



**GLOBAL
INITIATIVE**
AGAINST TRANSNATIONAL
ORGANIZED CRIME

A large, dark silhouette of a bird, possibly a seagull, is shown in flight with its wings spread wide. It is positioned in the upper left quadrant of the image, flying towards the right. The background is a dark, hazy city skyline with various skyscrapers, including the Burj Khalifa, visible against a lighter sky. The overall color palette is dark and moody, with shades of purple, blue, and grey.

TRADE AND TRANSIT

A small, dark silhouette of a boat is visible on the water in the foreground. The boat has a simple structure with a canopy and some equipment on board. It is positioned in the lower center of the image, moving across the water. The water is dark and textured with small waves.

DUBAI'S ROLE IN ILLICIT
ENVIRONMENTAL SUPPLY CHAINS

DECEMBER 2022

ACKNOWLEDGEMENTS

The author would like to thank colleagues, including Patricia Tricorache, who helped review the report, and the Global Initiative Against Transnational Organized Crime (GI-TOC)'s publications team for their support in developing the report. The report was made possible with funding provided by the government of Norway.

© 2022 Global Initiative Against Transnational Organized Crime.
All rights reserved.

No part of this publication may be reproduced or transmitted
in any form or by any means without permission in writing from
the Global Initiative.

Cover: © *Unsplash/Ziad Al Halabi*

Please direct inquiries to:
The Global Initiative Against Transnational Organized Crime
Avenue de France 23
Geneva, CH-1202
Switzerland
www.globalinitiative.net

CONTENTS

Acronyms and abbreviations.....	2
Executive summary	3
Introduction	6
Methodology	7
Context.....	8
Environmental crimes	10
Wildlife.....	12
Gold and diamonds	18
Flora	21
Enabling factors.....	24
Location and trade infrastructure	24
Corruption and impunity	24
Weak law enforcement.....	25
Lax financial structures	26
Future of the hub	27
Notes	30

ACRONYMS AND ABBREVIATIONS

BRI	Belt and Road Initiative
CAR	Central African Republic
C4ADS	Centre for Advanced Defense Studies
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
DIFC	Dubai International Financial Centre
DMCC	Dubai Multi Commodities Centre
DRC	Democratic Republic of the Congo
EIA	Environmental Investigation Agency
FATF	Financial Action Task Force
FTZ	Free trade zone
JAFZA	Jebel Ali Free Trade Zone
OECD	Organisation for Economic Co-operation and Development
TBML	Trade-based money laundering
TEU	Twenty-foot equivalent unit
UAE	United Arab Emirates



EXECUTIVE SUMMARY

Dubai's location and post-oil economic diversification and development strategy have reshaped the emirate from a small fishing village to a global leader in finance, trade and transport logistics. As a result, the emirate has also become a prime target for illicit actors moving goods such as wildlife, flora, and precious stones and metals to destinations all over the world. Emblematic of the emirate's dual role are its numerous free trade zones (FTZs), developed to attract foreign businesses and investors, while unintentionally serving as hotbeds for criminal actors to not only transport environmental commodities with impunity, but to reap the profits from these illicit activities by taking advantage of regulatory loopholes and the lack of oversight.

As with other trade hubs, Dubai's role as a preeminent transit and destination for environmental commodities represents specific vulnerabilities for criminals to exploit. As a transit corridor, consignments of illicit environmental products are less likely to be checked for simply passing through the emirate's busy ports and airports and more likely to avoid detection amid the large volume of licit products that pass through. Similarly, for many of the commodities that end up in Dubai, insufficient enforcement of requirements for proper documentation continues to perpetuate illicit markets in source countries and throughout supply chains.

What sets Dubai apart from other major hubs is the emirate's unusual character, a blend of indigenous Arabic and Islamic traditions and Western business and legal practices. This unique mix extends to the environmental commodities that illicitly pass through the emirate, the drivers that perpetuate supply chains, and the nature of response measures. When coupled with the fact that an illicit trade often exists alongside a legal market, ascertaining the exact size of Dubai's illicit environmental markets becomes challenging.



Dubai's role as a major transit hub and destination for environmental commodities is exploited by criminals trafficking illicit products.

© Francois Nel via Getty Images

Yet research suggests that Dubai is among the world's major environmental crime hotspots. For example, given the emirate's leading role as a transit corridor and based on seizures in other countries, the wildlife trafficking that Dubai experiences is estimated to be far greater than interceptions show. In 2020, the UAE was identified as one of the most common transit routes for wildlife but had the lowest seizure rate (at only 2%), reflecting the difficulty of making seizures in transit.¹ While authorities in Dubai have made efforts to curb wildlife trafficking generally, the trade has reportedly increasingly shifted online to evade crackdowns. Indeed, in a 2019 study exploring exotic animal species online in the Middle East, the majority of posts from all social-media platforms reviewed were sourced from the UAE, with Dubai cited as the most active emirate.²

Similarly, in recent years, Dubai has built a reputation as one of the leading centres globally for the trade in precious metals and stones. According to Dubai customs authorities, gold has become so important to Dubai's economy that it is the emirate's highest-value external trade item,³ and is the wider UAE's largest export after oil, with exports worth approximately US\$28.8 billion in 2020. Similarly, in 2021, the country was identified as the world's top trading hub for rough diamonds, with a reported industry growth of over 75% since 2015.⁴ Contributing to this exponential growth is the emirate's seemingly lax approach to verifying the provenance of these commodities with often troublesome origins, corruption and imbalances in law enforcement, suggesting that Dubai's role in the trade of gold and diamonds has helped facilitate illicit activities and divert revenue flows in countries of origin.

The illicit trade in flora commodities is also linked to Dubai, although such flows are not as prominent as those of other environmental commodities. Nevertheless, given that the forestry sector in key origin countries is often poorly regulated and Dubai's free trade port is strategically located between source and destination countries, it is likely that the emirate plays a significant transit role in the trade, resulting in enormous environmental impacts and loss of biodiversity in source countries due to overexploitation.

Underpinning these developments is Dubai's seemingly insatiable drive for continued growth and economic advancement. Despite COVID-19's temporary disruption to Dubai's economic growth, with a GDP contraction of nearly 11% in 2020,⁵ thanks to a proactive national vaccination scheme, a diverse economic portfolio and the success of Expo 2020 Dubai, the emirate has made recovery progress over the course of 2021 and into 2022.⁶ While the pandemic's exact impact on illicit environmental supply chains is not yet fully known, restrictions on movement almost certainly slowed the flow of illicit goods, at least in the short term. However, with the emirate firmly on the path to economic recovery and seeking to further boost its role in international trade and finance through various projects and initiatives, including its role in China's Belt and Road Initiative (BRI), its vulnerabilities to environmental crime markets are likely to expand in parallel.⁷

The emirate's strategic location, established infrastructure and relentless pursuit of economic and financial development have led to a culture of impunity for actors throughout illicit environmental supply chains. Indeed, in April 2020, the Financial Action Task Force (FATF) issued a report on the UAE outlining its shortcomings in efforts to tackle money laundering, including singling out trade-based money laundering (TBML) as one of the 'main risks' facing the UAE, and citing the example of ties to the trading of conflict metals and stones.⁸

Nevertheless, Dubai has shown a political willingness to crack down on environmental crimes in the past few years. However, these efforts, while good on paper, are yet to effect any change to illicit flows stemming from trade activities, as evidenced by regular reports of seizures and ongoing illicit activity. While several factors have contributed to Dubai's role as a major transit and destination hub for environmental crimes, ironically many of the conditions that have brought economic prosperity to the emirate are the very ones that have equipped it with the capacity to address its vulnerability to the illicit trade. Coupled with greater political will, measures including the implementation of stricter customs policies, legislative deterrence and improved public monitoring would help reduce Dubai's risk to environmental crimes and help build resilience in the years to come.



INTRODUCTION

Over the past few decades, the illicit trade in environmental commodities has continued to expand by an estimated rate of more than 5% every year.⁹ While a global phenomenon, Africa and Asia are regularly cited as playing among the most prominent roles in environmental crimes, driven by highly biodiverse ecosystems and large consumer markets. The two-way corridor of illicit flows between the two continents converges in several hubs along the way, not least those located in the Persian Gulf.

In the UAE, Dubai has emerged as a key transit and destination hub for the illicit trade in a wide range of commodities, including wildlife, diamonds, gold and timber. As the global financial (and de facto cultural) capital of the UAE, Dubai has become a booming centre for tourism, real estate, banking and trade (both licit and illicit). Situated on China's BRI maritime network, as the midway point between Africa and Asia, and serving as a major international airport hub, this highly connected emirate serves as a focal point for trillions of dollars' worth of business, investment and trade across multiple continents.

Dubai's role as both an important trading port and global business hub has shaped its identity as a world leader in logistics, moving people and commodities into and out of the emirate. While structural and economic developments over the past half-century have made Dubai central to global licit trade and business, they have simultaneously positioned the emirate at the epicentre of worldwide trafficking networks for a range of environmental commodities, including animal products, precious metals and flora to and from Asia and Africa. At the same time, the city's exponential growth, and consequently wealth, has created a culture of luxury, and a large consumer market in Dubai for rare and highly prized commodities, such as wildlife, gold and diamonds. These factors, combined with the city's lax financial regulations and advanced infrastructure has meant that financial flows from the sale and transport of environmental commodities can be easily hidden, contributing to a culture of corruption and impunity for those involved.

This report aims to provide a political economy analysis of Dubai as a global hub for key environmental crime markets. The analysis explores the factors that contribute to Dubai's role in a range of illicit supply chains and as well as the modus operandi by which these commodities are transported and how their proceeds enter the licit market. It does so by broadly tracking the flows of three environmental commodity types – wildlife, minerals and flora – aiming to bring some exposure to the multiple licit and illicit actors that are directly implicated in these activities.



Oudh, a resin-impregnated wood used for incense and perfumes, arrives in Dubai and is often transported to other destination markets throughout the region. © Raquel Magado/Alamy Stock Photo

Methodology

Owing to Dubai's opaque business culture and an overall lack of data, it is challenging to fully explore the extent of illicit flows for many environmental commodities. Nevertheless, this report seeks to provide a general analysis of such flows based on a mixed methodology. A comprehensive review was conducted of existing reports by international organizations and peer-reviewed journal articles, as well as international and regional newspaper articles. Illegal wildlife seizures were identified around the world using open-source material, including data from the Centre for Advanced Defense Studies (C4ADS) Wildlife Seizure Database, TRAFFIC and the Environmental Investigations Agency (EIA), as well as the ROUTES Partnership Air Seizure Database. Other open-source material included UN Comtrade and the Observatory for Economic Complexity for commodities such as gold and diamonds. Open-source research was coupled with Global Initiative Against Transnational Organized Crime (GI-TOC) interviews conducted with leading experts and academics in the field.

While this method brings exposure to key vulnerability points in the supply chains of prominent environmental assets, several questions remain as to the true reach of these markets, particularly due to the limited information provided by open-source seizure data and a significant knowledge gap concerning payments or incidents of money laundering relating to environmental crimes. The document should, therefore, be read as part of an ongoing analysis that can feed into more in-depth research reports in the future.



CONTEXT

Dubai's role as a key transit corridor and destination for organized crime flows, including environmental commodities, can be described as a byproduct of the emirate's economic and political history, its strategic location between major source and destination markets, and its undisputed role as a global leader in trade infrastructure and business.

Once a small fishing village, the discovery of oil over 50 years ago triggered Dubai's growth, transforming it into a booming metropolis and one of the fastest growing cities in the world. With a population growth of about 1 000% over the past four decades, the city boasts a population of 3.4 million people, over 90% of whom are foreign.¹⁰ Oil reserves in Dubai, however, pale in comparison to other emirates (such as Abu Dhabi), and the emirate has long sought to diversify its economic portfolio. Today, with only 1% of Dubai's GDP stemming from oil, the success of the emirate's post-oil economy can largely be attributed to its development of several FTZs. These FTZs, which are run by independent authorities and can be likened to mini states, attract foreign companies from all over the world through their developed infrastructure, lax rules on business ownership, tax and customs duty breaks, and bureaucratic shortcuts.¹¹ Such zones have come at a cost, however, as the limited regulatory environment has created a haven for criminal activities to take place relatively unimpeded, including engagement in the illicit trade of environmental commodities and associated illicit financial transactions and TBML.

On a global scale, Dubai's trade and transport infrastructure rival those of other major cities around the world. The city hosts two major airports: Dubai International Airport is regularly cited as among the busiest airports in the world by international passenger count, while its second airport, Al Maktoum International Airport, focuses on cargo flights.¹² Despite the negative effects of the COVID-19 pandemic, Dubai's International Airport remains a major transportation hub, with a reported 29.1 million passengers passing through its terminals in 2021, a 12.7% jump from the previous year.¹³

The emirate also hosts many seaports, including the Port of Jebel Ali, which is listed as one of the top 10 busiest cargo ports in the world, and the busiest in the Gulf region.¹⁴ The port's success can largely be linked to its location in the 57-square-kilometre Jebel Ali Free Trade Zone (JAFZA), the world's largest economic free zone and one of dozens of industry-specific free zones set up by the government.¹⁵ JAFZA generates approximately US\$80 billion in non-oil foreign trade, which accounts for over 20% of Dubai's GDP, while the port maintains container throughput of more than 15 million TEUs,¹⁶ underscoring the significance of the port to the emirate's economy.¹⁷

Dubai's complex and advanced air and maritime industry, developed in pursuit of building its post-oil economy, generates billions in revenue for the emirate while at the same time representing a major



Dubai's exponential growth has created a large consumer market for rare and highly prized commodities, such as wildlife, gold and diamonds.

© Bloomberg via Getty Images

vulnerability to the trafficking of illicit goods, as criminals seek well-situated and well-connected ports and airports with multiple freight forwarders, flights and routes that can hide illegal shipments and lower the risk of detection. Sadly, these risks are expected to remain, as Dubai's already established transport and trade infrastructure continues to grow, further solidifying the city's role as a gateway for imports and exports between continents.

Today, the emirate seeks to benefit from China's BRI, where logistics and supply chains to and through Dubai and to Africa, Asia and beyond are central to its supporting project, the Dubai Silk Road Strategy.¹⁸ While the COVID-19 pandemic temporarily disrupted Dubai's economic growth, with a GDP contraction of nearly 11% in 2020,¹⁹ thanks to a proactive national vaccination scheme, its diverse economic portfolio, and the success of Expo 2020 Dubai, the emirate has made recovery progress over the course of 2021 and into 2022.²⁰ In 2022, Dubai's economy is estimated to grow by around 4.5%, with almost all major industries, including hospitality, transport and financial services, seeing an upward trajectory.²¹ As such, this continued recovery and expansion means that infrastructure vulnerabilities to the illicit trade in environmental commodities are likely to grow in parallel.

The emirate's growth and role as a global trade powerhouse is largely thanks to its ruling family. Since the formation of the UAE in 1971, bringing together a federation of seven emirates, including Dubai, political power and economic authority have been shared between the federal and emirate levels.²² Each emirate is governed by an absolute hereditary monarch, a sheikh with familial links to historical tribes who once inhabited the area.²³ While together these royal families make up part of the federal governance apparatus of the country, each is afforded considerable governance and economic autonomy (and revenues) within their respective emirate. This model of governance is echoed within Dubai itself and the manner in which its ruler, Sheikh Mohammed bin Rashid Al Maktoum, governs over its semi-autonomous FTZs, while simultaneously holding the positions of Vice President and Prime Minister of the UAE.²⁴

Indeed, the ruling Al-Maktoum family has overseen the launch of a number of government-owned trade- and transport-based enterprises – including Emirates Airlines; DP World, a multi-national logistics company which runs the Jebel Ali Port and associated FTZ; and Dubai World, a global holding company which is an investment arm of the government of Dubai and owns 80% equity in DP World – essentially giving the ruling family ultimate control.²⁵ While these inseparable linkages between Dubai's government and the emirate's growth and trade infrastructure have brought enormous prosperity to Dubai, they also underpin the opaque nature of ties between members of the political elite and the business community, with reports of corruption linked to illicit flows that pass through the emirate.²⁶



ENVIRONMENTAL CRIMES

While the UAE simultaneously functions as a source, transit and destination hub for a huge array of illicit products, owing to its exceptional trade infrastructure and limited regulatory environment, Dubai's predominance with regards to environmental commodities is as a transit hub between Asia and Africa, and to a lesser extent, a destination. Indeed, according to the 2021 Global Organized Crime Index, the UAE is ranked among the top countries in Asia for a range of environmental crimes and is first in the Western Asia region, particularly for fauna and flora crimes.²⁷ Wildlife and animal products, depending on the species, are sourced from across Africa and parts of Asia, passing through Dubai to consumer markets around the world, including to wealthy clients in Dubai itself. Similarly, natural resources obtained illicitly in other countries (such as gold, diamonds and timber) make their way to Dubai where they are incorporated into the legal trade, despite their illegal origins, further contributing to organized crime activities in source countries.

As with other trade hubs, Dubai's roles as a transit corridor and destination for environmental commodities represent specific vulnerabilities for criminals to exploit. For example, as a transit corridor, consignments of illicit commodities (such as wildlife) are less likely to be checked for simply passing through the emirate's busy ports and airports and more likely to avoid detection amid the large volume of licit products that pass through.²⁸ This is especially true in the case of short layovers and transit times, and effectively places the burden of detection on source and destination countries.²⁹ Likewise, for commodities that end up in Dubai itself (such as gold and diamonds), insufficient enforcement of requirements for proper documentation continues to perpetuate illicit markets in source countries and throughout supply chains.³⁰ Throughout it all, corruption – whether in the form of falsified documentation or a blind eye being turned at security checks – contributes to solidifying illicit supply chains and perpetuating criminal markets.

While COVID-19's exact impact on illicit environmental supply chains is not yet fully known, restrictions on movement almost certainly slowed the flow of both licit and illicit goods, at least in the short term. Disruptions such as freight capacity limitations on land, sea and air routes, as well as a decline in international passenger travel may have initially reduced illicit flows, particularly since the movement of environmental commodities through Dubai largely relied on these methods of transport. For example, Dubai's liner-shipping activity saw a 9.4% loss in shipping services and 8.8% decline in deployed ship-carrying capacity in the second quarter of 2020, a continued trend from the first quarter

of that year.³¹ With less capacity to move goods, coupled with heightened surveillance at ports and airports to prevent the spread of the virus, criminals moving environmental commodities may have shifted their modus operandi (including moving online, or relying on land routes) in response. Still, with the emirate firmly on the path to economic recovery, it is likely that illicit environmental supply chains passing to and through Dubai are growing in parallel.

Dubai's unique character rests firmly on the integration of indigenous Arab and Islamic traditions and Western business and legal practices promoting modernity and tolerance. This unusual mix of old and new is apparent in Dubai's modern cultural identity and extends to the environmental commodities that pass illicitly through the city, as will be discussed in the following sections. The emirate's strategic location and logistical capacity means that the environmental commodities that move through the emirate are as diverse as the countries they come from and end up in. Nevertheless, for the purposes of this report, four major categories will be explored, owing to their prominent link to Dubai: wildlife, gold, diamonds and flora.

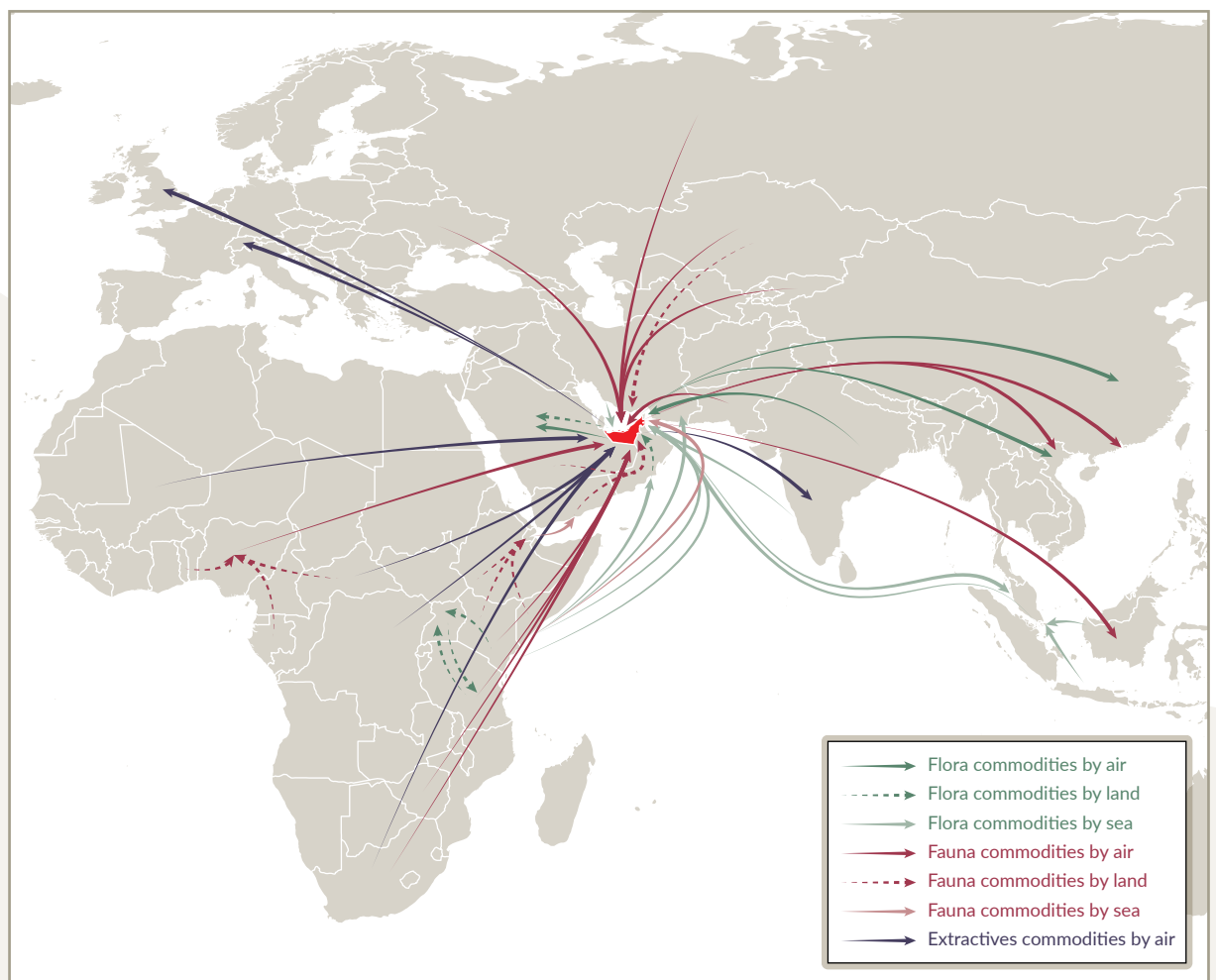


FIGURE 1 Illicit environmental flows through Dubai.

Wildlife

The trafficking of wildlife into and through Dubai generally falls into two broad categories: wildlife and wildlife products (in some cases live animals, but most often animal parts intended for use in traditional Asian medicines), largely from Africa, destined for markets in other countries in the Middle East and Asia; and those from a range of countries destined for Dubai itself (often live animals to serve as pets and for sport). In addition to its devastating environmental impact, the illegal wildlife trade also carries with it health risks, with diseases borne by animals more likely to be passed on to other wildlife and even humans, particularly when animals are transported quickly through transit zones (such as Dubai) en route to other countries.³²

Given the emirate's leading role as a transit corridor, and based on research on seizures in other countries, the wildlife trafficking that Dubai experiences is estimated to be far greater than is intercepted, a pattern that extends to the wider Middle East region.³³ In a 2020 C4ADS report, the UAE was cited as one of the most significant countries for air trafficking in the Middle East region by 'trafficking instance' count and the most common transit route for wildlife. However, it had the lowest seizure rate (at only 2%), reflecting the difficulty of making seizures in transit.³⁴ When coupled with the fact that the illicit trade often exists alongside a legal market, ascertaining the exact size of Dubai's illicit wildlife market becomes a challenge. Nevertheless, an analysis of the most prominent commodities, their origin, transport, use and pricing where available can help stakeholders understand the reach of this illicit trade.

Live animals

Dubai's extensive transport and logistics infrastructure and strategic location between major source countries and consumer markets means that the emirate sees illicit flows of a wide range of live animals. For example, in recent years, seizures of anything from snakes and monkeys from Indonesia via Kuwait, and elephants from Lao PDR, to reptiles and spiders from countries such as Thailand and the Philippines have all been reported in or en route to Dubai from Asian countries further east.³⁵

Although a range of wildlife species are trafficked to and through Dubai, by far the most extensive illicit trade of fauna destined for the emirate is that of birds from Eastern Europe, Central Asia and the Middle East; big cats from Africa; and, to a lesser extent, great apes and other primates from Asia, Latin America and Africa. Large consumer markets for these species, in particular, are linked to the social fabric of Dubai.

As nomadic life was slowly abandoned, falconry remained, particularly among wealthy, political elites, although a resurgence in society more broadly has appeared in recent years. Raptor species – particularly the Saker, Gyr and Peregrine falcons³⁷ – are popular, and despite a large, legal captive-bred market, the trafficking of wild birds is persistent,³⁸ owing to the belief that wild birds are better

*The trafficking of predatory birds stems from centuries-old local Bedouin traditions, where the birds were used by tribes throughout the Arabian Peninsula to hunt native animals.*³⁶



A falcon handler during the Fazza Championship for Falconry in Dubai. The emirate sees a great deal of illicit flows of a wide range of live animals, including falcons, which are highly prized in Dubai society. © Francois Nel via Getty Images

hunters.³⁹ These species are listed in Appendix I and II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES),⁴⁰ which the UAE joined in 1990, and through which commercial trade is either prohibited or only allowed with a CITES permit.⁴¹ In addition to the birds' use in hunting, falcon racing has become a growing past time, following its introduction early in the first decade of the 2000s by Dubai's Crown Prince, Sheikh Hamdan bin Mohammed bin Rashid Al Maktoum.⁴² Today, falcons are so prized in Dubai society that the emirate hosts a dedicated bird hospital, specific airline accommodations and custom-made vehicles for transporting the animals.⁴³

Modern-day Dubai's culture of luxury has also translated into a large consumer base for big cats, such as cheetahs, tigers and lions, as well as great apes and other primates, and has contributed to the development of trafficking networks dedicated to smuggling these animals into the emirate. As a comparatively new trend that has accompanied Dubai's exponential growth and wealth, these animals are trafficked from Asia (in the case of tigers, chimpanzees and orangutans) and Africa (bonobos, chimpanzees and gorillas), particularly from countries in the Congo Basin, the Horn of Africa and, to a lesser extent, southern Africa, and sold to Dubai's elite as exotic pets. Perceived as status symbols, primates and big cats are kept in private homes and zoos and showcased on social media as photo props in environments far removed from their natural habitats, as a way of gaining 'likes' and followers. Indeed, in a 2019 study exploring exotic animal species on Middle Eastern celebrity social media accounts, as well as the public perception of such posts and their potential impact on exotic pet demand and conservation, the majority of social media posts were sourced from the UAE, with Dubai cited as the most active emirate – particularly for mammals and birds.⁴⁴

The ways in which traffickers transport these animals into Dubai depends largely on an animal's country of origin. For example, falcons from other parts of the Arabian Peninsula are often smuggled into Dubai in the back of trucks after crossing the Hatta border between the UAE and Oman. A seizure by Dubai officials of 64 falcons in September 2021 illustrates a relatively common *modus operandi*: The birds were discovered concealed behind boxes of vegetables, without proper health documents.⁴⁵ According to officials, 44 similar cargoes were seized among the almost 24 000 trucks that crossed the border into the UAE in the first six months of 2021, suggesting that this route and transport method remain popular.⁴⁶

Falcons are also trafficked by air, from several regions outside the Middle East, including Eastern Europe (Ukraine),⁴⁷ Central Asia (Russia, Kazakhstan and Kyrgyzstan)⁴⁸ and South Asia (Pakistan).⁴⁹ Between 2009 and 2017, the UAE topped a global list of birds trafficked through airports, with 35 recorded cases.⁵⁰ Pakistan, in particular, is both a major country of origin and destination for falcons used in hunting, and in 2020, it was estimated that as many as 700 falcons were smuggled to the Gulf from Pakistan.⁵¹

Smugglers devise creative ways of bringing birds in and avoiding detection. For example, in 2017, Dubai law enforcement intercepted a trafficking attempt of three falcons from Ukraine, in which the birds had been given sleeping pills, bound with tape and concealed in a modified suitcase with ice packs.⁵² Falcon eggs are also smuggled, with reports of smugglers taping them to their bodies before attempting to pass through airport security.⁵³ From Central Asia, smugglers have been reported to stuff birds into electronic devices, car seats, or even in their clothing, before taking a flight or driving across the border en route to the Gulf.⁵⁴ Upon arrival, birds are sold to wealthy clients, often in private, invite-only affairs at their residences. Because the illicit bird trade involves wealthy elites, corruption is thought to be highly integrated into this trade, including from airport employees who are paid to turn a blind eye.⁵⁵

The pricing of falcons varies significantly and depends on a range of factors, including species, size, colour and the time of year of purchase.⁵⁶ For example, while Gyr falcons are the largest and Peregrine falcons are considered to be the fastest,⁵⁷ Saker falcons are endangered and consequently likely to be worth more. Although little information is

known about sales prices in Dubai, the case of well-known convicted smuggler Jeffrey Lendrum offers some insight. In 2010, Lendrum, who has been incarcerated multiple times since, attempted to smuggle 14 eggs from the UK to Dubai, estimated to be worth approximately US\$90 000 on the emirate's black market.⁵⁸ Reports of more recent legal sales in the Gulf region range from thousands to several hundreds of thousands of US dollars.⁵⁹ Such prices are likely to be less than those on the black market, with one report estimating that a single smuggled bird today could fetch up to US\$400 000.⁶⁰

Of the big cat species trafficked to Dubai, cheetahs (*Acinonyx jubatus*) are thought to be the most popular, likely due to their comparatively docile nature. Maritime and land routes appear to be the most commonly used modes of transport for cheetah trafficking, given East Africa's proximity to the Gulf and the difficulty of air travel amid COVID-19 restrictions.⁶¹ With an estimated 7 000 cheetahs remaining in the wild, both adults and cubs are poached primarily from countries such as Ethiopia, Uganda, Tanzania, Kenya and Somalia, where they are packed into crates and baskets and transported to the coast of the Arabian Peninsula via Somaliland, Djibouti or other countries in the Horn.⁶² From there, they are often sent by boat, along with livestock or other goods (including firearms) and even human trafficking victims, to the Arabian Peninsula – either to Oman, before making their way across the Hatta border into the UAE and to Dubai, or to Yemen, before crossing into the Jizan region in Saudi Arabia, from where they are then transported across the Ghuwaifat border into the UAE.⁶³ Prices for cheetahs in the UAE vary, with consumers paying up to US\$30 000 for a cheetah from East Africa, while an untamed cheetah from southern Africa can be sold for as little as US\$135 000, compared to a tame king cheetah costing as much as US\$1 million.⁶⁴ The cheetah trade is particularly troubling given the declining number of wild populations, and the species' difficulty in reproducing in captivity, coupled with the fact that it is estimated that over 60% of cheetah cubs die before they reach the market to be sold.⁶⁵

Less is known about the trade in great apes compared to other wildlife, as primates do not tend to appear in publicly reported Dubai seizure data.⁶⁶ However, like big cats, these species (orangutans, bonobos, chimpanzees and gorillas)⁶⁷ are highly sought after as pets in private homes and zoos, where they are showcased as status symbols. Sharing between 96% and over 98% of their DNA with humans,

these animals are known for their sensitivity and intelligence, and therefore experience significant trauma when captured. With all great ape species classified as either endangered or critically endangered,⁶⁸ the illicit trade is especially catastrophic, as it is estimated that around 10 apes are killed for a single animal to be captured, particularly since infant apes are most in demand and are therefore fiercely protected by their mothers and other family members.⁶⁹

Great apes are most frequently transported to and through Dubai by air from parts of central Africa (DRC, Cameroon, Guinea and Nigeria)⁷⁰ and South East Asia (Indonesia),⁷¹ often in cargo flights, although there have been reports of the use of private planes commissioned by wealthy buyers as well as commercial passenger flights.⁷² Their intelligence and tendency to die in transit make them riskier to move; their transport therefore requires significant resources and logistical planning, and thus tends to involve established, specialized networks.⁷³ For example, it has been reported that upon receiving an order, traffickers in Kinshasa, DRC, notify 'collector' counterparts in other areas of the country to move chimpanzees, bonobos or gorillas by river or road to the capital, where they are prepared for shipment to Dubai or other destinations abroad.⁷⁴ This often includes fraudulent paperwork falsely declaring that the shipment conforms to CITES regulations, such as designating the animal as captive-bred and/or misrepresenting the species as a less controlled primate. In all cases, the trade involves widespread local corruption or the threatening of customs and border officials.⁷⁵

Because the value of great apes is higher when they are alive, traffickers seek to limit the number of connecting flights, making an air transport hub like Dubai an attractive transit point and destination. Some reports have indicated that in addition to direct flights to Dubai, another common air route from Africa is from Ethiopia to Muscat, Oman, from where the animals are transported by land across the Hatta border en route to Dubai and other destinations throughout the Gulf.⁷⁶ Trafficking methods include the use of veterinary drugs, such as ketamine, to sedate the animals in transit,⁷⁷ and there have been reports of apes transported with other wildlife and animal products.⁷⁸

Prices for these animals vary across species and are dependent on several factors, including their behaviour, age and sex. For example, reports indicate that, in 2016, an orangutan cost approximately US\$15 000–US\$20 000 in the Gulf (far more expensive than in other destinations such as Thailand, where apes are cheaper because of the proximity to Indonesia),⁷⁹ while a baby chimpanzee could fetch around US\$40 000 on Dubai's black market.⁸⁰ By comparison, bonobos tend to fetch the highest prices on the UAE's black market after gorillas, with 2021 price estimates of between US\$100 000 and US\$250 000 for a single animal.⁸¹ While the natural habitats of some primates such as chimpanzees are more geographically widespread, bonobos are endemic to central Africa, making them rarer finds, and therefore likely to be more expensive.⁸² As with other animals, the resources needed to keep the apes alive, coupled with the risks of them waking up in transit, are also likely to contribute to the high prices.

While authorities in Dubai have made efforts to curb wildlife trafficking generally,⁸³ the trade has reportedly increasingly shifted online to evade crackdowns. For example, while today Dubai's famous Warsan pet market is limited to domesticated animals, reports suggest that many shops are affiliated with social media accounts on Facebook, Snapchat (where posts disappear after 24 hours and messaging is private) and, to a lesser extent, Instagram. These accounts sell a wide range of exotic animals – from tiger cubs and cheetahs to owls, snakes and primates – with transactions carried out through encrypted channels such as WhatsApp.⁸⁴ Such online platforms offer an unregulated environment for reaching more customers, at comparably lower risk, while also providing free advertising by consumers who showcase their exotic pets on the same channels.⁸⁵

Animal parts

Compared to live species, animal parts and derivatives represent far more flows through Dubai by volume, often transiting the emirate destined for various parts of Asia. Smugglers from known-country origin flights hoping to evade scrutiny may pass through Dubai in order to avoid raising suspicions at their destinations. For instance, in 2014, it was discovered that one Vietnamese individual carrying eight black rhino horns had flown from Maputo, Mozambique to Vietnam via Entebbe Airport in Uganda, Dubai Airport, Changi Airport in Singapore, and Lao PDR, before eventually being arrested in Singapore with 21.5 kilograms of rhino horn in his checked baggage.⁸⁶

In Dubai, ivory is the most frequently reported trafficked wildlife product, with rhino horn and pangolin scales appearing to a lesser extent.⁸⁷ However, there have been seizures of range of products, including shark fins, big cat skins, paws and teeth, among other commodities, from regions such as southern Africa and East and South East Asia.⁸⁸ Animal parts are often concealed with other commodities, such as timber and food stuffs, and are declared as other goods. According to C4ADS, air freight and passenger clothing/items are particularly common ways for transporting animal products in the Middle East, with more trafficking instances concealed in these ways in the Middle East than in any other region in the world.⁸⁹

Globally, there have been trends suggesting that the processing of wildlife products is increasingly occurring in source or origin countries rather than in destination markets, with implications for transit hubs like Dubai.⁹⁰ Smaller animal parts, compared to raw materials, are easier to hide and often more difficult to identify (depending on the degree of processing) and attribute to a particular species, allowing smugglers some advantages in moving these products through transit zones.⁹¹ Indeed, such trends appear to reflect a common way in which animal parts move through the Middle East, including through Dubai. For example, in December 2020, customs officials in Chennai, India, discovered three canines from big cat species covered in tissue and hidden inside the seat of an Emirates Airlines flight.⁹² Several similar seizures have been reported.⁹³

As mentioned, despite reports of a wide range of animal products, seizures in Dubai most frequently involve ivory from Africa. Ivory from forest elephant populations in West Africa and savanna elephants from eastern and southern Africa⁹⁴ is most often transported by air to Dubai before reaching destinations such as China and Vietnam.⁹⁵ Ivory is usually smuggled in the form of small tusks or tusks cut into lightweight pieces, while end products seized typically include jewellery and other small, easily transportable items.⁹⁶ Poaching patterns, and consequently smuggling routes, have changed with elephant depletion trends (there are only an estimated 415 000 African elephants remaining) and crackdowns on the trade.⁹⁷ Today, despite forest elephants from western and central Africa representing only 6% of the remaining African elephant population, in recent years, criminal groups have reportedly turned their attention from the savanna elephants of eastern and southern Africa to the forest elephants of western and central Africa, as the distinct pink tinge of forest elephant ivory can fetch significantly higher prices.⁹⁸ For example, one estimate from the Environmental Investigation Agency (EIA) suggests that criminals in China can sell 1 kilogram of forest elephant ivory for US\$900 in Japan where the distinct hue is favoured, compared to US\$150 per kilogram of savanna elephant ivory.⁹⁹

In West Africa, Nigeria has been identified as a primary exit point from the continent, although smuggling typically involves a string of source countries from the region that transport ivory consignments to Nigeria by land and sea; these include Cameroon, Gabon, the Central African Republic (CAR), Congo-Brazzaville and the Democratic Republic of the Congo (DRC).¹⁰⁰ Once in Nigeria, ivory is consolidated, packed and exported. While a significant number of commodities pass through maritime routes directly to East Asia, ivory consignments that do pass through Dubai are largely transported by air via Lagos's Murtala Muhammed International Airport (and to a lesser extent, Mallam Aminu Kano International Airport in Nigeria's northern state of Kano) en route to buyers further east. Jebel Ali Port has also occasionally been identified as a maritime transshipment hub for ivory.¹⁰¹

Smugglers in the ivory trade are often part of geographically dispersed, yet highly organized networks in Africa. A study published in 2022 tested the DNA of more than 4 000 elephant tusks from 49 different seizures made between 2002 and 2019 across Africa. The study showed that tusks from the same poached elephant were frequently separated and smuggled in different shipments, although still shipped from the same ports, suggesting that fewer networks are involved in large shipments of ivory to Asia, often passing through transit zones like Dubai.¹⁰² As with other commodities, corruption at border points plays a key role in the transport of animal parts, as criminal groups have been known to offer services as 'clearing agents' working with government officials, particularly in the customs departments of specific seaports and airports, to export ivory through Dubai and beyond.¹⁰³

In eastern and southern Africa, Kenya, Ethiopia, Uganda, Tanzania, Botswana and Zimbabwe are common origin countries,¹⁰⁴ with airports in their respective capitals all having direct flights to Dubai. Although there is a lack of more recent data, the most prominent route in 2017 was from Harare, Zimbabwe, through Dubai, and onward to Hong Kong SAR.¹⁰⁵ The route is so common that, in 2018, it was reported that nearly one-fifth of ivory seizures were identified to have transited through the UAE's airports, predominantly Dubai, before arriving in Hong Kong SAR.¹⁰⁶

Depending on the quantities involved, worked ivory pieces may be smuggled on passenger flights or through air freight. Smaller packages of ivory (those weighing less than

1 kilogram) often pass through Dubai's airport hidden in passenger clothing or items, while heavier consignments are placed in carry-on bags. Indeed, reports of several seizures reveal the use by traffickers of special handmade vests with hidden compartments to move small pieces of ivory.¹⁰⁷

Rhino horn, most often sourced in South Africa and neighbouring countries such as Namibia and Zimbabwe, also illicitly moves through Dubai to the same Asian destinations, albeit to a lesser extent. In 2019, for example, Hanoi police at Nor Bai International Airport detected a batch of 126.5 kilograms of rhino horn, worth about US\$7.5million, on an Etihad flight from Dubai to Vietnam.¹⁰⁸ Rhino horn, which when ground to a powder is believed to be medicinal cure for a wide variety of ailments, is a particularly lucrative commodity and can fetch around US\$17 850 per kilogram in Asia.¹⁰⁹ Given its rarity, rhino horn has increasingly come to be viewed as a status symbol, with reports of it being used to fabricate antiques and luxury goods, including carvings, jewellery and libation cups.¹¹⁰ Research suggests that due to their smell and unwieldy size and shape, rhino horns are often transported in cargo. However, other methods have been used, including cutting a horn into smaller pieces and shipping it by mail, as well as carrying it on passenger flights where it may be hidden in foil and coated in shampoo or toothpaste to help mask the smell and evade detection.¹¹¹

Other animal products, including pangolin scales, although less frequently moved through Dubai compared to other products, remain a problem. Like ivory, pangolin-derived products are also sourced in western and central Africa, where three of the four African pangolin species (White-bellied pangolins, Black-bellied pangolins and Giant ground pangolins)¹¹² inhabit countries such as Gabon, Congo-Brazzaville, Liberia and Côte d'Ivoire.¹¹³ While exact population figures are unavailable, all pangolin species found in these regions are threatened with extinction and are classified as either Endangered or Vulnerable on the International Union for Conservation of Nature's Red List. Since 2015, Nigeria has been implicated in the seizures of more than 30 tonnes of ivory and 151 tonnes of pangolin scales, the equivalent of at least 4 400 elephants and 167 000 pangolins, indicating that the country remains a major wildlife exporting hub for the continent.¹¹⁴ Pangolin scales are often headed for countries such as Malaysia, either as a final destination or key entrepôt for other destinations in the region such as China.¹¹⁵ In 2017, authorities discovered nearly 3 tonnes of scales, a portion (407 kilograms) of which

could be traced back to Ghana before transiting Dubai and arriving in Malaysia as its final destination.¹¹⁶ Similarly, another seizure in the same year revealed 10 bags of pangolin scales weighing 304 kilograms that had originated in Kinshasa, DRC, and transited through Kenya and Dubai before arriving in Malaysia.¹¹⁷ While less reported than for other animal products, such seizures illustrate Dubai's prominence as an transit hub.

Reports differ on the degree of convergence of illicit flows of animal parts to and through Dubai, whether in shipment, routes or groups involved. For example, ivory and pangolin trafficking often reportedly overlap, probably due to several factors, including that these species inhabit the same areas of western and central Africa and/or the same traders are involved for both species. Indeed, in recent years, the detection of large quantities of ivory and pangolin scales in the same shipment indicates a clear confluence of these markets. The EIA has also identified convergence between these commodities and other animal products such as rhino horn, lion teeth, seahorses and shark fins, as well as illegal donkey skins and timber.¹¹⁸ While not necessarily in the same shipment, rhino horn, for instance, frequently moves along the same routes as ivory due to the necessity of passing through major connecting airport and port hubs to reach their associated demand countries (primarily

China, Vietnam and Thailand).¹¹⁹ Other reports suggest that traffickers specializing in a single product have in some cases shifted their focus to other wildlife species when it suits them. Because groups in different criminal markets rely on the same vulnerabilities in transportation and finance systems (including corrupt officials), it is likely that the illicit wildlife trade through Dubai converges with other illegal trades, such as drugs, people and weapons.¹²⁰

The trafficking of both live animals and animal parts to and through Dubai is likely to remain as the emirate continues to grow as a preeminent transport hub, connecting multiple origin and destination countries and providing numerous opportunities for the concealment of wildlife species with relative ease. This high accessibility, coupled with a strong consumer demand for exotic animals and derivatives that are rooted in cultural and social traditions both in Dubai and abroad, means that countless species are vulnerable to trafficking and extinction. As with other environmental commodities (discussed below), the impact of the illicit trade in wildlife in Dubai and elsewhere extends far beyond a single smuggling instance or transaction, with significant ecological, economic and health implications, many of which are irreversible.

Gold and diamonds

Beyond wildlife, Dubai is a major hub for precious stones and minerals. Dubai is one of the world's major international gold hubs, and the largest in the UAE. As with diamonds, the gold trade in Dubai centres on the Dubai Multi Commodities Centre (DMCC), in addition to the Dubai Gold and Diamond Park FTZs.¹²¹ Indeed, statistics from the DMCC show that the emirate is responsible for about 80% of the total UAE gold imports and exports (measured either by volume or value).¹²² While the Dubai is one of the largest and fastest-growing gold markets in the world, it notably lacks any gold mines of its own, meaning that it imports all of its gold from around the world, whether legitimately or otherwise.¹²³ In fact, the emirate's prominence in the gold trade is a result of it hosting a large number of gold refineries. According to Dubai customs authorities, gold has become so important to Dubai's economy that it is the emirate's highest-value external trade item,¹²⁴ ahead of petroleum products, electronics and diamonds. It is also the wider UAE's largest export after oil,

with approximately US\$28.8 billion worth of gold exported from the UAE in 2020.¹²⁵

Similarly, while less prominent than the gold trade, diamonds make up a major industry in the emirate, with the country's strategic location being ideal for transporting stones from countries like South Africa (where many diamonds are mined) and India (one of the largest consumer markets and where 90% of the world's diamonds are polished).¹²⁶ Since 2015, the UAE's rough diamond trade has grown by over 75% and, in 2021, the country was identified as the world's top trading hub for rough diamonds, overtaking other countries like Belgium.¹²⁷ In 2021, over US\$22.8 billion of rough diamonds were traded through the UAE, with the DMCC FTZ being the only entry and exit point for rough diamonds in the country and thus playing the troubling dual role of both regulating the sector and promoting and facilitating trade.¹²⁸

Unlike wildlife trafficking, in which the entire supply chain may be hidden depending on the species, the issue of the illicit



The Dubai Gold Souk. It is estimated that as much as 95% of gold officially exported from East and central Africa makes its way to Dubai. © Francois Nel via Getty Images

gold and diamond trades in Dubai primarily rests on the concealment of the origins and provenance of consignments, through a 'no questions asked' approach. With Dubai as a preeminent hub, the illegality of its gold and diamond market centres on the perpetuation of supply chains of commodities that are illegally mined and/or linked to conflicts and other criminal activities in source countries, such as human trafficking, money laundering and terrorist financing.¹²⁹ Dubai not only serves as an end point for the precious metal and stones, but it also acts as a transit corridor, often to countries (such as Switzerland and the UK) where it is illegal to obtain these commodities from countries that have conflict gold or diamonds.¹³⁰

Illicit gold is frequently sourced from conflict zones in Africa, where organized-criminal groups, militias and other armed factions exploit artisanal or small-scale mine labourers¹³¹ in countries like Sudan, South Sudan, Somalia, Madagascar, CAR and the DRC. It is estimated that as much as 95% of gold officially exported from eastern and central Africa makes its way to Dubai.¹³² Climbing global gold prices (today gold trades at around US\$60 000 per kilogram)¹³³ have also attracted significant interest in gold extraction in the Sahel and West Africa from investors, especially in domestic and rural-based small-scale mining, with exports to Dubai also reportedly coming from countries such as Nigeria and Mali. Gold is either exported to Dubai directly from source countries or traded across porous borders in Africa to obscure its origins before it is transported abroad.¹³⁴ To a lesser extent, gold destined for Dubai is also sourced in South America, where, upon arrival at its destination, it becomes virtually impossible to determine its provenance and how it was obtained.¹³⁵

In addition to its overlap with conflict and crime, Dubai's gold and diamond market is associated with enormous losses of revenue for source countries. The emirate's lack of due diligence and sourcing checks means that illegally mined gold and diamonds in African countries can remain undeclared before being exported to Dubai, with virtually no taxes being paid to countries of origin. In 2016, media reports indicated that the UAE had declared gold imports worth US\$7.4 billion from 25 African countries

that had not declared any exports to the UAE.¹³⁶ Another example supports this finding: while, in 2016, Mali (Africa's third-largest exporter of gold) officially exported US\$216 million worth in gold to the UAE, the UAE recorded imports of US\$1.52 billion from Mali in the same year, illustrating the huge disparity in supply and profits.¹³⁷

Dubai's laissez-faire approach works in conjunction with a lack of coordinated tax frameworks in Africa, creating a perfect storm of conditions for gold smugglers to exploit. For example, according to ENACT, Mali applies export taxes to only the first 50 kilograms of gold exported per month, making it a magnet for the illegal gold trade by providing an incentive for West African gold smugglers to sell their gold in Mali for a large tax break.¹³⁸ Flights between Mali and Dubai cost around US\$500, the equivalent of approximately 10 to 12 grams of gold, making a single trip very profitable when considering that couriers typically transport 10 kilograms of gold per trip.¹³⁹ At the same time, the UAE's lack of export licences and certificates of origin for hand-carried parcels, means that smugglers are able to avoid paying royalties, depriving source countries of millions in revenue.¹⁴⁰

These commodities are most often transported by air, with smugglers concealing items in their hand luggage or on their person. For example, in 2021, an Indian man coming from Dubai was detained at Kempegowda International Airport in Bangalore, India, with 100 grams of gold in his mouth, along with an additional 15 gold pieces on the flight.¹⁴¹ As with other commodities, the transport is facilitated by corrupt airport staff, such as customs officers, and police authorities in source countries who reportedly accept bribes from smugglers.

Once in Dubai, traders and refiners obscure the origin of gold consignments through less-than-transparent business practices and regulatory loopholes before exporting the laundered gold to markets in Europe and the US. Despite the DMCC requiring gold dealers to have a written due diligence policy that aligns with standards of the Organisation for Economic Co-operation and Development (OECD), regular reports of illicit gold in Dubai's markets suggest that there is little or no enforcement of this requirement.¹⁴² For dealers buying gold to sell in the market, only a UAE customs form that proves the gold was legally declared upon entry to the country is sufficient, regardless of the metal's origins and the

circumstances in which it was obtained.¹⁴³ Moreover, gold may be traded multiple times among Dubai's refineries, allowing buyers and sellers to claim that their gold all comes from sources in Dubai, further obscuring the gold's problematic origins.¹⁴⁴ In 2021, in an effort to curb the illicit trade, the UAE's Ministry of Economy stated that it will require refineries to submit to annual audits to make sure their suppliers are sourcing gold responsibly, although it is likely to take time for the practice to be fully implemented.¹⁴⁵ This lack of due diligence, and Dubai's efforts to cater to artisanal and small-scale gold mining producers, helps explain the UAE's rapid rise as a major global gold hub.

For diamonds, the same vulnerabilities apply in Dubai, contributing to insecurity and conflict in source countries. In 2003, the diamond industry established the Kimberley Process, an international certification system designed to reassure consumers that the diamonds they bought were conflict free.¹⁴⁶ While the process did reduce the number of conflict diamonds on the market, the definition covered by the Kimberley Process remains limited to specific conflict circumstances and does not include issues of human-rights abuses and criminal activities. The UAE became a member of the Kimberley Process in 2002, which it began implementing in 2003, the first Arab country to do so.¹⁴⁷ Nevertheless, loopholes remain, including the lack of requiring individual diamonds to be traceable (rather, only the entire shipment must have a certificate), allowing for conflict diamonds to enter the licit trade. Partnership Africa Canada (PAC), one of the organizations that is leading the global campaign to regulate the diamond industry, has placed the UAE high on its watchlist of countries 'at risk' of becoming a conduit for illegal diamond trading.¹⁴⁸

Because of Dubai's role in the illicit trade of gold and diamonds, the emirate hosts a booming industry in these precious minerals and metals, maintained by both a desire for economic growth and a culture of luxury and opulence. At the same time, while the commercial benefits for the emirate have been apparent, the market has simultaneously perpetuated illicit activities in countries of origin, including contributing to dangerous and often fatal conditions for miners and other actors in the early stages of supply chains, and depriving source states of significant funds for administration and development.

Flora

The illicit trade in flora commodities is also linked to Dubai, although such flows are not as prominent as other environmental commodities. Literature on the illicit timber trade generally focuses on origin countries (often in West Africa) and destination points (primarily China), with little known about the transit stages of these illicit supply chains. Nevertheless, given that the forestry sector in key origin countries is often poorly regulated, and Dubai's free trade port is strategically located between source and destination countries, it is likely that the emirate plays a significant transit role in the trade, resulting in enormous environmental impacts and loss of biodiversity in source countries due to overexploitation.

The most frequently reported seizures linked to the emirate are of species of rosewood and sandalwood from East Africa and India, which are illegally harvested and make their way via Dubai before arriving in destinations further east, such as China, Japan and Vietnam, where timber is used in furniture-making and incense, among other purposes.

These hardwoods comprise several species, of which only a select few are CITES-listed, making it difficult to differentiate between the legal and illegal markets. Moreover, if timber processing occurs in the early stages of supply chains, it becomes nearly impossible to determine the legality of timber products as they pass through the emirate.

As with other environmental commodities, illegally sourced timber may pass through several transit locations, like Dubai, to obscure the origins of consignments. Given Dubai's large free trade port, illegal consignments of timber (often accompanied by fraudulent documentation) are likely to remain uninspected before making their way to end destinations. On arrival in destination countries, illicit shipments are laundered into mainstream timber markets, where buyers may be oblivious to the commodities' illegal origins.

Sandalwood is one of the most frequently illicitly traded timber species. There are over 19 varieties of sandalwood around the world, and certain species are in particularly high demand. From January to August 2020, Jebel Ali customs authorities reported intercepting 103 smuggling attempts, from which nearly 34 tonnes of sandalwood were discovered, along with a number of other illicit commodities (including drugs), suggesting that the trade overlaps with other criminal markets.¹⁴⁹ In East Africa, sandalwood from countries such as Kenya (where a ban was implemented in

2007) and Tanzania is taken across the border to Uganda through routes that often see the smuggling of other goods and people.¹⁵⁰ In Uganda, the sandalwood is semi-processed and then transported back to Kenya before being exported through the Kenyan Port of Mombasa to Dubai's seaports.¹⁵¹

Red sandalwood (*Pterocarpus santalinus*), which is endemic to India, also makes its way to Dubai through maritime shipping routes, before arriving at the emirate's Jebel Ali Port.¹⁵² Since 2019, Indian officials have intercepted several attempts by smugglers to transport logs to Dubai, mislabelled as other commodities.¹⁵³ For example, in March 2019, officials in Kattapuli Port in south-eastern India discovered over 18 tonnes of sandalwood (worth approximately US\$1.1 million) meant for Jebel Ali Port. Forged shipping bills accompanied the consignment, declaring the contents to be car accessories and parts.¹⁵⁴ Similarly, in May 2019, a Red sandalwood consignment from a fake company was seized by authorities in south-western India intended for China, via Dubai. The wood had been cut into log shapes in order to be passed off as normal commercial wood.¹⁵⁵ In May 2020, authorities in India seized 1.5 tonnes of Red sandalwood alongside US\$1.3 million worth of methamphetamines, opium paste, heroin, MDMA (Ecstasy), amphetamines and methaqualone.¹⁵⁶ This illustrates convergence with drug trafficking networks. The smuggling routes for Red sandalwood also converge with cigarette smuggling routes to the UAE and wildlife trafficking routes from India to Asia.

Like sandalwood, rosewood (sometimes referred to as 'red gold'), a term that covers a range of tropical hardwoods, is estimated to be one of the highest value and highest volume of illegally traded wildlife products globally.¹⁵⁷ The dominant rosewood species has changed many times over the years, shifting from Asian to African species as a result of the imposition of controls on various species; today, African rosewood is by far the most trafficked rosewood. As with the trade in gold and diamonds, corruption, poorly enforced or non-existent regulatory frameworks, and conflict help fuel the trade in rosewood, with import data suggesting that smugglers can pivot from one source country to another depending on changing circumstances (such as conflict, timber bans and political instability).¹⁵⁸

Between 2005 and 2015, 10 000 tonnes of rosewood were seized globally, with the majority found in China, Dubai,

Singapore and Malaysia (although the total is likely to be much higher, as numerous seizures are known to have taken place without being recorded in the World WISE database).¹⁵⁹ Between 2007 and 2015, a total of 338 seizures of rosewood took place in the UAE, which were either in transit or were intended to be used in the country, although it is not known how many of these seizures occurred in Dubai.¹⁶⁰ In December 2021, Hong Kong customs seized over 2.5 tonnes of rosewood (with an estimated market value of US\$1.9 million or 12.9 million yuan) at Hong Kong International Airport, arriving from Dubai.¹⁶¹

While most reported seizures of timber are those transported by sea, due to size and weight, smuggling can also occur through airfreight. For example, in late 2021, Hong Kong officials seized several tonnes of Red sandalwood from a Dubai flight en route to mainland China.¹⁶² In April 2021, Indian officials once again discovered nearly 2 tonnes of Red sandalwood (worth Rs17 crore – approximately US\$2.1 million), which were to be exported to Hong Kong SAR via Dubai near the airport.¹⁶³ Sometimes, rare wood is declared as second-hand furniture and products to deceive authorities.¹⁶⁴

In addition to timber logs, a range of different flora products illicitly pass through Dubai, albeit far less often than other environmental commodities. For example, Agarwood (known in Arabic as *oudh*) is a highly prized resin-impregnated wood found in a number of species of the *Thymelaeaceae* family, which produce a distinct scent when infected with a specific mold. As one of the most expensive raw ingredients for fragrances in the world, today Agarwood chips and oils are commonly used for perfumes and traditional aromatics across the Middle East but have been traded throughout the region for thousands of years and are highly integrated in the historical and cultural fabric of the Arabian Gulf.¹⁶⁵

Owing to the trade being part of an undefined, largely opaque market, recent authentic data on the illicit Agarwood market is often unavailable. Nevertheless, the continued high consumer demand in Dubai and the rest of the Arab world, coupled with the increasing scarcity of the commodity, means that the legal trade in Agarwood is likely to exist in parallel with significant clandestine supply chains.

With the only known species originating in South and South East Asia, consignments of Agarwood make their way to the Gulf, both illegally and legally, with the UAE (and Dubai specifically) identified as the primary entrepôt for the region. Fewer than 2% of tree species actually produce Agarwood,

as the trees are odourless until infected.¹⁶⁶ Since there is no discernable external way to identify that an infection exists, these trees have been felled indiscriminately in origin countries at astonishing rates, prompting Agarwood to be added to CITES Appendix II in 2004. A CITES certificate is now required for both the import and export of Agarwood and Agarwood oil.¹⁶⁷

Since its CITES listing, several countries have either banned the export of Agarwood (in the case of the Philippines and India) or placed export limits on it (Malaysia and Indonesia). However, the depletion of the species has only contributed to its rarity and consequently the demand for it and its price. With the quality, rarity, place of origin and nature of the wood all playing a part in determining the price, the cost of Agarwood is likened to gold, with a kilogram fetching up to hundreds of thousands of dollars, according to one 2019 study.¹⁶⁸ The scarcity of the commodity and the enormous demand has also resulted in a rise in fake or adulterated wood marketed as Agarwood.¹⁶⁹

Agarwood arrives in Dubai primarily by sea from Indonesia and Malaysia, via Singapore. In some cases, Agarwood is also smuggled from India on passenger flights.¹⁷⁰ For example, in 2019, it was reported that authorities had intercepted a smuggling attempt by an individual flying from Mumbai to Dubai with Agarwood worth Rs1.2 million (approximately US\$15 400).¹⁷¹ Although more recent data is unavailable, research shows that approximately 5.3 tonnes of illegal Agarwood were seized in the UAE between 2005 and 2014.¹⁷² In addition to imports for domestic use, the UAE also serves as a primary re-exporter to other countries in the region, such as Saudi Arabia.¹⁷³ Interviews conducted by TRAFFIC indicate that, as a result of trade restrictions, traders from the UAE supply customers throughout the region with Agarwood using a variety of methods, including private courier companies, personal luggage on passenger flights, and by truck using land routes.¹⁷⁴

In addition to wood, perhaps one of the most well-known flora commodities illicitly transported to Dubai is charcoal from Somalia. Derived from *Acacia* trees, charcoal is widely used in the emirate and throughout the region for smoking shisha pipes and cooking, with a preference for East African charcoal due to its long-lasting burning quality and aroma.¹⁷⁵ The illicit trade is so lucrative that in 2018, the UN estimated the total wholesale value of illicit Somali charcoal in the UAE to be US\$150 million per year.¹⁷⁶

As with gold, diamonds and timber, the illicit trade in charcoal has long been linked with instability, and has had a devastating impact on the environment, resulting in severe food insecurity for Somalia's population.¹⁷⁷ Several reports have outlined how taxation and extortion practices imposed at various checkpoints on charcoal traders by al-Shabaab¹⁷⁸ had once been a primary source of funding for the terrorist group, bringing in millions of dollars per year.¹⁷⁹ As a result, the UN imposed an international ban on the export of charcoal from Somalia in 2012, although reports of smuggling to Dubai continued.¹⁸⁰

The illicit trade in charcoal is often linked to the sugar trade, where small boats (called 'dhows') from the Gulf are loaded with sugar, which is exchanged for charcoal upon arrival at the Somali port of Kismayo.¹⁸¹ Charcoal consignments are then sent back, en route to smaller ports in Dubai, namely Al- Hamriyah Port, or to Oman, from where consignments are then transported by land to Dubai.¹⁸² Several reports also identify Iran as the largest importer of Somali charcoal and a major transit spot for shipments before their arrival at their final destination in the UAE. This is corroborated by discrepancies in Iran's reports of production and imports, with export quantities to the UAE. In Iran, charcoal shipments are repackaged and labelled as a 'Product of Iran' as a way of side-stepping the export ban.¹⁸³ Indeed, falsification of certificates of origin has been identified as a common method employed by smugglers, with reports of charcoal certificates mislabelled as products of a range of countries, including the Comoros, Côte d' Ivoire and Ghana,¹⁸⁴ before entering Dubai.

Criminal groups involved in the trade comprise counterparts in Somalia and Dubai, along with accomplices from locals in other countries, such as Iran and Oman. According to UN reports, charcoal traffickers frequently pay bribes (allegedly of between US\$2 000 and US\$4 000) to individuals at consulates in Dubai for the legal attestation of Somali charcoal,¹⁸⁵ underscoring the degree of corruption involved, as seen in other environmental supply chains.

Remarkably little information is available on the illicit charcoal trade between Somalia and Dubai, with the last seizures recorded in 2018, according to 2020 UN reports.¹⁸⁶ More recent sources suggest that due to increased pressure and enforcement of the ban by national authorities, al-Shabaab has shifted its focus to other profit-making activities.¹⁸⁷ Nevertheless, research indicates that large stockpiles of charcoal remain, coupled with increasing prices for the product. For example, in June 2020, the wholesale price of charcoal in Dubai was US\$80 per bag, compared with US\$50 per bag in 2019.¹⁸⁸ Such conditions suggest that despite a lack of recent evidence, the Somali charcoal trade still offers a strong incentive for smugglers to continue exporting the commodity to Dubai and beyond.

The illicit trade in flora commodities to and through Dubai poses serious questions about the sustainability of such practices. As with other environmental commodities, the larger the illicit market becomes, the fewer products there are to exploit. Beyond the apparent fact that viable alternatives exist to meet the demands of consumers in Dubai and other parts of Asia (particularly since processed flora species are often indistinguishable), flora crimes have a compounded impact on both the local ecosystems in which they are sourced, as well as broader environmental patterns and the social and economic well-being of populations across the globe.



ENABLING FACTORS

Location and trade infrastructure

As outlined above, Dubai's strategic location between Asia and Africa and its busy trade and transport systems are major enabling components of the emirate's role in the illicit trade in environmental commodities. The emirate's geographical position means that it serves as a natural stopping point for goods travelling long distances between source countries and consumer markets, and is arguably a decisive factor in contributing to its economic success. Of course, Dubai's accessibility has been enhanced by its substantial trade infrastructure. Smugglers are able to take advantage of the large volumes of cargo and shipments that frequently pass through the emirate to conceal illicit commodities and avoid detection. Beyond the emirate's robust logistics infrastructure, however, several key factors have contributed to Dubai's role as an attractive transit and destination hub for environmental products – namely, corruption; law enforcement shortcomings; and the emirate's lax financial structures, which enable criminals to benefit from environmental crimes through associated illicit financial flows.

Corruption and impunity

While by no means limited to environmental crimes, corruption plays an integral role in the ability of smugglers to illicitly move environmental commodities to and through Dubai. In addition to the challenges in distinguishing between legal and illegal products (such as timber logs and highly processed animal products) and the other security vulnerabilities that result in airport and port security unknowingly allowing consignments to pass through, in many cases, certain commodities (such as live animals and some animal products) are particularly difficult to transport without the collusion of intermediaries such as airport staff, freight forwarders, insurers, land border officials and customs brokers. This is particularly true given that consumer markets in Dubai for exotic pets and other rare commodities often comprise wealthy elites who are regularly reported to be given preferential treatment and able to shun laws and regulations in place.

For example, despite a UAE ban in 2016 on the private ownership of ‘predatory, dangerous and semi-dangerous animals’,¹⁸⁹ enforcement appears to be lax and has seemingly driven the trade underground, as big cats and other exotic animals in private homes continue to be posted on the social media accounts of Dubai’s privileged. The law limits the possession of wildlife to zoos, wildlife parks, circuses, and breeding and research centres, and violators may face up to six months in jail and fines as high as AED700 000 (approximately US\$190 500), although such penalties may be inconsequential for the ultra-rich.¹⁹⁰ Such trends extend to Dubai’s ruling family; for example, in November 2020, it was reported that the Pakistani government had issued a special permit to Sheikh Mohammed bin Rashid Al Maktoum to ‘export’ 150 Peregrine and Saker falcons from Pakistan to Dubai, in contravention of Pakistan’s laws.¹⁹¹ Indeed, despite a Pakistani ban on the hunting of endangered birds, the country regularly issues licences to Dubai’s rulers to hunt birds using falcons.¹⁹²



Jebel Ali Port, the busiest in the Gulf region, has occasionally been identified as a maritime transshipment hub for ivory. © Rabih Moghrabi via Getty Images

Weak law enforcement

Dubai’s role in many illicit environmental markets is also in large part due to its lax approach to due diligence inspections of consignments that pass through the emirate. This ‘no questions asked’ attitude can be described as emblematic of the emirate’s economic culture in pursuit of growth and is nowhere more exemplified than in the FTZs that make up its regulatory landscape. With over 40 FTZs,¹⁹³ Dubai’s specially delineated zones are each subject to their own distinct laws, creating a confusing patchwork of regulations. For instance, separate commercial laws apply to the Dubai Development Authority, JAFZA and the Dubai International Airport Free Zone.¹⁹⁴ Moreover, the emirate’s Central Bank, the Dubai International Financial Centre (DIFC)¹⁹⁵ and Dubai Customs have limited oversight roles in these zones, making it easier for traffickers to exploit both in terms of illicitly moving products and reaping the proceeds.¹⁹⁶

The absence of adequate and coordinated customs controls in FTZs means that environmental products shipped there can undergo various economic operations, such as transshipment, repackaging and relabelling, to mask the country of origin. This could include invoicing a shipment of sandalwood as granite or combining rhino horns in a single shipment with ebony wood and invoicing only for the wood.¹⁹⁷ In all these cases,

legitimacy is gained by having official-looking documentation, or else safe passage is secured by avoiding inspection – both of which are acquired through corruption. Because officials can transform environmental contraband into legal products with a single piece of documentation, permits, veterinary documents, certificates of origin and other forms can be forged or changed.

Lax financial structures

At their core, Dubai's FTZs provide the conditions for making profits as easy as possible to acquire, including permitting 100% foreign company ownership, the repatriation of capital and profits and no corporate, personal or customs tax.¹⁹⁸ Literature on the links between environmental crimes and illicit proceeds largely falls into two categories: illicit financial flows and their links to environmental crimes generally; and the role of Dubai specifically as a haven for illicit financial flows, with only a few cited links to environmental crimes. Nevertheless, given that the Dubai is a hub for both, it is likely that the emirate's permissive financial system significantly contributes to its attractiveness to criminals involved in a broad spectrum of illicit environmental supply chains. Indeed, in April 2020, the FATF issued a report on the UAE, which outlined its shortcomings in efforts to tackle money laundering, including singling out TBML as one of the 'main risks' facing the UAE, and citing the example of ties to the trading of conflict metals and stones.¹⁹⁹ Because environmental crimes deal heavily in raw materials and goods, TBML (which typically takes the form of over- and under-invoicing or mislabelling the contents of shipments) plays a key role in cleaning the proceeds of environmental crimes.²⁰⁰

In other cases, such as with respect to the gold and diamond markets, products are smuggled to Dubai, where the profits are often used to purchase goods for import to other regions (often after being mis-invoiced) and then sold for a profit, creating double the opportunity to raise illicit funds. Dubai's FTZs, through which a range of wildlife, minerals, metals and timber (among other commodities) illicitly pass, act as havens

for laundering the proceeds of these criminal activities, since few regulatory obstacles are presented. In this way, criminal actors are able to launder their ill-gotten gains through the formal financial system with comparably little risk. Other tools used to mask the origin, and which have been observed in Dubai's FTZs, include third-party payments, cash and other bearer negotiable instruments (such as checks or promissory notes). According to documentation, illicit actors in Dubai have also created fake invoices through anonymous Dubai companies.²⁰¹

The issue is further complicated by the Islamic hawala system, used throughout Dubai and the Middle East. The hawala payment system functions as a series of informal money transfer networks, which facilitate money flows outside the banking system. Such schemes are often community-based and draw on a network of brokers across countries to facilitate international transfers without money physically crossing borders.²⁰² This practice makes it difficult to distinguish between legitimate and illicit financial flows. Indeed, differentiating between the two in this case often requires in-depth co-ordination between anti-money-laundering authorities and specially trained environmental investigators, both domestically as well as across borders. According to the Global Trade Review, such systems are used 'extensively' by gold traders, for example, 'for the purposes of trade-based money laundering'.²⁰³ The risk to banks is that ultimately those funds will re-enter the financial system with little indication that they are connected to criminal activity.



FUTURE OF THE HUB

The factors that currently make Dubai a significant transit and destination hub for the illicit trade in environmental commodities are likely to remain unless significant changes are made to the emirate's approach to key vulnerabilities. Certain factors, such as the emirate's strategic location between Africa and Asia and its large transport infrastructure, are unavoidable and have undoubtedly had a far more positive than negative impact on Dubai's status and economic growth. At the same time, the emirate's pursuit of economic and financial development at any cost, including with lax law enforcement practices, corruption and a lack of true regulatory mechanisms, has led to a culture of impunity for actors throughout illicit environmental supply chains.

Currently, the emirate is on track to rapidly expand its operations and opportunity for economic diversification and growth. In January 2019, Dubai's ruler, Sheikh Mohammed bin Rashid, unveiled his '50-Year Charter' for the continued development of the emirate.²⁰⁴ Consisting of eight principles, the plan describes the emirate itself as a 'politically neutral, business-friendly global hub that focuses on creating economic opportunities.'²⁰⁵ Notably, the charter underscores that 'no one is above the law', not least the royal family.²⁰⁶ Also featured in the document are plans to set up the region's first virtual commercial city, granting commercial licences, residencies and open bank accounts without the need to be physically present in Dubai.²⁰⁷ Such developments, while enhancing the emirate's capacity to boost trade and finance, would be likely to increase the opacity of financial flows linked to illicit supply chains.

In the same year, and in line with the 50-year plan, the Dubai Silk Road strategy was approved by Crown Prince Sheikh Mohammed bin Rashid. The Silk Road strategy is a plan to grow Dubai's role as a strategic global trade link, by boosting air and sea freight and enhancing logistical integration. Comprising nine initiatives and 33 projects,²⁰⁸ the strategy aims to strengthen trade and improve logistical and operational connections between Dubai's FTZs, the UAE's other emirates, as well as DP World terminals worldwide. While these initiatives²⁰⁹ are emblematic of Dubai's continuous pursuit of economic growth and innovation, they simultaneously heighten the opportunities for illicit actors to engage in environmental supply chains.

Despite the vulnerabilities that accompany such developments, Dubai has shown a political willingness to crack down on environmental crimes in the past few years. For example, in October 2021, Sultan Ahmed Bin Sulayem, Group Chairman and CEO of DP World, was the first to sign a pledge calling for the mobilization of public and private resources to stamp out the illegal wildlife trade by 2030.²¹⁰

DP World is a principal partner of the United for Wildlife Taskforce, set up by the UK's Prince William as a network of transport industry leaders working together to tackle the illegal wildlife trade.²¹¹ In 2016, DP World signed the Buckingham Palace Declaration, which sets out 11 commitments to cover initiatives aimed at stopping the transportation of illegal wildlife products, including securing information-sharing systems for the transport industry to receive credible information about high-risk routes and methods of transportation and developing a secure alert system about suspected consignments to relevant customs and law enforcement authorities, among others.²¹²



A billboard in Dubai showing leader Sheikh Mohammed bin Rashid Al Maktoum. In 2019, Sheikh Mohammed unveiled Dubai's Silk Road strategy, a plan to grow the emirate's role as a strategic global trade link. © Paula Bronsetein via Getty Images

Additionally, the UAE now requires FTZs to share information about transactions with the country's Financial Intelligence Unit and Central Bank. In 2016, the Dubai Financial Services Authority also issued guidance on TBML, stating that businesses should consider issues such as customer onboarding and due diligence. Yet these efforts, while good on paper, are yet to effect any change to illicit flows stemming from trade activities, as evidenced by regular reports of seizures and ongoing illicit activity. Moreover, DIFC guidance yields little authority on trade transactions with FTZs unless they are routed to financial institutions in the DIFC. Indeed, while the FATF has acknowledged the UAE's progress in fighting money laundering, the country was added to the FATF's 'grey list' of high-risk jurisdictions in March 2022.²¹³

While several factors have contributed to Dubai's role as a major transit and destination hub for environmental crimes, many of the conditions that have brought economic prosperity to the emirate are the very ones that have equipped it with the capacity to address its vulnerability to the illicit trade.

While the trade in various environmental markets often exploit commodity-specific vulnerabilities in Dubai, a number of general initiatives could be implemented by the emirate and country as a whole to help curb these illicit activities. Still, without further political will followed by effective implementation of response measures, Dubai is likely to remain a centre for illicit environmental supply chains. The following recommendations would contribute to improving Dubai's capacity to detect and deter illicit environmental flows:

- **Stricter customs practices:** Implementing stricter customs practices, such as requiring entry documents to specify more information for certain products/smaller parcels than merely their countries of origin and destination, would allow Dubai authorities to better secure legal supply chains. It would also provide the emirate, as a major transit zone, an opportunity to share the burden of verification of consignments with source and destination countries. For example, documentation that specifies that environmental commodities have been paid for prior to entry and/or identifies the purchaser could help undermine smuggling attempts into the emirate and bolster due diligence practices.
- **Enhanced detection and detection training:** Since for several environmental commodities it is often difficult to distinguish between legal and illegal goods, further investment in forensic and other investigative methods, as well as training airport and port staff in these differences through risk profiling, would minimize the likelihood of illicit consignments evading detection.
- **Forbidding cash transactions for large volumes:** While hawala payments and other informal payment practices have a long history in the region and are likely to remain, banning informal money-transfer systems (such as cash payments) for consignments over a specified volume, would enhance transparency and the traceability of transactions.
- **Independence of regulatory authorities:** In many cases in Dubai, regulators and environmental market actors are one and the same. Reassigning auditing responsibilities to third parties would eliminate the risk of conflicts of interest, including expanding oversight capacities of customs authorities in FTZs, while simultaneously and regularly informing businesses operating in FTZs of their legal obligations and the reputational benefits of compliance.
- **Legislative deterrence and enforcement:** Laws related to the illicit trade in environmental commodities are currently not sufficient deterrent measures for individuals engaged in supply chains, whether as smugglers, retailers or consumers. Efforts such as increasing fines and criminalization, along with other measures in line with international laws and standards, would minimize the risk that individuals will engage in such activities. However, it is important to note that stricter legislation necessarily requires the political will to enforce laws without exceptions.
- **Enhanced public awareness and monitoring:** While regulatory and legal measures to tackle environmental crimes are key in reducing Dubai's vulnerability to the illicit trade, they should be embedded in broader efforts that allow for increased public monitoring of supply chains through the emirate. Moreover, given Dubai's large consumer market for many environmental commodities, security and legal steps taken to reduce illicit flows should be complemented by wider public campaigns that address the social drivers that facilitate the trade in the first place. By taking a more open and collective approach to tackling environmental crimes, the emirate has the potential to serve as an example of a global leader in responsible trade and development, and consequently build its resilience.



NOTES

- 1 TRAFFIC, Runway to extinction: Wildlife trafficking in the air transport sector, April 2020, https://www.traffic.org/site/assets/files/12773/runway-to-extinction_web.pdf.
- 2 Leonarda B Spee, et al., Endangered exotic pets on social media in the Middle East: Presence and impact, *Animals*, 9, 8 (2019), <https://www.mdpi.com/2076-2615/9/8/480/htm>.
- 3 Dubai Customs, Dubai trade statistics 2020, <https://www.dubaicustoms.gov.ae/en/OpenData/Pages/trade-stats.aspx>.
- 4 GJPEC India, UAE overtakes Belgium as world's largest rough diamond trading hub: DMCC, February 2022, https://gjpec.org/news_detail.php?news=uae-overtakes-belgium-as-world-s-largest-rough-diamond-trading-hub-dmcc.
- 5 Waheed Abbas, Dubai economy set to expand 4.5% in 2022, *Khaleej Times*, February 2022, <https://www.khaleejtimes.com/economy/dubai-economy-set-to-expand-4-5-in-2022>; Natasha Turak, Dubai's economy shows promising growth after slumping 11% last year, CNBC, October 2021, <https://www.cnbc.com/2021/10/12/dubais-economy-shows-promising-growth-after-slumping-11percent-last-year.html>.
- 6 Government of Dubai Media Office, Substantial upswing in Q2 and Q3 drives Dubai's economic acceleration in the first nine months of 2021, 31 January 2022, <https://www.mediaoffice.ae/en/news/2022/Jan/31-01/Dubai-Statistic-The-rapid-economic-grow-reflects-the-postive-impact>.
- 7 For more information about the potential impact of the Belt and Road Initiative on illicit flows, see Virginia Comolli and Natasha Rose, China's New Silk Road: Navigating the organized crime risk, GI-TOC, May 2021, <https://globalinitiative.net/wp-content/uploads/2021/03/Chinas-New-Silk-Road-Navigating-the-Organized-Crime-Risk-GITOC.pdf>.
- 8 FATF, United Arab Emirates' measures to combat money laundering and terrorist financing, April 2020, <https://www.fatf-gafi.org/countries/u-z/unitedarabemirates/documents/mer-uae-2020.html>.
- 9 INTERPOL, INTERPOL marks a decade of tackling serious organized environmental crime, 23 November 2020, <https://www.interpol.int/News-and-Events/News/2020/INTERPOL-marks-a-decade-of-tackling-serious-organized-environmental-crime>.
- 10 Fayed M Elessawy, The boom: Population and urban growth of Dubai city, *Horizons in Humanities and Social Sciences*, April 2017, https://www.researchgate.net/publication/317564338_The_Boom_Population_and_Urban_Growth_of_Dubai_City; Dubai Statistics Centre, <https://www.dsc.gov.ae/en-us/DSC-News/Pages/default.aspx>.
- 11 Charlotte Edmund, From fishing village to futuristic metropolis: Dubai's remarkable transformation, World Economic Forum, 1 November 2019, <https://www.weforum.org/agenda/2019/11/dubai-uae-transformation>.
- 12 Aya Batrawy, The world's busiest airport, saw 29 million passengers last year. Here's which one it is., USA Today, <https://eu.usatoday.com/story/travel/airline-news/2022/02/22/dubai-busiest-airport-world/6891061001>; Shereen El Gazzar, Huge growth in freight at Al Maktoum International Airport, *The National*, 10 February 2015, <https://www.thenationalnews.com/business/huge-growth-in-freight-at-al-maktoum-international-airport-1.54496>.
- 13 Aya Batrawy, The world's busiest airport, saw 29 million passengers last year. Here's which one it is., USA Today, <https://eu.usatoday.com/story/travel/airline-news/2022/02/22/dubai-busiest-airport-world/6891061001>.
- 14 Maritime Manual, Top 10 biggest ports in UAE, 2 August 2021, <https://www.maritimemmanual.com/ports-in-uae>.
- 15 See JAFZA official website, <https://www.jafza.ae/about>.
- 16 TEUs stands for 'twenty-foot equivalent units', the standard measure of port activity in the shipping industry.
- 17 *Khaleej Times*, Jafza's non-oil trade up 17% to \$80.2 billion in 2016, 13 August 2017, <https://www.khaleejtimes.com/business/jafzas-non-oil-trade-up-17-to-80-2-billion-in-2016>; *Khaleej Times*, Jafza records phenomenal growth, Marasi News, 23 June 2015, <https://www.marasinews.com/ports/jafza-records-phenomenal-growth>; Ajay Menon, Major container ports and port operators in the world in 2021, Marine Insight,

- 21 February 2021, <https://www.marineinsight.com/know-more/container-ports-and-port-operators>.
- 18 Dan Murphy, The UAE signed a massive, \$3.4 billion deal with China — and that 'isn't a surprise', CNBC, 29 April 2019, <https://www.cnbc.com/2019/04/29/china-uae-trade-deal-on-belt-and-road-isnt-a-surprise-wef-president.html>.
- 19 Waheed Abbas, Dubai economy set to expand 4.5% in 2022, *Khaleej Times*, February 2022, <https://www.khaleejtimes.com/economy/dubai-economy-set-to-expand-4-5-in-2022>; Natasha Turak, Dubai's economy shows promising growth after slumping 11% last year, CNBC, October 2021, <https://www.cnbc.com/2021/10/12/dubais-economy-shows-promising-growth-after-slumping-11percent-last-year.html>.
- 20 Government of Dubai Media Office, Substantial upswing in Q2 and Q3 drives Dubai's economic acceleration in the first nine months of 2021, 31 January 2022, <https://www.mediaoffice.ae/en/news/2022/Jan/31-01/Dubai-Statistic-The-rapid-economic-grow-reflects-the-postive-impact>.
- 21 Waheed Abbas, Dubai economy set to expand 4.5% in 2022, *Khaleej Times*, February 2022, <https://www.khaleejtimes.com/economy/dubai-economy-set-to-expand-4-5-in-2022>.
- 22 Elad Raymond, Federalism in a unitary desert: Analyzing the successes of federal political structure in the United Arab Emirates, Onero Institute, July 2020, <https://www.oneroinstitute.org/federalism-in-uae>.
- 23 Ibid.
- 24 BBC, Sheikh Mohammed Al Maktoum: Who is Dubai's ruler?, 16 February 2021, <https://www.bbc.com/news/world-middle-east-51762543>.
- 25 Reuters, DP World returns to full state ownership, takes on \$8.1 billion debt, 17 February 2020, <https://www.reuters.com/article/us-dp-wrld-delisting/dp-world-returns-to-full-state-ownership-takes-on-8-1-billion-debt-idUSKBN20B0F8>.
- 26 More recent allegations of corruption can be found here: <https://www.middleeasteye.net/news/revealed-tunisian-presidents-family-links-illegal-uae-oil-deal>; <https://projects.icij.org/investigations/pandora-papers/power-players/en/player/mohammed-bin-rashid-al-maktoum>; <https://carnegieendowment.org/2020/03/19/dubai-property-oasis-for-nigeria-s-corrupt-political-elites-pub-81306>. Notably, the UAE is ranked 24th of 180 in the 2021 Corruption Perceptions Index, <https://www.transparency.org/en/countries/united-arab-emirates>, and scores 17 out of 100 in the Freedom of the World 2021 report, see <https://freedomhouse.org/country/united-arab-emirates/freedom-world/2021>.
- 27 GI-TOC, 2021 Global Organized Crime Index, Criminality in United Arab Emirates, https://ocindex.net/country/united_arab_emirates.
- 28 Mary Utermohlen and Patrick Baine, In plane sight: Wildlife trafficking in the air transport sector, GI-TOC, 2018, <https://globalinitiative.net/wp-content/uploads/2018/08/In-Plane-Sight-Wildlife-Trafficking-in-the-Air-Transport-Sector-C4ADS-ROUTES-2018.pdf>; TRAFFIC, Runway to extinction: Wildlife trafficking in the air transport sector, April 2020, https://www.traffic.org/site/assets/files/12773/runway-to-extinction_web.pdf.
- 29 Mary Utermohlen and Patrick Baine, In plane sight: Wildlife trafficking in the air transport sector, GI-TOC, 2018, <https://globalinitiative.net/wp-content/uploads/2018/08/In-Plane-Sight-Wildlife-Trafficking-in-the-Air-Transport-Sector-C4ADS-ROUTES-2018.pdf>; TRAFFIC, Runway to extinction: Wildlife trafficking in the air transport sector, April 2020, https://www.traffic.org/site/assets/files/12773/runway-to-extinction_web.pdf.
- 30 Shawn Blore and Marcena Hunter, Dubai's problematic gold trade, *Dubai's Role in Facilitating Corruption and Global Illicit Financial Flows*, edited by Matthew T Paige and Jodi Vittori, Washington, DC.: Carnegie Endowment for International Peace, 2020, 35–48, <https://carnegieendowment.org/2020/07/07/dubai-s-problematic-gold-trade-pub-82184>.
- 31 UN Conference on Trade and Development, COVID-19 and maritime transport impact and responses, Transport and Trade Facilitation Series 15, 2021, https://unctad.org/system/files/official-document/dtl1b2021d1_en.pdf.
- 32 Mary Utermohlen and Patrick Baine, In plane sight: Wildlife trafficking in the air transport sector, GI-TOC, 2018, <https://globalinitiative.net/wp-content/uploads/2018/08/In-Plane-Sight-Wildlife-Trafficking-in-the-Air-Transport-Sector-C4ADS-ROUTES-2018.pdf>. While the origin of COVID-19 is still debated, it is thought by many that it is a zoonotic disease that 'jumped' from wildlife to humans; see more: <https://www.who.int/news/item/20-05-2021-new-international-expert-panel-to-address-the-emergence-and-spread-of-zoonotic-diseases>.
- 33 Mary Utermohlen and Patrick Baine, In plane sight: Wildlife trafficking in the air transport sector, GI-TOC, 2018, <https://globalinitiative.net/wp-content/uploads/2018/08/In-Plane-Sight-Wildlife-Trafficking-in-the-Air-Transport-Sector-C4ADS-ROUTES-2018.pdf>, p 7.
- 34 TRAFFIC, Runway to extinction: Wildlife trafficking in the air transport sector, April 2020, https://www.traffic.org/site/assets/files/12773/runway-to-extinction_web.pdf.
- 35 BBC, Snakes on the plane: Jakarta police foil smuggling bid, 26 March 2011, <https://www.bbc.com/news/world-asia-pacific-12871368>; Jeffrey Gittleman, Smuggled, beaten and drugged: The illicit global ape trade, *The New York Times*, 4 November 2017, <https://www.nytimes.com/2017/11/04/world/africa/ape-trafficking-bonobos-orangutans.html>; Jane Dalton, Illegal trafficking of baby elephants to China and Dubai for tourism must be stopped, say activists, *Independent*, 3 September 2018, <https://www.independent.co.uk/climate-change/news/elephants-laos-china-dubai-trafficking-illegal>.

- cites-tourist-trip-cites-stae-a8517431.html; Philippines Bureau of Customs, Customs NAIA stops another wildlife smuggling of tarantulas, gecko Lizards, Spiderlings declared as 'Cosmetics', 18 March 2022, <https://customs.gov.ph/customs-naia-stops-another-wildlife-smuggling-of-tarantulas-gecko-lizards-spiderlings-declared-as-cosmetics>.
- 36 Wild falcons are caught using a range of techniques, including sticky liquids, net traps or, most commonly, using smaller birds as bait, see Day Out Dubai, Falconry – Traditional sport of the UAE and heritage symbol, <https://www.dayoutdubai.ae/blog/safari/falconry/>; Joshua Hammer, In Dubai, flying with the falcons, *The New York Times*, 17 January 2018, <https://www.nytimes.com/2018/01/17/travel/dubai-falconry-hot-air-balloon-tour.html>.
 - 37 Scientific names: *Falco cherrug* (Saker); *Falco rusticolus* (Gyr); *Falco peregrinus* (Peregrine), available at <https://www.birdlife.org>.
 - 38 Zain Zaman Janjua, Poachers' paradise: Gulf hunts fuel Pakistan falcon trafficking, Phys.org, 4 January 2021, <https://phys.org/news/2021-01-poachers-paradise-gulf-fuel-pakistan.html>.
 - 39 Nick Webster, Dubai breeder's birds have the hunting instincts that could help to kill falcon smuggling, *The National*, 5 December 2018, <https://www.pressreader.com/uae/the-national-news/20181205/281685435917567>.
 - 40 Appendices I, II and III to the CITES Convention are lists of species afforded different levels or types of protection from overexploitation. Appendix I lists species that are the most endangered among CITES-listed animals and plants and are threatened with extinction. CITES prohibits international trade in specimens of these species, except when the purpose of the import is not commercial, such as scientific research. In these exceptional cases, trade may take place provided it is authorized by the granting of both an import permit and an export permit. Appendix II lists species that are not necessarily now threatened with extinction but that may become so unless trade is closely controlled. International trade in specimens of Appendix II species may be authorized by the granting of an export permit or re-export certificate, but only if certain conditions are met, and above all that trade will not be detrimental to the survival of the species in the wild.
 - 41 UAE Ministry of Climate Change & Environment, Implementation of CITES provisions concerning ivory, <https://cites.org/sites/default/files/eng/com/sc/71/E-SC71-11-A15.pdf>.
 - 42 Joshua Hammer, How the United Arab Emirates became the center of falconry's gyre, *Atlas Obscura*, 11 February 2020: <https://www.atlasobscura.com/articles/uae-falcon-racing-history>; Joshua Hammer, In Dubai, flying with the falcons, *The New York Times*, 17 January 2018, <https://www.nytimes.com/2018/01/17/travel/dubai-falconry-hot-air-balloon-tour.html>.
 - 43 Matthew DeBord, Bentley created a super luxe SUV specifically designed for falconry – and it looks awesome, *Business Insider*, 18 May 2017, <https://www.businessinsider.com/bentley-falconry-bentayga-suv-photos-2017-5?r=US&IR=T>; Bianca Britton, Falcons on a plane: First class treatment for birds of prey, *CNN*, 2 February 2017, <https://edition.cnn.com/travel/article/falcons-planes-middle-east/index.html>; Dubai Falcon Hospital, <https://www.citysearch.ae/dubai-falcon-hospital-dubai>.
 - 44 Leonarda B Spee, et al., Endangered exotic pets on social media in the Middle East: Presence and impact, *Animals*, 9, 8 (2019), <https://www.mdpi.com/2076-2615/9/8/480/htm>.
 - 45 *The National*, Dubai Customs seize 64 falcons as smugglers try to cross Hatta border, 12 September 2021, <https://www.thenationalnews.com/uae/2021/09/12/dubai-customs-seize-64-falcons-as-smugglers-try-to-cross-hatta-border>.
 - 46 Ibid.
 - 47 TRAFFIC, Runway to extinction: Wildlife trafficking in the air transport sector, April 2020, https://www.traffic.org/site/assets/files/12773/runway-to-extinction_web.pdf; Mary Utermohlen and Patrick Baine, In plane sight: Wildlife trafficking in the air transport sector, GI-TOC, 2018, <https://globalinitiative.net/wp-content/uploads/2018/08/In-Plane-Sight-Wildlife-Trafficking-in-the-Air-Transport-Sector-C4ADS-ROUTES-2018.pdf>. Although the full impact of the war in Ukraine on wildlife trafficking flows is currently unknown, it is likely that such flows have been temporarily disrupted. As elsewhere, the conflict may create conditions that in the long term exacerbate these activities and the illicit financial flows that stem from environmental crimes.
 - 48 AFP, Kremlin-backed falcon project sparks smuggling fears, *France 24*, 30 October 2019, <https://www.france24.com/en/20191030-kremlin-backed-falcon-project-sparks-smuggling-fears>; EFE, Kazakhstan thwarts smuggling of endangered falcons, November 2016, <https://www.efe.com/efe/english/life/kazakhstan-thwarts-smuggling-of-endangered-falcons/50000263-3098719>; RFE/RL, U.A.E. citizen nabbed 'trying to smuggle falcons' from Kyrgyzstan, 22 November 2011, https://www.rferl.org/a/uae_citizen_caught_smuggling_kyrgyz_falcons/24399084.html; Mary Utermohlen and Patrick Baine, In plane sight: Wildlife trafficking in the air transport sector, GI-TOC, 2018, <https://globalinitiative.net/wp-content/uploads/2018/08/In-Plane-Sight-Wildlife-Trafficking-in-the-Air-Transport-Sector-C4ADS-ROUTES-2018.pdf>, p 94.
 - 49 Haroon Janjua and David Klein, Pakistan: Seized from traffickers, 70 rare falcons die in government captivity, *OCCRP*, 29 January 2022, <https://www.occrp.org/en/daily/15867-pakistan-seized-from-traffickers-70-rare-falcons-die-in-government-captivity>.
 - 50 The UAE has been identified as the world's top importer of birds of prey; see *Financial Times*, The fall of a falcon

- smuggler, 29 March 2019, <https://www.ft.com/content/adf5e460-501d-11e9-9c76-bf4a0ce37d49>.
- 51 AFP, Poachers' paradise: Gulf hunts fuel Pakistan falcon trafficking, Al Jazeera, 4 January 2021, <https://www.aljazeera.com/news/2021/1/4/poachers-paradise-gulf-hunts-fuel-pakistan-falcon-trafficking>.
 - 52 Mary Utermohlen and Patrick Baine, In plane sight: Wildlife trafficking in the air transport sector, GI-TOC, 2018, <https://globalinitiative.net/wp-content/uploads/2018/08/In-Plane-Sight-Wildlife-Trafficking-in-the-Air-Transport-Sector-C4ADS-ROUTES-2018.pdf>.
 - 53 TRAFFIC, Runway to extinction: Wildlife trafficking in the air transport sector, April 2020, https://www.traffic.org/site/assets/files/12773/runway-to-extinction_web.pdf; Joshua Hammer, The egg thief, Outside Online, 7 January 2019, <https://www.outsideonline.com/outdoor-adventure/exploration-survival/egg-thief-jeffrey-lendrum-falcon>.
 - 54 AFP, Kremlin-backed falcon project sparks smuggling fears, France 24, 30 October 2019, <https://www.france24.com/en/20191030-kremlin-backed-falcon-project-sparks-smuggling-fears>.
 - 55 TRAFFIC, Runway to extinction: Wildlife trafficking in the air transport sector, April 2020, https://www.traffic.org/site/assets/files/12773/runway-to-extinction_web.pdf.
 - 56 Molting season occurs approximately between March and September. If a bird continues to molt beyond this period, it usually means that it is less healthy and will therefore fetch a lower price. See Harrison Jacobs, I woke up at dawn to follow a top falconer training the fastest creatures on earth to compete for \$7 million in prizes, and found the Middle East's oldest pastime grisly and thrilling, Insider, 16 January 2019, <https://www.businessinsider.com/middle-east-falcons-uae-training-2019-1?r=US&IR=T>.
 - 57 While the cheetah is listed as the fastest land animal, Peregrine falcons are considered the fastest animals on earth and can reach speeds of over 300 kilometres per hour when in a hunting dive; see One Kind Planet, Top 10 fastest animals, <https://onekindplanet.org/top-10/top-10-worlds-fastest-animals>.
 - 58 The Science Times, Peregrine eggs stolen from UK's national park to be sold in the black market for \$25,000 each: authorities, 16 June 2020, <https://www.sciencetimes.com/articles/26079/20200616/peregrine-eggs-stolen-uks-national-park-sold-black-market-25.htm>; PA, Businessman stole rare falcon eggs to sell in Dubai, *The Guardian*, 19 August 2010, <https://www.theguardian.com/environment/2010/aug/19/falcon-eggs-stolen-wales-dubai>; Damien Gayle, 'Pablo Escobar of eggs' fights extradition to Brazil, *The Guardian*, 22 January 2020, <https://www.theguardian.com/world/2020/jan/22/pablo-escobar-of-eggs-fights-extradition-to-brazil>.
 - 59 *The National*, World's most expensive falcon sells for \$170,000 in Saudi Arabia, 15 October 2020, <https://www.thenationalnews.com/world/gcc/world-s-most-expensive-falcon-sells-for-170-000-in-saudi-arabia-1.1093904>; Al Sharqiya, The most expensive falcon 'gir' in the world sold for nearly half a million dollars, 6 September 2021, <https://alsharqiya.com/en/news/the-most-expensive-falcon-gir-in-the-world-sold-for-nearly-half-a-million-dollars>; SPA, Most expensive Shaheen falcon sold at auction, Arab News, 14 November 2019, <https://www.arabnews.com/node/1583981/offbeat>; SPA, Most expensive falcon sold nets \$53,600 at Saudi Falcon Club auction, Arab News, 12 October 2021, <https://www.arabnews.com/node/1946766/saudi-arabia>.
 - 60 The Science Times, Peregrine eggs stolen from UK's national park to be sold in the black market for \$25,000 each: authorities, 16 June 2020, <https://www.sciencetimes.com/articles/26079/20200616/peregrine-eggs-stolen-uks-national-park-sold-black-market-25.htm>.
 - 61 Patricia Tricorache and Daniel Stiles, Live cheetahs, GI-TOC, September 2021, <https://globalinitiative.net/wp-content/uploads/2021/09/GITOC-ESAObs-Live-Cheetahs-Black-Market-Brief.pdf>.
 - 62 Rachel Bale, How trafficked cheetah cubs move from the wild and into your Instagram feed, *National Geographic*, 17 August 2021, <https://www.nationalgeographic.com/animals/article/how-trafficked-cheetah-cubs-move-from-the-wild-and-into-your-instagram-feed>.
 - 63 Patricia Tricorache and Daniel Stiles, Live cheetahs, GI-TOC, September 2021, <https://globalinitiative.net/wp-content/uploads/2021/09/GITOC-ESAObs-Live-Cheetahs-Black-Market-Brief.pdf>, pp 17–18.
 - 64 Ibid., pp 19–20.
 - 65 Ibid., p 13.
 - 66 Mary Utermohlen and Patrick Baine, In plane sight: Wildlife trafficking in the air transport sector, GI-TOC, 2018, <https://globalinitiative.net/wp-content/uploads/2018/08/In-Plane-Sight-Wildlife-Trafficking-in-the-Air-Transport-Sector-C4ADS-ROUTES-2018.pdf>.
 - 67 Scientific names: *Pongo abelii* and *Pongo pygmaeus* (Orangutans); *Pan paniscus* (Bonobos); *Pan troglodytes* (Chimpanzees); *Gorilla* and *Gorilla beringei* (Gorillas); available at <https://www.worldwildlife.org>.
 - 68 Fernando Turmo, About great ape trafficking, Jane Goodall Institute, <https://www.thejanegoodallinstitute.com/about-great-ape-trafficking>; Arcus Foundation, About apes, https://www.arcusfoundation.org/wp-content/uploads/2018/06/AboutApes_200.pdf.
 - 69 Michael Dahlstrom, 'True survivor': How investigators saved a baby ape trafficked on the dark web, 14 July 2021, Yahoo News, <https://au.news.yahoo.com/investigators-save->

- baby-ape-trafficked-dark-web-073824297.html; Fernando Turmo, About great ape trafficking, Jane Goodall Institute, <https://www.thejanegoodallinstitute.com/about-great-ape-trafficking>; Jeffrey Gettleman, Smuggled, beaten and drugged: The illicit global ape trade, *The New York Times*, 4 November 2017, <https://www.nytimes.com/2017/11/04/world/africa/ape-trafficking-bonobos-orangutans.html>.
- 70 Daniel Stiles, et al., Stolen apes: The illicit trade in chimpanzees, gorillas, bonobos, and orangutans, UNEP Rapid Response Assessment, 2013, https://gridarendal-website-live.s3.amazonaws.com/production/documents/s_document/62/original/GRIDPublication.pdf?1483646423.
 - 71 Rachel Fobar, In Indonesia, orangutan killings often go unpunished, *National Geographic*, 28 December 2021, <https://www.nationalgeographic.com/animals/article/orangutan-killings-unpunished-in-indonesia>.
 - 72 Arcus Foundation, *State of the Apes: Killing, Capture, Trade and Conservation*, Vol. 4, Ch. 4. Cambridge: Cambridge University Press, 2020, <https://www.stateoftheapes.com/volume-4-killing-capture-trade>. This applies to other primates; for example, in 2012, a smuggling attempt of two slender lorises was intercepted when three men were arrested in Delhi, arriving from Thailand. The men were attempting to hide the animals in their pants while boarding a flight to Dubai. See Melissa Locker, Three men arrested for smuggling slender lorises in underwear, *Time*, 13 September 2012, <https://newsfeed.time.com/2012/09/13/three-men-arrested-for-smuggling-slender-lorises-in-underwear>.
 - 73 Global Financial Integrity, Illicit financial flows and the illicit trade in great apes, October 2018, <https://www.gfintegrity.org/wp-content/uploads/2018/10/GFI-Illicit-Financial-Flows-and-the-Illegal-Trade-in-Great-Apes.pdf>.
 - 74 Ibid.
 - 75 Daniel Stiles, et al., Stolen apes: The illicit trade in chimpanzees, gorillas, bonobos, and orangutans, UNEP Rapid Response Assessment, 2013, https://gridarendal-website-live.s3.amazonaws.com/production/documents/s_document/62/original/GRIDPublication.pdf?1483646423; OCCRP, Organized crime at heart of great ape trafficking, 5 March 2013, <https://www.occrp.org/en/daily/1870-organized-crime-at-heart-of-great-ape-trafficking>.
 - 76 Project to End Great Ape Slavery (PEGAS), The illegal trade in great apes, September 2016, <https://freetheapes.files.wordpress.com/2014/11/cop17-report.pdf>.
 - 77 Mary Utermohlen and Patrick Baine, In plane sight: Wildlife trafficking in the air transport sector, GI-TOC, 2018, <https://globalinitiative.net/wp-content/uploads/2018/08/In-Plane-Sight-Wildlife-Trafficking-in-the-Air-Transport-Sector-C4ADS-ROUTES-2018.pdf>.
 - 78 This applies to other primates. For example, while more recent seizures have not been found, in 2011, an Emirati man was arrested in Bangkok while attempting to board an Emirates flight to Dubai with a live monkey, gibbon, along with baby leopards and a bear in his suitcase. See Carol Huang, Man arrested with endangered baby animals in suitcase, *The National*, 14 May 2011, <https://www.thenationalnews.com/uae/man-arrested-with-endangered-baby-animals-in-suitcase-1.468657>.
 - 79 PEGAS, The illegal trade in great apes, September 2016, <https://freetheapes.files.wordpress.com/2014/11/cop17-report.pdf>.
 - 80 Daniel Stiles, Great ape trafficking – an expanding extractive industry, Mongabay, 10 May 2016, <https://news.mongabay.com/2016/05/great-ape-trafficking-expanding-extractive-industry>.
 - 81 Michael Dahlstrom, 'True survivor': How investigators saved a baby ape trafficked on the dark web, 14 July 2021, Yahoo News, <https://au.news.yahoo.com/investigators-save-baby-ape-trafficked-dark-web-073824297.html>.
 - 82 Ibid.
 - 83 For example, between 2010 and 2019, 215 events involving illegal possession, trade or confiscations of 482 cheetahs were reported linked to the UAE. However, of these incidents, only 37 cats were confiscated. For more information, see Patricia Tricorache, Shira Yashphe and Laurie Marker, Global dataset for seized and non-intercepted illegal cheetah trade (*Acinonyx jubatus*) 2010–2019, *Data in Brief*, 35 (2021), <https://doi.org/10.1016/j.dib.2021.106848>.
 - 84 Nick Webster, Illegal wildlife trade 'funnelled back to organised crime in the region', *The National*, 23 December 2018, <https://www.thenationalnews.com/uae/illegal-wildlife-trade-funnelled-back-to-organised-crime-in-the-region-1.805766>; ITP, How illegal UAE wildlife sales have shifted online, *Arabian Business*, 15 February 2019, <https://www.arabianbusiness.com/industries/industries-culture-society/413336-the-business-of-wildlife>; Rosie Frost, Are Facebook, Snapchat and Tiktok the 'new eBay' for endangered wildlife?, 3 February 2022, <https://www.euronews.com/green/2022/01/30/are-facebook-snapchat-and-tiktok-the-new-ebay-for-endangered-cheetahs>.
 - 85 For more information about the online marketing of endangered wildlife species and efforts to disrupt wildlife trafficking, visit the Market Monitoring and Friction Unit initiative at <https://globalinitiative.net/initiatives/mmfu>.
 - 86 Elena Chong, Vietnamese jailed for 15 months for smuggling rhino horns worth more than \$1 million, *The Straits Times*, 16 January 2014, <https://www.straitstimes.com/singapore/vietnamese-jailed-for-15-months-for-smuggling-rhino-horns>.

- worth-more-than-1-million; Mary Utermohlen and Patrick Baine, Flying under the radar: Wildlife trafficking in the air transport sector, TRAFFIC, May 2017, https://www.traffic.org/site/assets/files/2100/flying_under_the_radar_final-web.pdf.
- 87 TRAFFIC, Runway to extinction: Wildlife trafficking in the air transport sector, April 2020, https://www.traffic.org/site/assets/files/12773/runway-to-extinction_web.pdf.
- 88 DNA India, Chennai: Two passengers caught smuggling 23.5 kg shark fins to Dubai, 28 October 2020, <https://www.dnaindia.com/india/report-chennai-two-passengers-caught-smuggling-235-kg-shark-fins-to-dubai-2852952>; Nick Webster, Lion heads and ivory: Dubai border patrols halt more than 50 illegally trafficked species, *The National*, <https://www.thenationalnews.com/uae/lion-heads-and-ivory-dubai-border-patrols-halt-more-than-50-illegally-trafficked-species-1.738956>.
- 89 TRAFFIC, Runway to extinction: Wildlife trafficking in the air transport sector, April 2020, https://www.traffic.org/site/assets/files/12773/runway-to-extinction_web.pdf.
- 90 Ibid.
- 91 For example, big cat teeth are usually sold in Asia as talismans and jewellery, where there is a huge demand for tiger products specifically. As tiger populations decline and the species becomes more endangered, the poaching and selling of lion teeth and claws as substitutes marketed as tiger has been growing, with seizures in Dubai illustrating this trend. See TRAFFIC, Runway to extinction: Wildlife trafficking in the air transport sector, April 2020, https://www.traffic.org/site/assets/files/12773/runway-to-extinction_web.pdf.
- 92 Zee News, Chennai: Canine tooth of big cats seized from Dubai-origin flight, 20 December 2020, <https://zeenews.india.com/india/chennai-canine-of-big-cats-seized-from-dubai-origin-flight-2332085.html>.
- 93 For example, in 2015, a suspect found in possession of worked ivory 'pebbles' weighing 9 kilograms was arrested while attempting to travel from Kenya to Hong Kong via Dubai. See ADM Capital Foundation, Trading in extinction: The dark side of Hong Kong's wildlife trade, 2018, <https://www.admcf.org/wp-content/uploads/2019/11/Trading-in-Extinction-The-Dark-Side-of-HKs-Wildlife-Trade-Report-EN.pdf>; In April 2019, customs officials in Vietnam discovered 9.52 kilograms of African elephant ivory in a passenger's luggage that had arrived on a flight from Dubai. The contraband was painted black, wrapped in foil, and hidden in a box with lobsters and dried fish to avoid inspection. See Action Against Extinction, Wildlife crime bulletin, Issue No. 2, 2020, https://env4wildlife.org/wp-content/uploads/2021/02/WCB-2020-No.2_EN_7.10.2020-Final_web_2.pdf.
- 94 Scientific names: *Loxodonta cyclotis* (forest elephant) and *Loxodonta Africana* (savanna elephant).
- 95 Environmental Investigation Agency (EIA), Saving elephants from the ivory trade, <https://eia-international.org/wildlife/protecting-elephants/saving-elephants-from-the-ivory-trade>.
- 96 Save the Elephants, Vietnam's illegal ivory trade threatens Africa's elephants, Annamiticus, 21 July 2016, <https://annamiticus.com/2016/07/21/vietnams-illegal-ivory-trade-threatens-africas-elephants>.
- 97 Daniel Stiles, African elephant ivory, GI-TOC, August 2021, <https://globalinitiative.net/wp-content/uploads/2021/08/Illegal-Wildlife-Trade-Elephant-Ivory.v4-web.pdf>.
- 98 Ashley Strickland, Tracing DNA of related elephants reveals illegal ivory trafficking networks, CNN, 14 February 2022, <https://edition.cnn.com/2022/02/14/africa/elephant-ivory-trafficking-dna-scn/index.html>; EIA, Saving elephants from the ivory trade, <https://eia-international.org/wildlife/protecting-elephants/saving-elephants-from-the-ivory-trade>; Rose Awori, Recognising elephants as separate species may save forest elephants – and Africa's forests, *The Journal of African Elephants*, April 2021, <https://www.africanelephantjournal.com/recognising-elephants-as-separate-species-may-save-forest-elephants-and-africas-forests>.
- 99 EIA, Saving elephants from the ivory trade, <https://eia-international.org/wildlife/protecting-elephants/saving-elephants-from-the-ivory-trade>.
- 100 EIA, Out of Africa: How West and Central Africa have become the epicentre of ivory and pangolin scale trafficking to Asia, December 2020, <https://eia-international.org/wp-content/uploads/Out-of-Africa-FINAL.pdf>; Ashoka Mukpo, Nigeria emerges as Africa's primary export hub for ivory, pangolin scales, Mongabay, 21 January 2021, <https://news.mongabay.com/2021/01/nigeria-emerges-as-africas-primary-export-hub-for-ivory-pangolin-scales>.
- 101 Alessandro Ford, Nigeria now epicentre of pangolin scale, ivory trafficking, OCCRP, 3 February 2021, <https://www.occrp.org/en/daily/13779-nigeria-now-epicentre-of-pangolin-scale-ivory-trafficking>; Caline Malek, Hundreds of pieces of raw elephant ivory seized in Dubai, *The National*, 21 May 2013, <https://www.thenationalnews.com/uae/hundreds-of-pieces-of-raw-elephant-ivory-seized-in-dubai-1.255274>.
- 102 Samuel K Wasser, et al., Elephant genotypes reveal the size and connectivity of transnational ivory traffickers, *Nature Human Behavior*, 6 (2022), 371–382, <https://go.nature.com/3xingPr>.
- 103 EIA, Out of Africa: How West and Central Africa have become the epicentre of ivory and pangolin scale trafficking

- to Asia, December 2020, <https://eia-international.org/wp-content/uploads/Out-of-Africa-FINAL.pdf>, p 8.
- 104 Nick Webster, More than 4,000 cheetahs caught in illegal wildlife trade since 2009, study finds, *The National*, 15 April 2021, <https://www.thenationalnews.com/uae/environment/more-than-4-000-cheetahs-caught-in-illegal-wildlife-trade-since-2009-study-finds-1.1202013>.
 - 105 The Government of Hong Kong Special Administrative Region, Press Release: Hong Kong Customs seizes suspected worked ivory, 25 August 2017, <https://www.info.gov.hk/gia/general/201708/25/P2017082501018.htm>; Mary Utermohlen and Patrick Baine, In plane sight: Wildlife trafficking in the air transport sector, GI-TOC, 2018, <https://globalinitiative.net/wp-content/uploads/2018/08/In-Plane-Sight-Wildlife-Trafficking-in-the-Air-Transport-Sector-C4ADS-ROUTES-2018.pdf>, pp 42 & 46.
 - 106 ADM Capital Foundation, Trading in extinction: The dark side of Hong Kong's wildlife trade, December 2018, <https://www.admcf.org/wp-content/uploads/2019/11/Trading-in-Extinction-The-Dark-Side-of-HKs-Wildlife-Trade-Report-EN.pdf>.
 - 107 Mary Utermohlen and Patrick Baine, In plane sight: Wildlife trafficking in the air transport sector, GI-TOC, 2018, <https://globalinitiative.net/wp-content/uploads/2018/08/In-Plane-Sight-Wildlife-Trafficking-in-the-Air-Transport-Sector-C4ADS-ROUTES-2018.pdf>, p 45.
 - 108 Reuters, Vietnam seizes 125 kg of rhino horns, seven tiger carcasses, 28 July 2019, <https://www.reuters.com/article/us-vietnam-wildlife-trafficking/vietnam-seizes-125-kg-of-rhino-horns-seven-tiger-carcasses-idUSKCN1UNOGF>; UNODC, World Wildlife Crime Report, 2020, https://www.unodc.org/documents/data-and-analysis/wildlife/2020/World_Wildlife_Report_2020_9July.pdf, p 124.
 - 109 Aletta van Roon, A preliminary analysis of raw rhino horn prices in Africa and Asia, Wildlife Justice Commission, 2019, <https://wildlifejustice.org/wp-content/uploads/2019/02/FINAL-raw-rhino-horn-digital-1.pdf>.
 - 110 Sade Moneron, Nicola Okes and Julian Rademeyer, Pendants, powder and pathways: A rapid assessment of smuggling routes and techniques used in the illicit trade in African rhino horn, TRAFFIC, September 2017, <https://www.traffic.org/site/assets/files/1313/pendants-powder-pathways.pdf>.
 - 111 Ibid.
 - 112 Scientific names: *Phataginus tricuspis* (white-bellied pangolin); *Phataginus tetradactyla* (black-bellied pangolin); *Smutsia gigantea* (giant ground pangolin), available at <https://www.pangolins.org>.
 - 113 World Wildlife Fund, Pangolin, <https://www.worldwildlife.org/species/pangolin>; CITES Appendix amendments: https://cites.org/sites/default/files/eng/cop/09/prop/E09-Prop-07_08_Manis.PDF.
 - 114 EIA, Huge ivory and pangolin scale bust in Nigeria is a chance to disrupt wildlife crime networks, 29 January 2021, eia-international.org/news/huge-ivory-and-pangolin-scale-bust-in-nigeria-is-a-chance-to-disrupt-wildlife-crime-networks.
 - 115 Thomas Maresca, Malaysia seizes \$18 million worth of elephant tusks, pangolin scales, UPI, 19 July 2022, https://www.upi.com/Top_News/World-News/2022/07/19/malaysia-pangolin-elephant-ivory-scales-seizure-trafficking-wildlife/7201658217531/; Gavin Butler, Rhino horns, tiger teeth and 6 tonnes of ivory seized in \$18m record bust, VICE, 19 July 2022, <https://www.vice.com/en/article/y3pvdx/malaysia-biggest-ever-ivory-seizure>.
 - 116 Kyle M Ewart, et al., DNA analyses of large pangolin scale seizures: Species identification validation and case studies, *Forensic Science International: Animals and Environments*, 1 (2021), <https://doi.org/10.1016/j.fsiae.2021.100014>.
 - 117 Wildlife Direct, Illegal wildlife trade ranks fourth after drugs, arms and human trafficking, July 2017, <https://wildlifedirect.org/wp-content/uploads/2017/07/Pangolin-Writeup.pdf>.
 - 118 EIA, Out of Africa: How West and Central Africa have become the epicentre of ivory and pangolin scale trafficking to Asia, December 2020, <https://eia-international.org/wp-content/uploads/Out-of-Africa-FINAL.pdf>, p 15.
 - 119 UNODC, World Wildlife Crime Report, 2020, https://www.unodc.org/documents/data-and-analysis/wildlife/2020/World_Wildlife_Report_2020_9July.pdf, Chapter 8.
 - 120 Janice Ponce de Leon, You may be supporting drug dealers by buying exotic pets, Gulf News, 24 July 2015, <https://gulfnews.com/uae/environment/you-may-be-supporting-drug-dealers-by-buying-exotic-pets-1.1555366>; Nick Webster, UAE action against wildlife trafficking stifles demand for cheetah cubs as exotic pets, *The National*, 29 December 2021, <https://www.thenationalnews.com/uae/2021/12/29/uae-action-against-wildlife-trafficking-stifles-demand-for-cheetah-cubs-as-exotic-pets>.
 - 121 DMCC, <https://www.dmcc.ae>; Dubai Gold and Diamond Park Free Zone, <https://freezoneregistration.ae/dubai-gold-and-diamond-park-free-zone.php>.
 - 122 Shawn Blore and Marcena Hunter, Dubai's problematic gold trade, *Dubai's Role in Facilitating Corruption and Global Illicit Financial Flows*, edited by Matthew T Paige and Jodi Vittori, Washington, DC.: Carnegie Endowment for International Peace, 2020, 35–48, <https://carnegieendowment.org/2020/07/07/dubai-s-problematic-gold-trade-pub-82184>.
 - 123 Paul Cochrane, Dubai, Switzerland, London: How the UAE became a smuggling hub for 'blood gold', Middle East Eye, December 2020, <https://www.middleeasteye.net/news/dubai-switzerland-london-how-uae-became-smuggling-hub-blood-gold>.
 - 124 Dubai Customs, Trade statistics 2020, <https://www.dubaicustoms.gov.ae/en/OpenData/Pages/trade-stats.aspx>.
 - 125 Government of Dubai, Dubai's external trade surges 31% to AED722 billion in H1 2021, 26 September 2021, <https://www.mediaoffice.ae/en/news/2021/September/26-09/Dubai-external-trade-surges-31percent--to-AED722-billion>.

- in-H1-2021; Observatory of Economic Complexity, United Arab Emirates country profile, [https://oec.world/en/profile/country/are#:~:text=Exports%20The%20top%20exports%20of,and%20Iraq%20\(%2413.1B\)](https://oec.world/en/profile/country/are#:~:text=Exports%20The%20top%20exports%20of,and%20Iraq%20(%2413.1B).).
- 126 Reuters, UAE becomes world's top trading hub for rough diamonds – DMCC CEO, 21 February 2022, <https://www.reuters.com/business/uae-becomes-worlds-rough-diamond-trade-hub-dmcc-ceo-2022-02-21>.
 - 127 GJPEC (India), UAE overtakes Belgium as world's largest rough diamond trading hub: DMCC, 22 February 2022, [https://gjpec.org/news_detail.php?news=uae-overtakes-belgium-as-world-s-largest-rough-diamond-trading-hub-dmcc#:~:text=The%20UAE%20reached%20the%20top,DDC\)%20held%20under%20the%20theme](https://gjpec.org/news_detail.php?news=uae-overtakes-belgium-as-world-s-largest-rough-diamond-trading-hub-dmcc#:~:text=The%20UAE%20reached%20the%20top,DDC)%20held%20under%20the%20theme).
 - 128 Dubai Multi Commodities Centre, Diamonds, <https://www.dmcc.ae/gateway-to-trade/commodities/diamonds>.
 - 129 Maggie Michael and Michael Hudson, Pandora Papers reveal Emirati royal families' role in secret money flows, International Consortium of Investigative Journalists, 16 November 2021, <https://www.icij.org/investigations/pandora-papers/pandora-papers-reveal-emirati-royal-families-role-in-secret-money-flows>.
 - 130 Eddie Spence, Switzerland tells refiners to get strict on UAE gold, Bloomberg, 15 October 2021, <https://www.bloomberg.com/news/articles/2021-10-15/switzerland-tells-refiners-to-tighten-audits-of-uae-gold>; Paul Cochrane, Dubai, Switzerland, London: How the UAE became a smuggling hub for 'blood gold', Middle East Eye, 26 December 2020, <https://www.middleeasteye.net/news/dubai-switzerland-london-how-uae-became-smuggling-hub-blood-gold>.
 - 131 Shawn Blore and Marcena Hunter, *Dubai's problematic gold trade, Dubai's Role in Facilitating Corruption and Global Illicit Financial Flows*, edited by Matthew T Paige and Jodi Vittori, Washington, DC.: Carnegie Endowment for International Peace, 2020, 35–48, <https://carnegieendowment.org/2020/07/07/dubai-s-problematic-gold-trade-pub-82184>.
 - 132 Simon Marks, Michael J Kavanagh and Verity Ratcliffe, Dubai can't shake off the stain of smuggled African gold, Bloomberg, 28 December 2021, <https://www.bloomberg.com/news/features/2021-12-28/where-does-gold-come-from-in-africa-suspected-smuggling-to-dubai-rings-alarms>. Hundreds of millions of dollars' worth of gold is thought to be smuggled out of the DRC each year, the vast majority of this to Uganda (and increasingly Rwanda). According to the OEC, Uganda is the second largest exporter of gold to the UAE (US\$3.47 billion), after Guinea; see <https://oec.world/en/profile/bilateral-product/gold/reporter/are>.
 - 133 See Goldprice.org, Gold price per kilo, <https://goldprice.org/gold-price-per-kilo.html>.
 - 134 For example, it is estimated that 80% of the artisanal gold present in Mali's supply chain is produced in Senegal. Porous borders, geographical proximity, transboundary ethnic affinity, safer routes through illegal entry points and Mali's long-lasting internal instability facilitate this illicit trade. See David Lewis, Ryan McNeill and Zandi Shabalala, Exclusive: Gold worth billions smuggled out of Africa, Reuters, 24 April 2019, <https://www.reuters.com/article/us-gold-africa-smuggling-exclusive/exclusive-gold-worth-billions-smuggled-out-of-africa-idUSKCN1S00IT>.
 - 135 Kai Bernier-Chen, Chile to Dubai, a thriving route for gold traffickers, InSight Crime, 28 October 2021, <https://insightcrime.org/news/chile-dubai-thriving-route-gold-traffickers>.
 - 136 David Lewis, Ryan McNeill and Zandi Shabalala, Exclusive: Gold worth billions smuggled out of Africa, Reuters, 24 April 2019, <https://www.reuters.com/article/us-gold-africa-smuggling-exclusive/exclusive-gold-worth-billions-smuggled-out-of-africa-idUSKCN1S00IT>.
 - 137 Abdelkader Abderrahmane, Mali: West Africa's hub for illegal gold trade with Dubai, ENACT, 11 March 2022, <https://enactafrica.org/enact-observer/mali-west-africas-hub-for-illegal-gold-trade-with-dubai>.
 - 138 Ibid.
 - 139 Ibid.
 - 140 Shawn Blore and Marcena Hunter, *Dubai's problematic gold trade, Dubai's Role in Facilitating Corruption and Global Illicit Financial Flows*, edited by Matthew T Paige and Jodi Vittori, Washington, DC.: Carnegie Endowment for International Peace, 2020, 35–48, <https://carnegieendowment.org/2020/07/07/dubai-s-problematic-gold-trade-pub-82184>.
 - 141 Petlee Peter, Smuggler with gold hidden in mouth lands at Bengaluru airport, *The Times of India*, 21 October 2021, <https://timesofindia.indiatimes.com/city/bengaluru/smuggler-with-gold-hidden-in-mouth-lands-at-kia/articleshow/87169510.cms>.
 - 142 Shawn Blore and Marcena Hunter, *Dubai's problematic gold trade, Dubai's Role in Facilitating Corruption and Global Illicit Financial Flows*, edited by Matthew T Paige and Jodi Vittori, Washington, DC.: Carnegie Endowment for International Peace, 2020, 35–48, <https://carnegieendowment.org/2020/07/07/dubai-s-problematic-gold-trade-pub-82184>.
 - 143 Ibid.
 - 144 Shawn Blore and Marcena Hunter, *Dubai's problematic gold trade, Dubai's Role in Facilitating Corruption and Global Illicit Financial Flows*, edited by Matthew T Paige and Jodi Vittori, Washington, DC.: Carnegie Endowment for International Peace, 2020, 35–48, <https://carnegieendowment.org/2020/07/07/dubai-s-problematic-gold-trade-pub-82184>; Sasha Lezhnev and Megha Swamy, Understanding money laundering risks in the conflict gold trade from East and Central Africa to Dubai and onward, The Sentry, November 2020, <https://cdn.thesentry.org/wp-content/uploads/2020/11/ConflictGoldAdvisory-TheSentry-Nov2020.pdf>.

- 145 Peter Hobson, EXCLUSIVE UAE to audit all gold refineries in crackdown on illicit trade, Reuters, 8 November 2021, <https://www.reuters.com/world/middle-east/exclusive-uae-audit-all-gold-refineries-crackdown-illicit-trade-2021-11-08>.
- 146 The Kimberley Process, <https://www.kimberleyprocess.com>.
- 147 Dubai Multi Commodities Centre, The Kimberley Process, <https://www.dmcc.ae/gateway-to-trade/commodities/diamonds/kimberley-process>.
- 148 Arabian Business, UAE to launch scheme 'to regulate diamond pricing', 27 March 2016, <https://www.arabianbusiness.com/abnews/uae-launch-scheme-to-regulate-diamond-pricing-626314>.
- 149 Dubai Gazette, 34,000 kg of sandalwood shipment seized in Dubai, 24 October 2020, <https://dubaigazette.com/34000-kg-of-sandalwood-shipment-seized-in-dubai>.
- 150 Willis Okumu, Illegal harvesting threatens Kenya's highly valued sandalwood tree, ENACT, 20 August 2021, <https://enactafrica.org/enact-observer/illegal-harvesting-threatens-kenyas-highly-valued-sandalwood-tree>.
- 151 Ibid.
- 152 U Sudhakar Reddy and Rajesh Sharma, This Indian tree prized by Chinese royalty is on the road to extinction, *The Times of India*, 18 January 2022, <https://timesofindia.indiatimes.com/india/this-indian-tree-prized-by-chinese-royalty-is-on-the-road-to-extinction/articleshow/88967537.cms>; TRAFFIC, Red sanders red alert, 23 December 2009, <https://www.traffic.org/news/red-sanders-red-alert>.
- 153 Shashank Bengali, Deep in an Indian forest, a deadly battle over wood prized in China, *Los Angeles Times*, 9 November 2018, <https://www.latimes.com/world/asia/la-fg-india-wood-2018-htmllstory.html>.
- 154 The New Indian Express, Red sanders worth Rs 9.17 crore meant for export to Dubai, seized at Chennai port, 30 March 2019, <https://www.newindianexpress.com/cities/chennai/2019/mar/30/red-sanders-worth-rs-917-crore-meant-for-export-to-dubai-seized-at-chennai-port-1957743.html>.
- 155 The Free Press Journal, Mumbai: Red Sandalwood smuggling: Wood was to be transported to China, 29 May 2019, <https://www.freepressjournal.in/mumbai/mumbai-red-sandalwood-smuggling-wood-was-to-be-transported-to-china>.
- 156 Basel Institute on Governance, Wildlife crime – a learning resource, Part 3: Forest crime and the illegal timber trade, May 2021, <https://baselgovernance.org/sites/default/files/2021-05/Part%203%20Timber%20trafficking%2025%20May.pdf>.
- 157 Sandy Ong and Edward Carver, The rosewood trade: An illicit trail from forest to furniture, *Yale Environment 360*, 29 January 2019, <https://e360.yale.edu/features/the-rosewood-trade-the-illicit-trail-from-forest-to-furniture>.
- 158 Naomi Basik Treanor, CITES takes unprecedented steps to stop the illegal African rosewood trade, *Forest Trends*, 28 March 2022, <https://www.forest-trends.org/blog/cites-takes-unprecedented-steps-to-stop-the-illegal-african-rosewood-trade>.
- 159 UNODC, World Wildlife Crime Report, 2020, https://www.unodc.org/documents/data-and-analysis/wildlife/2020/World_Wildlife_Report_2020_9July.pdf.
- 160 World Atlas, Share of illegal rosewood trade seizures by destination countries, <https://www.worldatlas.com/articles/share-of-illegal-rosewood-trade-seizures-by-destination-countries.html>.
- 161 The Limited Times, Customs inspects 2,570 kilograms of controlled rosewood with a market value of approximately 12.9 million yuan, 31 December 2021, <https://newsrnd.com/news/2021-12-31-customs-inspects-2-570-kilograms-of-controlled-rosewood-with-a-market-value-of-approximately-12-9-million-yuan.ry5-V42sK.html>.
- 162 The Government of Hong Kong Special Administrative Region, Press Release: Hong Kong Customs seizes suspected scheduled red sandalwood, 7 October 2021, <https://www.info.gov.hk/gia/general/202110/07/P2021100700707.htm>.
- 163 Ahmed Ali, Mumbai: Rs 17cr red sanders, headed for HK, seized; 4 arrested, *The Times of India*, 6 April 2021, <https://timesofindia.indiatimes.com/city/mumbai/mumbai-rs-17cr-red-sanders-headed-for-hk-seized-4-arrested/articleshow/81920782.cms>.
- 164 Clifford Lo, Hong Kong authorities seize more than 230 tonnes of endangered wood this year – five times that of last year's total, *South China Morning Post*, 29 December 2018, <https://www.scmp.com/news/hong-kong/law-and-crime/article/2179948/hong-kong-authorities-seize-more-230-tonnes-endangered>.
- 165 Marina Antonopoulou, et al., The trade and use of agarwood (*oudh*) in the United Arab Emirates, TRAFFIC, 2010, <https://www.traffic.org/site/assets/files/3187/agarwood-in-the-uae.pdf>.
- 166 Al Jazeera, Scent from heaven: The oud seller, <https://interactive.aljazeera.com/aje/2016/oud-agarwood-scent-from-heaven/scent-from-heaven-the-oud-seller.html>.
- 167 Plantations International, How does CITES regulate the Agarwood trade, <https://www.plantationsinternational.com/cites-regulate-agarwood-trade/>; CITES Appendix: <https://cites.org/eng/app/appendices.php>. Notably, the UAE opposed the addition on the grounds that such a listing would be 'very difficult to enforce due to the nature of the commodity that can be used and traded in various forms (wood, chips, powder, oil or as an ingredient in perfumes or medicines).' Since then, the country has entered specific reservations on Agarwood species. For more information, see Lim Teck Wyn and Nooraine Awang Anak, Wood for the trees: A review of the Agarwood (*gaharu*) trade in Malaysia, TRAFFIC, 2010, <https://www.traffic.org/site/assets/files/3179/wood-for-the-trees-agarwood-malaysia.pdf>.

- 168 Pearlin Naziz, Runima Das and Supriyo Sen, The scent of stress: Evidence from the unique fragrance of Agarwood, *Frontiers in Plant Science*, 10 (2019), <https://www.frontiersin.org/articles/10.3389/fpls.2019.00840/full>.
- 169 Pearlin Naziz, Runima Das and Supriyo Sen, The scent of stress: Evidence from the unique fragrance of Agarwood, *Frontiers in Plant Science*, 10 (2019), <https://www.frontiersin.org/articles/10.3389/fpls.2019.00840/full>; UNODC, Cosmetics and perfume case study: Oud, 2016, https://www.unodc.org/images/data-and-analysis/Wildlife/WLC16_Chapter_6.pdf.
- 170 Ibid.
- 171 News First, Agarwood worth Rs. 1.2Mn confiscated at BIA, 2 February 2019, <https://www.newsfirst.lk/2019/02/02/agarwood-worth-rs-1-2mn-confiscated-at-bia>.
- 172 World Atlas, Illegal Agarwood seizures by source and destination countries, <https://www.worldatlas.com/articles/the-top-source-and-destination-countries-for-illegal-agarwood-seizures.html>.
- 173 Marina Antonopoulou, et al., The trade and use of agarwood (oudh) in the United Arab Emirates, TRAFFIC, 2010, <https://www.traffic.org/site/assets/files/3187/agarwood-in-the-uae.pdf>.
- 174 Ibid.
- 175 Mugumo Munene, KDF funds Al-Shabaab through illegal charcoal trade, says new probe report, *Nation*, 26 July 2014, <https://nation.africa/kenya/news/kdf-funds-al-shabaab-through-illegal-charcoal-trade-says-new-probe-report-1009122>; Ilya Gridneff, Burning Somalia's future: The illegal charcoal trade between the Horn of Africa and the Gulf, *Environmental Politics in the Middle East*, edited by Harry Verhoeven, London: Hurst Publishers, 2018.
- 176 UN Security Council, Report on Somalia of the Monitoring Group on Somalia and Eritrea, 2018, <https://documents-dds-ny.un.org/doc/UNDOC/GEN/N18/301/65/PDF/N1830165.pdf>.
- 177 Some estimates claiming there will be no trees left in Somalia by the year 2060; see Harry Holmes, Nairobi terror group funded by \$7 million of illegal charcoal, OCCRP, January 2019, <https://www.occrp.org/en/daily/9137-nairobi-terror-group-funded-by-7-million-of-illegal-charcoal>.
- 178 The Kenya Defence Forces under the African Union Mission to Somalia (AMISOM) have also been accused of colluding with al-Shabaab and profiting from the illicit charcoal trade, although Kenya has denied these accusations; see Mugumo Munene, KDF funds Al-Shabaab through illegal charcoal trade, says new probe report, *Nation*, 26 July 2014, <https://nation.africa/kenya/news/kdf-funds-al-shabaab-through-illegal-charcoal-trade-says-new-probe-report-1009122>; *The Economist*, The Kenyan army is accused of running a sugar-smuggling racket with Somali terrorists, 23 November 2015, <https://www.economist.com/middle-east-and-africa/2015/11/23/the-kenyan-army-is-accused-of-running-a-sugar-smuggling-racket-with-somali-terrorists>.
- 179 In 2018, the UN estimated that the charcoal trade generated at least 7.5 million dollars for al-Shabaab; see UN Security Council, Report on Somalia of the Monitoring Group on Somalia and Eritrea, 2018, <https://documents-dds-ny.un.org/doc/UNDOC/GEN/N18/301/65/PDF/N1830165.pdf>; Claire Klobucista, Jonathan Masters and Mohammed Aly Sergie, Al-Shabab, Council on Foreign Relations, 19 May 2021, <https://www.cfr.org/backgrounder/al-shabab>.
- 180 Harry Holmes, Nairobi terror group funded by \$7 million of illegal charcoal, OCCRP, January 2019, <https://www.occrp.org/en/daily/9137-nairobi-terror-group-funded-by-7-million-of-illegal-charcoal>.
- 181 Mugumo Munene, KDF funds Al-Shabaab through illegal charcoal trade, says new probe report, *Nation*, 26 July 2014, <https://nation.africa/kenya/news/kdf-funds-al-shabaab-through-illegal-charcoal-trade-says-new-probe-report-1009122>.
- 182 Ilya Gridneff, Burning Somalia's future: The illegal charcoal trade between the Horn of Africa and the Gulf, *Environmental Politics in the Middle East*, edited by Harry Verhoeven, London: Hurst Publishers, 2018.
- 183 Ibid.
- 184 UN Security Council, Report on Somalia of the Monitoring Group on Somalia and Eritrea, 2018, <https://documents-dds-ny.un.org/doc/UNDOC/GEN/N18/301/65/PDF/N1830165.pdf>.
- 185 Ibid.
- 186 UN Security Council, Report of the Panel of Experts on Somalia, 2020, https://www.securitycouncilreport.org/atf/cf/%7B65BFCF9B-6D27-4E9C-8CD3-CF6E4FF96FF9%7D/S_2020_949.pdf.
- 187 AllAfrica, Somalia: UN says Al-Shabab has abandoned charcoal trade, resorts to extortion, 13 November 2019: <https://allafrica.com/stories/201911130260.html>; Abuga Makori, Somalia: Al-Shabab abandons charcoal trade, resorts to mafia-style taxation, Garowe Online, 13 November 2019, <https://www.garoweonline.com/en/news/somalia/somalia-al-shabaab-abandons-charcoal-trade-resorts-to-mafia-style-taxation>.
- 188 UN Security Council, Report of the Panel of Experts on Somalia, 2020, https://www.securitycouncilreport.org/atf/cf/%7B65BFCF9B-6D27-4E9C-8CD3-CF6E4FF96FF9%7D/S_2020_949.pdf.
- 189 Gillian Duncan, UAE approves new regulations about owning dangerous animals, *The National*, 17 March 2019, <https://www.thenationalnews.com/uae/uae-approves-new-regulations-about-owning-dangerous-animals-1.837974>.
- 190 UAE Government Portal, Banning private ownership of dangerous animals, 26 April 2021, <https://u.ae/en/information-and-services/environment-and-energy/banning>

- private-ownership-of-dangerous-animals; Al Jazeera, UAE bans keeping wild animals as pets, 4 January 2017, <https://www.aljazeera.com/news/2017/1/4/uae-bans-keeping-wild-animals-as-pets>.
- 191 The Current, Govt allows Dubai ruler to export 150 rare falcons despite ban, 26 November 2020, <https://thecurrent.pk/govt-allows-dubai-ruler-to-export-150-rare-falcons-despite-ban>; Dawn, Govt issues special permit for export of 150 rare falcons to Dubai, 13 January 2020, <https://www.dawn.com/news/1528012>.
 - 192 M Ilyas Khan, Pakistan's secretive Houbara bustard hunting industry, BBC, 11 February 2016, <https://www.bbc.com/news/world-asia-35524916>.
 - 193 UAE Ministry of Economy, Free Zones, <https://www.moec.gov.ae/en/free-zones>.
 - 194 Lakshmi Kumar, Dubai: Free trade or free-for-all?, Carnegie Endowment for International Peace, July 2020, <https://carnegieendowment.org/2020/07/07/dubai-free-trade-or-free-for-all-pub-82183>.
 - 195 The DIFC is Dubai's free financial zone.
 - 196 Jodi Vittori, Dubai's role in facilitating corruption and global illicit financial flows, Carnegie Endowment for International Peace, July 2020, <https://carnegieendowment.org/2020/07/07/introduction-pub-82181>.
 - 197 FATF, Money laundering from environmental crime, July 2021, <https://www.fatf-gafi.org/media/fatf/documents/reports/Money-Laundering-from-Environmental-Crime.pdf>; US Department of Justice, Press release: Members of smuggling ring plead guilty in Los Angeles to crimes relating to illegal trafficking of endangered rhinoceros horn, 14 September 2012, <https://www.justice.gov/opa/pr/members-smuggling-ring-plead-guilty-los-angeles-crimes-relating-illegal-trafficking>; Targeting Natural Resource Corruption, Trade-based money laundering and natural resource corruption, October 2020, <https://c402277.ssl.cf1.rackcdn.com/publications/1389/files/original/Introductory-Overview-Trade-Based-Money-Laundering-and-Natural-Resource-Corruption.pdf?1602708551>.
 - 198 Embassy of the UAE in Washington DC, Starting a business, <https://www.uae-embassy.org/business-trade/getting-started>.
 - 199 FATF, United Arab Emirates' measures to combat money laundering and terrorist financing, April 2020, <https://www.fatf-gafi.org/countries/u-z/unitedarabemirates/documents/mer-uae-2020.html>.
 - 200 Targeting Natural Resource Corruption, Trade-based money laundering and natural resource corruption, October 2020, <https://c402277.ssl.cf1.rackcdn.com/publications/1389/files/original/Introductory-Overview-Trade-Based-Money-Laundering-and-Natural-Resource-Corruption.pdf?1602708551>.
 - 201 Lakshmi Kumar, Dubai: Free trade or free-for-all?, Carnegie Endowment for International Peace, July 2020, <https://carnegieendowment.org/2020/07/07/dubai-free-trade-or-free-for-all-pub-82183>, p 3.
 - 202 FATF, Money laundering from environmental crime, July 2021, <https://www.fatf-gafi.org/media/fatf/documents/reports/Money-Laundering-from-Environmental-Crime.pdf>; FATF, The role of *hawala* and other similar service providers in money laundering and terrorist financing, October 2013, <https://www.fatf-gafi.org/media/fatf/documents/reports/Role-of-hawala-and-similar-in-ml-tf.pdf>.
 - 203 Global Witness, Beneath the shine: A tale of two gold refiners, July 2020, https://www.globalwitness.org/documents/19926/Beneath_the_Shine_-_July_2020.pdf; John Basquill, Money laundering and conflict gold: banks face tough questions over Dubai trade, Global Trade Review, 19 October 2020, <https://www.gtreview.com/magazine/volume-18-issue-4/money-laundering-conflict-gold-banks-face-tough-questions-dubai-trade>.
 - 204 Liz Cookman, Dubai ruler unveils 50-year charter development plan, *The National*, 6 January 2019, <https://www.thenationalnews.com/uae/dubai-ruler-unveils-50-year-charter-development-plan-1.810032>.
 - 205 *The National*, Sheikh Mohammed issues eight principles of governance to strengthen growth and tolerance, 5 January 2019, <https://www.thenationalnews.com/uae/sheikh-mohammed-issues-eight-principles-of-governance-to-strengthen-growth-and-tolerance-1.809562>.
 - 206 Ibid.
 - 207 Liz Cookman, Dubai ruler unveils 50-year charter development plan, *The National*, 6 January 2019, <https://www.thenationalnews.com/uae/dubai-ruler-unveils-50-year-charter-development-plan-1.810032>.
 - 208 Such projects involve the collaboration of Emirates airlines, Dubai Airports, Dubai South, Dubai Free Zones (DFZ) Council, the Dubai Maritime City Authority, Dubai Roads and Transport Authority, DP World, Dubai Municipality and Jebel Ali Free Zone. See *The National*, Sheikh Hamdan approves Dubai Silk Road strategy, 2 March 2019, <https://www.thenationalnews.com/uae/sheikh-hamdan-approves-dubai-silk-road-strategy-1.832234>.
 - 209 In 2019, the Dubai Chamber of Commerce and Industry in cooperation with the Dubai Future Foundation, DP World and others signed a memorandum of understanding to implement the Emirate's Digital Silk Road project, as part of the 'Dubai 10X' strategy. The project seeks to improve the transparency and efficiency of supply chains through a 'comprehensive automation process', which will use blockchain technology that helps surpass current trade barriers such as high costs, lack of transparency,

diversification of legislation and lack of security in business transactions. While the project was expected to go live in 2020 and is likely to add consistency and coordination across FTZs, no literature on the initiative is publicly available after 2019. See RetailMe, Dubai Chamber and DP World collaborate on Digital Silk Road initiative, 9 July 2019, <https://www.imagesretailme.com/latest-news/dubai-chamber-and-dp-world-collaborate-on-digital-silk-road-initiative/>; Eleanor Wragg, Emirates NBD joins Dubai's Digital Silk Road initiative, 16 October 2019, <https://www.gtriview.com/news/mena/emirates-nbd-joins-dubais-digital-silk-road-initiative/>; Emirates NDB, Emirates NBD boosts trade finance offering with launch of smartTRADE portal, 24 September 2019, https://www.emiratesnbd.com/en/media-centre/media-centre-info/?mcid_en=810&ref=homepage-news.

210 DP World, Press release: DP World calls on governments to stamp out illegal trade in wildlife, 7 October 2021, <https://www.dpworld.com/news/releases/dp-world-calls-on-governments-to-work-together-to-stamp-out-illegal-trade-in-wildlife>.

211 DP World, Press release: Prince William hears how United for Wildlife partners are supporting efforts to counter illegal wildlife trade on visit to Dubai, 10 February 2022, <https://www.dpworld.com/news/releases/prince-william-hears-how-ufw-partners-counter-illegal-wildlife-trade-on-dubai-visit>.

212 United for Wildlife, The Buckingham Palace Declaration, March 2016, <https://unitedforwildlife.org/the-buckingham-palace-declaration>.

213 Lisa Barrington, Financial crime watchdog adds UAE to 'grey' money laundering watch list, Reuters, 4 March 2022, <https://www.reuters.com/world/middle-east/fatf-adds-uae-grey-money-laundering-watchlist-2022-03-04>.



**GLOBAL
INITIATIVE**
AGAINST TRANSNATIONAL
ORGANIZED CRIME

ABOUT THE GLOBAL INITIATIVE

The Global Initiative Against Transnational Organized Crime is a global network with over 600 Network Experts around the world. The Global Initiative provides a platform to promote greater debate and innovative approaches as the building blocks to an inclusive global strategy against organized crime.

www.globalinitiative.net