for the implementation of EC Regulation 1005/2008; (3) the EU Regulation 995/2010 of 20 October 2010, known as 'Timber Regulation'; (4) the Directive 89/662/EEC of 11 December 1989 in relation to trade of animals; and (5) the Directive 93/50/EEC of 24 June 1993 in relation to trade in plants. (ERA, n.d.)

In 2016, after the start of the cooperation between the EU and CITES, as part of the EU's response to the UN's 2030 Agenda for Sustainable Development – in particular SDG 15, focused on the end of poaching and trafficking of protected species – an action plan was discussed and officialised under the EU Report - A8-0303/2016. In this report, the EU referred to itself as "an important actor both in the fight against wildlife crime, and as a major destination for illegal wildlife products, as well as a transit and often source point for wildlife trafficking especially between Africa, Asia, and Latin America but also within the EU itself" and promoted an action plan to fight against global wildlife trafficking between 2016 and 2020. (Bearder, 2016)

Interesting remarks of the EU Council in the Report - A8-0303/2016 associate wildlife crime control to global security – by mentioning the inclusion of illegal wildlife trade in the EU Agenda for Security 2015-2020 – and human rights – referring to wildlife protection as a key element in the EU's global poverty-reduction strategies. The Council even states that it "strongly regrets the lack of clear commitments by the Member States" since they are the ones responsible for the effective implementation of the action plan. (Bearder, 2016)

In 2022 the same EU action plan against wildlife trafficking was revised under reference 52022DC0581 for the period between 2022 and 2027, mentioning that illegal wildlife trade has remained serious and widespread, referring to the EU as a "hub for global wildlife trafficking" and seeking, once again, the commitment of its Member States (EUR-Lex, 2022). This revision aims to bring more focus to transparency, cooperation between stakeholders and capacity-building along the enforcement chain by investing in training, data-sharing and specialisation of police, judges, prosecutors, and other key enforcement actors (European Commission, 2022).

> *The illegal wildlife trade remains serious and widespread. According to the 2020 World Wildlife Crime Report by the United Nations Office on Drugs and Crime, no country in the world is unaffected by wildlife trafficking, with a wide variety of species involved, from eels to pangolins to rosewood. Globally, the numbers of seizures of*

> *trafficked wildlife by the authorities have fallen since the start of the COVID-19 pandemic, but there is no evidence that trafficking itself is being curbed.*
> (EUR-Lex, 2022)

3.2 Pangolin Trafficking Routes: A Chronicle of Transnational Relations

According to WWF (n.d.-b), more than 1,000,000 pangolins were trafficked over a 10-year period, with 2019 data indicating that a pangolin is poached every three minutes. Furthermore, despite being considered protected species, given the demand for pangolin meat and scales and the massive seizures of pangolin scales that occurred in 2019 and 2020, the population is believed to be in decline, although it is difficult to estimate the size of the wild population.

As explained previously, wildlife trafficking circuits, in general, involve the existence of several actors and, in most cases, in different countries or regions. Criminal networks tend to increase their profits through the optimization of trafficking networks, generally focusing on various types of products and even human beings. This versatility, or poly-criminality, allows them to reduce costs and expand distribution. (Mozer & Prost, 2023)

As described by TRAFFIC in its pangolin trafficking report of 2021, wildlife trafficking is transnational and this means that payments often go through digital channels and through the legal banking system. Therefore, money laundering investigations sometimes end up revealing cases of wildlife trafficking, generally coupled with other types of activities apparently legitimate.

> *False or invalid CITES permits are occasionally used, or CITES-listed specimens are concealed among similar-looking non-CITES species. Wild-caught specimens may be falsely declared as captive-bred, as in a 1997 case involving large numbers of Indonesian reptiles, including fly river turtles (Carettochelys insculpta). Ivory is painted and disguised as wood. In Asia, large quantities of wildlife are transported across borders by truck without any special effort at concealment. Amphibians and reptiles are found in luggage at airports. Smugglers of birds and reptiles commonly conceal specimens and eggs on their persons, sometimes in specially designed vests or underwear with pockets to hold their cargo. One man used a compartment in his prosthetic leg to smuggle three iguanas from Fiji to the USA.* (Rosen & Smith, 2010)

TRAFFIC (2021) described the result of one investigation, where several individuals were identified as being linked to various criminal activities, having family connections between them. The investigation began by focusing on the smuggling of Siamese rosewood, but ended up revealing that these individuals were also linked to cases of: trafficking of

pangolins, ivory, tigers and other wild animals; drug and weapons trafficking; corruption of security forces. The individuals also had connections with companies in various legitimate sectors.

In the same case (TRAFFIC, 2021) it is possible to see how comprehensive the trafficking chain can be, involving several countries in different continents. In this case: Malaysia and Indonesia appear in the wildlife trafficking circuit as being the origin of the products/living beings; Thailand and Laos appear in intermediate positions in the trafficking chain, associated with money laundering functions; China, on the other hand, appears to be the end user of wildlife.

For more details, please refer to Appendix A*: Siamese rosewood smuggling network. Image from TRAFFIC (2021).*

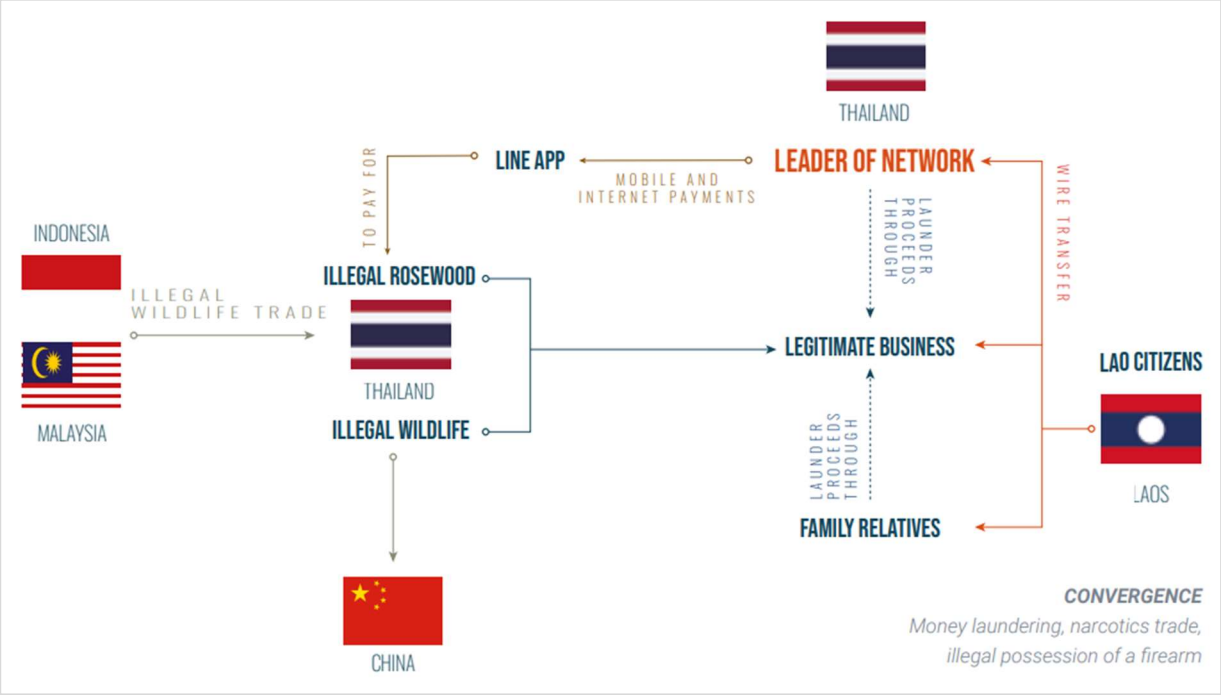


Image 3: *Countries involved in the Siamese rosewood smuggling network. Image from TRAFFIC (2021).*

In terms of general trafficking circuits for pangolins, ROUTES (n.d.-b) provided general views of the trafficking circuits, between 2009-2019, but restricted to air traffic and air transport. In Image 4, it is possible to see that those circuits mainly come from Africa to Asia, with less prominent flows from Africa to Europe, which operates mainly as intermediary and forwards the wildlife to Asia.

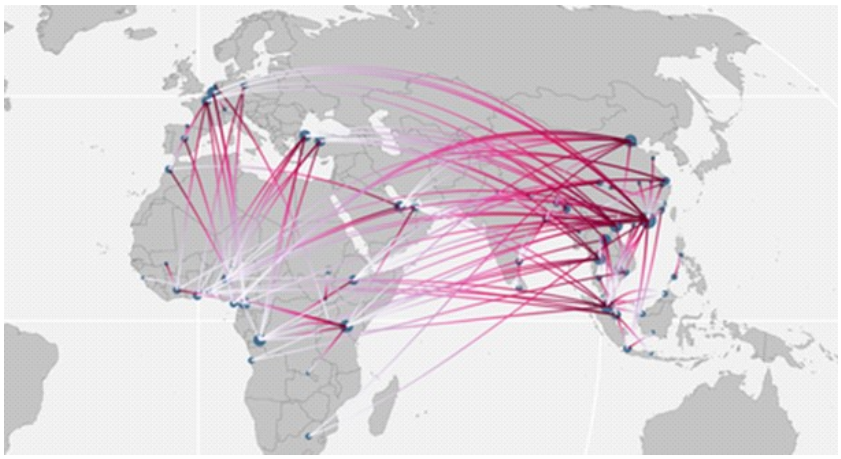


Image 4: *Seizure schemes of Pangolin Traffic in Air Transport between 2009-2019. Image from ROUTES Air Transport Wildlife Trafficking Route Maps. (ROUTES, n.d.-b)*

Similar results of trafficking flows of pangolins are presented by UNODC, between 2007-2018, but focused only on the seize of pangolin scales. In Image 5, it is clear that the main circuits refer Africa as origin and China as destination. However, UNODC points one sole European country on the map: France, as a source of shipment. (UNODC, 2020)

Image 5: *Main trafficking flows and reported origins/destinations of seized pangolin scales (2007-2018). Image from UNODC Wild Crime report. (UNODC, 2020)*

Another European country often mentioned in terms of pangolin trade is Germany. The map published by Heinrich et al. (2019), titled *Pangolin trafficking routes involving Germany, from 2010 to 2018* and referred here as Image 6, illustrates the presence of Germany in pangolin trafficking circuits by air and sea. From the information contained in the map, it

is possible to obtain a general representation of the volume of trafficked individuals within each circuit, with concrete data on the origins and destinations, having mainly African countries at the origin and China as a destination.

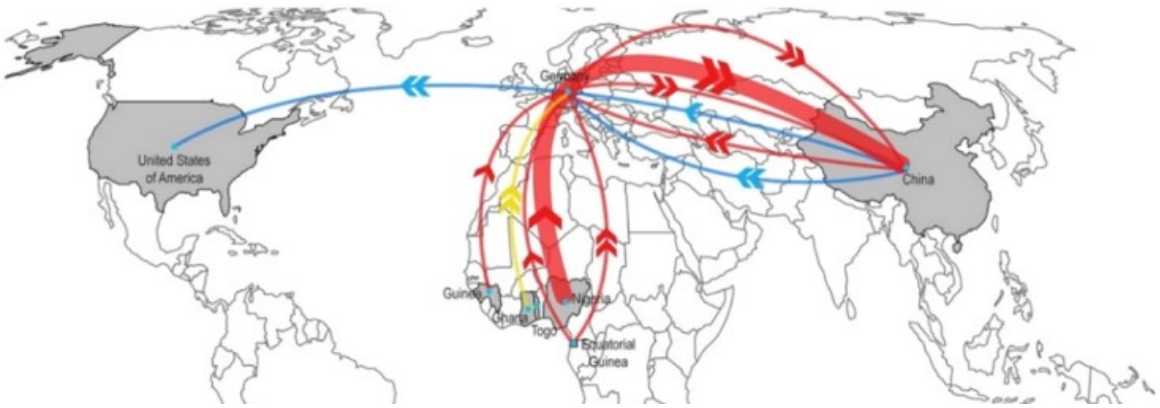


Image 6: Pangolin trafficking involving Germany, from 2010 to 2018 [1],
by Heinrich et al. (2019)

Regarding the data collected by the authors Heinrich et al. (2019), it was based on research in English and German, which limits the results obtained. Since the circuits mostly originate in African countries and end in Asia, the searches should ideally be done in the official and current languages of all the countries involved. However, it is understandable that a study in these terms is, by itself, difficult to conceive and biased from its inception, since the investigations and local perceptions themselves depend not only on the legal prism of each country, but also on the resources that each one has and/or is available to dedicate to such investigations. It should also be noted that the data presented in the map by Heinrich et al. (2019) is based on estimates, although methodically calculated and duly presented, which makes it difficult to unequivocally present results.

Since the data summarized on the maps of Images 4, 5 and 6 coincide with a period of analysis from 2010 to 2018, despite the variation year at the beginning and end of the period,

[1] Title and subtitle of the map presented in the article of Heinrich et al. (2019): *Pangolin trafficking routes involving Germany, from 2010 to 2018. The trafficking routes are on a country-by-country basis and are coloured by commodity, with seizure incidents involving scales (red), medicine (blue), and meat (yellow). The thickness of the lines represent the normalised number of seizure incidents multiplied by the seized quantities measured in estimated pangolins, per trafficking route. Single arrow heads (>) indicate a subsequent transit country in a trafficking route, while double arrow heads (≫) indicate the reported final destination in the trafficking route. Note: The start and end points of a trafficking route have been approximately centralised per country and do not indicate a specific location within a country. (For interpretation of the references to colour in this figure legend, the reader is referred to the Web version of this article.)*

it is possible to state that these converge with the validity of EC Regulation nº 338/97 on the protection of wild fauna and flora species (EUR-Lex, 2023). However, correlating the information from both maps with possible results arising from EC Regulation nº 338/97, becomes vague and not very relevant given the temporal coverage of the period in question, the successive revisions of the law and the eventual influence of external actors.

3.3 Illegal Wildlife Trade: European Union as a Global Actor?

The EU is one of the world's largest markets for wildlife and wildlife products. The EU's single market, without internal border controls, has provided new paths for cross-border wildlife trade crime, especially through weakly controlled countries, both EU members and borderers. (TRAFFIC, n.d.-c)

However, to understand the weight of the EU at an international level, in terms of the external repercussions of its internal regulations, it is necessary to delve deeper into the impact that external and/or independent structures have on the EU's internal management and organization. Two bodies that have that kind of impact are the IUCN and CITES.

As mentioned before, the IUCN Red List is a critical dataset while the CITES is a convention discussed and negotiated between its parties. Although the IUCN Red List serves as reference to CITES, it is not possible to establish that CITES replicates the information received. Quite on the contrary, there are signs of a lack of transversality, potentially associated with the local interests of its parties.

According to the information available in the nineteenth meeting of the Conference of the CITES Parties, only around 6.5% of the total number of species reported by the IUCN Red List are included in the CITES Appendices. This percentage increases with the severity of the risk implied, but by aggregating only the number of species with classification equal or higher to Critically Endangered in the IUCN Red List, only around 10% are also present in the CITES Appendices. (CITES, 2022)

Furthermore, according to Ivonne Higuero, the CITES Secretary-General, only 3% of all CITES-listed species in 2020 are present in Appendix I, which means that trade is permitted for the majority of species. (Higuero, 2020)

In general, there is a prevalence of Vertebrates, followed by Plants and Invertebrates, while Fungi and Protists are completely disregarded. An interesting contrast to this logic are Corals, which stand out from other Invertebrates and where the risk recognition of different species is visibly higher. However, CITES justifies that the Red List coverage of CITES-listed

vertebrates is comprehensive and most of the assessments are recent, while Plants have large gaps in coverage and the Invertebrates coverage is not as good, having a large number of species in need of reassessment. (CITES, 2022)

In order to better discuss the effectiveness of the partnership between the IUCN Red List and CITES, it is important to highlight that, although both structures aim to protect biodiversity and maintain species, each structure has its own focus, its own criteria and its own independent analysis.

As mentioned before, the IUCN Red List is a critical dataset, which divides species in 'Levels' of extinction danger, depending on quantitative thresholds - such as the population abundance and trends – and objective criteria – such as distribution and habitat. These assessment results are used by CITES but not necessarily straightforwardly, since CITES focuses on the sustainability of international wildlife trade, grounding its analysis on the effective impact of international trade on the extinction danger of certain species, which are mandatorily proposed by at least one of the CITES Parties. So, species that are endangered in the eyes of the IUCN Red List may not necessarily be part of the CITES Appendices, or at least part of Appendix I which is dedicated to the critical cases, when international trade is not considered a major treat, even if those species are present in the international circuits. (CITES, 2022 and Challender et al., 2019b)

The distance between the criteria and purposes of both structures makes it difficult to make a clear comparison between the IUCN Red List Levels and the CITES Appendices, and consequently makes it even more difficult to establish a clear correlation between the IUCN Red Levels and the local criteria applied by different entities based on CITES publications, including the EU itself.

> *Despite these efforts, wildlife trafficking, combined with climate change and environmental degradation, continues to put a serious strain on wildlife as well as on people's livelihoods and security. There have been changes over time in both trading routes and traded species. Moreover, increased use of online platforms for trading in wildlife illegally and the related use of small-parcel services have created new challenges for detecting and investigating this type of crime, calling for new solutions and increased resources.* (EUR-Lex, 2022)

Furthermore, CITES criteria do not invalidate the possibility that international trade has a real impact on species already at risk, regardless of whether it is not the main cause, inhibiting potential positive repercussions. In fact, in cases where species are threatened, trade

will only exacerbate non-commercial threats: for example the trade of bird species that are primarily threatened by deforestation. (Morton et al., 2022)

> *A near-automatic pathway will ensure that Red List assessments are not overlooked or neglected. It will be up to CITES to then apply its own set of criteria when drafting the proposal, discussing it, and voting on whether to list the species in Appendix I or II. A determination from CITES that the party members have reviewed the case brought on by the Red List assessment and have decided not to list the species will be important and informative. Absent such a pathway, it is difficult to know whether a given species was assessed informally by CITES and deemed unworthy of protection from trade or whether it was overlooked. The Red List assessment process will also benefit if the CITES party members can convey to IUCN what factors went into their decision not to list a species on either Appendix.* (Challender et al., 2019b)

On a local perspective, let's not forget that EC Regulation nº 338/97 introduces exceptions based on reservations from its Member States and includes species that were excluded from the CITES Appendices. This implies that even having the CITES confirmation that international trade is a major factor in the endangerment of a certain species, does not mean that EU Member States are required to abandon their trade, which may impact the recovery of those species and, in some cases, even lead them to extinction.

Despite discrepancies in the approach between the IUCN and CITES, the listing of species in the CITES Appendices is highly controversial, due to the political and economic influences often present. CITES Parties, despite having a common objective, end up being influenced by local interests, which can lead to the objection on restrictions that oppose trade of species that are relevant to them, economically or culturally. Furthermore, when looking at the subsequent costs of those restrictions, they are typically concentrated on a few states. (Gehring & Ruffing, 2008)

A global and standardized approach to the problematic of biodiversity protection, without overlooking the local specificities, seems to be the necessary approach. However, the political, economic and cultural discrepancies between the states consequently promote different visions on biodiversity and conservation. In addition, the current inter-entity organization, between the existing pillars of biodiversity protection, is complex and unclear when analysed as a whole and that is already an indicator that measures need to be taken in order to simplify processes and make their repercussions more agile at a local level.

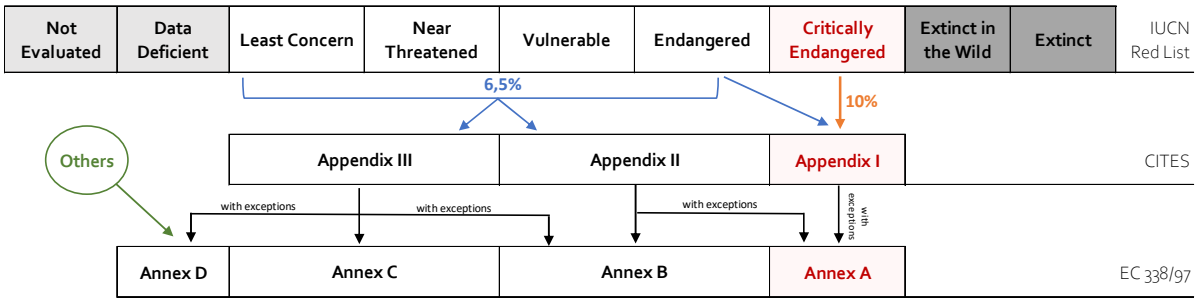


Image 7: *Dynamic of species categorization between the IUCN Red List, the CITES and the EU.*

In terms of the legal framework at local level, the EU has the Directive 2008/99/EC to define the applicable criminal law penalties that need to be translated at said level. However, according to an evaluation carried out in 2020 by DG Justice and Consumers, the Directive appears to be ineffective and questionable in several aspects. (European Commission, n.d.-d)

> *DG Justice and Consumers has evaluated the Directive [2008/99/EC] during 2019 and 2020 and published its results in October 2020. It was found that the Directive did not have much effect in practice. The number of environmental crime cases successfully investigated and sentenced has remained at a very low level. Sanction levels imposed were often too low to be dissuasive and cross-border cooperation was insufficient. There are also considerable enforcement gaps in all Member States and at all levels of the enforcement chain (police, prosecution and criminal courts). Moreover, the lack of coordination between the administrative and criminal law enforcement and sanctioning tracks often hinders effectiveness. It was also found that the lack of reliable, accurate and complete statistical data on environmental crime proceedings in the Member States did not only hamper the Commission's evaluation but also prevents national policy-makers and practitioners from monitoring the effectiveness of their measures.* (European Commission, n.d.-d)

It is also necessary to discuss and review the political influences on the local recognition of a GEG. The European regulation, and other global agreements in place, pose challenges when considering their own rights. This assertion is supported by requests from other official entities, such as the IUCN: *IUCN calls for the definition of further concrete actions that will define how the strategy will be implemented in the EU and in the Member States. This would also provide the opportunity for the important consultation with stakeholders.* (IUCN, 2020)

According to the information published by the IUCN Red List in 2019, all of the eight species of Pangolins are endangered: four are considered "Critically Endangered", two are

considered “Endangered” and the remaining two are “Vulnerable” – for more details, please refer to Appendix B - *List of Pangolin Species and their native areas*. However, the information from the nineteenth meeting of the Conference of the CITES Parties of November 2022, refers only three of the pangolin species, all included in its Appendix II and the reference to the IUCN Red List risk assessment does not match entirely. For example, CITES mentions that according to the Red List data of 2022, the Smutsia Gigantea (Manis gigantea) is referred to as “Endangered”. However, the Smutsia Gigantea was already published by the Red List in 2019 as “Critically Endangered”. Also, in the CITES Appendices version of June 2022, before the aforementioned Conference, all of the eight species of pangolins were already included in Appendix I. (CITES Appendices, 2022; and IUCN Red List, 2023)

As another example of how the volume and complexity of the lists managed by CITES implies data errors, Morton et al. (2022) states that when analysing the CITES Appendices, it was found that there were species repeated between Appendices, for no apparent reason. This suggests that improvements are required for CITES due to the necessary updating of the workload and the volume of the data managed. Investing in its internal organization and optimizing data sharing between the different bodies may be a solution, but different approaches need to be taken in consideration.

The sum of the previous examples allows us to affirm that the EU, when based on external information, is also exposed to possible errors right from the beginning. No studies were found on investigations about the impact of external reporting errors from CITES on the EU. However, the need to improve data management at CITES’ level is clear, in order to avoid or reduce risks at a local level.

Nevertheless, despite the existing partnership with CITES, it is incorrect to think that the EU has a passive role in the collection and interpretation of the species conservation status. In fact, comparisons between the CITES Appendices and the EU Annexes over time demonstrate that the EU is a proactive and even innovative actor when it comes to species monitoring and transcribing those perceptions at the level of its regulations.

The first version of EC Regulation 338/97, dated March 1997, already included pangolins in general - Manis spp. – in its Annex B, which under the current criteria would correspond to all species from CITES Appendix II that are not in Appendix I and some of the species from CITES Appendix III. Although at that date a formal partnership with CITES had not yet been established, the EU classification was already in line with the CITES classification, which already placed all species and subspecies of pangolins in its Appendix II. When comparing the classification given by the IUCN Red List classifications in the same

year, we see that all Pangolin species are characterized as ‘Least Concerned’, which is less critical than the classifications of both the EU and CITES, and only seven species were described. (EUR-Lex, 2023 ; CITES, n.d.-e ; and IUCN Red List, 2023)

Later in 2000, a zero annual export quota was established for three of the eight pangolin species – *Manis crassicaudata*, *Manis pentadactyla* and *Manis javanica,* the Asian pangolins who were seriously depleted for the skin and meat trade – and for animals taken from the wild and traded for primarily commercial purposes. This was put in place by both CITES and the EU, despite maintaining all the species in the CITES Appendix II and EC Annex B. Eight years later, in 2008, the IUCN Red List reviewed the assessment of the pangolin species, including a new one in the list – *Manis crassicaudata* –having a total of four species classified as 'Near Threatened' and two others as 'Endangered'. At the same time, the EU added *Manis crassicaudata* to the zero quota, the same change did not happen on the CITES side. So, once again, the EU seems to be more strict than its companion, but more aligned with the results from IUCN. (EUR-Lex, 2023 ; CITES, n.d.-e ; and IUCN Red List, 2023)

Coincidently, or not, the first Red List assessment of Pangolins was in 1996, the same year in which the EC Regulation 338/97 was implemented, and the second assessment ~~in~~ 2008 coincided with the publishing of the Council Directive 2008/99/EC, that defined criminal law penalties in the EU.

In 2014 the IUCN Red List increased the classification of all pangolins due to their increased risk of extinction: two species were defined as ‘Critically Endangered’, another two as ‘Endangered’ and the rest of them as ‘Vulnerable’. One year later, CITES and the EU joined forces and, in 2016, major changes took place on CITES’ side: all the eight species of pangolins were transferred to Appendix I, attributed to species threatened with extinction and to which trade is permitted only in exceptional circumstances. The EU followed CITES in 2017 by transferring the same information to its Annex A. (EUR-Lex, 2023; CITES, n.d.-e; IUCN Red List, 2023; and UNODC, 2020)

> *Prior to 2009, the international trade involved mostly pangolin meat and scales, sourced in Asia* […] *The reasons for the shift to African sources is unclear, but may be due to declining Asian populations.* […] *Between 2013 to 2017 (when all pangolin species were up-listed to Appendix I), the amount of pangolin scales legally imported went from almost zero to nearly 13 tons, with four countries being responsible for the bulk of the shipments: Burundi, the Democratic Republic of the Congo (DRC), Congo (Brazzaville) and Uganda. China was the importer of 99 per cent of this volume.* […]

In Uganda, hunters report being able to catch anywhere from one to 20 pangolins per day. (UNODC, 2020)

Modifications in the classification of species, by the EU, prior to the partnership with CITES, may be associated with the fact that all the member states of the EU were already parties of CITES. Therefore, it can be said that the partnership with the EU changed the direction of the information flow: now, the Member States would no longer be the transmitters of CITES information to the EU, but rather the opposite. And if, on the one hand, this change in flow promotes the standardization of processes between Member States, it can, on the other hand, have consequences in terms of the speed of implementation at local level, even though no studies have been found about the topic.

Since 2017 no changes were made in the classification by CITES and the EU, and all species remain at high risk of extinction. However, new assessments from the IUCN Red List demonstrated that the threat of extinction continued to increase until 2019, the year of the last assessment published, having a total of four species as 'Critically Endangered', two as 'Endangered' and the other two as 'Vulnerable' (EUR-Lex, 2023 ; CITES, n.d.-e ; and IUCN Red List, 2023). For more details, please refer to Appendix D – *Overview of Pangolin classifications through the revisions of the IUCN Red List*; Appendix E – *Overview of Pangolin classifications through the revisions of the CITES Appendices;* and Appendix F – *Overview of Pangolin classifications through the revisions of the EC Regulation 338/97.*

In terms of European regulation, between 1997 and 2023, a total of 26 updates were made to the EC Regulation 338/97, on the protection of wild fauna and flora species through trading controls. Observing an average of 1 update per year, over the last 26 years, it is reasonable to state that wildlife trade has been a recurrently debated topic, giving rise to frequent readjustments regarding control criteria and methodologies to apply. (EUR-Lex, 2023)

Although the Pangolin is currently the most trafficked mammal globally, none of its species are native to Europe, nor is it part of traditional European markets. The focus of the Pangolin trade is on Asian countries, with their exploitation from African territories, and having Europe playing an intermediary role. (Heinrich et al., 2019)

As a reflection of the EU's focus on other species, pangolin trafficking has a reduced presence in the EU Report - A8-0303/2016, and on the EU's action plan against trafficking in wild species, which throughout its 42 pages makes just 1 mention to pangolins, differently from the elephants that are mentioned more often (Bearder, 2016). In light of this, it can be

suggested that despite concerns about global trafficking, the EU ended up prioritizing and/or giving more emphasis to species that have more notoriety in the EU markets or that are traditionally more interesting to EU buyers.

After the revision of 52022DC0581 in 2022, Pangolins are now mentioned in the second point of its first priority – Preventing wildlife trafficking by addressing its root causes – with the objective of being in force since 2023, aiming to target behavioural change on EU consumers. (EUR-Lex, 2022)

Through the data collected, it is possible to assert that, despite the efforts on monitoring, data sharing and legislation improvement, it was not possible to prevent nor avoid the increase of the risk of extinction for pangolins.

> *The increase in seizures of trafficked wildlife in the EU since 2016 has not translated into a proportional increase in prosecutions and convictions. A lack of specialised staff, resources and training in many of the Member States and non-EU countries remains a major issue. There is also scope for improving cooperation: (i) within EU Member States; (ii) among EU Member States; (iii) between the EU and non-EU countries; and (iv) with stakeholders and civil society.* (EUR-Lex, 2022)

To test the above-mentioned conclusions, data were sought from reports relating to the commercialization of pangolins, published by official and/or recognized entities. The target was to test the effectiveness of the existing mechanisms and evaluate the relevance of the different agreements and partnerships over time.

The TRAFFIC entity, resulted from a partnership between IUCN and WWF, in a joint initiative with the 'Belgian Federal Police, Customs' and 'CITES Management', who then created a project to facilitate the exchange of information and international co-operation between law enforcement and management officials across Europe: the 'European Union Trade in Wildlife Information eXchange', or EU-TWIX, recognized and also funded by the European Commission. It consists of a mailing list and a website that centralises data on seizures and offences reported by all EU Member States. However, EU-TWIX is only accessible by CITES and EU enforcement and management officials responsible for implementating EU Wildlife Trade Regulations. (TRAFFIC, n.d.-b, c and d)

The mechanisms found for free consultation of data relating to wildlife trade reports at an international level were the World Wildlife Seizure database, also known as World WISE, and the CITES Trade Database.

The World WISE database, built to aggregate existing data sources, is managed by the UNODC and was a result of a partnership between UNODC, the CITES Secretariat and the ICCWC – International Consortium on Combating Wildlife Crime – in an attempt to compile a global database of seizure incidents. (UNODC, n.d.)

When looking at the World WISE records of pangolin seizures between 2007 and 2018, the period available, it was possible to notice that the numbers of trafficked specimens increased exponentially, starting in 2007 with 38 live pangolins and the equivalent of 5000 dead specimens, drastically increasing to 71 live pangolins and the equivalent of 142,000 dead specimens in 2018, as per Image 8. (UNODC, n.d.)

Unit of measurement	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
live equivalent (in thousands)	5	12	9	10	18	10	13	14	36	76	101	142
number	38	30	63	86	117	135	117	77	117	171	216	71

Image 8: *Records on the evolution of pangolin seizures between 2007 and 2018, from World WISE. (UNODC, n.d.)*

By restricting the World WISE results, to wildlife seizures with Europe at its origin or destination, the volumes are much less expressive: between 2007 and 2018, the equivalent of 55 specimens were reported with Europe as destination; and the equivalent of 45 specimens with Europe at the origin. (UNODC, n.d.)

However, the UNODC (n.d.) itself assumes that there are significant gaps in both geographic and temporal coverage, with further improvements needed, and turns the spotlights to CITES, one of the providers of World WISE database.

While the World WISE database provides aggregated data but lacks in detail, the CITES Trade Database allows a much deeper view and the filtering of results by date range, countries and even species. It is managed by the UN Environment Program World Conservation Monitoring Center on behalf of the CITES Secretariat and, as of its last version of 2023, it holds 7 million records of wildlife trade and 50,000 scientific names of taxa listed by CITES, with more than 500,000 records annually. (CITES, n.d.-f)

One limitation on the analysis of the data from CITES is the variety of formats of the results, which makes the match of data difficult and can lead to different interpretations, especially on the perception of the volume of individuals traded. This struggle may be linked to the different formats of reports at local level, which requires additional efforts to align results. With the objective of mitigating calculation errors, the next paragraphs will only make

reference to rounded amounts, with the purpose of providing generic ideas and contextualizing the notions presented. For more details, please refer to Appendix G – *Overview of pangolin reports with EU countries as Importer, between 2010 and 2022, Based on CITES Trade Database - version 2023.1*.

According to the CITES (CITES, n.d.-f), between 2010 and 2022, more than 3000 pangolins were imported by EU countries: Austria, Czechia, Denmark, France, Germany, Netherlands, Spain and the UK (still part of the EU during this period). On the exporters side: Benin, Cambodia, Cameroon, Central African Republic, Congo, Côte d'Ivoire, Gabon, Ghana, Liberia, Malaysia, Mexico, Philippines, Russia, Singapore, South Africa, Taiwan, Togo, UK and the US.

During this period, France imported pangolins from Benin, Côte d'Ivoire, Cameroon, Gabon, Ghana, US and South Africa. Exports from the US to France were the more prevalent: (1) a total of 8 specimens bred in captivity and exported for sientific purposes; (2) a total of 137 specimens taken from the wild, exported for sientific purposes, having 28 different countries at the origin and no reference to destination countries. (CITES, n.d.-f)

By looking at these results, many questions may be posed. Since the pangolins are mainly native from African and Asian countries, having the US as an exporter is certainly curious, especially when France is the importer knowing that France is geographically closer to those countries. It would be interesting to have the supposed final destinations, in order to complete the circuits and compare them with the literature available.

According to a joint report of WWF and TRAFFIC (Shiraishi et al., 2020), between 2008 and 2017, France had a total of 43 seizure records, involving 29 specimens and an additional 687 kg of Pangolin Manis spp, with less than six annual seizure records, mainly seized by the airport Paris-Charles De Gaulle. The majority of the specimens were seized on import or in transit, mainly exported by Cameroon, Central African Republic and Nigeria. At the destination, France, China and Lao PDR. The US seized only 2 kg of pangolin meat on import from France in 2017.

On the same period, between 2010 and 2022, Germany imported pangolins from the Central African Republic, Côte d'Ivoire, Liberia and Taiwan. In this case, ~~one~~ two specimens were taken alive from the wild with the purpose of breeding in captivity. The remaining trade (around 1990 specimens) refers to specimens taken from the wild for scientific purposes. (CITES, n.d.-f)

Another interesting aspect is the fact that, according to CITES (CITES, n.d.-f), in the circuits with France as Importer, the reported quantities seem to be done by the exporter

countries in the majority of the cases. On the other hand, in the circuits with Germany as Importer, the opposite occurs.

Without having more details about the local procedures of each country and specific case studies to test theories, it is difficult to clarify if the high level of reporting from Germany is a repercussion of a higher volume of criminal activity or a result of improved controls on the field. However, both France and Germany, are similar in terms of their socio-economic environment, which mitigates the impact of economic struggles of the State when allocating funds to the wildlife trade control. So, drastic local differences between France and Germany may be explained with political positions, but more specific studies need to be done in order to prove this theory.

This study also tried to compare the characteristics and volume of existing reports before and after the establishment of the partnership between the EU and CITES, in 2015. However, since all its Member States were already parties of CITES before that, further analysis of the effectiveness of these partnerships would require investigation at local level and the matching of data per country.

Furthermore, even looking at the individual partnerships with CITES by the Member States, the socio-economical context of each country at the time may imply different approaches to the problem of illegal wildlife trade. For example, France is a partner of CITES since 1978 and Ireland since 2002 (Mozer & Prost, 2023). This difference of more than 20 years impacts a comparison between the two countries. The context of France in 1978 would certainly not be the same of Ireland 24 years later, not only in terms of the economic level but also when looking ~~at~~ the priorities of the State and political environment.

Another interesting detail can be observed when reanalysing the pangolin trade reports with EU countries as Importer (CITES, n.d.-f), specifically the exports from the US to France, where the vast majority of specimens were exported for sientific purposes. Research was carried out to verify the existence of news or other sources about possible fraud in terms of classifying the type of purpose and, therefore, deceiving control systems that focus on transactions with a commercial purpose.

Although references to specific cases of this type are not abundant, the occasional use of false or invalid CITES permits, among other strategies, is a known fact. On the other hand, it should be noted that scientific motivations for the study of pangolins often lead to the illegal obtaining of specimens, either consciously or through prior manipulation of the documentation, in order to legally pass specimens collected by illegal means. (Rosen & Smith, 2010 and Fukushima et al., 2020)

Despite all the doubts that arise from this study, the EU's commitment to nature as a whole and its preservation is clear. Projects are underway and may bring changes, although it is still too early to extrapolate results.

In January 2020, the European Parliament published the 'EU Nature Restoration Law' as part of the EU biodiversity strategy linked to the European Green Deal, with the objective of restoring at least 30% of degraded natural areas and ecosystems by 2030, making the EU the global leader in restoring biodiversity. It involves local action ate the Member States' level, which are responsible for their own legislation and processes of implementation and control. (IUCN, 2023; EEA, 2022; and European Commission, n.d.-f).

Furthermore, the EU provided financial and political support to the UNEP around the world. Since the Rio+20, both entities are active partners, with the UNEP working closely with the European Environment Agency (EEA). While the UNEP considers the EU as an important actor of international environmental governance, the EU reinforces UNEP's role of global environmental authority within the United Nations. (UNEP, n.d.-e; and EEA, 2024)

> *The European Union's decisions on the economy and the environment have far-reaching impacts. By endorsing the European Green Deal, EU member states can drive positive change for their citizens and with partners worldwide. UNEP is ready to support countries in tailoring national action plans to seize the best investment opportunities from the Green Deal.* - Inger Andersen, Executive Director of UNEP (UNEP, n.d.-e)

Conclusion

Despite the efforts on the monitoring of the species by IUCN, the improvement of data sharing following the partnership between the EU and CITES and the legislation enhancement by the EU, with the implementation of criminal penalties to be translated in local laws, it was not possible to prevent nor avoid the increase of the risk of extinction for pangolins.

Multiple solutions have been considered with the aim of preserving the Pangolin species. Aside from the usual focus on wild harvest control and trade regulation, the idea of pangolin farming was one of the alternatives. However, studies suggest that wild collection would not be reduced, with unlikely and unclear benefits on the conservation of wild populations, since the breeding of pangolins on a commercial scale would be difficult and unprofitable. On the other hand, the idea of re-shaping the demand on the consumer side, has been recognized as a complementary measure that may have a positive impact in the species preservation. (Challender et al., 2019a, and Burgess et al., 2020)

The structure of 'Biodiversity Governance' is complex and legislation is extensive, updates are recurring, raising questions regarding their practical applicability and local control means have to adapt to these changes. The complexity of the circuits of trafficking, involving multiple countries from multiple continents and multiple transportation methods, hinders both the means of detecting wildlife trafficking circuits and the implementation of clear and practically applicable rules on the ground. On the other hand, the high demand from customers, that provides high profits to criminals, instigates the perpetuation of the wildlife trafficking.

It is clear that WWF is the entity with the greatest independence, but it is the UNEP who holds more connections and visibility worldwide and the partnership with the EU ends up emphasizing UNEP's role of global environmental authority.

Despite that, the EU is a central point in terms of environmental concerns and biodiversity preservation, with direct and indirect action, within and outside the borders of its Member States. However, as it depends on external information and recommendations, it is impacted by external data errors and delays.

It is important to highlight that, with the information collected and comparing the evolution of pangolin trade restrictions between the EU and CITES, the EU does not play a passive role. On the contrary, the EU appears to be stricter than the CITES throughout history. Nevertheless, the EU seems to prioritize species linked to its own local markets as pangolin

trafficking has a reduced presence in the EU Report - A8-0303/2016, despite being the most trafficked mammal globally.

Another aspect that contradicts the vision of the EU as a passive or subordinate actor, is that by supporting the UNEP, both financially and politically, the EU ends up having an indirect impact on the activities of IUCN, CITES and TRAFFIC, which includes the SDGs, in parallel with the WWF that supports these entities/projects without being necessarily in a partnership with the UNEP. However, the activities of these entities have direct impacts on the internal organization of the EU, which aligns its legislation and regulation with the results provided by them. It is a symbiosis that proved to be useful, despite the developments needed.

The IUCN Red List is a critical dataset, while CITES focuses on the sustainability of international wildlife trade, being conditioned by the propositions and decisions of its Parties, to include/eliminate species in/from its Appendices. This difference promotes discrepancies, as species that are endangered to the IUCN Red List may not necessarily be part of the CITES Appendices, and makes the comparison between the IUCN Red List Levels, the CITES Appendices and the criteria applied locally by the CITES Parties difficult.

Furthermore, the CITES' decisions are controversial, since political, economic and cultural influences are often present, promoting different visions on biodiversity and conservation. The CITES Parties, induced by local interests, may object restrictions that oppose trade of species economically or culturally relevant. Also, the costs of those restrictions, are often centred on the same states, which leads to financial impacts at local level.

Given the current complexity of the governance bodies and the political impacts on trade limitation decisions, it is important to encourage more studies on the topic. Besides, since the legal framework on wildlife trade is a topic that implicates international cooperation, and can easily oscillate between legality and illegality, this project provides useful data for future studies, in terms of the potentialities and limitations of the current governance and local controls.

Through the precedent chapters, it was possible to have a clear overview of the existing governance map for biodiversity preservation, which allows for future studies focused on testing the effectiveness of the structures involved, through practical local data.

To conclude, it is suggested to invest in the analysis of data collected from local reports of multiple countries and contrast these results with the regulations transmitted by international governance structures and the legislation actually in practice in these same countries. By identifying the countries with the greatest impact on pangolin trafficking, it is

possible to guide the study on possible risk factors and assess the presence of applicable legislation, whether local or international. Thus, with more specific data and longer investigations, it will be possible to question the governance bodies and work towards optimizing the biodiversity preservation methodologies, without depending solely on the control of wildlife trade.

Bibliographical References

Adams, W.M. (2004). *Against Extinction. The Story of Conservation.* Earthscan. Routledge. https://www.routledge.com/Against-Extinction-The-Story-of-Conservation/Adams/p/book/9781844070565

Aisher, A. (2016). *Scarcity, Alterity and Value: Decline of the Pangolin, the World's Most Trafficked Mammal.* Conservation and Society. http://www.jstor.org/stable/26393255

Bánki, O.S., Bergmans, W., Iongh, H.H., & Werff ten Bosch, M.J. (2003). *The harmonization of Red Lists for threatened species in Europe : proceedings of an international seminar in Leiden.* IUCN Library System. https://portals.iucn.org/library/node/8318

Bearder, C. (2016). *RELATÓRIO sobre o plano de ação da UE contra o tráfico de espécies selvagens | A8-0303/2016 | Parlamento Europeu*. © União Europeia. https://www.europarl.europa.eu/doceo/document/A-8-2016-0303_PT.html

Brain, S. (2014). *The appeal of appearing green: Soviet-American ideological competition and Cold War environmental diplomacy.* Cold War History. https://doi.org/10.1080/14682745.2014.971015

Burgess, G., Olmedo, A., Veríssimo, D., & Waterman, C. (2020). Changing consumer behavior for pangolin products. In Elsevier eBooks (pp. 349–366). https://doi.org/10.1016/b978-0-12-815507-3.00022-8

Cambridge Conservation Initiative. (2023, April 20). Our story | Cambridge Conservation Initiative. Cambridge Conservation Initative. https://www.cambridgeconservation.org/about/our-story/

Challender, D., Sas-Rolfes, M. '., Ades, G., Chin, J. S., Sun, N. C., Chong, J. L., Connelly, E., Hywood, L., Luz, S., Mohapatra, R. K., De Ornellas, P., Parker, K., Pietersen, D. W., Roberton, S., Semiadi, G., Shaw, D., Shepherd, C. R., Thomson, P., Wang, Y., . . . Nash, H. C. (2019a). *Evaluating the feasibility of pangolin farming and its potential conservation impact.* Global Ecology and Conservation, 20, e00714. https://doi.org/10.1016/j.gecco.2019.e00714

Challender, D., Hoffmann, M., Hoffmann, R., Scott, J., Robinson, J. E., Cremona, P., Hilton-Taylor, C., Jenkins, R. K. B., Malsch, K., Conde, D. A., & De Meulenaer, T. (2019b). *Criteria for CITES species protection. Science*. sciencemag.org . https://www.researchgate.net/publication/333035234_Criteria_for_CITES_species_protection

CITES (n.d.). Convention on International Trade in Endangered Species of Wild Fauna and Flora

a) *What is CITES?* https://cites.org/eng/disc/what.php
b) *CITES Secretariat*. https://cites.org/eng/disc/sec/index.php
c) *The CITES Appendices.* https://cites.org/eng/app/index.php; with details of *Appendices I, II and III. Valid from 25 November 2023*. https://cites.org/eng/app/appendices.php
d) *How CITES works.* https://cites.org/eng/disc/how.php
e) *Conference of the Parties* (list of all the amendments). https://cites.org/eng/meetings/cop
f) *CITES Trade Database.* https://trade.cites.org/en/cites_trade/# (Introduction to the data base at https://cites.org/eng/node/7691)

CITES (2022). *Nineteenth meeting of the Conference of the Parties - Panama City (Panama), 14 – 25 November 2022 - CITES LISTED SPECIES ON THE IUCN RED LIST OF THREATENED SPECIES: CHANGES SINCE CITES CoP18.* Convention on

International Trade in Endangered Species of Wild Fauna and Flora. https://cites.org/sites/default/files/documents/E-CoP19-Inf-74.pdf

CITES Secretariat and UNEP-WCMC (2022). *A guide to using the CITES Trade Database. Version 9.* Geneva, Switzerland, and Cambridge, UK. https://trade.cites.org/cites_trade_guidelines/en-CITES_Trade_Database_Guide.pdf

Dahl A. and Karlsson-Vinkhuyzen S. (2021). *Towards a Global Environment Agency Effective Governance for Shared Ecological Risks. Reports of the Climate Governance Commission.* The Global Challenges Foundation. https://globalchallenges.org/wp-content/uploads/2021/11/FINAL-%E2%80%93-Towards-a-Global-Environment-Agency-2021-11-03.pdf

Ecolex (n.d.). *Convention relative to the Preservation of Fauna and Flora in their Natural State. (Nov 8, 1933).* Joint initiative of IUCN, UNEP, FAO. https://www.ecolex.org/details/treaty/convention-relative-to-the-preservation-of-fauna-and-flora-in-their-natural-state-tre-000069/

EEA (2022). *UNEP/MAP–EEA, Joint Work Plan 2022-2030.* European Environment Agency. https://www.eea.europa.eu/about-us/documents/unep-map-eea-joint-work-plan

EEA (2024). *Biodiversity: state of habitats and species*. European Environment Agency. https://www.eea.europa.eu/en/topics/in-depth/biodiversity?activeTab=e3e6b879-fef4-4a88-9436-5f0064698270

ERA (n.d.). *EU Wildlife Trade Regulation.* ERA - Academy of European Law. https://www.era-comm.eu/EU_Nature_Protection_Legislation_Species_Protection/part_3/part_3_12.html

EUR-Lex (2008). *Directive 2008/99/EC of the European Parliament and of the Council of 19 November 2008 on the protection of the environment through criminal law.* Publications Office of the European Union. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32008L0099

EUR-Lex (2010). *Council Directive of 2 April 1979 on the conservation of wild birds (79/409/EEC).* Publications Office of the European Union. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A01979L0409-20100215

EUR-Lex (2013). *Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora*. Publications Office of the European Union. http://data.europa.eu/eli/dir/1992/43/2013-07-01

EUR-Lex (2019). *Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds.* Publications Office of the European Union. http://data.europa.eu/eli/dir/2009/147/2019-06-26

EUR-Lex (2022). *COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS: Revision of the EU action plan against wildlife trafficking.* Document 52022DC0581. Publications Office of the European Union. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2022:581:FIN

EUR-Lex (2023). *Consolidated text: Council Regulation (EC) No 338/97 of 9 December 1996 on the protection of species of wild fauna and flora by regulating trade therein. Document 01997R0338-20230520.* Publications Office of the European Union. http://data.europa.eu/eli/reg/1997/338/2023-05-20

European Commission (n.d.). Directorate-General for Environment

a) *Wildlife trade - EU and international measures to protect endangered species from illegal trade*. Directorate-General for Environment. https://environment.ec.europa.eu/topics/nature-and-biodiversity/wildlife-trade_en

b) *Protecting the environment and oceans with the Green Deal.* Directorate-General for Environment. https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/protecting-environment-and-oceans-green-deal_en
c) *Questions and answers on the EU Action Plan against Wildlife Trafficking.* Directorate-General for Environment. https://ec.europa.eu/commission/presscorner/detail/en/memo_16_388
d) *Environmental crime.* https://commission.europa.eu/strategy-and-policy/policies/justice-and-fundamental-rights/criminal-justice/environmental-crime_en#the-environmental-crime-directive
e) *The Habitats directive.* https://environment.ec.europa.eu/topics/nature-and-biodiversity/habitats-directive_en#:~:text=the%20long%2Dterm.-,Law,and%20outside%20Natura%202000%20sites.
f) *Biodiversity strategy for 2030.* https://environment.ec.europa.eu/strategy/biodiversity-strategy-2030_en#actions

European Commission (2022). *Questions and Answers on the EU Action Plan against wildlife trafficking.* Press corner EC. https://ec.europa.eu/commission/presscorner/detail/en/qanda_22_6581

European Union (n.d.). *Types of legislation.* Directorate-General for Communication of the European Union. https://european-union.europa.eu/institutions-law-budget/law/types-legislation_en

Explorers against Extinction (2023). *Extinction - The Red List Categories.* The Real World Conservation Trust. https://explorersagainstextinction.co.uk/projects/criteria/

Farrows (2023). *Giant Ground Pangolin.* World Land Trust. https://www.worldlandtrust.org/species/mammals/giant-ground-pangolin/

FFI (n.d.). *Who we are.* Fauna & Flora International. https://www.fauna-flora.org/about/

Fukushima, C. S., West, R. C., Pape, T., Penev, L., Schulman, L., & Cardoso, P. (2020). *Wildlife collection for scientific purposes*. Conservation Biology, 35(1), 5–11. https://doi.org/10.1111/cobi.13572

Gehring, T., & Ruffing, E. (2008). *When arguments prevail over power: The CITES procedure for the listing of endangered species.* Global Environmental Politics. https://doi.org/10.1162/glep.2008.8.2.123, with free access through https://www.researchgate.net/publication/24089966_When_Arguments_Prevail_over_Power_The_CITES_Procedure_for_the_Listing_of_Endangered_Species

Geneva Environment Network (n.d.). *Environment House Geneva.* https://www.genevaenvironmentnetwork.org/environment-house/

Heinrich, S., Koehncke, A., & Shepherd, C. R. (2019). The role of Germany in the illegal global pangolin trade. *Global Ecology and Conservation*, *20*, e00736. https://doi.org/10.1016/j.gecco.2019.e00736

Holdgate, M. W. (1999). *The Green Web: A Union for World Conservation*. Routledge. https://portals.iucn.org/library/sites/library/files/documents/1999-001.pdf

Horta, K. (1998). *The Global Environment Facility Partnership.* Foreign Policy in Focus (FPIF).https://fpif.org/global_environment_facility/

IATA (n.d.). *Illegal wildlife trade.* The International Air Transport Association. https://www.iata.org/en/programs/environment/wildlife-trafficking/ with link to the MOU with CITES. https://www.iata.org/contentassets/adfc0ea8044648fcbff13d79dceff7ae/cites-iata-mou.pdf

Ingdahl, W. (2021). Governing our climate future. The Global Challenges Foundation. https://globalchallenges.org/governing-our-climate-future/

Inside Justice. (2009). *Comparison of the ICJ and the ICC*. https://www.insidejustice.com/intl/2009/01/28/differences_icc_icj/

IUCN (2020). *IUCN welcomes the EU Biodiversity Strategy for 2030 and urges Member States to now also show high ambition*. International Union for Conservation of Nature and Natural Resources https://www.iucn.org/news/europe/202005/iucn-welcomes-eu-biodiversity-strategy-2030-and-urges-member-states-now-also-show-high-ambition

IUCN (2023). *IUCN statement on the EU Nature Restoration Law.* International Union for Conservation of Nature and Natural Resources. https://iucn.org/iucn-statement/202307/iucn-statement-eu-nature-restoration-law

IUCN (n.d.). *History of the IUCN Library.* International Union for Conservation of Nature and Natural Resources. https://www.iucn.org/our-work/science-led-approach/iucn-libraries/history-iucn-libraries

IUCN Red List (2023). The IUCN Red List of Threatened Species. Version 2023-1. https://www.iucnredlist.org.

a) *Pangolin Species List.* https://www.iucnredlist.org/search?query=pangolin&searchType=species
b) Manis culionensis. https://www.iucnredlist.org/species/136497/123586862
c) *Manis javanica.* https://www.iucnredlist.org/species/12763/123584856
d) *Smutsia gigantea.* https://www.iucnredlist.org/species/12762/123584478
e) *Manis pentadactyla.* https://www.iucnredlist.org/species/12764/168392151
f) *Phataginus tricuspis.* https://www.iucnredlist.org/species/12767/123586469
g) *Manis crassicaudata.* https://www.iucnredlist.org/species/12761/123583998
h) *Smutsia temminckii.* https://www.iucnredlist.org/species/12765/123585768
i) *Phataginus tetradactyla.* https://www.iucnredlist.org/species/12766/123586126
j) *Supporting Information.* https://www.iucnredlist.org/assessment/supporting-information
k) *Contact*. https://www.iucnredlist.org/support/contact

Higuero, I. (2020). IUCN World Conservation Congress, Reverse the Red Pavilion - Keynote presentation. https://cites.org/sites/default/files/articles/CITES_SG_Higuero_presentation_RtR_IUCN_SustainableUse.pdf

Laakkonen, S., Pál, V., & Tucker, R. (2016). *The Cold War and environmental history: complementary fields.* Cold War History. https://doi.org/10.1080/14682745.2016.1248544

Lopez-Claros, A., Dahl, A. L., & Groff, M. (2020*). Global governance and the emergence of global institutions for the 21st century.* Cambridge University Press. https://doi.org/10.1017/9781108569293

Morton, O., Scheffers, B. R., Haugaasen, T., & Edwards, D. P. (2022). *Mixed protection of threatened species traded under CITES.* Current Biology, 32(5), 999-1009.e9. https://doi.org/10.1016/j.cub.2022.01.011

Mozer, A., & Prost, S. (2023). An introduction to illegal wildlife trade and its effects on biodiversity and society. Forensic Science International: Animals and Environments. ELSEVIER. https://doi.org/10.1016/j.fsiae.2023.100064

Nellemann, C., Henriksen, R., Kreilhuber, A., Stewart, D., Kotsovou, M., Raxter, P., Mrema, E., & Barrat, S. (2016). *The Rise of Environmental Crime: A Growing Threat to Natural Resources, Peace, Development and Security.* RHIPTO. https://www.grida.no/publications/344

OHCHR (n.d.). Office of the High Commissioner for Human Rights:

a) *About human rights and the environment*. https://www.ohchr.org/en/special-procedures/sr-environment/about-human-rights-and-environment

b) *Special Rapporteur on human rights and the environment.* https://www.ohchr.org/en/special-procedures/sr-environment

OHCHR (2021). *UN recognition of human right to healthy environment gives hope for planet's future – human rights expert.* Office of the High Commissioner for Human Rights. https://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=27633&LangID=E

Open Spaces Society (2022). *About Us.* https://www.oss.org.uk/about-us/

Poole, R. E. (2012). *Global Governance and the Environment: Evaluating the Effectiveness of Global Governance in Tackling Contemporary Environmental Issues*. Inquiries Journal. http://www.inquiriesjournal.com/articles/652/globalgovernance-and-the-environment-evaluating-the-effectiveness-of-global-governance-in-tackling-contemporary-environmentalissues?id=652

Prendergast, D., & Adams, W. M. (2003). *Colonial wildlife conservation and the origins of the Society for the Preservation of the Wild Fauna of the Empire (1903–1914).* Oryx, 37(2), 251–260. https://doi.org/10.1017/s0030605303000425

Rosen, G. E., & Smith, K. F. (2010). *Summarizing the evidence on the international trade in illegal wildlife.* Ecohealth, 7(1), 24–32. https://doi.org/10.1007/s10393-010-0317-y

ROUTES (n.d.) - Reducing Opportunities for Unlawful Transport of Endangered Species – United States Agency for International Development partnership:

a) *About ROUTES.* https://routespartnership.org/about-routes

b) Air Transport Wildlife Trafficking Route Maps. https://routespartnership.org/industry-resources/infographics/air-transport-wildlife-trafficking-route-maps

SDGs (n.d.). United Nations Department of Economic and Social Affairs:

a) *Commission on Sustainable Development (CSD).* https://sustainabledevelopment.un.org/csd.html

b) *The 17 Goals.* https://sdgs.un.org/goals

Shiraishi H., Escot L., Kecse-Nagy K. and Ringuet S. (2020). *The role of France in wildlife trade: An analysis of CITES trade and seizure data.* WWF and TRAFFIC joint report. https://www.traffic.org/site/assets/files/13537/wwf-traffic_report_bd_2021-03.pdf

'T Sas-Rolfes, M., Challender, D. W., Hinsley, A., Veríssimo, D., & Milner-Gulland, E. (2019). *Illegal Wildlife Trade: Scale, Processes, and Governance.* Annual Review of Environment and Resources, 44(1), 201–228. https://doi.org/10.1146/annurev-environ-101718-033253

TRAFFIC (n.d.). Trade Records Analysis of Fauna and Flora in Commerce:

a) About: *Our organisation*. https://www.traffic.org/about-us/our-organisation/ and *Global Offices and Priorities.* https://www.traffic.org/about-us/global-offices/

a) *EU-TWIX: A Tool To Facilitate Information Exchange On Illegal Wildlife Trade In Europe.* https://www.eu-twix.org/

b) *EU-, AFRICA-, SADC- and Eastern Africa-TWIX. Trade in Wildlife Information eXchange.* https://www.traffic.org/what-we-do/thematic-issues/supporting-law-enforcement/twixs/

c) *EUTWIX – Trade in Wildlife Information Exchange – An internet tool to assist the European enforcement and management agencies in the fight against wildlife trade crime.* https://www.traffic.org/site/assets/files/3792/eu-twix-leaflet-2022-en-final.pdf

TRAFFIC (2021). Case Digest: An Initial Analysis of the Financial Flows and Payment Mechanisms Behind Wildlife and Forest Crime. Wildlife Trade Report from TRAFFIC. https://www.traffic.org/publications/reports/case-digest-an-initial-analysis-of-the-financial-flows-and-payment-mechanisms-behind-wildlife-and-forest-crime/

UIA (n.d.). *Global Civil Society Database: International Office for the Protection of Nature.* Union of International Associations. https://uia.org/s/or/en/1100014846

UN (n.d.). United Nations:

a) *United Nations Conference on Environment and Development, Rio de Janeiro, Brazil, 3-14 June 1992.* https://www.un.org/en/conferences/environment/rio1992
b) *Convention on Biological Diversity, key international instrument for sustainable development.* https://www.un.org/en/observances/biological-diversity-day/convention (with link to the History of the Convention at https://www.cbd.int/history/)

UN Chronicle (2021). *Protecting wildlife can help advance the 2030 agenda and sustain life on Earth, including humanity.* World Wildlife Day - United Nations. https://www.un.org/en/un-chronicle/protecting-wildlife-can-help-advance-2030-agenda

UNEP (n.d.). United Nations Environment Programme:

a) *The International Union for Conservation of Nature (IUCN).* https://www.unep.org/explore-topics/oceans-seas/what-we-do/working-regional-seas/partners/international-union
b) *Three ways the United Nations Environment Programme works to address illegal trade in wildlife.* https://www.unep.org/news-and-stories/story/three-ways-united-nations-environment-programme-works-address-illegal-trade
c) *Why does UN Environment Programme matter?* https://www.unep.org/about-un-environment/why-does-un-environment-matter
d) *Our branches in Europe.* https://www.unep.org/regions/europe/our-branches-europe
e) *European Union and UNEP.* https://www.unep.org/about-un-environment/funding-and-partnerships/european-commission

UNEP-OHCHR Bulletin (2021). *United Nations Environment Programme.* Third Edition. https://express.adobe.com/page/lIei9PJzB3OVa

US Department of State (2021). *2021 END Wildlife Trafficking Strategic Review.* Bureau Of Oceans and International Environmental and Scientific Affairs. https://www.state.gov/2021-end-wildlife-trafficking-strategic-review/

UNODC (n.d.). *World Wildlife Seizure database.* United Nations Office on Drugs and Crime. Database at https://dataunodc.un.org/dp-wildlife-seizures and infomative details at https://www.unodc.org/documents/data-and-analysis/wildlife/WLC16_Chapter_2.pdf

UNODC (2016). *World Wildlife Crime Report: Trafficking in protected species.* United Nations Publications. https://apo.org.au/node/65084

UNODC (2020). *Wildlife Crime: Pangolin scales, 2020.* United Nations Office on Drugs and Crime. https://www.unodc.org/documents/wwcr/2020/Wildlife_crime_Pangolin_UNODC.pdf

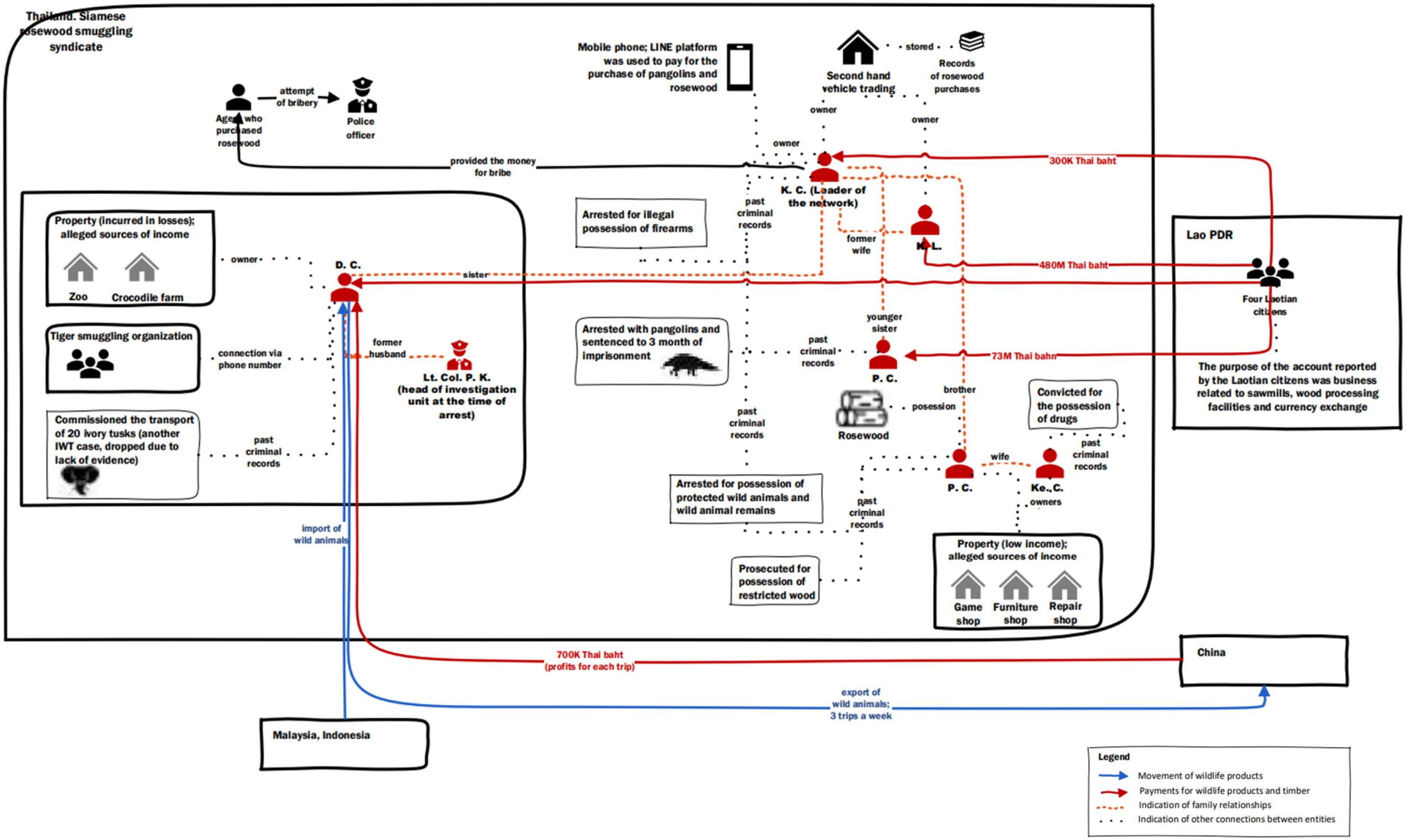
USAID (2018). *Reducing Opportunities for Unlawful Transport of Endangered Species: ROUTES; Monitoring, Evaluation and Learning Report (October 1, 2017 – September 30, 2018).* United States Agency for International Development partnership with C4ADS, Freeland, IATA, TRAFFIC, WWF. https://pdf.usaid.gov/pdf_docs/PA00TFB1.pdf

WWF (n.d.). World Wildlife Fund.

a) *History.* https://www.worldwildlife.org/about/history
b) *Pangolin.* *https://www.worldwildlife.org/species/pangolin*

Appendix Section

Appendix A: Siamese rosewood smuggling network. Image from TRAFFIC (2021).



Appendix B - List of Pangolin Species and their native areas (1/2)

Manis Culionensis

Native areas:

Image by © Roger G Dolorosa and map from IUCN Red List, 2023-b, edited by L.Marques

Manis Javanica

Native areas:

Image by © Dan Challender and map from IUCN Red List, 2023-c

Smutsia Gigantea

Native areas:

Image by © David Brossard, in Farrows (2023). Map from IUCN Red List, 2023-d

Manis Pentadactyla

Native areas:

Image by © Jason S C Chin Taipei Zoo Program, Cuc Phuong, and map from IUCN Red List, 2023-e

Appendix B - List of Pangolin Species and their native areas (2/2)

Phataginus Tricuspis

Native areas:

Image by © Hugues Akpona and map from IUCN Red List, 2023-f

Manis Crassicaudata

Native areas:

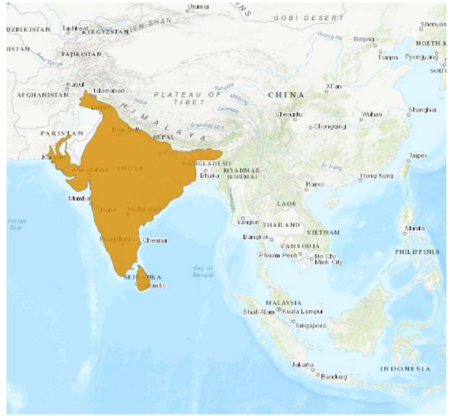


Image by © Gerald Cubitt and map from IUCN Red List, 2023-g

Smutsia Temminckii

Native areas:

Image by © Darren Pietersen/African Pangolin Working Group and map from IUCN Red List, 2023-h

Phataginus Tetradactyla

Native areas:

Image by © Rod Cassidy and map from IUCN Red List, 2023-i

Appendix C – Red List Assessment of Pangolin Species as of Version 2023-1. For the purpose of this table, the assessment dates and evolution of each species were retrieved from its specific page on the Red List website. (IUCN Red List, 2023)

Genus	Species	Scientific Name *& Other Names*	Status	Red List Criteria	Assessment Id	Assessment Date	Year Published	Historical Assessment	Description
Manis	culionensis	**Manis culionensis;** *Philippine pangolin; Palawan pangolin*	Critically Endangered	A3d+4d	123586862	12/04/2018	2019	*2018 — Critically Endangered (CR)* *2014 — Endangered (EN)* *2008 — Near Threatened (NT)*	*Philippine Pangolin Manis culionensis has most recently been assessed for The IUCN Red List of Threatened Species in 2018. Manis culionensis is listed as Critically Endangered under criteria A3d+4d.*
Manis	javanica	***Manis javanica;*** *Sunda pangolin*	Critically Endangered	A2d+3d+4d	123584856	02/05/2019	2019	*2014 — Critically Endangered (CR)* *2008 — Endangered (EN)* *1996 — Lower Risk/near threatened (LR/nt)*	*Sunda Pangolin Manis javanica has most recently been assessed for The IUCN Red List of Threatened Species in 2019. Manis javanica is listed as Critically Endangered under criteria A2d+3d+4d.*
Smutsia	gigantea	**Smutsia gigantea;** *Manis gigantea; Giant Ground Pangolin; Giant pangolin*	Critically Endangered	A2cd+4cd	123584478	02/05/2019	2019	*2019 — Critically Endangered (CR)* *2014 — Vulnerable (VU)* *2008 — Near Threatened (NT)* *1996 — Lower Risk/least concern (LR/lc)*	*Giant Ground Pangolin Smutsia gigantea has most recently been assessed for The IUCN Red List of Threatened Species in 2019. Smutsia gigantea is listed as Endangered under criteria A2cd+4cd.*
Manis	pentadactyla	**Manis pentadactyla;** *Chinese pangolin*	Critically Endangered	A3d+4d	168392151	10/05/2019	2019	*2014 — Critically Endangered (CR)* *2008 — Endangered (EN)* *1996 — Lower Risk/near threatened (LR/nt)*	*Chinese Pangolin Manis pentadactyla has most recently been assessed for The IUCN Red List of Threatened Species in 2019. Manis pentadactyla is listed as Critically Endangered under criteria A3d+4d.*
Phataginus	tricuspis	**Phataginus tricuspis;** *Manis tricuspis; White-bellied Pangolin; Tree pangolin*	Endangered	A2c+4cd	123586469	08/05/2019	2019	*2019 — Endangered (EN)* *2014 — Vulnerable (VU)* *2008 — Near Threatened (NT)* *1996 — Lower Risk/least concern (LR/lc)*	*White-bellied Pangolin Phataginus tricuspis has most recently been assessed for The IUCN Red List of Threatened Species in 2019. Phataginus tricuspis is listed as Endangered under criteria A2c+4cd.*
Manis	crassicaudata	**Manis crassicaudata;** *Indian pangolin*	Endangered	A3d+4d	123583998	10/05/2019	2019	*2014 — Endangered (EN)* *2008 — Near Threatened (NT)* *1996 — Lower Risk/near threatened (LR/nt)*	*Indian Pangolin Manis crassicaudata has most recently been assessed for The IUCN Red List of Threatened Species in 2019. Manis crassicaudata is listed as Endangered under criteria A3d+4d.*
Smutsia	temminckii	**Smutsia temminckii;** *Manis temminckii; Temminck's pangolin;*	Vulnerable	A4cd	123585768	01/05/2019	2019	*2014 — Vulnerable (VU)* *2008 — Least Concern (LC)* *1996 — Lower Risk/near threatened (LR/nt)*	*Temminck's Pangolin Smutsia temminckii has most recently been assessed for The IUCN Red List of Threatened Species in 2019. Smutsia temminckii is listed as Vulnerable under criteria A4cd.*
Phataginus	tetradactyla	**Phataginus tetradactyla;** *Manis tetradactyla; Black-bellied Pangolin; Long-tailed pangolin*	Vulnerable	A2cd+4cd	123586126	08/05/2019	2019	*2014 — Vulnerable (VU)* *2008 — Least Concern (LC)* *1996 — Lower Risk/least concern (LR/lc)*	*Black-bellied Pangolin Phataginus tetradactyla has most recently been assessed for The IUCN Red List of Threatened Species in 2019. Phataginus tetradactyla is listed as Vulnerable under criteria A2cd+4cd.*

Appendix D – Overview of Pangolin classifications through the revisions of the IUCN Red List. For the purpose of this table, the assessment dates and evolution of each species were retrieved from its specific page on the Red List website. (IUCN Red List, 2023)

Assessment Publication	Critically Endangered	Endangered	Vulnerable	Near Threatened	Least Concerned
2019	Manis pentadactyla; Manis javanica; Manis culionensis; Manis gigantea;	Manis crassicaudata; Manis tricuspis;	Manis tetradactyla; Manis temminckii;		
2018	Manis pentadactyla; Manis javanica; Manis culionensis;	Manis crassicaudata;	Manis tetradactyla; Manis temminckii; Manis tricuspis; Manis gigantea;		
2017					
2016	Manis pentadactyla; Manis javanica;	Manis crassicaudata; Manis culionensis;			
2015					
2014					
2013					
2012				Manis crassicaudata; Manis tricuspis; Manis gigantea; Manis culionensis;	Manis tetradactyla; Manis temminckii;
2011		Manis pentadactyla; Manis javanica;			
2010					
2009					
2008					
2007					
2006					
2005					
2004					Manis tetradactyla; Manis temminckii; Manis crassicaudata; Manis tricuspis; Manis pentadactyla; Manis gigantea; Manis javanica;
2003					
2002					
2001					
2000					
1999					
1998					
1997					
1996					

Appendix E – Overview of Pangolin classifications through the revisions of the CITES Appendices. For the purpose of this table, the Appendices amendments adopted at each Conference of the Parties were compared in order to establish a historical overview of the classification evolution of the pangolin species. Due to the successive changes in the reports design, it was not possible to clarify all the dates from which the amendments were valid. So, comparisons were made using the date corresponding to the last day of each Conference of the Parties. (CITES, n.d.-e)

Version	Last Day of Conference	Appendices valid as of	Appendix I	Appendix II	Appendix III	Notes
19	25/11/2022	12/01/2023	Manis crassicaudata; Manis culionensis; Manis gigantea; Manis javanica; Manis pentadactyla; Manis temminckii; Manis tetradactyla; Manis tricuspis	Manis spp. (Except the species included in Appendix I)		
18	28/08/2019	03/10/2019				
17	04/10/2016	29/11/2016				
16	14/03/2013	19/04/2013		Manis spp.		Manis crassicaudata, M. javanica and M. pentadactyla are maintained in Appendix II subject to a zero annual export quota for animals taken from the wild and traded for primarily commercial purposes.
15	25/03/2010	21/04/2010				
14	15/06/2007	26/07/2007				
13	14/10/2004	19/11/2004				
12	15/11/2002	?				
11	20/04/2000	?				
10	20/06/1997	?		Manis spp.		
9	18/11/1994	?				
8	13/03/1992	11/06/1992	Manis temminckii	Manis crassicaudata; Manis javanica; Manis pentadactyla	Manis gigantea; Manis tetradactyla; Manis tricuspis	Manis longicaudata was named as Manis tetradactyla
7	20/10/1989	18/01/1990				
6	24/07/1987	22/10/1987				
5	03/05/1985	01/08/1985				
4	30/04/1983	29/07/1983				
3	08/03/1981	08/03/1981				
2	30/03/1979	28/06/1979				
1	06/11/1976	04/02/1977				

Note: "ssp." is used to denote subspecies

Appendix F – Overview of Pangolin classifications through the revisions of the EC Regulation 338/97. For the purpose of this table, the Annex amendments adopted by the European Council were compared in order to establish a historical overview of the classification evolution of the pangolin species. (EUR-Lex, 2023)

Version	Date	Annex A	Annex B	Notes
24	20/05/2023	Manis crassicaudata; Manis culionensis; Manis gigantea; Manis javanica; Manis pentadactyla; Manis temminckii; Manis tetradactyla; Manis tricuspis	Manis spp. (II) Except for the species included in Annex A	
23	19/01/2022			
22	01/01/2020			
21	04/02/2017			
20	26/11/2016		Manis spp. (II)	A zero annual export quota has been established for Manis crassicaudata, Manis culionensis, Manis javanica and Manis pentadactyla for specimens removed from the wild and traded for primarily commercial purposes
19	20/12/2014			
18	10/08/2013			
17	15/12/2012			
16	14/02/2012			
15	15/08/2010			
14	10/06/2009			
13	11/04/2008			
12	22/08/2005		Manis spp. (II)	A zero annual export quota has been established for Manis crassicaudata, Manis pentadactyla and Manis javanica for specimens removed from the wild and traded for primarily commercial purposes
11	20/05/2004			
10	20/11/2003			
9	30/08/2003			
8	21/12/2001			
7	05/08/2001			
6	18/12/2000			
5	29/04/1999		Manis spp. (II)	
4	19/10/1998			
3	27/11/1997			
2	01/06/1997			
1	03/03/1997			

Note: "ssp." is used to denote subspecies

Appendix G – Overview of pangolin reports with EU countries as Importer, between 2010 and 2022, based on CITES Trade Database - version 2023.1 (1/2)

The present work is an unofficial translation for which the publisher accepts full responsibility. It includes trade data involving countries that were EU Member States at the time of trade (i.e. the year range of the query). Where the year range includes a country's year of accession to/exit from the European Union, all trade relevant to the search query reported for that country and year will be included within the search results even if the accession/exit date was partway through that year. (CITES, n.d.-f ; and CITES Secretariat and UNEP-WCMC, 2022)

Year	App.	Taxon	Importer	Exporter	Origin	Importer reported quantity	Exporter reported quantity	Term	Unit	Purpose	Source
2019	I	Manis culionensis	AT	PH			18	specimens		Scientific	Specimens taken from the wild
2010	II	Manis javanica	CZ	SG	XX		18	specimens		Scientific	Source unknown
2015	II	Manis tetradactyla	CZ	TG			5	live		Commercial	Specimens taken from the wild
2016	II	Manis tetradactyla	CZ	BJ			1	live		Commercial	Specimens taken from the wild
2018	I	Manis gigantea	CZ	CG			20	scales		Scientific	
2018	I	Manis gigantea	CZ	CG		16		specimens		Scientific	Specimens taken from the wild
2018	I	Manis gigantea	CZ	CG			60	specimens		Scientific	
2018	I	Manis tetradactyla	CZ	CG			10	scales		Scientific	
2018	I	Manis tricuspis	CZ	CG			50	scales		Scientific	
2018	I	Manis tricuspis	CZ	CG		42		specimens		Scientific	Specimens taken from the wild
2022	I	Manis gigantea	CZ	CG		5		specimens		Scientific	Specimens taken from the wild
2022	I	Manis pentadactyla	CZ	TW		2		live		Zoo	Animals bred in captivity
2022	I	Manis tetradactyla	CZ	CG		12		specimens		Scientific	Specimens taken from the wild
2022	I	Manis tricuspis	CZ	CG		67		specimens		Scientific	Specimens taken from the wild
2011	II	Manis tricuspis	DE	LR		1		specimens		Scientific	Specimens taken from the wild
2014	II	Manis gigantea	DE	LR		1	1	scales		Scientific	Specimens taken from the wild
2014	II	Manis tetradactyla	DE	CI		1	1	specimens		Scientific	Specimens taken from the wild
2014	II	Manis tricuspis	DE	CI		3	3	specimens		Scientific	Specimens taken from the wild
2014	II	Manis tricuspis	DE	LR		2	4	scales		Scientific	Specimens taken from the wild
2014	II	Manis tricuspis	DE	LR		1		specimens		Scientific	Specimens taken from the wild
2015	II	Manis tricuspis	DE	CI		10	10	specimens		Scientific	Specimens taken from the wild
2016	II	Manis spp.	DE	CI			40	scales	g	Scientific	Specimens taken from the wild
2016	II	Manis spp.	DE	CI		2		specimens		Scientific	Specimens taken from the wild
2016	II	Manis pentadactyla	DE	TW		2		live		Breeding in cap	Specimens taken from the wild
2017	I	Manis tetradactyla	DE	CI			10	scales	g	Scientific	Specimens taken from the wild
2017	I	Manis tetradactyla	DE	CI		2		scales		Scientific	Specimens taken from the wild
2018	I	Manis tetradactyla	DE	CF			458	specimens		Scientific	Specimens taken from the wild
2018	I	Manis tricuspis	DE	CF			456	specimens		Scientific	Specimens taken from the wild
2019	I	Manis tetradactyla	DE	CF		450		specimens		Scientific	Specimens taken from the wild
2019	I	Manis tricuspis	DE	CF		450		specimens		Scientific	Specimens taken from the wild
2019	I	Manis tricuspis	DE	CI		100	5	specimens		Scientific	Specimens taken from the wild
2021	I	Manis gigantea	DE	CI		2	2	specimens	Number of specimens	Scientific	Specimens taken from the wild
2014	II	Manis gigantea	DK	MX	TG		50	skins		Commercial	Specimens taken from the wild
2014	II	Manis gigantea	DK	MX	XX	50		leather products (small)		Commercial	Specimens taken from the wild
2012	II	Manis gigantea	ES	TG			5	live		Commercial	Specimens taken from the wild
2013	II	Manis tetradactyla	ES	TG			5	live		Commercial	Specimens taken from the wild
2013	II	Manis tricuspis	ES	TG			5	live		Commercial	Specimens taken from the wild
2022	I	Manis gigantea	ES	CM		3		specimens	Number of specimens	Scientific	Specimens taken from the wild
2022	I	Manis gigantea	ES	CM			3	specimens		Scientific	Specimens taken from the wild
2022	I	Manis tetradactyla	ES	CM		9		specimens	Number of specimens	Scientific	Specimens taken from the wild
2022	I	Manis tetradactyla	ES	CM			9	specimens		Scientific	Specimens taken from the wild
2011	II	Manis tetradactyla	FR	CM		2		skins		Commercial	Specimens taken from the wild
2011	II	Manis tricuspis	FR	CM		6		skins		Commercial	Specimens taken from the wild
2013	II	Manis tricuspis	FR	GH			2	specimens		Scientific	Specimens taken from the wild
2020	I	Manis crassicaudata	FR	US	IN		1	specimens	Number of specimens	Scientific	Specimens taken from the wild
2020	I	Manis gigantea	FR	US	CD		1	specimens	Number of specimens	Scientific	Specimens taken from the wild
2020	I	Manis gigantea	FR	US	GA		1	specimens	Number of specimens	Scientific	Specimens taken from the wild
2020	I	Manis javanica	FR	US	ID		11	specimens	Number of specimens	Scientific	Specimens taken from the wild
2014	II	Manis crassicaudata	FR	US	XX		1	specimens		Scientific	Animals bred in captivity
2014	II	Manis crassicaudata	FR	US			6	specimens		Scientific	Animals bred in captivity
2020	I	Manis javanica	FR	US	KH		1	specimens	Number of specimens	Scientific	Specimens taken from the wild
2020	I	Manis javanica	FR	US	MM		1	specimens	Number of specimens	Scientific	Specimens taken from the wild
2020	I	Manis javanica	FR	US	MY		4	specimens	Number of specimens	Scientific	Specimens taken from the wild
2020	I	Manis javanica	FR	US	TH		6	specimens	Number of specimens	Scientific	Specimens taken from the wild
2020	I	Manis javanica	FR	US	VN		1	specimens	Number of specimens	Scientific	Specimens taken from the wild
2020	I	Manis pentadactyla	FR	US	CN		2	specimens	Number of specimens	Scientific	Specimens taken from the wild
2020	I	Manis pentadactyla	FR	US	LA		1	specimens	Number of specimens	Scientific	Specimens taken from the wild
2020	I	Manis pentadactyla	FR	US	TW		5	specimens	Number of specimens	Scientific	Specimens taken from the wild
2020	I	Manis pentadactyla	FR	US	VN		2	specimens	Number of specimens	Scientific	Specimens taken from the wild

Appendix G – Overview of pangolin reports with EU countries as Importer, between 2010 and 2022, based on CITES Trade Database - version 2023.1 (2/2)

Year	App.	Taxon	Importer	Exporter	Origin	Importer reported quantity	Exporter reported quantity	Term	Unit	Purpose	Source
2020	I	Manis temminckii	FR	US	NA		1	specimens	Number of specimens	Scientific	Specimens taken from the wild
2020	I	Manis temminckii	FR	US	ZW		1	specimens	Number of specimens	Scientific	Specimens taken from the wild
2020	I	Manis tetradactyla	FR	US	GA		2	specimens	Number of specimens	Scientific	Specimens taken from the wild
2020	I	Manis tetradactyla	FR	US	GH		1	specimens	Number of specimens	Scientific	Specimens taken from the wild
2020	I	Manis tetradactyla	FR	US	LR		2	specimens	Number of specimens	Scientific	Specimens taken from the wild
2020	I	Manis tricuspis	FR	US	GA		1	specimens	Number of specimens	Scientific	Specimens taken from the wild
2020	I	Manis tricuspis	FR	US	GH		1	specimens	Number of specimens	Scientific	Specimens taken from the wild
2020	I	Manis tricuspis	FR	US	LR		1	specimens	Number of specimens	Scientific	Specimens taken from the wild
2020	I	Manis tricuspis	FR	US	NG		3	specimens	Number of specimens	Scientific	Specimens taken from the wild
2019	I	Manis pentadactyla	FR	US	TW		1	specimens	Number of specimens	Scientific	Specimens taken from the wild
2019	I	Manis tricuspis	FR	US	LR		1	specimens	Number of specimens	Scientific	Specimens taken from the wild
2018	I	Manis javanica	FR	US	SG		1	specimens		Scientific	Specimens taken from the wild
2018	I	Manis tricuspis	FR	US	KE		1	specimens		Scientific	Specimens taken from the wild
2015	II	Manis tetradactyla	FR	CI			65	specimens	ml	Scientific	Specimens taken from the wild
2015	II	Manis tetradactyla	FR	CI		13		specimens		Scientific	Specimens taken from the wild
2018	I	Manis tricuspis	FR	US	LR		1	specimens		Scientific	Specimens taken from the wild
2015	II	Manis tricuspis	FR	CI			10	specimens	ml	Scientific	Specimens taken from the wild
2015	II	Manis tricuspis	FR	CI		2		specimens		Scientific	Specimens taken from the wild
2016	II	Manis gigantea	FR	GA		29		scales		Scientific	Specimens taken from the wild
2016	II	Manis tricuspis	FR	GA		53		scales		Scientific	Specimens taken from the wild
2018	I	Manis tricuspis	FR	US	SL		1	specimens		Scientific	Specimens taken from the wild
2017	I	Manis tetradactyla	FR	US	XX		1	specimens		Scientific	Specimens taken from the wild
2017	I	Manis pentadactyla	FR	US	TW		1	specimens		Scientific	Specimens taken from the wild
2017	I	Manis tricuspis	FR	US	SL		1	specimens		Scientific	Specimens taken from the wild
2018	I	Manis pentadactyla	FR	US	XX		12	specimens		Scientific	Specimens taken from the wild
2015	II	Manis crassicaudata	FR	US	LK		1	specimens		Scientific	Specimens taken from the wild
2015	II	Manis culionensis	FR	US	PH		5	specimens		Scientific	Specimens taken from the wild
2015	II	Manis javanica	FR	US	ID		1	specimens		Scientific	Specimens taken from the wild
2019	I	Manis spp.	FR	US	XX		1	specimens	Number of specimens	Scientific	Specimens taken from the wild
2015	II	Manis pentadactyla	FR	US	NP		1	specimens		Scientific	Specimens taken from the wild
2015	II	Manis tetradactyla	FR	US	GH		1	specimens		Scientific	Specimens taken from the wild
2014	II	Manis spp.	FR	US	VN		2	specimens		Scientific	Specimens taken from the wild
2014	II	Manis crassicaudata	FR	US	IN		1	specimens		Scientific	Animals bred in captivity
2014	II	Manis crassicaudata	FR	US	IN		1	specimens		Scientific	Specimens taken from the wild
2014	II	Manis crassicaudata	FR	US	LK		2	specimens		Scientific	Specimens taken from the wild
2014	II	Manis culionensis	FR	US	PH		3	specimens		Scientific	Specimens taken from the wild
2014	II	Manis javanica	FR	US	LA		1	specimens		Scientific	Specimens taken from the wild
2014	II	Manis javanica	FR	US	MY		3	specimens		Scientific	Specimens taken from the wild
2014	II	Manis pentadactyla	FR	US	CN		4	specimens		Scientific	Specimens taken from the wild
2014	II	Manis pentadactyla	FR	US	IN		8	specimens		Scientific	Specimens taken from the wild
2014	II	Manis pentadactyla	FR	US	LA		2	specimens		Scientific	Specimens taken from the wild
2014	II	Manis pentadactyla	FR	US	NP		1	specimens		Scientific	Specimens taken from the wild
2014	II	Manis pentadactyla	FR	US	VN		2	specimens		Scientific	Specimens taken from the wild
2014	II	Manis temminckii	FR	US	BW		2	specimens		Scientific	Specimens taken from the wild
2014	II	Manis temminckii	FR	US	TZ		1	specimens		Scientific	Specimens taken from the wild
2020	I	Manis temminckii	FR	US	XX		1	specimens	Number of specimens	Scientific	Specimens taken from the wild
2014	II	Manis temminckii	FR	US	ZA		1	specimens		Scientific	Specimens taken from the wild
2014	II	Manis tetradactyla	FR	US	CD		5	specimens		Scientific	Specimens taken from the wild
2014	II	Manis tetradactyla	FR	US	GH		4	specimens		Scientific	Specimens taken from the wild
2014	II	Manis tricuspis	FR	US	CD		2	specimens		Scientific	Specimens taken from the wild
2020	I	Manis tricuspis	FR	BJ			349	live		Scientific	Specimens taken from the wild
2014	II	Manis tricuspis	FR	US	CM		1	specimens		Scientific	Specimens taken from the wild
2014	II	Manis tricuspis	FR	US	GH		5	specimens		Scientific	Specimens taken from the wild
2014	II	Manis tricuspis	FR	US	NG		4	specimens		Scientific	Specimens taken from the wild
2014	II	Manis tricuspis	FR	US	TZ		1	specimens		Scientific	Specimens taken from the wild
2021	I	Manis temminckii	FR	ZA		96		specimens	ml	Scientific	Specimens taken from the wild
2022	I	Manis gigantea	FR	GA			163	specimens	Number of specimens	Scientific	Specimens taken from the wild
2012	II	Manis gigantea	GB	GA		0.14		scales	kg	Law enforceme	Confiscated or seized specimens
2012	II	Manis gigantea	GB	GA			7	scales		Law enforceme	Specimens taken from the wild
2012	II	Manis javanica	GB	KH		6	6	bodies		Scientific	Specimens taken from the wild
2013	II	Manis javanica	GB	MY		0.30		specimens	ml	Scientific	Confiscated or seized specimens
2013	II	Manis pentadactyla	GB	RU	XX		1	bodies		Educational	Pre-Convention specimens
2013	II	Manis temminckii	GB	RU	XX		1	bodies		Educational	Pre-Convention specimens
2016	II	Manis tricuspis	GB	BJ			11	live		Commercial	Specimens taken from the wild
2017	I	Manis javanica	GB	SG	XX		1547	specimens	g	Scientific	Specimens taken from the wild
2017	I	Manis javanica	GB	SG			145	specimens	g	Scientific	Animals born in captivity
2013	II	Manis tricuspis	NL	TG			4	live		Commercial	Specimens taken from the wild
2021	I	Manis temminckii	NL	GB	XX		1	bodies	Number of specimens	Commercial	Pre-Convention specimens
2021	I	Manis temminckii	NL	GB	XX	1		bodies		Commercial	Pre-Convention specimens