



GLOBAL FINANCIAL INTEGRITY

Illicit Financial Flows and the Illegal Trade in Great Apes



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EXECUTIVE SUMMARY

Criminal networks of poachers, suppliers, dealers, wholesalers, and consumers make up the multi-million dollar industry in live great apes, their bushmeat, and their body parts, and investigators are missing intelligence and enforcement opportunities on these illicit financial flows. The live trade is the most significant in terms of value, and the markets for bushmeat and body parts are linked with the highest impact on the survival of the four species—bonobos, chimpanzees, and gorillas in Africa and orangutans in Indonesia and Malaysia, all of which are endangered species. Dealers are the most important actors in the illicit supply chain: they order or buy live infants and juveniles from poachers, farmers, and laborers and apply their specialized knowledge and connections to transport the animals safely, either to wholesalers in places like the UAE and China or directly to consumers. Researchers, investigators, and other experts have generally succeeded in establishing intelligence on this trading pattern, but they have not yet made similar progress identifying the values, payments, and financial transfer mechanisms involved. Addressing this gap, as well as overcoming a larger issue of political will to tackle the illegal great ape trade compared to some other wildlife crimes, should greatly benefit the larger campaigns against transnational crime and money laundering and against the destruction of these species.

Table 1. Estimated Average Annual Retail Value of the International Market for African Great Apes, Live Infants and Juveniles (in U.S. dollars)

Species	No. Traded*	Value Range
Bonobo	7	\$147,000 to \$301,000
Gorilla	14	\$560,000 to \$2.1 million
Chimpanzee	92	\$1.4 million to \$6.4 million
Total	113	\$2.1 million to \$8.8 million

*Source: *Stolen Apes: The Illicit Trade in Chimpanzees, Gorillas, Bonobos and Orangutans*

Thousands of bonobos, chimpanzees, and gorillas are killed each year to fill the demand for pets and attractions, bushmeat, and ceremonial body parts, generating significant revenue for those who make up the illicit supply chains. The average annual retail value of the international market for live infants and juveniles may be up to US\$2.1 million to US\$8.8 million (for these three species), based on published data. Experts estimate that an average of around 7 bonobos, 14 gorillas, and 92 chimpanzees enter the live trade annually,¹ suggesting a possible international market value of US\$147,000 to US\$301,000 for bonobos, US\$560,000 to US\$2.1 million per year for gorillas, and US\$1.4 million to US\$6.4 million for chimpanzees. These figures reflect the price the international buyer pays and include amounts for the animals themselves, payments for transportation to

¹ Daniel Stiles et al., eds., *Stolen Apes: The Illicit Trade in Chimpanzees, Gorillas, Bonobos and Orangutans*, A Rapid Response Assessment (Arendal, Norway: United Nations Environment Programme; GRID-Arendal, 2013), 8, <https://www.grida.no/publications/191>. The report estimated the number of great apes involved in the illegal trade by extrapolating data on the recorded legal trade.

the destination (including fraudulent authorization), and fees for the people facilitating the trade. Specialized illicit networks, often with direct or tacit support from senior government or military officials, smuggle the products and the money with minimal disguise and adapt to take advantage of new connections to poachers and to buyers. Money changes hands along the supply chains using cash in local currencies, wire transfers that are largely in US dollars, online payment services, and other systems. The combined domestic market for bushmeat from gorillas, chimpanzees, and bonobos may be worth as much as US\$650,000-US\$6.0 million per year, but the existing literature does not indicate what happens to this money at the higher levels. We found even less data and information on the trade in body parts and were not able to calculate a reliable estimated range for the annual domestic value.

Table 2. Estimated Average Annual Retail Value of the Illegal Market for Orangutans, Live Infants and Juveniles (in U.S. dollars)

Species	No. Traded*	Value Range
Orangutan	146	\$277,000 to \$10 million

*Source: *Stolen Apes: The Illicit Trade in Chimpanzees, Gorillas, Bonobos and Orangutans*

Orangutans on the islands of Sumatra and Borneo in Indonesia and Malaysia—Asia’s only great apes—are losing their battle for survival due to habitat destruction from commercial plantations, the killing of adults of the species, and the selling of orphaned infants on the black market. The illegal market for baby orangutans is thriving with consumers buying an estimated 146 on average per year and possibly spending US\$277,000 to as much as US\$10 million in total.² This reflects the *domestic* and *international* markets for infant and juvenile orangutans. The buyer pays the supplier’s account in the buyer’s country or transfers it electronically using a platform such as WeChat,³ and the supplier pays the dealer for his or her role in cash in his or her local currency.⁴ Trafficking orangutans sometimes involves organized gangs that are not specific to this trade, but most often the illegal trade in orangutans involves networks and individuals who specialize in the wildlife trade business, particularly in the case of foreign sales.⁵ Some experts we interviewed indicated that a small market for bushmeat from the adults of the species does exist, but we did not find or receive data to be able to calculate how much money this business may be worth. Demand for and supply of orangutan body parts is extremely limited, likely because there is not a strong demand to use them in traditional medicines, ceremonies, or rituals.

² Stiles et al., 8. The report estimated the number of great apes involved in the illegal trade by extrapolating data on the recorded legal trade.

³ Interview with Andrea Costa, Elephant Action League, interview by Channing May, Skype, August 29, 2017.

⁴ Interview with Daniel Stiles, interview by Channing May, Skype, September 15, 2017.

⁵ Dominique Mosbergen, “The Dark Story Behind That Cute Baby Orangutan ‘Thumbs Up’ Photo,” *Huffington Post*, March 2, 2017, http://www.huffingtonpost.com/entry/orangutan-thumbs-up-photo_us_58b79de5e4b023018c6cfd33; Questionnaire completed by Dr. Ian Singleton, Sumatran Orangutan Conservation Programme, September 2, 2017.

The illegal trade in great apes is a lucrative and low-risk business for those operating at the middle and upper levels, and governments are doing too little to address this problem. These values and dynamics have depended on large gaps in the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) enforcement, public and private sector corruption, insufficient resources for investigators in developing and developed countries, local community challenges, and abuse of social media and financial service companies. Governments, CITES, Interpol, the United Nations (UN), the World Customs Organization (WCO), and civil society organizations can increase their effectiveness in combatting the illegal great ape trade by closing information gaps, by increasing the legal risks and consequences for traffickers, dealers, and high-level consumers, and by focusing more investigative resources on the money from the illegal trade that is in the formal financial system. None of these policy or enforcement changes will “fix” the problem of the illegal trading of the world’s great apes. Rather, they represent additional lines of effort to make it harder and harder for participants in the illegal great ape trade to stay out of jail and to make enough money to be worth the risk of fines, asset seizures, and imprisonment.

I. INTRODUCTION

This paper focuses on the four species that constitute the world’s “great apes”: chimpanzees, gorillas, bonobos, and orangutans. They are all endangered, which means that governments try to tightly control and protect their trade, as per the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). This leaves a gap, however, between supply and demand, which illegal trading of great apes is filling.

Great apes are orders of primates and are classified by their close genetic relationship to humans—and their populations are under extreme threat in nearly every country in which they are found. Bonobos have the smallest stature and the most limited geographic range of Africa’s great apes; they are found only in the Congo Basin in the Democratic Republic of Congo (DRC). The Congo Basin forest is the second-largest rain forest in the world after the Amazon, making it an important habitat.⁶ Bonobos have been classified as ‘endangered’ since 1996 due to illegal hunting for bushmeat and high rates of habitat loss, primarily from slash-and-burn agriculture. Experts predict their population could decline by 50 percent by 2078 to as low as 5,000 as a result of these threats and the species’ long generation time of 25 years.⁷



Bonobo



Chimpanzee



Gorilla



Orangutan

⁶ Jeremy Hance, “Turning Gorilla Poachers into Conservationists in the Congo,” *Mongabay*, August 13, 2012, <https://news.mongabay.com/2012/08/turning-gorilla-poachers-into-conservationists-in-the-congo-warning-graphic-photos/>.

⁷ B. Fruth et al., “Pan Paniscus. The IUCN Red List of Threatened Species 2016” (Cambridge, UK: International Union for Conservation of Nature, 2016), 2, <https://doi.org/10.2305/IUCN.UK.2016-2.RLTS.T15932A17964305.en>.

Chimpanzees are the next great ape in size, and though they have traditionally been found over large swaths of West and Central Africa, they are disappearing at alarming rates. There are four subspecies of chimpanzees: the Nigeria-Cameroon chimpanzee, the Eastern chimpanzee, the Central chimpanzee, and the Western chimpanzee. In 2013 there were around an estimated 200,000 wild chimpanzees in Africa, and Guinea had the most in West Africa.⁸ Chimpanzees have been labeled as ‘endangered’ since 1996, however, due to high rates of habitat and population loss coupled with their slow generation period of 25 years, the same as bonobos. Their habitat loss stems from slash-and-burn agriculture and industrial agriculture, and their population decline is the result of disease and of poaching for bushmeat and illegal pets, particularly in areas with active mining, which is increasing.⁹ Nigeria-Cameroon chimpanzees are indeed native to these two countries in West Africa; these chimpanzees inhabit the smallest area of the four and are the most endangered.¹⁰ Eastern chimpanzees are found across a wide area that covers parts of the Central African Republic (CAR), the DRC, Burundi, Rwanda, Uganda, Tanzania, and even South Sudan. The Central chimpanzee covers a much smaller area: it is found only in parts of Cameroon and the DRC. Finally, the Western chimpanzee is found between Senegal and Ghana but primarily in Guinea and Côte d’Ivoire.¹¹ Its range used to extend much further, but it is extinct in Gambia, Burkina Faso, Benin, and Togo.¹² Western chimpanzees have been going down in population by about six percent per year, and they experienced a total decline of 80 percent from 1990-2014.¹³

Gorillas are the largest great ape overall in size, but they face the greatest threat to their survival of the three species of great apes in Africa. There are four subspecies of gorillas: Eastern Lowland, Western Lowland, Mountain, and Cross River.¹⁴ Gorillas were first classified as ‘endangered’ in 1996, and they moved up to ‘critically endangered’ in 2007.¹⁵ The subspecies with the smallest population is the Cross River gorilla, which scientists estimate number just 200-300. These gorillas make their home in Cameroon and Nigeria and are threatened by loss of territory from timber harvesting and slash-and-burn agriculture and by poaching, mostly for bushmeat and body parts.¹⁶ The Western Lowland gorilla, which very closely resembles Cross River gorillas, has the largest population and territory of the species, but their numbers are threatened by poaching and diseases such as Ebola. These gorillas live in Cameroon, the CAR, the DRC, Equatorial Guinea, Gabon, and

⁸ Jeremy Smith, “Chinese Mining Fuels Trade in Guinea’s Apes,” *China Dialogue*, March 22, 2013, <https://www.chinadialogue.net/article/show/single/en/5813-Chinese-mining-fuels-trade-in-Guinea-s-apes>.

⁹ T. Humle et al., “Pan Troglodytes. The IUCN Red List of Threatened Species 2016” (Cambridge, UK: International Union for Conservation of Nature, 2016), 6–8, <https://doi.org/10.2305/IUCN.UK.2016-2.RLTS.T15933A17964454.en>.

¹⁰ Sean Mowbray, “Great Apes and Greater Challenges: Trafficking in Cameroon,” *Mongabay*, January 12, 2017, <https://news.mongabay.com/2017/01/great-apes-and-greater-challenges-trafficking-in-cameroon/>; Humle et al., “Pan Troglodytes,” 3.

¹¹ Humle et al., “Pan Troglodytes,” 3, 5.

¹² Amanda Fisher, “How a Kenyan Ape Sanctuary Is Battling Illegal Mideast Trade,” *Al Arabiya*, November 23, 2016, <http://english.alarabiya.net/en/life-style/travel-and-tourism/2016/11/21/How-a-Kenyan-ape-sanctuary-is-battling-illegal-Mideast-trade.html>.

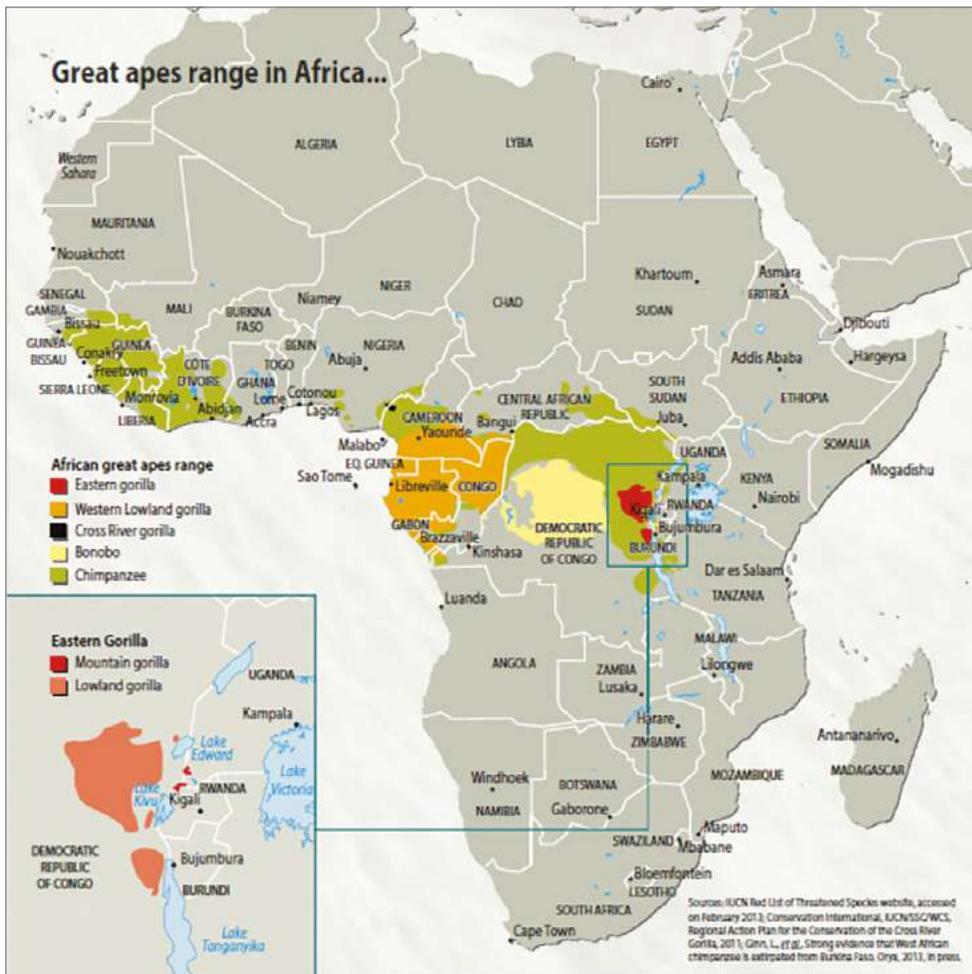
¹³ Mike Gaworecki, “Western Chimpanzee Numbers Declined by More than 80 Percent over the Past Quarter Century,” *Mongabay*, July 31, 2017, <https://news.mongabay.com/2017/07/western-chimpanzee-numbers-declined-by-more-than-80-percent-over-the-past-quarter-century/>.

¹⁴ Stiles et al., *Stolen Apes*, 17–18.

¹⁵ F. Maisels, R.A. Bergl, and E.A. Williamson, “Gorilla Gorilla. The IUCN RedList of Threatened Species 2016” (Cambridge, UK: International Union for Conservation of Nature, 2016), 2, <http://www.iucnredlist.org/details/9404/0>.

¹⁶ R.A. Bergl et al., “Gorilla Gorilla Ssp. Diehli. The IUCN Red List of Threatened Species” (International Union for Conservation of Nature, 2015), 4, <https://doi.org/10.2305/IUCN.UK.2016-2.RLTS.T39998A17989492.en>.

the Republic of Congo (Congo).¹⁷ Ebola and poaching have been especially devastating for the Western Lowland gorillas in Congo.¹⁸ Eastern Lowland gorillas, also known as Grauer's gorilla, are found exclusively in eastern DRC, an area that has experienced significant violent conflict, illegal mining, and poaching in recent decades. As a result, these gorillas have lost half of their territory in the past 50 years, and their numbers have declined from 17,000 in 1995 to a low of 3,800 in 2016.¹⁹ Mountain gorillas are a subspecies of Eastern gorillas and reside in high-elevation forests in the Congo Basin. There are only around 880 Mountain gorillas left in the wild, but conservation efforts, especially in Rwanda, are helping this number grow.²⁰



Source: UN GRASP, *Stolen Apes*

¹⁷ F. Maisels et al., "Gorilla Gorilla Ssp. Gorilla. The IUCN Red List of Threatened Species" (International Union for Conservation of Nature, 2016), 2, <https://doi.org/10.2305/IUCN.UK.2016-2.RLTS.T9406A17989591.en>.

¹⁸ Hance, "Turning Gorilla Poachers into Conservationists."

¹⁹ Nika Levikov, "The Hidden Toll of War: World's Largest Ape Plumets 77% in 20 Years," *Mongabay*, April 5, 2016, <https://news.mongabay.com/2016/04/new-report-finds-the-worlds-largest-ape-is-critically-endangered/>.

²⁰ "Mountain Gorilla," World Wildlife Fund, November 30, 2017, <https://www.worldwildlife.org/species/mountain-gorilla>.

Orangutans, native to Southeast Asia, are the only great ape found outside Africa but they face similar threats from humans, which are driving them towards extinction. There are three subspecies of orangutans: Tapanuli, Sumatran, and Bornean, the latter two of which are so named for the areas they inhabit. The main area for Sumatran orangutans is the Leuser Ecosystem in Aceh Province in the northern tip of the Indonesian island of Sumatra. They used to be found in a much larger portion of the island, but 60 percent of their habitat was lost from 1985-2007 and even more has been destroyed since then due to logging and mining concessions and commercial and subsistence agriculture.²¹ Sumatran orangutans are down to just 6,600 in the wild,²² and scientists estimate as many as another 4,500 will be lost by 2030, making them ‘critically endangered’.²³ Scientists only just published findings in 2017 revealing the subspecies Tapanuli, though genetically they are the oldest of the three. Fewer than 800 still exist, living in Batang Toru, a high-elevation forest on the island of Sumatra.²⁴

Bornean orangutans are found on the island of Borneo in areas that are shared by Indonesia and Malaysia.²⁵ They have spent most of the last 30 years on the list of ‘endangered’ species, and in 2016 they were moved up to ‘critically endangered’. More than 60 percent of Bornean orangutans were lost from 1950-2010, and scientists predict these animals will decrease by an additional 22 percent by 2025.²⁶ From 2000-2012, 23,000 square miles of virgin Indonesian rainforest was lost. In particular,

the forests were burned and drained to convert the land to palm oil production. Palm oil is the most consumed vegetable oil globally, and Indonesia is the top producer of palm oil.²⁷ High levels of poaching and conflict with humans are also important factors in orangutans’ population decline in Sumatra and Borneo.



Created by: Matthew W. Chwastyk, NG Staff

Sources: Batangtoru.org; Cheryl Knott, Boston University; Carel P. Van Schaik, University of Zurich; Serge Wich, Liverpool John Moores University

²¹ I. Singleton et al., “Pongo Abelii. The IUCN Red List of Threatened Species 2016” (Cambridge, UK: International Union for Conservation of Nature, 2016), 1, <https://doi.org/10.2305/IUCN.UK.2016-2.RLTS.T39780A17966164.en>.

²² Christina M. Russo, “Baby Orangutan Loses Everything So Someone Could Make \$8,” *The Dodo*, July 14, 2015, <https://www.thedodo.com/orangutan-sumatran-palm-oil-1248344032.html>.

²³ Singleton et al., “Pongo Abelii,” 1.

²⁴ Jason G. Goldman, “New Species of Orangutan Is Rarest Great Ape on Earth,” *National Geographic News*, November 2, 2017, <https://news.nationalgeographic.com/2017/11/new-orangutan-species-sumatra-borneo-indonesia-animals/>.

²⁵ Brunei also makes up a tiny portion of Borneo but its territory does not overlap with wild orangutan habitats.

²⁶ M. Ancrenaz et al., “Pongo Pygmaeus. The IUCN Red List of Threatened Species 2016” (Cambridge, UK: International Union for Conservation of Nature, 2016), 2, <https://doi.org/10.2305/IUCN.UK.2016-1.RLTS.T17975A17966347.en>.

²⁷ Russo, “Baby Orangutan Loses Everything.”

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is a multilateral treaty that regulates the legal international trade of wild animals and plants to safeguard species' survival. The Convention covers live specimens as well as their parts and products derived from them. CITES entered into force in 1975, and there are currently 183 signatory states (referred to as Parties). The Convention is a voluntary agreement that “provides a framework to be respected by each Party, which has to adopt its own domestic legislation to ensure that CITES is implemented at the national level.”²⁸ Each Party designates a Management Authority, which, among other things, is responsible for permit issuance and trade monitoring, and at least one Scientific Authority, which is largely responsible for advising the Management Authority on whether or not the trade of certain species is detrimental to their survival.

CITES classifies species according to a system of appendices, which determines the rules and conditions for the cross-border trade of each covered species. Species listed as Appendix I are threatened with extinction, and there are significant restrictions on their commercial and non-commercial trade. Appendix II species are not currently threatened with extinction but may be if trade is not controlled; they can be traded commercially if certain conditions are met. Most CITES-listed species are classified as Appendix II. The species listed under Appendix III are those that at least one Party has classified as protected, thereby requesting the help of other Parties in controlling the trade of that species. All great apes—bonobos, chimpanzees, gorillas, and orangutans—are classified as Appendix I.

A state Party to CITES must issue either an export or an import permit (depending on its role) for any trade of a specimen of an Appendix I-listed species, unless the specimen qualifies under a number of exemptions (such as an exemption for “pre-Convention” specimens acquired before the species was first listed on CITES). First, the Management Authority of the *importing* Party must issue an import permit, which it can only grant if it has determined that the specimen is not being imported for primarily commercial purposes and if the Scientific Authority has determined both that the specimen will not be used for purposes that are detrimental to the survival of the species and, for a living specimen, that the proposed recipient is suitably equipped to house it and provide the necessary care. Second, the Management Authority of the *exporting* Party must issue an export permit, which it can only grant if the import permit has already been issued, its Scientific Authority has determined that the export will not be detrimental to the survival of the species, and the Management Authority is satisfied that the specimen was legally acquired and, for a living specimen, that the exporter will prepare and ship the specimen in such a way as to minimize the risk of injury, damage to health, or cruel treatment. If the specimen is being re-exported, the Management Authority of the re-exporting country must issue a re-export certificate, which it can only grant if it is satisfied that the specimen was legally imported into the country and that an import permit has been granted. Living specimens trigger the same requirements for preparation

²⁸ “What is CITES?” Convention on International Trade in Endangered Species of Wild Fauna and Flora, accessed 23 October 2017, <https://cites.org/eng/disc/what.php>.

and shipment faced by the original exporting country. An exemption allows trade in specimens of Appendix I species for commercial purposes if they were captive-bred at an approved facility for that species. The Parties have agreed that, for approval to be given, the specimens must represent at least the second generation born in captivity (F2) and must have been derived from legally-acquired founder stock. Permits should record both the purpose of the transaction and the source of the specimen, using an agreed-upon series of codes (e.g. purpose code T for commercial transactions and source code C for specimens bred in captivity under conditions agreed upon by the CITES Parties).

The CITES Secretariat maintains a register of operations that Parties have notified are engaged in Appendix I-listed captive-breeding for commercial purposes. Importing Parties are encouraged to only accept specimens originating from such operations. This is not legally-binding upon the Parties, however, and many accept specimens from non-registered operations, as long as the process described above is followed.

This paper will explore the threat to the four great ape species from the illegal trade of live animals and of bushmeat and body parts. Central to this analysis will be an examination of the value of the three markets—live, bushmeat, and body parts—and how that value changes and is transferred along the supply chain from start to finish. The analysis of the trade and the values will also summarize the dynamics within each market to highlight how the animals go from the wild in West and Central Africa, Sumatra, and Borneo to their final buyers around the globe. Overall, this understanding of the value and dynamics of the illegal trade in great apes will inform a set of policy recommendations for governments, international bodies, and civil society organizations to combat the illicit financial flows and money laundering associated with this side of transnational wildlife crime.

The goal with this work is to arm those seeking to protect great apes and those seeking to combat wildlife crime and money laundering with additional tools and leverage points against the illicit actors and networks helping to drive these animals to extinction.

II. VALUES AND DYNAMICS OF THE ILLICIT MARKETS FOR CHIMPANZEES, GORILLAS, AND BONOBOS

Poachers, traffickers, dealers, and buyers—especially those with wealth—have connected to form illicit domestic and international markets for Africa’s great apes from West and Central Africa, but profits are thriving at the expense of rule of law and conservation. Thousands of bonobos, chimpanzees, and gorillas are killed each year to fill the demand for pets and attractions, bushmeat, and ceremonial body parts. Specialized illicit networks, often with direct or tacit support from senior government or military officials, smuggle the products and the money with minimal disguise and adapt to take advantage of new connections to poachers and to buyers. Money changes hands along the supply chains using cash in local currencies, wire transfers largely in US dollars, and online payment services. Too little research and investigations have been done to fully measure or understand the illicit financial flows of Africa’s great ape trade and the full scale of this global illegal market.

LIVE ANIMALS

Family networks in Africa specialize in the live trade of infant and juvenile bonobos, chimpanzees, and gorillas for use as pets and commercial attractions, the segment of the illegal great ape market that is the most valuable per animal and the most lucrative overall.²⁹ Chimpanzees dominate the live animal market, because they have the largest population of the three species and because baby gorillas are much more likely to die once separated from their mothers.³⁰ Bonobos and chimpanzees also face high mortality rates during trafficking, and poachers kill numerous adults for every baby they capture for the live trade.³¹ Buyers of these animals are mostly based in China, the Middle East, Commonwealth of Independent States (CIS), and within Africa and use them as pets, VIP gifts, and attractions at restaurants, hotels, zoos, and in traveling circuses.³² Traffickers operate out of West and Central Africa and usually collect the greatest profit by percentage for their crucial role in sourcing and smuggling the animals on commercial airlines to wholesalers or directly to final buyers. The information available on payments to traffickers and wholesalers and how they launder this money is scant, and traffickers’ increasing use of social media platforms is widening this enforcement gap.

²⁹ Interview with JoJo Head, interview by Channing May, Skype, June 8, 2017.

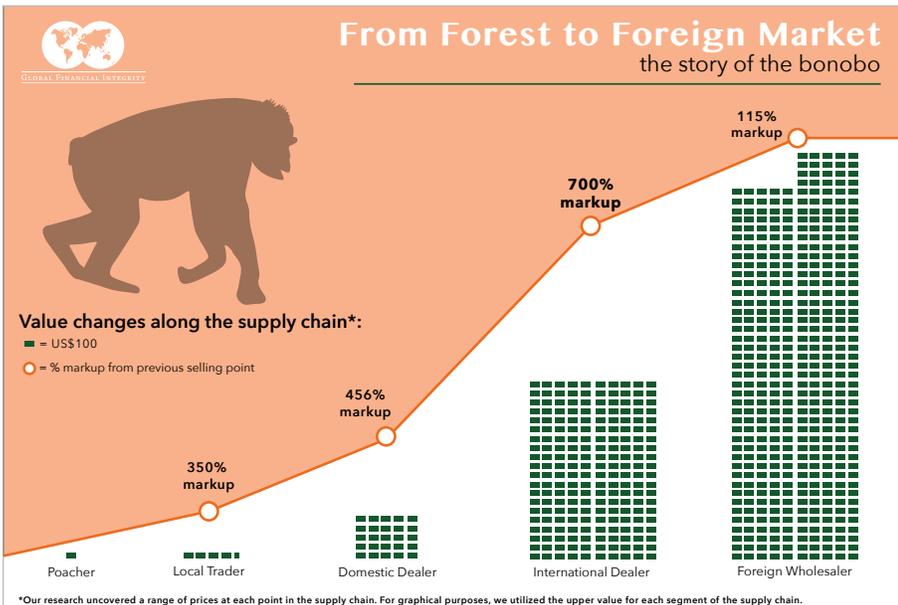
³⁰ Interview with Cécile Neel, EAGLE Network, interview by Channing May, Skype, June 13, 2017.

³¹ Stiles et al., *Stolen Apes*, 36.

³² Interview with Cécile Neel, EAGLE Network; Project to End Great Ape Slavery, “The Illegal Trade in Great Apes” (Kenya: OI Pejeta Conservancy, September 2016), 19–26, <https://freetheapes.files.wordpress.com/2014/11/cop17-report.pdf>.

Values and Payments

The illegal trade in great apes from Africa—bonobos, chimpanzees, and gorillas—is extremely lucrative for the networks that control the supply and smuggling: the annual value of the international market for these animals may be US\$2.1 million to US\$8.8 million. These figures reflect the price the international buyer pays and include amounts for the animals themselves, payments for transportation to the destination (including fraudulent authorization), and fees for the people facilitating the trade.

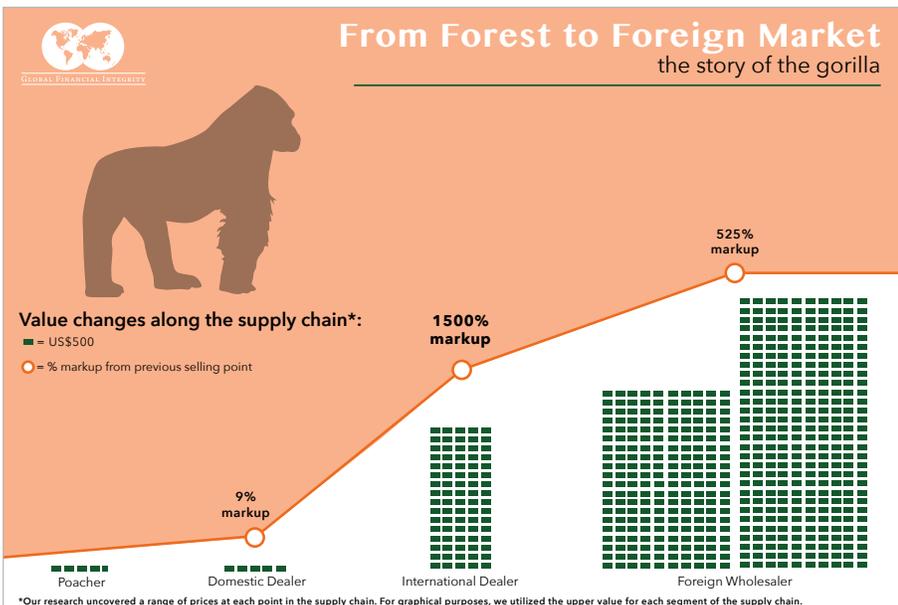


Poachers earn a very small amount compared to the final price paid by long-distance buyers and are paid primarily in cash.³³

The amount dealers and their regional counterparts each earn for bonobos and gorillas increases by a sizeable amount—1,000 percent, based on the limited data available. Wholesalers selling to the end consumer earn the most in absolute terms but likely less as a percent difference compared to the two previous levels of traders.

A 2013 United Nations Environment Programme report estimated that around 7 bonobos and 14 baby gorillas enter the pet trade annually,³⁴ suggesting a possible international retail value of US\$147,000 to US\$301,000 and US\$560,000 to US\$2.1 million per year on average, respectively.

Africa supplies significantly more chimpanzees than bonobos or gorillas for the illegal pet trade—potentially 92 per year,³⁵ and far more data on prices paid along the



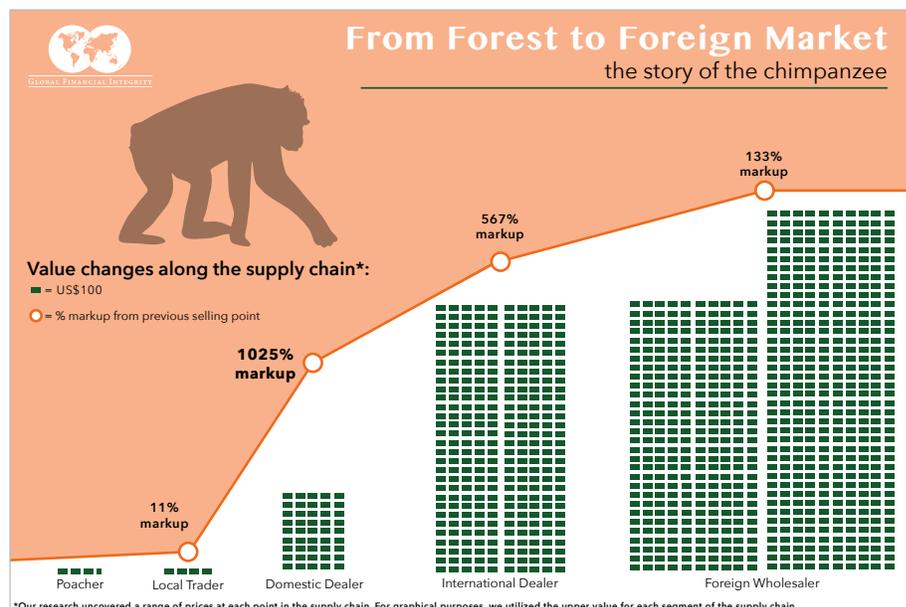
³³ Questionnaire completed by Liliana Vanegas, Wildlife Conservation Society, October 13, 2017.

³⁴ Stiles et al., *Stolen Apes*, 8.

³⁵ Stiles et al., 8.

value chain are available for analysis. The average annual international retail value for chimpanzees may range from US\$1.4 million to US\$6.4 million. Final foreign consumers have paid \$15,000-\$70,000 for an infant or juvenile, and consumers in countries to which the animals are native have paid only US\$100-US\$300. Poachers, selling to traders and to local consumers, have earned as little as US\$5 and as much as US\$360 but most often US\$20-US\$100. Traders for the illegal chimpanzee market operate at the village, domestic, and international levels and have received US\$50-US\$400, US\$500-US\$7,500, and US\$12,500-US\$30,000, respectively.

The value ranges we have presented reflect the international prices only. We have established the ranges based on the high and low prices in the data we gathered and by treating every sale as international. Buyers within the region from which the three species originate pay far less, especially those closest to the sources, but we do not have enough data on the prices they pay or how many of the animals they buy compared to the international market to further refine our estimates at this time.



Trade Patterns, Dynamics, and Costs

The pattern of selling great apes from West and Central Africa involves long-standing, specialized networks to collect and transport the animals, wholesalers at key distribution points to get the animals to their final buyers, and payments along the way to avoid scrupulous authorities. The trafficking of live animals is a specialized business, unlike rhino horn (for example), because concealment is much more difficult, and expensive.³⁶ A transaction starts when a buyer and seller connect and agree to a price, half of which the buyer typically pays up front and half of which is paid upon receipt of the animal(s).³⁷ The buyer pays the seller via wire transfer from a bank, a money service business (MSB) like Western Union, or a social media platform such as WeChat, and in most cases the payment is in US dollars. Some buyers and sellers may also be using the hawala system, but there is not a clear or a strong connection with the illegal great ape trade from Africa.³⁸ The pattern of the money flow is from a bank account or MSB in Asia or the Middle East to the seller's account in Africa.³⁹

³⁶ Interview with Karl Ammann, interview by Channing May, Skype, August 18, 2017.

³⁷ Interview with Cécile Neel, EAGLE Network.

³⁸ Questionnaire completed by Corneille Moukson Kutia, World Wildlife Fund, September 18, 2017.

³⁹ Cécile Neel to Channing May, "Information about Illegal Trade in Great Apes," June 7, 2017.

The dealer or trafficker in Africa acquires the requested species for the order from a poacher and organizes the logistics to get the order—alive—to the buyer. Dealers frequently source animals from the same poachers but sometimes use random one-off opportunistic hunters too.⁴⁰ There is a close connection between the live animal trade and the bushmeat trade at this first level of the supply chain: poachers hunting great apes for bushmeat will often sell the live orphan babies.⁴¹ Demand has been steady enough more recently that some dealers may now “stock” chimpanzees instead of just receiving them from poachers “on order.”⁴² Someone needs the right connections to sell chimpanzees and the other species as pets abroad, which most poachers do not have.⁴³ In the DRC, the traffickers (middlemen), who base themselves in Kinshasa, get an order and a deposit from a buyer; they call their “collectors” in the interior by mobile to order the “goods”; and, the “good(s)” get sent to them in Kinshasa by river or road. Chimpanzees and bonobos from the Mbandaka area get to Kinshasa via boat down the Congo River. Western lowland gorillas and chimpanzees from the Mayombe Forest are transported via road. In some cases the traffickers have been observed operating openly from a road next to a military base, which strongly suggests complicity in the illegal activity.⁴⁴



A live infant chimpanzee was seized along with charred ape meat and body parts. It is possible that the infant was captured when the rest of its family group was poached for bushmeat and parts.

Source: EAGLE Network

Planes are used to ship the animals from West and Central Africa to buyers elsewhere on the continent and those abroad. The traffickers routinely use legitimate companies for which their ownership is known and open; they have not (yet) needed to use anonymous shell companies. They tend to use bird companies for smaller animals and zoo animal transport companies for larger animals.⁴⁵ Traffickers have a narrow window of just a few days to transport a live great ape across the world; the longer the journey, the greater the likelihood that the animal will die during transit or that authorities may seize it.⁴⁶ The shipments are accompanied by fraudulent paperwork declaring

⁴⁰ Cécile Neel to Channing May, “Great Ape Trade,” August 23, 2017.

⁴¹ Interview with Marc Fourrier, Jane Goodall Institute, interview by Channing May, Skype, September 5, 2017.

⁴² Interview with Karl Ammann.

⁴³ Interview with Sheri Speede, In Defense of Animals-Africa, interview by Channing May, Skype, September 26, 2017.

⁴⁴ Project to End Great Ape Slavery, “The Illegal Trade in Great Apes,” 7.

⁴⁵ Neel to May, “Great Ape Trade.”

⁴⁶ Interview with Doug Cress, World Association of Zoos and Aquariums, interview by Channing May, Skype, September 6, 2017

falsely that the trade conforms with the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) regulations or that the animals are less controlled species such as other kinds of primates. This is what the UN Office on Drugs and Crime calls “wildlife laundering.”⁴⁷ In the DRC example mentioned above, the traffickers often used CITES permits that falsely declared the animals to have been captive bred (the ‘C’ source code), because this made the animals eligible for export.⁴⁸ Bribes are involved all along the route: police, military, government officials such as CITES Management Authority officials, customs officers, and local staff of the airline companies on which the shipments are loaded.⁴⁹

Smuggling the live great apes from West and Central Africa to buyers in other countries and on other continents is the most difficult and expensive portion of the illegal trade in these species. The first few years of the 2010s, trafficking in Africa’s great apes mostly stemmed from family networks in Guinea and the DRC that had been in the business for many years and primarily employed fraudulent CITES paperwork.⁵⁰ In the last few years Guinea has been under a CITES ban and the leaders of the networks there have largely been arrested. As a result, trade has shifted to other countries in West and Central Africa, such as Côte d’Ivoire,⁵¹ and traffickers are favoring hidden compartments among less controlled species versus fraudulent CITES paperwork, but otherwise the smuggling routes have remained relatively unchanged.⁵² The traffickers ship the animals to wholesalers and direct to final buyers using oft repeated patterns of airlines and transit cities. Airlines they have preferred to use include Turkish, Ethiopian, ASKY, and Kenya Airways.⁵³ Dominant cities for initiating the plane journey include Conakry (past), Kano in Nigeria, and Kinshasa.⁵⁴ Sudan, Libya, and Ethiopia often serve as transit hubs, because they are major urban airports with convenient flight patterns and connections. Egypt (Cairo in particular), the UAE, and Armenia serve as quick or longer transit points, or as destinations.⁵⁵ Wholesalers in China, the UAE, and Armenia often act as an intermediary for the traffickers and the final buyers in Asia, the Middle East, and Russia, respectively. China has three to four of these wholesalers or dealers, the biggest of which is Golden Land Animal Trade. The UAE also has around three wholesalers, and there is one primary dealer in Armenia.⁵⁶ The exception is buyers from royal families in Gulf countries, because they use their own private planes and have not in practice been subject to normal procedures for CITES and customs and border control due to their status.⁵⁷

⁴⁷ David Shukman and Sam Piranty, “The Secret Trade in Baby Chimps,” *BBC News*, January 30, 2017, <http://bbc.in/2k3TtXy>.

⁴⁸ Project to End Great Ape Slavery, “The Illegal Trade in Great Apes,” 6–7.

⁴⁹ Mowbray, “Great Apes and Greater Challenges.”

⁵⁰ Interview with Cécile Neel, EAGLE Network.

⁵¹ Neel to May, “Information about Illegal Trade in Great Apes.”

⁵² Neel to May, “Great Ape Trade.”

⁵³ Interview with Karl Ammann; Project to End Great Ape Slavery, “The Illegal Trade in Great Apes,” 10; Vinita Bharadwaj, “Crimes against Apes,” *GulfNews*, November 16, 2006, <http://static.gulfnews.com/about-gulf-news/al-nisr-portfolio/weekend-review/articles/crimes-against-apes-1.39782>.

⁵⁴ “PEGAS Briefing Document on Items 34.1 and 37 of CITES SC65” (Project to End Great Ape Slavery (PEGAS), 2014), 1, <https://freetheapes.files.wordpress.com/2014/11/pegas-sc65-briefing.pdf>.

⁵⁵ Project to End Great Ape Slavery, “The Illegal Trade in Great Apes,” 10–19.

⁵⁶ Interview with Karl Ammann.

⁵⁷ “United Arab Emirates – Research into Illegal Wildlife Trade,” *Project to End Great Ape Slavery (PEGAS)* (blog), March 28, 2015, <https://freetheapes.org/2015/03/28/united-arab-emirates-a-hot-bed-of-illegal-wildlife-trade/>.

CITES

The Convention on International Trade in Endangered Species of Wild Fauna and Flora—CITES—is supposed to help regulate the global trade in great apes but instead traffickers have easily abused or evaded the system. In the 1990s there were cases of trades without source or purpose codes on the CITES forms and cases where the country of origin was listed as a place like Suriname in South America for a species that was only found in Africa.⁵⁸ The 21st century challenge for CITES has been abuse of its source AND purpose codes system and a combination of corruption of and

insufficient due diligence by country officers ostensibly tasked with protecting the system. The corruption and source code abuse relate to the CITES form that must accompany exports of protected species such as great apes. For around US\$5,000 traffickers have bought fraudulent CITES forms from corrupt country officers in West and Central Africa that declare the animal or animals to be captive bred, therefore allowing them to be exported, even though no such facilities actually exist in West or Central Africa.⁵⁹

This is called the “C-scam” after the ‘C’ source code that denotes captive bred animals.⁶⁰ CITES officers in many countries receiving the animals also failed to conduct certain basic due diligence work that would have revealed inconsistencies with the forms, such as species being exported from countries to which they are not native and the absence of approved captive breeding facilities for great apes anywhere in Africa.⁶¹ There are no great ape breeding facilities in Guinea, yet from 2009-2011 130 chimpanzees and 10 gorillas were exported from Guinea to China using the ‘C’ source code. Furthermore, while China reported the imports, Guinea did not report the exports. China’s CITES officers failed to do the simple due diligence that would have revealed the lack of breeding facilities in Guinea.⁶²

The image shows a CITES permit form for the export of chimpanzees. The form is titled "INTERNATIONAL DES ESPÈCES DE FAUNE ET DE FLORE SAUVAGES MENACÉES D'EXTINCTION". It includes fields for the exporter (OPRESHPAL SINGH), the importer (N.S.D SPRL), the country of origin (INDONESIA), and the destination (République Démocratique du Congo). The species is listed as "CHIMPANZEE PAN TROGLODYTES". The source code is "C" and the purpose code is "IC". The form is signed by a CITES officer and includes a date of 07 JUL 2014.

This permit lists the chimpanzee's source as captive-bred (C), however there are no captive breeding facilities in the Democratic Republic of the Congo.

Source: Daniel Stiles

⁵⁸ Project to End Great Ape Slavery, “The Illegal Trade in Great Apes,” 10–11.

⁵⁹ Neel to May, “Information about Illegal Trade in Great Apes.”

⁶⁰ “PEGAS Briefing Document,” 1–2; Interview with Ian Redmond, Born Free International/Ape Alliance, interview by Channing May, Skype, September 21, 2017. Only the second generation (F2) of offspring from wild-caught animals can be traded using the ‘C’ source code, however reaching the second generation takes a long time and the breeding facilities that do exist are not old enough to have possibly reached this point.

⁶¹ Neel to May, “Information about Illegal Trade in Great Apes.”

⁶² “PEGAS Briefing Document,” 19.

Buyers

The primary buyers of Africa's great apes reside in Africa, Eastern Europe, the Middle East, and China, using them for pets, displays of wealth, and commercial entertainment. The pet trade is primarily in Gulf countries, Russia, and Eastern Europe.⁶³ Great apes are sometimes given as gifts to VIPs to grease business deals if he/she is an exotic pet collector.⁶⁴ In the UAE, Kuwait, and Qatar, wealthy families want a baby chimpanzee or baby gorilla in the garden for status.⁶⁵ The commercial trade is mainly China and Southeast Asia (especially Thailand).⁶⁶ The growing middle class in this region are increasingly interested in zoos and safari parks, and the owners of some facilities source Africa's great apes from the black market instead of through reputable channels. Sometimes the animals are also made to perform in shows, such as staged boxing matches.⁶⁷ There is additional demand for baby chimpanzees in Africa at hotels,⁶⁸ village cafés,⁶⁹ and as pets for wealthy families.⁷⁰ Experts believe there may be around 50-100 orphan chimpanzees kept as pets by wealthy families in Gabon, for example.⁷¹ Local consumers pay the least and foreigners pay the most, thereby also contributing the most to fueling the profitability of the illegal trade of great apes from Africa that attracts illicit entrepreneurs.



Some zoos and safari parks in China use great apes for commercial purposes, featuring them in entertainment shows and having them pose for pictures with visitors. The photo on the left shows a costumed chimpanzee performing at Shanghai Wild Animal Park, while skating chimpanzee on the right is from Yangcheng Safari Park near Changzhou, China
Source: Asia-based NGO that desires to remain anonymous

⁶³ Interview with JoJo Head.

⁶⁴ Interview with Ian Redmond, Born Free International/Ape Alliance.

⁶⁵ Nick Clark, "Wildlife Crime: Stealing Animals to Sell as Pets," *Al Jazeera*, May 26, 2016, <http://www.aljazeera.com/news/2016/05/wildlife-crime-stealing-animals-sell-pets-160525113231433.html>.

⁶⁶ Interview with JoJo Head.

⁶⁷ Mowbray, "Great Apes and Greater Challenges."

⁶⁸ Bharadwaj, "Crimes against Apes."

⁶⁹ Interview with Laura Darby, interview by Channing May, Phone Call, September 22, 2017.

⁷⁰ Stiles et al., *Stolen Apes*, 40.

⁷¹ Kathryn Brun-Jeffery to Channing May, "Illegal Trade in Great Apes," September 13, 2017.

Recent Changes

Networks involved in the illegal trade in great apes are adapting to take advantage of recent changes in technology as well as shifting economic and political stability in source and transit countries. There is a heavy use of social media and the internet for buyers in the Middle East and Asia.⁷²

The buyer and the seller connect via a platform such as Facebook or Instagram, where the seller posts photos of the animals available, and then move to a social media app that facilitates money transfers, particularly China's WeChat, for the actual transaction or sale.⁷³ In China's online sales of wildlife, 1,355 of the 2,106 transactions involved communication with the buyer—at their request—by “QQ” (WeChat).⁷⁴ Avito.ru and slando.ua have frequently been implicated in illegal wildlife sales for Russia and Ukraine, respectively.⁷⁵ Global demand for minerals and a reduction in civil violence in countries in West and Central Africa have fueled a strong increase in mining activities, particularly from China. This dynamic has put pressure on the natural habitats of great apes, brought the species and humans into greater contact, and increased Chinese interest in the animals.⁷⁶ China was not a main destination or big problem for great apes from Africa before 2007/08.⁷⁷



An infant chimpanzee (US\$32,700) and an infant tiger (US\$100,000) advertised for sale in the United Arab Emirates via Instagram.

Source: Project to End Great Ape Slavery (PEGAS)

⁷² Interview with Ricardo Forrester, Freeland Foundation, interview by Channing May, Skype, August 22, 2017.

⁷³ Interview with Tracy Bain, International Fund for Animal Welfare, interview by Channing May, In person, August 23, 2017.

⁷⁴ Jo Hastie and Tania McCrea-Steele, *Wanted - Dead or Alive: Exposing Online Wildlife Trade* (London: International Fund for Animal Welfare, 2014), 35, <http://www.ifaw.org/united-states/resource-centre/wanted-dead-or-alive-exposing-online-wildlife-trade>.

⁷⁵ Hastie and McCrea-Steele, 53.

⁷⁶ Smith, “Chinese Mining Fuels Trade in Guinea’s Apes.”

⁷⁷ Interview with Doug Cress, World Association of Zoos and Aquariums.

BOX 1. THE AFRICAN TRIANGLE: CORRUPT OFFICIALS, WILDLIFE BUSINESSES & FAMILY NETWORKS

By Charlotte Röniger

In Central and West Africa, corrupt government officials, wildlife businesses, and family networks have worked together to run the illegal export of bonobos, chimpanzees, and gorillas to wholesalers and consumers around the globe. Investigations by the Eco Activists for Governance and Law Enforcement (EAGLE) Network and WARA Conservation Project revealed one of the biggest African trafficking networks connected to a Guinean-based company named Doumbouya Pets Company. Located at the center of the investigation was the Sidibé family as well as a former head of Guinea's CITES Management Authority. They were allegedly responsible for the illegal export of more than 100 chimpanzees to China, as well as other protected species.¹

The Doumbouya Pets Company and its owner and operator Balla Doumbouya provided a legitimate veneer to cover the trafficking of great apes, which he moved through a combination of trade misinvoicing and physical smuggling.² Balla Doumbouya's network consisted of more than nine major dealers operating from six different countries, which allowed him to shift source areas and transportation routes depending on enforcement risks and other logistical hazards.³

Ansoumane Doumbouya (no relation), the then-head of both the CITES Management Authority for Guinea and the Division of Forestry Legislation, was crucial to the facilitation of the illegal enterprise. He issued CITES export permits for chimpanzees, bonobos, and gorillas that declared the animals as captive-bred, despite there being no captive breeding facilities for great apes in Guinea. Researchers estimate that between 2009 and 2011, as many as 130 chimpanzees and 10 gorillas left Guinea for China.⁴ As the head of Guinea's CITES Management Authority during this time, Ansoumane Doumbouya's office will have had to issue export permits for any great apes sent abroad from Guinea.⁵

Many of the CITES permits Ansoumane Doumbouya issued listed Abdourahamane Sidibé as the exporter. Abdourahamane Sidibé was part of a family network specializing in trafficking great apes that worked closely with Ansoumane Doumbouya. Abdourahamane Sidibé's son, Ghana-based Abdoul Salam Sidibé operated as a dealer for Doumbouya Pets Company.⁶ The Sidibé family, active in international wildlife trafficking for at least 30 years, acted as the operation's connection to Chinese buyers.⁷

1 EAGLE Network and WARA Conservation Project. "Doumbouya Pets Company: Wildlife Trafficking and Corruption." Presentation.

2 WARA Conservation Project. "Guinée: Balla Doumbouya Enfin Localisé et Arrêté!" March 25, 2016. Accessed November 11, 2017. <http://www.wara-enforcement.org/guinee-balla-doumbouya-enfin-localise-et-arrete/>.

3 EAGLE Network and WARA Conservation Project. "Doumbouya Pets Company: Wildlife Trafficking and Corruption."

4 Great Apes Survival Partnership. "GRASP Hails Arrest of Major Guinea Ape Trafficker." September 1, 2015. Accessed November 9, 2017. <http://www.un-grasp.org/grasp-hails-arrest-of-major-guinea-ape-trafficker/>.

5 Project to End Great Ape Slavery (PEGAS). "Presidential pardon: Former head of Guinea CITES office pardoned before his case was finalized." January 29, 2017. Accessed January 31, 2018. <https://freetheapes.org/2017/01/29/presidential-pardon-former-head-of-guinea-cites-office-pardoned-before-his-case-was-finalized/>

6 EAGLE Network and WARA Conservation Project. "Doumbouya Pets Company: Wildlife Trafficking and Corruption."

7 Ibid.

The network did not employ heightened levels of secrecy characteristic of other transnational criminal networks to conduct their smuggling, trafficking, and illicit payments and receipts. The Doumbouya Pets Company used the formal financial system in order to process their transactions and to easily launder their illicit proceeds. Receipts of Western Union and bank transfers from China show payments (in U.S. dollars) made for “import animals” and “airline fees” to Balla Doumbouya using his real name, instead of something more difficult to investigate such as a pseudonym or an anonymous company.⁸ Among other payments, Doumbouya received wire transfers through HSBC for US\$30,000, US\$40,000 and US\$50,000 (shown below), while Abdourahamane Sidibé was allegedly the recipient of similar money transfers from the same Chinese account amounting to approximately US\$450,000.⁹

Source: WARA Conservation Project

⁸ Ibid.

⁹ Guineematin. “Criminalite Faunique: Le Verdict sur Abdourahamane Sidibe et son fils Abdoul Salam au Centre des Debats!” April 20, 2017. Accessed November 9, 2017. <http://guineematin.com/actualites/criminalite-faunique-le-verdict-sur-abdourahamane-sidibe-et-son-fils-abdoul-salam-au-centre-des-debats/>; EAGLE Network and WARA Conservation Project. “Doumbouya Pets Company: Wildlife Trafficking and Corruption.”

Abdourahame and Abdoul Salam Sidibé were arrested in 2017, both having already been sentenced in absentia to five years in prison in 2015 for forgery and use of forgery related to the illegal export of chimpanzees without a valid license. However, these sentences were later reduced to only four months in prison with eight months suspended sentence and two months in prison, respectively.¹⁰ Balla Doumbouya, who authorities arrested in March 2016,¹¹ received a sentence of only six months imprisonment for illegal wildlife trading and paid a fine equivalent to roughly US\$17, (GNF 150,000), which is considerably smaller than the estimated value of even one chimpanzee on the international black market.¹² Authorities arrested Ansoumane Doumbouya in August 2015, and he was convicted later that year of misuse of title, forgery, forgery of public documents, and delivery of fraudulent CITES permits to traffickers.¹³ He received a sentence of only 18 months and was ordered to pay the State a symbolic penalty of 1 Guinean franc (US\$0.0001) for damages and interest and a fine of around US\$17 (GNF 150,000).¹⁴ He appealed the ruling, however the President of Guinea, Alpha Condé, pardoned him before the appeals process concluded.¹⁵

The relatively minimal penalties some have received raises the question of whether the governments have sufficiently discouraged involvement in or addressed the role of corruption in the illegal great ape trade going forward. As long as the ratio of risk to reward remains static, people will continue to take part in the illegal poaching, trafficking, and sale of Africa's great apes.

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- 10 Mamadou Aliou Barry, "Criminalité faunique: le verdict sur Abdourahamane Sidibé et son fils Abdoul Salam au centre des débats !" Aminata.com, April 21, 2017. <https://aminata.com/criminalite-faunique-verdict-abdourahamane-sidibe-fils-abdoul-salam-centre-debats/>
- 11 The EAGLE Network. "Wildlife Law Enforcement Briefing." March 2016. Accessed January 31, 2018. <http://www.eagle-enforcement.org/data/files/eagle-briefing-march-2016-public.pdf>.
- 12 Tamone, Richards. "Commerce Illégal des Espèces Protégées: Un Procès Qui Fait Débat..." The Independent, July 31, 2016. Accessed November 10. <http://guineeactu.info/actualite-informations/actualite-informations-generale/6607-commerce-illegal-des-especies-protegees--un-proces-qui-fait-debat.html>. Rate of exchange calculated on December 1, 2017.
- 13 Great Apes Survival Partnership. "GRASP Hails Arrest of Major Guinea Ape Trafficker." September 1, 2015. Accessed November 9, 2017. <http://www.un-grasp.org/grasp-hails-arrest-of-major-guinea-ape-trafficker/>; Guineematin. "Criminalité Faunique: Un Colonel de l'Armée Guinéenne et ses Acolytes Mis aux Arrêts pour Trafic d'Espèces Animales Protégées!" April 19, 2017. Accessed November 9, 2017. <http://guineematin.com/actualites/criminalite-faunique-un-colonel-de-larmee-guineenne-et-ses-acolytes-mis-aux-arrets-pour-traffic-despeces-animales-protegees/>; Golota Raphael Lamah, "Grâce présidentielle : L'ancien chef de l'organe CITES-Guinée en attente de procès, gracié par le Président !" Soleil FM Guinée, 20 January 2017, <http://soleilfmguinee.net/grace-presidentielle-lancien-chef-de-lorgane-cites-guinee-attente-de-proces-gracie-president/>.
- 14 Tamone, Richards. "Commerce Illégal des Espèces Protégées: Un Procès Qui Fait Débat..." The Independent, July 31, 2016. Accessed November 10. <http://guineeactu.info/actualite-informations/actualite-informations-generale/6607-commerce-illegal-des-especies-protegees--un-proces-qui-fait-debat.html>. Rate of exchange calculated on December 1, 2017.
- 15 PEGAS. "Presidential pardon: Former head of Guinea CITES office pardoned before his case was finalized."

BUSHMEAT AND BODY PARTS

Lower in market value than the live animal trade but higher in volume is the illicit trade in the meat and body parts of Africa's great apes, which responds to strong demand for subsistence locally and to conspicuous consumption in African and foreign cities. Great ape bushmeat is traditional only in West and Central Africa, not East or Southern Africa,⁷⁸ though there is less demand in Gabon and Senegal because of their relatively higher Muslim populations (eating the meat goes against Islam).⁷⁹ Bushmeat is a by-product of poachers killing adults while trying to capture the baby chimpanzees for the pet trade, and vice versa.

Market Values

Selling bushmeat, especially rare species, is very profitable and very low risk.⁸⁰ The combined domestic market for bushmeat from gorillas, chimpanzees, and bonobos may be worth as much as US\$650,000 to US\$6.0 million per year. This reflects the range in per kilo prices in the data of US\$1.31-US\$12; we provide more information on the data and the calculations in the Appendix. 'Domestic' refers to the countries to which the three species are native; it excludes any sales outside the region, because we have insufficient data on the different prices and volumes. Transportation and species rarity can both push the price up, as discussed further below.⁸¹ Related to this is the trend of prices increasing from the village level up to the markets in major urban centers.

Data on prices in different markets and on the volumes sold are not readily available, making it difficult to estimate how much money is involved in this segment of the illegal great ape trade. A report in 2010 estimated that poachers, villagers, and local workers were killing 8,000 chimpanzees, gorillas, and bonobos per year for their meat.⁸² Prices for great ape bushmeat are especially high in Switzerland where it is around 10-times those in Cameroon.⁸³ Experts estimate that 40 tons of bushmeat arrives at Geneva and Zurich airports every year; the figure from Charles de Galle in Paris may be 270 tons per year. It is unclear how much of this is great apes versus other wild species.⁸⁴ Statistics on how much of each great ape species is entering overseas markets are incomplete, because many authorities in Europe do not conduct a DNA analysis on the meat they confiscate to properly identify it,⁸⁵ and the U.S. and the UK only report all "illegal meat," so there are not figures for the amount of great ape meat they seize from which to estimate how much might be entering these markets illegally.⁸⁶

⁷⁸ Sharon Guynup, "African Great Ape Bushmeat Crisis Intensifies; Few Solutions in Sight," *Mongabay*, July 7, 2017, <https://news.mongabay.com/2017/07/african-great-ape-bushmeat-crisis-intensifies-few-solutions-in-sight/>.

⁷⁹ Interview with Marc Fourrier, Jane Goodall Institute.

⁸⁰ Sean Mowbray, "'Endangered Species to Declare?' Europe's Understudied Bushmeat Trade," *Mongabay*, March 20, 2017, <https://news.mongabay.com/2017/03/endangered-species-to-declare-europes-understudied-bushmeat-trade/>.

⁸¹ Interview with David Wilkie, Wildlife Conservation Society, interview by Channing May, Skype, September 6, 2017.

⁸² "The Illegal Pet Trade," World Orangutan Events, August 22, 2017, <http://www.worldorangutanevents.org/illegal-pet-trade.php>.

⁸³ Interview with Karl Ammann.

⁸⁴ Mowbray, "Endangered Species to Declare?"

⁸⁵ Mowbray.

⁸⁶ Susan Brown, "The West Develops a Taste for Bushmeat," *New Scientist*, July 8, 2006, <https://www.newscientist.com/article/dn9503-the-west-develops-a-taste-for-bushmeat/>.

Trade Patterns and Dynamics

The value chain for bushmeat is very diffuse and most roles in the illegal trade require little to no specialized knowledge, in contrast to the illicit trade in live great apes from Africa.⁸⁷ Women are the primary sellers of the bushmeat at markets—“market mamas”,⁸⁸ and they are often involved in transporting the meat from rural areas to the cities.⁸⁹ One reason for this dynamic is that environmental authorities, who monitor the forests, are less likely to search women than they are men.⁹⁰ Rural villages and towns are proximate to the habitats of domestic species, so little hassle or organization is required to get the bushmeat to the markets and prices are low. Supplying markets in the cities requires more organization, more complicated logistics, and more stealth. Great apes are the objective for some poachers, and for others they can be a bonus when hunting elephants for ivory, such as in the DRC.⁹¹ According to David MacDonald, one common model is for taxis to go out to remote areas in the morning and come back loaded with bushmeat catches.⁹² Boats are also used for transportation, such as along the Congo River, depending on the destination. In other cases, women or men have used public transport buses to get the great ape bushmeat to urban markets.⁹³ The meat may then be stored in large cold storage facilities outside the cities.⁹⁴ The “market mamas” used to be able to sell the great ape bushmeat openly, but greater enforcement and attention in recent years has forced them to conceal the meat, and this has pushed prices higher.⁹⁵ Great ape conservation groups report that trafficking rings are commonly involved in the trade at the city level,⁹⁶ and though militaries and other armed groups are not directly involved, they have sometimes levied a tax on the sale or transport of the meat.⁹⁷

⁸⁷ Interview with David Wilkie, Wildlife Conservation Society.

⁸⁸ Interview with Jimmiel Mandima, African Wildlife Foundation, interview by Channing May, In person, September 7, 2017.

⁸⁹ Interview with David Wilkie, Wildlife Conservation Society.

⁹⁰ Questionnaire completed by Centre de Réhabilitation des Primates de Lwiro, August 4, 2017.

⁹¹ Interview with Gay Reinartz, Bonobo and Congo Biodiversity Initiative, interview by Channing May, Phone Call, August 23, 2017.

⁹² Mowbray, “Great Apes and Greater Challenges.”

⁹³ Questionnaire completed by Corneille Moukson Kutia, World Wildlife Fund.

⁹⁴ Interview with Michelle Wieland, Wildlife Conservation Society, interview by Channing May, Skype, September 6, 2017.

⁹⁵ Interview with Alice Wittevrongel and Guillaume Tati, Endangered Species International, interview by Channing May, Skype, September 8, 2017.

⁹⁶ Interview with Michelle Wieland, Wildlife Conservation Society.

⁹⁷ Interview with Marc Fourier, Jane Goodall Institute.



Gorilla meat, heads, and parts are offered for sale along with other wildlife.
Source: EAGLE Network

Consumers

Consumption of great ape bush meat stems from a mix of conspicuous consumption, traditional beliefs and culture, and nutrition gaps. In villages and towns the great apes are killed and consumed as a less expensive alternative to “regular protein” such as chicken; people residing in these areas would otherwise generally prefer not to consume the bushmeat.⁹⁸ Some people also sell small quantities for local consumption as a way to supplement their meagre income. Great apes are good for bushmeat because they are large animals, providing more meat and money for the effort.⁹⁹ For people living in West and Central Africa’s large cities, and for those living abroad, the bushmeat of great apes offers a connection to culture and to the past, and in many cases a way to show off their wealth, too.¹⁰⁰ In these markets the bushmeat costs more than regular forms of protein, sometimes substantially more. It is a luxury food to serve at holidays, something impressive to serve guests or bring as a gift if you are a houseguest, or simply a way to display your wealth just like other luxury goods.¹⁰¹ Experts have also reported that some (domestic) restaurants buy bushmeat directly to serve their customers.¹⁰² A third driver of great ape bushmeat consumption is a cultural belief in some areas, including Central Africa, that eating these animals will give you their “essences”: strength for gorillas and cleverness for chimpanzees. More broadly, gorillas are seen as “big man’s meat” and equated with power and strength.¹⁰³

Recent Developments

Recent changes to where people in West and Central Africa work and live are increasing the demand for bushmeat and thus the pressure on great ape populations. Violence and civil war in the DRC shifted people from rural areas to cities, and this has been linked with a massive increase

⁹⁸ Interview with Michelle Wieland, Wildlife Conservation Society.

⁹⁹ Interview with Marc Fourier, Jane Goodall Institute

¹⁰⁰ Sarah Elton, “Monkeys on the Menu,” *Maclean’s*, April 15, 2013, <http://www.macleans.ca/society/life/gorillas-in-our-midst/>.

¹⁰¹ Interview with Michelle Wieland, Wildlife Conservation Society.

¹⁰² Questionnaire completed by Sone Nkoke, TRAFFIC, August 22, 2017.

¹⁰³ Interview with Ian Redmond, Born Free International/Ape Alliance.

in the bushmeat trade: “Between 1990 and 2000 the rate of primary forest loss in DRC was double the post-[civil] war rate [and] bushmeat sales increased by as much as 23 percent.”¹⁰⁴ Overall in the region, migration to cities (where economies tend to be stronger) has had a huge impact on consumption patterns, since the motivation here is more about luxury and culture and less about survival.¹⁰⁵ In addition, poachers are sometimes using weapons leftover from civil wars and other violent conflicts to hunt the great apes.¹⁰⁶ This makes them more lethal for the animals and precludes them needing to invest separately in a weapon in order to get into poaching.

The other major trend has been an increase in mining activities in rural areas, which is spurring demand and supply. There are strong links between illegal mining and the bushmeat trade, such as Grauer’s gorillas; it is mostly for local consumption rather than commercial sale to the cities or abroad.¹⁰⁷ Miners get very little food from their employers—and generally no meat—and they are in very remote areas. Two days wage might be 500 Congolese Francs (about US\$1) and a chicken at the market is 1,500 Francs (about US\$3), so eating bushmeat is smart and necessary.¹⁰⁸ Mining camps have 50-500 men in them, which translates to a great deal of extra hunting, and it is happening in areas where great apes were otherwise more separate from humans. Sometimes miners sell a bit of bushmeat for extra income, for which they may seek payment in medicine instead of cash.¹⁰⁹ Mining activities surged in Sierra Leone after the civil war and negatively affected chimpanzee populations in the surrounding areas, particularly Kono and Koinadugu. The involvement of Chinese workers in the mining also helped fuel their interest in the animals.¹¹⁰

The third facet of the illegal trade in great apes is a small but still lucrative and destructive market for body parts. The Last Great Ape Organization (LAGA) estimates that 900 great ape skulls were trafficked in Africa in 2015,¹¹¹ but we do not have enough data on prices to estimate possible ranges for the overall value. Witch doctors in Cameroon, Senegal, and Guinea seek heads, hands, and feet.¹¹² Body parts from chimpanzees and gorillas also go to Nigeria, China, and the United States.¹¹³ The belief that consuming gorilla parts passes on their strength includes a practice of burning and grinding their bones to make a traditional “vaccine.”¹¹⁴ Similarly, consuming bonobo is thought to pass on their magical powers, which has led to a demand for fingers and toes when these animals are hunted and killed.¹¹⁵ LAGA has also reported that in Cameroon heads and skulls are now worth more than the meat, and they are easier to conceal, so sometimes the bodies are just

¹⁰⁴ Claire Asher, “Illegal Bushmeat Trade Threatens Human Health and Great Apes,” *Mongabay*, April 6, 2017, <https://news.mongabay.com/2017/04/illegal-bushmeat-trade-threatens-human-health-and-great-apes/>.

¹⁰⁵ Interview with Johannes Refisch, UN-GRASP, interview by Channing May, Skype, September 18, 2017.

¹⁰⁶ Levikov, “The Hidden Toll of War.”

¹⁰⁷ Interview with Marc Fourrier, Jane Goodall Institute.

¹⁰⁸ Interview with Laura Darby.

¹⁰⁹ Interview with Laura Darby.

¹¹⁰ Asami Kabasawa, “Current State of the Chimpanzee Pet Trade in Sierra Leone,” *African Study Monographs* 30, no. 1 (2009): 50–51.

¹¹¹ Mowbray, “Great Apes and Greater Challenges.”

¹¹² Guynup, “African Great Ape Bushmeat Crisis.”

¹¹³ Eugene N. Nforngwa, “Trade in Skulls, Body Parts Severely Threatens Cameroon’s Great Apes,” *Mongabay*, January 19, 2017, <https://news.mongabay.com/2017/01/trade-in-skulls-body-parts-severely-threatens-camerouns-great-apes/>.

¹¹⁴ Interview with Ian Redmond, Born Free International/Ape Alliance.

¹¹⁵ Interview with Gay Reinartz, Bonobo and Congo Biodiversity Initiative.

left to rot in the forest.¹¹⁶ Body parts come with less risk for those involved than with the bushmeat trade, adding to its attractiveness as a profit-motivated criminal enterprise. The net result is that filling demand for illegal great ape body parts has become the biggest threat to these animals in Cameroon, which has the strongest market for these illicit goods.¹¹⁷



Great ape skulls and hands seized along with other animal products such as snakeskin, leopard skin, and giraffe skin.
Source: EAGLE Network

WRAP-UP

The market for live infants and juveniles, bushmeat, and body parts from Africa's great apes is thriving at every level—local, domestic, regional, and long-distance international, and too little research has been done on the movement of money across these illegal businesses and activities. Non-profit groups in West and Central Africa that work to protect the great apes have collected some information on payments and transfers along the illicit supply chain, particularly for the live animal trade, but there are more unknowns than there are knowns. Section IV delves into this challenge and discusses its significance for more effectively combatting the illegal trade in great apes. First, however, Section III presents a mirror analysis for the world's other great ape, orangutans, for which even less is known about the methods of payment.

¹¹⁶ Mowbray, "Great Apes and Greater Challenges."

¹¹⁷ Nforngwa, "Trade in Skulls, Body Parts."

III. VALUES AND DYNAMICS OF THE ILLICIT MARKET FOR ORANGUTANS

Orangutans on the islands of Sumatra and Borneo—Asia’s only great apes—are losing their battle for survival due to habitat destruction from commercial plantations, the killing of adults of the species, and the selling of orphaned infants on the black market. High profits accrue to a few from these activities, and Malaysian and Indonesian societies are losing a precious natural resource. The governments of these two countries, and others in the region, have not yet made changing this dynamic a priority, limiting the conservation and prosecution efforts of civil society and other organizations in the region.

LIVE ANIMALS

Demand for live infant and juvenile orangutans is strong, thanks to domestic buyers in Malaysia and Indonesia and from international buyers in other countries in Southeast and East Asia, but there are significant gaps in what experts and investigators know about key dynamics of the trade. Poachers and farmers sell the young animals for cash after killing the adults. Traders take over the sale process for buyers in cities and in other countries, using a combination of cash payments, bank transfers, and electronic payments. They make use of vehicles, boats, and planes to move the orangutans from the forests of Borneo and Sumatra to the individual and corporate buyers. More research is needed for investigators to better understand how the payments are moved and laundered, and who makes up these illicit networks.

Market Values and Payments

The illegal market for baby orangutans is thriving with consumers buying an estimated 146 per year on average¹¹⁸ and possibly spending \$277,000 to as much as US\$10 million in total. This reflects the domestic and international markets for infant and juvenile orangutans. The range is large and imprecise, because our research could not indicate reliable volumes for sales between the two markets; the lower estimate represents the case of domestic sales accounting for 100 percent and the higher estimate represents international sales at 100 percent. We present more information on the data and calculations in the Appendix. Poachers, at the bottom of the supply chain, earn US\$8 to US\$121 per animal. Traders continue to move the animals along in villages and in cities. The ones operating at the village level receive only US\$140-US\$385 for each infant; dealers in the city earn as little as US\$454 for a domestic sale and as much as US\$20,000 selling to a wholesaler outside Indonesia or Malaysia. The data shows that Indonesian consumers pay only US\$1,700-US\$1,900 for one of the animals while consumers much further away pay US\$22,000 to US\$69,000 for each infant.

¹¹⁸ Stiles et al., *Stolen Apes*, 8.

Trade Patterns and Dynamics

The illegal trade in orangutans from Sumatra and Borneo follows a similar setup in both places to connect buyers and sellers and smuggle the animals to their final destinations, primarily in East and Southeast Asia. A prospective buyer responds to an ad on a social media website like Instagram or connects with a dealer,¹¹⁹ who are most often based in Indonesia and Malaysia. An associate or supplier fills the order and smuggles it by road, boat,¹²⁰ and plane to the buyer, who is usually in Southeast Asia—particularly Thailand, as well as in CIS countries, and Gulf States.¹²¹ The buyer pays the supplier's account in the buyer's country or transfers it electronically using a platform such as WeChat,¹²² and the supplier pays the dealer for his or her role in cash in his or her local currency.¹²³ Trafficking orangutans sometimes involves organized gangs that are not specific to this trade, but most often the illegal trade in orangutans involves networks and individuals who specialize in the business, particularly in the case of foreign sales.¹²⁴



Two baby orangutans offered for sale to an undercover wildlife trafficking investigator via the messaging platform WhatsApp.

Source: Daniel Stiles

Infant and juvenile orangutans often enter the live trade after the mother has been killed. Some poachers will be after the young specifically for selling to traffickers and other times it is more opportunistic. Professional or village hunters often target adult orangutans to keep the animals away from commercial agricultural plantations and from small personal farmlands. Ironically, it is the clearing of land for these activities that is driving this human-orangutan conflict, because the depletion of normal food sources from the forests pushes the adults to seek food elsewhere.¹²⁵ Poachers overall have much easier access to orangutans than do their counterparts seeking bonobos, chimpanzees, and gorillas in Africa.¹²⁶

¹¹⁹ Associated Press, "Indonesian Police Arrest Man Who Bought Orangutan, Leopard, Bear," *The Jakarta Post*, April 5, 2017, <http://www.thejakartapost.com/news/2017/04/05/indonesian-police-arrest-man-who-bought-orangutan-leopard-bear.html>.

¹²⁰ Interview with Daniel Stiles.

¹²¹ Christopher Haslett, "Click to like This: Is Instagram a Hub for Illegal Ape Deals?," *Mongabay*, December 10, 2015, <https://news.mongabay.com/2015/12/click-to-like-this-is-instagram-a-hub-for-illegal-ape-deals/>.

¹²² Interview with Andrea Costa, Elephant Action League.

¹²³ Interview with Daniel Stiles.

¹²⁴ Mosbergen, "Dark Story Behind"; Questionnaire completed by Dr. Ian Singleton, Sumatran Orangutan Conservation Programme.

¹²⁵ Interview with Serge Wich, Liverpool James Moore University, interview by Channing May, Skype, September 11, 2017.

¹²⁶ Interview with Matt Linkie, Wildlife Conservation Society, interview by Channing May, Skype, September 13, 2017; Questionnaire completed by Dr. Ian Singleton, Sumatran Orangutan Conservation Programme.

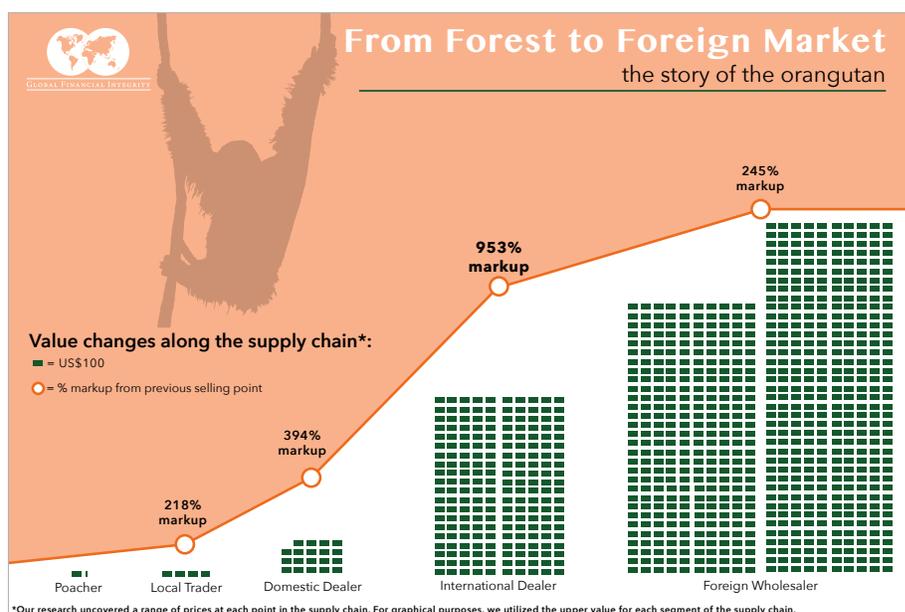
Smuggling the infant and juvenile orangutans around Asia relies on a combination of transportation methods and nodes. In some cases the animals are first transported by boat from Jakarta, Indonesia—their holding area before export—to Singapore and then they travel on planes to Thailand and Taiwan.¹²⁷ Other times the animals go from Indonesia, to Malaysia, and then to Thailand, if that is their final destination.¹²⁸ Employees of commercial airlines and airports at the origin of and destination for the orangutans participate in the smuggling in some cases.¹²⁹ Fraudulent CITES permits have not been part of the smuggling pattern for orangutans; traffickers rely instead on physical smuggling techniques to hide the orangutans.¹³⁰

Consumers

Orangutans, like Africa's great apes, are popular pets and zoo animals.¹³¹

Orangutan pet owners in Indonesia are mainly influential people like high-ranking military members and politicians, who are above the rule of law.¹³²

The animals are also prized status symbols in Malaysia, Thailand, and Taiwan.¹³³ Some village families in Sumatra and Borneo also keep the animals as pets, but it is about ease of access due to proximity rather than a show of wealth or status.¹³⁴ On the commercial side, orangutans are popular in zoos and safari parks, and they have been forced to perform in shows like boxing matches in Thailand and Cambodia, though experts in the region have reported that this practice is waning.¹³⁵ An outsized proportion of orangutans observed at zoos and safari parks have been younger/infants compared to adult breeding pairs, which means these facilities are using outside sources to bolster their collection.¹³⁶



¹²⁷ Stiles et al., *Stolen Apes*, 39.

¹²⁸ Interview with Andrea Costa, Elephant Action League.

¹²⁹ Questionnaire completed by Gunung Gea, Scorpion Foundation, August 31, 2017.

¹³⁰ Interview with John Sellar, interview by Channing May, Skype, October 5, 2017.

¹³¹ Questionnaire completed by Gunung Gea, Scorpion Foundation.

¹³² Philip Jacobson, "The Military Family That Kept a Pet Orangutan in Indonesia," *Mongabay*, March 29, 2017, <https://news.mongabay.com/2017/03/the-ape-who-escaped-indonesias-blackmarket-trade-in-pet-orangutans/>; Questionnaire completed by Dr. Ian Singleton, Sumatran Orangutan Conservation Programme.

¹³³ Mosbergen, "Dark Story Behind."

¹³⁴ Interview with Serge Wich, Liverpool James Moore University.

¹³⁵ Stiles et al., *Stolen Apes*, 40.

¹³⁶ Claire A. Beastall, Jamie Bouhuys, and Anna Ezekiel, *Apes in Demand: For Zoo and Wildlife Attractions in Peninsular Malaysia and Thailand* (Petaling Jaya, Malaysia: TRAFFIC, 2016), iv, 24, <http://static1.1.sqspcdn.com/static/f/157301/27369265/1481208884120/Apes-in-demand.pdf?token=q2gLb%2BByVXRz%2BHiJ1WrRo02eZb0%3D>.



Several orangutans are used in a boxing match performance at Safari World in Bangkok, Thailand. According to counter-wildlife trafficking expert Daniel Stiles, Thai law prohibits performances like this.

Source: Daniel Stiles

Recent Challenges

The dynamics of the illegal trade in live infant and juvenile orangutans has not varied significantly in recent years, at least based on what is currently understood in the literature. Two trends from the literature on the illegal great ape trade in West and Central Africa likely apply to orangutans as well: the increasing role of online social media platforms to advertise the animals for sale and to facilitate international payments between buyers and sellers, and the increasing demand for great apes—legal or illegal—from zoos and related businesses in East Asia that cater to the growing middle class. The more investigators and experts learn about how poachers, traders, dealers, wholesalers, and buyers are engaging in this particular illegal market, the more they will also be able to discern regarding shifts in the dynamics.

BUSHMEAT AND BODY PARTS

There is little demand domestically and no demand internationally for orangutan bushmeat, so there are not the illicit supply networks and operations found in West and Central Africa. Sumatra is predominantly Muslim, so they do not consume the bushmeat.¹³⁷ Those that do eat the animals, in Sumatra or Borneo, do so out of financial and nutritional necessity. Small amounts may be sold, but this activity still fits within the necessity parameters and takes place outside urban areas, not in them.¹³⁸ Recent outbreaks of the SARS virus have also reduced demand for the bushmeat.¹³⁹ The supply that does exist comes from the adults when they are killed for other reasons, such as farmers trying to protect their land.¹⁴⁰

¹³⁷ Interview with Serge Wich, Liverpool James Moore University.

¹³⁸ Interview with Doug Cress, World Association of Zoos and Aquariums.

¹³⁹ Vincent Nijman, "An Overview of International Wildlife Trade from Southeast Asia," *Biodiversity and Conservation* 19, no. 4 (2010): 1109.

¹⁴⁰ Questionnaire completed by Karnele Llano Sánchez, International Animal Rescue - Indonesia, September 5, 2017.

Demand for and supply of orangutan body parts is extremely limited. Reports and experts point only to a very small trade in orangutan skulls.¹⁴¹ A market for their body parts is largely non-existent because they are not used in traditional medicines or linked with super-human abilities like bonobos, chimpanzees, and gorillas in Central Africa.¹⁴²

WRAP-UP

Households in Malaysia and Indonesia, zoos and wildlife businesses in East and Southeast Asia, and wealthy elites in the region drive the demand behind the illicit actors selling an estimated 1,019 infant and juvenile orangutans a year. Dealers use vehicles, boats, and planes to smuggle the animals from forests and villages to final buyers, domestic and international. We have been able to gather some data on the changes in value along the supply chain, but every group working on this issue needs a better understanding of the amounts of money involved and how the various actors playing a role in the illegal trade make and receive payments. We expand on these gaps in Section IV—for all four great apes, we present a brief summary of existing enforcement efforts, and we put forward some new recommendations for civil society, governments, and international institutions to improve their efforts to curtail the illicit great ape trade.

¹⁴¹ Questionnaire completed by Gunung Gea, Scorpion Foundation.

¹⁴² Interview with Matt Linkie, Wildlife Conservation Society.

IV. POLICIES AND RECOMMENDATIONS FOR CURTAILING THE ILLICIT MARKETS FOR GREAT APES

The illegal trade in great apes is a lucrative and low-risk business for those operating at the middle and upper levels, and governments are doing too little to address this problem. These values and dynamics have depended on large gaps in the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) enforcement, public and private sector corruption, insufficient resources for investigators in developing and developed countries, local community challenges, and abuse of social media and financial service companies. In the countries in West and Central Africa and in Southeast Asia where the world's four great apes are found in the wild, enforcement of wildlife and anti-money laundering laws are weak, and prosecutions are far too limited in scale and consequence. Governments in the countries in and through which the illegal great ape trade operates also fail too often in taking the crimes seriously, especially compared to rhinos and elephants. Governments, CITES, Interpol, the UN, the World Customs Organization (WCO) and civil society organizations can increase their effectiveness in combatting the illegal great ape trade by closing information gaps, by increasing the legal risks and consequences for traffickers, dealers, and high-level consumers, and by focusing more investigative resources on the money from the illegal trade that is in the formal financial system.

FINANCIAL INTELLIGENCE GAPS

Civil society groups, journalists, and some government bodies are leading existing efforts to investigate and then prosecute the networks responsible for illegally selling and trafficking great apes, helping to improve the general understanding of the dynamics of these illegal businesses but also revealing key gaps related to the financial flows around these crimes. Some of our main goals for this paper were to establish the following for live animals, bushmeat, and body parts: How much does each actor in the supply chain earn? How do they receive and/or make these payments—cash, wire transfer, mobile banking, an informal transfer system, other? In what currency(s) do they make and/or receive these payments? Which countries, financial institutions, money service businesses, and other relevant companies have been involved in processing and/or laundering the payments? Through our research we were able to collect some data on the value of payments that poachers, dealers, wholesalers, consumers, and corrupt officials make and/or receive and publish it in this report. We were also able to establish that poachers for all four species receive their payments in cash in their respective local currencies. But this is where the trail mostly ends, with a few exceptions, which gives us many new questions that need answers.

Investigators largely do not seem to be tracking or recovering the illicit payments stemming from the illegal great ape industry, despite the fact that these are profit-motivated crimes. The sale of great ape bushmeat at markets in urban centers in Central and West Africa can fetch up to US\$12 per kilo, which suggests that the sellers are accumulating large amounts, probably mostly in cash. Is there a formalized network controlling this business? Are all payments indeed made in cash? Where do the “market mamas” or their bosses (if applicable) take this cash? If they have formal bank accounts and bring the money there, is anyone at the bank asking questions? Are investigators following up with these banks about the money when they catch someone selling the illegal bushmeat? Are investigators proactively sending guidance to area bank branches to help bank staff detect if clients or deposits may be connected to this illegal enterprise?

We have similar questions and concerns related to payments that corrupt government officials receive for their roles in all three markets linked to the illegal great ape trade (i.e. live, bushmeat, and body parts). This is especially relevant for larger amounts, such as the US\$2,000-US\$5,000 that our research indicates those in charge of CITES permits in Central and West Africa received on numerous occasions to facilitate the illegal export of live infants and juveniles. One NGO in West Africa shared with us pictures of financial documents they uncovered during some of their investigative work, but it was just one case, and they did not pursue the financial portion of the investigation further than the few wire transfer receipts. Did government officials ever notify the banks involved? Did the officials try to recover the money linked with the crimes? Did they then look for similar suspicious transfers, in the past or going forward?

Answering these questions and pursuing these opportunities would add significant strength to the campaign to fight the illegal trade related to great apes at the higher levels of the system. This is especially true where the currency involved is the U.S. Dollar, because that gives the U.S. government jurisdiction for pursuing the money and the criminals. We incorporate this perspective and these opportunities in our recommendations at the end of this section. First, however, we will summarize the current enforcement efforts in the countries linked with the poachers, dealers, wholesalers, and consumers of bonobos, chimpanzees, gorillas, and orangutans.

CURRENT ENFORCEMENT EFFORTS

Countries around the world that are part of the illegal great ape trade have struggled with effective enforcement due primarily to lack of political will, weak laws, and indifference. Some countries, however, are passing new laws that, if enforced, could make life tougher for the poachers, traffickers, dealers, and buyers. According to CITES, authorities in 23 countries seized 1,800 great apes from 2005-2011.¹⁴³ The Ape Seizures Database, run by GRASP at the United Nations Environment Programme (UN Environment, formerly UNEP), includes international and domestic seizures of great apes and their body parts. The countries reporting the most seizures have been

¹⁴³ Shukman and Piranty, “The Secret Trade in Baby Chimps.”

Cameroon, Guinea, Indonesia, Malaysia, and Sierra Leone. Orangutans make up 67 percent of the data, chimpanzees 25 percent, gorillas 6 percent, and bonobos 3 percent.¹⁴⁴ Experts estimate that only 10 percent of great apes are detected or intercepted during trafficking, leaving significant room for improvement.¹⁴⁵ During the same 2005–2011 timeframe, UN Environment reports that investigators in Africa and Asia made only 27 combined arrests for great ape trafficking—and 25 percent of these went unprosecuted.¹⁴⁶ The NGO community around great apes lament that it is only “losers” who get caught.¹⁴⁷ Even when caught, authorities in many countries seize the illegal animals but do not attempt to prosecute or even arrest the people from whom they seized the animals. In general, there is a link between enforcement levels and the financial resources of the agencies responsible, including those with larger budgets than their developing country counterparts.¹⁴⁸



Two suspected traffickers (shown displaying the dead apes) were arrested in Guinea in December 2017 with the assistance of Guinée Application de la Loi Faunique (GALF), a member organization of the EAGLE Network. The traffickers had tortured and killed two chimpanzees (shown) but the GALF team and law enforcement did save a baby chimpanzee.

Source: EAGLE Network

Enforcement in West and Central Africa has to overcome government corruption and a perception that the illegal great ape trade is not a serious issue. According to the EAGLE Network (Eco Activists for Governance and Law Enforcement), a non-profit group working to combat the illegal great ape trade, the majority of arrests for great ape crimes are small-time traffickers.¹⁴⁹ It is positive that these facilitators are being arrested; it is unclear however whether this is an indication that those primarily responsible for the illegal trade are being arrested. Sierra Leone did not outlaw the capture, possession, and killing of chimpanzees until July 2007, and even then these activities only come with a US\$1,000 equivalent fine or jail.¹⁵⁰ Compare this with an expected value of US\$15,000-

¹⁴⁴ Matt McGrath, “New Data Shows ‘staggering’ Extent of Great Ape Trade,” *BBC News*, September 29, 2016, <http://www.bbc.com/news/science-environment-37513707>.

¹⁴⁵ Mowbray, “Great Apes and Greater Challenges.”

¹⁴⁶ Stiles et al., *Stolen Apes*, 8; Millie Kerr, “Great Apes in Asian Circus-Style Shows on Rise — so Is Trafficking,” *Mongabay*, April 12, 2017, <https://news.mongabay.com/2017/04/great-apes-in-asian-circus-style-shows-on-rise-so-is-trafficking/>.

¹⁴⁷ Interview with Laura Darby.

¹⁴⁸ Interview with Julie Vanassche, Libassa Wildlife Sanctuary, interview by Channing May, Skype, August 24, 2017.

¹⁴⁹ Clark, “Wildlife Crime: Stealing Animals.”

¹⁵⁰ Kabasawa, “Current State of the Chimpanzee Pet Trade,” 39.

US\$70,000 from an international buyer for a live infant/juvenile and US\$1.31-US\$12 per kilo in domestic markets for the meat of an adult for traffickers and dealers, on whom the trade depends. In Eastern DRC the laws are good but enforcement is weak: officers will only seize animals being trafficked, leaving the persons involved otherwise unhindered, if they are in dangerous parts of the country.¹⁵¹ Enforcement officials in Liberia likewise seize or rescue the animals without making arrests, which does virtually nothing to prevent the crime from reoccurring.¹⁵² Attitudes in Cameroon are even more blasé with many in the country simply not viewing this wildlife crime as a serious offense.¹⁵³ Bushmeat sellers, however, seem to be facing greater enforcement at urban markets. Gabon is an example of a country where sellers rarely display great ape bushmeat openly at markets, selling instead directly to customers, both individuals and restaurants.¹⁵⁴

Laws related to wildlife crimes in Indonesia, Malaysia, and Thailand have been weakly enforced or written, which has signaled to those perpetrating the illegal great ape trade in this part of the world that such crimes offer a high profit, low risk opportunity. Indonesian law only deals with ‘direct’ killing,¹⁵⁵ and there were no prosecutions in Indonesia for great apes until the last several years.¹⁵⁶ The first cases were in 2010 in Borneo and 2012 in Sumatra.¹⁵⁷ The two key laws in Malaysia are the Wildlife Conservation Act, 2010 (Act 716) and the International Trade in Endangered Species Act, 2008 (Act 686). Act 686 even allows for charges against individuals and companies.¹⁵⁸ Thailand’s law, the Wild Animal Preservation and Protection Act (WARPA), which dates back to 1992, has a large loophole that criminals exploit: the law does not cover non-native ape species or punish those possessing illegally imported ones.¹⁵⁹ Claire Beastall of TRAFFIC highlights the consequence of this dynamic for the illegal great ape trade: “Illegal wildlife traffickers are fully aware that Thailand provides a safe haven for their activities.”¹⁶⁰ Poachers, traffickers, wholesalers, and facilitators of the illegal trade in great apes have a much easier time balancing the risks and rewards of their illicit activities with such weak legal codes and enforcement.

Political will to seriously tackle the illegal great ape trade is also a challenge in the Middle East, Europe, and Commonwealth of Independent States (CIS) countries. In January 2017, a new law in the United Arab Emirates (UAE) outlawed private ownership of exotic pets, and all current and future owners of imported animals must register them with the government.¹⁶¹ In general, however,

¹⁵¹ Interview with Marc Fourrier, Jane Goodall Institute.

¹⁵² Interview with Julie Vanassche, Libassa Wildlife Sanctuary.

¹⁵³ Mowbray, “Great Apes and Greater Challenges.”

¹⁵⁴ Questionnaire completed by Dr. Katharine Abernethy, University of Stirling, August 11, 2017.

¹⁵⁵ Interview with Serge Wich, Liverpool James Moore University.

¹⁵⁶ Philip Jacobson, “Indonesian Kingpin of Illegal Wildlife Trade Gets Two Years in Prison,” *Mongabay*, July 13, 2015, <https://news.mongabay.com/2015/07/indonesian-kingpin-of-illegal-wildlife-trade-gets-two-years-in-prison/>.

¹⁵⁷ “Indonesia Steps Up Fight Against Illegal Orangutan Trade,” Wildlife Conservation Society, February 23, 2015, <https://newsroom.wcs.org/News-Releases/articleType/ArticleView/articleId/5189/Indonesia-Steps-Up-Fight-Against-Illegal-Orangutan-Trade.aspx>.

¹⁵⁸ Beastall, Bouhuys, and Ezekiel, *Apes in Demand*, 6, 26.

¹⁵⁹ Beastall, Bouhuys, and Ezekiel, 7.

¹⁶⁰ “Inadequate Thai Legislation Failing to Prevent Trafficking of Non-Native Apes,” TRAFFIC, November 28, 2016, <http://www.traffic.org/home/2016/11/28/inadequate-thai-legislation-failing-to-prevent-trafficking-o.html>.

¹⁶¹ “Exotic Pet Owners Have Just Six Months to Hand in Animals,” *Gulf News*, January 8, 2017, <http://gulfnews.com/news/uae/society/exotic-pet-owners-have-just-six-months-to-hand-in-animals-1.1958580>.

investigations in CIS and Middle East countries get blocked by well-connected people, making it difficult to fight the buying and trafficking of great apes in these areas.¹⁶² Customs agencies in Europe give little attention to illegal bushmeat,¹⁶³ and Interpol has not been able to apply significant resources to great apes because the national governments behind it say that the priority is rhinos and elephants. Governments' reasoning is a view that great apes do not threaten the economic wellbeing or political stability of any countries.¹⁶⁴ A 2014 DLA Piper report found that many countries have loopholes or poor enforcement related to CITES-required laws.¹⁶⁵ Section II discussed how trafficking networks in Africa have exploited gaps related to CITES guidelines and documentation requirements. The 2016 CITES conference worked on the issue of abuse of the 'C' source code, and there is a push to get source countries to better verify captive breeding facilities.¹⁶⁶

A final aspect to consider before discussing specific recommendations is how the present illegal great ape trade dynamics impinge financially on government budgets and GDP in the countries from which the animals originate. Gorillas in Uganda and Rwanda, countries that do much better at protecting these great apes, help the economies there through greater tourism revenue. UN Environment estimates that a single live gorilla in Uganda brings in more than US\$1 million per year in tourism revenue, and Rwanda's eco-tourism sector was worth roughly US\$300 million in 2014.¹⁶⁷ If bonobos, chimpanzees, and gorillas in West and Central Africa were protected in national parks instead of stolen and slaughtered for illegal private gain by a few, how much might the eco-tourism sector in these economies grow, creating more jobs and more tax revenue, among other benefits? Instead, the regions' governments and some private charities are having to devote considerable financial resources to provide long-term care for rescued great apes. It costs around US\$4,000 per year per chimpanzee for care; most are rescued between the ages of 0 and 5, and they live until around 50(!), which can bring the total amount needed for each animal to as much as US\$200,000.¹⁶⁸ Great apes are intelligent, requiring a higher level of care, and they are very hard to re-introduce to the wild.¹⁶⁹ A greater emphasis on dismantling the illegal great ape trade would help stabilize the rescue population and its associated costs by keeping more animals in the wild, and this could make it easier to devote more financial resources to wildlife enforcement programs.

¹⁶² Interview with Ian Redmond, Born Free International/Ape Alliance.

¹⁶³ Mowbray, "Endangered Species to Declare?"

¹⁶⁴ Shukman and Piranty, "The Secret Trade in Baby Chimps."

¹⁶⁵ Kerr, "Great Apes in Asian Circus-Style Shows."

¹⁶⁶ Interview with Ron Orenstein, interview by Channing May, Skype, September 25, 2017.

¹⁶⁷ Clark, "Wildlife Crime: Stealing Animals."

¹⁶⁸ Interview with Julie Vanassche, Libassa Wildlife Sanctuary.

¹⁶⁹ Interview with Doug Cress, World Association of Zoos and Aquariums.

BOX 2: THE CASE OF GREAT APES IN ARMENIA

By Sasha Henry

Armenia is a post-Soviet state with pervasive corruption, a declining economy, and a fragile political system, making it an attractive location for the illegal trafficking of goods and services, including great apes. Armenian law allows for the private ownership of wildlife as long as the owner has adequate space to keep the animal(s).¹ Numerous private facilities, including zoos, restaurants and hotels, have capitalized on the ease of acquiring wildlife and the public's growing interest in viewing them.

The issue of illegality arises with how the animals are sourced and traded, particularly if fraudulent CITES permits are used, making the trade illegal. While owners claim that their animals entered the country legally, there is often very little paperwork to verify these assertions.² Armenia does not require CITES import permits for captive-bred Appendix I species, which is in accordance with CITES regulations, however for Armenia this has led to discrepancies in trade data between the country's designated CITES Management Authority—the Bio-Resources Management Agency within the Ministry of Nature Protection (MNP)—and the State Revenue Committee (SRC), which is responsible for tax and customs control.³

A 2014 investigation by *Hetq*, an Armenian online newspaper, discovered that not all of the great apes that have entered the country were recorded in the MNP's trade statistics.⁴ The SRC had records detailing that at least four chimpanzees and four bonobos have been imported into Armenia from Guinea, despite no record in the CITES Trade Database that a bonobo has ever been exported to or imported into Armenia.⁵ Further investigation revealed that the CITES export permit for two of the bonobos was fraudulent. The permit reported the animals as captive-bred (a 'C' source code), but there were not—and still are not—any (certified) captive breeding facilities in Guinea. Ansoumane Doumbouya, the then-head of Guinea's Management Authority who has been linked to the fraudulent export of more than one hundred great apes (see Box 1), was the person who signed the permit.⁶

In Armenia the paper trail led to several prominent figures in legal wildlife businesses but who also are suspected to be major players in the country's illegal import of great apes and other wildlife. The fraudulent CITES export permit for the bonobos that Doumbouya signed listed the address of Artur Khachatryan as the animals' destination. Khachatryan owns Zoo Fauna Art, a company that purchases and trades a variety of animal species through a network spanning Russia and the United Arab Emirates.⁷ One of the bonobos died

¹ Corrine Henn, "Inside The 'World's Saddest Zoo' and the Wildlife Trade That Brought the Animals There," One Green Planet, March 22, 2016, accessed November 16, 2017, <http://www.onegreenplanet.org/animalsandnature/inside-the-worlds-saddest-zoo/>.

² Henn, "Inside The 'World's Saddest Zoo'."

³ Arevick Mkrtchyan, Areg Karapetyan, and Gareth Goldthorpe, *An Assessment of Wildlife Trade in Armenia with Recommendations for Interventions* (Yerevan, Armenia: Foundation for the Preservation of Wildlife and Cultural Assets; Fauna & Flora International, 2016), 4, http://www.fpwd.org/wp-content/uploads/2017/04/Wildlife-Trade-in-Armenia_FPWC-FFI_2016.pdf.

⁴ Kristine Aghalaryan, "Endangered Animals Enter Armenia—And Then Go Where?," Organized Crime and Corruption Reporting Project, August 20, 2014, accessed October 31, 2017, <https://www.occrp.org/en/investigations/2596-endangered-animals-enter-armeniaand-then-go-where>.

⁵ Project to End Great Ape Slavery, "The Illegal Trade in Great Apes" (Kenya: OI Pejeta Conservancy, September 2016), 22, <https://freetheapes.files.wordpress.com/2014/11/cop17-report.pdf>; "CITES Trade Database," Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), accessed November 17, 2017, <https://trade.cites.org/>.

⁶ Project to End Great Ape Slavery, "The Illegal Trade in Great Apes," 22; "CITES Trade Database"; "GRASP Hails Arrest of Major Guinea Ape Trafficker," Great Apes Survival Partnership (GRASP), September 1, 2015, accessed November 7, 2017, <http://www.un-grasp.org/grasp-hails-arrest-of-major-guinea-ape-trafficker/>.

⁷ Aghalaryan, "Endangered Animals Enter Armenia."

shortly after arriving in Armenia and Khachatryan leased the surviving bonobo to a man named Artyom Alik Vardanyan.⁸

Artyom Alik Vardanyan, his brother Eduard Alik Vardanyan, and Khachatryan have been major focus points in *Hetq's* investigation. Artyom owns the Jambo Exotic Park & Restaurant, and he is one of the most recognized wildlife traders in Armenia. The Vardanyans have close business ties with Khachatryan.⁹ Several years ago, the Armenian Ministry of Finance named Khachatryan as a suspect in a criminal investigation involving his role in illegally importing endangered species, however the government dropped the case in 2016 due to what seem to be technicalities.¹⁰

In March 2016, Tanzanian authorities arrested the Vardanyan brothers at Kilimanjaro International Airport for attempting to export dozens of wild-caught monkeys to Armenia.¹¹ Although the brothers ostensibly had official cargo permits, the Minister of Natural Resources and Tourism had previously declared a three-year ban on the export of live animals because of repeated offenses in the customs procurement process, making the brothers' cargo permits null and void and the export illegal.¹² A Tanzanian court denied the brothers bail, and law enforcement arrested an additional five suspects, four of whom were government officials.¹³ A total of seven suspects were arrested for attempting to illegally export 61 primates to Eastern Europe, with the cargo valued at US \$7,320—likely indicating the source region price for the animals rather than the price the animals would fetch in Armenia and beyond, which would be much higher.¹⁴ Artyom argued that the seized primates belonged to Khachatryan and said that he and his brother were only accountable for the transportation of the animals.¹⁵ Reporting on the case is unclear as to the current status of the brothers.

As long as there is a strong demand for exotic wildlife like great apes coupled with lax enforcement, Armenia will continue to serve as a transit and destination country for these endangered animals. Private facilities serve as status symbols and commercial enterprises in these societies, and wildlife rules and regulations are not meticulous enough to properly monitor, investigate and prosecute traffickers in the region. Armenia has increasingly become a major transit route as well as a destination point for traffickers moving goods and services from Asia as well as Africa. Without proper enforcement or sufficient laws, criminals will continue to illegally import great apes as a vehicle for profit and pleasure.

⁸ Ibid.

⁹ Ibid.

¹⁰ Ibid.

¹¹ Kristine Aghalaryan and Hrant Galstyan, "Armenia: 'Exotic Park' Owner Arrested for Monkey Smuggling in Tanzania," Organized Crime and Corruption Reporting Project, March 26, 2016, accessed October 31, 2017, <https://www.occrp.org/en/daily/5090-armenia-exotic-park-owner-arrested-for-monkey-smuggling-in-tanzania>; Project to End Great Ape Slavery, "The Illegal Trade in Great Apes," 22–23.

¹² Anne Robi, "Tanzania: Ban On Export of Live Animals Remains Intact," *Tanzania Daily News*, December 22, 2016, accessed November 7, 2017, <http://allafrica.com/stories/201612220059.html>.

¹³ "Tanzania: Five More Joined in Monkey Export Saga," *Tanzania Daily News*, March 31, 2016, accessed November 7, 2017, <http://allafrica.com/stories/201603311272.html>.

¹⁴ Kristine Aghalaryan and Hrant Galstyan, "Tanzanian Court Denies Bail to Vardanyan Brothers, Arrested for Animal Smuggling Last Month - *Hetq* - News, Articles, Investigations," *Hetq.am*, April 11, 2016, accessed November 3, 2017, <http://hetq.am/eng/news/67090/jambo-aygu-sepakanatirojy-gravi-dimac-azat-chen-ardzakel.html./=-0987u6y5>.

¹⁵ Ibid.

RECOMMENDATIONS

Significantly curtailing the illicit trade in great apes will entail greater sharing and mobilizing of information by governments, global bodies like the UN, CITES, the WCO, and Interpol, and civil society organizations to shrink the space in which this illegal industry has been operating. The annual estimated values within this industry, the rate of decline of each of the four species, and the costs of caring for animals rescued from this illegal trade point to the need for governments and global bodies, and the private sector, to take the illegal great ape trade more seriously. The specific, actionable recommendations that follow take into account existing resource constraints as well as offering options for how additional resource investments could be allocated for high outcome returns.

Governments need to increase the consequences of buying or trafficking great apes illegally, so that it is no longer such a “safe” and profitable crime that encourages rather than discourages involvement. This effort involves three parts: close loopholes in applicable laws, increase the rate of arrest and prosecution, and raise the penalties for those who break the laws. Thailand loses by allowing criminals and their clients to use the country’s sovereign territory to illegally buy, sell, or house any of the world’s four great apes. The Government of Thailand needs to close the loophole in its law that was mentioned earlier in Section IV.

Governments in other countries also need to ensure that wildlife crimes are specified as predicate offenses for money laundering. This would open up additional charges against those involved and would require financial institutions to keep the proceeds of the illegal great ape trade out of their accounts—or face charges and expensive penalties themselves.

Investigators from police forces and other government agencies also need to consistently apply existing laws to those they catch with illegal great apes, rather than the current practice of doing so only very infrequently. Rescuing the animals without taking action against those involved perpetuates a vicious cycle of killing, theft, and profit, especially without an arrest record that could be fed into due diligence databases. This is related to the third objective—raising the penalties—by changing a participant’s risk calculation from the chance of losing one animal worth perhaps as much as US\$250,000 (see Appendix Table G) to a chance of losing the worth of the animal and having to pay a fine plus be away from their business while in jail, thereby multiplying their losses. However, this also means that the fines and jail time those convicted face need to be sufficiently costly. Indonesia is working on increasing the maximum sentence for poachers and traffickers; the current fine of 100 million rupiah (US\$7,500) is too small compared to the sale price of the country’s orangutans of up to US\$69,000 for foreign buyers (see Appendix Table L).¹⁷⁰ Facilities that governments investigate and sanction for having illegal great apes, such as zoos and safari parks,

¹⁷⁰ Associated Press, “Indonesian Police Arrest Man Who Bought Orangutan, Leopard, Bear.”

should lose their operating license and the owners banned from opening a similar facility, otherwise these businesses may decide to keep buying these illegal animals.¹⁷¹

Governments, civil society groups, and the CITES Secretariat should increase public reporting on investigations, arrests, prosecutions, and seizures in the illegal great ape trade to mobilize all stakeholders. Knowledge is power, and organizations working on fighting the illegal trade in great apes are not sharing information widely and systemically enough to mobilize and empower fellow stakeholders in the fight against this criminal industry. Citizens need to know what is happening in their country and with their natural resources, and the private sector, especially financial institutions, need to be informed on smuggling and money laundering risks. The CITES Secretariat, working with UN Environment, has a seizures database called GRASP, but there is no public access.¹⁷² CITES, government representatives, and civil society groups can work together on a system that will balance the right to access to information and any privacy or sensitive data issues.

Financial institutions and transportation companies also need improved access to information on the names of companies and individuals found to be involved in the illegal great ape trade in order to carry out due diligence. An example of this in practice would be a corporate officer of an airline (not a local hire) running pertinent information through a customer due diligence system when someone makes a reservation to transport animal cargo.

We used World-Check to determine to what extent great ape traffickers were identified alongside criminals, terrorists, politically exposed persons, and sanctioned individuals and organizations, among others, in a risk intelligence database. Out of 9,000 wildlife crime entries in the system, up to 100 were related to crimes involving great apes. We found that traffickers who had made prominent headlines regarding their arrests and convictions, such as the individuals involved in the Doumbouya Pets Company network (see Box 1) and the Vardanyan brothers (see Box 2), made up the bulk of the entries. Lower level operatives whose arrests or convictions for great ape-related criminal activity are not reported widely enough in the media or by governmental or non-governmental investigators are likely not included in the database. Government investigators and their civil society partners should share public information on arrests and convictions with KYC (know your customer) database firms such as World-Check, so that financial institutions will be better able to keep corrupt and criminal clients out of the legitimate financial system, making it harder for these illicit actors to launder their money.

¹⁷¹ Beastall, Bouhuys, and Ezekiel, *Apes in Demand*, 26.

¹⁷² Interview with Johannes Refisch, UN-GRASP.

Governments, civil society groups, and journalists investigating the illegal buying and selling of great apes need to include the movement of money from these activities as a core component of their investigations, because money is the key driver of these crimes.

Smaller transactions that are handled in cash in local currencies, such as payments to poachers, will be hard to combat since this money is likely not being deposited in traditional bank accounts. Transactions at the other end of the value chain, including larger bribes, will involve the formal financial system, and that is an under-utilized opportunity to fight this illegal industry thanks to anti-money laundering and counter terrorism financing (AML/CFT) laws. Some government investigators and civil society groups who work on investigations, such as the Freeland Foundation, have been partnering with national financial intelligence units (FIUs), but it is the exception rather than the norm, and it has not been a major line of effort against the trafficking networks.¹⁷³ FIUs are staffed by experts in AML/CFT and forensic accounting to be able to receive, assess, and share analysis on the financial aspects of crimes.

Follow the money, and investigate individuals and businesses that handle it: Which financial institution(s) processed the wire transfers? With which banks do the traffickers and their front companies have accounts? Where are the corrupt government officials facilitating the illegal trade depositing their bribes? When the money from any of these sources is transferred overseas, does it ever go through correspondent accounts in major Western financial centers such as the United States, France, or the UK? If the answer to this last question is 'yes', or if the electronic transfers are in U.S. Dollars, British Pounds, or Euros, then it is possible to open investigations in these countries, and their investigators may have more political will or capacity to take action than their counterparts in other countries involved in the illegal trades.

Participants in the illegal great ape trade are increasingly using social media to conduct business, and governments, the CITES Secretariat, civil society groups, and the private sector need to come together to deny these criminals and their buyers access to these platforms. There are two steps to this effort: 1) developing algorithms to help identify posts on websites and social media platforms that are promoting the sale of a great ape and 2) ensuring that the companies behind these platforms are diligently applying the algorithms. This is a daunting challenge, but unlike a law that each country must pass and implement, the four stakeholder groups can pool their resources to pay for the development of algorithms that are then applied globally, benefiting everyone. The result will be computer systems that automatically scan for risky posts across these platforms, which saves national and international investigators significant time and allows them to accomplish more with the resources and manpower they do have. Most of the tech firms involved will be eager to help with this effort and keep abusive posts off their sites, and they will have important insights on feasibility and efficiency of different algorithms, helping to ensure better outcomes and stronger buy-in. CITES is working to make its permits electronic instead of

¹⁷³ Interview with Ricardo Forrester, Freeland Foundation.

the easier-to-forge paper permits. The people and networks buying and selling great apes illegally have shown no such hesitation with technology, which has given them a significant advantage over enforcement efforts. This dynamic needs to be disrupted.

WRAP-UP

None of these policy or enforcement changes will “fix” the problem of the illegal trading of the world’s great apes. The steps outlined above represent additional lines of effort to make it harder and harder for participants in the illegal great ape trade to stay out of jail and to make enough money to be worth the risk of fines, asset seizures, and imprisonment.

V. CONCLUSIONS

This paper has sought to make a positive contribution to the global effort to end the illegal trade around great apes by collecting in one place published statistics and analysis as well as original interviews with experts on the values and overall dynamics and providing recommendations for future research, collaboration, and investigations based on that assessment. The world's four great apes—bonobos, chimpanzees, gorillas, and orangutans—are all classified as endangered species due to pressures from the environment, land use, and the illegal sale of infants and juveniles for pets and attractions and the adults for bushmeat and body parts. The next stage of the campaign to protect them should invest resources in tracking and shutting down the illegal payments flowing to and from the dealers, who are the most important players in the markets, to close the highly profitable space in which they are operating and driving the overall trade.

Thousands of bonobos, chimpanzees, and gorillas are killed each year to fill the demand for pets and attractions, bushmeat, and ceremonial body parts, potentially generating significant revenue for those who make up the illicit supply chains. The average annual value of the international market for live infants and juveniles may be up to US\$2.1 million-US\$8.8 million. Experts involved in a 2013 United Nations Environment Programme report estimated that around 7 bonobos, 14 gorillas, and 92 chimpanzees enter the live trade annually on average,¹⁷⁴ suggesting a possible international market value of US\$147,000-US\$301,000 for bonobos, US\$560,000-US\$2.1 million per year for gorillas, and US\$1.4 million-US\$6.4 million for chimpanzees. These figures reflect the retail prices that international buyers have paid and include amounts for the animals themselves, payments for transportation to the destination (including fraudulent authorization), and fees for the people facilitating the trade. Specialized illicit networks, often with direct or tacit support from senior government or military officials, smuggle the products and the money with minimal disguise and adapt to take advantage of new connections to poachers and to buyers. Money changes hands along the supply chains using cash in local currencies, wire transfers that are largely in US dollars, online payment services, and other systems. The combined domestic market for bushmeat from gorillas, chimpanzees, and bonobos may be worth as much as US\$650,000-US\$6.0 million per year, but the existing literature does not indicate what happens to this money at the higher levels. We found even less data and information on the trade in body parts and were not able to calculate a reliable estimated range for the annual domestic value.

Orangutans on the islands of Sumatra and Borneo in Indonesia and Malaysia—Asia's only great apes—are losing their battle for survival due to habitat destruction from commercial plantations, the killing of adults of the species, and the selling of orphaned infants on the black market. The illegal market for baby orangutans is thriving with domestic and international consumers buying an estimated 146 per year on average¹⁷⁵ and possibly spending US\$277,000 to as much as

¹⁷⁴ Stiles et al., *Stolen Apes*, 8.

¹⁷⁵ Stiles et al., 8.

US\$10 million in total. The buyer pays the supplier's account in the buyer's country or transfers it electronically using a platform such as WeChat,¹⁷⁶ and the supplier pays the dealer for his or her role in cash in his or her local currency.¹⁷⁷ Trafficking orangutans sometimes involves organized gangs that are not specific to this trade, but most often the illegal trade in orangutans involves networks and individuals who specialize in the business, particularly in the case of foreign sales.¹⁷⁸ Some experts we interviewed indicated that a small market for bushmeat from the adults of the species does exist, but we did not find or receive data to be able to calculate how much money this business may be worth. Demand for and supply of orangutan body parts is extremely limited, likely because people do not use them in traditional medicines, ceremonies, or rituals.

The illegal trade in great apes is a lucrative and low-risk business for those operating at the middle and upper levels, and governments are doing too little to address this problem. These values and dynamics have depended on large gaps in CITES enforcement, public and private sector corruption, insufficient resources for investigators in developing and developed countries, local community challenges, and abuse of social media and financial service companies. Governments, CITES, Interpol, the UN, the World Customs Organization, and civil society organizations can increase their effectiveness in combatting the illegal great ape trade by closing information gaps, by increasing the legal risks and consequences for traffickers, dealers, and high-level consumers, and by focusing more investigative resources on the money from the illegal trade that is in the formal financial system. None of these policy or enforcement changes will "fix" the problem of the illegal trading of the world's great apes, they represent additional lines of effort to make it harder and harder for participants in the illegal great ape trade to stay out of jail and to make enough money to be worth the risk of fines, asset seizures, and imprisonment.

¹⁷⁶ Interview with Andrea Costa, Elephant Action League.

¹⁷⁷ Interview with Daniel Stiles.

¹⁷⁸ Mosbergen, "Dark Story Behind"; Questionnaire completed by Dr. Ian Singleton, Sumatran Orangutan Conservation Programme.

APPENDIX: METHODOLOGY & DATA

I. METHODOLOGY

Experts on great apes have worked hard to try to provide reliable and specific estimates for the number of members of each species in the wild, in zoos, and in illegal markets, and we have endeavored to do our best in providing the first set of public estimates of various levels of values of the illegal markets. This has required collecting original data and making decisions about how best to use the resources we have, in order to make a positive contribution to the literature and to the larger effort to protect these endangered natural resources. Many important gaps exist in data that are relevant to assigning values to the illegal great ape trade, as we highlighted in Sections II-IV (see pages 8-9, 18, and 23). Future research and analysis, by us and by others, will hopefully be able to improve on the work that we have done, and in the meantime we are happy to have provided a starting point. In this Appendix we explain how we approached the data, and we provide the full data tables with sources.

We compiled the data based on publicly available documents, interviews with experts, and questionnaires to individuals and groups in Indonesia, Malaysia, and Central and West Africa, doing our best to filter for outliers. For each case, we recorded the species, the location involved, a high and/or low price, the types of actors involved, the year the data were published, and the source of the data. We excluded data for years prior to 2010 or that fell well outside the central range of the rest of the data from our analysis and calculations. We did this to ensure that a few unusually large or low observations did not unduly influence our estimates. An example of such a data point is the reported 2002 payment by a zoo in Malaysia of US\$400,000 for a gorilla, a price that was more than double the next highest price of US\$150,000. However, we still report the data that we excluded from our analysis in the tables in this Appendix for transparency and information sharing purposes.

The values we calculated and reported in Sections II and III reflect our efforts to follow as simple a method as feasible and to be open about the uncertainty of what the figures would be with perfect information. We limited our estimates of market values to the international side for bonobos, chimpanzees, and gorillas, because those transactions are the most consequential and have the most robust data. We calculated value in a straightforward way: we multiplied the estimated number of each species in the illegal live trade annually by the low price and then by the high price. This means that we treated every animal as reaching the international market, which will not actually have been the case. We judged that the estimated ranges of value enabled by that assumption would likely bracket the “true” value. Orangutans, we know from the qualitative literature, have a more substantial domestic market than their African counterparts, so we used the highest price a domestic buyer has paid in order to calculate the estimated value for the low end of the range, instead of using the low international market price as we did for bonobos, chimpanzees, and gorillas. We decided not to add the four ranges together for a global estimate for the live illegal great ape trade, because the networks involved largely do not intersect, so there is less utility in a global figure, and because we do not want to over-stretch our simple methodology and relatively limited datasets.

We followed a similar rationale in our approach to calculating estimated values of the illegal bushmeat market. The data that we could gather were quite limited, so we could not calculate any values for orangutans, and we could only calculate a reasonable range for bonobos, chimpanzees, and gorillas by lumping them together and treating them as all having the same prices per kilo. The existing qualitative research that we reviewed indicated domestic markets as dominating the illegal great ape bushmeat market in West and Central Africa, and we did not find reliable figures for how many kilos (of great apes) people sell outside this region. We therefore determined that the most responsible approach was to treat all sales as “domestic,” by which we mean villages, towns, and cities in countries in West and Central Africa directly tied to the three great ape species. We calculated the volume of illegal bushmeat (in kilos), using several data sources (the existing literature had little data) and in several steps:

- First, we adopted the Bushmeat Project’s estimate that poachers, villagers, and local workers kill 8,000 great apes in the region annually for bushmeat.¹⁷⁹
- Next, we applied the ratios of bonobos, chimpanzees, and gorillas in the live trade (see: *Stolen Apes: The Illicit Trade in Chimpanzees, Gorillas, Bonobos and Orangutans*) to estimate their respective volumes for bushmeat. That assumption is consistent with the observed tendencies for poachers seeking bushmeat to kill the adults and sell any of the young for the live trade and for those seeking the infants and juveniles for the live trade to sell parts of the adults they kill for bushmeat and body parts.
- Finally, we converted the counts for each species into kilos using estimates of average weight for male and females in each species (assuming the population was split evenly between the two genders).

We then translated the volume estimates for each species (in kilograms) into values using the high and low prices in the data.

We lacked sufficient data to reliably estimate ranges for body parts for any of the four species.

As a result of the data limitations, we judged that a robust estimate of the overall value of the entire illegal great ape industry is not possible at this time. To the extent this study contributes to increasing awareness of the economic significance of illicit activity associated with the great apes, future research will doubtless work to build more complete and accurate databases and pave the way for more refined methodologies than we could apply here.

¹⁷⁹ “The Illegal Pet Trade.” Some experts consider the 8,000 figure to be on the high-end.

II. DATA TABLES

Appendix Table A. Market Value per Bonobo
(in U.S. dollars)

Location	Price Low	Price High	Transaction	Year
Village, source ¹	\$50	\$100	village poacher to middleman	2016
Congo ²	.	\$450	price given by a shopkeeper to sell her family's pet	2013
Boma, DRC ³	.	\$450	price paid to middleman, source region	2013
Kinshasa, DRC ⁴	\$1,000	\$2,500	price paid to middleman, source region	2014
Capital city, such as Kinshasa or Conakry ⁵	\$1,000	\$2,500	price paid to middleman by international buyer	2016
Conakry, Guinea ⁶	.	\$15,000	price paid to middleman/dealer, outside source area (quoted \$30,000 for pair)	2013
Capital city, source region ⁷	\$15,000	\$20,000	price paid to middleman/dealer by international buyer for export, includes cost of shipment	2016
Russia ⁸	.	\$21,000	online, demand country dealer to consumer	2016
Russia ⁹	.	\$43,000	online, demand country dealer to consumer	2017

¹ Project to End Great Ape Slavery, "The Illegal Trade in Great Apes" (Kenya: OI Pejeta Conservancy, September 2016), 30, <https://freetheapes.files.wordpress.com/2014/11/cop17-report.pdf>.

² Daniel Stiles et al., eds., *Stolen Apes: The Illicit Trade in Chimpanzees, Gorillas, Bonobos and Orangutans*, A Rapid Response Assessment (Arendal, Norway: United Nations Environment Programme; GRID-Arendal, 2013), 41, <http://www.grida.no/publications/rr/apes/>.

³ Ibid., 42.

⁴ Project to End Great Ape Slavery, "The Illegal Trade in Great Apes," 6.

⁵ Ibid., 30.

⁶ Stiles et al., *Stolen Apes*, 42.

⁷ Project to End Great Ape Slavery, "The Illegal Trade in Great Apes," 30.

⁸ Ibid., 24.

⁹ "Primates | Page 6 | www.Zoo-Ekzo.Ru - Sale of Exotic Animals," *Zoo Ekzo*, September 19, 2017, <http://www.zoo-ekzo.ru/taxonomy/term/9?page=5>.

Appendix Table B. Market Value per Chimpanzee Price Paid to Poacher (in U.S. dollars)

Location	Price Low	Price High	Transaction	Year
Province Orientale, DRC ¹	\$5	\$50	price paid to poacher by next level trader or buyer at the local level	2017
South Kivu, DRC ²	\$15	\$150	price paid to poacher by low level trader/middleman	2017
Sierra Leone ³	\$15	\$300	price paid to poacher or low level trader, chimpanzee to remain in country as pet	2009
Source country ⁴	\$20	\$50	price paid to poacher	2016
Africa ⁵	\$20	\$50	price paid to poacher, village level	2016
Guinea ⁶	.	\$50	price paid to poacher	2013
Africa ⁷	\$50	\$100	price paid to poacher by low level trader/middleman	2013
Village, source country ⁸	\$50	\$100	price paid to poacher by low level trader/middleman	2016
Cameroon ⁹	.	\$100	local black market	2010
Gabon ¹⁰	.	\$135	local black market	2017
Africa ¹¹	.	\$360	price paid to poacher by middleman (€300)	2017
RANGE	\$5	\$360		

¹ Interview with Laura Darby, interview by Channing May, Phone Call, September 22, 2017.

² Questionnaire completed by Centre de Réhabilitation des Primates de Lwiro, August 4, 2017.

³ Asami Kabasawa, "Current State of the Chimpanzee Pet Trade in Sierra Leone," *African Study Monographs* 30, no. 1 (2009): 45.

⁴ Geoffrey Kamadi, "Home for the Holidays: Chimp Exits War-Torn Iraq, Lands in Kenya," *Mongabay*, December 12, 2016, <https://news.mongabay.com/2016/12/home-for-the-holidays-chimp-exits-war-torn-iraq-lands-in-kenya/>.

⁵ Amanda Fisher, "How a Kenyan Ape Sanctuary Is Battling Illegal Mideast Trade," *Al Arabiya*, November 23, 2016, <http://english.alarabiya.net/en/life-style/travel-and-tourism/2016/11/21/How-a-Kenyan-ape-sanctuary-is-battling-illegal-Mideast-trade.html>.

⁶ Stiles et al., *Stolen Apes*, 42.

⁷ *Ibid.*, 9.

⁸ Project to End Great Ape Slavery, "The Illegal Trade in Great Apes," 30.

⁹ Lora Ghobrial et al., "Tracing the Origins of Rescued Chimpanzees Reveals Widespread Chimpanzee Hunting in Cameroon," *BMC Ecology* 10, no. 2 (2010): 2, <https://doi.org/10.1186/1472-6785-10-2>.

¹⁰ Gaspard Abitsi to Channing May, "Illegal Trade of Great Apes in Gabon," September 21, 2017.

¹¹ David Shukman and Sam Piranty, "The Secret Trade in Baby Chimps," *BBC News*, January 30, 2017, <http://bbc.in/2k3TtXy>.

Appendix Table C. Market Value per Chimpanzee Price Paid to Low-level Trader (in U.S. dollars)

Location	Price Low	Price High	Transaction	Year
Africa ¹	\$50	\$100	price paid to trader, town	2016
Africa ²	\$200	\$400	price paid to trader	2013
Kano, Nigeria ³	.	\$350	price paid to trader, source region	2013
RANGE	\$50	\$400		

¹ Fisher, "How a Kenyan Ape Sanctuary."

² Stiles et al., *Stolen Apes*, 9.

³ *Ibid.*, 42.

Appendix Table D. Market Value per Chimpanzee

Price Paid to Middleman, Domestic Sale (in U.S. dollars)

Location	Price Low	Price High	Transaction	Year
Capital city, such as Kinshasa or Conakry ¹	\$500	\$1,000	price paid to middleman to in-country international buyer/dealer for export, ape only	2017
Africa ²	\$500	\$5,000	price paid to middleman, city (domestic sale)	2017
Kinshasa, DRC ³	\$550	\$800	price paid to middleman (one level up from collector/poacher)	2009
Yaoundé, Cameroon ⁴	.	\$1,700	price paid to middleman, source region	2016
Conakry, Guinea ⁵	.	\$7,500	price paid to middleman/dealer (city) by in-country foreign buyer, without shipment fee or CITES permit	2016
RANGE	\$500	\$7,500		

¹ Project to End Great Ape Slavery, "The Illegal Trade in Great Apes," 30.

² Fisher, "How a Kenyan Ape Sanctuary."

³ Project to End Great Ape Slavery, "The Illegal Trade in Great Apes," 6.

⁴ Stiles et al., *Stolen Apes*, 42.

⁵ Jeremy Smith, "Chinese Mining Fuels Trade in Guinea's Apes," China Dialogue, March 22, 2013, <https://www.chinadialogue.net/article/show/single/en/5813-Chinese-mining-fuels-trade-in-Guinea-s-apes>.

Appendix Table E. Market Value per Chimpanzee

Price Paid to Middleman, International Sale (in U.S. dollars)*

Location	Price Low	Price High	Transaction	Year
Africa ¹	.	\$12,500	African middleman to buyer	2017
Africa ²	\$15,000	\$20,000	price paid to middleman (city) for export to Middle East or China	2016
Capital city, source region ³	\$15,000	\$20,000	price paid to middleman by international buyer/dealer for export, including shipment; buyer is outside the source country	2016
Cameroon ⁴	.	\$20,000	international market price	2010
Cairo, Egypt ⁵	.	\$20,000	price paid to middleman/dealer, exported with CITES permits	2013
Kuwait, Qatar, Saudi Arabia, Russia, Armenia, Thailand, and China ⁶	\$20,000	\$30,000	price paid to middleman by international dealer	2016
RANGE:	\$12,500	\$30,000		

*These prices will have typically included any costs for transportation and CITES documents.

¹ Shukman and Piranty, "The Secret Trade in Baby Chimps."

² Fisher, "How a Kenyan Ape Sanctuary."

³ Project to End Great Ape Slavery, "The Illegal Trade in Great Apes," 30.

⁴ Ghobrial et al., "Tracing the Origins," 2.

⁵ Stiles et al., *Stolen Apes*, 42.

⁶ Project to End Great Ape Slavery, "The Illegal Trade in Great Apes," 31.

Appendix Table F. Market Value per Chimpanzee
Price Paid by Final Buyer (in U.S. dollars)

Location	Price Low	Price High	Transaction	Year
Damascus, Syria ¹	.	\$15,000	price paid to dealer by private zoo, including shipment/transport by road to Erbil, Iraq; no CITES permit but veterinary health certificates	2013
Destination country ²	\$15,000	\$20,000	price paid by final buyer	2016
Qatar ³		\$20,600	price paid to dealer by final buyer (QAR 75,000)	2016
Gulf countries ⁴	\$20,000	\$30,000	price paid to dealer by final buyer	2016
Online (Asian Dragon) ⁵		\$20,500	online price to wholesaler/retailer, chimpanzee from Guinea, including CITES permits	2012
Russia ⁶	.	\$21,000	online price, demand country dealer to final buyer (P1,200,000)	2016
Asia ⁷	\$25,000	\$30,000	price paid by final buyer	2016
China ⁸	.	\$26,000	price paid for a baby chimpanzee in China	2016
Russia ⁹	\$34,000	\$43,000	online price, demand country dealer to final buyer (P2,000,000 to P2,500,000)	2017
Dubai, UAE ¹⁰	.	\$40,000	price paid to wholesaler/dealer to final buyer	2016
China ¹¹	.	\$70,000	price paid to animal wholesaler/trading company by Chinese zoo, including all transportation and dealing with CITES regulations	2017
RANGE	\$15,000	\$70,000		

¹ Project to End Great Ape Slavery, "The Illegal Trade in Great Apes," 31.

² Kamadi, "Home for the Holidays."

³ "Great Ape Trafficking to Qatar for Pets – and Safari Parks?," Project to End Great Ape Slavery, March 27, 2016, <https://freetheapes.org/2016/03/27/great-ape-trafficking-to-qatar-for-pets-and-safari-parks/>.

⁴ Project to End Great Ape Slavery, "The Illegal Trade in Great Apes," 31.

⁵ Ibid., 27.

⁶ Ibid., 24.

⁷ Matt McGrath, "New Data Shows 'staggering' Extent of Great Ape Trade," *BBC News*, September 29, 2016, <http://www.bbc.com/news/science-environment-37513707>.

⁸ Nick Clark, "Wildlife Crime: Stealing Animals to Sell as Pets," *Al Jazeera*, May 26, 2016, <http://www.aljazeera.com/news/2016/05/wildlife-crime-stealing-animals-sell-pets-160525113231433.html>.

⁹ "Primates | Page 6 | www.zoo-ekzo.ru - Sale of Exotic Animals."

¹⁰ Project to End Great Ape Slavery, "The Illegal Trade in Great Apes," 30.

¹¹ Dave Neale to Channing May, "Illegal Trade in Great Apes," September 11, 2017.

Appendix Table G. Market Value per Infant Gorilla
Price Paid Throughout Supply Chain (in U.S. dollars)

Location	Price Low	Price High	Transaction	Year
Gabon ¹	\$135	\$270	price paid to poacher, local black market	2017
Brazzaville, Congo ²	.	\$2,300	price paid to poacher	2013
Capital city in Africa, such as Kinshasa or Conakry ³	\$1,000	\$2,500	price paid to middleman in source region (buyer in-country)	2016
Kinshasa, DRC ⁴	.	\$2,500	price paid to middleman in source region	2014
Online (Asian Dragon) ⁵	.	\$37,000	online wholesaler/retailer; price for ape from Guinea, including CITES permits	2012
Cairo, Egypt ⁶	.	\$37,000	price paid to middleman/dealer, outside source region	2013
Source country (likely capital city) ⁷	.	\$40,000	price paid to middleman by international buyer/dealer; buyer is outside the source country, price includes shipment	2016
China ⁸	.	\$40,000	price paid by buyer in China	2016
Asia ⁹	.	\$45,000	price paid in demand region	2016
Africa ¹⁰	.	\$137,500	African dealer to buyer in Dubai (AED 500,000) (likely covers CITES permits and shipment)	2016
Cairo, Egypt ¹¹	.	\$150,000	price paid to dealer, outside source region; price includes health certificates	2013
Dubai, UAE ¹²	.	\$250,000	price reportedly offered by West African dealer to buyer in Dubai (\$500,000 for a pair), price all inclusive	2016
Malaysia ¹³	.	\$400,000	price reportedly paid to a broker by a Malaysian zoo	2002

¹ Abitsi to May, "Illegal Trade of Great Apes in Gabon."

² Stiles et al., *Stolen Apes*, 42.

³ Project to End Great Ape Slavery, "The Illegal Trade in Great Apes," 30.

⁴ Ibid., 6.

⁵ Ibid., 27.

⁶ Stiles et al., *Stolen Apes*, 42.

⁷ Project to End Great Ape Slavery, "The Illegal Trade in Great Apes," 30.

⁸ Clark, "Wildlife Crime: Stealing Animals."

⁹ McGrath, "New Data Shows 'Staggering' Extent."

¹⁰ Project to End Great Ape Slavery, "The Illegal Trade in Great Apes," 31.

¹¹ Stiles et al., *Stolen Apes*, 42.

¹² Daniel Stiles to Channing May, "Request for Comments," December 15, 2017.

¹³ Stiles et al., *Stolen Apes*, 42.

Appendix Table H. Market Value per Orangutan Price Paid to Poacher (in U.S. dollars)

Location	Price Low	Price High	Transaction	Year
Sumatra, Indonesia ¹	.	\$8	price paid to poacher by palm oil plantation employee	2015
Borneo ²	\$13	\$100	price paid to poacher, source area	2013
Kalimantan, Indonesia ³	\$27	\$112	price paid to poacher, source area	2005
Kalimantan, Indonesia ⁴	\$37	\$75	price paid to poacher, source area (IDR500,000 - IDR1,000,000)	2017
Village, source country ⁵	\$50	\$100	price paid to village poacher by middleman	2016
Sumatra, Indonesia ⁶	.	\$121	price paid to local trader	2015
RANGE	\$8	\$121		

¹ Christina M. Russo, "Baby Orangutan Loses Everything So Someone Could Make \$8," *The Dodo*, July 14, 2015, <https://www.thedodo.com/orangutan-sumatran-palm-oil-1248344032.html>.

² Stiles et al., *Stolen Apes*, 42.

³ "The Illegal Pet Trade," *World Orangutan Events*, August 22, 2017, <http://www.worldorangutanevents.org/illegal-pet-trade.php>.

⁴ Nico Hermanu to Channing May, "Illegal Trade in Orangutans," September 27, 2017.

⁵ Project to End Great Ape Slavery, "The Illegal Trade in Great Apes," 30.

⁶ Confidential source.

Appendix Table I. Market Value per Orangutan Price Paid to Local Trader (in U.S. dollars)

Location	Price Low	Price High	Transaction	Year
Indonesia ¹	.	\$140	price paid to trader by local for baby orangutan to be kept as a pet	2016
Aceh, Indonesia ²	\$188	\$247	price paid to trader, small town	2016
Kalimantan, Indonesia ³	.	\$194	price paid to trader in source-region town	2013
Indonesia ⁴	.	\$262	price paid to trader by local buyer	2013
Java, Indonesia ⁵	.	\$385	price paid to middleman/dealer, city; price for animal only	2016
RANGE	\$140	\$385		

¹ "Our Team in Indonesia Fights to Save the Life of a Baby Orangutan - the Latest Victim of the Illegal Pet Trade," *International Animal Rescue*, June 25, 2012, <https://www.internationalanimalrescue.org/news/our-team-indonesia-fights-save-life-baby-orangutan-latest-victim-illegal-pet-trade?currency=USD>.

² Gunung Gea to Channing May, "Follow up (Illegal Trade in Orangutans)," August 31, 2017.

³ Stiles et al., *Stolen Apes*, 42.

⁴ "Indonesian Authorities Uncover Online Orang Utan Trade," *The Straits Times*, August 25, 2017, <http://www.straitstimes.com/asia/se-asia/indonesia-authorities-uncover-online-orangutan-trade>.

⁵ "The Illegal Pet Trade."

Appendix Table J. Market Value per Orangutan
Price Paid to Middleman, Domestic Sale (in U.S. dollars)

Location	Price Low	Price High	Transaction	Year
Jakarta, Indonesia ¹	.	\$454	price paid to middleman/dealer, city; price for animal only	2013
Capital city, such as Jakarta ²	\$500	\$1,000	price paid to middleman/dealer, city; price for animal only	2016
Medan, Indonesia ³	.	\$575	price paid to middleman/dealer, city; price for animal only	2017
Medan, Indonesia ⁴	.	\$583	price paid to middleman/dealer, city; price for animal only	2016
Source country, capital city ⁵	.	\$1,000	price paid to middleman/dealer, city; price for animal only	2013
Java, Indonesia ⁶	.	\$1,000	price paid to middleman/dealer, city; price for animal only	2013
Medan, Indonesia ⁷	.	\$1,300	price paid to online wildlife trader by local buyer	2015
Medan, Indonesia ⁸	.	\$1,400	price paid to middleman/dealer, city; price for animal only	2015
Jakarta, Indonesia ⁹	.	\$1,860	price paid to middleman/dealer, city; price for animal only	2017
Jakarta, Indonesia ¹⁰	.	\$1,900	price paid to middleman by domestic buyer, to keep orangutan as a pet	2017
RANGE	\$454	\$1,900		

¹ Stiles et al., *Stolen Apes*, 42.

² Project to End Great Ape Slavery, "The Illegal Trade in Great Apes," 30.

³ Gea to May, "Follow up (Illegal Trade in Orangutans)."

⁴ Ibid.

⁵ Stiles et al., *Stolen Apes*, 9.

⁶ Ibid., 42.

⁷ Confidential source.

⁸ Gea to May, "Follow up (Illegal Trade in Orangutans)."

⁹ Hermanu to May, "Illegal Trade in Orangutans."

¹⁰ Associated Press, "Indonesian Police Arrest Man Who Bought Orangutan, Leopard, Bear," *The Jakarta Post*, April 5, 2017, <http://www.thejakartapost.com/news/2017/04/05/indonesian-police-arrest-man-who-bought-orangutan-leopard-bear.html>.

Appendix Table K. Market Value per Orangutan
Price Paid to Middleman, International Sale (in U.S. dollars)

Location	Price Low	Price High	Transaction	Year
Bangkok, Thailand ¹	.	\$9,700	price paid to dealer by foreign buyer	2016
Thailand ²	.	\$10,000	price paid to dealer by final buyer, close to source region	2017
Indonesia ³	.	\$13,000	price quoted by middleman/dealer to PEGAS investigator, including transport but no CITES permit	2016
Indonesia ⁴	.	\$15,000	price quoted by middleman/dealer to PEGAS investigator, including shipment to the Middle East but no CITES permit	2016
Source country, capital city ⁵	\$15,000	\$20,000	price paid to middleman by international buyer for export, price includes shipment	2016
Gulf countries ⁶	\$15,000	\$20,000	price paid to middleman by foreign buyer	2016
RANGE	\$9,700	\$20,000		

¹ Confidential source.

² Dominique Mosbergen, "The Dark Story Behind That Cute Baby Orangutan 'Thumbs Up' Photo," *Huffington Post*, March 2, 2017, http://www.huffingtonpost.com/entry/orangutan-thumbs-up-photo_us_58b79de5e4b023018c6cfd33.

³ Project to End Great Ape Slavery, "The Illegal Trade in Great Apes," 30.

⁴ Ibid.

⁵ Ibid.

⁶ Ibid., 31.

Appendix Table L. Market Value per Orangutan Price Paid by Final Consumer (in U.S. dollars)

Location	Price Low	Price High	Transaction	Year
Russia ¹	\$22,000	\$30,000	price given by online demand-country dealer (¥1,250,000 - ¥1,820,000)	2016
Russia ²	.	\$35,000	price quoted by breeding facility to final consumer	2015
Russia ³	.	\$40,000	price given by online dealer	2015
International market ⁴	\$40,000	\$45,000	price paid by final consumer	2017
Demand country ⁵	.	\$45,000	price paid by final consumer	2017
Russia ⁶	.	\$60,000	price given by online dealer	2015
Russia ⁷	\$52,000	\$69,000	price given by online demand-country dealer (¥3,000,000 - ¥4,000,000)	2017
RANGE	\$22,000	\$69,000		

¹ Project to End Great Ape Slavery, "The Illegal Trade in Great Apes," 24.

² Will Stewart and Simon Tomlinson, "EXPOSED: Shocking Trade in Baby Orangutans Being Bred as Playthings for the Russian Super-Rich for £24,000 Each," *Mail Online*, January 6, 2015, <http://www.dailymail.co.uk/news/article-2891073/Shocking-Russian-trade-baby-orangutans-bred-playthings-super-rich-25-000-each.html>.

³ Ibid.

⁴ Hermanu to May, "Illegal Trade in Orangutans."

⁵ Mosbergen, "Dark Story Behind."

⁶ Stewart and Tomlinson, "Exposed: Shocking Trade in Baby Orangutans."

⁷ "Primates | Page 6 | Wwww.Zoo-Ekzo.Ru - Sale of Exotic Animals."

Appendix Table M. Market value of Great Ape Meat Price Paid by Final Consumer (in U.S. dollars)

Location	Price Low	Price High	Transaction	Year
Congo, Republic of ¹	.	\$1.31	price per kilo of gorilla meat	2012
Congo, Republic of ²	.	\$5.62	price for small piece of gorilla meat	2012
Congo, Republic of ³	.	\$100	price for entire gorilla carcass in bushmeat market	2017
Gabon ⁴	\$1.80	\$3.60	price per kilo of great ape meat	2017
Gabon, major town ⁵	\$10	\$12	price per kilo for chimpanzee or gorilla meat, black market	2017
Berberati, Central African Republic (CAR) ⁶	\$2.11	\$2.49	average price per kilo, chimpanzee meat	2011
Beya, CAR ⁷	\$2.30	\$2.67	average price per kilo, chimpanzee meat	2011
Nola, CAR ⁸	.	\$2.22	average price per kilo, chimpanzee meat	2011
Berberati, CAR ⁹	\$2.31	\$2.80	average price per kilo, gorilla meat	2011
Beya, CAR ¹⁰	\$1.76	\$2.29	average price per kilo, gorilla meat	2011
Nola, CAR ¹¹	\$3.10	\$3.21	average price per kilo, gorilla meat	2011

¹ Jeremy Hance, "Turning Gorilla Poachers into Conservationists in the Congo," *Mongabay*, August 13, 2012, <https://news.mongabay.com/2012/08/turning-gorilla-poachers-into-conservationists-in-the-congo-warning-graphic-photos/>.

² Ibid.

³ Interview with Alice Wittevrongel and Guillaume Tati, Endangered Species International, interview by Channing May, Skype, September 8, 2017.

⁴ Questionnaire completed by Dr. Katharine Abernethy, University of Stirling, August 11, 2017.

⁵ Questionnaire completed by Gaspard Abitsi, Wildlife Conservation Society, September 19, 2017.

⁶ Ezra Neale and Daniel Stiles, *Elephant Meat Trade in Central Africa: Central African Republic Case Study* (Gland, Switzerland: IUCN, 2011), 30, <https://portals.iucn.org/library/sites/library/files/documents/SSC-OP-045-002.pdf>.

⁷ Ibid.

⁸ Ibid.

⁹ Ibid.

¹⁰ Ibid.

¹¹ Ibid.

Appendix Table N. Market Value of Fraudulent CITES Permit (in U.S. dollars)

Location	Price Low	Price High	Transaction	Year
Africa ¹	.	\$3,000	price/bribe for a CITES permit, chimpanzee or bonobo	2016
Africa ²	.	\$5,000	price/bribe for a CITES permit, gorilla	2016
Africa ³	.	\$5,000	price for CITES permit, any great ape	2014
Egypt ⁴	.	\$4,000	price for one CITES permit, chimpanzee	2016/2017
West and Central Africa ⁵	\$2,000	\$5,000	price paid by dealer for CITES permit, any great ape	2014
RANGE	\$2,000	\$5,000		

¹ Project to End Great Ape Slavery, "The Illegal Trade in Great Apes," 30.

² Ibid.

³ "PEGAS Briefing Document on Items 34.1 and 37 of CITES SC65" (Project to End Great Ape Slavery (PEGAS), 2014), 1, <https://freetheapes.files.wordpress.com/2014/11/pegas-sc65-briefing.pdf>.

⁴ Shukman and Piranty, "The Secret Trade in Baby Chimps."

⁵ Huang Jingjing, "African Fraud, Local Market Exacerbate Illegal Primate Importation," *Global Times*, September 24, 2014, <http://www.globaltimes.cn/content/883220.shtml>.

Appendix Table O. Average Annual Revenue Earned by Poachers (in U.S. dollars)

Species	Average Number Illegally Captured per year	Average Value to Poacher, Low	Average Value to Poacher, High	Estimated Revenue to Poacher, Lows	Estimated Revenue to Poacher, High
Chimpanzee	92	\$5	\$360	\$460	\$33,120
Bonobo	7	\$50	\$100	\$350	\$700
Gorilla	14	\$135	\$2,300	\$1,890	\$32,200
Orangutan	146	\$8	\$121	\$1,168	\$17,666

Appendix Table P. Average Annual Revenue Earned by Low-Level Traders (in U.S. dollars)

Species	Average Number Illegally Captured per year	Average Value to Trader, Low	Average Value to Trader, High	Estimated Revenue to Trader, Lows	Estimated Revenue to Trader, High
Chimpanzee	92	\$50	\$400	\$4,600	\$36,800
Bonobo	7	-	\$450	-	\$3,150
Gorilla	14	-	-	-	-
Orangutan	146	\$140	\$385	\$20,440	\$56,210

Appendix Table Q. Average Annual Revenue Earned by Dealers, Domestic Sale
(in U.S. dollars)

Species	Average Number Illegally Captured per year	Average Value to Dealer, Low Domestic	Average Value to Dealer, High Domestic	Estimated Revenue to Dealer, Low Domestic	Estimated Revenue to Dealer, High Domestic
Chimpanzee	92	\$500	\$7,500	\$46,000	\$690,000
Bonobo	7	\$1,000	\$2,500	\$7,000	\$17,500
Gorilla	14	\$1,000	\$2,500	\$14,000	\$35,000
Orangutan	146	\$454	\$1,900	\$66,284	\$277,400

Appendix Table R. Average Annual Revenue Earned by Dealers, International Sale Including Transport and/or Permits (in U.S. dollars)

Species	Average Number Illegally Captured per year	Average Value to Dealer, Low International	Average Value to Dealer, High International	Estimated Revenue to Dealer, Low International	Estimated Revenue to Dealer, High International
Chimpanzee	92	\$12,500	\$30,000	\$1,150,000	\$2,760,000
Bonobo	7	\$15,000	\$20,000	\$105,000	\$140,000
Gorilla	14	\$37,000	\$45,000	\$518,000	\$630,000
Orangutan	146	\$9,700	\$20,000	\$1,416,200	\$2,920,000

Appendix Table S. Average Annual Revenue Earned by Final Retailers
(in U.S. dollars)

Species	Average Number Illegally Captured per year	Average Value to Final Retailers, Low	Average Value to Final Retailers, High	Estimated Revenue to Final Retailers, Low	Estimated Revenue to Final Retailers, High
Chimpanzee	92	\$15,000	\$70,000	\$1,380,000	\$6,440,000
Bonobo	7	\$21,000	\$43,000	\$147,000	\$301,000
Gorilla	14	\$40,000	\$150,000	\$560,000	\$2,100,000
Orangutan	146	\$1,900	\$69,000	\$277,400	\$10,074,000

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About

Global Financial Integrity

Founded in 2006, Global Financial Integrity (GFI) is a non-profit, Washington, DC-based research and advisory organization, which produces high-caliber analyses of illicit financial flows, advises developing country governments on effective policy solutions and technical solutions to illicit flows, and promotes pragmatic transparency measures in the international financial system as a means to global development and security.

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