

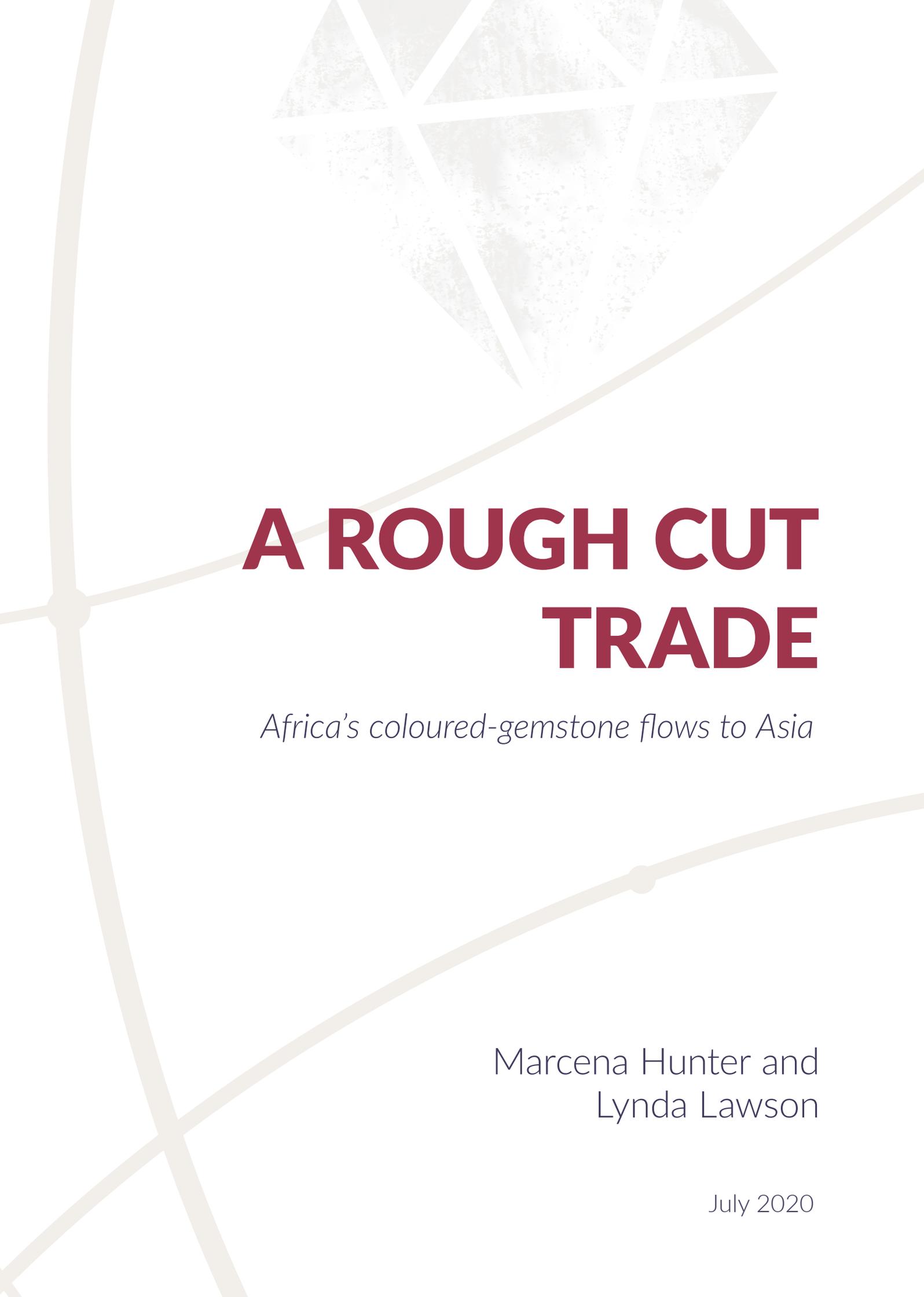
**GLOBAL
INITIATIVE**
AGAINST TRANSNATIONAL
ORGANIZED CRIME

A ROUGH CUT TRADE

**Africa's Coloured-Gemstone
Flows to Asia**

MARCENA HUNTER | LYNDA LAWSON

JULY 2020



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Lynda Lawson

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ACRONYMS AND ABBREVIATIONS

ASM	artisanal and small-scale mining
DRC	Democratic Republic of Congo
GIA	Gemmological Institute of America
GIT	Gem and Jewelry Institute of Thailand
IPIS	International Peace Information Service
JTC	Jewellery Trade Centre
MRM	Montepuez Ruby Mining Limitada
OECD	Organization for Economic Cooperation and Development
UNCTAD	United Nations Conference on Trade and Development





EXECUTIVE SUMMARY



Known for their beauty, coloured gemstones have been used in jewellery, to adorn clothing and in religious ceremonies for centuries. Fuelled by demand from jewellers and investors, the coloured gemstone sector is an international trade linking supply countries in Africa and traders in Thailand and elsewhere in Asia. Today, there are more than 50 source countries and over a hundred gemstone varieties.¹ In 2015, a conservative estimate of the global annual market for rough coloured gemstones – the term used to describe uncut, unpolished stones – valued the sector at between US\$17 billion and US\$23 billion.²

Africa is a prominent supplier of gemstones, which are shipped across the Indian Ocean to Asia for beneficiation. Rough coloured gemstones are mined throughout Africa, largely by artisanal and small-scale mining (ASM) operators. Small-scaling mining will continue to be a vital source of gemstones for the international market because many gem deposits are small, which means they are short-lived and therefore not appropriate for large-scale mining operations.³ From Africa, the rough stones are shipped mainly to Thailand, India and Sri Lanka, which are home to long-established, traditional processing centres, and are the main global hubs for cutting and polishing stones for the global retail market. China is also expanding its market share of this industry through increasing use of machine cutting (a process traditionally done manually).

Dubbed the 'ruby trading kingdom', Thailand is one of the world's major processing centres for coloured gemstones.⁴ The country has been the world's leading exporter of precious coloured gemstones for the last eight years consecutively,⁵ with overall exports in 2017 valued at US\$1.9 billion.⁶ Thailand plays an especially prominent role in ruby and sapphire supply chains.

The Thai gemstone industry is known to be heavily dependent on African rough coloured gemstones (see the map); however, official trade records fail to reflect the immense scale of the trade. This is because of the clandestine nature of flows, which are of both an informal and illegal nature. Most African coloured

- ◀ **Chanthaburi, Thailand. The country is a major processing and export hub for gemstones from Africa. Much of the value of the imports is undeclared.**

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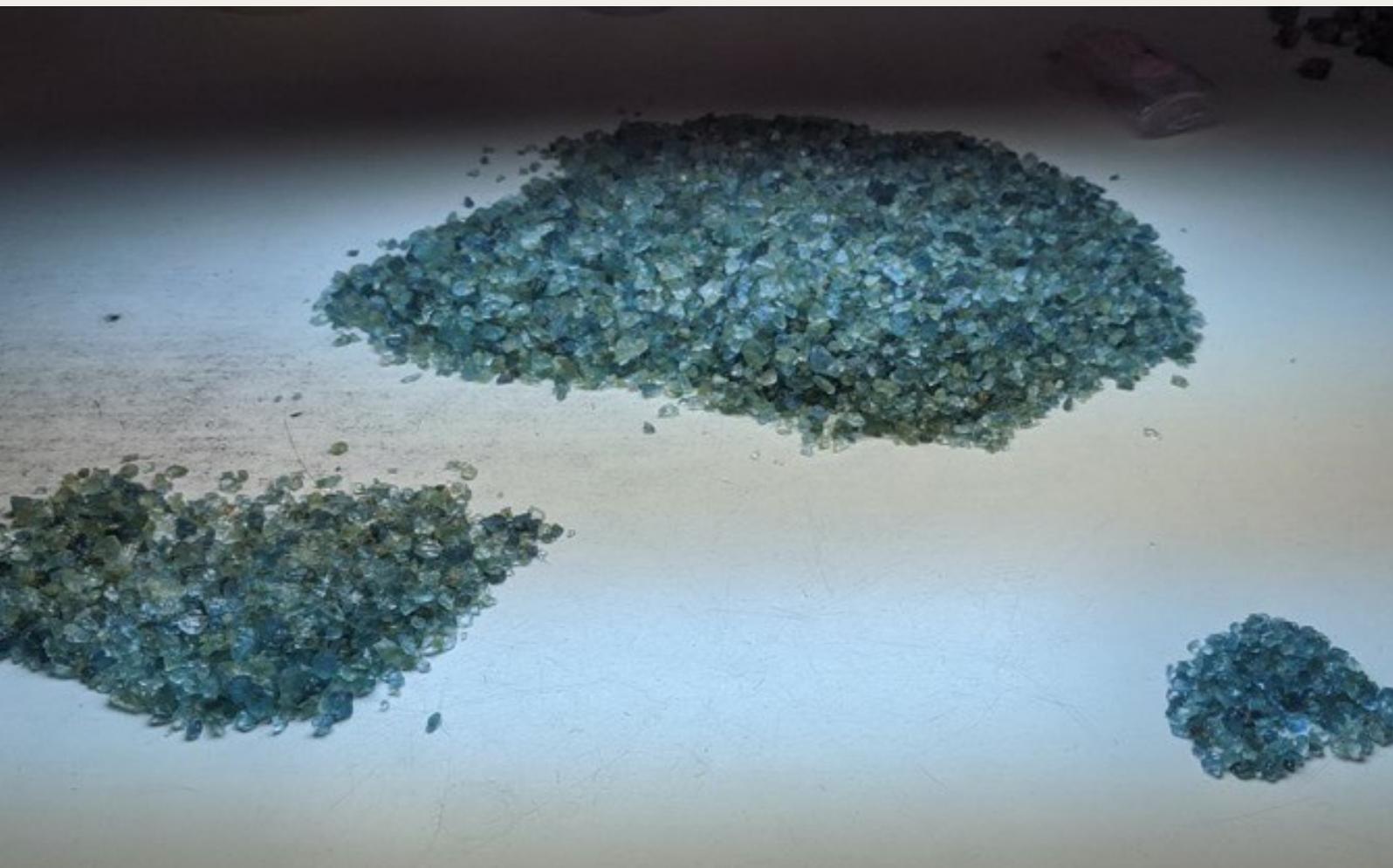
gemstones are moved undeclared through informal channels or are under-declared in official channels. African rough-gemstone traders play a significant role in these supply chains, and have been able to exploit their knowledge of the gemstone industry, as well as their close social and ethnic networks, to buy and export stones from Africa to Asia with ease.

In Thailand it is openly acknowledged that the country's import figures for coloured gemstones from Africa are underreported.⁷ For example, according to participants in this research, Madagascar has been an important source of sapphires and other gemstones supplying the Thai industry for over 20 years. After the discovery of brilliant-blue sapphires in the 1990s, numerous gem rushes ensued and Madagascar became the centre of the sapphire universe, but has only recently started to be included as a source country in official Thai trade records.⁸

The informal nature of the coloured-gemstone trade, combined with the inherent difficulty in valuing rough stones at the site of extraction, provides ample opportunity for criminal and corrupt actors to exploit and profit from it. This includes large-scale smuggling of stones, resulting in significant underreporting of export and trade figures.⁹ Based on Thai trade figures and estimates of authorities and stakeholders, there is a strong likelihood that hundreds of millions of dollars of coloured gemstones are smuggled annually from Africa to Thailand. According to authorities and those engaged in the trade, coloured gemstones may also be being used in money-laundering schemes.¹⁰

**Aquamarine rough
gemstones sorted and
graded before processing.**

© Marcena Hunter



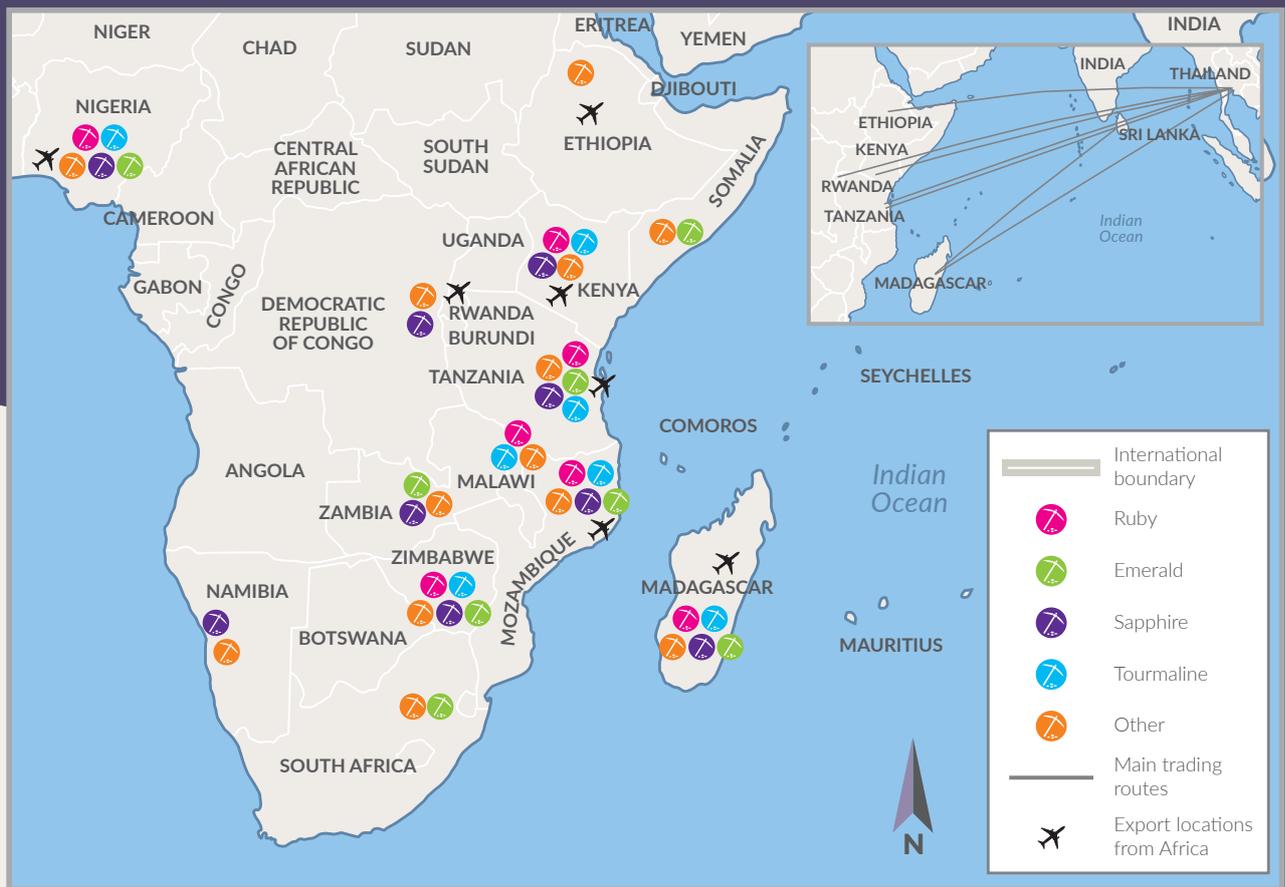


FIGURE 1 Mining sites and flows of coloured gemstones from Africa to Thailand

SOURCE: Adapted from James E. Shigley et al, Gem localities of the 2000s, *Gems and Gemology*, 46, 33 (2010), 188–216

The extensive nature of illicit supply chains and the influence of criminal actors are significant obstacles to development efforts and outcomes in Africa, as well as other countries where coloured gemstones are mined. While individuals engaged in the smuggling of coloured gemstones may provide an immediate livelihood option to vulnerable populations who need the income, this is at the long-term expense of rule of law and establishing sustainable, fairly paid livelihoods for miners and those who help process the stones locally. As a result, in Africa, criminal control over this sector, especially by foreign actors, has deprived the continent of much of the potential economic benefits of the gemstone industry by offshoring value-adding processing.¹¹

Although it is widely known or acknowledged that there are significant hidden coloured-gemstone flows from Africa to Asia, and that these come with a high risk of criminal financing, both of which thwart development gains, there is little research on supply chains, actors or financial flows in this sector. The vast majority of existing research on coloured gemstones has instead focused on the material properties and sources of gem varieties.¹²

This has left significant gaps in what we know about the supply chains, the actors and networks involved, and their modus operandi for moving coloured gemstones.



African tourmaline rough for sale by an African trader in Bangkok. © Lynda Lawson

A clandestine trade

It is evening on Silom Road, the heart of Bangkok's coloured-gemstone district, and we are meeting Nasir (not his actual name) a Guinean coloured-gemstone trader. We cross the lobby of a skyscraper packed full of stalls selling all forms of coloured gemstones, glistening under strategically placed fluorescent lights, and take a nondescript, dated lift up into the building. Sharing the ride are African gemstone traders speaking French. In a small, quiet office we find Nasir sorting through rough aquamarine recently arrived from Mozambique. Nasir is a small man, giving off an air of calm and wisdom. He welcomes us in and offers us seats. He deftly sorts through the rough stones, pulling out the higher-quality ones, which shine brightly. Nasir has been trading gemstones for decades and has been in Bangkok

since the 1990s. He tells us Thailand needs the rough gemstones African traders bring in for its coloured gemstone industry to survive. Leaving Nasir's office, we share the lift ride down with another set of African gemstones traders, this time from Nigeria.

Back outside on this busy Bangkok street, you would never know the building was full of African traders and a wealth of rough coloured gemstones. Although they form the lifeblood of the Thai gemstone industry, people like Nasir, and the other African gemstone traders and their transnational networks, remain hidden away from the more public face of this market, silently fuelling a clandestine trade that often skirts the law, while providing livelihoods for millions on both sides of the Indian Ocean.

In particular, the role of African traders in international coloured-gemstone supply chains has received little attention, and their participation often goes unnoted and unacknowledged.¹³ When foreign traders are identified in the existing research, there tends to be a focus on those from Asian locations, such as Sri Lanka, India and Thailand.

This investigation aims to begin to fill this information gap. This report draws attention to the significant and multifaceted role African traders play in linking African source markets to Asian producers. The report also seeks to shed light on the scale of the trade and its long-term development impacts for actors both in Africa and in Thailand. It is hoped this will provide insight into where further research is needed, and to enable governments and development agencies to better understand the role played by criminal actors and networks in the coloured-gemstone sector, so that they can engage more effectively with stakeholders.

This study does not attempt to provide a comprehensive overview of the informal or illegal trade in all coloured gemstone types. Instead, it focuses on the kinds of stones that appear to be most commonly exchanged by African traders, according to our research in Thailand for this report. It also focuses on those that are of the highest value, namely sapphire and ruby (forms of corundum); emerald and aquamarine (forms of beryl); and tourmaline. Other stones known to be a part of this supply chain include spinel and a wide range of coloured quartzes, such as amethyst, citrine, garnet and chrysoberyl.

Methodology

This report is informed by a desk review, interviews conducted in Thailand in January 2020, and analysis of trade data. Interviews were conducted in Bangkok and Chanthaburi with a range of informants, including African and Asian gemstone traders, jewellers, gemmologists, government bodies and industry bodies. In addition, quantitative data on the origin of traders and types of stones transported was collected. The report also benefits from past and on-going research conducted by the authors on coloured gemstones and global illicit mineral flows. This included key informants via telephone and research in Madagascar in February 2020 and Mozambique in April 2020.

The Gemmological Institute of America (GIA) hosts an online gemstone encyclopaedia, which provides an overview of and buying guide to a

wide range of coloured gemstones. A limited selection of gemstones is profiled here as an introduction to coloured gemstones.

PRECIOUS COLOURED GEMSTONES

Ruby (corundum)

Description

Ruby is the name for red corundum. Prized for their colour and hardness (second only to diamonds), rubies can command the highest per-carat price of any coloured stone. The most renowned rubies, like those from Myanmar, typically form in marble deposits. These kinds of rubies are fluorescent red under ultraviolet light and sunlight. In other locations, rubies can be found in basalt rocks. Rubies are often heat-treated to remove purplish colourations, rendering them a purer quality of red.¹⁴

Mozambique is an important new source of ruby, with the quality of gems at a similar standard to those from Myanmar. Other sources are Vietnam, Afghanistan, Tajikistan, Pakistan, Sri Lanka, Kenya, Tanzania and Madagascar. Ruby deposits along the border between Thailand and Cambodia used to be a major source of ruby, but it is thought these reserves have largely been exhausted.¹⁵



Rough: Ruby from Mozambique, cut to make best use of the natural, unheated rough.



Cut and polished: Ruby from Mozambique that has undergone heat enhancement.

Sapphire (corundum)

Description

Sapphire is the name for all forms of the mineral corundum except for red corundum, which is known as ruby. Depending on their trace element content, sapphire varieties might be blue, yellow, green, orange, pink, purple, or show a six-rayed star if cut as a cabochon (i.e. as opposed to faceted). Sapphire is prized for its colour and hardness.¹⁶

Madagascar is a major source of sapphires. Kashmir, Myanmar and Sri Lanka are also three historically major sources for sapphires. Other African sapphire sources are Nigeria, Tanzania, Kenya and Ethiopia. There are also deposits in Australia, Thailand, Cambodia, Laos, Vietnam and the US.¹⁷



Rough: Sapphires from Madagascar (a mixture of heated and unheated stones).



Cut and polished: Unheated sapphire from Madagascar.

Emerald (beryl)

Description

Emerald is the most valuable stone in the beryl family, which includes aquamarine and morganite. Colombia is the best-known producer of emeralds today. Zambia is also a major source. Pakistan and Afghanistan are also important producers.¹⁸



Rough emeralds



Cut and polished: This Zambian emerald weighs 1 carat.

© Poppy Hollis/Getty Images

SEMI-PRECIOUS COLOURED GEMSTONES

Tourmaline

Description

Tourmaline has gained in popularity since 2012 because of its colour and relative hardness. Tourmaline comes in a wide range of colours. Among the most popular are the pink and red rubellites, the emerald-green 'chrome' tourmalines, the green and pink 'watermelon', and the rare and highly prized blue-to-violet 'Paraiba' tourmalines (named after the state in Brazil where it occurs). Red and green tourmalines are especially popular among Chinese customers. It also has pyroelectric qualities, which make it useful in some industrial processes.¹⁹

Although found all over the world, tourmaline is mined mostly in Brazil and Africa (Mozambique, Zambia, Namibia, Madagascar, Nigeria, Rwanda and the DRC). In the early 2000s, Paraiba-type copper-bearing tourmalines were also discovered in Mozambique and Nigeria. Tourmaline is also found in Afghanistan, Pakistan and the US.²⁰



Rough: Nigerian tourmaline, natural and unheated.



Cut and polished: Unheated tourmaline from Nigeria.

Aquamarine (beryl)

Description

Blue to slightly greenish-blue, aquamarine is a variety of beryl. Heat treatment usually imparts a more bluish appearance. Aquamarine crystals are known to be large in size and relatively pure and well-formed, making them particularly valuable to collectors. Crystals are sometimes big enough to be fashioned into gems of more than 100 carats.²¹

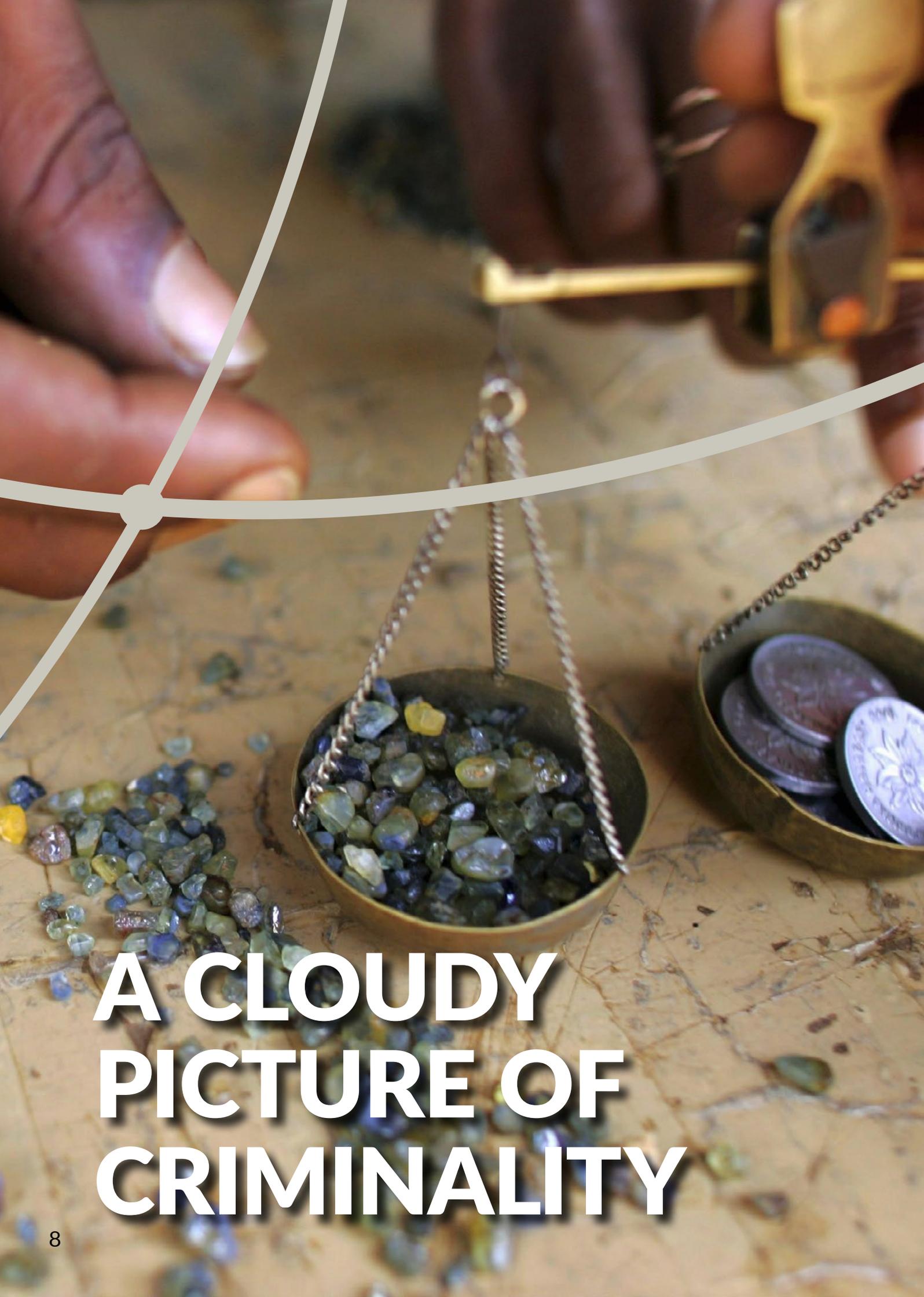
Aquamarine is found across Africa, including in Kenya, Madagascar, Nigeria, Zambia and Mozambique. Brazil and Pakistan are also prominent producers, and the stone is also found in the US, China, Myanmar, Russia and Ukraine, and other countries.²²



Rough: Natural and unheated aquamarine from Mozambique.



Cut and polished: An unheated aquamarine from Madagascar.



A CLOUDY PICTURE OF CRIMINALITY



The illicit economy and transnational networks underpinning the global coloured-gemstone trade are largely hidden and not well understood; nor do they receive the same level of attention given to other precious mineral and natural-resource sectors. The diamond trade, for example, was thrust into the public consciousness in the 1990s with global campaigns around blood diamonds, resulting in the establishment of the Kimberley Process in 2003. Likewise, a great deal of effort has also been expended on mapping illicit gold supply chains.²³ The Organization for Economic Cooperation and Development (OECD) released a gold supplement to its Due Diligence Guidance on Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas.²⁴ By contrast, coloured-gemstone supply chains and the transnational, and often illicit, networks linking their source and destination countries have received little attention. This is a multi-billion-dollar transnational industry thriving in the shadows.

Unpacking the transnational coloured gemstone trade, the networks of actors that operate it and the flows is no easy feat. It is a complex web of activity, interweaving informal livelihoods, criminal activity, and high-end investor and jewellery markets. Furthermore, criminal methods and networks are dynamic – they adapt in response to opportunities, and to global and local market forces.²⁵

Starting upstream at the mine site, actors in the coloured gemstone supply chain include (see Figure 2):

- **Miners and washers:** At the mine, miners dig for stones. The ore removed from mine shafts is then washed, generally by women, to separate the stones from the rest of the ore.
- **Local buyers:** These purchase stones directly from miners and sell them down the supply chain to other buyers who belong to larger networks. Depending on the supply chain, there may be one to two local buyers before the stones reach

◀ **The gemstone supply chain moves along a continuum from informality, to criminal trade activity and international luxury jewellery end markets.** © Imaz Press/Getty Images

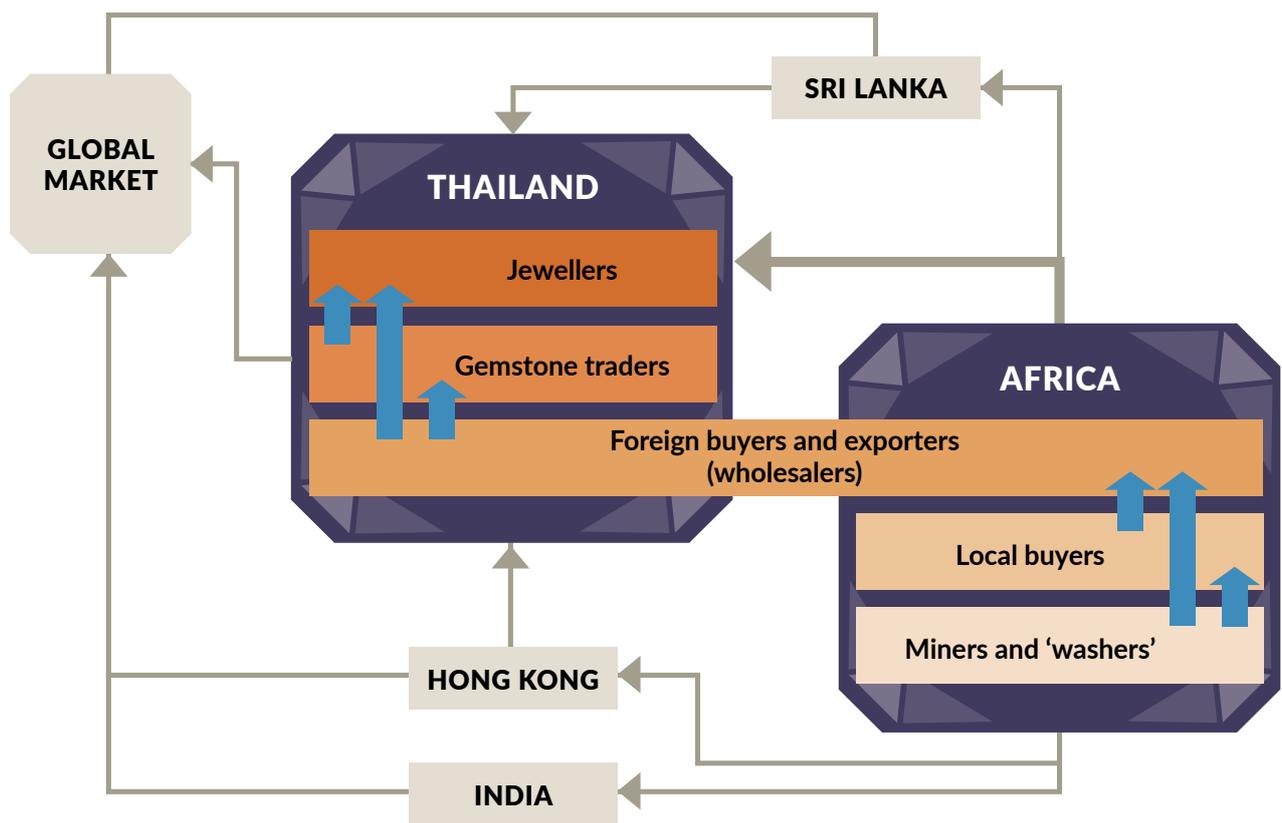


FIGURE 2 A multifaceted trade: Overview of coloured gemstone supply chains

a trader/exporter. For example, in Madagascar, local buyers include 'ladies in hats' who sell to 'men with cars', who then sell to businessmen before the stones are ultimately sold to traders/exporters.²⁶

- Traders/exporters: Often wholesalers of coloured gemstone rough, this group of actors ship stones from Africa to processing centres (such as Bangkok). Traders of various nationalities are found at this point in the supply chain. In addition to African traders, Asian traders from Thailand, Sri Lanka and India are commonly involved in this economy, as well as Western traders.
- Gemstone traders/processors: At global hubs, such as Bangkok, gemstone traders will buy coloured gemstone rough in bulk and process the material, then selling the processed stones to commercial buyers (such as jewellers or investors), or they make the stones into jewellery that they sell themselves.

- Commercial buyers (i.e. jewellers): Processed stones are purchased by commercial buyers, often jewellers, who will use the stones in products that are sold to consumers.

The activities of coloured-gemstone traders are often outside the bounds of legal and regulatory frameworks, to say the least. In interviews conducted for this study, traders openly discussed how they are able to skirt the law and avoid paying royalties and other taxes, to maximize profits. However, it would be unreasonable to characterize them as criminal kingpins. Rather, African traders are cogs in a larger hidden economy; their dealings underpin and link the most visible 'surface' manifestations of the coloured gemstone trade: the mining sites, and the gemstone and jewellery industry.

Traders can be predatory. In fact, in source countries, due to lack of local awareness of the market value of coloured gemstone rough, buyers are known to exploit miners and pay them only a small



Cogs in a larger economy: Many African gemstone traders sell to expert Asian buyers. © Lynda Lawson

fraction of the value of the stones. Research has found that 'entrenched patterns of clientelism and exploitation by foreign actors sap many countries of potential benefits accruing from the gemstone industry'.²⁷ For example, Sri Lankan gem traders in Madagascar are reported to exploit information and power asymmetries, paying a small fraction of the price of gemstone values. This includes local male accomplices of the Sri Lankan traders who collude to price-fix and to restrict access to information and funding sources for female traders.²⁸ They also benefit from the informality of the industry, and knowingly engage in and profit from illicit activity, in particular smuggling or substantially under-declaring stones to avoid paying taxes.²⁹

What complicates any analysis of the impacts of this trade is that traders occupy a grey area, providing an essential livelihood to vulnerable mining communities, while at the same time perpetuating informality and criminality. This seems to be especially true of African traders, who report sourcing rough stones at times directly from the mines, and who engage

more closely with local communities. For example, local buyers and traders may provide transportation to get the stones from mine to market, which many miners do not possess. Also, local buyers and traders consolidate production from a number of mine sites, this enables enabling miners to make regular sales of small amounts of rough.³⁰ Highlighting the multifaceted nature of their role, one trader explained, 'We are the suppliers, we are the backbone of the trade. We play two roles – we help miners, we support them, and we bring stones to the market.'³¹

Yet, their activities and those of other actors (including state actors in both source and destination countries) is by no means harmless. To grasp the damage of the illicit trade, the concept of death by a thousand cuts is helpful. The harm caused by each individual trader may be relatively innocuous in isolation, but when taken as a whole, the criminal activity and culture of impunity that pervade the coloured-gemstone sector have resulted in long-term harms that undermine rule of law, governance and sustainable development. Governance mechanisms are rarely enforced, and

The Jewellery Trade Centre, Bangkok

In the coffee shops surrounding the Jewellery Trade Centre (JTC) in Bangkok, the heart of the gemstone district, African traders can be found floating in and out, and congregating in small groups. Many have roots in Bangkok, having lived in Thailand for many years. Others have arrived more recently, hosted by their African peers and looking to sell the rough gemstones they have brought. Like any other entrepreneurs, for them this is a business and everyone is looking to strike a deal. However, the importance of the lifeline they are providing to African mining communities is not lost on them at the same time. As one West African trader said, 'I take my stones. I sell them here. I make four times the value and I feed a hundred people.'³²

taxes and fees are applied indiscriminately and at inconsistent rates. Furthermore, human-rights harms inflicted by this industry include deploying child labour in some mines, and extend to enforcing cultural norms that do not encourage the participation of women and girls as traders, leaving them relegated to lower-paying positions, such mining and trading in less valuable stones.³³

In general, criminality and the resulting illicit financial flows, both direct and indirect, reduce physical security, well-being and productive opportunities of citizens. Long-term criminality and elite impunity, paired with widespread corruption erode the fabric of the state and often cause politics, business and crime to converge, creating ambiguity around governance and rule of law. Illicit financial flows are especially damaging in the context of developing, institutionally weak and fragile states, where they may exploit and exacerbate weaknesses in public institutions, undermine governance and empower those who operate outside of the law. The result is citizen disenfranchisement, underinvestment in development and political instability, all of which constrain legitimate economic growth and enable criminality to thrive.³⁴

Criminal activity and a culture of impunity pervade the coloured-gemstone sector.

To assess the overall cumulative harms created by illicit activity in the coloured-gemstone sector and to inform appropriate, targeted responses, further research is required to understand how criminal actors and networks operate, including how traders perpetuate informality and engage in criminal activity. The roles and activities of traders may vary significantly depending on whether they are African or Asian, with some groups of traders more open to becoming agents of change. For example, in Madagascar African or Thai traders may be more amenable to change than Sri Lankan traders, who wield considerably more influence and power in the mining regions and have a greater incentive to maintain the status quo.



THAILAND

THE RUBY TRADING KINGDOM



Thailand is one of the world's leading centres for coloured-gemstone processing and jewellery manufacture and export, in particular ruby and sapphire. Dubbed the 'ruby trading kingdom',³⁵ Thailand has many highly skilled cutters and has developed its own processing styles and expertise in the heat treatment of stones, which enhances the colour of the finished gems. Although Thailand used to be a major source of rubies and sapphires,³⁶ in the last 20 to 30 years Thai deposits have been largely depleted. The country now relies entirely on imported rough stones to support its manufacturing industry,³⁷ and a very large portion of these stones are now sourced from Africa.

As the top global exporter of precious coloured gemstones for eight years,³⁸ overall exports in 2017 were valued at US\$1.9 billion, and roughly half of these exports are sapphires.³⁹ Stones are often used in jewellery or they are held by investors.

Bangkok's Silom Road area, and especially the JTC, is the centre of the Thai coloured-gemstone industry. The JTC is dedicated to gems and jewellery, functioning as a hub and a one-stop shop for buyers and sellers from across Africa and Asia hawking a wide range of precious and semi-precious stones.

Jewellers from across Thailand and Asia also come to buy at Chanthaburi in eastern Thailand. One of the world's largest centres for value addition to gemstones, it hosts legendary weekend markets for cut and polished gemstones. Although the market used to be dominated by Thai buyers, an increasing number of Indians now buy stones in Chanthaburi. One major sapphire trader explained that 'in the past it was 80% Thai and 20% Indian; now it's the reverse', in addition to some Russian buyers.⁴⁰ The importance of Indian buyers has increased with a recent downturn in the market.

◀ Jewellers from across Asia purchase African coloured gemstones in Thailand's Chanthaburi market. © Yut Chanthaburi/Shutterstock



A fall in prices over the past few years has pushed an estimated 250 African traders to return to Bangkok, where Indian buyers provided a steady source of sales and thus regular income.⁴¹

The Thai success story has been further driven by private partnerships and significant support from government. Recently, the Thai industry has been seeking to establish more formal relationships with source countries in Africa. This includes efforts by both the government (for example, Thai officials welcomed a high-level delegation of ruby producers and the Mozambique Ministry of Mining Resources and Energy in 2018⁴²) and the private sector (a major Thai jewellery house, for instance, has offered value-addition partnerships with African stakeholders⁴³).

Thailand is known for producing high-quality jewellery using coloured gemstones. © *Tristan Fewings/ Getty Images*

From Africa to Thailand

From Africa, rough coloured gemstones are either hand-carried by air or shipped to Thailand. Precious gemstones and moderate-sized consignments of semi-precious stones are usually carried in hand baggage. For example, from Madagascar direct flights to Nairobi and Addis Ababa, and thence connecting flights to Bangkok and Hong Kong via Indian Ocean airports provide the most direct routes into the Asian markets. Sea routes are used for large quantities of semi-precious and large specimen stones from East Africa. Ports mentioned for shipping such cargoes include Maputo and Dar es Salaam.⁴⁴

Weak regulation and a lack of transparency in some exporting nations facilitate the easy smuggling or under-declaration of coloured gemstone exports. For example,

A disregard for reporting the provenance of stones was reflected in conversations with some traders.

precious stones from Madagascar, require a *laissez passer*, an official export permit. But inconsistent applications of export rules and underreporting mean the trade has become associated with illegal activities.⁴⁵

Thai buyers source stones directly from Africa, purchase stock online, and buy from international auctions (notably in Hong Kong). A current common practice is to send buyers to mines and local mining towns to purchase stones. For example, according to sources who provided information for this report, a major Chanthaburi sapphire dealer, which sources sapphires from across the globe, has extensive trading networks in Africa. Most of their blue sapphires are sourced from Diego, in northern Madagascar, where they have teams of Thai buyers continuously buying direct from miners. They are the largest buyer in town and pay cash, making them a reliable trading partner for local miners.⁴⁶ Over the past three years, much of their stock has come from Nigeria.⁴⁷

Thai coloured-gemstone dealers have a history of owning mines in Africa and dealing directly with African miners, but this practice has largely been replaced with a system whereby they buy stones from intermediary traders, most often African or Indian nationals. For example, one major Thai gem and jewellery house used to source sapphires directly from its own mine in Tanzania, but now relies on a network of Indian and African traders for its procurement of stock.

At the receiving end, Thailand has a liberal policy on the import of coloured gemstone rough. At customs there is no requirement to show proof of the provenance of the stones, how they have been acquired or that appropriate export royalties or fees have been paid in the country of origin or transit. 'Legal or illegal, it's not a problem for us,' remarked one Thai stakeholder.⁴⁸ Several traders reported that they can collect the rough with ease, with customs officials never, or seldomly, checking the package to confirm the given valuation is accurate. Reportedly, traders need only show their own visas, produce a receipt and show the parcel. Service charges are negotiable.⁴⁹

Part of the reason for the Thai *laissez-faire* attitude towards the import of coloured gemstones is the overall importance of this sector to the Thai economy. It is Thailand's fifth largest industry, creating well over a million jobs, and coloured gemstones and jewellery are Thailand's third largest export.⁵⁰ At the same time, Thailand's dominance of the global trade is also being threatened by ever-increasing competition from other established and emerging gemstone hubs. Currently, Bangkok, Hong Kong and Jaipur, India, are the most important centres for the global coloured-gemstone trade.⁵¹ Therefore, it is unlikely the Thai government will look to tighten regulations and risk pushing traders to seek other, easier-to-access jurisdictions to sell their rough. As one industry representative put it, Thailand is the gemstone king and it needs to maintain this status.⁵²

Competitors for the gemstone crown



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© Sorbis/Shutterstock

Jaipur (left), and Hong Kong and mainland China, are major international jewellery retail hubs and importers of coloured gemstones from Africa.

INDIA

India is the second largest global importer of coloured gemstones, both polished and rough. The country has a long history of activity in the African coloured-gemstone sector. Notably, the city of Jaipur is particularly famous for its transformation of emeralds from Zambia and ruby from Mozambique. Since 2018, there has also been an increase in Indian traders exporting sapphires directly from Madagascar. According to information from the Indian Embassy in Madagascar, there are currently 15 000 Indians residing in Madagascar. Most of them have trading companies, while others have established factories in the country.⁵³

Working to secure a steady and sustainable flow of African stones, Indian gemstone traders and bodies, such as The Indian Gem and Jewellery Export Promotion Council, have increased their activity in Africa, and in Madagascar in particular.⁵⁴ African miners and traders in rough gemstones, many from Madagascar, were invited to attend a trade show in the gemstone hub of Jaipur.⁵⁵ India also signed a memorandum of understanding with Madagascar in 2014 and 2018, and offers an import tax exemption to least developed countries, a category that includes most African coloured-gemstone producers.⁵⁶ The efforts are showing results: Indian imports of Malagasy stones soared in 2019.

HONG KONG AND MAINLAND CHINA

Coloured gemstones in Hong Kong and mainland China are sourced both by Chinese buyers and African traders. In response to newfound rapid growth in the jewellery sector in Hong Kong and Guangzhou, African gem traders are regular suppliers of a wide range of precious and semi-precious gemstones. They tend to visit on short-term visas and sell stones in return for a wide range of Chinese goods to sell in Africa.⁵⁷ Hong Kong is their preferred place to trade, as rough stones can easily be re-exported, which is not the case in mainland China.⁵⁸ Buyers reported that when they take stones to Hong Kong, there is a high degree of freedom and they are not asked for any documentation.⁵⁹ The Hong Kong gem and jewellery fairs are a mecca for global buyers. While only a handful of African traders had official booths at the fair in 2019, there are many informal opportunities for sales.

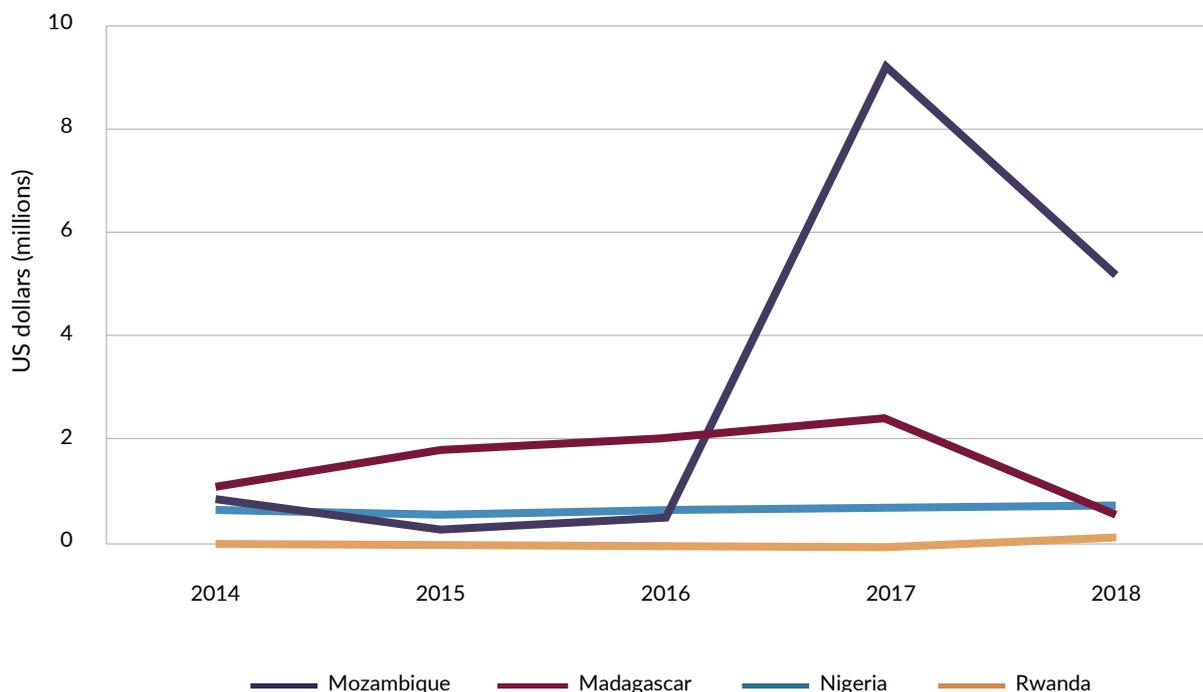
Chinese traders also buy coloured gemstone rough from Sri Lankan and Thai traders. In Thailand, Chinese buyers tend to buy faceted stones and are willing to undercut other foreign buyers, for example by offering double the prices offered by Thai buyers, in particular for red and green gems (e.g. ruby, tsavorite, and red and green tourmaline).⁶⁰

As a result of lax monitoring, both in Africa and Thailand, trade statistics are thought to massively under-represent the actual value of the coloured-gemstone trade flows. One Thai official estimated that the real value of the gemstone sector was likely to be five times more than the official number.⁶¹ An industry representative estimated that there was between US\$1 billion and US\$2 billion worth of rough coloured gemstones coming into the country, much of this through Bangkok. The industry representative stated that it is easy to hide wealth in the coloured gemstone sector, and no one really knows the value.⁶² This is also corroborated by African traders.

Looking at the trade data with countries highlighted in this report (i.e. Mozambique, Madagascar, Nigeria and Rwanda), there are major discrepancies between the value of what is on offer in Thailand, the estimated industry value and trade figures. Thailand's reported imports from all four countries falls far below expectation (with the exception of a bump in reported imports from Mozambique following the entry of large-scale miner Gemfields). Madagascar and Mozambique's export trade data reveal a similar trend, while Nigeria and Rwanda record almost no data on coloured-gemstone exports for the time period. A disregard for reporting the provenance of stones was also reflected in conversations with some African traders, who expressed little interest in the origin of their stones. One stated: 'We don't care if our stones are recognized as African. It's a blind business.'⁶³

When estimates of the actual value of the trade and official trade data are compared, the scale of potential smuggling in the industry is striking. From 2014 to 2018, Thailand reported importing between US\$338 million and US\$539 million in coloured gemstones. Of this, during this same period, Thailand reported importing between US\$184 million and US\$352 million annually of ruby, sapphires and emeralds. If the real market value were five times greater than official figures, then these amounts would mean Thailand could actually be importing between US\$1.5 billion and US\$2.5 billion in coloured gemstones per year, the vast majority of these imports undeclared.⁶⁴

FIGURE 3 Value of Thai reported coloured gemstone imports, (HS Code: 7103)





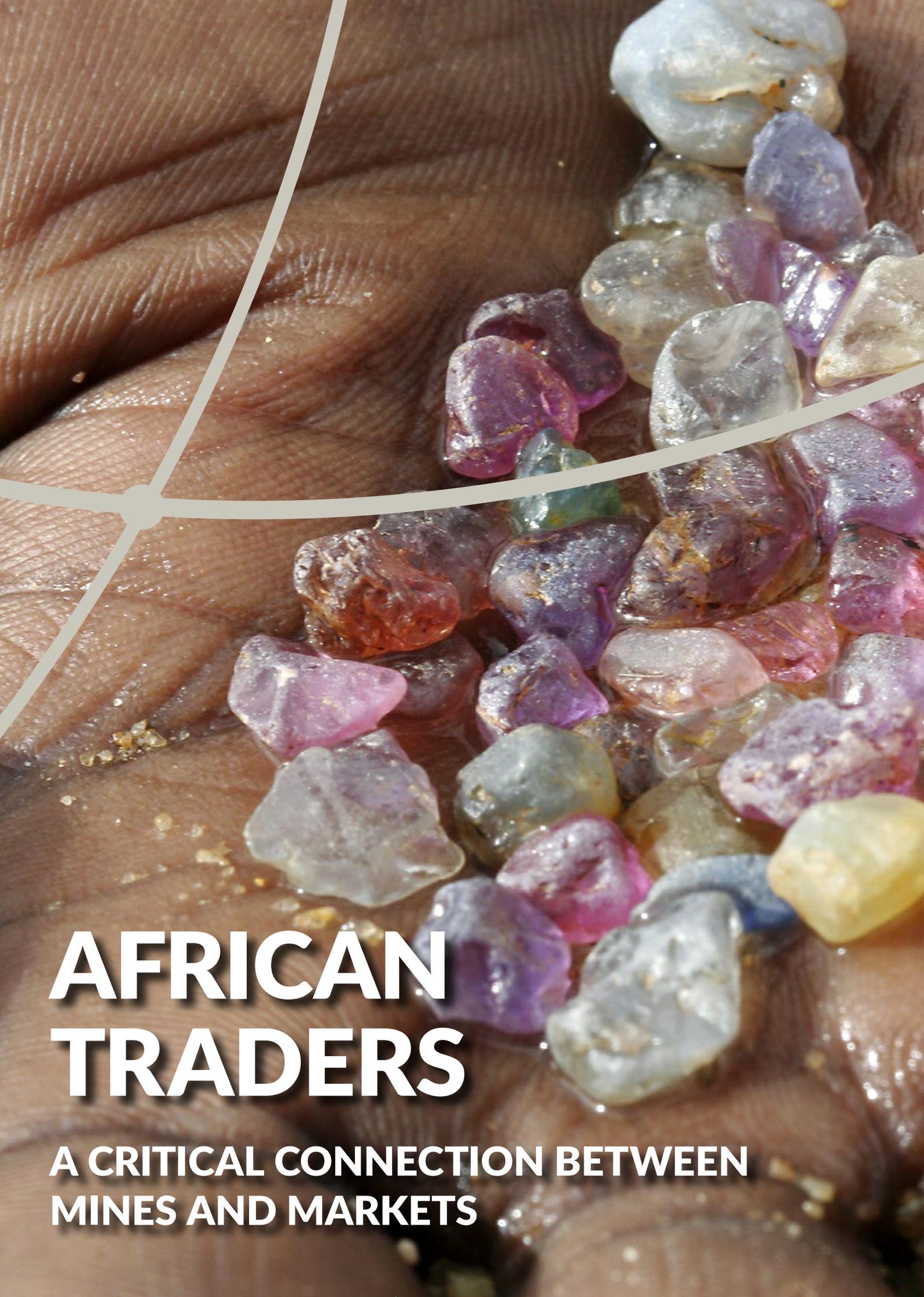
Focusing on Madagascar, the country is widely recognized as a major source of a variety of coloured gemstones and a major supplier to Thailand. However, minimal exports from Madagascar and imports into Thailand have been reported by both countries. From 2014 to 2018, Thailand reported a high of US\$2.4 million in coloured gemstone imports from Madagascar, with the figure dropping to just over US\$600 000 in 2018 (see the figure). During this same period, Madagascar reported exporting a high of US\$1.8 million in gemstones in Thailand in 2014, with the same drop in 2018, when exports were reported to dip below US\$700 000.⁶⁵

It is worth noting that the lack of trade data and low numbers provided by Sri Lanka are even more concerning. From 2014 to 2018, Sri Lanka recorded coloured gemstone imports only from Madagascar in 2016, valued at US\$1 070. In contrast, during that same time period Sri Lanka reported exporting from US\$86 million to US\$153 million each year. While Sri Lanka is a gemstone producer, the reporting gaps and discrepancies in trade figures raise a red flag.⁶⁶ In Thailand, Sri Lankan sapphire traders are heavily represented in the coloured-gemstone trade but operate 'in secret'. Sri Lankan traders will take sapphire rough from Madagascar to Sri Lanka, where it is cut, polished and treated. Then it is taken to Bangkok where it is sold or exchanged for other coloured gemstones.⁶⁷

The smuggling of coloured gemstone imports is not necessarily a concern for Thailand, given the importance of the rough stones as an input needed to fuel the country's coloured-gemstone industry. But it is a concern for source countries. The substantial amount of smuggling activity results in significant state revenue losses and is a significant challenge to establishing the responsible, secure supply chains that are needed to improve conditions for miners and other upstream actors.

The beneficiation of gemstones happens off Africa's shores: here a Thai lapidarist cuts and polishes rough stones.

© Lakkana Savaksuriyawong/
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AFRICAN TRADERS

**A CRITICAL CONNECTION BETWEEN
MINES AND MARKETS**



The African gem-dealing community is a well-established and essential part of the economy in terms of supplying the Thai coloured-gemstone industry. Depending on the country and its regulations, much of this trade takes place in the informal or illicit realm. African traders mostly sell rough, often by the kilogram, as opposed to individual stones.⁶⁸ Some traders sell stones informally on an ad hoc basis, directly from their pockets and shoulder bags, while others have established more commercial relationships with major Thai gem and jewellery houses. Transactions are made in cash.

West Africans, especially Guineans, and increasingly Nigerians, are heavily represented in this segment of the Thai coloured-gemstone trade. In Chanthaburi, all the traders interviewed for this report were from Guinea. In Bangkok, Guineans were the most heavily represented nationality (48%), followed by Nigerians (26%)⁶⁹ and Sierra Leoneans (11%). Others were from Gambia, Madagascar, Mali and Senegal.

African traders tend to be highly mobile, with many reporting making the trip between Africa and Thailand several times a year. Traders reported travelling to Madagascar, Tanzania, Mozambique, Nigeria and Rwanda to purchase coloured gemstone rough. For example, in Chanthaburi, one group of young gemstone traders had just returned from Africa and were currently showcasing large parcels of gemstone rough. One successful Nigerian gem trader in Bangkok, who attributes his success to his mobility and willingness to invest, stated that he is prepared to travel to 'any country where they have stones' and prefers to source directly from the mines.⁷⁰

◀ An African gemstone trader with multicoloured sapphires mined in Ilakaka, Madagascar.
© Thomas Samson/Gamma-Rapho via Getty Images

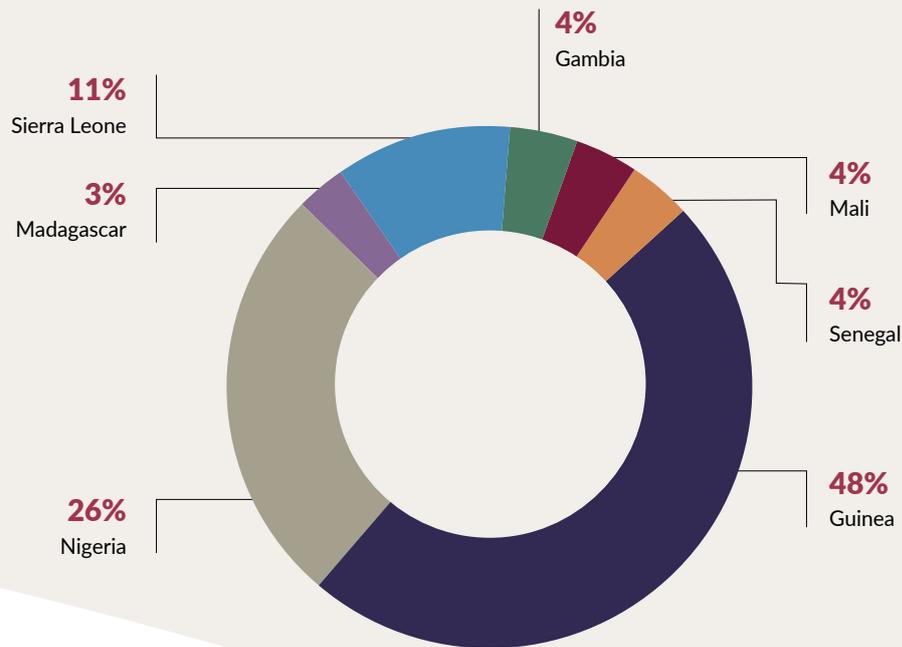


FIGURE 4 Nationality of African traders in the Silom Road Gem District (Bangkok) and Alex District (Chanthaburi)

African traders leverage their long-standing experience of working in this industry and their wide-reaching networks to profit from the coloured gemstone trade. Over multiple generations, they have acquired extensive knowledge of the industry and developed global trade networks, which may span Africa, Europe and Asia. A number of traders said they learnt about diamonds from their fathers and applied those skills and knowledge to coloured gemstones. One Guinean trader in Madagascar described how he and his family ‘were born in stones’ while another in Bangkok spoke of how his grandfather had been a diamond trader. ‘My father and I transferred what we learned from him to trade in coloured gemstones,’ he said.⁷¹ Many traders have also travelled extensively and lived in several source countries, such as Madagascar, Mozambique and Nigeria, their careers plotting out a living map of Africa’s gemstone sector.⁷² Also, Guineans are often fluent in English and French, which facilitates their work in Africa and Asia.

Socio-ethnic ties also facilitate the trade, in that these ties help form the basis of trust, which can give African traders an advantage over non-Africans and enable them to buy directly from miners. African traders based in Thailand reported having numerous exporting suppliers based in situ across Africa who send them shipments of rough coloured gemstones on order. As one trader explained, ‘We are many, and we don’t have to go all the time [to Africa].’⁷³ Another said that he had recently bought aquamarine from his Guinean ‘brothers’⁷⁴ in Mozambique to whom he had sent money for the gemstone rough.⁷⁵

Unpacking identity: The Malinke

Recognizing that socio-ethnic labels are not immutable and identities can shift, seeking to unpack such identities and relationships is relevant for understanding the foundations of trust for business relationships between African traders. As in many parts of the world and trade networks, socio-ethnic connections are more determinative of identity and relationships of trust than nationality.

When asked, all the traders from Guinea reported being Malinke, as did traders from neighbouring West African states (Senegal, Gambia and Sierra Leone). Based on interviews, it is possible that nearly three-quarters of gemstone traders in Thailand could belong to the Malinke group. The Malinke (also known as the Mandingo, Maninka, Mandinka or Manding) are a West African people occupying parts of Guinea, Liberia, Sierra Leone, Burkina Faso, Côte d'Ivoire, Mali, Senegal, Gambia, Guinea-Bissau, Mauritania and Benin. Estimates of the global Malinke population range from 11 to 13 million. However, only 29% of the Guinean population are Malinke.⁷⁶

As an ethnic group, the Malinke are well-known migrant traders and have successfully sustained long-distance or large-scale trading ventures for many generations. They have been central to the West African diamond trade since the early 20th century and also feature in the West African gold trade. For example, in Liberia, where Malinke are referred to as Mandingo, the dealers and dealers' agents who buy diamonds in the bush are reported to be mostly Mandingos from other West African countries.⁷⁷ Similarly, a 2015 investigation into the Liberian ASM gold sector found the Mandingo were repeatedly referred to as buyers and dealers.⁷⁸ A Mandingo broker explained that he was able to buy and sell gold in Guinea, Liberia and Côte d'Ivoire because they were all Mandingos and trusted one another.⁷⁹

By the traders' own accounts, the skills and networks used in the diamond trade have been transferred to the coloured gemstones trade. Reflecting the dominance of the Malinke in the West African diamond trade, and cross-border trade more generally, belonging to the Malinke group may be more important to traders and their networks than hailing from Guinea.

Despite having lived and worked in Thailand for decades, and playing such a critical role in the local trade, some African traders expressed frustration with the system and the lack of recognition they received. They are often under-represented in official industry events and initiatives. For example, at the 2019 Bangkok Gems & Jewelry Fair, there was only one African booth, hosted by the Embassy of Nigeria.⁸⁰ The lack of recognition and promotion of this critical group partly explains why it can be challenging to understand and map global coloured-gemstone supply chains, as well as the need for greater engagement.



© Marcena Hunter



© Lynda Lawson

Top: trays of rough gemstone on display in Bangkok's Jewellery Trade Centre; bottom: a Guinean trader sorts Nigerian spessartine garnet in Chanthaburi.

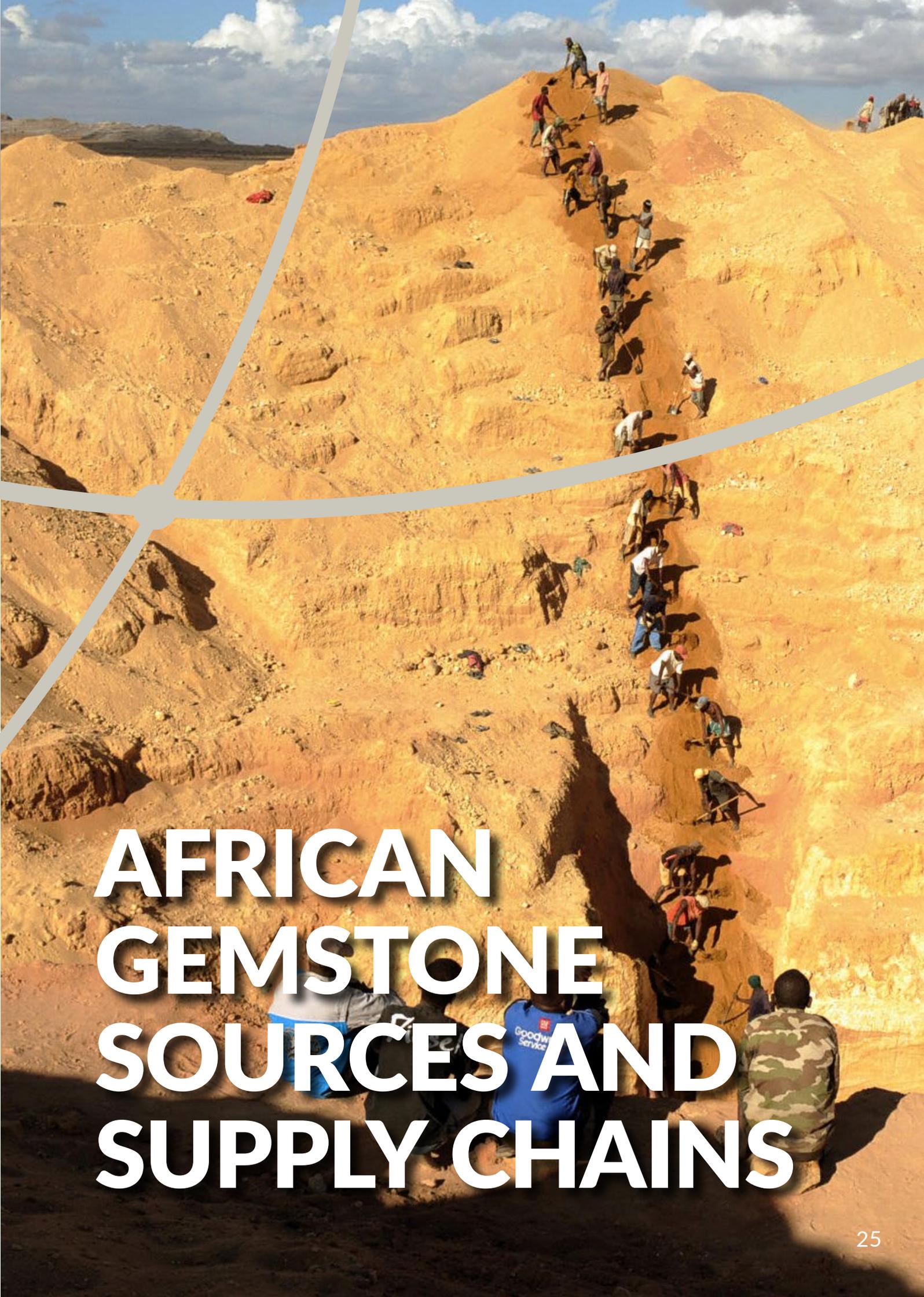
African gemstone traders in Thailand

African gem traders can be found throughout the Silom Road area, gathering at coffee houses, selling rough stones inside the JTC and working from offices nearby. To find the stalls of African traders in Bangkok's JTC, a 59-storey building in the heart of the gem district, you have to first weave your way through the first-floor stalls, offering sparkling finished gemstones and jewellery. Making your way up the escalators to the upper floors, you will find a 'marketplace' of African traders. Many are from Guinea or other West African French-speaking countries; other traders are from Nigeria. Unlike the stalls of merchandise below, many of these sell unprocessed rough gemstones. One trader from Nigeria displays a beautiful watermelon tourmaline collection, the stones a striking rainbow of green and pink, even in their unpolished state, while another, from Guinea, hawks trays of blue sapphire rough.

CHANTHABURI

Chanthaburi, with its renowned markets selling rough gemstones, is also an important point on the Thailand gemstone map. African traders, although a critical component of the Chanthaburi gemstone ecosystem, are not easy to find. Tucked away behind the town centre, the district of Alex hosts a vibrant African trade community. There is a mosque for Muslim African traders to worship at, and numerous store fronts bearing the mostly Guinean names of trading companies.

Although over 20 registered stores can be found in Alex, much of the trade takes place in the Guinean Traders' Association office next to the community mosque.⁸¹ On this particular day, two young traders arrive, dressed in jeans and carrying dusty shoulder bags full of gemstone rough. They have just returned from Nigeria with large packages of green tourmaline and mandarin-coloured spessartine garnet. Older traders sort the stones, knowledgeably flicking them into piles. Elsewhere, a young trader shows his rough stones to Thai traders who pick over them in a seemingly disinterested manner.



AFRICAN GEMSTONE SOURCES AND SUPPLY CHAINS



The presence of criminal actors and networks in gemstone transnational supply chains exacerbates the negative impacts of ASM and poses a significant obstacle to securing supply chains and regulating mining activity, interventions necessary to improve conditions for mining communities and achieve development gains. For example, although mining coloured gemstones creates local job opportunities, this economy has not translated into sustainable or improved livelihoods in many cases for the mining communities. Furthermore, working conditions are dangerous; child labour is used in some sites; women experience discrimination; there is no environmental oversight (mining activities are found in protected areas, for example); and there is widespread failure to rehabilitate mined areas.

African coloured gemstones are predominantly mined by artisanal and small-scale miners, including many women. The limited industrial-scale mining of gemstones in Africa that takes place is largely monopolized by the Gemfields corporation and its African companies, Kagem Mining Ltd in Zambia (which runs the largest emerald mine in the world), and Montepuez Ruby Mining Limitada (MRM) in Mozambique.

The following sections present three country case studies – Madagascar, Mozambique and the DRC. These countries have been selected because traders in Thailand reported buying rough coloured gemstones specifically from these three countries (via Rwanda in the case of the DRC). These countries also provide a good illustration of the patterns of dynamics, actors and supply chains that link African source markets to the Thai gemstone market.

◀ **Madagascar's sapphire hunters: Miners work an open-cast sapphire mine in Ilakaka, Madagascar.** © Roberto Schmidt/AFP via Getty Images

Madagascar

Madagascar plays a significant role in the global coloured-gemstone trade. Its vast deposits hold an array of precious and semi-precious gemstones, including some of the world's finest sapphires,⁸² as well as high-quality rubies and emeralds.⁸³ In fact, it is estimated that only 10% of the country is *not* gem bearing.⁸⁴ Reportedly, most of the blue sapphires that find their way to Thailand's gemstone industry are from Madagascar.⁸⁵ (Malagasy blue sapphires may be smuggled through Sri Lanka, where they are heat-modified and rebranded as Sri Lankan, before being shipped on to Thailand.) One trader also reported that 'Guinean ruby' for sale in Thailand is known to come from Madagascar.⁸⁶

Amethyst	76 000
Emerald	15
Garnet	1 300
Ruby	120
Sapphire	5 000
Tourmaline (gem and ornamental)	350 000
Agate	670
Amazonite	350
Labradorite	11 000

FIGURE 5 Estimates of Madagascar gemstone production (kilograms), 2015

NOTE: These figures do not include informal production, so actual production is likely to be much higher.

SOURCE: Thomas R. Yager, *The mineral industry of Madagascar*, in *US Geological Survey Minerals Yearbook*, 2015, <https://www.usgs.gov/centers/nmic/international-minerals-statistics-and-information>

Large quantities of high-quality sapphire were first discovered in the early 1990s.⁸⁷ Madagascar continues to be one of the largest producers of quality sapphires in the world, mostly mined by ASM operations. More recent finds of fine sapphire in the south-west and the north-east of the country maintain Madagascar's reputation as a premier source of sapphire.⁸⁸

A wide range of semi-precious coloured gemstones can also be found. For example, high-quality aquamarine and morganite (popular forms of beryl) are

found in significant quantities. Furthermore, fine blue spinel and rarer gemstones, such as granodiorite, as well as large quantities of ornamental stone, such as agate and peacock blue labradorite, are also exported to be used in luxury fittings in wealthy homes, notably in China and the US.

While possessing a wealth of high-quality gemstones, the Madagascar coloured gemstone sector is thought to be undervalued. In an industry where provenance plays an important role in the value of a stone,⁸⁹ Madagascar's reputation as a gemstone producer has been undermined, sometimes justifiably but other times in an unfair fashion, by reports of environmental destruction, corruption and unregulated rush activity.

Also, Madagascar is thought to be losing out on millions of dollars of unpaid royalties and untaxed trade annually to illicit trade in its ASM sector.⁹⁰ As with most of the country's economy as a whole, the coloured gemstone sector is largely informal, operating in an institutional void left by the state's failure to create a system and a regulatory framework for the purchase and valuing of stones. This gap is exploited by illegal actors, who are reported to smuggle vast quantities of stones out of the country. This is often done by under-reporting both the quantity and the value of the gemstones.

This has direct implications for the development of the sector and thwarts efforts to establish responsible supply chains that could support sustainable livelihoods and maximize local development. Madagascar has a young and rapidly growing population of over 27 million. Half the population are under 20 and it is growing at about 600 000 people a year.⁹¹ Poverty is extremely high, with 70% of the population living in poverty.⁹²

In this context, ASM of coloured gemstones and gold provides an important economic lifeline with few barriers to entry for many thousands of Malagasy people. In 2019, it was estimated that there were 1 300 ASM licences and up to a million miners.⁹³ More than any other gemstone, sapphires are mined by hand,⁹⁴ and provide a particularly accessible livelihood for many, including youths and women in gem-bearing nations.⁹⁵

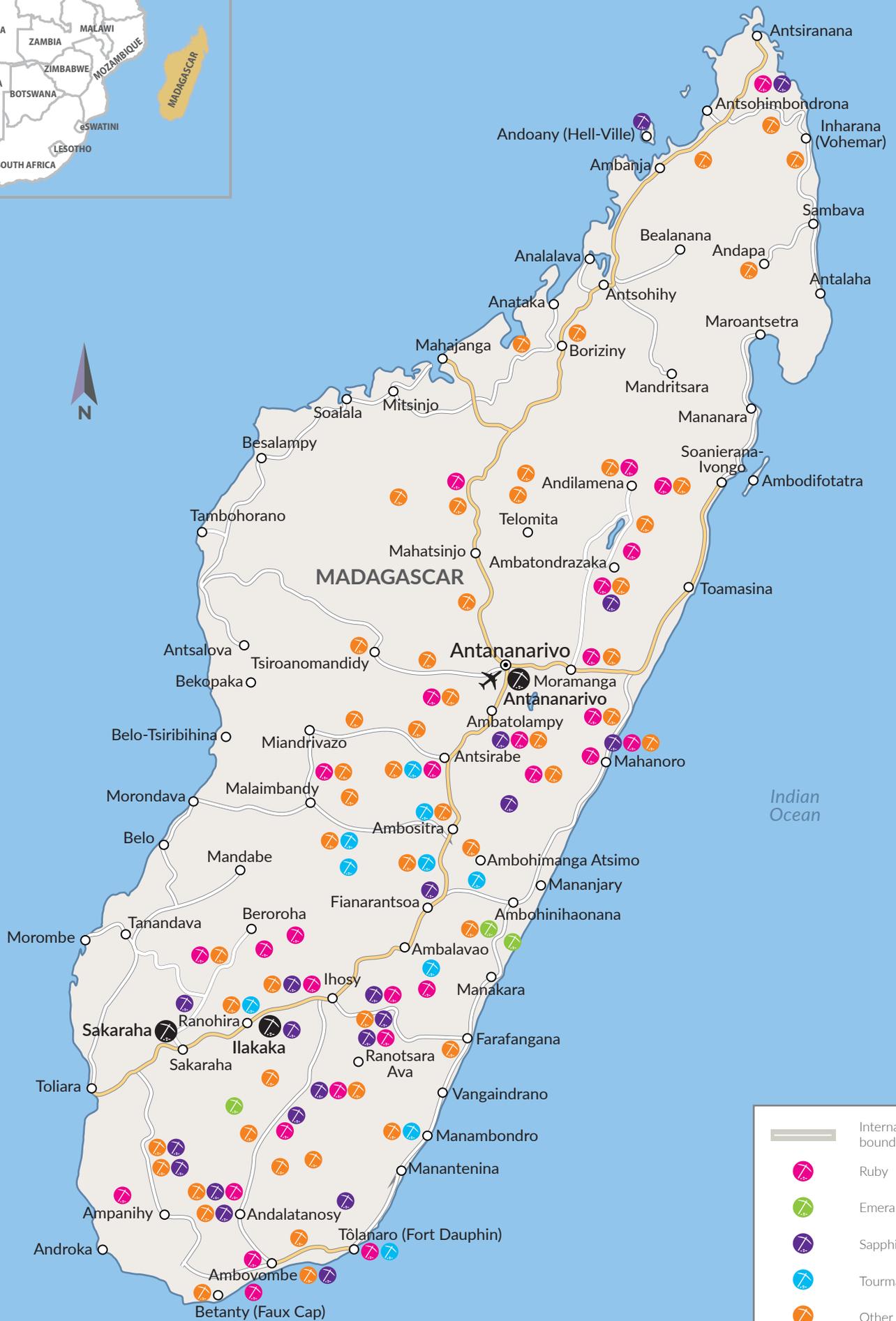


FIGURE 6 Main ruby and sapphire discoveries in Madagascar

SOURCE: Courtesy Richard W. Hughes (2006), modified and updated by Vincent Pardieu (2017)

It can be argued that state systemic voids have permitted the growth of informal groups, such as women traders. However, the abandonment of the sector by the authorities means that an opportunity has also been missed to generate rents from these natural resources that could be capitalized on to improve the overall level of local economic development and establish formal support systems..

The sapphire trade

There is great asymmetry in terms of power, networks and knowledge among the various players along the Malagasy sapphire supply chain, often to the detriment of vulnerable miners upstream in the supply chain. According to a 2010 estimate, miners are paid only 10% of the value of stones.⁹⁶ (For comparison, African gold miners often collect 70% or more of the value of gold.⁹⁷) The result is that buyers and traders, who are likely to be engaged in some form of smuggling, are reaping substantial profits while thwarting efforts to minimize the negative impacts of ASM and sustainable development of the sector.

The sapphire trade in Madagascar is dominated by foreign buyers, mostly Sri Lankans, who have little interest in any value addition in the country. It is alleged the traders maintain a cartel system to ensure local prices are suppressed, maximizing profits for traders, who are thought to under-declare or smuggle most coloured gemstone exports.⁹⁸ More valuable Malagasy stones are purchased and then traded in Thailand or Sri Lanka, where they may be processed and even rebranded as Sri Lankan. There are some Malagasy traders who operate in Thailand, but their stones are typically semi-precious, such as low-value corundum (mostly sapphire).

Miners may or may not be working on registered mining claims. Many of them, including men and women, are from the south of Madagascar, and some are drawn to the mining areas because of poverty and drought. Others have had family experience of sapphire mining.⁹⁹ Often, miners work without legal licences and sell their rough stones freely to buyers. Other types of arrangements are sponsorships or the first right to purchase. If sponsored, a miner will receive a small salary from



Some parts of the gemstone supply chain provide an accessible livelihood for women in source countries, although they earn less than men. © Lynda Lawson

a permit-holder for gemstones they find. In a sponsorship arrangement, a regular breakdown is that the permit-holder will keep two-thirds of the proceeds and distribute the remaining third among the miners. In a first right to purchase arrangement, miners are required to sell any finds to the permit-holder, often at unfavourable prices.¹⁰⁰

Women miners are an overlooked part of the supply chain. Women work in rivers with sieves, picking through gravel brought from the mines by male relatives. It is rare to find women working underground, where the best stones are found.¹⁰¹ Some women become trapped in 'sapphire marriages', forming a relationship with a male miner and trading sexual favours to gain access to revenue from mining. Although they earn less than their male counterparts, many women report being able to earn enough from sapphire mining to provide for their families.¹⁰²



Female trader with rough sapphires, Madagascar. © Lynda Lawson

Women in search of sapphire wealth

A 20-hour bus ride south from Madagascar's capital, Antananarivo, takes you to Ilakaka. In 1998, a sapphire rush of 100 000 people transformed this sparsely populated area into the sapphire trading hub it is today. At first sight, it seems like a masculine frontier, but upon closer inspection the women in hats draw your attention. These are traders of small sapphires who work the edges of the main market. These women, who have worked their way up the economic ladder so that they can now afford hats, are a stark visual representation of the economic prosperity and hope that fuels the sapphire trade in the area. As they say in Ilakaka, 'dreams are free'.

It is here where Tantley and Jeane trade in rough stones, buying small stones from women miners and selling them to Sri Lankan and African buyers. The two are close partners, working and attending church together, supporting their children and other family members, who sell coffee by the side of the road. The two have been trading sapphires for 18 years and, since their miner husbands left them for younger women, have been left to fend for their families on their own.

Originally from farming communities in southern Madagascar, Tantley and Jeane learned about sapphires when they were young girls searching for stones. Two drops in a much bigger flood washing over the country in search of sapphire wealth. As droughts became more frequent, they found they could make money more easily in sapphires than farming. After the theft of their cattle, they moved to Ilakaka, where they have made their home. When there is money to be made, they work individually but when the market is less buoyant, they work as a group of up to 10 women. 'We divide the profits among the group. If we don't have enough money to buy, we share.'

The women have found relative success, a reflection of the hope the sapphire trade brings to a country with few other options. They are now building a house on a piece of land they bought and have gained a certain level of economic independence. However, the coloured gemstone trade continues to be deeply controlled by gender norms and traditions, restricting their hopes for further economic gain. They explain that the men are allowed to sell large stones, while women are confined to trading in smaller gems: 'Men sell to men, and women sell to women.'



Sapphire miners return home at the end of a shift. © Roberto Schmidt/AFP via Getty Images

In the sapphire towns of Ilakaka and Sakaraha, Sri Lankan traders dominate the sapphire market through their ownership of mines and other businesses. They have acquired mines and control the industry by working, sometimes fraudulently, with local and traditional authorities. The role of Sri Lankan exporters has been entrenched through networks among the male Muslim community and through carefully cultivated relationships with local authorities. Marriages with local women also provides them with market support and long-term business and value-addition strategies.

Each morning in the sapphire towns, miners gather to sell their stones to foreign buyers. The trading houses, cars, equipment, and access to funds are largely in the hands of foreign buyers and those who support them.¹⁰³

In these rural areas, where the government has failed to enforce the mining code, almost the entire rough-gemstone stone market is controlled by Sri

Lankan, and to a lesser extent Thai and African, traders. Thai traders have played a less dominant role in recent years. Networks of African traders, notably Guineans, still work both in rural areas and in the capital, but in recent times they have been displaced by powerful Sri Lankan operators. This foreign control of the market means that only a handful of local Malagasies are able to access the most valuable stones.¹⁰⁴

A hierarchy of Malagasy middlemen support the oligopoly imposed by the Sri Lankan and Thai traders, who engage in price fixing, spread misinformation about the stones and manipulate the market. Such middlemen buy stones at a Malagasy market (where foreigners are not welcome) and sell them to foreign buyers and exporters.¹⁰⁵

A unique characteristic of the Madagascan sapphire trade is the role of women traders, the 'ladies in hats'¹⁰⁶ – so-called because they have a small amount of disposable income, enabling them to buy a hat

Government policy and institutions for the sector are, at best, inefficient and, at worst, corrupt.

and a bag to carry gems. They buy and sell smaller stones, mostly sapphires, which they buy directly from miners at the mining sites or in town. Some have their own market booths but most move from place to place around the sapphire towns, selling in small groups. Like most of the miners in this area, these women are from the south of Madagascar and they operate in clan groups supporting each other with funds.¹⁰⁷ The ladies in hats are highly entrepreneurial; a number have their own mines and aspire to become independent businesspeople, able to save their stock and make a profit.¹⁰⁸ However, some are controlled by Sri Lankan interests through Malagasy women who have married Sri Lankan men.

Institutional failure

Systems regulating the mining sector continue to stagnate in Madagascar; reforms to the Mining Code and permit arrangements have been on hold since 2009.¹⁰⁹ Although there are laws for obtaining permits and operating mines, they have not been enacted or enforced because of political crises, uncertainty and the lack of even the most basic mining resources, such as vehicles and staff. Mining offices (known as *bureaux d'administration minière*) have been constructed with funds from donors in the mining towns, but to date they are not operational.

To operate in full compliance with the laws is too costly and complex for most miners, and the offices are located too far away for the majority of miners and traders to access. This is also a barrier to access the formal financing necessary to improve and upscale operations. For Malagasy informal traders, women in particular, there is little hope that they will be able to access assistance and finance, even if it were available.

Furthermore, local traders have no recourse to any benchmarking of prices. Unlike gold, which has a standard international spot price, understanding the market price of precious stones requires understanding and experience. The ministry's value schedule, particularly for sapphires, does not provide a realistic appraisal of the stone's worth, and customs administrative staff are not well equipped to do this work.

The failure of the state must in part be attributed to a long history of political instability and crises,¹¹⁰ the most recent being the coup of 2009, which left the country in a political hiatus for four years followed by a series of governments seemingly unable to make decisions to move the industry forward. Although the current government has promised to issue 500 new licences for small-scale mining,¹¹¹ it has also reorganized mining ministry staff, which has created voids in technical expertise and leadership, while there are key roles in the mining regions remaining unfilled. Similarly, the Mining Business Centre, proudly built close to the airport with resource rents, is yet to live up to its potential of a one-stop shop for all those seeking to export stones.

Government policy and institutions for the sector are, at best, inefficient and incongruent, and, at worst, corrupt. This has created institutional voids that have enabled the marketplace to be dominated and controlled by foreign traders. For example, export permits (*laissez passers*) are reported to be sold to traders who have bought illegally mined stones, effectively enabling the laundering of illicit stones and economic elites are alleged to move and launder money abroad through the coloured-gemstone trade.¹¹² If conditions are to improve for miners, then more effective action to curb criminality in supply chains is needed.

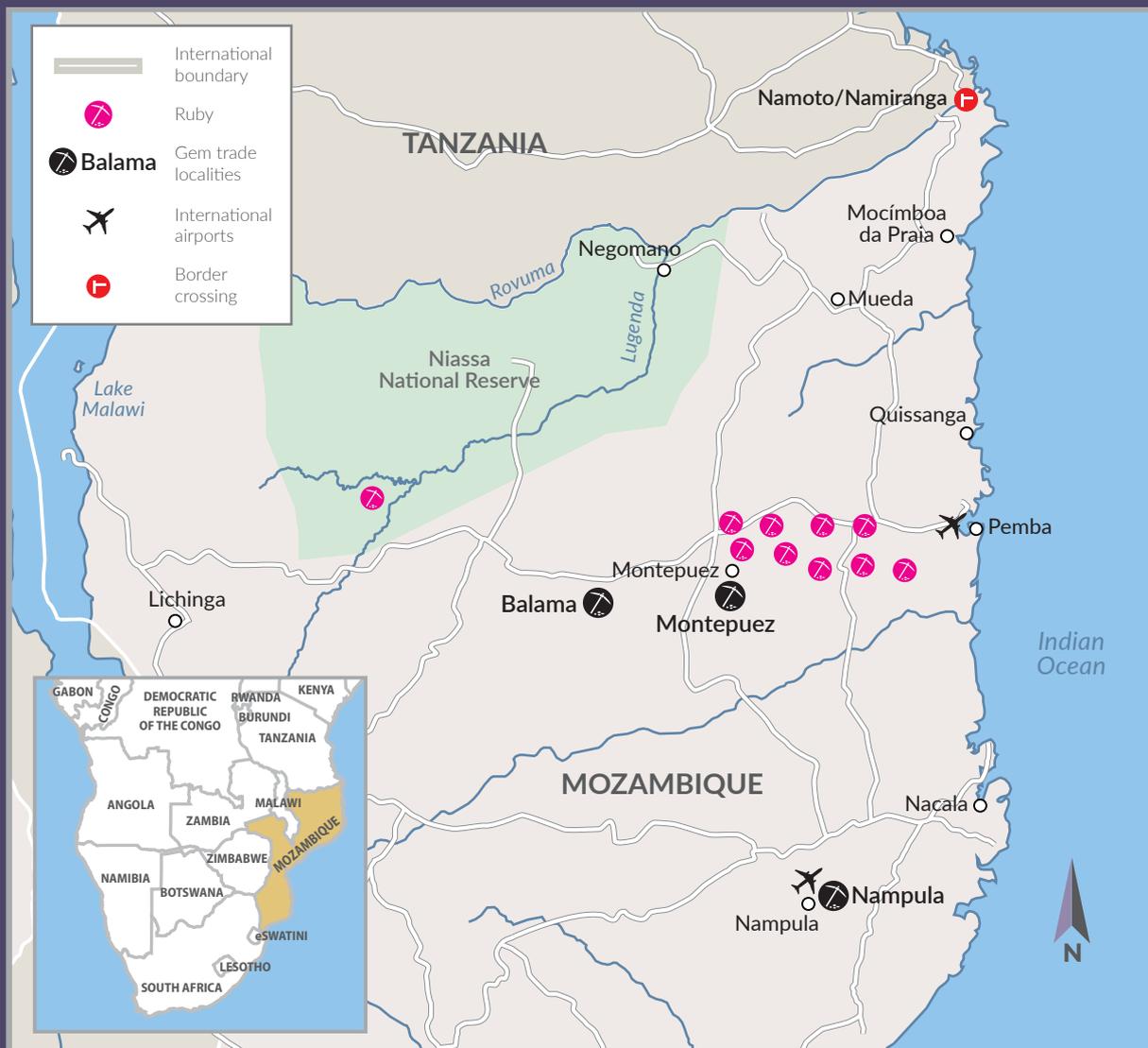


FIGURE 7 Mozambique mining locations and trading hubs

Northern Mozambique

Mozambique, and in particular the north of the country, is a source country for gemstones, including ruby, tourmaline and spinel.¹¹³ Ruby and other gemstone mining has been under way in the Niassa National Reserve since the early 2000s. However, it was the discovery of ruby deposits near Montepuez in 2009 that shot Mozambique to the top global position in ruby production. Today Mozambique accounts for up to 80% of global ruby production.¹¹⁴ Thai gemstone authorities estimate that as much as 70–80% of rubies entering Thailand are from Mozambique.¹¹⁵

With the exception of the presence of the large mining corporate MRM, much of the mining activity in northern Mozambique is on an artisanal and small-scale level. Gemstone smuggling is reportedly flourishing, with most coloured gemstones mined by ASM in Mozambique thought to be smuggled out of the country.¹¹⁶ The Minister of Mineral Resources and Energy, Max Tonela, has said that although there are no exact figures, the consequent cost to the state is 'high' and it is known that smuggling takes place across land borders and through airports.¹¹⁷

Most coloured gemstones mined in Mozambique are thought to be smuggled out of the country.

The discovery of ruby deposits in 2009 and the relative ease with which they can be extracted (gemstones occur near the surface, making them suitable for ASM), triggered a rush that attracted thousands of unlicensed miners, known as *garimpeiros*. The provincial government of Nampula in northern Mozambique estimates that there are now some 6 000 illegal artisanal mining operations in the area.¹¹⁸ Before 2016, the *garimpeiros* were, legally speaking, 'informal' small-scale miners. But in 2016, that changed when mining for gemstones without a licence became a crime punishable by three years in jail.¹¹⁹ Now, to evade the authorities, miners have retreated deeper into the forest, hours on foot from the nearest road. When a sizeable stone is unearthed, it is rushed to the nearest village market.¹²⁰

Foreign ruby traders hire or fund poorer rural Mozambicans, typically young men and sometimes boys, to mine gemstones on their behalf. In some cases, traders have established alliances through marital ties or become benefactors and operators in local communities by building mosques and establishing general-dealer stores with their profits.¹²¹

Once found, stones are mainly bought by traders in Montepuez and Nampula. Balama has also recently developed as a small market for gemstones and alluvial gold.¹²² From northern Mozambique, the stones are smuggled out of the country, most making their way to Bangkok.¹²³ They are thought to be smuggled out of Mozambique through one of the northern airports or over the border to Tanzania (Dar es Salaam is a major East African gemstone trading hub). There are reports of lax scanning procedures and hence opportunity for corruption at Mozambican airports. A June 2018 investigation by the GI-TOC also found that mineral resources were being smuggled from strategic places along the Cabo Delgado coast, including Mocimboa da Praia and other local harbours, with traders using the same route across the Tanzanian border that are used for drug, wildlife and timber trafficking.¹²⁴ There is also potential for coloured gemstone rough being sent by mail, a tactic that has also been used to ship illegal wildlife products.

Gemstone dealers

It is reported that ruby traders operate in the open and are well known to police.¹²⁵ Prior to 2017, Thai buyers were the most prominent, based in Montepuez where they would buy gemstones directly from miners. However, over the years a large mix of other nationalities have been identified as buyers, including buyers from Tanzania, Somalia, West Africa and the Great Lakes region, as well as buyers from Sri Lanka and Pakistan. Thai, Pakistani and Burmese people have relocated to these areas and have cornered support-service enterprises selling tools and wheelbarrows, for example, to the miners. The Chinese have also been linked to the ruby trade and are reported to conceal rubies (as well as ivory tusks) within logs of timber.¹²⁶

There was a major disruption in the northern Mozambique gemstone market after February 2017, when the government launched an offensive against illegal mining and trade in gemstones, arresting 3 600 people. Several police operations were launched in Cabo Delgado, and many foreign buyers (mainly Tanzanians, Thais, Sri Lankans and West Africans) were arrested, fined and expelled. Many did not return, creating the opportunity for other actors to fill the space.¹²⁷ As a result of this crack-down, rubies immediately ran into scarce supply in the Thai market.¹²⁸

Today, traders are mainly from Tanzania and Nigeria (potentially all West Africans are referred to in this marketplace as Nigerians), and Pakistani traders are reported to be still active.¹²⁹ Other nationalities reported include Senegalese and Malians.¹³⁰ This also reflects the findings in Bangkok, where the vast majority of African gemstone dealers were from West Africa, specifically Guinea.

While there are various degrees of formality and structure in northern Mozambique's criminal networks, African migrant ruby traders tend to be highly informal and loosely structured.

Gemstone traders control not only the trade in precious stones, but also other informal businesses supplying basic necessities, construction, fuel and car parts.¹³¹ The profits from these various enterprises appear to be primarily invested in shops selling a variety of goods, such as car parts, food and clothing. Some traders have invested in private and commercial property (small houses or shops) in order to launder their money.¹³² This foreign ownership of the local economy also fuels grievances.

Gemstone miners and traders are targeted by the police and customs officials, while at the same time, allegedly, have corrupt working relationships with them. For example, 2018 investigations by the GI-TOC found that, reportedly, the Mozambican police officers extract bribes from the local community by charging them a tax to enter the ruby fields.¹³³ There are also accusations that the police apprehend illegal miners and free them in return for a payment.¹³⁴ The police deny accusations of such collusion.¹³⁵

Gemstones are but one of a number of illicit markets operating in northern Mozambique. For example, some of the alluvial gemstone mines in Niassa National Reserve have been associated with ivory poaching and trafficking, albeit on a small scale. The miners around Montepuez also seem to be significant consumers of heroin, resulting in a flow of low-grade cheap heroin from southern Tanzania over

Ahlu Sunnah wa Jama

A militant group known locally as Ahlu Sunnah wa Jama is linked to the illicit economy in the region. As of 2018, the group did not control any major contraband trade, with the illicit economy as a whole providing varied opportunities.¹⁴⁵ However, there is evidence there may be growing links between the group and the local ruby sector. There have been reports that some of the insurgents have filled the vacuum left by the deported traders following the 2017 crackdown and are buying rough rubies locally, which they sell on to traders who then sell them internationally, particularly those with links to Pakistan and Thailand, which is the central ruby marketing hub.

In 2018, after a security operation by the state against African migrants accused of committing petty crimes, the class of migrant shop owners around the ruby fields of Montepuez and Muede who had been involved in the ruby trade sold their assets and moved on. The GI-TOC received reports that these traders were prolific mosque builders – it is not clear whether they were simply devout Muslim immigrants and traders, or whether they were in fact linked to Ahlu Sunnah wa Jama. Since around 2011 or 2012, the sect has been recruiting youths in the Montepuez area, where there is a mosque and madrassa.¹⁴⁶ Locals in the region have suggested that the profits from the sale of the assets might have gone to funding Ahlu Sunnah wa Jama.¹⁴⁷



Vested interests: Montepuez Ruby Mining, the Mozambican operation of mining giant Gemfields, won concessions in 2011. A shareholding company of MRM is owned by a senior Mozambican general and politician.

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the border by road to Montepuez. However, the networks are largely distinct and there does not appear to be much overlap between illegal activity in the coloured gemstone sector.¹³⁶

Large-scale mining

MRM is the Mozambican operation of Gemfields, which won mining concession rights in 2011.¹³⁷ Gemfields' auctions of MRM rubies since June 2014 have generated US\$462.60 million in aggregate revenues.¹³⁸ MRM is co-owned by Gemfields (75%) and local company Mwiriti (25%).¹³⁹ Mwiriti is owned by General Raimundo Pachinuapa, a senior figure in the Mozambique's party, FRELIMO.¹⁴⁰ The direct financial partnership with a senior government official has contributed to perceptions that the distribution of ruby resources has been corrupt. This mistrust has been fuelled by the awarding of gemstone mining concessions to other FRELIMO party leaders.¹⁴¹

There is tension and competition over access to ruby resources between MRM and local communities. Locals allege that, in an effort to secure the MRM concession and relocate the community, they have been beaten and murdered, and their crops and homes burnt down by local police and private security forces.¹⁴² In January 2019, Gemfields paid £5.8 million (about US\$7.6 million) to community members residing near MRM in a 'no admission of liability' move that settled a claim of human-rights abuses brought against it by locals.¹⁴³ In February 2020, an MRM mine was overrun by an estimated 800 illegal miners, which led to the death of 11 of the miners when pit walls caved in.¹⁴⁴

Eastern DRC

Rough tourmaline originating in the eastern DRC is traded often in large units of several kilograms by African traders in Thailand. During the research, it was evident that green, pink and dual-coloured tourmaline stones were widely on offer in Bangkok and Chanthaburi. A significant portion of buyers reported sourcing the rough tourmaline stones from the DRC via Rwanda (in addition to spinel, another gemstone). Traders in Bangkok described how stones mined in the DRC can be purchased in Rwanda; a typical trade route is reportedly from Goma to Rwanda, then to Bangkok and Hong Kong.¹⁴⁸

North and South Kivu, in the eastern DRC, have long been a known source of quality tourmaline.¹⁴⁹ It is also found further south in the Katanga province.¹⁵⁰ The DRC tourmaline sector has experienced notable growth, a reflection of the rising global popularity of tourmaline since 2012.¹⁵¹

Although there is clear evidence of coloured gemstones from the DRC for sale in Thailand, and the eastern DRC is a known source of coloured gemstones, in particular tourmaline, very little research has been carried out on the supply chains linking the

mines to international markets. One of the few studies available is a 2015 investigation by the Belgian-based non-governmental organization International Peace Information Service (IPIS).¹⁵²

IPIS reports that from mine sites in North and South Kivu, coloured gemstones largely flow to Goma, on the border with Rwanda. For example, the town of Numbi has developed into a notable market for the trade in tourmaline, as well as other coloured gemstones.¹⁵³ More recently, a 2019 Al Jazeera investigation reported that Numbi's local economy still relies on the trade in tourmaline and that tourmaline is often overlooked by initiatives that aim to prevent the import of resources linked to conflict.¹⁵⁴ According to the IPIS team, pricing of tourmaline was a highly subjective affair – depending on the opinion of the buyer, with certain buyers (usually those also active abroad) having a greater knowledge of pricing than others.¹⁵⁵

The overwhelming proportion of gemstones leave the DRC illegally, mostly for sale in Rwanda. Reflecting the dominance of West African gem traders in Thailand, the IPIS team were told that West African traders from countries such as Senegal, Nigeria and Burkina

Good-quality tourmaline sourced in the DRC is highly sought after by mineral traffickers.

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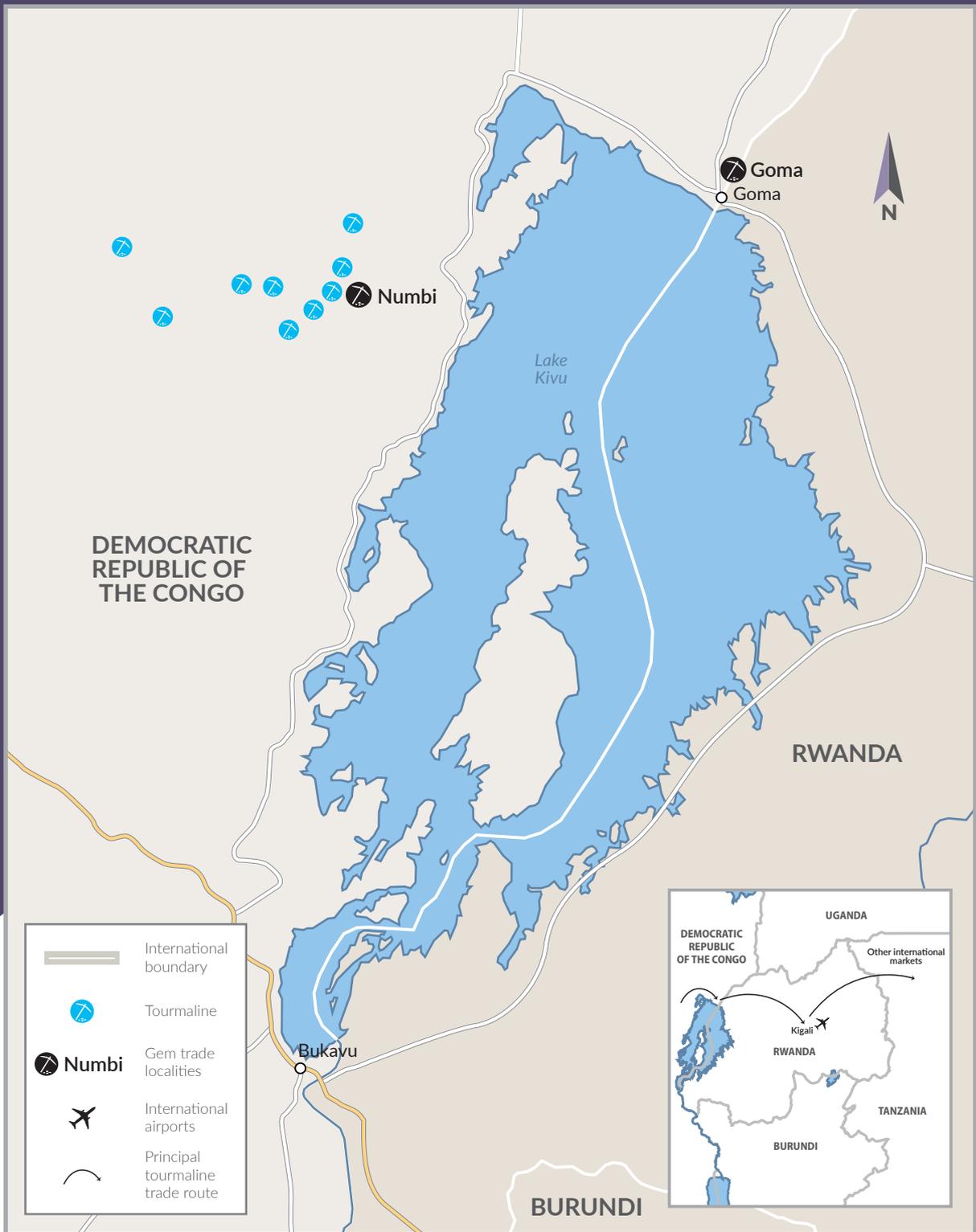
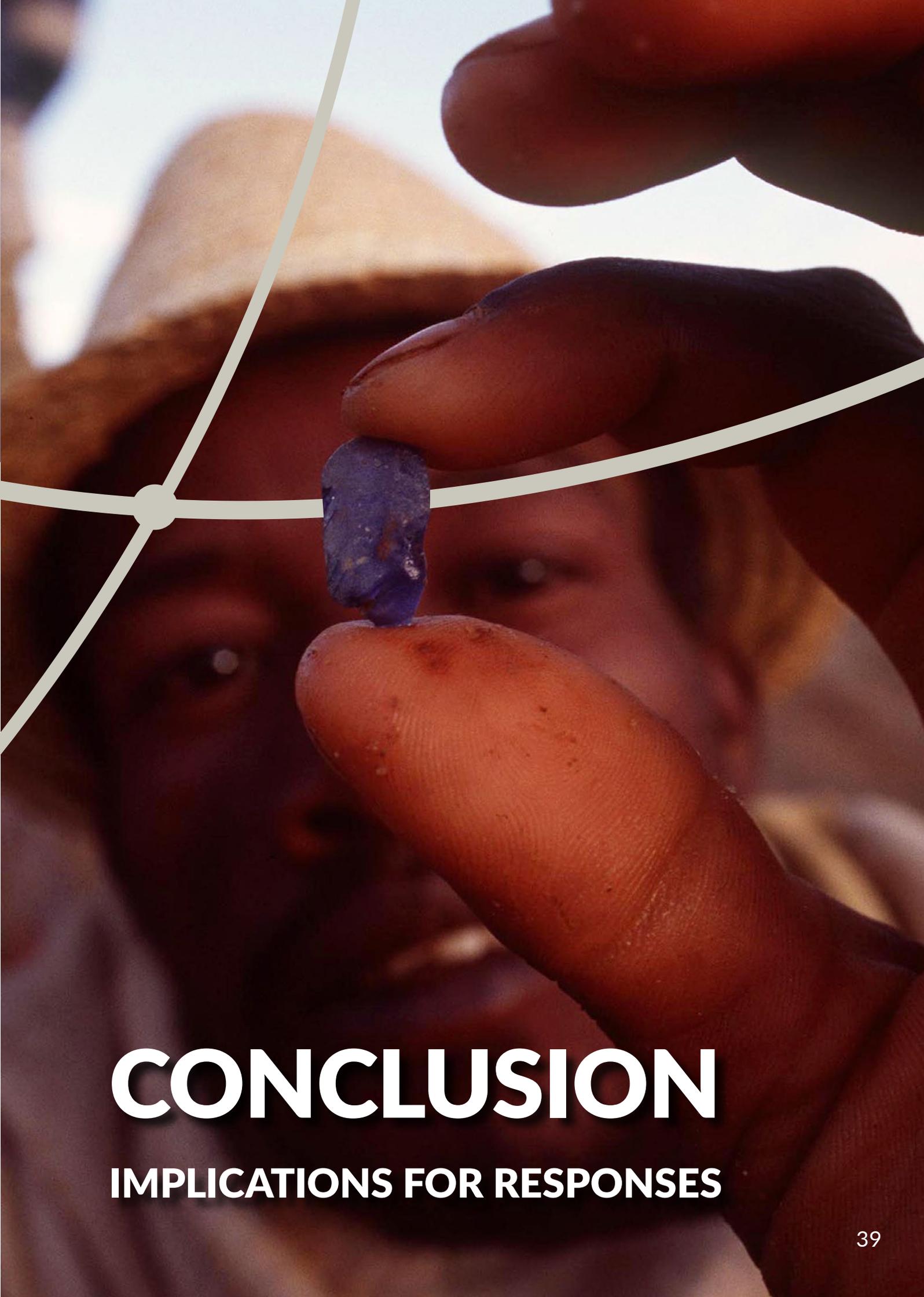


FIGURE 8 Principal tourmaline production sites in the Kivu provinces, DRC

Faso had a particularly dominant presence on the Rwandan gemstone market.¹⁵⁶ However, in Bangkok it was Guineans who reported to be sourcing the stones from Rwanda. It is possible that these West Africans from various countries are linked by ethnic

or tribal affiliations, for example belonging to the Malinke group, as discussed earlier. However, further research is needed to map out the supply chains, actors and networks who link the eastern DRC and Rwanda to the Thai gemstone market.



CONCLUSION

IMPLICATIONS FOR RESPONSES



The coloured-gemstone sector is an international trade, linking Africa and Thailand, and with a market value in the billions of dollars. However, due to the clandestine nature of flows, both informal and illegal, official trade figures fail to reflect the scale of the trade and there remain significant knowledge gaps around the actors and networks involved, and the modus operandi used to export coloured gemstones to the international marketplaces. In turn, traceability of the source of gemstones and the ability to support sustainable development in the gemstone sector in Africa are major challenges facing the industry, governments and development actors.

The informal nature of the coloured-gemstone trade and the difficulties inherent in valuing rough stones at their source provide ample opportunity for criminal and corrupt actors to exploit and profit from the trade. Criminal actors and networks have proven to be universal spoilers to efforts to improve development outcomes in the Africa ASM sector, which encompasses a wide range of mineral resources and stones.¹⁵⁷

Nuance is essential in understanding and framing the role and impact of coloured gemstone supply chains. Informed, coherent understandings of criminality, cultural contexts and the coloured-gemstone business are necessary in order to achieve an effective balance between, on the one hand, combating criminal activity and on the other maximising development returns.¹⁵⁸ This requires applying lessons learnt to better understand how and why criminal actors have undermined a wide range of policy approaches and programmatic interventions, as well as identifying which groups of intermediaries may be more open to becoming agents of change. As such, the following recommendations are made.

- ◀ Informal trade: knowledge gaps around sources and flows of coloured gemstones make it difficult to frame appropriate responses and maximize development returns.

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1. MORE WIDE-REACHING AND IN-DEPTH RESEARCH IS NEEDED TO UNDERSTAND AND MAP CRIMINAL ACTORS, SUPPLY CHAINS, NETWORKS AND MODUS OPERANDI IN THE GLOBAL COLOURED-GEMSTONE SECTOR.

Although significant research has been conducted on criminal actors, activity and networks in other mineral sectors, especially diamonds and gold, there is a dearth of research in the coloured-gemstone sector. Due to the clandestine nature of flows, both informal and illegal, official trade figures fail to reflect the scale of the trade, and there remain significant knowledge gaps around the actors and networks involved and the modus operandi used to move coloured gemstones.

An important component of any research will be to seek to understand the political economy of this sector. Any intervention or policy discussion calls for

supply chain, financial flows and political-economy analyses, examining how ASM networks are economically and socially rooted in communities and local power structures. This includes gender dynamics. Analyses ought to also map out criminal networks and the motivations and relative power of influential actors (in the form of a market and structure analysis).¹⁵⁹ Analysis also ought to assess the impact that interventions, including development assistance, will have on incentives and vested interests, which is not always obvious when dealing with complex issues, networks and supply chains.¹⁶⁰

2. INCREASE ENGAGEMENT WITH AFRICAN TRADERS IN EFFORTS TO IMPROVE SOURCING AND DUE DILIGENCE PRACTICES

There have been calls for more stringent reporting practices to help ensure that coloured gemstones entering formal supply chains are sourced in a responsible manner. The private sector in particular has an interest in protecting against reputation damage and unwittingly enabling criminal activity, conflict financing or human-rights abuses. However, improving traceability and due diligence inevitably increases compliance costs and barriers to entry for miners. The increased costs and barriers to entry can have unforeseen, undesirable consequences. For example, efforts to secure supply chains can have a disparate impact on women because of the structural disadvantage they face.¹⁶¹ Also, if requirements to participate are too onerous, then the most vulnerable will be unable to participate in mining, pushing them to engage with the informal sector and criminal actors.¹⁶²

In parallel, the African trading community in Thailand has been sidelined in this market. They

are afforded minimal engagement in official events (such as trade fairs) and value-addition activities (such as the cutting and polishing of stones). This is a missed opportunity for the international market to engage with a critical group of stakeholders in transnational coloured-gemstone networks.

Consequently, interventions ought to also seek out strategies to engage with and leverage established informal networks, even if they require working with less-than-ideal partners. In particular, the influential role of intermediaries and traditional authorities needs to be recognized, and these stakeholder groups need to be included in dialogues. Rather than seeking to shorten supply chains, stakeholders could seek out ways to formalize the role of intermediaries as service providers. African traders could also prove to be valuable partners in delivering messages around health and environment issues, which may not be as well received directly from government agents.¹⁶³

3. PROMOTE REGULATORY COOPERATION AT REGIONAL AND GLOBAL LEVELS

There are evident direct links between African source countries and the Thai coloured-gemstone market, a gateway to the global jewellery sector. However, official cooperation between African and

Thai actors has been minimal. In particular, there does not appear to be any coordination around regulation or the tracking of trade flows. Given the transnational nature of flows of gemstones

to the markets, international cooperation will be necessary to more effectively monitor and regulate coloured-gemstone flows.

It is important to note that this ought to be done in a way that does not divert trade flows away from Thailand, which would be problematic to navigate. Like other illicit flows, if pressure is put on one point of the supply chain, criminal networks will adapt and shift. In the case of coloured gemstones, this is likely to be a shift away from Thailand to another traditional, or rising, global coloured-gemstone hub.

4. ADOPT A DEVELOPMENT PERSPECTIVE, EMPHASIZING THE 'DO NO HARM' PRINCIPLE IN PROGRAMMING AND INTERVENTIONS AIMED AT THE COLOURED-GEMSTONE SECTOR.

Caution should be taken not to demonize this sector, as it is a critical livelihood option for many African communities that have few other options. Responses ought therefore to adopt a development perspective and adhere to the do no harm principle. Strategies that apply heavy-handed, punitive measures to marginalized groups are likely to be counterproductive and will only increase criminal groups' social collateral. As such, an appropriate response may not be to attempt to tackle or deconstruct the prevailing illicit trade or economy but rather to enable slow, iterative and progressive change – including, for example, through the integration of this trade into the formal economy, and the development of strategies to rebuild the legitimacy of the state in relation to the host community.¹⁶⁴

5. SUPPORT INVESTMENT AND RESEARCH INTO NEW TECHNOLOGIES IN THE COLOURED-GEMSTONE SECTOR, INCLUDING A FOCUS ON THE INVESTMENT AND TRAINING REQUIRED IN LOCAL SOURCE COMMUNITIES FOR THEM TO BE EFFECTIVE, AND ON COMMUNITY INCLUSION AND DEVELOPMENT OUTCOMES.

As industry demands to know more about the provenance of gemstones, technological solutions and management models could contribute to these needs, as well as local development. Although it is not possible to trace a coloured stone back to a specific mine, origin determination can help validate claims made by companies regarding country of origin. Blockchain, a digital ledger that traces chain of custody, is one such prospect. Data is added to the blockchain at each transaction creating an immutable record that can trace a gem's journey from mine to market.¹⁶⁵ For example, in 2020

Not only is this sector an important component of the Thai economy, employing millions of workers, but Thailand also has arguably more responsible labour, employment and trade practices than some of the other countries where flows would most likely be diverted to.

As such, regulatory cooperation may entail efforts to invest in formalization efforts, both in Africa and in Thailand, offering stronger incentives to engage in the formal sector.

Importantly, disengaging with the coloured-gemstone ASM sector is not a solution. If buyers turn away from the ASM sector, it will not only impede engagement, but will also leave the sector vulnerable to illicit exploitation, aggravating the potential for, and severity of, harms. Non-engagement and de-risking practices by private-sector actors are not neutral positions, but render the sector more vulnerable to environmental, social and governance harms. As such, it is critical to continue to engage with and source coloured gemstones from the ASM sector in order to create the conditions and foundations necessary to establish responsible supply chains, and improve development outcomes in source countries.

Gubelin's adaptation of their Provenance Proof (a form of blockchain) showed some promise for benefiting rural women miners in Madagascar.¹⁶⁶ However, to make full use of such technology, significant investment in local technology and training in Africa will be needed. Currently, the majority of miners do not have access to the computers and cameras required to properly make use of such technology and, until that changes, will remain excluded from the supply chains that require proof of provenance.

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