

CONFLICT RUBIES

How Luxury Jewellers Risk Funding
Military Abuses in Myanmar

December 2021



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This report contains some quotations from press articles, documents and sources that have been translated into English from Burmese. These are clearly indicated in the references.

Abbreviations

CGWG	Coloured Gemstones Working Group	NDAA	National Democratic Alliance Army
DICA	Directorate of Investment and Company Administration	NLD	National League for Democracy
JV	joint venture	NUG	National Unity Government
KIA	Kachin Independence Army	OECD	Organisation for Economic Co-operation and Development
MEC	Myanmar Economic Corporation	PNO	Pa-O National Organisation
MEHL	Myanmar Economic Holdings Limited	RJC	Responsible Jewellery Council
MEITI	Myanmar Extractive Industries Transparency Initiative	SAC	State Administration Council
MGE	Myanma Gems Enterprise	SSA-N	Shan State Army–North
MGJEA	Myanmar Gems and Jewellery Entrepreneurs Association	SSA-S	Shan State Army–South
MNDAA	Myanmar National Democratic Alliance Army	TNLA	Ta'ang National Liberation Army
		UWSA	United Wa State Army



Groups of artisanal ruby miners work in Mogok in March 2020. *MO*



BANGLADESH

INDIA

CHINA

Sagaing

Kachin

Namya

Myitkyina

Hakha

MYANMAR

Lashio

Chin

Mogok

Sagaing

Mandalay

Mong Hsu

Mandalay

Shan

Taunggyi

LAOS

Sittwe

Rakhine

Magway

Nay Pyi Taw



Kayah

THAILAND

Bago

Mon

Kayin

Ayeyarwady

Yangon

 Capital City

 Gemstone Mining Areas

Tanintharyi

EXECUTIVE SUMMARY

Rubies from Myanmar, also known as Burmese rubies, are the finest in the world.¹ They are also an important source of funding for one of the world's most brutal regimes. Since seizing power in a coup on 1 February 2021 and imprisoning the country's elected leaders, Myanmar's military and its police have killed more than 1,300 civilians, including 75 children. They have fired indiscriminately into residential neighbourhoods, arrested thousands of people on spurious charges and systematically tortured prisoners in detention.²

As millions of brave people across Myanmar risk their lives to oppose the coup,³ and as Western countries impose economic sanctions aimed at cutting the regime off from key revenue sources,⁴ the country's natural resource wealth is proving to be a lifeline for the generals⁵ – and not for the first time. For decades the military has consolidated its rule by looting the country's valuable natural resources. This has enabled

it to procure weapons, support its troops, reward the loyalty of senior military officers, buy off and sow division among its enemies, and kill and torture innocent civilians with impunity.⁶

One of the most important sources of revenue both for the military and its corrupt generals, is the country's lucrative jade and gemstone sector. Since 2015, Global Witness has documented the links between jade mining, armed conflict and continued military control, even during the decade of liberalisation that preceded the 2021 coup. Our previous reports have exposed the rogue actors at the heart of one of Myanmar's most valuable sectors.⁷

What is less well known is how the military and other armed actors profit from gemstones, including rubies, sapphires and other coloured stones. This report reveals for the first time in detail how Myanmar's gemstone industry is just as problematic as the jade sector. It is



Protesters wave the flag of Aung San Suu Kyi's National League for Democracy party on Sule Pagoda Road in downtown Yangon on 22 February, 2021, three weeks after the military coup. *Hkun Lat/Getty Images*

based on more than 150 interviews with public officials, community members and industry representatives and analysis of data including Myanmar Extractive Industries Transparency Initiative reporting, corporate records, maps, trade data and hundreds of other public sources in English and Burmese.

For too long, many international jewellers, auction houses and mass-market retailers have hidden behind the myth that the issues plaguing Myanmar's jade industry do not apply to rubies and other gemstones.⁸ The reality is that just like the jade industry, Myanmar's gemstone trade is a racket, controlled by its military and powerful abusive armed groups.

For three decades, Myanmar's military has consolidated control over the country's gemstone mines. It has granted mining rights to its own conglomerates, which then use the revenue from mines to fund units that commit atrocities. It has used the country's gemstone wealth to buy off armed opposition, granting lucrative licences to ethnic armed groups. And now, its illegal takeover of state functions earlier this year has placed regulatory control over the industry back in its own hands.

Our analysis indicates that Myanmar's gemstone industry was worth on average from US\$346 million to US\$415 million a year from 2014 to 2017 at full production, before licences began to expire, based on official production volume data. But integrating what we know about the scope of smuggling and the illicit trade, we found the sector could have been worth an average of US\$1.73 billion to US\$2.07 billion annually over these four years (see analysis on p. 30). That means that if the military starts issuing gemstone mining licences again, a billion-dollar industry could be in its hands, which could be used to fund further atrocities and sustain its illegal power grab.

For now, all gemstone mining in Myanmar is illegal, meaning there should be no gemstone mining activity taking place in the country at all. In 2016 State Counsellor Aung San Suu Kyi's National League for Democracy government suspended the renewal and granting of new licences, with the last existing licence expiring in 2020, a year before the coup.⁹ The junta has not publicly issued any new licences; earlier this year in July, Myanmar's National Unity Government, a government-in-exile formed of elected lawmakers and other resistance leaders, said that it would consider any licences issued by the military to be illegal and would blacklist companies obtaining them.¹⁰

Nevertheless, since the coup there has been a boom in informal gemstone mining. In Mogok Township in Mandalay Region, where an estimated 90% of the country's



A protestor holds a poster with an image of detained civilian leader Aung San Suu Kyi during a candlelight vigil to honour those who have died during demonstrations against the military coup in Yangon on 13 March, 2021. STR/AFP via Getty Images

gemstone extraction takes place,¹¹ Myanmar's military is systematically collecting bribes from tens of thousands of local residents who are mining by hand in sites that were previously licensed to the industry's heavyweights, including military conglomerate Myanmar Economic Holdings Limited (MEHL) and its subsidiaries. MEHL, which has been placed under sanctions by the US, the EU and the UK,¹² is controlled by Senior General Min Aung Hlaing,¹³ the architect of the illegal power grab earlier this year, who faces allegations of crimes against humanity including genocide against the people of Myanmar.¹⁴

This informal mining is taking place against a backdrop of extreme instability. Since the coup, in Mogok, soldiers have opened fire on civilians who were peacefully demonstrating against the coup and has detained others,¹⁵ and there have been multiple armed clashes in the township between Myanmar's military and ethnic armed groups.¹⁶ Around Mong Hsu, a smaller mining area in Shan State, which has also seen an informal mining boom, civilians have been displaced by clashes between two ethnic Shan armed groups.¹⁷

Meanwhile, in Bangkok, Hong Kong, New York and London, the multi-billion-dollar gemstone industry continues to thrive. Jewellers, auction houses and mass-market retailers continue to buy and market rubies and other precious stones from Myanmar. While Mozambique has

emerged as a rival source of rubies,¹⁸ our analysis shows Myanmar remains one of the world's two largest suppliers. It is also the source of the world's most valuable stones, which hold multiple world records at auction.¹⁹

Companies worldwide are hiding behind the complexity of gemstone supply chains, which obscures the origins of stones sold on the global market. Gemstones that fund abuses in Myanmar are smuggled to Thailand for processing, in a murky process that involves payments to armed actors. Global Witness found that by the time rubies and other precious stones, particularly lower-quality stones, reach Thailand, most dealers have no idea which mine they came from. This is inconsistent with due diligence expectations set by international supply chain standards applicable to gemstones.

Only one of the dealers we met in Thailand, Fai Dee Gems Co., Ltd., identified a specific mine in Myanmar from which it had sourced a particular gemstone – but it still could not tell us what year the stone was mined. We found that for at least 20 years, this mine was licensed to military conglomerate MEHL.

Processed in Thailand, gemstones from Myanmar are sold to international jewellers and ultimately to customers who have no way of knowing whether they are funding atrocities. For example, Fai Dee Gems told Global Witness it supplies rubies to American luxury jeweller Harry Winston, British multinational jewellery company Graff and high-end auctions houses Sotheby's and Christie's. In a welcome move, Harry Winston announced on 9 December that it would no longer source gemstones that have a Burmese origin from its suppliers.

We contacted more than 30 international jewellers, auction houses and mass-market retailers that sell gemstones, based in the US, Europe and Asia. We found that most of them did not have adequate due diligence measures (as long established by the OECD and the United Nations) in place to ensure that their supply chains were not funding abuses. As a result, these companies may have been funding Myanmar's military, one of the world's most brutal regimes, helping to sustain its abusive power over the people of Myanmar.

Only four companies, Tiffany & Co., Signet Jewellers, Boodles and Harry Winston, declare publicly that they



A view at sunset over the gemstone mines in Mong Hsu in Myanmar's Shan State in 2018. *Suthep Kritsanavarin*

have stopped sourcing gemstones from Myanmar (“due to concerns about ongoing human rights violations and a lack of transparency”²⁰ in the words of Tiffany), while Cartier and Gübelin also told Global Witness they had done the same.²¹ The fact that these companies have excluded gemstones originating in Myanmar from their supply chains shows that it is possible for others to follow suit.

As the US, the EU and other jurisdictions impose sanctions on key actors in Myanmar’s gemstone industry,²² in recognition that gemstone revenues disproportionately benefit the military and are likely to fund atrocities and other human rights abuses, all companies dealing in gemstones must urgently review their supply chains, to ensure that they are not funding conflict, corruption, or state oppression in Myanmar.



A sign reading “Welcome to Ruby Land” is displayed beside a road leading to Mogok in Mandalay Region. *Thierry Falise/LightRocket via Getty Images*

KEY FACTS ABOUT MYANMAR’S GEMSTONE INDUSTRY



An estimated 90% of the world’s supply of rubies came from Myanmar until 2009 when Mozambique emerged as a rival supplier.²³

Most gemstones mined in Myanmar come from one of two places:

- 1 Mogok in Mandalay Region**, where gemstones have been mined for over 800 years²⁴ and which accounts for an estimated **90% of Myanmar’s reported production.**²⁵
- 2 Mong Hsu in Shan State**, where a smaller deposit of lower quality rubies was discovered in the 1990s.²⁶

Myanmar also has several smaller gemstone mining areas, including Namya in Kachin State.²⁷



The most valuable gemstones in the world come from Myanmar,²⁸ including the current world record holder, an untreated ruby from Mogok, which sold in 2015 for over **\$30 million at a Sotheby’s auction – or more than \$1 million per carat.**²⁹

Myanmar’s gemstone industry at full production was worth an average of US\$346 million to US\$415 million a year based on official data, **but could have been worth five times more** (see analysis on p.53)

MYANMAR RUBIES SUPPLY CHAIN

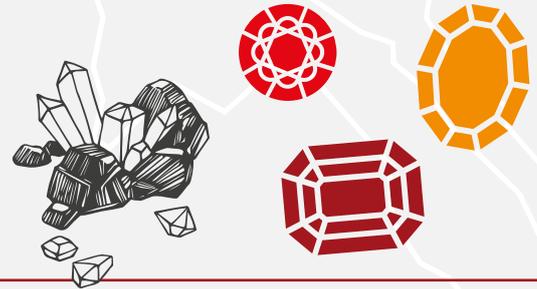
1 Rubies are mined in Myanmar. The mines are controlled by the country's military, which has been accused of crimes against humanity. Armed conflict and widespread human rights abuses are taking place in and around the mining sites.



2 The rubies travel overland to Myanmar's airports or its land borders, through multiple areas of armed conflict, where traders and smugglers pay bribes to different armed groups.



3 Rubies are cut and polished by middlemen in neighbouring countries, mostly Thailand. By now, the origin of the gems has already been obscured: most wholesale dealers in Thailand cannot say which mine in Myanmar their rubies came from.



Sotheby's
BVLGARI
CHRISTIE'S


Van Cleef & Arpels
GRAFF
Walmart

4 Rubies from Myanmar are turned into jewellery to be sold by well known international jewellers, mass market retailers and auction houses.

5 Conflict rubies from Myanmar are bought as symbols of love by consumers around the world, particularly in key markets including the US, Europe, China and India.



1. HOW MEN WITH GUNS HAVE COME TO CONTROL MYANMAR'S GEMSTONE SECTOR

1.1 Six decades of military control

For the six decades since it first seized power in 1962, and in particular since its 1988 coup, Myanmar's military – known as the Tatmadaw – has looted the country's valuable resources, earning money to procure weapons, support its troops, reward the loyalty of senior military officers and buy off ethnic armed groups, all the while killing and torturing with impunity.³⁰

Beginning in the early 1990s, as this report shows, the military consolidated control over the country's gemstone mines, granting mining rights to its own powerful conglomerates Myanmar Economic Corporation (MEC) and Myanmar Economic Holdings Limited (MEHL) which has used its revenue to fund officers and units that commit atrocities. The military has also used lucrative gemstone mining licences to buy off ethnic armed groups that have opposed its rule, and even to incentivise them to transform into military-aligned militias.

The military began partly to relax its political control from 2010, allowing elections which its own political party lost in 2015, but attempts by Aung San Suu Kyi's National League for Democracy (NLD) government to reform the gemstone sector over its five years in office largely failed.³¹ On taking power in 2016, one of the NLD government's first acts was to suspend the renewal of jade and gemstone mining licences and halt the issuance of new ones, pending reforms intended to clean up the industry.³²

But these reforms stalled, for multiple reasons including resistance from within the industry and the institutions responsible for its governance; a lack of prioritisation by the NLD; and the control of the industry by armed groups, including the country's military.³³ The main change that took place in the industry under the NLD was that gemstone mining became illegal, after the final licence issued by the party's predecessor in government, the military-backed Union Solidarity and Development Party, expired in 2020,³⁴ with a few limited exceptions, which have not been publicly disclosed.³⁵

Now, however, the military's seizure of power in February 2021, less than three months after the NLD had won a second term in office, has placed economic and regulatory control of the industry back in its hands. The junta has not publicly issued any new licences,³⁶ and Myanmar's



An artisanal miner in Mogok examines the spinels he's mined during the day, February. *MO*

National Unity Government (NUG), formed of elected lawmakers and other resistance leaders, has said that it would consider any licences issued by the military to be illegal.³⁷ However, this seems unlikely to dissuade the military from taking full advantage of the opportunity to profit from the country's gemstone resources by extorting money from illegal miners and traders, holding emporiums, and by engaging in mining itself through its own network of companies.

1.2 Ethnic armed groups – the military's uneasy partners in crime

Myanmar's military is not the only point of intersection between the country's mineral wealth and human rights abuses. As with the jade industry, the history of investment in Myanmar's gemstone industry is deeply intertwined with the history of so-called "ceasefire capitalism". In 1989, the year after its previous coup, the military began signing ceasefire agreements with armed groups representing various ethnicities who live in the country's borderlands.³⁸

In return for ceasing hostilities after decades of conflict, and in some instances for transforming themselves into military-aligned militias,³⁹ ethnic armed groups were allowed to retain de facto control of large areas of territory bordering China, Thailand and India, and permitted to

pursue investments in industries from logging and mining to the production and sale of narcotics.⁴⁰

Senior members of some of these groups, including the Myanmar National Democratic Alliance Army (MNDAA)⁴¹ and the National Democratic Alliance Army (NDAA),⁴² were among the first to invest in the mines at Mong Hsu in Shan State,⁴³ where gemstones are believed to have been first discovered in the early 1990s.⁴⁴

In the years since, ethnic armed groups have played various roles in the gemstone industry, as detailed below. As well as running companies that operated large mines, they use their control of Myanmar's border regions to extort money from miners and traders and to smuggle rubies and other gemstones from the main mining areas of Mogok in Mandalay Region and Mong Hsu in Shan State into Thailand, where they are cut, polished, heat-treated (in some cases, to improve colour) and sold to jewellery companies around the world.

Among the most important armed groups involved in gemstone mining and smuggling are the following (for more details, see Chapters 2 and 3 and Section 4.2):

- The United Wa State Army (UWSA), which controls a large enclave on the Chinese border⁴⁵ as well as an

area bordering Thailand, and since the 1990s has been one of the military's largest business partners in Mogok and Mong Hsu.⁴⁶

- The Pa-O National Organisation (PNO), which has de facto control over territory in Shan State⁴⁷ and is closely associated with the Ruby Dragon group of companies⁴⁸ (owned by one of its senior officials⁴⁹), which had three joint venture (JVs) with MGE in Mogok,⁵⁰ a mine in Mong Hsu⁵¹ and a factory in the capital Nay Pyi Taw cutting gems from both areas.⁵²
- The Shan State Army–North (SSA–N), which has a base at Wan Hai, 20 miles from Mong Hsu,⁵³ and controls mines in the area,⁵⁴ apparently with the military's acceptance⁵⁵ – despite the group repeatedly clashing with the military (see Chapter 2.2).
- The Shan State Army–South (SSA–S), based in a small enclave on the Thai border, which controls part of the cross-border trade from Mogok and Mong Hsu.⁵⁶
- The Ta'ang National Liberation Army (TNLA), which extorts money from Mogok miners, gemstone company owners and other businesspeople and has kidnapped them for ransom.⁵⁷

Gemstone wealth not only helps to fund these ethnic armed groups but also contributes to rivalry between them – and the military – that periodically breaks out



Soldiers from the SSA-N are pictured patrolling their territory from their base in Wan Hai including their nearby ruby mines in Mong Hsu, in 2018. *Suthep Kritsanavarin*

into violence as groups seek to gain more wealth or the military looks to cut off groups' access to the mines. The highly militarised environment around the gemstone mines also provides an opportunity for lawlessness of other kinds. At the same time the low-level conflicts between the groups and Myanmar's military have provided cover as they collaborate to enrich themselves at the country's expense. Though nominally enemies, many ethnic armed groups have business relationships with the military – not only in gemstone mining but across the economy – which incentivise them to maintain the status quo.

These groups' opportunities to exploit the country's gemstone wealth are greatest during periods of localised truce within a broader context of unrest. This has become even more evident since the military seized power again. While some ethnic armed groups have fought against the military, others have sought to strengthen their own territorial and economic positions.⁵⁸ Several ethnic armed groups in Shan State, including the UWSA, SSA-N and NDAA have failed to take a stand against the coup,⁵⁹ despite the military's widespread abuses against ethnic minorities. The UWSA's foreign relations department told Global Witness that the group will not take sides, because



A SSA-N truck patrols a road built by the Myanmar government in an area under SSA-N control near the ruby mines at Mong Hsu, 2017. *Suthep Kritsanavarin*

“it has been forced to endure the negative results of internal struggle within Myanmar but has never benefited from the positive results of development.”⁶⁰

VIOLENCE IN MYANMAR'S GEMSTONE MINING REGIONS

Number of events of political violence and riots, including battles, explosions/remote violence, strategic developments and violence against civilians in Myanmar's Mogok and Mong Hsu townships.



Source: ACLED

1.3 The 2021 coup has fuelled violence and repression in an existing conflict context, including around gemstone mines

The violence unleashed by Myanmar’s military has been shocking in its brutality. After it seized power on 1 February 2021, detaining the country’s elected civilian leaders and taking control of state functions, millions of people in Myanmar held peaceful demonstrations against the unlawful takeover. The military responded by massacring hundreds of civilians and arresting thousands more on trumped-up political charges, amid widespread and credible reports of torture and sexual abuse.⁶¹ Civilians have fought back, turning to violent methods after months of mainly peaceful resistance, with the NUG declaring a “resistance war” against the junta in September,⁶² and there have been increasing reports of assassinations and bomb attacks targetting junta administrators and suspected informers.⁶³

Mogok has emerged as a regional centre of resistance to military rule, with frequent protests held in the town in the months after the coup.⁶⁴ Initially the demonstrations were peaceful, but by mid-March soldiers had opened fire on civilians and there were multiple credible reports of excessive force being used against demonstrators and security forces illegally detaining protestors, including monks.⁶⁵

In mid-April, clashes were reported in Mogok between the military and the TNLA and its ally the Kachin Independence Army (KIA), both of which have actively resisted the coup.⁶⁶ Local people responded by writing

the words “Welcome KIA” in large letters on the streets alongside other messages reading “We need help!” and “We want democracy”.

On 17 April the day after the message appeared, two protestors were shot dead when soldiers opened fire on a demonstration in support of the NUG.⁶⁷ In a video filmed by a Mogok resident, a soldier is heard saying: “I want them dead. Do you hear me? Five of them.”⁶⁸ Since then, protests and sporadic attacks and clashes have continued, as security forces struggle to regain control of the town.⁶⁹

In Mong Hsu, in the month following the coup there were protests against the military takeover led by students and health workers in support of the civil disobedience movement.⁷⁰

In June, adding to the instability, two Shan ethnic armed groups that are involved in the gemstone industry (see Section 1.2), the SSA-S and the SSA-N, began fighting each other over a territorial dispute in the area around Mong Hsu, with UWSA troops reportedly supporting the SSA-N, although the SSA-N has denied receiving this support.⁷¹ In early July, some 1,000 civilians were displaced after artillery shells were reportedly fired near residential areas in Kyethi Township adjacent to Mong Hsu,⁷² with more residents fleeing their homes in Mong Hsu Township in mid-July after the SSA-N allegedly began forcibly recruiting villagers there.⁷³

As Chapter 2 shows, instability, armed conflict and human rights abuses in Myanmar’s gemstone mining areas are not new. Rather, they have been a part of life in both Mogok and Mong Hsu for decades.



The words “Welcome KIA” written in large letters on the streets of Mogok were visible from the air on 16 April, 2021. *Myitkyina News Journal*

2. CONFLICT AND GEMSTONE MINING: A HISTORY OF EXPROPRIATION AND ABUSE

2.1 Documenting dispossession

As Myanmar's military and ethnic armed groups have consolidated their control over the country's gemstone industry, they have left a trail of destruction that has seen local people dispossessed and abused. This chapter documents the various ways in which military and ethnic armed group capture of Myanmar's gemstone resources has impacted local people in Mong Hsu and Mogok, both prior to and since the 2021 coup.

We interviewed gemstone miners, company bosses, traders and brokers in Mogok and Mong Hsu about the post-coup conditions in the mines. We found that informal activity has exploded since the military's takeover. Because of the coup, the heightened conflict environment, and the expiry of licences, commercial-scale operations have largely stopped. Into this void, tens of thousands of informal miners are now working by hand, searching for rubies and other gems in former commercial concessions.

Some miners told us that there were more opportunities now for local people than before the coup, because for the first time in decades they have access (albeit illegally) to lucrative gemstone tracts that were previously licensed to large companies.⁷⁴ However, these opportunities are contingent upon paying bribes extorted by soldiers and local officials. These payments fund the same military that has shut local people out of the gemstone mining industry for decades.⁷⁵

Moreover, as long as the military remains in de facto control of the mining areas, there are serious concerns that the extortion payments it collects are funding human rights abuses, as its campaign of violence against civilians continues across the country.

Many of the miners we spoke to said they supported international sanctions on companies linked to the military and state regulator Myanma Gems Enterprise (MGE),⁷⁶ which is responsible for making and enforcing the rules that govern the sector, collecting licensing fees and taxing the industry, while also forming JVs with mining companies and marketing gemstones, posing an obvious conflict of interest, if mining starts up again.⁷⁷

2.2 "Everything is broken" – the destruction of Mong Hsu

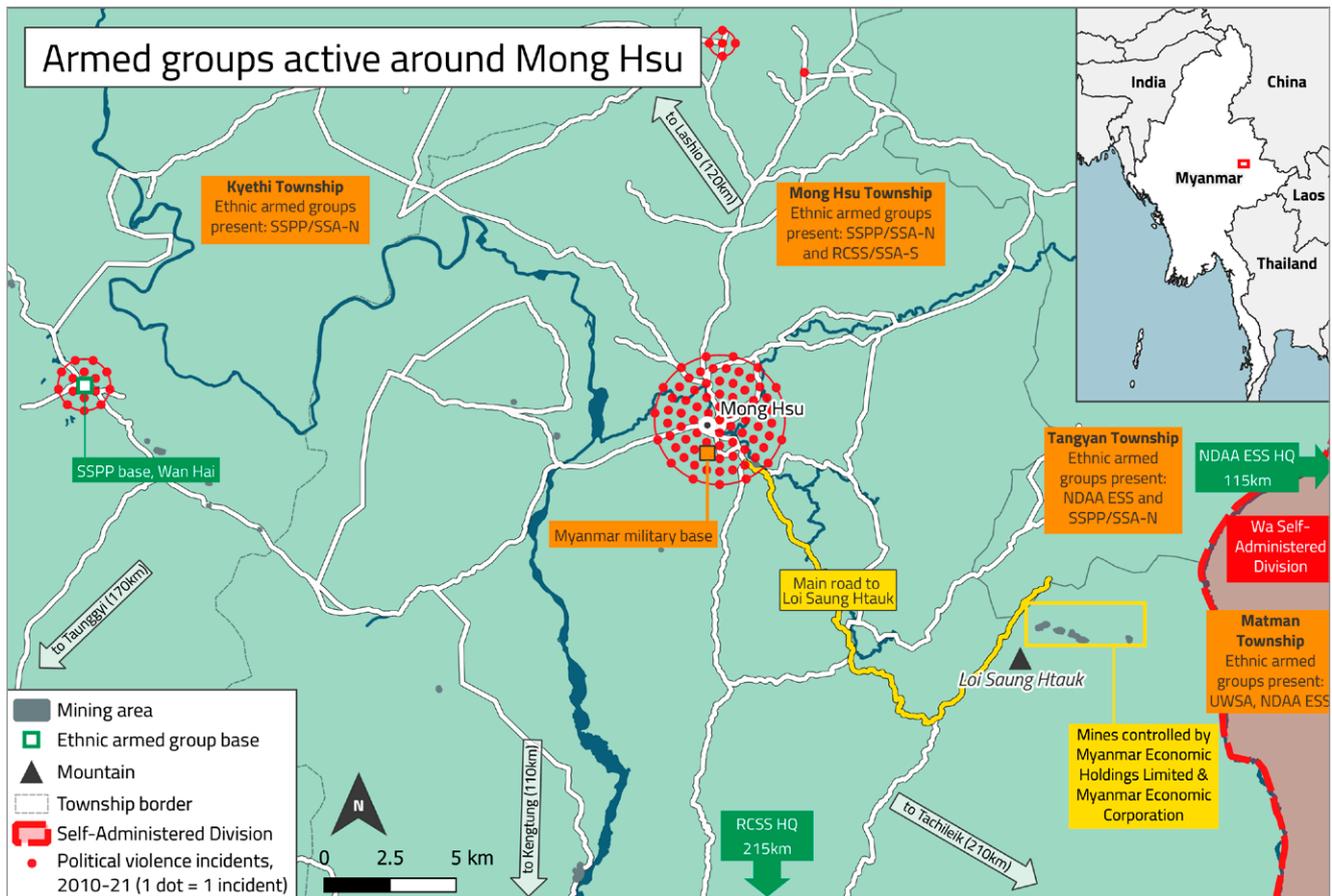
The history of the Mong Hsu mines is a tragic example of the devastating effect that Myanmar's conflict economy has had on local communities in resource-rich areas.

Gems were first discovered in the Mong Hsu area around late 1990 by local Ta'ang and Shan people.⁷⁸ In July 1992, the junta-run Ministry of Mines issued a notification claiming that the government had discovered a new deposit of rubies in Mong Hsu, and prohibited their extraction, cutting or trade without official approval.⁷⁹ By that November, contracts for JV mining in the area were being signed between MGE and private companies.⁸⁰ The government confiscated hundreds of acres of land from local people, including plots that were being excavated by local miners, and gave the best sites to the military's companies.⁸¹

One Mong Hsu resident recalled how, after the junta's intervention in Mong Hsu, "the public had no permission or rights to touch the soil there, ever."⁸² Many of the ethnic Shan residents spoke no Burmese, she said, and could not understand why their land was being taken from them.⁸³



A motorbike driver rides towards Loi Saung Htauk, known locally as Ruby Mountain, where the most valuable ruby mines near Mong Hsu can be found, in 2018. *Suthep Kritsanavarin*



Sources: contains OpenStreetMap data © OpenStreetMap contributors; Myanmar Information Management Unit (MIMU) <http://themimu.info/>; Armed Conflict Location & Event Data Project (ACLED) www.acledata.com, The Asia Foundation www.asiafoundation.org.

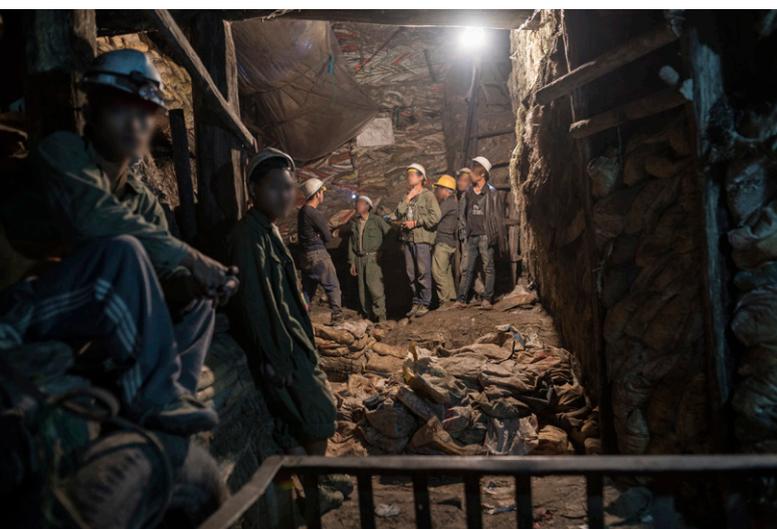
As the junta took control of the mountains to the south-east of the town, where the most valuable rubies could be found, itinerant miners from across Myanmar flocked to Mong Hsu and the villages in the surrounding river valleys, to dig for less valuable alluvial stones.⁸⁴ One resident described an atmosphere of lawlessness: “It was a very mad time, there was fighting, and people were

homeless. Lives were not safe.”⁸⁵ Sex work and illicit drug use increased, as did the prevalence of HIV,⁸⁶ and the environment also suffered, with forests around the town logged to clear plots for excavation.⁸⁷

These problems only intensified, when the army launched a brutal “Four Cuts” campaign in the area, aiming to deprive ethnic armed groups in central Shan State of funding, food, intelligence, and recruits. The campaign saw the forced relocation of hundreds of thousands of people amid widespread atrocities, including rape and other sexual violence.⁸⁸

Intense clashes broke out between the SSA-N and the military in 2010 after the military pressured the group to transform into a Border Guard Force, a militia under its command. Two of its brigades agreed to integrate with the state security forces⁸⁹ but Brigade 1 based near Mong Hsu refused.⁹⁰ Fighting escalated until the end of 2012⁹¹ when the SSA-N signed a ceasefire, which included concessions to explore gemstones in the Mong Hsu area,⁹² after withdrawing its troops from Loi Saung Htauk, the mountain near the town where the most valuable mines are located.⁹³

By 2014, fighting had intensified again, and the military indiscriminately shelled civilian areas, displacing more



Workers wait for a lift to their accommodation after completing their shift at a ruby mine near Mong Hsu controlled by the SSA-N, 2018. *Suthep Kritsanavarin*



An artisanal miner searches for gemstone deposits in a stream on the outskirts of Mong Hsu town, in 2017. *Suthep Kritsanavarin*

than 6,000 people in Mong Hsu Township in late 2015.⁹⁴ Fighting had largely subsided by 2016, enabling the status quo to resume: a business relationship between the SSA-N and the military, interrupted by sporadic clashes when one side overstepped the terms of the truce.⁹⁵

As armed groups divided the spoils of the gemstone trade, the less-valuable alluvial gemstone deposits around Mong Hsu were running out.⁹⁶ The land was also scarred by holes, preventing local people from resuming their agricultural livelihoods.⁹⁷ Since the gemstone rush, there has been no investment in the local economy, residents told Global Witness.

“Companies and the army took a lot, but they never implemented infrastructure, hospitals, healthcare,” a local journalist said.⁹⁸ A member of the Shan Nationalities League for Democracy, Shan State’s largest political party, agreed, saying: “We have our world-famous ruby land. But the roads are the same, old and dusty, and our land, environment, everything is broken.”⁹⁹

Local concerns about the lack of development are reflected in the most recent census data,¹⁰⁰ which showed that in Mong Hsu Township in 2014, only 1% of households had a flushing toilet, and more than 50% were not considered to have safe sanitation, while 74% of households cooked with firewood, and only 3% used electricity for lighting.¹⁰¹

Most residents we spoke to in Mong Hsu knew little about the more lucrative hard-rock mining operations that until the licensing suspension were taking place just 15 miles away. Companies rarely hired local people, they said, instead employing ethnic Burmese from central Myanmar.¹⁰²

“It is like having beehives everywhere but never being able to taste the honey,” one resident explained.

“... People in Mong Hsu get nothing for our land, and our resources are only enriching other people.”¹⁰³

Perhaps because the mines are located further from the town itself, mining operations in Mong Hsu Township were allegedly less impacted by the licensing suspension than mining at Mogok.

“In Mong Hsu, illegal mining is taking place at the expired mines,” a politician and gemstone miner from the town told Global Witness in January 2021, the month before the coup.

“Former company staff are operating the mines and companies collect [money] from the illegal miners. The government is also turning a blind eye.”¹⁰⁴ He added that there were between 70,000 and 80,000 itinerant miners working in the mines during peak season, mostly from Mogok and Taunggyi, the Shan State capital.¹⁰⁵

“It is like having beehives everywhere but never being able to taste the honey ... People in Mong Hsu get nothing for our land, and our resources are only enriching other people.”

Mong Hsu resident

Since the coup: illegal mining continues in Mong Hsu

Since the coup, some companies have suspended their clandestine operations, retaining a small number of staff to keep other miners out,¹⁰⁶ but local people say they are still able to mine in some areas with small machines,¹⁰⁷ including at a mining tract known as Hla Khun.¹⁰⁸

“Hla Khun mining tract is not big but it is a good opportunity for us, because it has been many years since local people were able to mine at a company’s site,” said one miner who works there.¹⁰⁹

Global Witness researchers have been unable to visit Mong Hsu since the coup, and due to security concerns, we were unable to confirm whether Myanmar’s military or ethnic armed groups were currently mining illegally at former company sites, or extorting miners. A former gemstone industry official told us in November 2021 that none of MGE’s staff in Mong Hsu had participated in Myanmar’s civil disobedience movement.¹¹⁰

2.3 Displacement and extortion in Mogok

While there has been more active conflict in Mong Hsu than in Mogok over the past three decades, the history of ceasefire capitalism in the larger gemstone mining town has followed a similar pattern of dispossession and abuse. Interviews with multiple sources revealed that when the junta awarded concessions to ceasefire groups in the 1990s, there was a dramatic transformation in the way that mines were run, which destroyed the livelihoods of many of Mogok’s residents.

Until then, most of the mines in Mogok were run by families who had lived there for generations, even though legally all the country’s gemstone mines were owned by the state.¹¹¹ But in April 1990, the military set up MEHL¹¹² and began taking over lucrative mines in Mogok.¹¹³



A truck filled with rocks rides out of a ruby gallery-mine shaft in Mogok. Thierry Falise/LightRocket via Getty Images

In the decades that followed, MEHL and MEC gradually took control of all the most valuable mining sites, according to two representatives of the country’s industry body, Myanmar Gems and Jewellery Entrepreneurs’ Association (MGJEA).¹¹⁴ One of them told us that the public “hate” MEHL because of this.¹¹⁵

As other outside investors including ethnic armed groups and military-aligned militias moved into Mogok beginning in the 1990s, their mining operations “increasingly displaced local people, whether they were involved in the mining industry or not,” according to EarthRights International and the Karen Environmental and Social Network (KESAN).¹¹⁶ In 2003, the US-based NGO and local civil society group documented the pressures on local people, including bribe-taking by military units; corruption in the permitting process; and outright land seizures, with entire villages forced to move without compensation.¹¹⁷

“Due to these mounting pressures, many people originally from Mogok can no longer mine on an independent basis and they have become daily or monthly workers for businesses run by outside interests,” the report found. Many others chose to leave the town and seek work elsewhere.¹¹⁸

By the time of the licensing suspension in 2016 there were “almost no small mines owned by local people in Mogok”, a local businesswoman told us.¹¹⁹ It was around this time that security in the town deteriorated, and members of the TNLA, the SSA-S and the SSA-N reportedly began to demand extortion payments.¹²⁰ Local people formed an association to protect themselves¹²¹ and towards the end of 2020 there were multiple protests against extortion organised by civil society groups.¹²²

Since the coup: Mogok residents are paying the military for the right to mine

In the months after the coup, Mogok became a centre of resistance to the military takeover.¹²³ The military responded by opening fire on peaceful demonstrators, evicting people from the surrounding villages and detaining members of civil society.¹²⁴ In September 2021 it cut internet access, imposing a blackout.¹²⁵ However, it also found time to oversee a boom in illegal mining in Mogok.¹²⁶ It has blocked off some areas,¹²⁷ and is allowing local people to mine in others, collecting payments in return.¹²⁸

Local businesspeople and miners estimate that tens of thousands of people – and perhaps as many as 70,000 – are mining informally in Mogok,¹²⁹ with one source estimating that since the coup people have travelled there from as far away as Myitkyina, the Kachin State

capital, some 180 miles away.¹³⁰ But as this chapter shows, many of them are making only limited income, while incurring high risks, and the military and police are systematically extorting payments from them in return for the right to mine.

As in Mong Hsu, there had been widespread illegal mining in Mogok since at least 2019,¹³¹ when most of the licences issued by the government expired.¹³² Before the coup, some miners were already paying bribes to mine, including to the police.¹³³ The difference now is that the military exercises de facto control over Mogok.¹³⁴

Soldiers are also said by two sources to have extorted money from the owners of large gemstone mining companies in Mogok. Soon after the coup, soldiers gathered businesspeople together at the local high school and asked for “donations”, according to a company employee whose manager attended the meeting. “Most of them dared not refuse,” she added.¹³⁵ Some large companies have allegedly also started mining again, several years after their licences expired.¹³⁶

Ethnic armed groups are also cashing in on the instability, overseeing informal mining in two areas to either side of



Ruby mines in the Mogok valley pictured in 2019. Each mine was covered by a tarpaulin to protect the miners from the hot sun and rain. *Vlad Sokhin/Panos Pictures*

Mogok. Both areas are on the Mogok Township border with Shan State and soldiers from the KIA, SSA-N and TNLA are allegedly imposing fees there.¹³⁷

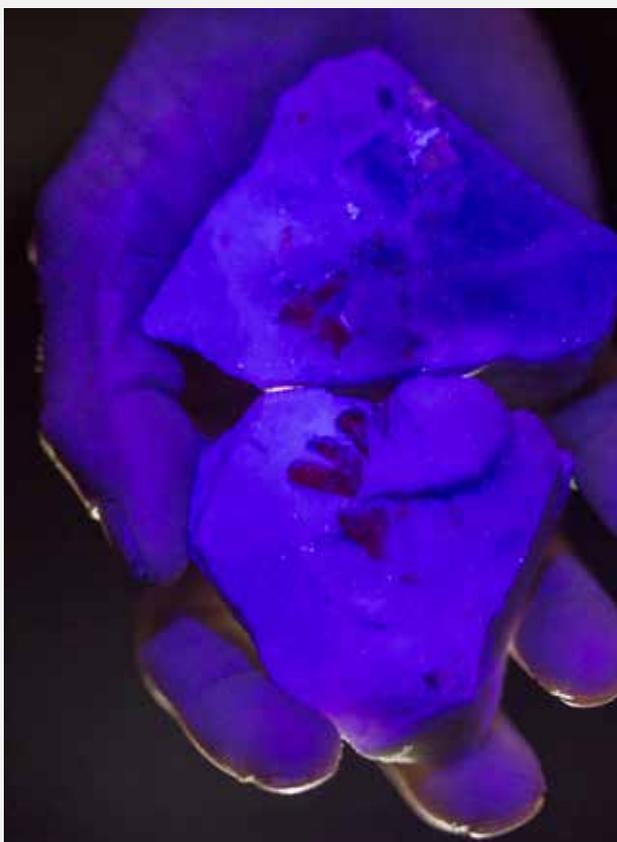


Groups of small-scale artisanal ruby miners work in Mogok in March 2020. *MO*

Case study: Shwe Pyi Aye – mining under the cover of darkness

In the months after the coup, thousands of people¹³⁸ began mining illegally every night at Shwe Pyi Aye, a mining tract near the centre of Mogok that was previously controlled by military conglomerate MEHL.¹³⁹ Shwe Pyi Aye is the area from which Thai-based Fai Dee Gems told Global Witness it had sourced at least one valuable stone – as described in the case study on p. 37. Fai Dee Gems supplies Burmese rubies to international jeweller Graff, and auction houses Sotheby's and Christie's.¹⁴⁰

Miners said that after the military opened the site in late April, it became the most popular place to mine in Mogok.¹⁴¹ But mining was permitted only at night,¹⁴² and miners were allegedly beaten for working in the daytime.¹⁴³ One miner claimed that soldiers used bulldozers to fill in the mines with earth during the day. “They took our money but on the other hand, they didn't let us mine peacefully,” he said, adding that his group was so frustrated they gave up mining at the site.¹⁴⁴



A miner uses a torch that emits ultraviolet light to reveal the gemstones contained in a piece of rock, 2018.
Suthep Kritsanavarin

Soldiers allegedly began collecting money from the miners in May.¹⁴⁵ They initially charged each small team¹⁴⁶ K150,000 (US\$80) a month, but soon doubled the rate to K300,000.¹⁴⁷ One miner who worked there said that some groups had to pay more than this, while others paid less. “But only the ones who are brave enough to negotiate with the soldiers can do that,” he said.¹⁴⁸ One miner said that his group paid the bribes “because we don't want to be in trouble”.¹⁴⁹

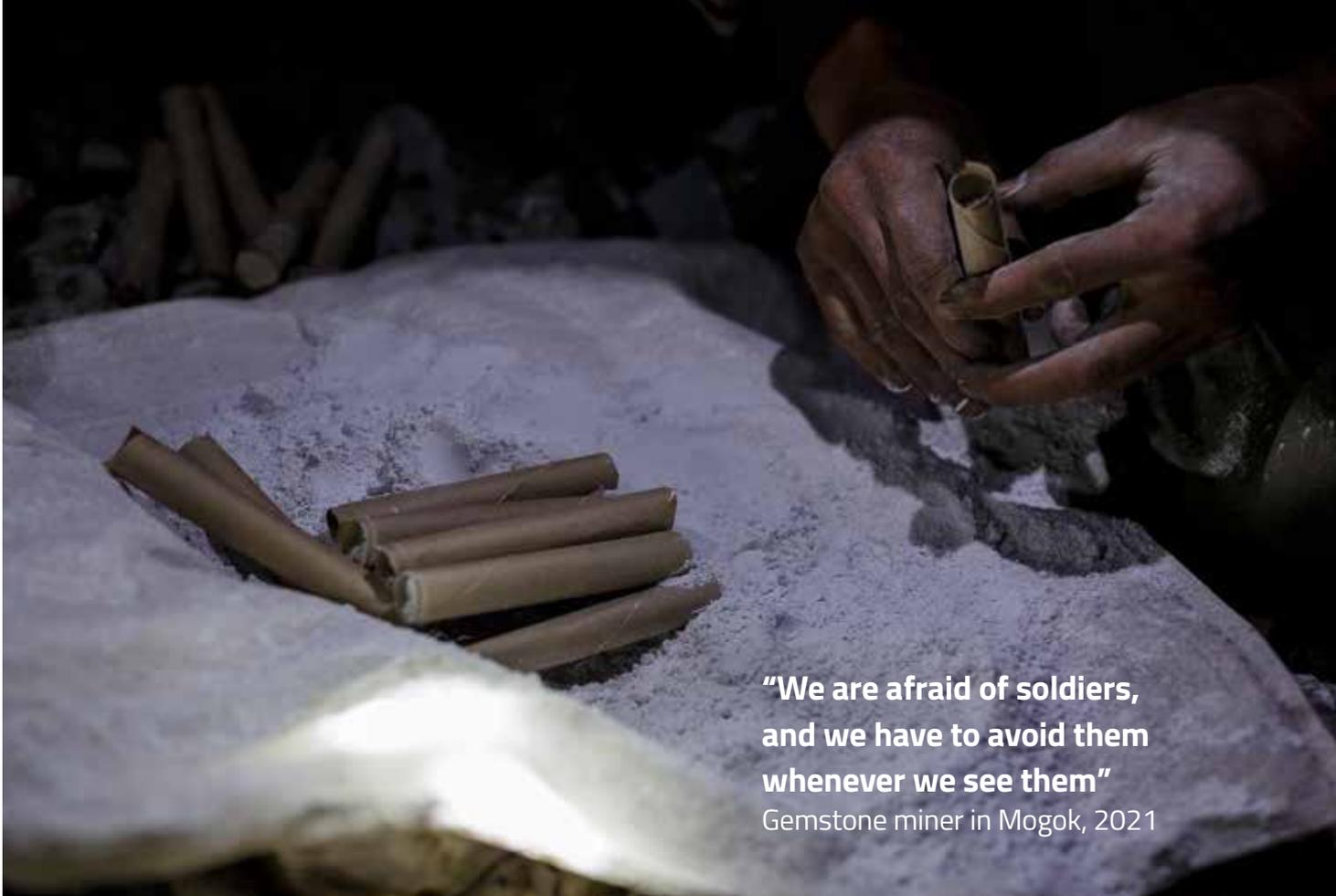
But the mining boom at Shwe Pyi Aye did not last long, highlighting how vulnerable informal miners are to the whims of Myanmar's military. In September, soldiers closed the site to the public¹⁵⁰ and the following month, to make their message clear, they allegedly fired warning shots¹⁵¹ and detained some 20 miners, demanding that each of them pay K500,000 (US\$280) in return for their release.¹⁵²

“I don't know why they were arrested but it could just have been an excuse for the soldiers to demand money from the people,” one miner said.¹⁵³ Mining allegedly continues at Shwe Pyi Aye, but only by individuals with a connection to the military.¹⁵⁴

It is unclear why the military closed the site to the public, but two miners speculated that the crowds had become too large, and soldiers were worried about their own safety, with one miner noting that the soldiers had shut down all the most crowded mining sites.¹⁵⁵ They also said that the decision might have been related to the fact that the soldiers who collected payments were not sharing the money with their superiors.¹⁵⁶

Indeed, it is unclear whether payments collected by soldiers in the mining areas are being passed up through the military command,¹⁵⁷ a practice that Global Witness has documented in the jade industry.¹⁵⁸ Meanwhile, the miners who worked at Shwe Pyi Aye are now searching for gemstones elsewhere in Mogok, including at Dat Taw, another area that was previously licenced to MEHL, where soldiers and police both collect bribes.¹⁵⁹

“The police and soldiers collect taxes from illegal mining sites as usual,” one miner said in November.¹⁶⁰



**“We are afraid of soldiers,
and we have to avoid them
whenever we see them”**
Gemstone miner in Mogok, 2021

A gemstone miner makes explosives from potassium nitrate in 2018. *Suthep Kritsanavarin*

2.4 Illegal mining: a dangerous business made riskier since the coup

The tens of thousands of people who are mining in Mogok and Mong Hsu are highly vulnerable. Like everyone in Myanmar since the coup, they are exposed to the risk of arbitrary violence, and safety is a constant concern.¹⁶¹

“Since the coup, it has become unsafe to go around, especially for the miners,”¹⁶² explained a businessperson who oversees a mining group in Mogok. Another miner there told us that soldiers were “roaming everywhere” and there was a risk of being arrested for no reason, at any time.¹⁶³ Another said that working at night was particularly risky and that people sometimes had to run and hide when they heard heavy weapons being fired.¹⁶⁴ In the words of one miner:

“We are afraid of soldiers, and we have to avoid them whenever we see them.”¹⁶⁵

Miners are also at risk when buying, transporting and using materials to make explosives to mine, because of the current environment of suspicion and armed violence.¹⁶⁶ There have been robberies too, including in September when local media reported that around K100 million (US\$55,000) in gold, precious stones and cash were seized at a gemstone trader’s house.¹⁶⁷

Meanwhile, at the mines, workers are at risk from earth collapses and oxygen shortages underground.¹⁶⁸ There have been multiple reported fatalities in Mogok in 2021, and likely more that have gone unreported. A month before the coup, a gemstone mine reportedly collapsed at Nga Yant Eain, a tract that was previously operated by MEHL, leaving one person dead.¹⁶⁹ In May, three months after the coup, local media reported that a group of workers was trapped when a collapse occurred in a 300-metre deep mine at Baw Ba Tan,¹⁷⁰ an area where Ruby Dragon group was previously mining. The company told Global Witness that while the mine was adjacent to the company’s former concession, it was not part of the concession.¹⁷¹ At least four of the miners were found dead.¹⁷² The same month, two people died from oxygen deprivation while sleeping in a mine at a site called Kyauk Pyart Thut, according to a source working in the area.¹⁷³ In August, a mine collapsed at Sat Inn Pyant near Pyaung Gaung, allegedly killing another miner.¹⁷⁴

Despite the risks, people continue to mine, even if they fail to find valuable gemstones and even though the rewards for doing so are often small.¹⁷⁵ One person who works at Kyauk Pyart Thut told us that people on mining teams who found gems there could only expect to earn up to K200,000 (US\$107) per month. “But there are also some mining teams who haven’t found any stones even though they have worked hard for more than seven months,” he said.¹⁷⁶

3. HOW MYANMAR'S MILITARY CONTROLS GEMSTONE MINING

3.1 The extent of the military's control under the former licensing system

Shining a light on a murky sector

Companies that source gemstones should conduct due diligence, asking basic questions such as where the stones are mined, who benefits, and whether their production contributes to corruption, conflict, or human rights abuses. Our investigation found that in the case of gemstones from Myanmar, this clearly is not being adequately done. This is hardly surprising given that the armed actors in Myanmar that profit the most from the industry have nothing to gain from revealing their control, and everything to gain from an information vacuum that enables them to keep doing business, directly or indirectly, with some of the world's largest luxury and mass-market brands, despite the gemstones' links to conflict, corruption and human rights abuses.

We investigated the ownership and operation of Myanmar's gemstone mines prior to the licensing suspension and subsequent expiry of remaining licences. Our aim was to understand who gemstone dealers, international companies and their customers were ultimately buying their gemstones from.¹⁷⁷

We analysed data on licensing, disclosure of production volumes and disclosure of tax payments, published by the Myanmar Extractive Industries Transparency Initiative (MEITI) over five fiscal years to 2018, to establish the names of Myanmar's largest gemstone companies.¹⁷⁸

We then used data disclosed through Myanmar's corporate registry to link the identified companies to their beneficial owners. And because MEITI and shareholder data does not tell the full story, we supplemented these findings with mine ownership information provided to us by industry insiders prior to the military coup.¹⁷⁹ We reviewed maps of the mining areas, and we interviewed civil society representatives, journalists, and businesspeople in Mogok and Mong Hsu.

The evidence we assembled offers an unprecedented insight into the corporate ownership of the country's gemstone mines before the last remaining licence expired in 2020, revealing the shadowy business networks that still control the industry and are well

placed to renew their licences if licensing begins again. Specifically, all the evidence points to Myanmar's military having been the largest player in gemstone mining up until the last licences expired, along with ethnic armed groups working with it under the terms of ceasefire agreements, and businesspeople with ties to the military and ethnic armed groups.

For further details of our findings, our methodology and the challenges we encountered with the data, see Annex I.

Licensing data shows the extent of the military's control

We started by looking at MEITI licensing data, multiplying the number of acres a company was licensed to mine by the duration of each licence it held.

On this basis, the largest licensee during the period 2013–14 to 2017–18 was military conglomerate MEHL, through its wholly owned subsidiary Myanmar Ruby Enterprise (Gems & Jewellery) Company Limited.¹⁸⁰ But that is not the full story: analysis of corporate records revealed that MEHL also had at least seven other wholly owned subsidiaries that held gemstone mining licences.¹⁸¹

"Together, MEHL's subsidiaries had 2.6 times as many permitted acre days over the period as the next largest licensee"

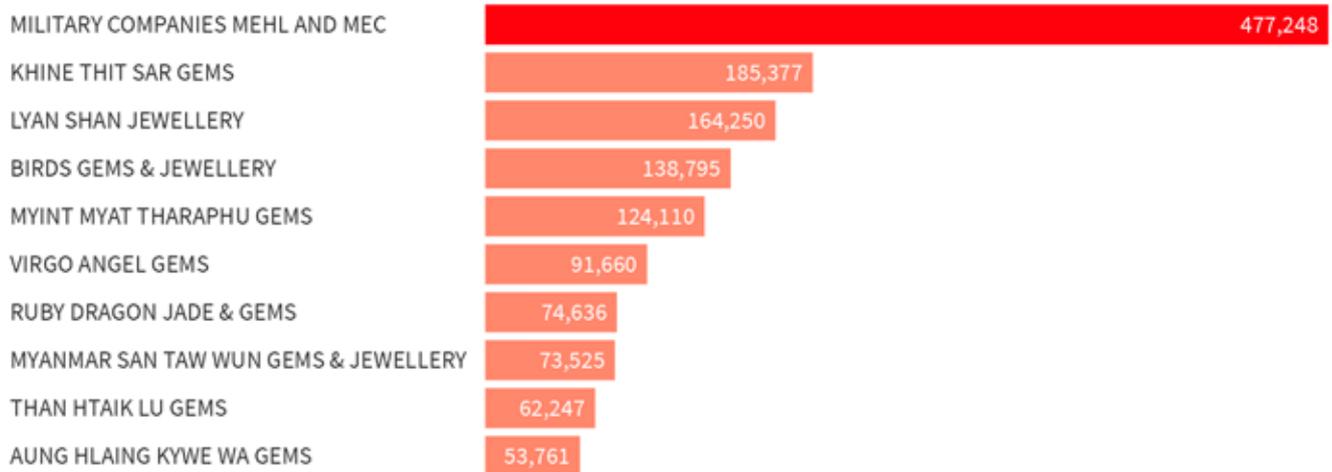
Global Witness analysis of MEITI data

Together, MEHL's subsidiaries had 2.6 times as many permitted acre days over the period as the next largest licensee, making the conglomerate by far the largest licensee in Myanmar before the suspension took effect.¹⁸² The military's other conglomerate, Myanmar Economic Corporation (MEC), also held a significant number of licences.¹⁸³

However, before the suspension there were plenty of licences held by companies that were not directly owned by MEHL or MEC. Would it therefore have been possible to establish a responsible gemstone supply chain that did not involve handing profits to companies linked to the military or other armed actors?

TOP GEMS COMPANIES BY ACTIVE LICENCE AREA

Active acre area days, 2014-15 to 2017-18



Source: MEITI

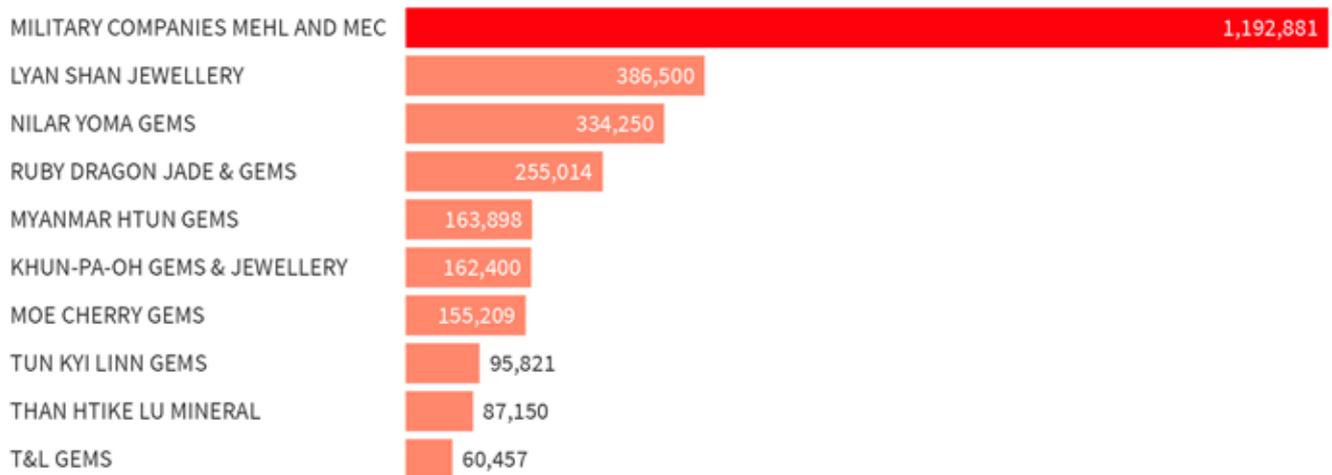
The answer is probably not. We investigated corporate ownership and directorships of the 10 largest licensees, which collectively had 34% of permitted acre days during the period of MEITI reporting¹⁸⁴ – and we found links between all but two of these companies and Myanmar’s military and/or the armed groups it does business with. The fact that we did not find a connection between the other two companies and armed actors does not mean that such connections do not exist.

- Two of the 10 largest licensees – Myanmar Ruby Enterprise (Gems & Jewellery) Company and Thit Sar Pann (Gems & Jewellery) Company – are fully owned subsidiaries of military conglomerate MEHL.¹⁸⁵
- Two of the 10 largest licensees are part of a corporate network with directorship links to Northern Star Gems & Jewellery Company, set up by the military’s Northern Command to supplement military revenues¹⁸⁶ and partially owned until at least 2018 by its former commanding officer.¹⁸⁷ Virgo Angel Gems Company shares a director, Tun Kyaw Win, with Northern Star Gems & Jewellery Company.¹⁸⁸ Virgo Angel Gems Company is part of an opaque network of jade and gemstone companies linked by shared corporate directors, addresses and phone numbers to Northern Star Gems & Jewellery Company, which includes Myanmar San Taw Wun Gems & Jewellery Company, another of the top 10 licensees.¹⁸⁹
- Two of the 10 largest licensees – Khine Thit Sar Gems Company and Ruby Dragon Jade & Gems

- Company – are part-owned by Nay Win Tun, a senior official in the PNO (see box below) and close associate of Aung Kham Hti, the group’s leader.¹⁹⁰ His Ruby Dragon group of companies¹⁹¹ won valuable mining concessions in Mong Hsu after the military signed a ceasefire with the PNO in 1991¹⁹² (a company representative told Global Witness that no special treatment was given to the company and/or to Nay Win Tun¹⁹³) and has since become one of the largest known investors in Myanmar’s gemstone sector.¹⁹⁴ Khine Thit Sar Gems Company is majority-owned by Nay Win Tun’s son Ye Myat Thu,¹⁹⁵ who also holds a 25% share in the company,¹⁹⁶ while Ruby Dragon Jade & Gems Company is 88% owned by Nay Win Tun.¹⁹⁷
- Two of the 10 largest licensees were owned by other businesspeople with connections to the military and non-state armed groups. Birds Gems & Jewellery Company was owned until at least November 2018 by an individual who co-owns a jade mining company called Kyaing International Gems Company with U Kyaing San Shwe, the son of retired Senior General Than Shwe, leader of Myanmar’s previous military junta.¹⁹⁸ Lyan Shan Jewellery Company’s largest shareholder is a former leader of the MNDAA, Yang Moe Lyan (see box below), who has a longstanding business relationship with Myanmar’s military.¹⁹⁹ The MNDAA told Global Witness that Yang Moe Lyan betrayed the group in 1992, and since then has had nothing to do with the MNDAA.²⁰⁰

TOP GEMS COMPANIES BY REPORTED PRODUCTION

Carats, 2014-15 to 2017-18



Source: MEITI

Production and taxation data also points to capture of the industry by the military and ethnic armed groups

While licensing data tells us which companies were allocated the largest number of permitted acre days, it reveals nothing about the productivity or value of the mines concerned.²⁰¹ Although MEITI data on reported production volumes and tax payments is flawed, with an estimated 60% to 90% of gemstones smuggled out of the

country without ever being recorded, even before the licencing process was suspended,²⁰² it provides another indicator of which groups were likely profiting from gemstone mining before the suspension.

Accordingly, we looked at the gemstone production figures reported by MEITI over the four years from 2014–15 to 2017–18 (the first report, for 2013–14, does not include production data by company).

On this measure, MEHL again emerged as by far the largest player,²⁰³ while companies linked to the military and/or to ethnic armed groups with business connections to the military were the sector's other heavyweights.

MEHL's subsidiary Myanmar Ruby Enterprise disclosed the highest production,²⁰⁴ while its subsidiaries together accounted for 26% of total reported production across the four years.²⁰⁵ MEHL subsidiaries aside, Lyan Shan Jewellery Company²⁰⁶ owned by former MNDAA leader Yang Moe Lyan, disclosed the second highest production volumes, followed by Nilar Yoma Gems Company.²⁰⁷

Nilar Yoma is owned by Aung Ko Win, the chair of Kanbawza (KBZ) Group, one of Myanmar's largest conglomerates.²⁰⁸ A major player in jade²⁰⁹ and previously described as a crony of the former military leadership,²¹⁰ today Aung Ko Win is close to junta leader Senior General Min Aung Hlaing.²¹¹ The 10 largest companies by production also included Nay Win Tun's Ruby Dragon Jade & Gems Company.



The chair of Ruby Dragon Jade & Gems Company, Nay Win Tun (centre) attends a business conference in Myanmar's capital Nay Pyi Taw in October 2016. Gaung Htet/AFP via Getty Images

Profiting from power: Nay Win Tun and Yang Moe Lyan's corporate networks

It is not only Myanmar's military that controls a large network of gems companies. Analysis of corporate records reveals networks of gemstone companies linked to important figures in ethnic armed groups, including businessman Nay Win Tun, a senior official in the PNO, and Yang Moe Lyan, one of the founders of the MNDAA:

- **Gems companies owned or part-owned by Nay Win Tun:** Ah Yon Oo Nagar Gems Company, Jade Dragon Family Gems Company, Khine Thit Sar Gems Company Limited, Kyauk Seinn Nagar (Gems) Company, Loi Mine Nagar Gems Company, Nagar Minthar Gems Company, Ruby Dragon Jade & Gems Company, R B G Yadanar Company, Sapphire Dragon Gems Company, Tein Yan Nagar Gems Company.²¹²
- **Gems companies owned by or with directorship links to Yang Moe Lyan:** Lyan Shan Jewellery Company,²¹³ Chatkyiyay Gems & Jewellery Company,²¹⁴ Pyae Sone Myay Mining Company,²¹⁵ Kyauk Sein Minn Gems Company,²¹⁶ Shwe Tun Win Company.²¹⁷

As with licensing data, production data only tells us part of the story of what is happening in the mines. Companies that extract a large volume of low-quality stones may make profits no greater than companies extracting a smaller volume of high-value stones, other factors being equal.

With this in mind, we also looked at the disclosure of tax payments to see which companies reported the highest profits. The gemstone company that reported paying the most taxes across the five MEITI reports was military conglomerate MEC. Lyan Shan Jewellery Company was again in second place, followed by Ruby Dragon Jade & Gems. Other gems companies in the top 10 taxpayers included MEHL subsidiary Myanmar Ruby Enterprise; R B G Yadanar company which is part of the Ruby Dragon Group;²¹⁸ and Nilar Yoma.²¹⁹

All approaches lead to the same conclusion: the country's gemstone industry is dominated by Myanmar's military and companies that are linked to it, along with businesses associated with ethnic armed groups that have reached ceasefire deals with the military.

Of course, the data published in MEITI reports is only as accurate as the reporting by companies and the government, so we tested the above findings in interviews with sources, and the same names came



Residents pass the time at Mogok Lake, beside a sign celebrating the 801st anniversary of the discovery of gemstones in the town. Formed from a colonial-era ruby mine, Mogok lake is now a meeting point, where families gather, and small-scale traders sell gems. *MO*

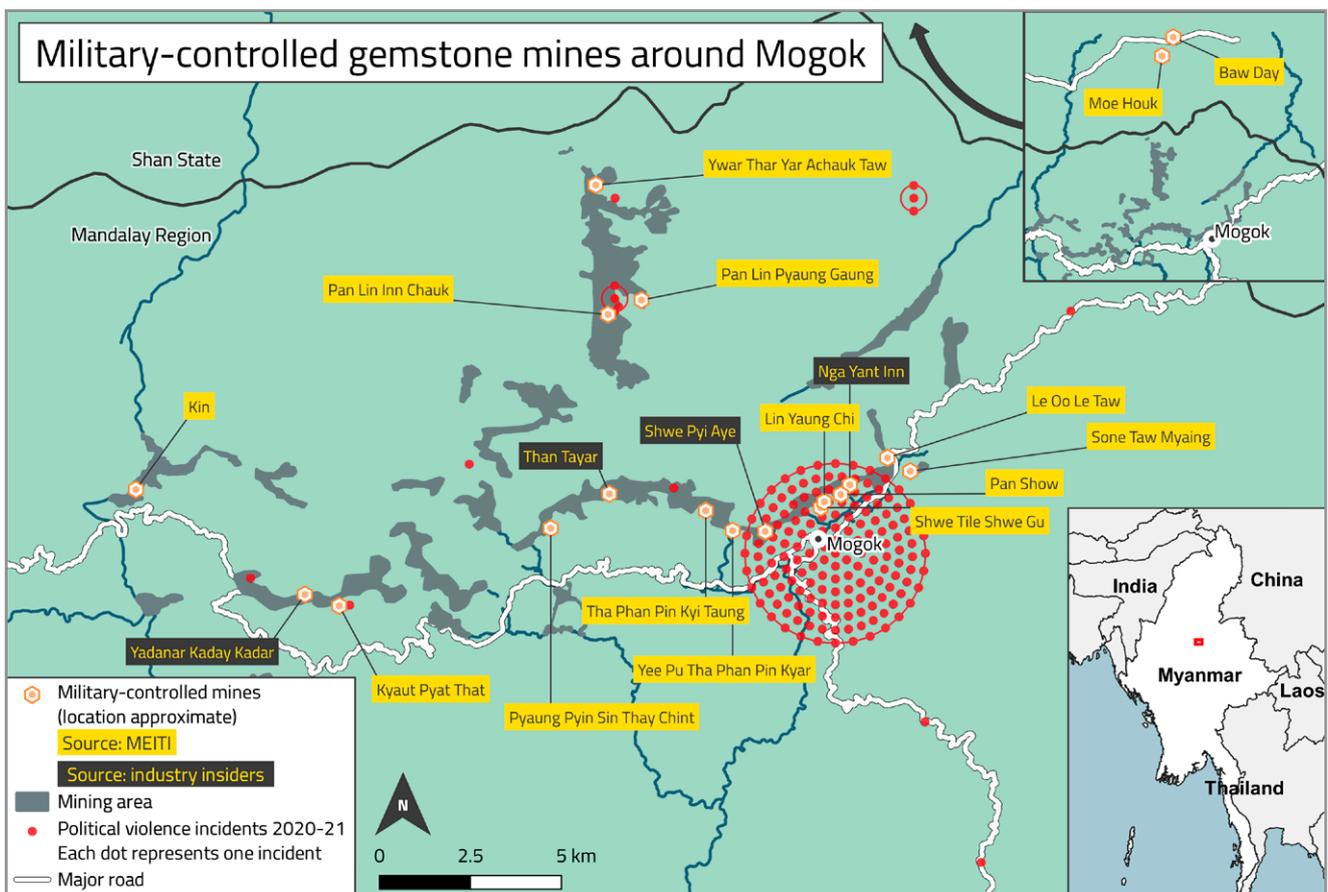
up. Multiple sources said the largest companies involved in gemstone mining were Myanmar’s military conglomerates MEHL and MEC, as well as Aung Ko Win’s KBZ Group and Ruby Dragon.²²⁰ Sources also claimed that companies with links to the UWSA are major players in the industry.²²¹

Sources also told us that MEHL controlled even more mines than were reported through MEITI. A concession map provided to Global Witness in 2017 by industry insiders alleged that MEHL operated in at least four mining areas that were not disclosed through MEITI; information that was confirmed by a former gemstone industry official.²²² The map below shows the mining areas in Mogok that were licenced to MEHL subsidiaries according to MEITI data, and the additional areas that were run by MEHL according to the concession map and the former official. At least three of these sites, Yadanar Kaday Kadar, Shwe Pyi Aye and Nga Yant Inn, have been controlled by MEHL since 1995, according to a Mogok civil society representative and former businessman.²²³

3.2 Licence subleasing or opaque joint ventures – the military’s modus operandi

While analysing the MEITI data, we noticed that some companies appeared to have very few licences but were reporting high levels of production and high tax payments, or vice versa.²²⁴ There are several possible reasons for this, including tax evasion and inaccurate reporting, along with the chance that a small mine operated by a handful of staff may get lucky, unearthing a highly valuable stone that incurs high tax payments.

However, the picture is complicated by a practice that Global Witness has previously documented in Myanmar’s jade mines,²²⁵ but that sources said was also common among licence holders in the gemstone industry. Licensees in Mogok and Mong Hsu frequently subleased or subcontracted their licences to other companies, which handed over a share of their profits – even though the subleasing or transfer “in any way” of licences is illegal under Myanmar’s Gemstone Law.²²⁶



Sources: contains OpenStreetMap data © OpenStreetMap contributors; Myanmar Information Management Unit (MIMU) <http://themimu.info>; Myanmar Extractive Industries Transparency Initiative (MEITI) <https://myanmareiti.org>; Armed Conflict Location & Event Data Project (ACLED) <https://acleddata.com>; R.E. Kane and R.C. Kammerling (1992); G. Bosshart (1994); T. Themelis (2008); Concession map provided to Global Witness by industry insiders (2017) and corroborated by industry sources (2021).



Protesters step on a banner showing an image of Myanmar military chief Senior General Min Aung Hlaing during a demonstration against the military coup in Yangon on 11 February, 2021. *Sai Aung Main/AFP via Getty Images*

The main offenders, sources said, were companies run by Myanmar’s military.

A report by ALTSEAN Burma²²⁷ alleged that as far back as 2003 the military was subleasing mines in Mogok to private companies, including Nilar Yoma, and Zaw & Zaw, a company with directorship links to Tay Za, a well-known regime crony, who was recently sanctioned by the UK for allegedly providing financial support and arms to Myanmar’s military.²²⁸ Journalists and civil society representatives claimed that military conglomerates MEHL and (to a lesser extent) MEC ran a licence brokering system that operated without transparency or oversight.²²⁹

Because neither MEHL nor MEC declared these arrangements to MEITI, there is no public reporting on whether they were organised on the basis of informal JVs, subcontracting of mining, or subleasing of licensed mining areas, or a combination of the above. A former gemstone industry official described the companies as being like agents, saying they applied for valuable mining blocks, in the knowledge they’d be able to secure them, then sold them back to other companies in “secret”.²³⁰ While the specifics of these arrangements are not widely

known, sources said the military did not run most of the mining operations under its permits.

“Most mining operations are under the total control of the military,” said a Mogok-based civil society representative who formerly worked for a company that operated mines on behalf of MEHL. “[But] MEHL and MEC’s subsidiary companies did not conduct operations by themselves. They went into profit sharing agreements with third parties, which put in financial investment. The split [of profits] was 50–50 after paying royalties to the government.”²³¹

The owner of another firm told Global Witness that many businesses in Mogok had no choice but to sign agreements with MEHL. In return for being “left alone”, he said, his company was forced to form a partnership with the military conglomerate.²³²

Such partnerships and subleasing/subcontracting arrangements make supply chain due diligence extremely difficult, because companies may believe that they are buying gemstones from privately owned mines in Myanmar, when in fact they risk inadvertently funding the military through profit sharing or other leasing arrangements.

Asked about the legality of the military companies' informal partnership agreements, one civil society representative told Global Witness that the regulator MGE "probably knows about it but isn't willing to do anything". The only company that MEHL never formed JVs with, they added, is MGE. "There are clear reasons why the military would not want to have that level of supervision and sale sharing with MGE," they said.²³³

3.3 Profits from MEHL and MEC fund human rights abuses

Following the 2021 coup, the US and UK governments and the EU Council imposed sanctions on MEHL and MEC. In justification they pointed to the links between the revenues earned by these conglomerates and human rights abuses.²³⁴

MEHL is around two-thirds owned by individual shareholders who are serving and retired military personnel, with the remaining equity being held by institutional shareholders comprising regional commands, divisions, battalions, and war veteran associations.²³⁵ Many of these shareholders are directly implicated in crimes under international law, according to a report by Amnesty International that reveals how the conglomerate funds human rights abuses.

The report finds that it not simply a case of MEHL unwittingly providing financing to the military – the military created, directs and owns MEHL, whose board consists entirely of serving and retired military officers and is accountable to Senior General Min Aung Hlaing, who faces allegations of genocide and crimes against humanity²³⁶ and commands a military that has been repeatedly implicated in mass atrocities.²³⁷

Moreover, individual military units deployed in both Mogok and Mong Hsu and accused of human rights violations own shares in MEHL and receive dividends (see box).

The UN Independent Fact-Finding Mission on Myanmar concluded in a 2019 report that the military's interests in the jade and ruby extractive industries "benefitted from and directly contributed to international human rights violations" in conflict-affected areas of Kachin and Shan states.²³⁸ Further, donations by MEHL and MEC to the military in September 2017 helped enable it to carry out its genocidal campaign against the Rohingya in Rakhine State.²³⁹

Military units deployed in Mogok and Mong Hsu are MEHL shareholders, cementing the military's corrupt hold over the gemstone industry

Many of the military units that are, or have been, deployed in Mogok and Mong Hsu are shareholders in MEHL, documents leaked in 2020 by Amnesty International show.²⁴⁰

This means that battalions deployed in the gemstone mining areas benefit at an institutional level from the military's hold over the gemstone industry. This situation is even more concerning considering allegations that units deployed in Mogok and Mong Hsu have been responsible for multiple human rights violations that may amount to war crimes, including sexual abuse, torture, use of civilians as human shields, and shelling of and shooting at civilians.²⁴¹

Mogok

Units present: Infantry Battalions (IBs) 44, 71, 95, 148, 223²⁴²

IBs 44, 71 and 95 operate in Mogok, with one local source saying the units rotate there every six months.²⁴³ A fourth unit, IB 148, was operational in Mogok as of May 2020,²⁴⁴ while a fifth battalion, IB 223, has been deployed in the township on at least three different occasions over the last six years.²⁴⁵

Mong Hsu

Units present: IBs 149, 150²⁴⁶

Publicly available sources indicate that IBs 149 and 150 are regularly based in Mong Hsu,²⁴⁷ with a local source confirming that IB 149 is permanently based in the town.²⁴⁸

3.4 How the military may increase its revenues from mining in post-coup Myanmar

As set out above, the military's companies have historically been the largest players in Myanmar's gemstone mines. The fact that the military now controls both mining areas and state functions will undoubtedly increase its opportunities to profit from the industry, both directly and through extortion by its battalions in Mogok and Mong Hsu. While the gemstone mines are not currently operating at full capacity, there is clearly potential for the military to make a significant amount of money (see box, p.30). One

key factor is that the military now also controls MGE, the state regulator, which is responsible for everything from making and enforcing the rules that govern the sector, to collecting licensing fees, taxing the industry and, despite its regulatory status, actually forming JVs with mining companies and marketing gemstones.²⁴⁹

There are multiple ways in which the military, aided by its post-coup control of MGE, may benefit from Myanmar's gemstone sector, including:

- **Licensing.** Licensing fees for jade and gemstone mining, paid to MGE,²⁵⁰ have hitherto generated substantial revenues, earning K106 billion (US\$58 million), or around 50% of government income from private jade and gemstone production, in financial year 2015–16, the year before licensing was suspended.²⁵¹ Any new licensing fees collected by MGE will directly benefit the military. More concerning, however, is the risk of the bulk of any new licences being issued to military-owned companies and military cronies, as the military takes the opportunity to enrich itself and reward loyalty. It is also likely to issue licences to reward political support from ethnic armed groups and militias, just as it has done in the past. A majority of MGE's staff are retired military personnel,²⁵² and during the last period of junta rule its officials operated "like clerks to process requests from military companies," a source previously told Global Witness.²⁵³ The NUG has stated that it would consider any new licences issued by the military to be illegal.²⁵⁴
- **Joint ventures and subleasing of licences.** MGE has previously participated in formal gemstone JVs on behalf of the state, collecting a flat fee for licences²⁵⁵ and 25% of sales revenues, without bearing any operational costs.²⁵⁶ The benefit to companies of such JVs was that they could mine larger plots under a single licence.²⁵⁷ Now that MGE is under military control it stands to benefit from any new JVs signed with private companies. Informal joint ventures or similar arrangements involving MEHL and MEC (see Section 3.2) have been even more lucrative for the military. Whichever model the military prioritises, it can be expected to reap significant rewards.
- **Taxation.** In addition to licensing fees and revenues from its JVs, MGE previously administered most taxation of the gemstone industry.²⁵⁸ However, weak enforcement²⁵⁹ enabled tax avoidance,²⁶⁰ limiting revenues to a fraction of the sector's profits.²⁶¹ MEITI data shows that revenues from formal taxation of the gemstone industry in the five years from 2013–14 to 2017–18 averaged just US\$3.7 million annually, using the exchange rate from October 2021.²⁶² More concerning, a parallel and



An agent from military conglomerate MEHL checks production from a mine in Mogok in 2014. *Thierry Falise/LightRocket via Getty Images*

illegal system of "taxation" or extortion has existed since before the coup, to the benefit of corrupt officials²⁶³ and local power brokers.²⁶⁴ In Mogok, the military has already taken its cue from this, exacting payments from mining companies and informal miners (see Section 2.3).

- **Gemstone fairs.** MGE has also hitherto made money from jade and gemstone fairs (known as "emporiums")²⁶⁵ that have been held in Myanmar's capital Nay Pyi Taw. In April 2021, just two months after the coup, the military held a 10-day fair, but the NUG warned of legal action against companies cooperating with the regime,²⁶⁶ and attendance and sales were limited. Nevertheless, the emporium brought in a reported US\$22 million in jade, gemstone, and pearl sales,²⁶⁷ and future fairs have the potential to become an important source of income for the military,²⁶⁸ with the next one scheduled for December 2021.²⁶⁹ MEHL will reportedly participate, and the junta has arranged for gemstone traders to stay in 10 hotels in Nay Pyi Taw, according to local media.²⁷⁰

"MEITI data shows that revenues from formal taxation of the gemstone industry in the five years from 2013–14 to 2017–18 averaged just US\$3.7 million annually"

How much is Myanmar's gemstone sector worth?

Reaching an accurate valuation of a gemstone industry is notoriously difficult in any country,²⁷¹ and in Myanmar the exercise is particularly challenging. However, it's important to address the question of the industry's value, because for decades revenue from gemstones has been an important source of funding for the country's military, supplementing its income from the larger jade industry, and from other natural resources including oil and gas, timber, and minerals. If large-scale production starts up again, those concerned about the military's sources of income should understand the scale of its significance as a source of funding.

To read our full methodology and the challenges we encountered with the data, see Annex II.

We found that at full production, before mining licences began to expire from 2017, Myanmar's gemstone industry was worth an average of between US\$346 million and US\$415 million a year *based on official production volume data*. But integrating what we know about the scope of smuggling and the illicit trade, we found the sector could have been worth an average of US\$1.73 billion to US\$2.07 billion annually over these four years.

How did we reach these numbers? We considered multiple different approaches to estimating the value of gems mined in Myanmar and concluded that the most feasible method was to use production data as our measure of quantity, combined with price data from various sources, including trade figures. The starting point for this approach was production data (measured in carats) reported annually by the industry's state-owned regulator, MGE, and published in the country's statistical yearbooks. We



US\$50 banknotes and rubies sit on top of a display cabinet at a gemstone store in Mogok in 2016. Taylor Weidman/Bloomberg via Getty Images

applied the MGE production data for the four years from 2014 to 2017 to two sources of external price data: price information from Gemfields auctions of rubies mined in Mozambique, which are among the most transparent sources of ruby price information globally; and price information from Thai customs on imports of worked rubies, sapphires, and emeralds.

Our analysis focused on the period until 2017, when gemstone production was at or near full capacity, because there is insufficient information available to estimate annual changes in the size of unreported production since licences began to expire. Because the price of gemstones has changed significantly over time, we limited our analysis to a period of four years.

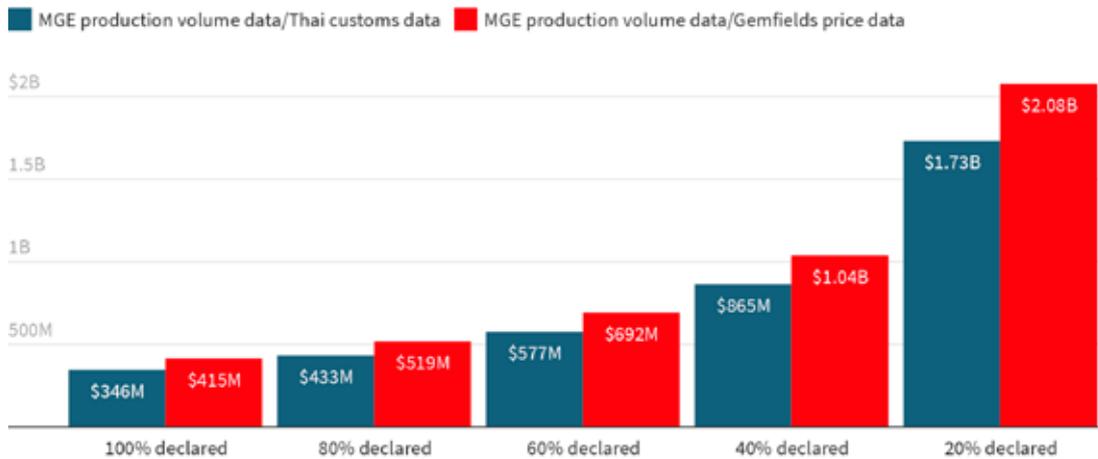
Both sources provide relatively reliable and precise estimates of prices, but they do not reflect the price premium that is commanded by Burmese rubies and especially by those from Mogok, which are the world's most valuable. Research conducted by Global Witness on the ruby sector found that in sizes under two carats, an unenhanced stone from Myanmar can command prices two to three times that of a comparable stone from another source. Larger unenhanced rubies can command much higher prices, up to ten times more than heat-treated rubies of similar size. However, perhaps the most useful overall estimate of the premium attained by Myanmar rubies comes from one of their biggest competitors, the Gemfields ruby mines in Mozambique. According to a presentation by Gemfields, "Mozambique rubies remain half the price of comparable Burmese (Myanmar) rubies."²⁷²

However, not all of Myanmar's coloured gemstone production consists of rubies which fetch this price premium. To create our overall estimate, we adjusted prices only for the share of production accounted for by rubies. This adjustment to our estimates, which we called our "Mogok margin", was not a perfect solution, but it did provide some reflection of the price premium of commanded by Myanmar rubies.

This approach yielded an average value of Myanmar's gemstone output of US\$346 million per year between 2014 and 2017 using Thai Customs price data, or US\$415 million per year using Gemfields auction prices and applying the "Mogok margin" in both cases.

ESTIMATING THE VALUE OF MYANMAR'S GEMS INDUSTRY

Using different estimates of the % of total production declared to regulator Myanmar Gems Enterprise (MGE) in \$US.



Higher estimates based off findings that “up to 80% of gemstones produced in Myanmar are not declared” in a 2016 Gemstone Sector Review conducted for MEITI.

Chart: Global Witness • Source: MGE, Gemfields, Thai Customs

All the above estimates are based only on official production data, and do not take any account of underreporting of production at the mining site. Official production statistics have regularly been criticised for failing to capture a significant proportion of production. A 2016 Gemstone Sector Review conducted for MEITI found through interviews with stakeholders that “up to 80% of gemstones produced in Myanmar are not declared and therefore bypass the formal system.”²⁷³ This poor coverage is in part shaped by the nature of the sector itself – gems are high value and low weight, making them easy and rewarding to smuggle. However, regulatory shortcomings have also contributed to the issue. There was “effectively no government inspection or monitoring of privately held mines” before licences expired, according to the same report. This largely left it up to private mine operators to declare stones, despite the significant conflicts of interest to doing so.

If we make the assumption, which we consider credible, that 80% of total production was not declared at the mining site estimates of the size or value of the sector increase by a factor of five.

Incorporating this estimate of undeclared production into the first approach described above, using price data from the Thai customs, and applying the “Mogok margin”, produces an estimated value for

the output of the Myanmar gems sector of up to US\$1.73 billion annually over the period from 2014 to 2017. Incorporating the same estimate of undeclared production into the second approach described above, using prices from Gemfields auctions and again applying the “Mogok margin”, gives an estimated value of US\$2.07 billion annually between 2014 and 2017.

Are Myanmar’s gemstone deposits running out?

There are persistent reports that Myanmar’s gemstone deposits are depleted,²⁷⁴ but not everyone agrees.²⁷⁵ Ultimately, there remains considerable uncertainty over the size of the remaining deposits and the value of the gemstone mines that are now in military hands. Several geological surveys of Myanmar’s gemstone tracts have been undertaken over the past few decades, but very little information has been made public.²⁷⁶ As one Yangon-based jeweller explained: “There are concession maps, but people are very cagy about them because they are very useful in working out where you might want to mine in the future.”²⁷⁷ The picture is complicated further by the existence of gemstone deposits outside Mogok and Mong Hsu, including at several locations in Shan State and at Namya in Hpakant Township, Kachin State.²⁷⁸

4. MURKY MIDDLEMEN: TRADE THROUGH THAILAND



A gemstone miner in Mong Hsu checks for damage after several houses collapsed in a storm in 2018. The mining area in Shan State is vulnerable to landslides. *Suthep Kritsanavarin*

4.1 A global hub for gem processing – and a magnet for smuggling

In this chapter we expose how the military and the ethnic armed groups that work with it bring their gemstones to market – the first stages on the stones’ journey from the mines of Mogok and Mong Hsu to the display cases of international jewellers and, despite their connection to conflict and human rights abuses, to adorning the bodies of people around the world as signs of wealth, love and beauty.

Industry sources claim that between 60% and 90% of gemstones mined in Myanmar are smuggled out of the country without ever being documented.²⁷⁹ The route the stones take depends on their quality, but industry experts agree that the initial destination is usually Thailand,²⁸⁰ the main processing hub, with other important hubs being China and India.²⁸¹

For decades, Thailand has benefitted from the lack of sophisticated gemstone processing capacity in Myanmar²⁸² just as China has in the case of the country’s jade (as documented in Global Witness’s 2015 report, *Jade: Myanmar’s “Big State Secret”*). As a representative of MGJEA, Myanmar’s gemstone industry body, put it: “We sell our rubies at a very cheap price to Thailand. They are technicians and their

market is very big, so the merchants can get so much profit when they sell worldwide.”²⁸³

Once itself an important gemstone producing country, Thailand established itself as a cutting and polishing industry hub after its own ruby deposits had largely been depleted.²⁸⁴ By 2009, an estimated 90% of the world’s rubies passed through the country.²⁸⁵ Thailand is one of the world’s primary trading hubs for gemstones in general²⁸⁶ and has a significant jewellery-making sector. Its long-standing expertise means that most rubies continue to be cut by Thai specialists.²⁸⁷ Chanthaburi in the south-east of the country is Thailand’s main processing centre.²⁸⁸

Lower-value stones are more likely to be handled by several intermediaries before they are cut and polished in Thailand and again before being bought by a jewellery company.²⁸⁹ These intermediaries include cutters and traders in the mining towns;²⁹⁰ brokers who transport the stones overland to Myanmar’s border towns (including Muse on the Chinese border, and Tachileik and Myawaddy bordering Mae Sai and Mae Sot in Thailand²⁹¹) or to Myanmar’s largest cities, including Mandalay and Yangon; and agents who buy both from these brokers on behalf of processing companies in Thailand and elsewhere, and from the processing companies for clients in other countries.²⁹² There were also rumours before the coup of foreign traders buying stones directly from the mines at Mogok and Mong Hsu, according to members of MGJEA, even though access to foreigners is restricted in both mining areas.²⁹³

Higher-quality stones, on the other hand, are often already sold by the time they come out of the ground and do not change hands so many times in Myanmar.²⁹⁴ “The good [stones] are smuggled directly out, including through Mandalay airport, through corruption and collusion with airport officials,” said one Yangon-based jeweller, a claim that was backed up by other sources.²⁹⁵ The jeweller added that because even highly valuable rubies are so small, they are easy to smuggle.²⁹⁶ Other valuable stones are transported by land through Mae Sai and Mae Sot.²⁹⁷ Retired military officers are believed to be involved in the trade,²⁹⁸ and ethnic armed groups themselves are heavily involved in smuggling, as well as extorting traders and smugglers, although the export of gemstones overland, particularly to Thailand, has been impeded by Covid-19 restrictions on travel, as well as armed conflict along the major overland trading routes.²⁹⁹

4.2 Border fiefdoms: the role of ethnic armed groups

Myanmar's military has never exercised full control over the country's borders during the decades-long conflicts with multiple non-state armed groups, some of which administer large areas of territory bordering China, Thailand and India (see map on p.34).³⁰⁰

The UWSA controls a large swathe of territory bordering China, from which several sources confirm that gemstones are exported,³⁰¹ and another, smaller area of territory on the border with Thailand.³⁰² The first area

extends almost as far east as Mong Hsu, providing the armed group with direct access to the gemstone mines there. The Shan SSA-S is based in Loi Tai Leng,³⁰³ directly to the east of UWSA territory on the Thai border.³⁰⁴ Three other groups, the MNDAA, the NDAA and the KIA all control territory bordering China (see map).

Ethnic armed groups have a long history of making money by smuggling gemstones to neighbouring countries, a practice that has been given new impetus by the lawlessness that has followed the coup,³⁰⁵ and before that by the transition of the entire Myanmar gemstone industry into illegality after the suspension of licensing.

Case study: Straddling the Thai border

The SSA-S is based in Loi Tai Leng, adjoining the Thai border. Access to Loi Tai Leng from military-controlled territory in Myanmar is by a narrow jungle path,³⁰⁶ but on the Thai side a road leads directly to Chiang Mai, the largest city in the country's north.³⁰⁷ The SSA-S has historic connections with both the gemstone mines in Mong Hsu³⁰⁸ and with traders in Thailand,³⁰⁹ putting it in a strong position to conduct smuggling operations.

The armed group has a gemstone processing factory at Loi Tai Leng capable of employing around 40 staff, which a Global Witness investigator visited several years ago.³¹⁰ Higher-value stones were not cut here³¹¹ but sold rough to Thai buyers, an SSA-S officer told us.³¹² The factory's manager told Global Witness that the SSA-S was well placed to trade gems because its soldiers speak Thai and with their Thai ID cards that enabled them to travel freely in the country they were able to sell to traders unable to make the difficult journey to the mines in Myanmar.³¹³



SSA-S soldiers work at a gemstone processing factory in Loi Tai Leng, the armed group's headquarters on the Myanmar-Thai border, 2017. *Suthep Kritsanavarin*

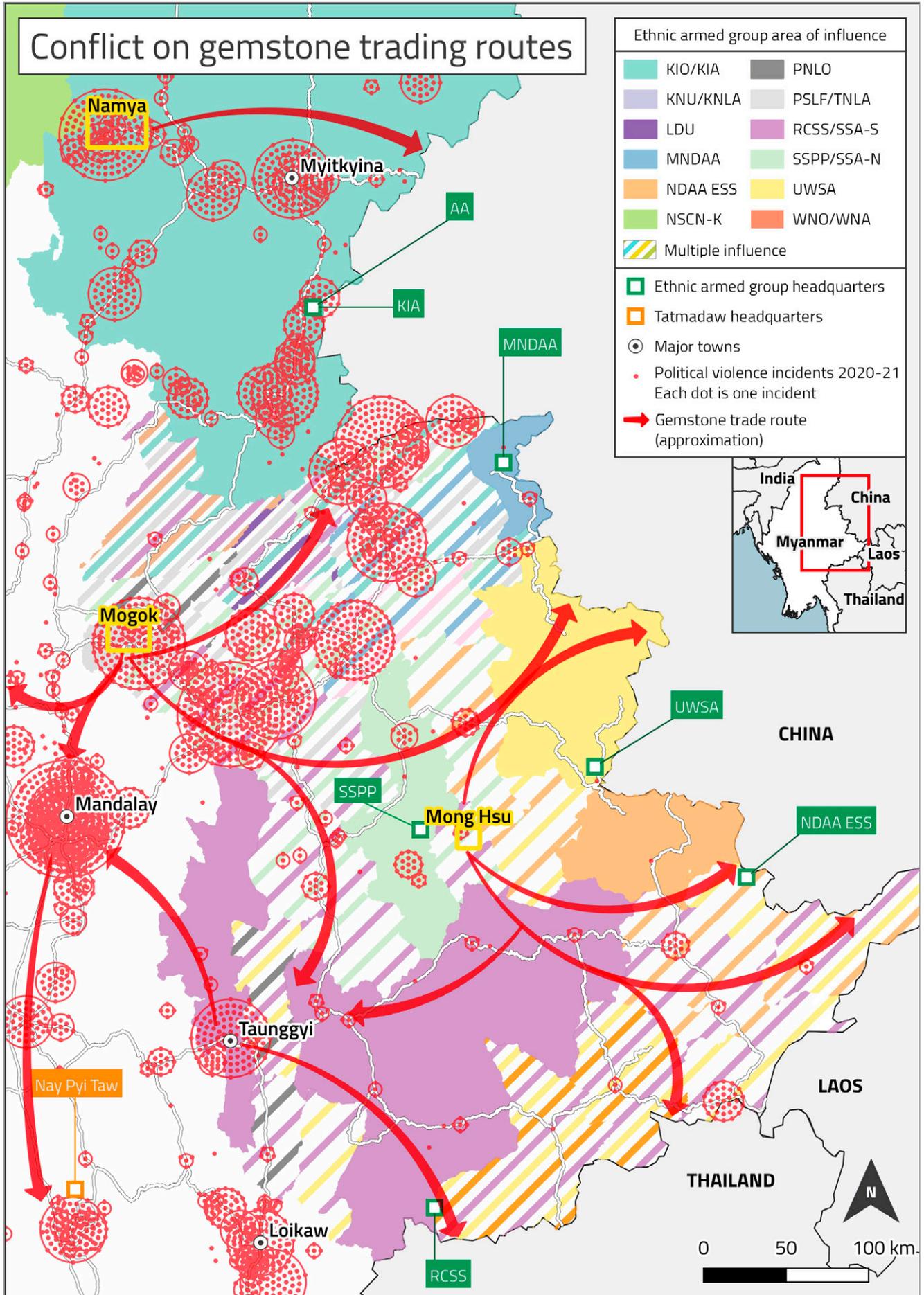


SSA-S leader Yawd Serk wearing a ruby ring is pictured at his armed group's headquarters in Loi Tai Leng in 2017. *Suthep Kritsanavarin*

The factory's manager described members of the SSA-S as middlemen. He said that Thai buyers who wanted rubies from Mogok or Mong Hsu contacted the SSA-S, which bought from its network of traders or sent its own soldiers to the mines to bring rubies back on foot, either to Loi Tai Leng, or to Mae Sai on the Thai border.³¹⁴ "Some buyers in Thailand ask us to [buy from the mines] for them because it is hard for them to go there. There are some places the Tatmadaw does not allow them to go," the manager said.³¹⁵ A Shan State-based reporter who has been to the ruby mines at Mong Hsu confirmed that mid-level SSA-S soldiers "openly" go there.³¹⁶ The head of the SSA-S foreign affairs department told Global Witness that he was friends with several of the Myanmar military's cronies who are known to be involved in the gemstone trade.³¹⁷

There is a risk that gemstone sales that involve payments to the SSA-S could be funding human rights abuses as well as conflict. The group, along with other ethnic armed groups, has been accused of systematic human rights violations including forced recruitment, forced labour, abduction, and the use of child soldiers.³¹⁸

Conflict on gemstone trading routes



Sources: Myanmar Information Management Unit (MIMU) <http://themimu.info/>; Armed Conflict Location & Event Data Project (ACLED) <https://acleddata.com/>; The Asia Foundation <http://www.asiafoundation.org>

Armed groups extort traders who smuggle gemstones and other resources, both at checkpoints on the roads in state-controlled territory, and within areas along the borders under their control.³¹⁹ Small-time smugglers can operate alone, but “for large-scale informal trade you will need to have a connection with an armed group or an authority,” said a former member of Myanmar’s EITI National Coordination Office. “[Gemstone traders] definitely link up with some groups, they [the groups] are very much professionals in the informal trade and there is a network,” he said.³²⁰

4.3 Gemstones – a front for the drugs trade?

It is not only human rights abuses, conflict, and the military’s grip on power that buyers of Myanmar’s gemstones risk abetting. Public reports, confirmed by several sources who spoke to Global Witness, state that gemstone mining in Myanmar is a front for the country’s booming drugs trade, as described below.

Myanmar is one of the world’s largest sources of opium and heroin as well as the centre of Asia’s methamphetamine industry, with the International Crisis Group claiming that drug production and profits are so vast that they “dwarf the formal sector of Shan State”.³²¹

"Myanmar is effectively one enormous proceeds of crime generating vehicle"

Anti-money laundering (AML) expert

The Mong Hsu mines are in the heart of Shan State, which also borders Mogok, and some of the key groups involved in the production and sale of narcotics, including the UWSA, are also involved in gemstone mining.³²²

In a review of Myanmar’s gemstone sector for MEITI, widespread allegations of money laundering were documented, “involving gems being bought and sold by people using money made from the drugs trade in other parts of Myanmar”.³²³ One method of laundering drug money, as explained by a gemstone expert from Thailand, is that “Drug traffickers... may invest in a low-quality gemstone mine, inflate the value of low-quality stones, and then sell these to trusted partners to launder money and move it out of the country.”³²⁴ An anti-money laundering (AML) expert who has worked closely on Myanmar said the type of scenario where a group over- or under-invoices to launder the proceeds of crime is well-established.³²⁵ “The effectiveness of AML/CTF [counter-terrorism financing] efforts in Myanmar is woefully low. Myanmar is effectively one enormous proceeds of crime generating vehicle,”³²⁶ he said.

4.4 Don’t ask questions: Thai dealers fail to conduct basic due diligence

With Thailand’s importance as a processing and trading centre come due diligence responsibilities. Processing companies and traders have a key role to play as control points in supply chains, given their ability to exert leverage relatively easily on their suppliers.³²⁷ The post-coup situation in Myanmar, along with the suspension of the licensing system and the impact of the Covid-19 pandemic, makes the challenges of due diligence



A woman displays rubies for sale to another trader at the “Htar Pwe”, a traditional term for the gems market in Mogok, February 2020. MO

greater, but does not absolve processors and traders of this responsibility.

Global Witness investigated the due diligence practices of processing companies and traders based in Thailand and selling Burmese rubies to Western countries, meeting representatives of more than 20 companies in Bangkok.³²⁸ (We were unable to visit Chanthaburi, the country's main cutting and polishing centre, due to Covid-19 restrictions.)

We identified a list of leading gemstone and jewellery companies in Thailand, based on their reported export volumes of precious stones,³²⁹ combined with their relative importance in the market according to information from experts or their own websites, and evidence pointing to the possibility that they sell Burmese rubies to Western markets. Global Witness investigators contacted these companies posing as potential customers looking to source high-value Burmese rubies. We queried the companies about their ruby sales, sourcing methods, suppliers, and the steps they had taken to ensure their rubies were conflict-free and free from human rights abuses. We cross-referenced our findings with analysis of export data and open-source research.

Our key findings were as follows:

- At least six of Thailand's top ten gemstone exporting companies as of 2020 sell Burmese rubies.³³⁰
- Most of the companies we contacted do not source gemstones directly from mines in Myanmar, meaning that they are dependent on information provided by their suppliers.³³¹
- Companies said that it is possible to determine the country of origin of more valuable stones, and sometimes even whether stones from Myanmar were mined in Mogok or Mong Hsu, but that they do not usually know which mines in these areas their stones come from.³³²
- Tracing gemstones to the mine of origin in Myanmar is nearly impossible³³³ because there have generally been several intermediaries involved by the time a company buys them, while suppliers rarely share source information, considering it a commercial secret.³³⁴
- Many companies are aware of the high risks relating to their Myanmar supply chains but are reluctant to discuss them in detail.³³⁵
- Confronted with the challenging task of carrying out due diligence, many companies do not even try, while responsible sourcing efforts, where they do exist, are inadequate.³³⁶

In short, the responses we received made clear that by the time most gemstones have left Myanmar their origin is already obscured. And as the owner of one gemstone

"There is no such thing as an ethically sourced Burmese ruby" Gemstone supplier

supplier, ABC Stone, told us, there is no such thing as an ethically sourced Burmese ruby.³³⁷

Only one supplier of Myanmar rubies among the companies Global Witness interviewed in Thailand, Fai Dee Gems Co., Ltd. (trading as Faidee), told us the name of a specific mine from which it had bought just one of its gemstones (see box below).³³⁸ We looked into the ownership of this mine, and found that it was controlled for at least 20 years by military conglomerate MEHL.

Given the extent to which Myanmar's military controls the industry, it is highly likely that other suppliers with less adequate due diligence measures in place than Faidee are funding the military through their supply chains.

The information provided to us by gemstone dealers and jewellers in Thailand was insufficient to determine whether the specific stones they were selling had funded Myanmar's military or ethnic armed groups, because these companies simply do not have this information. However, the responses we received from several gemstone and jewellery companies, including a representative selection profiled below, offered insights as to whether and how Thai companies carry out due diligence, and into the risks that their customers may end up buying conflict-linked rubies.

AJS Gems describes itself as a major worldwide importer and exporter of rough, and cut and polished, gemstones, including from Myanmar.³³⁹ The company told Global Witness that it has due diligence measures in place which mainly involve avoiding sourcing from government auctions or from companies owned or controlled by the military. AJS Gems explained that it is impossible to ascertain which mines its rubies come from, but that by buying only from independent dealers it can avoid supporting the army.³⁴⁰

As we have seen, this is untrue. While it is laudable that the company is trying to avoid funding Myanmar's military, there is a high risk that it could be funding the military and armed groups.

As described in this report, even since the suspension of the licensing regime and the effective end of legal gemstone mining, both the military and ethnic armed groups continue to make money from third parties engaged in mining activity in several ways, including through extortion and smuggling.

Case study: Fai Dee Gems Co., Ltd. – buying from a military-linked mine; selling to Western brands

A key player particularly in the high-end segment of the Myanmar ruby business is the Bangkok-based Fai Dee Gems Co., Ltd. (trading as Faidee), calls itself “The Premier Source for the World’s Rarest Burmese Rubies”.³⁴¹ It deals exclusively in Burmese rubies, sourcing directly from Myanmar and then cutting, treating and setting the stones.³⁴² Faidee told Global Witness that it knows the origin of only some of the stones it sells,³⁴³ and told us the origin of just one stone.

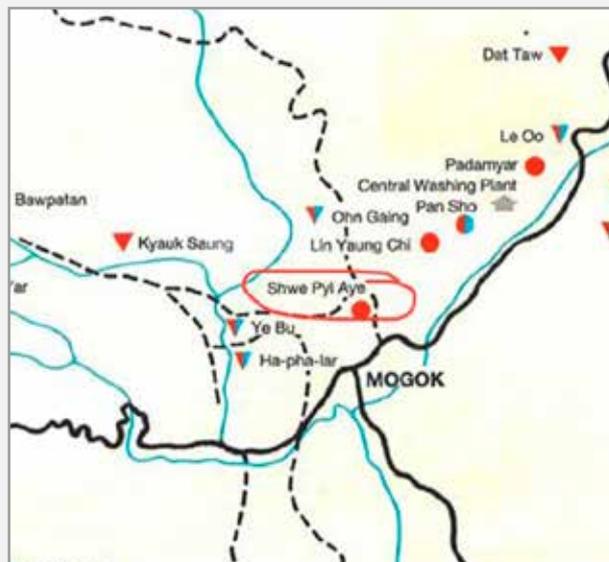
That stone – a 4-carat stone in a ring priced at US\$788,000³⁴⁴ – was sourced from the Shwe Pyi Aye mine in Mogok.³⁴⁵

Global Witness research shows that military conglomerate MEHL took control of the Shwe Pyi Aye mine in 1995 and still controlled it in 2017.³⁴⁶ Faidee’s CEO was unable to tell us when the stone was mined,³⁴⁷ meaning that there is a risk that the military profited from the sale. Shwe Pyi Aye is the same mine profiled on p.20 where the military allowed large numbers of people to mine after the coup and systematically extorted payments.

When asked whether buyers should worry about human rights issues related to Faidee’s rubies, Ravi Lunia, the company’s managing director,³⁴⁸ responded: “Absolutely not.” Regarding allegations that the military in Myanmar is profiting from gemstones, Lunia told us that it was “nothing to worry [about]” since “the majority of the funding [for the military] comes from natural gas and oil” and “the rubies in [the] market are over decades old.”³⁴⁹

This reassurance is inadequate given that the military has extensive established economic interests in the jade and gemstone industries and has largely controlled Myanmar’s bureaucracy since 1962.³⁵⁰ Lunia also told Global Witness that Faidee sourced rubies from Mong Hsu, where deposits were only discovered in the 1990s³⁵¹ (see Section 2.2). To put Lunia’s words into perspective, another jewellery company in Thailand told Global Witness in July 2021 that at least some of the revenue from all gemstones exported from Myanmar found its way to those in power.³⁵²

Lunia told Global Witness that Western jewellery brands such as Harry Winston and Graff bought



A map of the mines in Mogok provided to Global Witness by Faidee with the Shwe Pyi Aye mine circled in red

wholesale rubies from the company.³⁵³ British auction house Christie’s³⁵⁴ has sold various pieces of high-end jewellery from Faidee as recently as 2021, while Sotheby’s has sold several Faidee pieces, including a ruby and diamond necklace³⁵⁵ that fetched almost US\$10 million in Hong Kong in 2014.³⁵⁶

Graff told Global Witness in a letter that it takes the integrity of its supply chain seriously and that Faidee Gems is not a significant nor a frequent supplier. The company added it would contact Faidee to ask further questions about its sources of supply.³⁵⁷

Van Cleef & Arpels was also among Faidee’s customers, Lunia said, but the jeweller has now moved to African sources.³⁵⁸ However, Van Cleef & Arpels was still marketing Burmese rubies in 2021.³⁵⁹

Faidee told Global Witness in an emailed response to the allegations detailed above that the company’s rubies have been collected over several decades from legitimate sources, and also inherited from the owner’s father and grandfather’s era before the military’s occupation of Myanmar. “Fai Dee Gems does not have any association whatsoever with the Myanmar’s military coup nor do we support the injustices that have been taking place,” he said. “We support the people of Myanmar and stand with them always.”³⁶⁰

The customer review page on AJS’s website shows that many Western individuals, particularly in the US, have recently bought gemstones from the company.³⁶¹ AJS Gems confirmed that it had sold gemstones to international jewellery brands, but would not disclose their names.³⁶²

GemMatrix, which told Global Witness it sells rubies from Myanmar³⁶³ and indirectly provides rubies to international brands, told us it was aware that the military controls the country’s gemstone mines.³⁶⁴ The company told Global Witness in a letter that it had a policy in place before the military coup against buying gemstones from Myanmar, and that it had issued a “no-purchase or marketing order” for all Myanmar rubies and other gemstones.³⁶⁵ However, in July 2021, six months after the coup, a company representative told a Global Witness investigator posing as a potential customer that the company could help to source a large, unheated Burmese ruby.

Another three of Thailand’s top ten gemstone exporters – Sant Enterprises Co., Ltd., KGK Group and China Stone Co., Ltd. – also told Global Witness that they sell Burmese rubies.³⁶⁶ Two of them (Sant Enterprises³⁶⁷ and KGK Group through its diamond subsidiary³⁶⁸) are members of the Responsible Jewellery Council – an industry standard for the gemstone sector – while China Stone claims on its website to source “conflict-free” gemstones.³⁶⁹ None of the company representatives were able to tell us which mines in Myanmar they sourced from. The China Stone representative said the company was still receiving rubies from Myanmar despite the coup. China Stone and Sant Enterprises both reported having international customers but did not disclose their identities.³⁷⁰



Craftsmen cut and polish raw rubies and other gemstones at a workshop in Mogok, in March 2020. *MO*

We wrote to all the companies to give them an opportunity to comment on the record for this report, and four of them replied: Faidee, GemMatrix, Manja-Thai and Veerasak Gems. All four companies stressed that they sought to source responsibly.³⁷¹

4.5 What should Thailand’s gemstone and jewellery companies and the Thai government be doing?

Thailand’s gemstone and jewellery companies need to achieve full oversight over their supply chains to ensure that they are conflict-free in line with the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas (see box in Section 5.1). This is particularly important in the case of Myanmar, where the military now controls both the gemstone industry and the state.

At present, as this report explains, there is no way to trade rubies from Myanmar without financing a brutal military junta and/or contributing to conflict and human rights abuses. This means that companies should not be sourcing or marketing rubies from Myanmar at all.

More action is therefore needed both by the companies and by the Thai government to ensure that Burmese rubies are not entering international supply chains through Thailand.

Thailand must demonstrate that it is taking responsible sourcing seriously if it hopes to retain its status as a gemstone trading hotspot in the long term. Its actions to this end should include adhering to responsible sourcing standards, including the OECD framework, as well as imposing legal restrictions on the importing of rubies from Myanmar, and tightening border controls to prevent smuggling.



Brokers wait to get paid in cash by a trader for the gemstones they have sold, at the Htar Pwe, or gems market, in Mogok in February 2020. *MO*

5. INTERNATIONAL JEWELLERS AND AUCTION HOUSES ARE FAILING TO RESPECT HUMAN RIGHTS

5.1 Flouting internationally agreed responsibilities

Companies selling gemstones have a responsibility under internationally endorsed frameworks including the UN Guiding Principles on Business and Human Rights (UN Guiding Principles) and the OECD's Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas (OECD Guidance) to avoid causing or contributing to adverse human rights impacts, and governments have a responsibility to ensure that companies comply (see box below).

But Global Witness research has found that industry codes based on these frameworks are obscuring bad practices, while existing responsible sourcing systems are inadequate for the current Myanmar context. Our research into 30 of the largest European, American and Asian jewellery companies, auction houses and mass-market retailers found that in any case only a few companies sourcing from



Female workers aged between 13 and 19 extract rubies from stones mined in the mountains near Mong Hsu in Shan State, 2018. *Suthep Kritsanavarin*

Myanmar are taking their responsibility to protect human rights seriously. The need for a more stringent approach could hardly be clearer.

Internationally endorsed human rights frameworks applicable to the gemstone sector

UN Guiding Principles

All companies have a responsibility to respect human rights, wherever they operate in the world, regardless of their size, sector, location, ownership, or structure. This responsibility is laid out in the UN Guiding Principles.³⁷²

The UN Guiding Principles require companies to avoid causing or contributing to adverse human rights impacts through their own activities and to address such impacts when they occur. They also require companies to seek to prevent or mitigate adverse human rights impacts that are linked to their operations, products or services by their business relationships, even if they have not themselves contributed to those impacts.³⁷³

OECD Guidance

The OECD Guidance³⁷⁴ is the internationally recognised standard for responsible minerals sourcing. It was developed in the context of the

Congo wars and with a focus on the so-called 3T minerals (tin, tantalum and tungsten ores) and gold, but is applicable to all minerals and regions.

The OECD Guidance lays out a five-step process, which in principle is valid for all companies in a supply chain, aiming to ensure that mineral purchases do not contribute to conflict or human rights abuses. It includes the establishment of company management systems; the identification and assessment of risks in supply chains; risk mitigation and management; independent audits of supply chains (this applies only to refiners and smelters); and public reporting.³⁷⁵ A few jurisdictions, including the EU, have enshrined the principles of the OECD Guidance into law.³⁷⁶

The OECD framework requires companies continuously to assess and mitigate conflict and human rights issues in their supply chains when sourcing from high-risk areas such as Myanmar.

5.2 Industry codes fall short and can obscure bad practices

Gemstone and jewellery industry bodies have developed several voluntary standards, which in some cases are built on the OECD Guidance. Such standards can in the best cases promote responsible sourcing; but being purely voluntary they cannot replace mandatory standards and they lack the independent structures needed to ensure effective regulation, particularly when dealing with such a challenging environment as Myanmar.

The Responsible Jewellery Council (RJC) is a leading jewellery industry association, with over 1,200 members worldwide.³⁷⁷ Its Code of Practices (COP) standard addresses responsible sourcing from conflict and high-risk areas among other criteria such as environmental impact and labour rights in jewellery supply chains.³⁷⁸ The revised COP standard from 2019 includes coloured gemstones for the first time.³⁷⁹ Compliance with the COP standard is certified by audits every three years in case there are minor issues, or after a year when the auditor reports major non-conformance.³⁸⁰ Companies are required to report publicly on relevant business practices, but the standard does not provide sufficient detail on what they need to report.³⁸¹

Member companies have two years to achieve certification and become certified members.³⁸² This means that companies could enjoy the enhanced credibility that comes from RJC membership without necessarily adhering to its principles, because outsiders might not be aware of the difference between uncertified and certified members. According to Human Rights Watch, around 30% of the RJC's members were not certified as of May 2020.³⁸³ RJC said in a

letter to Global Witness that it disagrees with the assertion that companies could benefit from their membership before they are certified, because they are identified as simply having “joined” the RJC.³⁸⁴

The Gemstones and Jewellery Community Platform of the Coloured Gemstones Working Group (CGWG) is another industry initiative, launched in April 2021. The CGWG was founded in 2015 by some of the best-known Western jewellery and gemstone mining companies, with the objective of improving sourcing and operating practices along the entire coloured gemstone value chain.³⁸⁵ In collaboration with the RJC and with support from consultants TDi Sustainability it has developed several tools and resources, based on the OECD Guidance, which are freely accessible and intended to help companies with responsible sourcing.³⁸⁶

However, the CGWG's commitment to responsible sourcing is called into question by the fact that the controversial gemstone company Gemfields is a member and that at least three major participating companies, Chopard³⁸⁷, Boucheron³⁸⁸ and Tiffany & Co.³⁸⁹ source, or have recently sourced, rubies from Gemfields' mine in Mozambique, where serious human rights abuses have been documented. Mozambique does not offer an ethical alternative to sourcing gemstones from Myanmar (see box on p.41).

In a letter to Global Witness, the CGWG said it takes human rights allegations against Gemfields extremely seriously and that Gemfields has always acted transparently within the CGWG. In view of the OECD guidance recommendation to disengage in case of a risk of serious human rights abuses, CGWG said that it prefers to cultivate transparent mineral supply chains and sustainable corporate engagement in the mineral sector with a view to enabling countries to benefit from their mineral resources. To this end, its members use their influence to work together to address potential risks, the CGWG said. However, it did not provide any explanation as to how its members have addressed the reported human rights abuses related to Gemfields' concession or whether these abuses have been addressed by Gemfields.³⁹⁰

In a letter to Global Witness Tiffany & Co. said it had not purchased directly from Gemfields since 2017 and was reviewing the allegations that had come to its attention. “Over the years, Tiffany & Co. has made clear to Gemfields that human rights and ethical business conduct are key priorities, and we have discussed these topics with them,” the company said, noting that under the OECD guidance the response to a red flag should be to seek to resolve issues where possible. Tiffany did not comment on whether its concerns have been addressed by Gemfields.³⁹¹



A worker drills a hole to insert explosives at a ruby mine near Mong Hsu controlled by the SSA-N, 2018. *Suthep Kritsanavarin*

Mozambique: not an ethical alternative to rubies from Myanmar

Amid concern about human rights risks relating to the supply of rubies from Myanmar, the 2009 discovery of an immense new ruby deposit in Mozambique's Cabo Delgado Province³⁹² came as a relief to the jewellery industry. The Montepuez deposit was soon producing an estimated 30% of the world's rubies.³⁹³ In 2011, a 130 square mile concession was granted for 25 years³⁹⁴ to Montepuez Ruby Mining Limitada (MRM).³⁹⁵ MRM is 75% owned by Gemfields,³⁹⁶ with the remainder owned by Mozambican company Mwiriti Limitada.³⁹⁷

Gemfields describes itself as a “world leading supplier of responsibly sourced coloured gemstones” and says it contributes “positively to national economies” and builds “lasting, sustainable livelihoods for the communities surrounding our mines”.³⁹⁸ Such framing has helped it promote its rubies as the ethical alternative to Burmese rubies, particularly between 2003 and 2016, when Burmese rubies were subject to a US import ban (with sanctions expanded in 2008).³⁹⁹

However, the reality seems to be very different. During the last decade widespread human rights violations committed by security forces against artisanal miners in and around the Montepuez mine have been documented, including beatings, humiliating treatment, unlawful detention and sexual abuse.⁴⁰⁰

The discovery of the ruby deposit led to an influx of artisanal miners to the area from 2009,⁴⁰¹ but when MRM obtained its concession two years later it began to use armed security forces to eject artisanal miners and prevent their return.⁴⁰² Since then at least 18 people have been shot dead, with most of the killings linked to private and state security forces, according to Montepuez' Attorney General interviewed by Al Jazeera.⁴⁰³ In response to our enquiries, Gemfields stated to Global Witness that it is aware of seven people shot dead of which six are attributed to Mozambican forces or police.⁴⁰⁴ A video which went viral shows police officers and security guards beating artisanal miners on the MRM concession.⁴⁰⁵ Apart from the official security guards, a gang of thugs reportedly operates within the MRM concession, attacking miners.⁴⁰⁶ While Gemfields has denied any connection to them, they have been seen clearing out an artisanal mine in view of MRM security guards.⁴⁰⁷

Gemfields has stated that it is illegal to carry out mining on a concession held by another party, and has acknowledged to journalists that it cooperates closely with the government, saying that state forces have a mandate to safeguard a key national asset.⁴⁰⁸

In 2014, the police allegedly chased inhabitants of two villages from their homes in order to remove them from MRM's concession, assaulting them and burning down some 300 houses.⁴⁰⁹ Gemfields insisted that the clearance was lawful and that those whose houses were destroyed had had no lawful land claim.⁴¹⁰ However, at London's High Court in 2018 Gemfields agreed to pay £5.8 million to 273 people alleging human rights abuses associated with the clearing of the land, although it denied any liability.⁴¹¹

Gemfields wrote to Global Witness that, apart from one journalist's allegations, it is not aware of allegations of ongoing violence involving MRM personnel and contractors, and that the company has recently joined the Voluntary Principles on Security and Human Rights.⁴¹²

The project appears to have primarily profited the elite. Gemfields' Mozambican partner Mwiriti Limitada is connected to some of the country's most powerful individuals, including Samora Machel Jr, the son of Mozambique's first president,⁴¹³ and General Raimundo Pachinuapa,



Artisanal miners hunt for rubies as they sift through gravel by a small dam near the Montepuez ruby mine in Mozambique, 2018. Matthew Hill/Bloomberg via Getty Images

a member of the ruling party and former governor of Cabo Delgado Province.⁴¹⁴ Gemfields told Global Witness that it takes the issue of conflicts of interest seriously and undertakes respective due diligence risk assessments.⁴¹⁵

The northern provinces, including Cabo Delgado, have the highest poverty rates in the country despite great natural resource wealth.⁴¹⁶ Cabo Delgado is blighted by armed conflict and large-scale population displacement.⁴¹⁷ Gemfields told Global Witness that MRM has been a key driver of employment, tax revenue, economic stimulus and vocational training in Cabo Delgado and that Gemfields' profits benefit thousands of public shareholders.⁴¹⁸

5.3 Due diligence on Myanmar supply chains is extremely difficult

Industry experts commonly describe gemstone supply chains, not just in Myanmar, as complex, fragmented and opaque. Processors and jewellers do not usually source directly from mines and gemstones often change hands multiple times.⁴¹⁹ In previous chapters this report has described how

company ownership in Myanmar lacks transparency and how companies processing rubies usually do not know the precise origin of the rubies they buy. Together, these factors mean that due diligence for downstream companies is especially difficult where Myanmar is concerned.

Several tracing and certification systems have been developed to help ensure responsible sourcing of minerals and gemstones around the world, but none of these initiatives are compatible with the specific circumstances in Myanmar. Conflict-free certification, "closed pipeline" sourcing, fair trade and enhanced "mass balance" schemes able to report what percentage of their material comes from certain areas of origin all rely on a level of stability and legitimate governance that does not exist in Myanmar. Even before the 2021 coup, Tiffany & Co. had abandoned an attempt at closed pipeline sourcing from Mogok amid concerns that it could not be done responsibly.⁴²⁰

These challenges do not free companies or governments from a responsibility to act. If anything, they make it more important for companies to take the responsibility themselves and to demand transparency from suppliers, and to advance traceability and other efforts to ensure that the gemstones they buy are free from links to conflict, human rights abuses and illegality; and for governments to ensure that companies are taking these responsibilities seriously. On the issue of rubies mined before the military takeover, see the box on p.43.



A man searches after dark through the tailings left by gemstone mining companies in the mountains near Mong Hsu. *Suthep Kritsanavarin*

Old versus new rubies

Many of the most valuable Burmese rubies sold by international auction houses and luxury retailers are antiques that were mined and cut decades, or even more than a century, ago. Does that mean that they should be exempted from restrictions?

Unfortunately not. It would be very difficult for companies and retailers to demonstrate that their rubies were sourced responsibly prior to military rule in Myanmar. There is currently no established technology that allows the date when a ruby was mined or cut to be tested. Additionally, rubies mined under the Burmese kings, or the British colonial administration when many of the finest Burmese rubies were first sold – were also tainted by abuse and exploitation.⁴²¹

Our investigations have shown that even under the 2016–2021 NLD government, men with guns

dominated the gemstone industries. The military, its cronies and ethnic armed groups continued to profit at every step of the supply chain – making it virtually impossible to source responsibly even rubies that were mined during that period, to say nothing of the difficulty of reliably establishing that they were in fact mined then.

In any case, even if there were shown to have been a period when rubies were produced without human rights abuses (as may have been the case in the decade between Myanmar’s independence from Britain and the military’s 1962 seizure of power), and even if it were possible reliably to date rubies to that period, adding exemptions to a blanket ban against imports of Burmese rubies would create loopholes open to fraudulent exploitation by military-connected companies and dealers.

5.4 Western jewellery brands, auction houses and mass-market retailers ignore the risk that they could be funding atrocities in Myanmar

According to industry experts, the most significant destination markets for Burmese rubies are China, India and the US.⁴²² EU countries, the UAE, Hong Kong and Singapore are also important markets.⁴²³ The US and Europe do not have significant cutting and polishing industries but have important jewellery manufacturing sectors, particularly of high-end jewellery in the case of Europe.⁴²⁴

Global Witness contacted 30 US-, Europe- and Asia-based jewellery companies, auction houses and mass-market retailers selling gemstones and asked them to fill in a questionnaire on their due diligence efforts regarding gemstone sourcing and in particular on their potential sourcing of gemstones from Myanmar.

Seventeen of the 30 companies we contacted did not respond at all, despite repeated email and telephone follow-up. These included jeweller Pragnell; mass-market retailer Walmart; and auction houses Christie’s, Sotheby’s and Bonhams – all of which advertised Burmese rubies for sale on their websites in 2021.⁴²⁵ Sotheby’s⁴²⁶ and Christie’s⁴²⁷ in particular sell some of the Burmese rubies

achieving the highest prices on international markets, and while many of these rubies are clearly old (see box above), others come with a certificate from a recent year, including 2021.

Only four companies agreed to speak to Global Witness and six companies submitted partial responses to the questionnaire, including luxury jeweller Van Cleef & Arpels, which also marketed Burmese rubies in 2021.⁴²⁸ The company cited its commitment to the OECD Guidance and membership of the RJC as evidence of its responsible sourcing practices. However, it did not provide further evidence that it was able to source rubies from Myanmar ethically.⁴²⁹ Three companies replied to us but neither agreed to an interview nor responded to the questionnaire.

Harry Winston directed us to a statement on the company’s website which states that it does not source directly from Myanmar, but rather from “trusted and verified suppliers, who certify that their rubies and jadeite, of Burmese origin, were imported during a period of time when there were no international sanctions”. Harry Winston announced on 9 December that it would no longer source gemstones from its suppliers that have Burmese origins, regardless of their importation dates.⁴³⁰

Myanmar gemstones in Europe and the US

The inability of traders to identify the origins of the Burmese rubies they sell demonstrates the opacity of the supply chain in the country. Still, the question of which countries buy Myanmar’s rubies is a crucial one. Unlike in Myanmar’s jade industry, where China is by far the largest market, the ruby industry has broader international ties.⁴³¹

The UN Comtrade database publishes trade statistics showing which countries have imported gemstones from Myanmar.⁴³² This data must be viewed with caution, for two main reasons. First, it relies on reporting by countries and is therefore likely to be inaccurate or incomplete.⁴³³ Trade data on gemstones is broadly unreliable due to the prevalence of smuggling and the common practice of undervaluation to reduce customs and tax obligations. Second, the data cannot be disaggregated to include only rubies, so other precious and semi-precious stones mined in Myanmar (including jade) are likely to be included.

Nevertheless, trade data makes it clear that three European nations (France, Switzerland and Italy) each imported over one hundred million dollars’ worth of Myanmar’s gemstones in the five years

from 2016 to 2020. In total, countries reported importing US\$955 million of Myanmar gemstones during that period, or an average of US\$191 million annually.

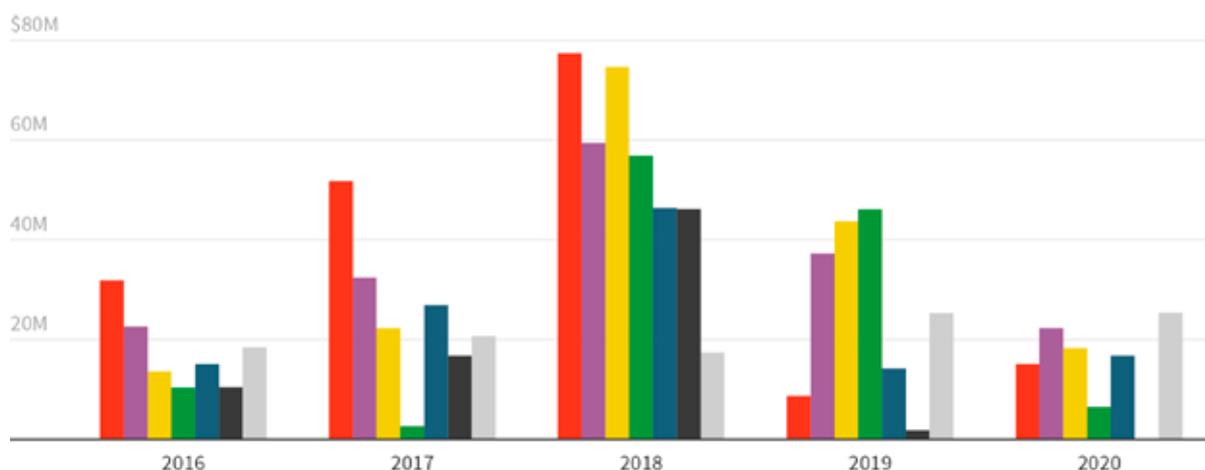
France, China (including Hong Kong and Macao)⁴³⁴ and the US were the largest reported importers, purchasing over US\$170 million worth of Myanmar gemstones and semi-precious stones each over five years, while Italy was the fourth-largest importer at US\$122 million. Switzerland and Germany were the next two largest importers, at US\$119 million and US\$75 million respectively.

While these figures must be treated with caution, it is unlikely that imports of Myanmar gemstones into the countries concerned were below what was reported to the UN. Rather, these numbers likely represent an underestimation of Myanmar’s exports – the prevalence of smuggling and undervaluation means that Myanmar’s contribution to the global gemstone industry is likely to be significantly larger. They also do not capture any Myanmar gemstones smuggled to Thailand and then exported, which as we have seen is the most common route to international markets.

ANNUAL REPORTED IMPORTS OF GEMSTONES FROM MYANMAR

Global imports of precious and semi-precious gemstones from Myanmar (HS710310 & HS 710391)

France China USA Italy Switzerland Germany All Other Countries



Source: United Nations Comtrade Database

The companies that spoke to us, Signet Jewelers,⁴³⁵ Chopard, Tiffany & Co. and Bulgari, see themselves as industry leaders on responsible sourcing. Yet two of them – Bulgari and Chopard – would not rule out sourcing rubies from Myanmar,⁴³⁶ and Bulgari was marketing at least one ruby from Myanmar at the time of our investigation.⁴³⁷ Chopard and Bulgari both explained to Global Witness that they do not exclude entire countries from their supply chains unless required by regulations (an approach which Chopard considers not to be in line with international standards). This is even though Chopard published an announcement on its website in October 2017 which stated that it would stop sourcing Burmese gemstones with immediate effect. The statement was still on the company’s website in October 2021, but by November it had been removed.⁴³⁸

Chopard told Global Witness that rather than excluding entire countries, it instead applies enhanced due diligence and that on the basis of its due diligence system and the assurances provided by its suppliers, it is satisfied that the gemstones it uses are not linked to conflict or human rights abuses.⁴³⁹ Chopard said that due diligence measures include in-depth discussions with suppliers and, for high-risk suppliers, site visits and document checks. If it has doubts, Chopard said that it will stop doing business with a supplier. However, it is not clear to Global Witness how effective due diligence could be achieved when sourcing from Myanmar under the current circumstances.

According to a former Gemmological Institute of America analyst, Bulgari still seeks out Burmese rubies.⁴⁴⁰ Bulgari did not clarify whether it sources gemstones from Myanmar but said that it does not buy directly from Myanmar.⁴⁴¹ It also acknowledged that full traceability of gemstones is difficult.⁴⁴²

Global Witness is only aware of four international high-end jewellers, namely Boodles,⁴⁴³ Harry Winston⁴⁴⁴, Signet,⁴⁴⁵ and Tiffany & Co.⁴⁴⁶ which declare publicly that they have stopped sourcing rubies from Myanmar. Boodles stopped sourcing all products from Myanmar in December 2017. Signet reinstated an earlier ban on rubies originating from Myanmar in 2017, due to reports of human rights violations in the country, which in 2018 it extended to all gemstones from Myanmar. The company states that it may be willing to sell Myanmar-sourced gemstones in the future, if they are produced within the framework of its OECD Due Diligence Guidelines-based sourcing policies.⁴⁴⁷

Tiffany & Co. kept its policy banning the use of Burmese rubies in place after the lifting of the US sanctions in 2016⁴⁴⁸ and told Global Witness that, when those sanctions were first put in place in 2003, there was a



A model displays a ring bearing the “Sunrise Ruby”, the most expensive ruby in the world, worth more than US\$30 million, during Sotheby's spring Magnificent Jewels and Nobel Jewels auction in May 2015 in Geneva. *Fabrice Coffrini /AFP via Getty Images*

loophole that permitted imports of Burmese rubies if they were cut and polished in other countries. This loophole was closed in 2008, but Tiffany & Co. told Global Witness that it was one of the few retail jewellers that had respected the letter and spirit of the law since 2003 by not purchasing rubies from Myanmar, regardless of where they were cut and polished.⁴⁴⁹ Cartier does not have a statement on its website⁴⁵⁰ but wrote to Global Witness that it stopped sourcing rubies from Myanmar in 2017.⁴⁵¹

Gübelin wrote to us that it has stopped sourcing gemstones exported from Myanmar since 1 February 2021 until it feels secure that its purchases benefit the communities who find them and do not support conflict and abuses of human rights. The company acknowledged that a gemstone’s value and journey to market “can lead to bad actors engaging in illicit or illegal actions”. Gübelin said that it had created an enhanced due diligence procedure to support its policy, ensuring that any supplier offering a Myanmar gemstone must produce documentation proving that it was exported from Myanmar prior to February 2021.⁴⁵² While this is a positive step, even stones mined before the coup are likely to have benefited the military and other armed actors, as our investigation shows.

5.5 Due diligence and responsible sourcing: a few companies show the way, but reporting remains weak

Jewellery companies rarely make responsible sourcing issues front and centre of their marketing. The websites of many companies are designed solely to evoke beauty and

luxury, referring to human rights risks only on a corporate social responsibility page which customers are unlikely to see if they do not search for it.⁴⁵³ Of the company websites reviewed by Global Witness, Signet's is an exception in this regard, placing information relating to due diligence policies and performance in a relatively prominent position and publishing more information than most other companies.⁴⁵⁴

Many companies do not appear to report annually on their due diligence efforts at all,⁴⁵⁵ despite this being an expectation of the OECD Guidance.⁴⁵⁶

As regards actual due diligence activity, some of the companies who replied to Global Witness do engage actively with their suppliers to gain oversight of their supply chains. Tiffany & Co. and Bulgari told Global Witness that suppliers (in the case of Bulgari including its subcontractors and indirect suppliers) are required to respect a company code of conduct with obligations regarding social and human rights risks, and that they monitor suppliers through assessments and audits (which in the case of Bulgari can be unannounced).⁴⁵⁷

Chopard uses a similar code of conduct for suppliers and informed Global Witness that it has recently completed an engagement programme with its suppliers to better understand its supply chain.⁴⁵⁸ Signet has developed a supplier code of conduct⁴⁵⁹ and a protocol on responsible sourcing,⁴⁶⁰ which together detail its expectations of its suppliers, including putting in place a management system to identify risks and reporting annually on compliance.⁴⁶¹

Tiffany & Co. was the only company classified as "strong" on responsible sourcing in a 2020 Human Rights Watch review. Bulgari and Signet were ranked as "moderate" and Chopard as "fair" by the same review.⁴⁶²



Traders check rubies and other gemstones beside the Mogok Lake, a lake formed from an abandoned colonial-era ruby mine in the centre of the town, March 2020. *MO*

Global Witness contacted Sotheby's, Christie's and Bonhams to request discussion of their due diligence practices, but none of the three auction houses replied to the request. Global Witness also contacted Costco, Intercol USA and Walmart asking to discuss their due diligence practices but none of these companies replied either. Interviewed by a trade journal, the vice-president of Intercol USA suggested that when sourcing from Myanmar it was enough to avoid breaking any laws and to respect sanctions.⁴⁶³

5.6 What should international jewellers, auction houses and gemstone dealers be doing?

Jewellers, auction houses and gemstone dealers have a responsibility to find out whether the gemstones they sell are linked to conflict or are helping to fund human rights abuses. Few of them are fulfilling that responsibility. If companies do not know who they are ultimately buying from, and there is a risk that they could be funding Myanmar's military or ethnic armed groups that are responsible for the types of abuses described in this report, they have an obligation to responsibly end the business relationships concerned.

A 2019 UN Fact Finding Mission on Myanmar concluded that businesses in the gemstone sector should conduct heightened due diligence to ensure that they are not purchasing or trading any gemstones produced, sold by or otherwise linked to the military.⁴⁶⁴

"No business enterprise active in Myanmar or trading with or investing in businesses in Myanmar should enter into a business relationship of any kind with the security forces of Myanmar, in particular the Tatmadaw, or any enterprise owned or controlled by them, including subsidiaries, or their individual members," the UN mission said. "Given the global reach of Myanmar's jade and ruby trade, the involvement of the Tatmadaw in its extraction and the Tatmadaw's responsibility for human rights and international humanitarian law violations perpetrated in mining areas, businesses should ensure they are not contributing towards, or benefiting from, those violations."⁴⁶⁵

However in the current situation in Myanmar, as we have shown, it is simply not possible to conduct effective due diligence or to mitigate risk adequately. In Global Witness's view, any company that carried out adequate due diligence on its supply chains would not currently be sourcing rubies or other gemstones from Myanmar at all. Accordingly, international companies' due diligence must focus on excluding all gemstones originating in Myanmar until such time as responsible sourcing becomes possible.

RECOMMENDATIONS

To all states, the UN, international institutions, and regional bodies

1. Avoid recognising the Myanmar military's State Administration Council (SAC) and deny the SAC accreditation and representation in all instances.
2. Do not engage with the SAC in any kind of activity and do not pressure local partners to engage with the SAC to enable operations.
3. Recognise the National Unity Consultative Council (NUCC) and the National Unity Government (NUG) as legitimate representatives of the people of Myanmar and include these bodies in regional and international forums.
4. Increase humanitarian assistance to the people of Myanmar, including addressing the emergency that has developed in the wake of the coup and the Covid-19 pandemic, without legitimising the military junta, or allowing the junta to influence or benefit from the distribution of assistance.
5. Support a UN Security Council arms embargo and a resolution mandating a peaceful transition back to elected civilian government.
6. Adopt policies that restrict companies under their jurisdiction from providing material support to or engaging in business with the Myanmar military, by means of targeted sanctions and other restrictions that focus on the military's economic lifelines while minimising impacts on the people of Myanmar, including measures targeting:
 - a. Senior military officers, members of the SAC and other officials responsible for violations of international human rights law and international humanitarian law, as well as their immediate family members and associates, where they may be used as proxies to evade sanctions
 - b. All military-owned companies including conglomerates Myanmar Economic Corporation and Myanmar Economic Holdings Limited and their subsidiaries
 - c. SAC's ability to access Myanmar's foreign currency reserves held overseas that are not already frozen, as well as the country's annual revenues from the sale of natural gas
 - d. All state-owned enterprises that provide financial support to the military, including Myanma Oil and Gas Enterprise (MOGE) and Myanmar Gems Enterprise (MGE)
 - e. Companies that are part of the military's patronage network in the gemstone sector
7. Recognise the pervasive influence of the military over Myanmar's jade and gemstone industries and place bans on the import of all jade and gemstones from Myanmar.
8. In the case of countries that do not have due diligence laws on responsible sourcing from conflict-affected and high-risk areas, enshrine in law the Organisation for Economic Co-operation and Development (OECD) Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas (OECD Guidance), promote awareness of the Guidance and ensure compliance by companies. Companies should be penalised for failing to conduct adequate supply chain due diligence as required under the standard.
9. In the case of countries which have due diligence regulations on responsible sourcing from conflict-affected and high-risk areas in place, broaden the regulations to include gemstones and jade from Myanmar and ensure that they are in line with the OECD Guidance, and properly enforce them. Companies should be penalised for failing to conduct adequate supply chain due diligence as required under the standard.
10. Ensure financial systems do not facilitate money laundering related to the illicit trade in Myanmar gemstones.
11. Direct humanitarian and livelihood support to civilians in resource-rich areas through local ethnic civil society organisations and border-based civil society organisations to mitigate the impact of gemstone trade restrictions.
12. Ensure that conflict-sensitive supply chain due diligence is incorporated into National Action Plans on Business and Human Rights, and that these plans are adopted into domestic legislation with adequate penalties and incentives, implemented with adequate resources and enforced.
13. Standardise trade data on coloured gemstones, which currently uses inconsistent units, with some countries recording carats imported, others reporting kilograms and others submitting only a value measure.
14. Create subcategories for Harmonized System (HS) Code for "precious stones except diamonds" used in the current trade system, making it possible to distinguish between rubies, sapphires and emeralds.
15. Improve the transparency and quality of trade data, to ensure that records are easily accessible, transparent and accurate.



Miners take a lift to their accommodation after finishing their shift at a ruby mine controlled by the SSA-N near Mong Hsu, in 2018.
Suthep Kritsanavarin

16. Provide technical and policy support to the NUCC, NUG, ethnic administration groups and Myanmar civil society to develop a vision for the future of the gemstone industry that is inclusive of ethnic minorities and ensures local stakeholders have a meaningful role in deciding how these resources are managed.
17. Provide technical and policy support to the NUCC, NUG, ethnic administration groups and Myanmar civil society to promote transparency and accountability in resource management.

To the NUCC and NUG:

1. Develop a vision for the future of natural resource governance, including gemstone management that is inclusive of ethnic minorities and ensures local stakeholders have a meaningful role in deciding how these resources are managed.
2. Engage ethnic stakeholders and civil society in substantive policy discussions to inform policies, planning, and statements on natural resource governance.
3. Respond to SAC actions in the jade and gemstone industry while addressing post-coup risks that jade, rubies and other gemstones will be used to enrich the military and help sustain its rule.
4. Make concrete policy reform proposals, including the following points:
 - a. Suspending large-scale and heavily mechanised operations until such time as mining can be managed responsibly
 - b. Ordering all companies involved in the jade and gemstone industry to publish beneficial ownership, licence, contract and payment information

- c. Prioritising responsible mining practices and promoting the downstream value-added gemstone sector
 - d. Pledging to prioritise environmental protection and the rights of indigenous and other affected communities, including the right to free, prior and informed consent
 - e. Committing to transparency and accountability in gemstone management
5. Establish a monitoring system and a robust remedy and grievance mechanism that will address the environmental and social impacts of mining.

To gemstone mining and trading companies in Myanmar:

1. Halt illegal operations in gemstone mining areas in recognition that they violate Myanmar law and international norms.
2. Do not apply for any new gemstone mining licences, or for renewal of lapsed licences, should the SAC recommence licensing, until there is a return to a freely and fairly elected civilian government.
3. Avoid making facilitation payments to the military, police, SAC administrators or to the non-state armed groups active in Myanmar's gemstone mines, in line with the OECD Guidance.
4. Do not participate in military-run jade and gemstone emporiums.
5. Follow NUG guidance and policies related to the gemstone industry.
6. Publish beneficial ownership, licence, contract and all payment information.

To the OECD:

1. Issue a clear statement that companies engaged in gemstone trading should conduct supply chain due diligence in line with the OECD Guidance.
2. Actively monitor OECD member states to ensure that robust provisions ensuring appropriate supply chain due diligence for gemstones are put in place and enforced, including through legislation.

To the Responsible Jewellery Council:

1. Develop detailed reporting requirements for its members.
2. Ensure that its standards are properly enforced, including through sanctions for non-compliant members.
3. Expand its chain of custody standard to include coloured gemstone supply chains.

4. Issue a statement to its members that under the present conditions it is not possible to be both OECD compliant and to source gemstones from Myanmar.
5. Issue a notice to their members expressing strong concerns of past reports of repeated severe human rights abuses connected to Gemfields' rubies mining in Mozambique and remind them of their due diligence obligations, including Annex II of the OECD Guidance.

To gemstone and jewellery companies outside Myanmar:

1. Comply with international and domestic laws, including those governing illicit trade in resources, as well as with economic and trade sanctions.
2. Adopt and apply the OECD Guidance, including by implementing the OECD's five-step framework for risk-based due diligence, as follows:
 - a. Establish strong company management systems and adopt and clearly communicate to suppliers and the public a policy for gemstones originating from Myanmar and other conflict-affected and high-risk areas
 - b. Identify and assess actual and potential supply chain risks
 - c. Design and implement a strategy to respond to identified risks, including by deciding to suspend trade with Myanmar and to disengage from individual suppliers
 - d. Carry out an independent third-party audit of supply chain due diligence at identified points in the supply chain
 - e. Publicly report on supply chain due diligence policies and practices, including clear identification of suppliers
3. Apply the five-step framework to pre-existing stocks of coloured gemstones to the extent that it is possible to identify the sources of past supplies.
4. Avoid contributing to the financing of conflict or fuelling, facilitating or exacerbating conditions of conflict, as outlined in Annex II of the OECD Guidance and its supplements, and address such impacts where they occur.
5. Adopt and apply other relevant guidelines including the UN Guiding Principles on Business and Human Rights and the UN Guidance for Heightened Due Diligence in Conflict-Affected Regions.
6. In the case of technology companies that facilitate the sale of gemstones from Myanmar (including WeChat), follow the UN's Guiding Principles on Business and Human Rights by ensuring that they avoid causing or contributing to adverse human rights impacts and addressing such impacts where they do occur.

If companies follow the OECD Guidance and the above recommendations in good faith, they are likely to conclude that responsible sourcing of jade and other gemstones from Myanmar, including through processors in Thailand and other third countries, is impossible in the current context.

While due diligence under the OECD Guidance is designed to be a tool for engagement, the guidance also recognises that disengagement may be necessary, including with upstream suppliers when a reasonable risk has been identified that a company is sourcing from, or linked to, any party committing serious abuse or any non-state armed group.

Companies that stop sourcing jade and/or other gemstones from Myanmar should:

1. Ensure that disengagement from existing business relationships prioritises human rights
2. Provide for, or support legitimate processes that enable the remedy of any adverse human rights impacts that they have caused, contributed to, or been linked with
3. Publicly declare that they have stopped sourcing from Myanmar and set out their conditions for reengagement



An artisanal miner checks mined rubble for raw rubies, at the entrance to a mining tunnel in Mogok, in February 2020. *MO*

REPORT METHODOLOGY

Interviews

Global Witness carried out the research for this report between 2017 and 2021. We gathered information through meetings and correspondence with more than 150 public officials, politicians, armed actors, industry representatives, journalists, community members and experts in Mogok, Mong Hsu, Loi Tai Leng and Yangon in Myanmar; and from company representatives and other industry stakeholders in gemstone trading and sales centres around the world, including in Bangkok, Hong Kong, London and New York.

Given the heightened risk of violence since the military coup in Myanmar we do not reveal the identities of most interviewees in this report.

Data analysis

Global Witness reviewed and analysed a wide range of datasets for this report, including:

- Data published in the five Myanmar EITI reports for the financial years 2013–14 to 2017–18
- Data provided by industry insiders on gemstone licence holders, including a gemstone concession map covering the Mogok area
- Company records made available through DICA's online corporate registry, which can be accessed at www.myco.dica.gov.mm
- Official MGE data on gemstone production
- UN Comtrade data
- Trade statistics and company data from Thai Customs
- Industry gemstone pricing data
- Data compiled by The Armed Conflict Location & Event Data Project and the Assistance Association of Political Prisoners on instances of conflict and violence
- State media archives dating back to the 1990s, hosted by burmalibrary.org
- A comprehensive desktop review of publicly available English and Burmese language sources

Support from Security Force Monitor

Non-profit research group Security Force Monitor, a project of the Columbia Law School Human Rights Institute (<https://securityforcemonitor.org/>), provided Global Witness with support and research on public sources on the Myanmar military's chain of command and operations which contributed to the analysis in this report.

Note on the use of "gemstones" and "rubies"

The mines at Mogok and Mong Hsu are a key source not only of rubies but also of sapphires and other coloured stones. In this report we refer to coloured gemstones rather than rubies in general discussion of mining and trading activities and when primary data sources do not disaggregate gemstone types, as is the case with data published through MEITI. Where possible the report focuses on rubies rather than other gemstones from Myanmar because they fetch higher prices on international markets. However, our recommendations apply to sapphires, spinels and all other gemstones mined in Mogok and Mong Hsu, which should be considered equally likely to be funding armed conflict and human rights abuses.

Revealing identities

Given the heightened risk of violence since the military coup in Myanmar we do not reveal the identities of most interviewees in this report, or the people in the photographs throughout.

ANNEXES

Annex I: Using MEITI data to identify the biggest gemstone mining companies in Myanmar and their links to the military and ethnic armed groups

The lack of transparency in Myanmar's gemstone industry makes it difficult to establish which companies are the largest and the most profitable.

We used three different approaches, based on disclosures made through MEITI during the five fiscal years from 2013–14 to 2017–18, in order to estimate who the biggest players were prior to the expiry of the final licences in 2020, so that we could then see which of them had links to the military and/or to ethnic armed groups. This annex describes our methodology for each approach, outlines in each case the advantages and disadvantages, and lists our headline findings.

There were multiple challenges common to all three approaches. Inaccuracies in disclosures by companies and by Myanmar's government were reproduced in the published data. We found a surprising degree of variation between MEITI reporting years, indicating potentially falsified or otherwise unreliable data. As explained on p.31 of this report, there was little-to-no government monitoring of privately owned mines. This left companies free to underreport production, with sources estimating that during the period of the MEITI data between 60% and 90% of total production was smuggled across Myanmar's border without ever being reported.⁴⁶⁶

Furthermore, MEITI did not cross-check corporate information it published against Myanmar's company registry, held by the Directorate of Investment and Company Administration (DICA). This omission presents several challenges, including that many company names published by MEITI do not appear in the DICA registry, while others show up in the registry under names that are similar but not identical. This made it difficult to establish the corporate ownership of many of the companies listed by MEITI, in order to identify any links to the military or to ethnic armed groups.

The requirement to provide company registration numbers in the later MEITI reports helped us in some instances to establish the identity, and thus the corporate ownership,

of companies, but in other cases it was impossible to establish whether a company that appeared in MEITI reporting was the same as a company with a similar name in the DICA registry. The picture is further complicated by the fact that many companies are inconsistently named across MEITI reports, making accurate aggregation difficult. Finally, none of our three approaches captured companies that did not hold licences to mine but formed informal joint ventures with other companies that did have licences, because only licence holders were required to submit production and tax data to MEITI.

Approach 1: Disclosure of permitted acre days for licences owned by a company

How we did it: We ranked the potential intensity of productivity for each company owning gemstone licences, by multiplying the area of each licence reported in the four MEITI reports from 2014–15 to 2017–18 by the number of active days during the validity period of the licence, then adding together the resulting figures. We did not use the data in the first MEITI report because it included only 20 gemstone mining licences, which we considered to be too small a sample.

Advantages: This approach allowed us to look at a much larger number of companies than those included in the MEITI tax payment and production disclosures, which represented only a small proportion of total gemstone production, since only companies with tax payments above a certain level were expected to report them to MEITI.

Disadvantages: This approach did not take account of the actual productivity of licensed mines. For example, companies sometimes held plots of land without mining them.⁴⁶⁷ The MEITI licence database may also be incomplete, and there may be inaccuracies in our calculations due to the differences in company names and spelling across the four MEITI reports analysed.

Which companies had the largest number of permitted acre days?

1. [Myanmar Ruby Enterprise \(Gems & Jewellery\) Company Limited](#)
2. [Khine Thit Sar Gems Company Limited](#)
3. [Lyan Shan Jewellery Company Limited](#)
4. [Birds Gems & Jewellery Company Limited](#)

5. [Myint Myat Tharaphu Gems Company Limited](#)
6. [Virgo Angel Gems Company Limited](#)
7. [Ruby Dragon Jade & Gems Company Limited](#)
8. [Myanmar San Taw Wun Gems & Jewellery Company Limited](#)
9. [Than Htaik Lu Gems Company Limited](#)
10. [Thit Sar Pan \(Gems & Jewellery\) Company Limited](#)

Approach 2: Disclosure of production

How we did it: We ranked the quantities of gemstones (measured in carats) mined and reported by each company included in the four most recent MEITI reports (the first MEITI report did not include production figures for individual companies).

Advantages: This approach enabled us to check whether the companies with the largest number of acre days also reported high production volumes, as well as bringing to light companies that had high productivity despite a relatively small number of acre days.

Disadvantages: The number of companies obliged to report production was small, and data on the output of companies that were not required to do so (so-called “out of scope” production) was published only in the fifth MEITI report. Among the companies “in scope”, some companies’ figures varied greatly from one year to another, indicating either reporting inaccuracies or that the production of mines varied significantly from year to year. As described above, companies were at liberty to underreport production with little fear of challenge from the authorities, meaning that the companies identified as the largest producers based on their reporting may not in fact have been the largest. Moreover, production data does not translate directly into value, because the quality of gemstones mined in Myanmar varies hugely and market prices fluctuate.

Which companies reported the highest production?

1. [Myanmar Ruby Enterprise \(Gems & Jewellery\) Company Limited](#)
2. [Lyan Shan Jewellery Company Limited](#)
3. [Nilar Yoma Gems Company Limited](#)
4. [Hawk Star \(Gems & Jewellery Company\) Limited](#)
5. [Ruby Dragon Jade & Gems Company Limited](#)
6. [Du Won Star \(Gems & Jewellery\) Company Limited](#)
7. [Myanmar Htun Gems Company Limited](#)
8. [Khun-Pa-Oh Gems & Jewellery Company Limited](#)
9. [Moe Cherry Gems Company Limited](#)
10. [Tun Kyi Linn Gems Company Limited](#)

Approach 3: Disclosure of tax payments

How we did it: We ranked tax payments disclosed by gemstone licence-owning companies across the five MEITI reports. Up to and including the fourth report the requirement for companies to report tax payments was based on thresholds defined by each government department that collected taxes. Only companies making payments above these thresholds (which were progressively lowered for each report) were included in the reporting. We excluded those companies whose tax payments most likely related to their jade licences.

Advantages: This approach enabled us to identify the biggest taxpayers in the gemstone sector, including several companies that did not appear to be significant players judged solely from their number of permitted acre days or the production levels they reported, indicating that they may have been mining stones of above-average quality and value.

Disadvantages: This approach captured only companies that reported and paid tax on their production. With smuggling possibly accounting for as much as 60% to 90% of production in the period of the MEITI data, the companies that reported the highest tax payments may not have been those with the most valuable output of gemstones during the period. A further challenge was that the tax payment data reported through MEITI was not disaggregated according to whether the payments related to jade or to other gemstones. This was a problem because some of the largest gemstone mining companies are also involved in jade mining. We got around this by removing companies from our dataset if their gemstone licences represented only a small proportion of their total licences, but this was an imperfect workaround.

Which companies reported the highest tax payments?

1. [Myanmar Economic Corporation Limited](#)
2. [Lyan Shan Jewellery Company Limited](#)
3. [Ruby Dragon Jade & Gems Company Limited](#)
4. [Nay La Pwint Gems Company Limited](#)
5. [Kyauk Seinn Sun Shwin Jade Gems & Jewellery Company Limited](#)
6. [San Taw Wun Gems & Jewellery Company Limited](#)
7. [Myanmar Ruby Enterprise \(Gems & Jewellery\) Company Limited](#)
8. [Nilar Yoma Gems Company Limited](#)
9. [R B G Yadanar Company Limited](#)
10. [Htay Paing Gems Company Limited](#)

Annex II: How much is Myanmar's coloured gemstone sector worth?

If the gemstone industry in Myanmar were well-regulated and transparent, estimating its value would be straightforward. There would be publicly available and reliable data on the quantity and quality of gemstones being mined and exported, and their prices at each stage in the supply chain.

Unfortunately, this is not the case. The gemstone industry both in Myanmar and internationally is highly opaque, posing formidable challenges to estimating its value. However, while publicly available data is both limited and flawed, it does provide information that, combined with information shared by industry experts, can be used to make an estimate.

This annex explains the methodologies we used to attempt a valuation of Myanmar's gemstone sector and outlines the many challenges we encountered in the process.

Neither this nor any other estimate should be considered authoritative, because there are just too many unknown factors, as set out below for details. Instead, we hope that read in conjunction with our analysis, they will be a starting point for discussions not only about the probable value of Myanmar's gemstone sector, but also about the need for greater transparency across the industry.

Using production and price data to value Myanmar's gemstone industry

We considered multiple different approaches to estimating the value of gems mined in Myanmar and concluded that the most feasible method given data availability and detail was to use production and price data. We take this approach for numerous reasons. First, information is regularly updated and available from multiple sources, unlike other data that could be used to estimate sector size, such as workforce size and the labour share of income in the sector.

Unlike volume figures in trade data, volume figures from production data capture the quantity of gemstones that remain in Myanmar after they are mined as well as those that are exported,⁴⁶⁸ and enable us to estimate the theoretical gross value of officially recorded gemstones produced in a given time period. These sources also provide data on an annual basis, though for various reasons multi-year averages are sometimes preferable and therefore also included. The figures in this analysis

should not be misinterpreted as meaning the net profits of gems mined because it does not include any estimates of operating and other costs.

The starting point for this approach was production volume data (measured in carats) reported annually by the industry's state-owned regulator, MGE, and published in the country's statistical yearbooks.⁴⁶⁹ Gemstone production remained relatively constant between 2011 and 2016, at above 10 million carats each year, but there has been a steep and steady downward trend in recorded production since the NLD administration stopped issuing and renewing licences for gemstone production and the existing licences began to expire from 2017. By 2020, officially recorded gemstone production had fallen by more than 99% from 2016, to just 51,500 carats for the entire year. It is not clear whether this genuinely reflects a massive decline in production, or simply that production was not being reported because it was illegal – interviews with industry sources that are described in detail in this report indicate that the reality is likely to be a combination of both.

Because there is insufficient information available to estimate annual changes in the size of unreported production since licences began to expire, our analysis focused on the period until 2017, when gemstone production was at or near full capacity. We believe that these figures best represent the full potential value of the sector if it were operating at capacity. Because the price of gemstones has changed significantly over time, we limited our analysis to a period of four years, beginning in 2014, when Myanmar began reporting to MEITI and when Gemfields began holding ruby auctions (see "Approach 2" below). We briefly look at more recent years (2018 to 2020) near the end of this annex.

We applied the MGE production volume data for the four years from 2014 to 2017 to two sources of external price data: price information from Gemfields auctions of rubies mined in Mozambique, which are among the most transparent sources of ruby price information globally; and price information from Thai customs on imports of worked rubies, sapphires, and emeralds (HS 7103.91).⁴⁷⁰ We did not use Thai customs data on the price of unworked gems (HS 7103.10) because it combines jade with other gemstones, making it largely useless in the Myanmar context because of the primacy of jade in the country's exports.

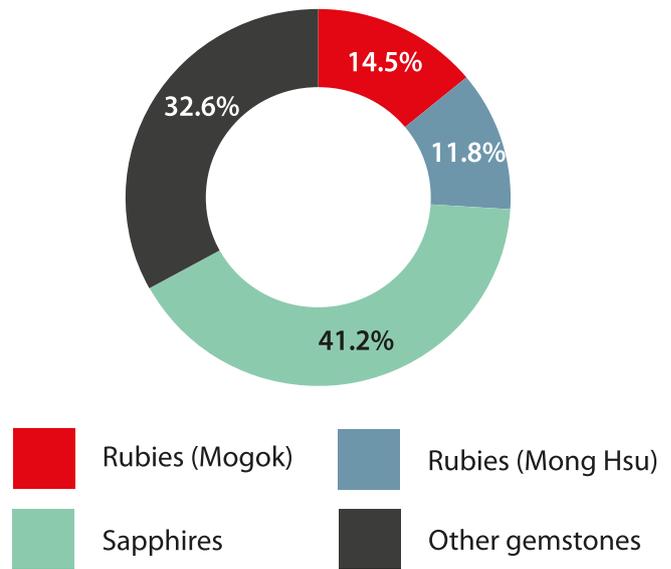
Both sources provide relatively reliable and precise estimates of prices, but they do not reflect the traditional price premium that has been commanded by Burmese rubies and especially by those from Mogok, which are the world's most valuable. Research conducted by Global Witness on the ruby sector found that in sizes under two

carats, an unenhanced stone from Myanmar can command prices two to three times that of a comparable stone from another source. Larger unenhanced rubies can command much higher prices, up to ten times more than heat-treated rubies of similar size. However, perhaps the most useful overall estimate of the premium attained by Myanmar rubies comes from one of their biggest competitors, the Gemfields ruby mines in Mozambique. According to a presentation by Gemfields, “Mozambique rubies remain half the price of comparable Burmese (Myanmar) rubies.”⁴⁷¹

Using this estimate from Gemfields, we can assume the price of rubies from Myanmar to be double that of rubies from elsewhere.

However, not all of Myanmar’s coloured gemstone production consists of rubies which fetch this price premium. Data from the FY2016 MEITI report⁴⁷² shows that Mogok rubies made up about 14.5% of Myanmar’s total gemstone production. Mong Hsu rubies made up another 11.8%. The rest of the production consisted of sapphires and other gemstones, with a very small quantity of other rubies coming from Nant Yar Seik. To create our overall estimate, we adjusted prices only for the share of production accounted for by rubies. This meant that, for 2016 and later, we doubled the value of 26.3% of the total gemstone production. For 2015 and earlier, when only rubies and sapphires were included in the production data, we doubled the value of 39.0% of the total reported production, again corresponding to the percentage accounted for by rubies. In both cases we valued the other gemstones at the international prices. This adjustment to our estimates, which we called our “Mogok margin”, was not a perfect solution, but it at least provided some reflection of the price premium of commanded by Myanmar rubies.

Share of Myanmar gemstone production, by type of stone



Source: MEITI, FY2016 report.

Approach 1: Using MGE production data and Thai customs price data

Thailand’s customs service collects data on gemstone imports including value and weight. It also disaggregates the data so that worked ruby, sapphire and emerald imports (HS 7103.91) are separated from imports of other worked gemstones (HS 7103.99). This presents a unique opportunity to use trade data to assess prices of this specific subset of valuable gemstones. While Myanmar also exports unworked gems to Thailand, most

Thai Customs reference prices

			2014	2015	2016	2017	Average
MGE production data	Rubies and sapphires	unit: (000) carat	11,037	13,482	6,844	4,825	-
	Other gemstones		-	-	3,309	2,124	-
Thai Customs reference price	Rubies, sapphires and emeralds	unit: US\$ per carat	US\$4.26	US\$37.54	US\$43.55	US\$38.49	US\$30.96
	Other gemstones		US\$0.55	US\$1.01	US\$0.63	US\$0.59	US\$0.70
Sector estimate based on Thai Customs prices	unit: million US\$		US\$47	US\$506	US\$300	US\$187	US\$260
Sector estimate after “Mogok margin” of 100% applied to rubies only	unit: million US\$		US\$65	US\$703	US\$379	US\$236	US\$346

Sources: Myanmar Gems Enterprise and Thailand Customs

Myanmar stones go through a first rough cut in Myanmar before being recut abroad.⁴⁷³ We also focused on worked gemstones because unworked gemstones are grouped in trade data with unworked jade, making it far more difficult to analyse.

Our estimates developed using Thai trade data vary somewhat more than those using the Gemfields price data (see below) and show an especially low value in 2014. However, this price data includes sapphires as well as other generally less valuable gemstones, both of which constitute a significant share of Myanmar’s production volume (Myanmar does not have emerald deposits). Because of this, we consider this approach to be more accurate than the other approaches described below. This approach yielded an average value of Myanmar’s gemstone output of US\$260 million per year between 2014 and 2017, or US\$346 million per year when a “Mogok margin” for Myanmar’s rubies was added.⁴⁷⁴

This estimation strategy has a few shortcomings. First, starting in 2016, MGE data on gems production in Myanmar’s Statistical Yearbook began including less valuable gems (or “other gems”) in the total carats produced. The above estimations adjust for that by using price data from Thai imports of other gems (HS 7103.99) to price the share of production that is not rubies, emeralds or sapphires. However, other challenges are more difficult to address, such as the inclusion of emeralds (which Myanmar does not produce) in the overall price data for HS 7103.91 that has been applied to Myanmar’s sapphires and rubies. Lastly, the above application of the “Mogok margin” assumes that Mozambique ruby prices are the same as world prices for rubies from a wide range of countries, which may not be the case.

Approach 2: Using MGE production data and Gemfields price data

Gemfields operates a large ruby mine in Mozambique (see box, Section 5.2) and sells the rubies and other gems through a small number of auctions every year. Price information from these auctions is recorded and released in Gemfields’ annual reports. Using this price information applied to MGE production estimates for gemstones, we arrived at estimated valuations of Myanmar’s annual gemstone output ranging from US\$197 million in 2015 to US\$450 million in 2017 – or an average of US\$311 million per year. Applying the “Mogok margin” to these estimates gave an average annual value of US\$368 million over the four-year period from 2014 to 2017.

This approach also has several potential shortcomings. First, while the MGE production volume data captures sapphires and rubies, we applied a price from Gemfields that reflects only a range of rubies, sapphires, and other types of corundum. The inclusion of the latter, if it sells for lower average prices than rubies and sapphires, may result in an undervaluation of Myanmar’s production. Similarly, the distribution of stones by type and grade is not the same between Gemfields and the mines in Myanmar, and these differences can affect estimates.⁴⁷⁵ We also do not have price data from Gemfields on other gemstones that are produced by Myanmar, and as such the above estimates only reflect the value generated by the rubies and sapphires subsector of Myanmar’s gemstone industry.

Lastly, changes in the way that Gemfields conducts its auctions makes it difficult to compare prices between years. Since 2014 Gemfields has had different types of auctions: some only for higher value rubies, some only

Gemfields auction prices

		2014	2015	2016	2017	Average
MGE production data (rubies and sapphires)	unit: (000) carat	11,037	13,482	6,844	4,825	-
Gemfields guide price	unit: US\$ per carat	US\$40.8	US\$18.1	US\$28.8	US\$73.1	US\$40.2
Sector estimate based on Gemfields auction prices	unit: million US\$	US\$450	US\$243	US\$197	US\$353	US\$311
Sector estimate after “Mogok margin” of 100% applied to rubies only	unit: million US\$	US\$626	US\$338	US\$249	US\$445	US\$415

Sources: Myanmar Gems Enterprise and Gemfields Annual Reports

for lower value rubies, and some mixed auctions. These auctions are not evenly distributed across years, and the volume and quality distribution are not the same at each auction. This is further complicated by the fact that stones are not necessarily sold at auction the same year they are produced. Given the peculiarities of this auction system, multi-year data may provide a more accurate valuation of the sector than the value in any single year.

Two other possible approaches: using UN Comtrade data and Myanmar emporium data

We considered applying two other pricing data sources to MGE production data, but concluded that neither of them was sufficiently reliable. The first was the UN Comtrade database, which publishes price data for imports and exports reported by countries. The main problem with this data is that it shows a huge range in implied values for Myanmar gemstones from US\$2 to US\$5,221 per carat. While these values would not be extraordinary for an individual shipment, they are rather variable for annual averages. Using this UN Comtrade price data applied to MGE production data, Myanmar’s gemstone sector would have had an estimated value of US\$15.89 billion in 2018 but only US\$109,456 in 2020.

It is highly likely that these values are both too extreme, driven by peculiar reporting and some powerful outliers in the trade data. For example, in 2020 China reported imports of 7,575 kilograms of gemstones (HS. 7103.91) from Myanmar. This represented 99.8% of Myanmar’s exports that year by weight, resulting in an average price per carat of just over US\$2 – much lower than other average value estimates (though not out of line with many individual valuations reported by specific countries in specific months of Thai import data). It is unclear what lies behind this reported figure, but this example and

others suggest that reliance on UN Comtrade data is a problematic approach.

The second alternative data source we considered was price data for gemstones sold at Myanmar’s jade and gemstone fairs. These fairs, known as emporiums, are held periodically by MGE. The value of this data as a source of market price information has been questioned by industry sources, including by the Natural Resource Governance Institute (NRGI), which attempted an earlier valuation of Myanmar’s gemstone sector in a 2019 report. According to NRGI, the average unit sales price from the emporiums was approximately US\$7 per carat in financial year 2014–15 and US\$4 per carat in 2015–16, which would imply an “incredibly low” valuation of the sector.⁴⁷⁶ Beyond the problem of valuation, data from emporium sales is also aggregated in a way that makes it difficult to conduct analysis. Multiple types of gemstones are included in summary data, making it impossible to separate out rubies and sapphires from semi-precious stones, such as quartz, that have far lower values, and it presents major challenges to using emporium data to value the sector.

Gemstone sector valuations after 2017

Estimating the value of Myanmar’s gemstone sector becomes more difficult after 2017 for several reasons. First, as described in this report, undeclared production increased as a share of total production after licences began to expire, but we have no further data from which to produce accurate estimates. This means that official production estimates from this period are less likely to reflect the actual sector size than those from earlier years.

Additionally, there are no MEITI reports that provide detailed data on production after 2017, so there is no way to determine what share of the carats produced and disclosed in the statistical yearbook are rubies and sapphires and which are significantly less valuable other gems. For the estimates below, we use 2017 data,

Recorded gemstones production and sector valuations from 2018 to 2020, US\$ millions

		2018	2019	2020
Production (official MGE estimates)	carats (000)	3,767	1,852	52
Sector estimate based on Thai Import prices	US\$ millions	US\$52	US\$52	US\$1
Sector estimate based on Thai Import prices with Mogok margin of 100%	US\$ millions	US\$66	US\$66	US\$2
Sector estimate based on Gemfields prices	US\$ millions	US\$267	US\$83	–
Gemfields prices with Mogok margin of 100%	US\$ millions	US\$337	US\$104	–

Note: Thai import price estimates assume that, for each year from 2018 to 2020, 69.43% of production volume was rubies and sapphires and the remaining volume was other gems. This ratio is from the 2017 Myanmar EITI report. Thai import prices for HS 7103.91 have been applied to the former, and prices from HS 7103.99 to the latter.

which showed that 69.43% of total carats were rubies and sapphires. Lastly, the Covid-19 pandemic affected the gemstones sector significantly, introducing greater uncertainty around the volumes and values reported for the year. Because of the pandemic, Gemfields held no auctions in 2020, so it is not possible to develop an estimate for that year.

Missing millions: adjusting for estimates of smuggled gemstones?

Various estimation techniques exist for gemstones that go missing at some point after they are recorded as extracted at the mining site. However, it is significantly more difficult to estimate the quantity of gems that are mined in Myanmar but never recorded even in production data (let alone in emporium or trade data). Official production statistics have regularly been criticised for failing to capture a significant proportion of production. The 2016 Gemstone Sector Review conducted for MEITI found through interviews with stakeholders that “up to 80% of gemstones produced in Myanmar are not declared and therefore bypass the formal system.”⁴⁷⁷ This factor introduces significant uncertainty into any attempt to estimate the overall size or value of the sector.

The failure to report production is attributable to illegal business practices, corruption, incentives that encourage smuggling, and lax enforcement. All the above estimates are based only on official production data, and do not take any account of underreporting of production at the mining site. If we make the assumption (which we consider credible) that 80% of total production was not declared at the mining site estimates of the size or value of the sector increase by a factor of five.

Incorporating this estimate of undeclared production into the first approach described above, using price data from the Thai customs and applying the “Mogok margin”, produces an estimated value for the output of the Myanmar gems sector of US\$1.73 billion annually over the period from 2014 to 2017. Incorporating the same estimate of undeclared production into the second approach described above, using prices from Gemfields auctions and again applying the “Mogok margin”, gives an estimated value of US\$2.07 billion annually between 2014 and 2017. Both estimates are subject to all the caveats noted above.

Further research could help estimate whether these figures are reasonable within a broader context – for example, how does the value of rubies produced in Gemfields 86,403-acre Mozambique concession compare to the value of production and size of Myanmar’s concessions.



A group of small-scale artisanal ruby miners works in Mogok in March 2020. MO

ENDNOTES

- 1 “Step by step: Myanmar gem sector emerges from isolation and U.S. sanctions”, American Gem Trade Association, 2016, p.6; “EITI Report 2017–2018”, Myanmar Extractive Industries Transparency Initiative, March 2020, p.99 (<https://eiti.org/document/myanmar-20172018-eiti-report>)
- 2 “Myanmar: Coup Leads to Crimes Against Humanity”, Human Rights Watch, 31 July 2021 (<https://www.hrw.org/news/2021/07/31/myanmar-coup-leads-crimes-against-humanity>); “Myanmar military uses systemic torture across country”, Associated Press, 28 October 2021 (<https://apnews.com/article/myanmar-torture-military-prisons-insein-abuse-390fe5b49337be82ce91639e93e0192f>)
- 3 “Myanmar: Coup Leads to Crimes Against Humanity”, Human Rights Watch, 31 July 2021 (<https://www.hrw.org/news/2021/07/31/myanmar-coup-leads-crimes-against-humanity>)
- 4 EU COUNCIL DECISION (CFSP) 2021/639 of 19 April 2021 amending Decision 2013/184/CFSP concerning restrictive measures in view of the situation in Myanmar/Burma (<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32021D0639>); “Treasury Sanctions Military Holding Companies in Burma”, US Department of the Treasury, 25 March 2021 (<https://home.treasury.gov/news/press-releases/jy0078>)
- 5 “UN rights expert urges sanctions on Myanmar’s oil, gas sectors”, Reuters, 7 July 2021 (<https://www.reuters.com/business/media-telecom/un-rights-chief-urges-asean-move-myanmar-dialogue-2021-07-07/>); “Myanmar junta’s growing reliance on extractives for cash raises concerns”, Mongabay, 18 June 2021 (<https://news.mongabay.com/2021/06/myanmar-juntas-growing-reliance-on-extractives-for-cash-raises-concerns/>)
- 6 “The Economic Interests of the Myanmar Military”, United Nations Independent Fact-Finding Mission on Myanmar, United Nations Human Rights Council, A/HRC/42/CRP.3, August 2019, pp.7, 30 and 36 (<https://www.ohchr.org/EN/HRBodies/HRC/MyanmarFFM/Pages/EconomicInterestsMyanmarMilitary.aspx>)
- 7 See “Jade: Myanmar’s ‘Big State Secret’”, Global Witness, October 2015 (<https://www.globalwitness.org/en/campaigns/oil-gas-and-mining/myanmarjade/>) and “Jade and conflict: Myanmar’s vicious circle”, Global Witness, June 2021 (<https://www.globalwitness.org/en/campaigns/natural-resource-governance/jade-and-conflict-myanmars-vicious-circle/>)
- 8 “Step by Step: Myanmar Gem Sector Emerges from Isolation and U.S. Sanctions”, AGTA, 2016, p.12
- 9 “Myanmar’s flawed new gemstone law set to restart gemstone permits in tainted sector”, Global Witness, 20 December 2018 (<https://www.globalwitness.org/en/press-releases/myanmars-flawed-new-gemstone-law-set-to-restart-gemstone-permits-in-tainted-sector/>); MEITI licensing data (<https://myanmareiti.org/en/publication-category/meiti-reports>)
- 10 “Gem industry leaders attend meeting with junta officials”, Myanmar Now, July 2021 (<https://www.myanmar-now.org/en/news/gem-industry-leaders-attend-meeting-with-junta-officials>)
- 11 Global Witness analysis of MEITI data from 2014–15 to 2017–18 (<https://myanmareiti.org/en/publication-category/meiti-reports>)
- 12 Canada had already imposed sanctions against MEHL and MEC in 2007. See “US and UK Join Canada in Designating Myanmar’s Military Conglomerates, with EU Considering Further Action”, Gibson Dunn, 2 April 2021 (<https://www.gibsondunn.com/us-and-uk-join-canada-in-designating-myanmar-military-conglomerates-with-eu-considering-further-action/>)
- 13 “Who profits from a coup? The power and greed of Senior General Min Aung Hlaing”, Justice for Myanmar, 30 January 2021 (<https://www.justiceformyanmar.org/stories/who-profits-from-a-coup-the-power-and-greed-of-senior-general-min-aung-hlaing>)
- 14 “Myanmar coup: Min Aung Hlaing, the general who seized power”, BBC News, 1 February 2021 (<https://www.bbc.co.uk/news/world-asia-55892489>)
- 15 “Junta troops kill two protesters in Mogok at National Unity government rally”, Myanmar Now, 17 April 2021 (<https://www.myanmar-now.org/en/news/junta-troops-kill-two-protesters-in-mogok-at-national-unity-government-rally>). “Scenes of terror in Myanmar’s Mogok”, Reuters, 19 April 2021 (<https://www.bangkokpost.com/vdo/world/2101803/scenes-of-terror-in-myanmar-mogok/>) and “Monk arrested in Mogok crackdown forced to disrobe, charged under 505b”, Myanmar Now, 12 March, 2021 (<https://www.myanmar-now.org/en/news/monk-arrested-in-mogok-crackdown-forced-to-disrobe-charged-under-505b>)
- 16 Armed Conflict Location & Event Data Project (ACLED) data on clashes in Mogok Township since 1 February 2021
- 17 “Daily Briefing”, Frontier Myanmar, 2 July 2021
- 18 “Gemstone Sector Review: In Support of Myanmar EITI”, MEITI, 2016, p.15 (<https://www.resourcedata.org/document/rgi-myanmar-eiti-gemstone-sector-review>); “Multifaceted: Governance and Conflict Risks in Myanmar’s Ruby Industry”, Natural Resource Governance Institute, 2018, p.1 (<https://resourcegovernance.org/analysis-tools/publications/multifaceted-governance-and-conflict-risks-myanmar-ruby-industry>)
- 19 “Gemstone Sector Review: In Support of Myanmar EITI”, MEITI, 2016, pp.6 and 15. The current world record holder is a ruby from Mogok known as the ‘sunrise ruby’ which sold in May 2015 for US\$30.33 million at a Sotheby’s auction in Geneva, or more than US\$1 million per carat (<https://www.resourcedata.org/document/rgi-myanmar-eiti-gemstone-sector-review>)
- 20 <https://www.tiffany.com/sustainability/product/gemstones-metals-materials/>
- 21 Cartier correspondence with Global Witness, 2021, Gübelin response to Global Witness letter, 2021
- 22 Military conglomerates Myanmar Economic Holdings Limited and Myanmar Economic Corporation, and state-owned regulator Myanma Gems Enterprise
- 23 “Gemstone Sector Review: In Support of Myanmar EITI”, MEITI, 2016, p.15 (<https://www.resourcedata.org/document/rgi-myanmar-eiti-gemstone-sector-review>); “Multifaceted: Governance and Conflict Risks in Myanmar’s Ruby Industry”, NRGI, 2018, p.1 (<https://resourcegovernance.org/analysis-tools/publications/multifaceted-governance-and-conflict-risks-myanmar-ruby-industry>)
- 24 “800 years of Mogok: A Celebration in Tenuous Times”, International Gem Society, 2018 (<https://www.gemsociety.org/article/800-years-of-mogok-a-celebration-in-tenuous-times/>)
- 25 Global Witness analysis of MEITI data (<https://myanmareiti.org/en/publication-category/meiti-reports>)
- 26 “Fluxed Up: Fracture Healing of Ruby”, Richard W. Hughes, Palagems.com, 2005 (<https://www.lotusgemology.com/index.php/component/content/article?id=152:fluxed-up-the-fracture-healing-of-ruby>)
- 27 “Expedition to the Ruby and Spinel Mines of Namya (Northern Burma/ Myanmar)”, Adolf Peretti and Anong Kanpraphai, Gemresearch Swisslab AG, 2003 (<https://www.gemresearch.ch/assets/documents/publication-articles/2003-08-namya-spinel-and-ruby-mines-contributions-no02-part-1.pdf>)
- 28 “800 years of Mogok: A Celebration in Tenuous Times”, International Gem Society, 2018 (<https://www.gemsociety.org/article/800-years-of-mogok-a-celebration-in-tenuous-times/>)
- 29 “Gemstone Sector Review: In Support of Myanmar EITI”, MEITI, 2016, pp.6 and 15 (<https://www.resourcedata.org/document/rgi-myanmar-eiti-gemstone-sector-review>)
- 30 “The Economic Interests of the Myanmar Military”, United Nations Independent Fact-Finding Mission on Myanmar, United Nations Human Rights Council, A/HRC/42/CRP.3, August 2019, p.62 (<https://www.ohchr.org/EN/HRBodies/HRC/MyanmarFFM/Pages/EconomicInterestsMyanmarMilitary.aspx>)
- 31 “Myanmar’s flawed new gemstone law set to restart gemstone permits in tainted sector”, Global Witness, 20 December 2018 (<https://www.globalwitness.org/en/press-releases/myanmars-flawed-new-gemstone-law-set-to-restart-gemstone-permits-in-tainted-sector/>)

- 32 “Back to business as usual in Myanmar’s jade mines?”, *Frontier Myanmar*, 28 November 2018 (<https://www.frontiermyanmar.net/en/back-to-business-as-usual-in-myanmars-jade-mines/>); “Parliament passes gemstone bill amid criticism”, *Thompson Chau, Myanmar Times*, 8 February 2019 (<https://www.mmtimes.com/news/parliament-passes-gemstone-bill-amid-criticism.html>)
- 33 “Jade and conflict: Myanmar’s vicious circle”, *Global Witness*, June 2021 (<https://www.globalwitness.org/en/campaigns/natural-resource-governance/jade-and-conflict-myanmars-vicious-circle/>)
- 34 Global Witness analysis of MEITI data (<https://myanmareiti.org/en/publication-category/meiti-reports>). See also “Gem industry leaders attend meeting with junta officials”, *Myanmar Now*, July 2021 (<https://www.myanmar-now.org/en/news/gem-industry-leaders-attend-meeting-with-junta-officials>)
- 35 A few jade and gemstone mining licences were extended, including for jade mining in Hkamti in Sagaing Region, according to a former gemstone industry official, but details have not been made public. Interview with former gemstone industry official; 2021 (Global Witness interview 922)
- 36 Interviews with a member of staff at a gemstone mining company and an informal gemstone miner in Mogok, 2021 (Global Witness interviews 902 and 906)
- 37 “Gem industry leaders attend meeting with junta officials”, *Myanmar Now*, July 2021 (<https://www.myanmar-now.org/en/news/gem-industry-leaders-attend-meeting-with-junta-officials>)
- 38 “Neither war nor peace: the future of the cease-fire agreements in Burma”, *Transnational Institute*, 2009, p.2 (<https://reliefweb.int/report/myanmar/neither-war-nor-peace-future-cess-fire-agreements-burma>); “The Economic Interests of the Myanmar Military”, *United Nations Independent Fact-Finding Mission on Myanmar, United Nations Human Rights Council, A/HRC/42/CRP.3*, August 2019, pp.35–36 (<https://www.ohchr.org/EN/HRBodies/HRC/MyanmarFFM/Pages/EconomicInterestsMyanmarMilitary.aspx>)
- 39 “Militias in Myanmar”, *The Asia Foundation*, July 2016, p.12 (<https://asiafoundation.org/wp-content/uploads/2016/07/Militias-in-Myanmar.pdf>)
- 40 “Ceasefire capitalism: military–private partnerships, resource concessions and military–state building in the Burma–China borderlands”, *Kevin Woods, The Journal of Peasant Studies* Vol. 38, No. 4, October 2011 (<http://www.mekonglandforum.org/node/2553>); “Multifaceted: Governance and Conflict Risks in Myanmar’s Ruby Industry”, *NRGI*, March 2018, p.10 (<https://resourcegovernance.org/analysis-tools/publications/multifaceted-governance-and-conflict-risks-myanmar-ruby-industry>); “Pigeon Blood Valley: On the Trail of Mogok’s Famed Burmese Ruby”, *Adolf Peretti and Thierry Falise*, 2016, p.75; “Militias in Myanmar”, *The Asia Foundation*, July 2016, pp.iii, 25 (<https://asiafoundation.org/wp-content/uploads/2016/07/Militias-in-Myanmar.pdf>)
- 41 “Ending ethnic armed conflict in Burma: A complicated peace process”, *Lian H. Sakhong and Paul Keenan, Burma Centre for Ethnic Studies*, 2014, p.145 (https://themimu.info/sites/themimu.info/files/documents/Book_Ending_Ethnic_Armed_Conflict_in_Burma_Keenan_2014.pdf)
- 42 “Leaders from Mongla, UWSA Meet on ‘New Year’s Greeting Tour’”, *Shan Herald Agency for News*, 23 January 2019 (<https://www.bnionline.net/en/news/leaders-mongla-uwsa-meet-new-years-greeting-tour>); “Jade and conflict: Myanmar’s vicious circle”, *Global Witness*, June 2021, p.47 (<https://www.globalwitness.org/en/campaigns/natural-resource-governance/jade-and-conflict-myanmars-vicious-circle/>)
- 43 “Situation in Mong Hsu Gem Land”, *All Burma Students’ Democratic Front (ABSDF)*, published in “*Human Rights Year Book 1995: Burma*”, *Human Rights Documentation Unit (HRDU) of the National Coalition Government of the Union of Burma (NCGUB)*, 1995, p.235 (<https://www.burmalibrary.org/docs/LIVELY.PDF>)
- 44 Interview with Mong Hsu resident, 2017 (Global Witness interview 505)
- 45 “Myanmar’s strongest ethnic armed group says drug label ‘not fair’”, *Reuters*, 7 October 2016 (<https://www.reuters.com/article/us-myanmar-wa-idUSKCN1270R3>)
- 46 The UWSA was awarded its first gemstone and jade mining permits after signing a ceasefire with the military in 1989; by 2002, the junta-run *New Light of Myanmar* newspaper was reporting that “the Wa group has been permitted to undertake about 30 percent of mining business at... Mongshu [Mong Hsu] gems land” as part of an opium substitution programme. “Foreign diplomats witness developments and opium-substitute undertakings of Wa regions in eastern and northern Shan State”, *New Light of Myanmar*, 4 April 2002 (http://uzo.sakura.ne.jp/burma/nlm/nlm_data/nlm_2002/nlm_04_2002/nlm_04_04_2002). “Step by Step: Myanmar Gem Sector Emerges from Isolation and U.S. Sanctions”, *AGTA*, 2016, p.13; “Neither war nor peace: the future of the cease-fire agreements in Burma”, *Transnational Institute*, 2009, p.14 (<https://reliefweb.int/report/myanmar/neither-war-nor-peace-future-cess-fire-agreements-burma>); interviews with: Mogok civil society representative and former businessman, 2021; Yangon-based journalist, 2019; Shan State-based journalist, 2019; Mogok civil society representative, 2019; civil society representative, 2018; Myanmar analyst, 2017 (Global Witness interviews 101, 201, 212, 213, 301c and 607)
- 47 “Sector Wide Impact Assessment of Limestone, Gold and Tin Mining in Myanmar”, *Myanmar Centre for Responsible Business*, March 2018, p.212 (<https://www.myanmar-responsiblebusiness.org/pdf/SWIA/Mining/00-Myanmar-Mining-Sector-Wide-Assessment.pdf>)
- 48 “History”, *Ruby Dragon Group* (<https://www.rubydragongroup.com/history.html>). “Multifaceted: Governance and Conflict Risks in Myanmar’s Ruby Industry”, *NRGI*, March 2018, pp.10–11 (<https://resourcegovernance.org/analysis-tools/publications/multifaceted-governance-and-conflict-risks-myanmar-ruby-industry>) and interview with Mogok civil society representative and former businessman, 2021 (Global Witness interview 101)
- 49 “Nay Win Tun: Burma’s Gem Stone Tycoon”, *The Irrawaddy*, 31 October 2007 (https://www2.irrawaddy.com/article.php?art_id=9164); Response to Global Witness letter, *Ruby Dragon Group of Companies*, November 2021
- 50 “Ruby Mining”, *Ruby Dragon Group* (<https://www.rubydragongroup.com/ruby-mining.html>). “Myanmar’s ‘Valley of the Rubies’ emerges from shadows”, *Nikkei Asian Review*, 8 April 2018 (<https://asia.nikkei.com/Life-Arts/Life/Myanmar-s-Valley-of-the-Rubies-emerges-from-shadows>)
- 51 “Ruby Mining”, *Ruby Dragon Group* (<https://www.rubydragongroup.com/ruby-mining.html>); “Neither war nor peace: the future of the cease-fire agreements in Burma”, *Transnational Institute*, 2009, p.14 (<https://reliefweb.int/report/myanmar/neither-war-nor-peace-future-cess-fire-agreements-burma>)
- 52 “Ruby Dragon Jade & Gems” (<https://www.rubydragongroup.com/gemstones.html>)
- 53 “Clashes Cease in Wan Hai, but for How Long?”, *The Irrawaddy*, 27 November 2015 (<https://www.irrawaddy.com/news/burma/clashes-cess-in-wan-hai-but-for-how-long.html>)
- 54 Interview with Shan State-based journalist, 2019 (Global Witness interview 209)
- 55 Interview with Thai journalist, 2019 (Global Witness interview 211)
- 56 Interviews with manager of SSA–S gemstone processing factory, 2017 and RCSS liaison officer, 2017 (Global Witness interviews 401 and 407)
- 57 “Fear and lawlessness stalk Mogok after tycoon kidnapping”, *Frontier Myanmar*, 17 February 2021 (<https://www.frontiermyanmar.net/en/fear-and-lawlessness-stalk-mogok-after-tycoon-kidnapping/>)
- 58 “Shan State Villagers Flee Fighting Between Rival Ethnic Armed Groups”, *The Irrawaddy*, 7 April 2021 (<https://www.irrawaddy.com/news/burma/shan-state-villagers-flee-fighting-rival-ethnic-armed-groups.html>); “Thousands flee homes once again as two Shan armed groups fight for control of territory”, *Myanmar Now*, 25 September 2021 (<https://www.myanmar-now.org/en/news/thousands-flee-homes-once-again-as-two-shan-armed-groups-fight-for-control-of-territory>)
- 59 “Ethnic Armed Organisations in Post-Coup Myanmar: New Conversations Needed”, *Andrew Ong, ISEAS Yusof Ishak institute*, June 2021 (<https://www.iseas.edu.sg/articles-commentaries/iseas-perspective/2021-79-ethnic-armed-organisations-in-post-coup-myanmar-new-conversations-needed-by-andrew-ong/>)
- 60 Wa State’s response letter to Global Witness, *Department of Foreign Relations of Wa State*, November 2021
- 61 “Myanmar’s Coup and Violence, Explained”, *New York Times*, 26 October 2021 (<https://www.nytimes.com/article/myanmar-news-protests-coup.html>); “Myanmar: Coup Leads to Crimes Against Humanity”, *Human Rights Watch*, 31 July 2021 (<https://www.hrw.org/news/2021/07/31/myanmar-coup-leads-crimes-against-humanity>)

- 62 “Myanmar’s shadow government declares ‘resistance war’ against military junta”, Myanmar Now, 7 September 2021 (<https://www.myanmar-now.org/en/news/myanmars-shadow-government-declares-resistance-war-against-military-junta>)
- 63 “Taking Aim at the Tatmadaw: The New Armed Resistance to Myanmar’s Coup”, International Crisis Group, June 2021 (<https://www.crisisgroup.org/asia/south-east-asia/myanmar/b168-taking-aim-tatmadaw-new-armed-resistance-myanmars-coup>)
- 64 ACLED data on demonstrations in Mogok Township from 1 February 2021 to 1 October 2021, accessed at: <https://acleddata.com/data-export-tool/>
- 65 “Monk arrested in Mogok crackdown forced to disrobe, charged under 505b”, Myanmar Now, 12 March 2021 (<https://www.myanmar-now.org/en/news/monk-arrested-in-mogok-crackdown-forced-to-disrobe-charged-under-505b>)
- 66 ACLED data on armed clashes in Mogok Township, April 2021, accessed at: <https://acleddata.com/data-export-tool/>. See also “KIA forms two new brigades”, The Irrawaddy, 14 February 2018 (<https://www.irrawaddy.com/news/burma/kia-forms-2-new-brigades.html>)
- 67 “Junta troops kill two protesters in Mogok at National Unity government rally”, Myanmar Now, 17 April 2021 (<https://www.myanmar-now.org/en/news/junta-troops-kill-two-protesters-in-mogok-at-national-unity-government-rally>)
- 68 “Junta troops kill two protesters in Mogok at National Unity government rally”, Myanmar Now, 17 April 2021 (<https://www.myanmar-now.org/en/news/junta-troops-kill-two-protesters-in-mogok-at-national-unity-government-rally>); “Scenes of terror in Myanmar’s Mogok”, Reuters, 18 April 2021 (<https://www.bangkokpost.com/vdo/world/2101803/scenes-of-terror-in-myanmar-mogok/>)
- 69 ACLED data on political violence and demonstration events in Mogok Township from 1 February 2021 to 1 October 2021, accessed at: <https://acleddata.com/data-export-tool/>
- 70 ACLED data on demonstrations in Mong Hsu Township from 1 February 2021 to 1 October 2021, accessed at: <https://acleddata.com/data-export-tool/>
- 71 “RCSS urges SSPP to halt offensives and fight together against military dictator”, Democratic Voice of Burma, translated from Burmese to English in “Media Monitor”, Frontier Myanmar, 7 June 2021; “Rival armed groups fight over territorial dispute in Myanmar’s Shan State”, The Irrawaddy, 1 July 2021 (<https://www.irrawaddy.com/news/burma/rival-armed-groups-fight-over-territorial-dispute-in-myanmars-shan-state.html>). Asked whether UWSA troops had supported SSA–N soldiers in the conflict, a UWSA representative told Global Witness that the group only cooperated with “various minority organisations” on political issues. Wa State’s response letter to Global Witness, Department of Foreign Relations of Wa State, November 2021
- 72 “Daily Briefing”, Frontier Myanmar, 2 July 2021
- 73 “Some people flee homes in Mong Hsu Township”, Shan Herald Agency for News, translated from Burmese to English in “Media Monitor”, Frontier Myanmar, 13 July 2021; “SSPP forcibly recruiting new members in Mong Hsu town, southern Shan State”, Shan Herald Agency for News, translated from Burmese to English in “Media Monitor”, Frontier Myanmar, 29 October 2021
- 74 Interviews with gemstone trader and broker in Mogok, 2021 and gemstone miners in Mogok, 2021 (Global Witness interviews 903, 902 and 907)
- 75 Interview with small-scale gemstone businessperson in Mogok, 2021 (Global Witness interview 910)
- 76 Interviews with three gemstone miners in Mogok, 2021 (Global Witness interviews 902, 904 and 908)
- 77 Interview with gemstone miner in Mogok, 2021 (Global Witness interview 905)
- 78 Interview with Mong Hsu resident, 2017 (Global Witness interview 505); “A history of Mong Hsu”, Sawanna Siri, 2017 (Global Witness document 511); “Monghsu gem land: Predators and prey”, Shan Herald Agency for News, 22 July 2009 (<https://www.bnionline.net/en/shan-herald-agency-for-news/item/6716-monghsu-gem-land-predators-and-prey.html>); “Mong Su: Deserted Land of Blood Rubies”, 7 October 2007, from “Candles in the Dark: Diaries of School for Shan State Nationalities Youth Students”, 2008, p.111 (<https://ssny.org/media/publications/candle-in-the-dark/>)
- 79 Ministry of Mines Notification No. 62/92, 16 July 1992, published in Working People’s Daily, 18 July 1992 pp.36–37 (<https://www.burmalibrary.org/docs3/BPS92-07.pdf>)
- 80 Working People’s Daily, 17 November 1992, p.33 (<https://www.burmalibrary.org/docs3/BPS92-11.pdf>)
- 81 “Grave diggers: A report on mining in Burma”, Roger Moody, Canada Asia Pacific Resource Network, September 1999, pp.59–61 (<https://www.burmalibrary.org/en/grave-diggers-a-report-on-mining-in-burma>); “Monghsu gem land: Predators and prey”, Shan Herald Agency for News, 22 July 2009 (<https://www.bnionline.net/en/shan-herald-agency-for-news/item/6716-monghsu-gem-land-predators-and-prey.html>)
- 82 Interview with Mong Hsu resident, 2017 (Global Witness interview 505)
- 83 “A history of Mong Hsu”, Sawanna Siri, 2017 (Global Witness document 511); interview with Mong Hsu resident, 2017 (Global Witness interview 505)
- 84 “Pigeon Blood Valley: On the Trail of Mogok’s Famed Burmese Ruby”, Adolf Peretti and Thierry Falise, 2016, p.153; “Grave diggers: A report on mining in Burma”, Roger Moody, Canada Asia Pacific Resource Network, September 1999, pp.59–61 (<https://www.burmalibrary.org/en/grave-diggers-a-report-on-mining-in-burma>) and “Monghsu gem land: Predators and prey”, Shan Herald Agency for News, 22 July 2009 (<https://www.bnionline.net/en/shan-herald-agency-for-news/item/6716-monghsu-gem-land-predators-and-prey.html>)
- 85 Interview with Mong Hsu resident, 2017 (Global Witness interview 507)
- 86 Interviews with Mong Hsu residents, 2017 (Global Witness interviews 501, 505 and 507); “Mong Su: Deserted Land of Blood Rubies”, 7 October 2007, from “Candles in the Dark: Diaries of School for Shan State Nationalities Youth Students”, 2008 (<https://ssny.org/media/publications/candle-in-the-dark/>) and “Grave diggers: A report on mining in Burma”, Roger Moody, Canada Asia Pacific Resource Network, September 1999, pp.59–62 (<https://www.burmalibrary.org/en/grave-diggers-a-report-on-mining-in-burma>)
- 87 “Mong Su: Deserted Land of Blood Rubies”, 7 October 2007, from “Candles in the Dark: Diaries of School for Shan State Nationalities Youth Students”, 2008 (<https://ssny.org/media/publications/candle-in-the-dark/>); interviews with member of Shan Nationalities League for Democracy, 2017 and Shan State-based journalist, 2018 (Global Witness interviews 508 and 612)
- 88 “New video exposes horror of Burma army ‘clearance operations’ in Shan State”, Shan community groups, 21 January 2020 (<https://burmacampaign.org.uk/the-four-cuts-new-video-exposes-horror-of-burma-army-clearance-operations-in-shan-state/>); “Situation of human rights in Myanmar”, United Nations General Assembly, 8 October 1996, p.333 (<https://www.burmalibrary.org/reg.burma/archives/199611/msg00161.html>) and interview with Shan State-based journalist, 2018 (Global Witness interview 612)
- 89 “Ending armed conflict in Burma: A complicated peace process”, Lian H. Sakhong and Paul Keenan, Burma Centre for Ethnic Studies, 2014, pp.205–209 (https://themimu.info/sites/themimu.info/files/documents/Book_Ending_Ethnic_Armed_Conflict_in_Burma_Keenan_2014.pdf)
- 90 “Discrimination, Conflict and Corruption: The Ethnic States of Burma”, Ethnic Nationalities Council, 2011, p.73 (<https://www.burmalibrary.org/en/discrimination-conflict-and-corruption-the-ethnic-states-of-burma>); “Deciphering Myanmar’s Peace Process: A Reference Guide”, Burma News International, 2014, p.172 (https://www.bnionline.net/sites/bnionline.net/files/publication_docs/deciphering_myanmar_peace_process_2014.pdf)
- 91 “Ending armed conflict in Burma: A complicated peace process”, Lian H. Sakhong and Paul Keenan, Burma Centre for Ethnic Studies, 2014, pp.205–209 (https://themimu.info/sites/themimu.info/files/documents/Book_Ending_Ethnic_Armed_Conflict_in_Burma_Keenan_2014.pdf); “Ceasefire Shan army’s HQ unit transformed to Home Guard Force”, Burma News International, 27 April 2010 (<https://www.bnionline.net/en/shan-herald-agency-for-news/item/8398-ceasefire-shan-armys-hq-unit-transformed-to-home-guard-force.html>); “The Burma army’s offensive against Shan State Army-North”, EBO Analysis Paper No. 3, 2011 (https://euroburmaoffice.s3.amazonaws.com/filer_public/22/90/22904c1c-2fef-4b22-8054-66e162465724/ebo_analysis_paper_no_3_2011_-_shan_state_army-north_-_july_2011.pdf)
- 92 “Deciphering Myanmar’s Peace Process: A Reference Guide”, Burma News International, 2014, p.174 (https://www.bnionline.net/sites/bnionline.net/files/publication_docs/deciphering_myanmar_peace_process_2014.pdf)

- 93 “Statement by the Shan State Progress Party/Shan State Army on Hpar Sawng Incident”, Shan State Progress Party, General Headquarters, October 2014 (<https://www.mmpeacemonitor.org/images/2014/october/sspp-ssa%20statementeng%2010%20oct%202014-eng.pdf>)
- 94 “Naypyidaw must immediately stop its attacks in central Shan State and let communities return home”, statement by Shan community-based organisations, 6 November 2015 (<https://burmacampaign.org.uk/naypyidaw-must-immediately-stop-its-attacks-in-central-shan-state-and-let-communities-return-home/>); “Humanitarian Bulletin, Myanmar”, United Nations Office for the Coordination of Humanitarian Affairs, Issue 7, November–December 2015 (<https://reliefweb.int/report/myanmar/myanmar-humanitarian-bulletin-issue-7-november-december-2015-enmy>)
- 95 Interview with senior monk in Mong Hsu, 2017 (Global Witness interview 503)
- 96 “A history of Mong Hsu”, Sawanna Siri, 2017 (Global Witness document 511)
- 97 “A history of Mong Hsu”, Sawanna Siri, 2017 (Global Witness document 511)
- 98 Interviews with Mong Hsu civil society representative, 2017 and Shan State-based journalist, 2018 (Global Witness interviews 506 and 612)
- 99 Interview with member of Shan Nationalities League for Democracy, 2017 (Global Witness interview 509)
- 100 “A closer look at Myanmar’s demographics”, The Economist Intelligence Unit, 3 June 2015
- 101 “2014 population census dataset by population and township”, 2014 Myanmar Population and Housing Census, Ministry of Immigration and Population, 2014 (https://themimu.info/sites/themimu.info/files/documents/BaselineData_Census_Dataset_Township_MIMU_16Jun2016_ENG.xlsx)
- 102 Interviews with Mong Hsu residents, 2017 and Shan State-based journalist, 2018 (Global Witness interviews 505, 507 and 612)
- 103 Interviews with Mong Hsu resident, 2017; member of the Shan Nationalities League for Democracy, 2017; and Shan State-based journalist, 2018 (Global Witness interviews 505, 508 and 612)
- 104 Interviews with Mong Hsu politician and gemstone miner, 2021, and Mong Hsu gemstone broker, 2021 (Global Witness interviews 102 and 104)
- 105 Interviews with Mong Hsu politician and gemstone miner, 2021 and gemstone miner in Mong Hsu, 2021 (Global Witness interviews 102 and 915)
- 106 Interviews with gemstone miners in Mong Hsu, 2021 (Global Witness interviews 911 and 915)
- 107 Interview with gemstone miner in Mong Hsu, 2021 (Global Witness interview 911)
- 108 Interviews with gemstone miners in Mong Hsu, 2021 (Global Witness interviews 911 and 912)
- 109 Interview with gemstone miner in Mong Hsu, 2021 (Global Witness interview 912)
- 110 Interview with former gemstone industry official; 2021 (Global Witness interview 922)
- 111 “Pigeon Blood Valley: On the Trail of Mogok’s Famed Burmese Ruby”, Adolf Peretti and Thierry Falise, 2016, p.67
- 112 Corporate record held by DICA (<https://www.myco.dica.gov.mm/Corp/EntityProfile.aspx?id=0cc033d7-a5a3-4ea4-8e15-12eba86482e7>)
- 113 “Multifaceted: Governance and Conflict Risks in Myanmar’s Ruby Industry”, NRGi, 2018, p.12 (<https://resourcegovernance.org/analysis-tools/publications/multifaceted-governance-and-conflict-risks-myanmar-ruby-industry/>); “Artisanal Ruby Mining in Myanmar: Environmental and Social Impacts”, Sally Dickinson DeLeon, 2007, p.7 (http://lapidaryworld.com/pdf/DeLeon_Myanmar_2007.pdf); “Capitalising on Conflict,” EarthRights International and Karen Environmental & Social Action Network, October 2003, pp.49–50 (<https://earthrights.org/publication/capitalizing-on-conflict/>); interview with Mogok civil society representative, 2019 (Global Witness interview 213)
- 114 “Gemstone Sector Review: In Support of Myanmar EITI”, MEITI, 2016, p.7 (<https://www.resourcedata.org/document/rgi-myanmar-eiti-gemstone-sector-review>)
- 115 Interview with representatives of MGJEA, 2018 (Global Witness interview 609)
- 116 “Capitalising on Conflict: How logging and mining contribute to environmental destruction in Burma”, EarthRights International and Karen Environmental & Social Action Network, October 2003, p.48 (<https://earthrights.org/publication/capitalizing-on-conflict/>)
- 117 “Capitalising on Conflict: How logging and mining contribute to environmental destruction in Burma”, EarthRights International and Karen Environmental & Social Action Network, October 2003, p.18 (<https://earthrights.org/publication/capitalizing-on-conflict/>)
- 118 “Capitalising on Conflict: How logging and mining contribute to environmental destruction in Burma”, EarthRights International and Karen Environmental & Social Action Network, October 2003, p.51 (<https://earthrights.org/publication/capitalizing-on-conflict/>)
- 119 Interview with businesswoman from Mogok, 2017 (Global Witness interview 604)
- 120 “Fear and lawlessness stalk Mogok after tycoon kidnapping”, Frontier Myanmar, 17 February 2021 (<https://www.frontiermyanmar.net/en/fear-and-lawlessness-stalk-mogok-after-tycoon-kidnapping/>)
- 121 “Fear and lawlessness stalk Mogok after tycoon kidnapping”, Frontier Myanmar, 17 February 2021 (<https://www.frontiermyanmar.net/en/fear-and-lawlessness-stalk-mogok-after-tycoon-kidnapping/>)
- 122 “Series of Abductions by Ethnic Armed Groups Rattle Myanmar Ruby Town”, The Irrawaddy, 7 December 2020 (<https://www.irrawaddy.com/news/burma/series-abductions-ethnic-armed-groups-rattle-myanmar-ruby-town.html>); “Town elders in Mogok Township, Mandalay Region, issue letter urging halt to collecting extortion money and kidnapping”, *Standard Time Daily*, translated from Burmese to English in “Media Monitor”, Frontier Myanmar, 7 December 2020; “Myanmar civilians demand protection from TNLA kidnappings”, The Irrawaddy, 21 December 2020 (<https://www.irrawaddy.com/specials/myanmar-covid-19/myanmar-civilians-demand-protection-tnla-kidnappings.html>)
- 123 ACLED data on demonstrations in Mogok Township from 1 February 2021 to 1 October 2021, accessed at: <https://acleddata.com/data-export-tool/>
- 124 “Junta troops kill two protesters in Mogok at National Unity government rally”, Myanmar Now, 17 April 2021 (<https://www.myanmar-now.org/en/news/junta-troops-kill-two-protesters-in-mogok-at-national-unity-government-rally/>); “Scenes of terror in Myanmar’s Mogok”, Reuters, 18 April 2021 (<https://www.bangkokpost.com/vdo/world/2101803/scenes-of-terror-in-myanmar-mogok/>); “Junta kills Mogok man on neighbourhood watch”, Myanmar Now, 20 March 2021 (<https://www.myanmar-now.org/en/news/junta-kills-mogok-man-on-neighbourhood-watch/>); “Coups military force evicts IDPs in Mogok town, Mandalay Region”, Democratic Voice of Burma, translated from Burmese to English in “Media Monitor”, Frontier Myanmar, 22 April 2021; “Terrorist military force arrests 30 members of social welfare association and seizes vehicles in Mogok”, Democratic Voice of Burma, translated from Burmese to English in “Media Monitor”, Frontier Myanmar, 3 May 2021
- 125 “Military cuts off internet connection in 11 more townships in northwestern Myanmar”, Myanmar Now, 25 September 2021 (<https://www.myanmar-now.org/en/news/military-cuts-off-internet-connection-in-11-more-townships-in-northwestern-myanmar>)
- 126 Interviews with gemstone miners in Mogok, 2021 (Global Witness interviews 902, 905 and 908)
- 127 Interview with small-scale gemstone businessperson in Mogok, 2021 (Global Witness interview 910)
- 128 Interviews with gemstone miners in Mogok, 2021 (Global Witness interviews 902, 904 and 907)
- 129 Interviews with two gemstone miners in Mogok; 2021 and two small-scale gemstones businesspeople in Mogok, 2021 (Global Witness interviews 904, 908, 909 and 910). There were just over 35,000 households in Mogok Township when the most recent census was taken in 2014 and the total population was 167,149. “The 2014 Myanmar Population and Housing Census: Mandalay Region, Pwin Oo Lwin District, Mogok Township Report”, Department of Population, Ministry of Labour, Immigration and Population, October 2017, p. 7 (https://themimu.info/sites/themimu.info/files/documents/TspProfiles_Census_Mogok_2014_ENG.pdf)
- 130 Interview with gemstone miner in Mogok, 2021 (Global Witness interview 916)

- 131 Interviews with two gemstone miners in Mogok, 2021; gemstone trader and broker in Mogok, 2021; and member of staff at gemstone mining company, 2021 (Global Witness interviews 902, 916, 903 and 906)
- 132 Interview with gemstone miner in Mogok, 2021 (Global Witness interview 902). For the dates that gemstone licences expired, see MEITI licensing data from FY2016-17 and FY2017-18 (<https://myanmareiti.org/en/publication-category/meiti-reports>)
- 133 Interviews with gemstone miner in Mogok, 2021 and small-scale gemstone businessperson in Mogok, 2021 (Global Witness interviews 914 and 909)
- 134 Interviews with member of staff at gemstone mining company in Mogok, 2021 and gemstone miners in Mogok, 2021 (Global Witness interviews 902, 905 and 906)
- 135 Interviews with gemstone trader and broker in Mogok, 2021 and member of staff at gemstone mining company in Mogok, 2021 (Global Witness interviews 903 and 906)
- 136 Interviews with member of staff at gemstone mining company in Mogok, 2021 and gemstones miners in Mogok, 2021 (Global Witness interviews 906, 904 and 908)
- 137 Interviews with gemstone miners in Mogok, 2021 and small-scale gemstone businesspeople in Mogok, 2021 (Global Witness interviews 904, 913, 914, 916, 909 and 910)
- 138 Interviews with gemstone miners in Mogok, 2021 (Global Witness interviews 907 and 914)
- 139 Gemstone mining concession map provided to Global Witness by industry insiders, 2017; interview with gemstone miner in Mogok, 2021 (Global Witness interview 914)
- 140 Call with Fai Dee Gems, 2021 (Global Witness interview 131). See also “A superb ruby and diamond ring” (<https://www.christies.com/en/lot/lot-5749879>); “Harry Winston ruby and diamond ring,” <https://www.christies.com/lot/lot-harry-winston-ruby-and-diamond-ring-6312201/>); “Important ruby and diamond necklace, Faidee” (<https://www.christies.com/en/lot/lot-6316839>); “Our Collection – Faidee” (<https://www.faidee.com/our-collection/>); “Superb Ruby and Diamond Necklace, by James W. Currens for Fai Dee” (<https://www.sothebys.com/en/auctions/ecatalogue/2014/magnificent-jewels-jadeite-hk0518/lot.1914.html>); “Ruby and diamond bangle / brooch, Faidee” (<https://www.sothebys.com/en/auctions/ecatalogue/2019/magnificent-jewels-and-jadeite-hk0893/lot.1680.html>); “Pair of ruby and diamond earrings, Faidee” (<https://www.sothebys.com/en/auctions/ecatalogue/2019/magnificent-jewels-and-jadeite-hk0863/lot.1688.html>); “Unique ruby and diamond ‘fireworks’ ring, James W. Currens for Faidee” (<https://www.sothebys.com/en/auctions/ecatalogue/2012/jewels-and-jadeite-hk0400/lot.1709.html>)
- 141 Interviews with gemstone miners in Mogok, 2021 (Global Witness interviews 905 and 907)
- 142 Interviews with gemstone miners in Mogok, 2021 (Global Witness interviews 905 and 907)
- 143 Interview with gemstone miner in Mogok, 2021 (Global Witness interview 905)
- 144 Interview with gemstone miner in Mogok, 2021 (Global Witness interview 907)
- 145 Interview with gemstone miner in Mogok, 2021 (Global Witness interview 907)
- 146 Interviews with small-scale gemstone businessperson in Mogok, 2021 and gemstone miners in Mogok, 2021 (Global Witness interviews 909, 905 and 916)
- 147 Interviews with gemstone miners in Mogok, 2021 and small-scale gemstone businessperson in Mogok, 2021 (Global Witness interviews 904, 905, 907 and 909)
- 148 Interview with gemstone miner in Mogok, 2021 (Global Witness interview 914)
- 149 Interviews with gemstone miners in Mogok, 2021 (Global Witness interviews 902 and 905)
- 150 Interviews with gemstone miners in Mogok, 2021 (Global Witness interviews 902, 904, 907 and 914) and small-scale gemstone businessperson in Mogok, 2021 (Global Witness interview 910)
- 151 Interviews with gemstone miners in Mogok, 2021 (Global Witness interviews 902, 904, 908 and 914)
- 152 Interviews with gemstone miners in Mogok, 2021 (Global Witness interviews 902, 904, 908 and 914)
- 153 Interview with gemstone miner in Mogok, 2021 (Global Witness interview 914)
- 154 Interviews with gemstone miners in Mogok, 2021 and small-scale gemstone businessperson in Mogok, 2021 (Global Witness interviews 902, 908 and 910)
- 155 Interviews with gemstone miners in Mogok, 2021 (Global Witness interviews 902, 904 and 914)
- 156 Interviews with gemstone miners in Mogok, 2021 (Global Witness interviews 902, 904 and 914)
- 157 Interviews with gemstone miners in Mogok, 2021 (Global Witness interviews 913 and 916)
- 158 “Jade and conflict: Myanmar’s vicious circle,” Global Witness, 2021, p.31 (<https://www.globalwitness.org/en/campaigns/natural-resource-governance/jade-and-conflict-myanmars-vicious-circle/>)
- 159 Interviews with gemstone miners in Mogok, 2021 and small-scale gemstone businessperson in Mogok, 2021 (Global Witness interviews 902, 904, 907, 908, 914 and 910)
- 160 Interview with gemstone miner in Mogok, 2021 (Global Witness interview 904)
- 161 Interview with member of staff at gemstone mining company, 2021 (Global Witness interview 906)
- 162 Interview with small-scale gemstone businessperson in Mogok, 2021 (Global Witness interview 910)
- 163 Interview with gemstone miner in Mogok, 2021 (Global Witness interview 913)
- 164 Interview with gemstone miner in Mogok, 2021 (Global Witness interview 916)
- 165 Interview with gemstone miner in Mogok, 2021 (Global Witness interview 908)
- 166 Interviews with three gemstone miners in Mogok, 2021 and gemstone miner in Mong Hsu, 2021 (Global Witness interviews 902, 904, 913 and 911)
- 167 “Robbery at gem trader’s house in Mogok town, Mandalay Region”, DVB TV News, translated from Burmese to English in “Media Monitor”, Frontier Myanmar, 21 September 2021
- 168 Interviews with gemstone miner in Mogok, 2021 and small-scale gemstone businessperson in Mogok, 2021 (Global Witness interviews 904 and 909)
- 169 Concession map provided to Global Witness by industry insiders, 2017; “Mogok mine collapses, kills one”, Myanmar Times, 3 January 2021 (<https://www.mmtimes.com/news/mogok-mine-collapses-kills-one.html>)
- 170 “Body recovered of one of four workers trapped in Mogok ruby mine”, Democratic Voice of Burma, translated from Burmese to English in “Media Monitor”, Frontier Myanmar, 11 May 2021
- 171 Ruby Dragon Group of Companies response to Global Witness letter, 10 November 2021
- 172 Ruby Dragon Group of Companies response to Global Witness letter, 10 November 2021
- 173 Interview with gemstone miner in Mogok, 2021 (Global Witness interview 902)
- 174 Interview with gemstone miner in Mogok, 2021 (Global Witness interview 904)
- 175 Interviews with gemstone miners in Mogok, 2021 (Global Witness interviews 912 and 913)
- 176 Interview with gemstone miners in Mogok, 2021 (Global Witness interviews 902 and 913)
- 177 Data published by MEITI from 2013-14 to 2017-18 reveals which companies owned and operated the mines before the last remaining licences expired, indicating which companies are well positioned to receive permits if licensing starts again (<https://myanmareiti.org/en/publication-category/meiti-reports>)

- 178 The most recent report covering the period of FY2017-18 was published in March 2020. Myanmar was suspended from EITI in February 2021, due to political instability and a lack of essential freedoms in the wake of the coup, with the Board expressing strong concern about the safety of members of the multi-stakeholder group in the country. “Myanmar suspended due to political instability”, Extractive Industries Transparency Initiative Board, February 2021 (<https://eiti.org/news/myanmar-suspended-due-to-political-instability>)
- 179 Concession map provided to Global Witness by industry insiders, 2017
- 180 Global Witness analysis of MEITI data (<https://myanmareiti.org/en/publication-category/meiti-reports>)
- 181 Some of these companies use multiple names, for example Sabae (Gems & Jewellery) also uses the name “Jasmine”, which is spelt “Jusmine” in MEITI reporting. “The Economic Interests of the Myanmar Military”, United Nations Independent Fact-Finding Mission on Myanmar, United Nations Human Rights Council, A/HRC/42/CRP.3, August 2019, pp. 73–75 (<https://www.ohchr.org/EN/HRBodies/HRC/MyanmarFFM/Pages/EconomicInterestsMyanmarMilitary.aspx>)
- 182 Global Witness analysis of MEITI data (<https://myanmareiti.org/en/publication-category/meiti-reports>). Some of MEHL’s competitors also belonged to informal groupings, for example involving overlaps in ownership or directorships, but because these were not formally constituted, we have treated them as individual companies
- 183 Global Witness analysis of MEITI data (<https://myanmareiti.org/en/publication-category/meiti-reports>)
- 184 Global Witness analysis of MEITI data (<https://myanmareiti.org/en/publication-category/meiti-reports>)
- 185 Global Witness analysis of MEITI data (<https://myanmareiti.org/en/publication-category/meiti-reports>)
- 186 Interview with Myanmar analyst, 2015 (Global Witness interview 808). See also “The Economic Interests of the Myanmar Military”, United Nations Independent Fact-Finding Mission on Myanmar, United Nations Human Rights Council, A/HRC/42/CRP.3, August 2019, p.31 (<https://www.ohchr.org/EN/HRBodies/HRC/MyanmarFFM/Pages/EconomicInterestsMyanmarMilitary.aspx>); “Jade: Myanmar’s ‘Big State Secret’”, Global Witness, October 2015, p. 50 (<https://www.globalwitness.org/en/campaigns/oil-gas-and-mining/myanmarjade/>); and “Jade and conflict: Myanmar’s vicious circle”, Global Witness, 2021, p.43 (<https://www.globalwitness.org/en/campaigns/natural-resource-governance/jade-and-conflict-myanmars-vicious-circle/>)
- 187 “Transfer of Shares: Northern Star Gems & Jewellery Co. Ltd”, December 2018, p.8 (Global Witness document 485)
- 188 Corporate records held by DICA (<https://www.myco.dica.gov.mm/Corp/EntityProfile.aspx?id=18e7a99f-c634-422d-9139-6b77e5f9c513>, <https://www.myco.dica.gov.mm/Corp/EntityProfile.aspx?id=22e9c279-1c18-4014-8bdc-d65e9d8d5c8>)
- 189 We used data scraped from Myanmar’s corporate registry by OpenCorporates to create a database of companies and their registered addresses, phone numbers, email addresses and directors and we verified the information we found on the Myanmar Companies Online corporate registry database (<https://www.myco.dica.gov.mm/corp/search.aspx>)
- 190 Ruby Dragon Group of Companies response to Global Witness letter, 10 November 2021
- 191 “Board of Management”, Ruby Dragon Group (<https://www.rubydragongroup.com/our-management.html>)
- 192 “Pigeon Blood Valley: On the Trail of Mogok’s Famed Burmese Ruby”, Adolf Peretti and Thierry Falise, 2016, p.75; “Multifaceted: Governance and Conflict Risks in Myanmar’s Ruby Industry”, NRGi, March 2018, pp.10–11 (<https://resourcegovernance.org/analysis-tools/publications/multifaceted-governance-and-conflict-risks-myanmar-ruby-industry>)
- 193 Ruby Dragon Group of Companies response to Global Witness letter, 10 November 2021
- 194 “Pigeon Blood Valley: On the Trail of Mogok’s Famed Burmese Ruby”, Adolf Peretti and Thierry Falise, 2016, p.75; “Multifaceted: Governance and Conflict Risks in Myanmar’s Ruby Industry”, NRGi, March 2018, pp.10–11 (<https://resourcegovernance.org/analysis-tools/publications/multifaceted-governance-and-conflict-risks-myanmar-ruby-industry>)
- 195 “Noble Twin Dragons guides Myanmar out of the fog”, Elsid Andra Filemon, Jakarta Globe, 3 May 2015 (<https://jakartaglobe.id/opinion/noble-twin-dragons-guides-myanmar-fog/>)
- 196 Corporate record held by DICA (<https://www.myco.dica.gov.mm/Corp/EntityProfile.aspx?id=c0910a4f-1bba-4375-acbe-a291161393d6>)
- 197 Corporate record held by DICA (<https://www.myco.dica.gov.mm/Corp/EntityProfile.aspx?id=9f3faf76-ea1c-41c8-be4a-25c0719d59bb>)
- 198 “Jade and conflict: Myanmar’s vicious circle”, Global Witness, 2021, p.17; corporate record held by DICA (<https://www.myco.dica.gov.mm/corp/search.aspx>)
- 199 “Jade and conflict: Myanmar’s vicious circle”, Global Witness, 2021, p.47 (<https://www.globalwitness.org/en/campaigns/natural-resource-governance/jade-and-conflict-myanmars-vicious-circle/>). Yang Moe Lyan remains the company’s largest shareholder today, as per corporate record held by DICA (<https://www.myco.dica.gov.mm/Corp/EntityProfile.aspx?id=7e3f4bc9-1962-4f2e-ad8b-4f7a2aac0854>)
- 200 Myanmar National Democratic Alliance Army response to Global Witness letter, November 2021
- 201 “Gemstone Sector Review: In Support of Myanmar EITI”, MEITI 2016, p.31 (<https://www.resourcedata.org/document/rgi-myanmar-eiti-gemstone-sector-review>)
- 202 “Gemstone Sector Review: In Support of Myanmar EITI”, MEITI, 2016, p.7 (<https://www.resourcedata.org/document/rgi-myanmar-eiti-gemstone-sector-review>); interviews with senior monk in Mong Hsu, 2017, Yangon-based jeweller, 2017 and businesswoman from Mogok, 2017 (Global Witness interviews 503, 601 and 604)
- 203 Global Witness analysis of MEITI data (<https://myanmareiti.org/en/publication-category/meiti-reports>)
- 204 Global Witness analysis of MEITI data (<https://myanmareiti.org/en/publication-category/meiti-reports>)
- 205 Global Witness analysis of MEITI data (<https://myanmareiti.org/en/publication-category/meiti-reports>)
- 206 “Jade and conflict: Myanmar’s vicious circle”, Global Witness, 2021, p.47 (<https://www.globalwitness.org/en/campaigns/natural-resource-governance/jade-and-conflict-myanmars-vicious-circle/>)
- 207 Global Witness analysis of MEITI data (<https://myanmareiti.org/en/publication-category/meiti-reports>)
- 208 “KBZ Group rated the most transparent in Myanmar”, KBZ Bank, 5 June 2016 (<https://www.kbzbank.com/en/blog/news-en/kbz-group-rated-transparent-myanmar/>); corporate record held by DICA (<https://www.myco.dica.gov.mm/Corp/EntityProfile.aspx?id=a3c6d65d-3956-4d5b-bdaa-08e090bf08d3>)
- 209 “Jade: Myanmar’s ‘Big State Secret’”, Global Witness, 2015, p.58 (<https://www.globalwitness.org/en/campaigns/oil-gas-and-mining/myanmarjade/>)
- 210 “Special Report: An image makeover for Myanmar Inc”, Reuters, 12 April 2012 (<https://www.reuters.com/article/us-myanmar-cronies-image-idUSBRE83B0YU20120412>)
- 211 U.S. Senate Committee on Foreign Relations Asia Subcommittee Hearing on the Situation in Burma, Testimony of Kelley E. Currie, 25 March 2021 (https://www.foreign.senate.gov/imo/media/doc/032521_Currie_Testimony.pdf)
- 212 The chair and founder of Ruby Dragon Group, Nay Win Tun, is one of three directors in all these companies. At least eight other directors feature in at least seven of the companies. Seven of the companies are registered to the same address as Ruby Dragon Jade & Gems Company, and the remaining two, R B G Yadanar Company and Khine Thit Sar Gems, share an address with each other and share nine directors with Ruby Dragon Jade & Gems Company. See corporate records held by DICA (<https://www.myco.dica.gov.mm/corp/search.aspx>). A representative of Ruby Dragon Group confirmed to Global Witness that all these companies were part of the group but claimed that several had been inactive for many years (Loi Mine Nagar Gems Company, R B G Yadanar Company, Sapphire Dragon Gems Company, Ah Yon Oo Nagar Gems Company, Jade Dragon Family Gems Company, Khine Thit Sar Gems Company Limited and Tein Yan Nagar Gems Company). However, MEITI data shows that Loi Mine Nagar Gems Company had licences to mine in Mong Hsu until 2019, Sapphire Dragon Gems Company had licences to mine in Mong Hsu until 2018 and Mogok until 2019, and R B G Yadanar Company

had licences to mine in Mogok until 2018. Khine Thit Sar Gems Company was one of the largest licensees across the five years of MEITI data (see Section 3.1). Ruby Dragon Group of Companies response to Global Witness letter, November 2021

213 “Jade and conflict: Myanmar’s vicious circle”, Global Witness, June 2021, p.47 (<https://www.globalwitness.org/en/campaigns/natural-resource-governance/jade-and-conflict-myanmars-vicious-circle/>). Yang Moe Lyan remains the company’s largest shareholder today as per corporate record held by DICA (<https://www.myco.dica.gov.mm/Corp/EntityProfile.aspx?id=7e3f4bc9-1962-4f2e-ad8b-4f7a2aac0854>)

214 The company shares a registered address and four directors with Lyan Shan Jewellery Company, which is owned by former MNDA chairman U Yan Moe Lyan: see corporate records held by DICA (<https://www.myco.dica.gov.mm/Corp/EntityProfile.aspx?id=e79d62ef-33b1-4257-9f5f-4ae7e2dde174> and <https://www.myco.dica.gov.mm/Corp/EntityProfile.aspx?id=7e3f4bc9-1962-4f2e-ad8b-4f7a2aac0854>)

215 The company shares a director (Yang Khike Kyin) with Lyan Shan Jewellery Company and another director (Chit Kyaw) with Chatkyiyay Gems & Jewellery Company Limited: see corporate records held by DICA (<https://www.myco.dica.gov.mm/Corp/EntityProfile.aspx?id=c54792b9-445e-4084-a479-6d66d2b85abb>, <https://www.myco.dica.gov.mm/Corp/EntityProfile.aspx?id=e79d62ef-33b1-4257-9f5f-4ae7e2dde174> and <https://www.myco.dica.gov.mm/Corp/EntityProfile.aspx?id=7e3f4bc9-1962-4f2e-ad8b-4f7a2aac0854>)

216 The company shares a director (Win Htaik) with Chatkyiyay Gems & Jewellery Company Limited (spelt Win Htkie in the Chatkyiyay record, but the National Registration Card number is the same): see corporate records held by DICA (<https://www.myco.dica.gov.mm/Corp/EntityProfile.aspx?id=88449376-6c76-4b83-95d2-6b229b3c6790> and <https://www.myco.dica.gov.mm/Corp/EntityProfile.aspx?id=e79d62ef-33b1-4257-9f5f-4ae7e2dde174>)

217 The company shares a registered phone number, email address and four directors with Kyauk Sein Minn Gems Company, including Win Htaik, who is a director of Chatkyiyay Gems & Jewellery Company (spelt Win Htkie in the Chatkyiyay record, but the NRC number is the same): see corporate records held by DICA (<https://www.myco.dica.gov.mm/Corp/EntityProfile.aspx?id=3972341d-9899-4fc8-aaa6-fec683855966>, <https://www.myco.dica.gov.mm/Corp/EntityProfile.aspx?id=88449376-6c76-4b83-95d2-6b229b3c6790> and <https://www.myco.dica.gov.mm/Corp/EntityProfile.aspx?id=e79d62ef-33b1-4257-9f5f-4ae7e2dde174>)

218 Ruby Dragon Group of Companies response to Global Witness letter, November 2021

219 Global Witness analysis of MEITI data (<https://myanmareiti.org/en/publication-category/meiti-reports>). Ruby Dragon Group confirmed in a November 2021 letter to Global Witness that R B G Yadanar Company is part of the group. We excluded Khun-Pa-Oh Gems & Jewellery Company Limited and Long Byit Jewellery Company Limited from our calculations because they held significant numbers of jade mining licences, meaning that their payments were likely to have been linked to their jade mining rather than their gemstone mining operations. Ruby Dragon Group of Companies response to Global Witness letter, November 2021

220 Interviews with: Mogok civil society representative and former businessman, 2021; Mogok civil society representative, 2021; Yangon-based journalist, 2019; Thai journalist, 2019; Mogok civil society representative, 2019; Yangon-based civil society representative, 2020; member of Shan Nationalities League for Democracy, 2017; international financial institution representative in Yangon, 2017; Myanmar-focused analyst, 2018; representatives of MGJEA, 2017; and Shan State-based journalist, 2017 (Global Witness interviews 101, 103, 206, 211, 213, 301a, 509, 606, 607, 609 and 612)

221 Concession map provided to Global Witness by industry insiders, 2017; Interview with former gemstone industry official; 2021 (Global Witness interview 922)

222 Concession map provided to Global Witness by industry insiders, 2017; Interview with former gemstone industry official; 2021 (Global Witness interview 922)

223 Concession map provided to Global Witness by industry insiders, 2017

224 Global Witness analysis of MEITI data (<https://myanmareiti.org/en/publication-category/meiti-reports>)

225 “Jade and conflict: Myanmar’s vicious circle”, Global Witness, June 2021, p.16 (<https://www.globalwitness.org/en/campaigns/natural-resource-governance/jade-and-conflict-myanmars-vicious-circle/>)

226 Interview with journalist, 2019 (Global Witness interview 206). See Section 16(e) of Myanmar’s 1995 Gemstone Law and Section 21(e) of Myanmar’s revised 2019 Gemstone Law

227 “Ready, Aim, Sanction”, ALTSEAN Burma Special Report, November 2003, p.88 (<http://archive.altsean.org/Docs/PDF%20Format/Special%20Reports/Ready%20Aim%20Sanction.pdf>)

228 “Foreign Secretary Dominic Raab announces new Myanmar sanctions”, UK Foreign, Commonwealth & Development Office, 2 September 2021 (<https://www.gov.uk/government/news/foreign-secretary-dominic-raab-announces-new-myanmar-sanctions>)

229 “Jade: Myanmar’s ‘Big State Secret’”, Global Witness, 2015, p.30 (<https://www.globalwitness.org/en/campaigns/oil-gas-and-mining/myanmarjade/>); interviews with: Mogok civil society representative and former businessman, 2021; Yangon-based journalists, 2019; and Yangon-based civil society representatives, 2018 and 2020 (Global Witness interviews 101, 201, 206, 214, 301a and 309)

230 Interview with former gemstone industry official; 2021 (Global Witness interview 922)

231 Interview with Mogok civil society representative and former businessman, 2021 (Global Witness interview 101)

232 Interview with company owner in Mogok, 2017 (Global Witness interview 704)

233 Interview with civil society representative in Mogok, 2020 (Global Witness interview 309)

234 EU COUNCIL DECISION (CFSP) 2021/639 of 19 April 2021 amending Decision 2013/184/CFSP concerning restrictive measures in view of the situation in Myanmar/Burma (<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32021D0639>); “Treasury Sanctions Military Holding Companies in Burma”, U.S. Department of the Treasury, March 2021 (<https://home.treasury.gov/news/press-releases/jy0078>)

235 “Military Ltd – The Company Financing Human Rights Abuses in Myanmar”, Amnesty International, 2020, p.5 (<https://www.amnesty.org/en/documents/asa16/2969/2020/en/>)

236 “Myanmar coup: Min Aung Hlaing, the general who seized power”, BBC News, 1 February 2021 (<https://www.bbc.co.uk/news/world-asia-55892489>)

237 “Military Ltd – The Company Financing Human Rights Abuses in Myanmar”, Amnesty International, 2020, p.7 (<https://www.amnesty.org/en/documents/asa16/2969/2020/en/>)

238 “The Economic Interests of the Myanmar Military”, United Nations Independent Fact-Finding Mission on Myanmar, United Nations Human Rights Council, A/HRC/42/CRP.3, August 2019, p.36 (<https://www.ohchr.org/EN/HRBodies/HRC/MyanmarFFM/Pages/EconomicInterestsMyanmarMilitary.aspx>)

239 “The Economic Interests of the Myanmar Military”, United Nations Independent Fact-Finding Mission on Myanmar, United Nations Human Rights Council, A/HRC/42/CRP.3, August 2019, p.87, list of donors and details of donations solicited by the Tatmadaw in September 2017 (<https://www.ohchr.org/EN/HRBodies/HRC/MyanmarFFM/Pages/EconomicInterestsMyanmarMilitary.aspx>) See also EU COUNCIL DECISION (CFSP) 2021/639 of 19 April 2021 amending Decision 2013/184/CFSP concerning restrictive measures in view of the situation in Myanmar/Burma (<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32021D0639>)

240 “MEHL Shareholders 2010–2011”, Justice for Myanmar, September 2020 (<https://files.justiceformyanmar.org/MEHL-shareholders-2010-2011-EN.xlsx>)

241 Analysis of published sources by Security Force Monitor for Global Witness. “Update on the human rights situation in Burma”, Network for Human Rights Documentation-Burma, 2018, p.20 (<https://www.burmalink.org/wp-content/uploads/2018/09/hrsituation-final-engjan-june2018.pdf>) and “Trained to Torture”, Ta’ang Women’s Organisation, 2016, pp.39–40 and 44 (https://www.burmapartnership.org/wp-content/uploads/2016/06/Trained-to-Torture-English_for-Web.pdf). Forced portering is shorthand for the longstanding military practice of abducting civilians, often from ethnic minority groups, and forcing them to serve as porters in support of

the military's campaigns against ethnic armed groups. See also "Update by the Shan Human Rights Foundation on the International Day for the Elimination of Violence Against Women", Shan Human Rights Foundation, November 2015, p.3 (<https://www.hart-uk.org/news/international-day-for-the-elimination-of-violence-against-women-shan-human-rights-foundation-update/>)

242 All of these units were listed as MEHL shareholders in the leaked MEHL table of shareholder units covering 2010–11. "MEHL Shareholders 2010–2011", Justice for Myanmar, September 2020 (<https://files.justiceformyanmar.org/MEHL-shareholders-2010-2011-EN.xlsx>)

243 Interviews with Mogok civil society representative and former businessman, 2021 and local people in Mogok, 2017 (Global Witness interviews 101 and 701). Public sources also indicate that IB 71 is regularly based in the township, with sources placing the unit in Mogok in July 2014 and June 2016 ("Trained to Torture", Ta'ang Women's Organisation, 2016, p.39 and p.8 (https://www.burmapartnership.org/wp-content/uploads/2016/06/Trained-to-Torture-English_for-Web.pdf), and May 2020 ("Tatmadaw Fight With TNLA After Announcing Unilateral Ceasefire," Network Media Group, 16 May 2020 (<https://www.bnionline.net/en/news/tatmadaw-fight-tnla-after-announcing-unilateral-ceasefire>). A single published source places IB 95 in Mogok in June 2016 ("Trained to Torture", Ta'ang Women's Organisation, 2016, p.8 (https://www.burmapartnership.org/wp-content/uploads/2016/06/Trained-to-Torture-English_for-Web.pdf))

244 "Tatmadaw Fight With TNLA After Announcing Unilateral Ceasefire", Network Media Group, 16 May 2020 (<https://www.bnionline.net/en/news/tatmadaw-fight-tnla-after-announcing-unilateral-ceasefire>)

245 "Trained to Torture", Ta'ang Women's Organisation, 2016, pp.8 and 39 (https://www.burmapartnership.org/wp-content/uploads/2016/06/Trained-to-Torture-English_for-Web.pdf); "Election Ends, Fighting Resumes in Northern Shan State", Network Media Group, 23 November 2020 (<https://www.bnionline.net/en/news/election-ends-fighting-resumes-northern-shan-state>)

246 These may be Light Infantry Battalions rather than Infantry Battalions. These units were not listed in the leaked MEHL table of shareholder units covering 2010–11, suggesting that they may have been created after the publication of the MEHL shareholder report. See "MEHL Shareholders 2010–2011", Justice for Myanmar, September 2020 (<https://files.justiceformyanmar.org/MEHL-shareholders-2010-2011-EN.xlsx>)

247 Public sources indicate that IB 149 operated in Mong Hsu in 2012. ("Truce Violations Continue", Burma News International, 20 June 2012 (<https://www.bnionline.net/en/shan-herald-agency-for-news/item/13279-truce-violations-continue-.html>); "Shan Ceasefire Starts to Show Cracks", The Irrawaddy, August 2012 (<https://reliefweb.int/report/myanmar/shan-ceasefire-starts-show-cracks>) and in 2016 ("Extrajudicial Killing, Arbitrary Arrest, Looting by Burma Army in Nawngkhio, Hsipaw and Mong Hsu in October 2016", Shan Human Rights Foundation, 29 November 2016 (<https://www.burmalink.org/extrajudicial-killing-arbitrary-arrest-looting-burma-army-nawngkhio-hsipaw-mong-hsu-october-2016/>)). IB 150 was reported to be operating in Mong Hsu in 2012 ("Truce Violations Continue", Burma News International, 20 June 2012 (<https://www.bnionline.net/en/shan-herald-agency-for-news/item/13279-truce-violations-continue-.html>); "Shan Ceasefire Starts to Show Cracks", The Irrawaddy, August 2012 (<https://reliefweb.int/report/myanmar/shan-ceasefire-starts-show-cracks>) and 2017 ("Burma army orders SSPP/SSA to withdraw from Monghsu", Shan Herald Agency for News, 20 January 2017 (<https://www.bnionline.net/en/news/shan-state/item/2653-burma-army-orders-sspp-ssa-to-withdraw-from-monghsu.html>))

248 Interview with Mong Hsu resident, 2021 (Global Witness interview 614)

249 "Gemstone Sector Review: In Support of Myanmar EITI", MEITI, 2016, p.7 (<https://www.resourcedata.org/document/rgi-myanmar-eiti-gemstone-sector-review>)

250 "Losing Luster: Addressing Tax Evasion in Myanmar's Jade and Gemstone Industry", NRGi, 2019, p.16 (<https://resourcegovernance.org/analysis-tools/publications/losing-luster-addressing-tax-evasion-myanmars-jade-and-gemstone>)

251 "Losing Luster: Addressing Tax Evasion in Myanmar's Jade and Gemstone Industry", NRGi, 2019, p.17 (<https://resourcegovernance.org/analysis-tools/publications/losing-luster-addressing-tax-evasion-myanmars-jade-and-gemstone>)

252 "Gemstone Sector Review: In Support of Myanmar EITI", MEITI, 2016, pp.7 and 17 (<https://www.resourcedata.org/document/rgi-myanmar-eiti-gemstone-sector-review>)

253 "Jade and conflict: Myanmar's vicious circle", Global Witness, 2021, p.18 (<https://www.globalwitness.org/en/campaigns/natural-resource-governance/jade-and-conflict-myanmars-vicious-circle/>)

254 "Gem industry leaders attend meeting with junta officials", Myanmar Now, July 2021 (<https://www.myanmar-now.org/en/news/gem-industry-leaders-attend-meeting-with-junta-officials>)

255 "Losing Luster: Addressing Tax Evasion in Myanmar's Jade and Gemstone Industry", NRGi, 2019, p.6 (<https://resourcegovernance.org/analysis-tools/publications/losing-luster-addressing-tax-evasion-myanmars-jade-and-gemstone>)

256 "EITI Report 2017–18", Extractive Industries Transparency Initiative Myanmar, March 2020, p.120 (<https://eiti.org/document/myanmar-20172018-eiti-report>)

257 "Gemstone Sector Review: In Support of Myanmar EITI", MEITI, 2016, p.29 (<https://www.resourcedata.org/document/rgi-myanmar-eiti-gemstone-sector-review>); "EITI Report 2017–18", Extractive Industries Transparency Initiative Myanmar, March 2020, p.120 (<https://eiti.org/document/myanmar-20172018-eiti-report>)

258 "Losing Luster: Addressing Tax Evasion in Myanmar's Jade and Gemstone Industry", NRGi, 2019, p.5 (<https://resourcegovernance.org/analysis-tools/publications/losing-luster-addressing-tax-evasion-myanmars-jade-and-gemstone>)

259 "Gemstone Sector Review: In Support of Myanmar EITI", MEITI, 2016, p.39 (<https://www.resourcedata.org/document/rgi-myanmar-eiti-gemstone-sector-review>)

260 "Losing Luster: Addressing Tax Evasion in Myanmar's Jade and Gemstone Industry", NRGi, 2019, pp.14 and 27 (<https://resourcegovernance.org/analysis-tools/publications/losing-luster-addressing-tax-evasion-myanmars-jade-and-gemstone>); "Gemstone Sector Review: In Support of Myanmar EITI", MEITI, 2016, p.7 (<https://www.resourcedata.org/document/rgi-myanmar-eiti-gemstone-sector-review>)

261 "Losing Luster: Addressing Tax Evasion in Myanmar's Jade and Gemstone Industry", NRGi, 2019, p.11 (<https://resourcegovernance.org/analysis-tools/publications/losing-luster-addressing-tax-evasion-myanmars-jade-and-gemstone>)

262 Calculated using the combined taxation payments reported through MEITI for gemstones and jade divided by the percentage of total production value for gemstones: 2013–14: K2,155,867,385; 2014–15: K10,390,253,120; 2015–16: K10,901,641,360; 2016–17: K5,586,134,339; 2017–18: K5,448,208,041 (<https://myanmareiti.org/en/publication-category/meiti-reports>)

263 "Losing Luster: Addressing Tax Evasion in Myanmar's Jade and Gemstone Industry", NRGi, 2019, p.19 (<https://resourcegovernance.org/analysis-tools/publications/losing-luster-addressing-tax-evasion-myanmars-jade-and-gemstone>)

264 "Losing Luster: Addressing Tax Evasion in Myanmar's Jade and Gemstone Industry", NRGi, 2019, p.11 (<https://resourcegovernance.org/analysis-tools/publications/losing-luster-addressing-tax-evasion-myanmars-jade-and-gemstone>)

265 "EITI Report 2017–2018", Myanmar Extractive Industries Transparency Initiative, March 2020, p.120 (<https://eiti.org/document/myanmar-20172018-eiti-report>)

266 "Myanmar Gem Traders Warned of Blacklist for Joining Naypyitaw Emporium by CRPH", The Irrawaddy, March 2021 (<https://www.irrawaddy.com/news/burma/myanmar-gem-traders-warned-blacklist-joining-naypyitaw-emporium-crph.html>)

267 "Ten-day gem show successfully concludes", *Global New Light of Myanmar*, 12 April 2021 (<https://www.gnlm.com.mm/ten-day-gem-show-successfully-concludes/>)

268 "Jade and conflict: Myanmar's vicious circle", Global Witness, 2021, p.23 (<https://www.globalwitness.org/en/campaigns/natural-resource-governance/jade-and-conflict-myanmars-vicious-circle/>)

269 "Myanmar Junta to Stage Gem Fair in December," The Irrawaddy, 10 November 2021 (<https://www.irrawaddy.com/news/burma/myanmar-junta-to-stage-gem-fair-in-december.html>)

- 270 “Myanmar Junta to Stage Gem Fair in December,” *The Irrawaddy*, 10 November 2021 (<https://www.irrawaddy.com/news/burma/myanmar-junta-to-stage-gem-fair-in-december.html>)
- 271 “A rough cut trade: Africa’s coloured gemstone flows to Asia,” *Global Initiative Against Transnational Organised Crime*, July 2020, p.2 (<https://globalinitiative.net/analysis/africa-asia-gemstones-trade/>)
- 272 “Montepuez Ruby Update – analyst presentation”, Gemfields Group Limited, 22 July 2015 (https://xmb.files.wordpress.com/2015/07/20150721_gemfields_montepuez_srk_presentation_final.pdf)
- 273 “Gemstone Sector Review: In Support of Myanmar EITI”, MEITI, 2016 (<https://www.resourcedata.org/document/rgi-myanmar-eiti-gemstone-sector-review>)
- 274 “Gemstone Sector Review: In Support of Myanmar EITI”, MEITI, 2016, p.43 (<https://www.resourcedata.org/document/rgi-myanmar-eiti-gemstone-sector-review>)
- 275 Interviews with civil society representative, 2020; photographer, 2016; monk in Mong Hsu, 2017; Mong Hsu resident, 2017; and monk in Mogok, 2017 (Global Witness interviews 301a, 310, 503, 505 and 702); “Gemstone Sector Review: In Support of Myanmar EITI”, MEITI, 2016, p.38 (<https://www.resourcedata.org/document/rgi-myanmar-eiti-gemstone-sector-review>)
- 276 “Gemstone Sector Review: In Support of Myanmar EITI”, MEITI, 2016, p.6 (<https://www.resourcedata.org/document/rgi-myanmar-eiti-gemstone-sector-review>); “EITI Report 2017–2018”, Myanmar Extractive Industries Transparency Initiative, March 2020, p.87 (<https://eiti.org/document/myanmar-20172018-eiti-report>)
- 277 Interview with Yangon-based jeweller, 2017 (Global Witness interview 601)
- 278 In 2001, visiting geologists observed relatively well-mechanised mining for rubies and spinel taking place in sedimentary deposits at Namya in Hpakant Township, where most of Myanmar’s jade mining takes place (see “Expedition to the Ruby and Spinel Mines of Namya (Northern Burma/ Myanmar)”, Adolf Peretti and Anong Kanpraphai, GRS, 2001 (<https://www.gemresearch.ch/assets/documents/publication-articles/2003-08-namya-spinel-and-ruby-mines-contributions-no02-part1.pdf>)). Production is reported in Namya (referred to as Nant Yar Seik in MEITI reporting) in one of the five MEITI reports, for 2016–17 (<https://myanmareiti.org/en/publication/4th-meiti-report-2016-2017-fy>), with a reported production value of K15 million, a comparatively small sum. There have also been reports of gemstone deposits in other parts of Shan State, including Maw Pa on the Thanlwin River (interview with Mogok civil society representative and former businessman, 2021 (Global Witness interview 101); Namkham and Namtu Townships (Working People’s Daily, 3 March 1990 (http://uzo.sakura.ne.jp/burma/nlm/nlm_data/bps_1987-1996/bps_1990/bps_03_1990.pdf) and 7 November 1990 (<https://www.burmalibrary.org/docs3/BPS90-11.pdf>)); “Grave diggers: A report on mining in Burma”, Roger Moody, Canada Asia Pacific Resource Network, September 1999, p.8 (<https://www.burmalibrary.org/en/grave-diggers-a-report-on-mining-in-burma>); and SSA–N territory near Wan Hai (interview with Thai journalist, 2019 (Global Witness interview 211).
- 279 Interviews with: senior monk in Mong Hsu, 2017; Yangon-based jeweller, 2018; and businesswoman from Mogok, 2017 (Global Witness interviews 503, 601 and 604); “Gemstone Sector Review: In Support of Myanmar EITI”, MEITI 2016, p.7 (<https://www.resourcedata.org/document/rgi-myanmar-eiti-gemstone-sector-review>)
- 280 Interviews with 12 industry experts in “Global Supply Chains for Myanmar Rubies”, consultant report for Global Witness, 2021
- 281 “Global Supply Chains for Myanmar Rubies”, consultant report for Global Witness, 2021
- 282 Interviews with Yangon-based jeweller, 2018; former member of Myanmar EITI coordination office, 2018; and businesswoman from Mogok, 2017 (Global Witness interviews 601, 610 and 604)
- 283 Interview with representatives of MGJEA, 2018 (Global Witness interview 609)
- 284 “Chanthaburi – City of Gems”, Gemscene (www.gemscene.com/chanthaburi---city-of-gems.html)
- 285 “Ruby and Sapphire Production and Distribution: a Quarter Century of Change”, Russell Shor and Robert Weldon, *Gems and Gemology*, 2009, p.244 (<https://www.gia.edu/doc/Ruby-and-Sapphire-Production-and-Distribution.pdf>)
- 286 “Thailand: The Undisputed Ruby Trading Kingdom – a Brief History”, Vincent Pardieu, *InColor Magazine*, 2019, p.14 (<https://elibrary.git.or.th/book-detail/3292>)
- 287 Interview with representative of a Gemmological Institute, 2021 (Global Witness interview 803), p.38; “Multifaceted: Governance and Conflict Risks in Myanmar’s Ruby Industry”, NRGi, 2018, pp.4–5 (<https://resourcegovernance.org/analysis-tools/publications/multifaceted-governance-and-conflict-risks-myanmar-ruby-industry>)
- 288 “Chanthaburi – City of Gems”, Gemscene (www.gemscene.com/chanthaburi---city-of-gems.html)
- 289 “Global Supply Chains for Myanmar Rubies”, consultant report for Global Witness, 2021, p.3
- 290 Interviews with Mong Hsu politician and gemstone miner, 2021; and Yangon-based jeweller, 2018; and US gemstone trader, 2018 (Global Witness interviews 102, 601 and 605)
- 291 Interviews with journalist, 2019; Mong Hsu resident, 2017; senior monk in Mong Hsu, 2017; Yangon-based jeweller, 2018; and former member of Myanmar EITI coordination office, 2018 (Global Witness interviews 206, 501, 503, 602, 610)
- 292 Interviews with senior monk in Mong Hsu, 2017 and Yangon-based jeweller, 2018 (Global Witness interviews 503 and 602)
- 293 Interview with MGJEA representatives, 2018 (Global Witness interview 609)
- 294 Interview with IFI representative in Yangon, 2018 (Global Witness interview 606)
- 295 Interviews with: Yangon-based jeweller, 2018; businesswoman from Mogok, 2017; and NGO representative, 2021 (Global Witness interviews 601, 604 and 806)
- 296 Interview with Yangon-based jeweller, 2018 (Global Witness interview 601)
- 297 Interview with IFI representative in Yangon, 2018 (Global Witness interview 606)
- 298 “Step by Step: Myanmar Gem Sector Emerges from Isolation and U.S. Sanctions”, AGTA, 2016, p.13
- 299 Interviews with gemstone trader and broker in Mogok, 2021 and gemstone miner in Mogok, 2021 (Global Witness interviews 903 and 904). See also MEITI data (<https://myanmareiti.org/en/publication-category/meiti-reports>)
- 300 “Myanmar’s ethnic armed groups, and why their threats against junta could spiral into more conflict”, AFP, 31 March 2021, published by the South China Morning Post (<https://www.scmp.com/week-asia/explained/article/3127646/myanmars-ethnic-armed-groups-and-why-their-threats-against>)
- 301 Interviews with Mogok civil society representative and former businessman, 2021 and Yangon-based journalist, 2019 (Global Witness interviews 101 and 201)
- 302 “Fire and Ice: Conflict and Drugs in Myanmar’s Shan State”, International Crisis Group, 8 January 2019 (<https://www.crisisgroup.org/asia/south-east-asia/myanmar/299-fire-and-ice-conflict-and-drugs-myanmars-shan-state>)
- 303 “Ethnic rebels’ show of force highlights Suu Kyi’s peace challenge”, Reuters, 15 February 2016 (<https://www.reuters.com/article/us-myanmar-politics-rebels-idUSKCN0VO11U>)
- 304 Interview with Thai businessman, 2017 (Global Witness interview 405)
- 305 “The Cost of the Coup: Myanmar Edges Toward State Collapse”, International Crisis Group, 1 April 2021 (<https://www.crisisgroup.org/asia/south-east-asia/myanmar/b167-cost-coup-myanmar-edges-toward-state-collapse>)
- 306 Interview with junior soldiers at Loi Tai Leng, 2017 (Global Witness interview 404)
- 307 Satellite imagery of Loi Tai Leng (19°44’19.56”N, 98°11’53.92”E) accessed using Google Earth
- 308 Interviews with soldiers at Loi Tai Leng, 2017 and IFI representative in Yangon, 2018 (Global Witness interviews 404 and 606)
- 309 Interview with soldiers at Loi Tai Leng, 2017 (Global Witness interview 404)

- 310 Interview with workers at SSA-S gemstone processing factory, 2017 (Global Witness interview 411)
- 311 Interview with SSA-S leader Yawd Serk, 2017 (Global Witness interview 402)
- 312 Interview with SSA-S liaison officer, 2017 (Global Witness interview 407)
- 313 Interview with manager of SSA-S gemstone processing factory, 2017 (Global Witness interview 401)
- 314 Interview with manager of SSA-S gemstone processing factory, 2017 (Global Witness interview 401)
- 315 Interview with manager of SSA-S gemstone processing factory, 2017 (Global Witness interview 401)
- 316 Interview with Shan-based journalist, 2018 (Global Witness interview 612)
- 317 Interview with head of SSA-S foreign affairs department, 2017 (Global Witness interview 406)
- 318 “Report of the detailed findings of the Independent International Fact-Finding Mission on Myanmar”, United Nations Human Rights Council, August 2018, pp.83–89 (<https://www.ohchr.org/en/hrbodies/hrc/myanmarFFM/Pages/ReportoftheMyanmarFFM.aspx>)
- 319 “The Conflict Resource Economy and Pathways to Peace in Burma”, Kevin Woods, United States Institute of Peace, 19 November 2018, p.2 (<https://www.usip.org/publications/2018/11/conflict-resource-economy-and-pathways-peace-burma>)
- 320 Interview with former member of Myanmar EITI coordination office, 2018 (Global Witness interview 610)
- 321 “Fire and Ice: Conflict and Drugs in Myanmar’s Shan State”, International Crisis Group, January 2019 (<https://www.crisisgroup.org/asia/south-east-asia/myanmar/299-fire-and-ice-conflict-and-drugs-myanmars-shan-state>)
- 322 “Fire and Ice: Conflict and Drugs in Myanmar’s Shan State”, International Crisis Group, January 2019 (<https://www.crisisgroup.org/asia/south-east-asia/myanmar/299-fire-and-ice-conflict-and-drugs-myanmars-shan-state>)
- 323 “Gemstone Sector Review: In Support of Myanmar EITI”, MEITI, 2016, p.49 (<https://www.resourcedata.org/document/rgi-myanmar-eiti-gemstone-sector-review>)
- 324 Interview with Thailand-based gemstone expert, 2021 (Global Witness interview 805)
- 325 Interview with AML expert, 2021 (Global Witness interview 614)
- 326 Interview with AML expert, 2021 (Global Witness interview 614)
- 327 “Due Diligence Guidance for Responsible Business Conduct”, OECD, 2018, p.69 (<https://www.oecd.org/investment/due-diligence-guidance-for-responsible-business-conduct.htm>)
- 328 Companies we spoke to included ABC Stone Co., Ltd., AJS Gems Co., Ltd., China Stone Co., Ltd., Facet Gems Co., Ltd., Fai Dee Gems Co., Ltd. GemMatrix Co., Ltd., Gems Fine Co., Ltd., Gems Store Co., Ltd., KGK Group, Manja-Thai Co., Ltd. (Atelier Quadrature), Natural Art Jewelry Co., Ltd., Nazo Anna Co., Ltd., P&P Gems Co., Ltd., Premier Gems Co., Ltd., Sant Enterprises Co., Ltd., Veerasak Gems Co., Ltd., Venice of the East Gems and Jewelry Co., Ltd., and Yoolim Gemstones Co., Ltd.
- 329 “Thai Trade Data: Import & Export Trade Data”, Indo-Siam Technical Services Co., Ltd. (<https://www.thaitradedata.com/import-export.php>)
- 330 These are KGK Group, Sant Enterprises Co., Ltd., Veerasak Gems Co., Ltd., China Stone Co., Ltd., SWD Import Export Co., Ltd., and Gandhi Enterprises Co., Ltd. Two of the remaining four are logistics/transport companies. Meetings with KGK Group, September 2021; Sant Enterprises Co., Ltd., September 2021; Veerasak Gems Company, May 2021; China Stone Co., Ltd., September 2021; and SWD Import Export Co., Ltd., May 2021; Gandhi Enterprises Co., Ltd. website (<https://www.gemporium.net/>) and Facebook page (<https://www.facebook.com/gandhijewels/>)
- 331 Meetings with Venice of the East Gems and Jewelry Co., Ltd., (September 2021); Gems Store Co., Ltd., May 2021; Nazo Anna Co., Ltd., May 2021; Yoolim Gemstones Co., Ltd., May 2021; Natural Art Jewelry Co., Ltd., May 2021; Facet Gems Co., Ltd., May 2021; ABC Stone Co., Ltd., May 2021; and GemMatrix Co., Ltd., July 2021
- 332 Email exchange with AJS Gems Co., Ltd., June 2021; meeting with Yoolim Gemstones Co., Ltd., May 2021; interview with US-based gemstone trader, 2018 (Global Witness interview 605)
- 333 Meetings with ABC Stone Co., Ltd., May 2021; Facet Gems Co., Ltd., May 2021; and Yoolim Gemstone Co., Ltd., May 2021; email exchange with Manja-Thai Co., Ltd. (Atelier Quadrature), July 2021
- 334 Meeting with Yoolim Gemstones Co., Ltd., May 2021, Interview with Kennedy Ho, Head of Asian Institute for Gemmological Sciences AIGS, Bangkok, August 2019
- 335 Meetings with GemMatrix Co., Ltd., July 2021; ABC Stone Co., Ltd., May 2021; and Nazo Anna Co., Ltd., May 21; Global Witness email exchange with Manja-Thai Co., Ltd. (Atelier Quadrature), July 2021
- 336 Meetings with GemMatrix Co., Ltd., July 2021; and ABC Stone Co., Ltd., May 2021
- 337 Meeting with ABC Stone Co., Ltd., May 2021
- 338 Call with Fai Dee Gems Co., Ltd., June 2021; WhatsApp exchange with Fai Dee Gems Co., Ltd., June 2021
- 339 “About AJS Gems, Bangkok”, AJS Gems Company (<https://www.ajsgem.com/about-ajs-gems-71.html>)
- 340 Email exchange with AJS Gems Co., Ltd., June 2021 and July 2021
- 341 Fai Dee Gems Ltd. website (www.faidee.com)
- 342 Fai Dee Gems Ltd. website: “Our Story” (<https://www.faidee.com/our-story/>), “The Burmese Ruby” (<https://www.faidee.com/the-burmese-ruby/>), “Our Collection” (<https://www.faidee.com/our-collection/>)
- 343 Call with Fai Dee Gems Co., Ltd., June 2021
- 344 Email exchange with Fai Dee Gems Co., Ltd., May 2021
- 345 WhatsApp exchange with Fai Dee Gems Co., Ltd., June 2021
- 346 Interview with Mogok civil society representative and former businessman, 2021 (Global Witness interview 101); Interview with former gemstone industry official; 2021 (Global Witness interview 922); “Ready, Aim, Sanction”, ALTSEAN Burma Special Report, November 2003 (<http://archive.altsean.org/Docs/PDF%20Format/Special%20Reports/Ready%20Aim%20Sanction.pdf>)
- 347 WhatsApp exchange with Fai Dee Gems Co., Ltd., June 2021
- 348 LinkedIn page for Ravi Lunia (<https://www.linkedin.com/in/ravi-lunia-53a684154/?originalSubdomain=th>)
- 349 WhatsApp exchange with Fai Dee Gems Co., Ltd., June 2021
- 350 “Myanmar coup: how the military has held onto power for 60 years”, The Conversation, 3 February 2021 (<https://theconversation.com/myanmar-coup-how-the-military-has-held-onto-power-for-60-years-154526>); “The Cost of the Coup: Myanmar Edges Toward State Collapse”, International Crisis Group, April 2021 (<https://www.crisisgroup.org/asia/south-east-asia/myanmar/b167-cost-coup-myanmar-edges-toward-state-collapse>)
- 351 Email exchange with Fai Dee Gems Co., Ltd., June 2021
- 352 Email exchange with Manja-Thai Co., Ltd. (Atelier Quadrature), July 2021
- 353 Call with Fai Dee Gems Co., Ltd., June 2021
- 354 “Important ruby and diamond necklace, Faidee”, Christie’s, 2021 (<https://www.christies.com/en/lot/lot-6316839>); “Important ruby and diamond necklace, Faidee”, Christie’s, 2020 (<https://www.christies.com/en/lot/lot-6287267>); “A superb ruby and diamond bracelet, by Faidee”, Christie’s, 2018 (<https://www.christies.com/en/lot/lot-6143876>)
- 355 “Our Collection”, Fai Dee Gems Co., Ltd. website (<https://faidee.com/our-collection/>); “Superb Ruby and Diamond Necklace, by James W. Currens for Fai Dee”, Sotheby’s, 2014 (<http://www.sothebys.com/en/auctions/ecatalogue/2014/magnificent-jewels-jadeite-hk0518/lot.1914.html>); “Ruby and diamond bangle/brooch, Faidee”, Sotheby’s, 2019 (<https://www.sothebys.com/en/auctions/ecatalogue/2019/magnificent-jewels-and-jadeite-hk0893/lot.1680.html>); “Magnificent ruby and diamond necklace, Faidee”, Sotheby’s, 2012 (<http://www.sothebys.com/en/auctions/ecatalogue/2012/jewels-and-jadeite-hk0394/lot.1954.html>); “Pair of ruby and diamond earrings, Faidee”, Sotheby’s, 2019 (<https://www.sothebys.com/en/auctions/ecatalogue/2019/magnificent-jewels-and-jadeite-hk0863/lot.1688.html>); “Unique ruby and diamond ‘Fireworks’ ring, James

- W. Currens for Faidee”, Sotheby’s, 2012 (<https://www.sothebys.com/en/auctions/ecatalogue/2012/jewels-and-jadeite-hk0400/lot.1709.html>)
- 356 “Superb Ruby and Diamond Necklace, by James W. Currens for Fai Dee,” Sotheby’s, 2014 (<http://www.sothebys.com/en/auctions/ecatalogue/2014/magnificent-jewels-jadeite-hk0518/lot.1914.html>); “See the World’s Rarest and Most Famous Rubies,” Lucy Rees, Galerie Magazine, August 2020 (<https://galeriemagazine.com/rubies-most-famous/>)
- 357 Graff letter to Global Witness, November 2021
- 358 Call with Fai Dee Gems Co., Ltd, June 2021
- 359 “Ruby”, Van Cleef & Arpels (<https://www.vancleefarpels.com/ie/en/the-maison/articles/ruby.html>)
- 360 Fai Dee Gems Co., Ltd. email to Global Witness, November 2021
- 361 “Customer Reviews”, AJS Gems Co., Ltd. (<https://www.ajsgem.com/info/testimonials.php?page=1>)
- 362 Email exchange with AJS Gems Co., Ltd., June 2021
- 363 Meeting with GemMatrix Co., Ltd., July 2021. See also “Single gemstones: Ruby”, GemMatrix Co., Ltd. (<https://gem-matrix.com/collection/singlestones#ruby>)
- 364 Meeting with GemMatrix Co., Ltd., July 2021
- 365 GemMatrix Co., Ltd. letter to Global Witness, November 2021
- 366 Meeting with Sant Enterprises Co., Ltd., September 2021
- 367 “Sant Enterprises Co., Ltd”, Responsible Jewellery Council (<https://www.responsiblejewellery.com/member/sant-enterprises-co-ltd/>)
- 368 “K GK Diamonds (I) Private Limited”, Responsible Jewellery Council (<https://www.responsiblejewellery.com/member/kgk-diamonds-i-private-limited/>)
- 369 “Partners”, China Stone Co., Ltd. (<https://www.thechinastone.com/partners/>)
- 370 Meetings with China Stone Co., Ltd., September 2021, Sant Enterprises Co., Ltd., September 2021; and K GK Group, September 2021
- 371 GemMatrix said that it had issued a policy against procuring or buying gemstones from Myanmar (GemMatrix Co., Ltd. letter to Global Witness, November 2021); Manja-Thai said it was willing to stop selling gemstones from Myanmar and to publish a disclaimer on its website stating its position (Manja-Thai Co., Ltd. email to Global Witness, November 2021); Veerasak Gems said that it carried out due diligence in sourcing gemstones from Myanmar to prevent funding to the military government and did not support violence or oppression anywhere (Veerasak Gems Co., Ltd. letter to Global Witness, November 2021); while Faidee Gems said the company had no association with the coup and supported the people of Myanmar (Fai Dee Gems Co., Ltd. email to Global Witness, November 2021)
- 372 “Guiding Principles on Business and Human Rights: Implementing the United Nations ‘Protect, Respect and Remedy’ Framework”, United Nations Office of the High Commissioner for Human Rights, 2011, p.1 (<https://digitallibrary.un.org/record/720245?ln=en>)
- 373 “Guiding Principles on Business and Human Rights: Implementing the United Nations ‘Protect, Respect and Remedy’ Framework”, United Nations Office of the High Commissioner for Human Rights, 2011, Principle 13 (<https://digitallibrary.un.org/record/720245?ln=en>)
- 374 “OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas”, Third Edition, Organisation for Economic Co-operation and Development, 2016 (<https://www.oecd.org/daf/inv/mne/OECD-Due-Diligence-Guidance-Minerals-Edition3.pdf>)
- 375 “OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas”, Third Edition, Organisation for Economic Co-operation and Development, 2016, pp.111–113 (<https://www.oecd.org/daf/inv/mne/OECD-Due-Diligence-Guidance-Minerals-Edition3.pdf>)
- 376 “Help for your business”, European Commission (<https://ec.europa.eu/trade/policy/in-focus/conflict-minerals-regulation/help-for-your-business/>)
- 377 “Sparkling Jewels, Opaque Supply Chains”, Human Rights Watch, 2020, p.42 (<https://www.hrw.org/report/2020/11/24/sparkling-jewels-opaque-supply-chains/jewelry-companies-changing-sourcing>)
- 378 “COP Guidance”, RJC, 2019, pp.13, 16 (<https://www.responsiblejewellery.com/wp-content/uploads/RJC-COP-Guidance-April-2019.pdf>)
- 379 “COP Standard”, RJC, 2019, p.7 (<https://www.responsiblejewellery.com/wp-content/uploads/RJC-COP-2019-V1-1-Standards-2.pdf>); “COP Guidance”, Responsible Jewellery Council, 2019 (<https://www.responsiblejewellery.com/wp-content/uploads/RJC-COP-Guidance-April-2019.pdf>)
- 380 “COP Guidance”, RJC, 2019, p.8 (<https://www.responsiblejewellery.com/wp-content/uploads/RJC-COP-Guidance-April-2019.pdf>)
- 381 “COP Standard”, RJC, 2019, p.15 (<https://www.responsiblejewellery.com/wp-content/uploads/RJC-COP-2019-V1-1-Standards-2.pdf>); “COP Guidance”, RJC, 2019, pp.22–29 (<https://www.responsiblejewellery.com/wp-content/uploads/RJC-COP-Guidance-April-2019.pdf>)
- 382 RJC letter to Global Witness, November 2021
- 383 “Sparkling Jewels, Opaque Supply Chains,” Human Rights Watch, 2020, p.44 (<https://www.hrw.org/report/2020/11/24/sparkling-jewels-opaque-supply-chains/jewelry-companies-changing-sourcing>)
- 384 RJC letter to Global Witness, November 2021
- 385 Coloured Gemstones and Jewellery Working Group letter to Global Witness, November 2021
- 386 “Gemstones and Jewellery Community Platform Launch”, TDI Sustainability, April 2021 (<https://tdi-sustainability.com/gemstones-and-jewellery-community-platform-launch/>); “An Introduction to The Coloured Gemstones Working Group”, The Dragonfly Initiative, 2018 (<https://slidetodoc.com/introduction-to-the-coloured-gemstones-working-group-october/>)
- 387 “Collection: Diamonds and gemstones shine brighter than ever before with Chopard’s new secret setting”, Professional Jeweller, 15 February 2019 (<https://www.professionaljeweller.com/collection-diamonds-and-gemstones-shine-brighter-than-ever-before-with-chopard-s-new-secret-setting/>)
- 388 “How Tiffany, Chopard and Boucheron are adding an ethical shine to their gemstones”, South China Morning Post, 10 November 2018 (<https://www.scmp.com/magazines/style/watches-jewellery/article/2171950/how-tiffany-chopard-and-boucheron-are-adding>)
- 389 Tiffany & Co. letter to Global Witness, November 2021
- 390 Coloured Gemstones and Jewellery Working Group letter to Global Witness, November 2021
- 391 Tiffany & Co. letter to Global Witness, November 2021
- 392 “Mozambique’s jihadists and the ‘curse’ of gas and rubies”, BBC News, 18 September 2020 (<https://www.bbc.co.uk/news/world-africa-54183948>)
- 393 “The deadly rubies of Montepuez”, Oxpeckers, 15 March 2016 (<https://oxpeckers.org/2016/03/the-deadly-rubies-of-montepuez/>); “Is the Burmese ruby the new blood diamond”, The National (UAE), 29 January, 2018 (<https://www.thenationalnews.com/lifestyle/luxury/is-the-burmese-ruby-the-new-blood-diamond-1.699821>)
- 394 “Montepuez Ruby Mining Limitada (Ruby)”, Gemfields Group Limited (<https://www.gemfieldsgroup.com/assets/montepuez-ruby-mining-limitada/>); “The fight for Cabo Delgado: A hidden war over Mozambique’s natural resources”, The Telegraph, 21 July 2021 (<https://www.telegraph.co.uk/global-health/terror-and-security/mozambiques-hidden-war/>)
- 395 “Montepuez Ruby Mining Limitada (Ruby)”, Gemfields Group Limited (<https://www.gemfieldsgroup.com/assets/montepuez-ruby-mining-limitada/>)
- 396 “Montepuez Ruby Mining Limitada (Ruby)”, Gemfields Group Limited (<https://www.gemfieldsgroup.com/assets/montepuez-ruby-mining-limitada/>)
- 397 Corporate document for Mwiriti Limitada extracted from Nexis Diligence
- 398 Gemfields Group Limited website (<https://gemfields.com/>)
- 399 “Is the Burmese ruby the new blood diamond”, *The National* (UAE), 29 January, 2018 (<https://www.thenationalnews.com/lifestyle/luxury/is-the-burmese-ruby-the-new-blood-diamond-1.699821>); “The Ban on Burma Ruby and Jade: Latest News”, AJS Gems Company, updated 27 April 2021 (<https://www.ajsgem.com/articles/ban-burma-ruby-and-jade-latest-news.html>)

- 400 “The fight for Cabo Delgado: A hidden war over Mozambique’s natural resources”, *The Telegraph*, 21 July 2021 (<https://www.telegraph.co.uk/global-health/terror-and-security/mozambiques-hidden-war/>); “Fabergé owners face London High Court battle over alleged human rights abuses”, Leigh Day, 16 April 2018 (<https://www.leighday.co.uk/latest-updates/news/2018-news/faberge-owners-face-london-high-court-battle-over-alleged-human-rights-abuses/>)
- 401 “The Blood Rubies of Montepuez”, *Foreign Policy*, 3 May 2016 (<https://foreignpolicy.com/2016/05/03/the-blood-rubies-of-montepuez-mozambique-gemfields-illegal-mining/>)
- 402 “The Blood Rubies of Montepuez”, *Foreign Policy*, 3 May 2016 (<https://foreignpolicy.com/2016/05/03/the-blood-rubies-of-montepuez-mozambique-gemfields-illegal-mining/>)
- 403 “Mozambique’s Gem Wars”, *Al Jazeera*, 10 December 2015 (<https://www.aljazeera.com/program/africa-investigates/2015/12/10/mozambiques-gem-wars/>) See also https://www.open.ac.uk/technology/mozambique/sites/www.open.ac.uk.technology.mozambique/files/files/Mozambique_436-29Jan2019_Gemfields_PolComm_Samito.pdf
- 404 Gemfields letter to Global Witness, November 2021
- 405 “The fight for Cabo Delgado: A hidden war over Mozambique’s natural resources”, *The Telegraph*, 21 July 2021 (<https://www.telegraph.co.uk/global-health/terror-and-security/mozambiques-hidden-war/>)
- 406 “The Blood Rubies of Montepuez”, *Foreign Policy*, 3 May 2016 (<https://foreignpolicy.com/2016/05/03/the-blood-rubies-of-montepuez-mozambique-gemfields-illegal-mining/>)
- 407 “The Blood Rubies of Montepuez”, *Foreign Policy*, 3 May 2016 (<https://foreignpolicy.com/2016/05/03/the-blood-rubies-of-montepuez-mozambique-gemfields-illegal-mining/>)
- 408 “The fight for Cabo Delgado: A hidden war over Mozambique’s natural resources”, *The Telegraph*, 21 July 2021 (<https://www.telegraph.co.uk/global-health/terror-and-security/mozambiques-hidden-war/>)
- 409 “The Blood Rubies of Montepuez”, *Foreign Policy*, 3 May 2016 (<https://foreignpolicy.com/2016/05/03/the-blood-rubies-of-montepuez-mozambique-gemfields-illegal-mining/>); “The deadly rubies of Montepuez”, *Oxpeckers*, 15 March 2016 (<https://oxpeckers.org/2016/03/the-deadly-rubies-of-montepuez/>)
- 410 “The Blood Rubies of Montepuez”, *Foreign Policy*, 3 May 2016 (<https://foreignpolicy.com/2016/05/03/the-blood-rubies-of-montepuez-mozambique-gemfields-illegal-mining/>)
- 411 “Gemfields Press Statement”, Gemfields Group Limited, 29 January 2019. In response to our enquiries Gemfields informed Global Witness that the £5.8 million included the claimant’s legal expenses. Gemfields letter to Global Witness, November 2021
- 412 Gemfields letter to Global Witness, November 2021
- 413 “Samora Machel Jr.”, *The Business Year*, 2020 (<https://www.thebusinessyear.com/mozambique-2020/samora-machel-jr-chairman-montepuez-ruby-mining-mrm/vip-interview>)
- 414 “Mining Concession requests increase as armed conflict in Cabo Delgado intensifies – Who are the lords of the mining licenses in Cabo Delgado?”, *Centro de Integridade Publica (Mozambique)*, 2021, p.5 (<https://www.cipmoz.org/wp-content/uploads/2021/07/Mining-Concession.pdf>)
- 415 Gemfields letter to Global Witness, November 2021
- 416 “Mozambique’s jihadists and the ‘curse’ of gas and rubies”, *BBC News*, 18 September 2020 (<https://www.bbc.co.uk/news/world-africa-54183948>)
- 417 “Mining Concession requests increase as armed conflict in Cabo Delgado intensifies – Who are the lords of the mining licenses in Cabo Delgado?”, *Centro de Integridade Publica (Mozambique)*, 2021, p.5 (<https://www.cipmoz.org/wp-content/uploads/2021/07/Mining-Concession.pdf>)
- 418 Gemfields letter to Global Witness, November 2021
- 419 “Global Supply Chains for Myanmar Rubies”, consultant report for Global Witness, 2021
- 420 Interview with Myanmar gemstone industry expert; 2021 (Global Witness interview 806)
- 421 “Mogok Expedition Series, Part 1: The Valley of Rubies”, Andrew Lucas and Vincent Pardieu, *Gemological Institute of America Inc.*, 20 March 2014 (<https://www.gia.edu/UK-EN/gia-news-research-expedition-to-the-valley-of-rubies-part-1>); “Pigeon’s Blood: Pilgrimage to Mogok – Valley of Rubies”, Richard W. Hughes, *Lotus Gemology*, 1996 (<https://www.lotusgemology.com/index.php/library/articles/286-pigeon-s-blood-a-pilgrimage-to-mogok-valley-of-rubies>)
- 422 “Global Supply Chains for Myanmar Rubies”, consultant report for Global Witness, 2021
- 423 “Global Supply Chains for Myanmar Rubies”, consultant report for Global Witness, 2021
- 424 “Global Supply Chains for Myanmar Rubies”, consultant report for Global Witness, 2021
- 425 “Masterpiece Oval Cut Burmese Ruby Ring 4.13CT in Platinum”, *Pragnell*, 2021 (https://www.pragnell.co.uk/burmese-ruby-ring_5611058); *Ross-Simons 2.00 Carat Burmese Ruby and .64 ct. t.w. Diamond Ring in 18kt Yellow Gold*, Walmart, 2021 (<https://www.walmart.com/ip/Ross-Simons-2-00-Carat-Burmese-Ruby-and-64-ct-t-w-Diamond-Ring-in-18kt-Yellow-Gold/941291898>); “F.J. Cooper Superb Ruby and Gold Ring”, *Christie’s*, 2021 (<https://www.christies.com/en/lot/lot-6312153>); “An Extremely Fine and Rare Ruby and Diamond Ring”, *Sotheby’s*, 2021 (<https://www.sothebys.com/en/buy/auction/2021/magnificent-jewels-part-i/an-extremely-fine-and-rare-ruby-and-diamond-ring?locale=en>); “Mogok Burmese Unheated ‘Pigeon Blood’ Ruby and Diamond Pendant Necklace with Gubelin”, *Bonhams*, 2019 (https://www.bonhams.com/online_auctions/26276/lot/689/)
- 426 “An Extremely Fine and Rare Ruby and Diamond Ring”, *Sotheby’s*, 2021 (<https://www.sothebys.com/en/buy/auction/2021/magnificent-jewels-part-i/an-extremely-fine-and-rare-ruby-and-diamond-ring?locale=en>)
- 427 “A superb ruby and diamond ring”, *Christie’s*, 2013 (<https://www.christies.com/en/lot/lot-5749879>); “Harry Winston ruby and diamond ring”, *Christie’s*, 2021 (<https://www.christies.com/lot/lot-harry-winston-ruby-and-diamond-ring-6312201/>); “Important ruby and diamond necklace, Faidee”, *Christie’s*, 2021 (<https://www.christies.com/en/lot/lot-6316839>)
- 428 “Ruby”, *Van Cleef & Arpels* (<https://www.vancleefarpels.com/ie/en/the-maison/articles/ruby.html>)
- 429 Email to Global Witness from Van Cleef & Arpels, June 2021
- 430 Harry Winston email to Global Witness, November 2021; <https://www.harrywinston.com/en/legal/ca-supply-chain>
- 431 “Jade and Conflict: Myanmar’s Vicious Circle”, *Global Witness*, June 2021 (<https://www.globalwitness.org/en/campaigns/natural-resource-governance/jade-and-conflict-myanmars-vicious-circle/>)
- 432 This analysis reviewed HS Codes 710310 (stones; precious (other than diamonds) and semi-precious stones, unworked or simply sawn or roughly shaped, not strung, mounted, or set) and 710391 (stones; rubies, sapphires, and emeralds, worked (other than simply sawn or roughly shaped), not strung, mounted, or set). The Harmonized Commodity Description and Coding System (HS) is an international product nomenclature developed by the World Customs Organization (WCO)
- 433 For example, data on Myanmar’s exports as reported by Myanmar varies significantly from data on imports from Myanmar as reported by third countries. Myanmar has not yet reported gemstone export data for 2020
- 434 The Chinese numbers might be skewed by data on jade, which is likely to make up most of its uncut gemstone imports from Myanmar, although jade is also reported under other HS codes
- 435 Signet operates through its brands Kay Jewelers, Zales, Jared, Diamonds Direct, H.Samuel, Ernest Jones, Peoples, Piercing Pagoda, Rocksbox and JamesAllen.com. “Our Banners: Signet Jewelers” (<https://www.signetjewelers.com/brands/default.aspx>)
- 436 Global Witness correspondence with Signet Jewelers, Chopard, Tiffany & Co., and Bulgari, 2021
- 437 “Ruby Drapery Ring”, *Bulgari* (<https://www.bulgari.com/en-gb/266447.html>)
- 438 Until at least October 30, 2021, the sustainability milestones page on Chopard’s website included a post that read: “In light of the escalating Rohingya crisis in Burma, Chopard have taken the decision to cease sourcing Burmese gemstones with immediate effect” (<https://web.archive.org/web/20211030051931/https://www.chopard.com/intl/milestones-sustainability>). By 17 November 2021, the post had been removed from the page (<https://www.chopard.com/intl/milestones-sustainability>)
- 439 Chopard interview with Global Witness, May 2021

- 440 Interview with a former analyst at the Gemmological Institute of America, 2021 (Global Witness interview 923)
- 441 Bulgari's response to Global Witness questionnaire, June 2021
- 442 Bulgari's response to Global Witness questionnaire, June 2021
- 443 "Corporate Responsibility", Boodles (<https://www.boodles.com/pages/corporate-responsibility>)
- 444 <https://www.harrywinston.com/en/legal/ca-supply-chain>
- 445 "Responsible Sourcing: Conflict Minerals", Signet Jewelers, 2019 Corporate Social Responsibility Report (<http://www.corporatereport.com/signet/2019/csr/sourcing/minerals.php>)
- 446 "Responsibly Sourced Materials", Tiffany & Co. (<https://www.tiffany.com/sustainability/product/gemstones-metals-materials/>)
- 447 "Responsible Sourcing: Conflict Minerals", Signet Jewelers, 2019 Corporate Social Responsibility Report (<http://www.corporatereport.com/signet/2019/csr/sourcing/minerals.php>)
- 448 "Responsibly Sourced Materials", Tiffany & Co. (<https://www.tiffany.com/sustainability/product/gemstones-metals-materials/>)
- 449 Tiffany & Co.'s response to Global Witness questionnaire, June 2021; Tiffany & Co. email to Global Witness, 3 November 2021
- 450 <https://www.cartier.com/>
- 451 Cartier email to Global Witness, June 2021
- 452 Gübelin letter to Global Witness, November 2021
- 453 See for example "Corporate Responsibility", Boodles (<https://www.boodles.com/pages/corporate-responsibility>); "CA Supply Chain", Harry Winston, Inc. (<https://www.harrywinston.com/en/legal/ca-supply-chain>); "Corporate Social Responsibility", Bulgari (<https://www.bulgari.com/en-gb/the-maison/about-bulgari/corporate-social-responsibility.html>)
- 454 "Sustainability", Signet Jewelers (<https://signetjewelers.com/sustainability/default.aspx>); "2020 Corporate Citizenship and Sustainability Report", Signet Jewelers (<https://www.signetjewelers.com/sustainability/2020-Sustainability-and-Corporate-Citizenship-Report/default.aspx>); "Welcome To Signet Responsible Sourcing", Signet Jewelers (<https://signetresponsiblesourcing.com/>)
- 455 For example Boodles (see "Corporate Responsibility", Boodles (<https://www.boodles.com/pages/corporate-responsibility>)); Van Cleef & Arpels (see "Corporate Social Responsibility Policy", Van Cleef & Arpels (<https://www.vancleefarpels.com/en/legal/corporate-social-responsibility-policy.html>)); and Chopard (see "Responsible Business", Chopard International SA (<https://www.chopard.com/intl/responsible-business>))
- 456 "OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas", third edition, OECD, 2016, Step 5, p.21 (<https://www.oecd.org/daf/inv/mne/OECD-Due-Diligence-Guidance-Minerals-Edition3.pdf>)
- 457 Bulgari's response to Global Witness questionnaire, June 2021; Tiffany & Co.'s response to Global Witness questionnaire, June 2021
- 458 Chopard's response to Global Witness questionnaire, May 2021
- 459 "Supplier Code of Conduct", Signet Jewelers (<https://www.signetjewelers.com/sustainability/esg/environmental/supplier-code-of-conduct/default.aspx>)
- 460 "Responsible Sourcing Protocol 2020", Signet Jewelers, 2020 (https://s26.q4cdn.com/755441662/files/doc_downloads/The-Signet-Responsible-Sourcing-Protocol-update-June-2020.pdf)
- 461 Signet's response to Global Witness questionnaire, May 2021
- 462 "Sparkling Jewels, Opaque Supply Chains", Human Rights Watch, 2020, p.16; "The Hidden Cost of Jewellery", Human Rights Watch, 2018, p.53 (<https://www.hrw.org/report/2020/11/24/sparkling-jewels-opaque-supply-chains/jewelry-companies-changing-sourcing>)
- 463 "Red Planet", Diana Jarrett, *Rapaport Magazine*, July 2021 (<https://www.diamonds.net/Magazine/Article.aspx?RDRIssueID=214&ArticleID=66550>); LinkedIn page for Afshin (Alan) Hackman (<https://www.linkedin.com/in/afshin-alan-hackman-534a4065/>)
- 464 "UN Fact-Finding Mission on Myanmar exposes military business ties, calls for targeted sanctions and arms embargoes", Office of the United Nations High Commissioner for Human Rights, 5 August 2019 (<https://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=24868&LangID=E>)
- 465 "The Economic Interests of the Myanmar Military", United Nations Independent Fact-Finding Mission on Myanmar, United Nations Human Rights Council, A/HRC/42/CRP.3, August 2019, p.6 (<https://www.ohchr.org/EN/HRBodies/HRC/MyanmarFFM/Pages/EconomicInterestsMyanmarMilitary.aspx>)
- 466 "Gemstone Sector Review: In Support of Myanmar EITI", MEITI, 2016, p.7 (<https://www.resourcedata.org/document/rgi-myanmar-eiti-gemstone-sector-review>); interviews with senior monk in Mong Hsu, 2017, Yangon-based jeweller, 2017 and businesswoman from Mogok, 2017 (Global Witness interviews 503, 601 and 604)
- 467 "Gemstone Sector Review: In Support of Myanmar EITI", MEITI, 2016, p.31 (<https://www.resourcedata.org/document/rgi-myanmar-eiti-gemstone-sector-review>)
- 468 This is important because sources told us that many rubies mined in Myanmar never leave the country. "Global Supply Chains for Myanmar Rubies", consultant report for Global Witness, 2021
- 469 Until 2015, Myanmar's Statistical Yearbook reported data from MGE on the weight of rubies and sapphires mined only in carats. Other gemstones, whose weights were recorded only in kilograms, were not reported in the Statistical Yearbook but were available in MGE data released through the MEITI process. Until 2015, therefore, the weight of gemstones reported in the Statistical Yearbook consisted entirely of rubies and sapphires. However, in 2016, MGE started reporting the weight of all types of gemstones in both carats and kilograms. However, while from 2016 onward the Statistical Yearbook reporting included all types of gemstones, it continued to report data in carats only. This change in reporting affects the way that we apply a price premium to reflect the value of Burmese rubies (the "Mogok Margin"), as discussed below
- 470 The HS code used is for "worked" gems, but this can be basic – one cut or more; it doesn't mean fully cut and polished. We have not included unworked gems (HS 7103.10) because that code also includes jade and many other gems, making it difficult to distinguish Myanmar's ruby exports from its jade exports
- 471 "Montepuez Ruby Update – analyst presentation,," Gemfields Group Limited, 22 July 2015 (https://xmbf.files.wordpress.com/2015/07/20150721_gemfields_montepuez_srk_presentation_final.pdf)
- 472 The other reports do not contain this level of disaggregation
- 473 Interview with Myanmar gemstone expert, 2021 (Global Witness interview 802)
- 474 Data from Thai Customs in 2014 shows a significantly lower price per carat than any other year in the analysis. This low value is largely due to the very high volume of reported imports (6,703 kilograms) from the US that year. Monthly data shows imports of 1,026kg in February, at a total value of US\$5,789,58, and then the larger 5,662kg of imports in August 2014, at a total value of US\$181,504. August data place values at less than one cent per carat, however upon further examination these values are not unprecedented. Given this we cannot justify excluding these values from the overall analysis, despite their outsized influence on the 2014 estimates. If the two large months of US exports were removed from estimates, 2014 prices would still only rise to US\$14.56 per carat, about half of prices in 2015 and less than half of the prices we see in 2016 and 2017
- 475 For a full disclosure of the distribution of different types of gems produced at the Gemfields Mozambique mines, see: https://www.gemfieldsgroup.com/reports_and_presentations/investor-update-may-2018/, p. 15
- 476 "Losing Luster: Addressing Tax Evasion in Myanmar's Jade and Gemstone Industry", NRGi, February 2019, p.36 (<https://resourcegovernance.org/analysis-tools/publications/losing-luster-addressing-tax-evasion-myanmars-jade-and-gemstone>)
- 477 "Gemstone Sector Review: In Support of Myanmar EITI", MEITI, 2016 (<https://www.resourcedata.org/document/rgi-myanmar-eiti-gemstone-sector-review>)

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