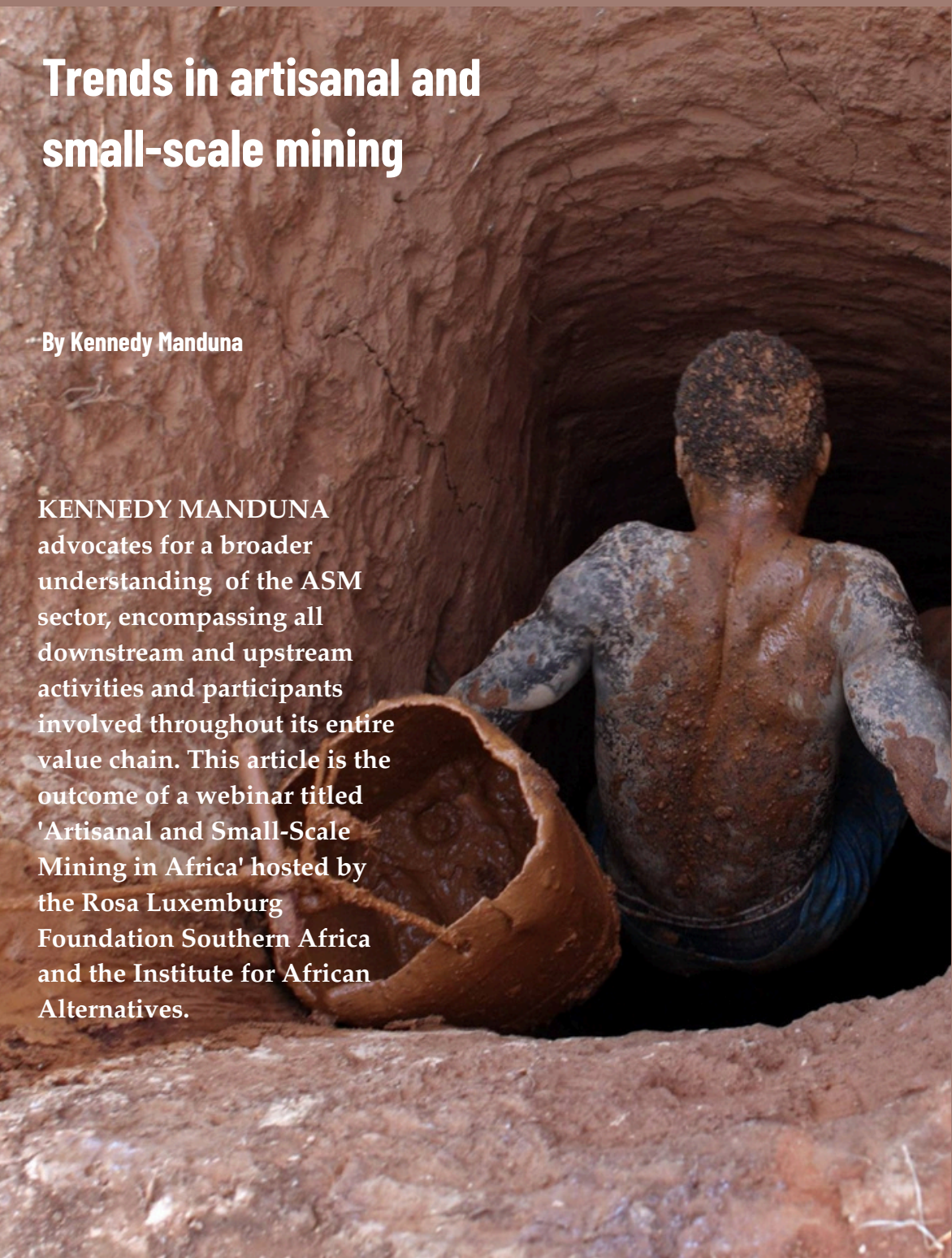


Drivers, actors, and resistance

Trends in artisanal and small-scale mining

By Kennedy Manduna

KENNEDY MANDUNA advocates for a broader understanding of the ASM sector, encompassing all downstream and upstream activities and participants involved throughout its entire value chain. This article is the outcome of a webinar titled 'Artisanal and Small-Scale Mining in Africa' hosted by the Rosa Luxemburg Foundation Southern Africa and the Institute for African Alternatives.





On 30 August 2008, I donned my illegal mining gear and made my way to the Chiadzwa Diamond Field following the diamond rush in the area that began in September 2006 – about a five-hour walk from our homesteads in the southeastern part of Buhera district, Zimbabwe. This act was a protest against the rampant inflation of 2008, which peaked at an astounding 89.7 sextillion percent (10 21 %) in November 2008, effectively erasing my entire three-month salary as a temporary high school teacher at my old school.

As a senior high school student from the nearby district, I often encountered a group of illegal miners as they walked through our fields towards the Chiadzwa area. Colloquially known as *magweja/makorokoza* in Zimbabwe, *galamseyers* in Ghana, *jerabos* in Zambia, *wachimbaji haramu* in Tanzania, or *zama zamas* in South Africa, they were identified by their hustling through illegal digging of minerals, equipped with mining gear such as shovels, picks, sacks, and other tools. Many of my peers, including close friends and relatives, left school in pursuit of fortunes in illegal diamond mining, while others, some still very young, took grave risks to search for alluvial diamonds in an area once recognised for having the largest diamond deposits in the world.

It was not until a decade later, during my drawn-out PhD journey, that I realised my active involvement was merely the surface of a deeper geological scandal, commonly known as the ‘paradox of plenty’. As in many African countries, the liberalisation of the economy due to the adoption and implementation of the structural adjustment programmes (SAPs), which led to massive retrenchments, caused the artisanal and small-scale mining (ASM) sector to gain more traction in Zimbabwe.

This article examines the changing dynamics and variations in Southern Africa’s extractive industries overall and specifically within the ASM sector. For instance, this diverse, complex, and fluid sector is becoming increasingly criminalised and unregulated. The following straightforward but important questions need urgent answers to address the challenges faced by ASM: (a) Who is the real *zama zama*? (b) Who genuinely is a *zama zama*? (c) How and why did we end up in this situation? (d) Who is disadvantaged and who benefits from this situation? (e) Why does illegal, irregular, and informal mining continue unchecked in Africa? Addressing these questions is crucial because the common portrayal of ASM miners in literature, media, and policy documents – which I strongly argue is narrow, misleading, and overly simplistic – frames them as dirty, criminal-looking hustlers engaged in scavenging residual mineral deposits in Africa’s newly discovered and abandoned mines. I advocate for a broader understanding and framing of the sector, encompassing all downstream and upstream activities and participants involved throughout its entire value chain,



including the mining companies that carelessly abandoned their mines without proper closure procedures or planning for a sustainable and responsible post-mining economy and landscape.

Introduction

Artisanal and small-scale mining (ASM) in Africa has a history that predates European explorers and colonisers. Southern Africans, especially the Shona people at Great Zimbabwe, traded gold with international traders from as far away as India, China, Egypt and many other Arab nations (Boafo & Arthur-Holmes, 2025; Manduna, 2025a ; Manduna, 2022; Bond, 1998). Successive colonial regimes harshly suppressed African natives who engaged in ASM. After independence, Africa did not see restructuring of the mining sector until the 1980s, when SAPs were introduced as economic reforms to address the economic crisis. It was during this period that the ASM sector gained prominence because SAPs affected sustainable rural livelihoods, led to the retrenchment of a significant portion of the formal labour force and caused unemployment and poverty rates to surge — thus pushing many into informality, with ASM and illegal mining becoming the pathways of least resistance. “The SAPs impacted rural economies and fueled the retrenchment of mine workers, resulting in the participation in non-farm activities like ASM” (Boafo & Arthur-Holmes, 2025, p. 3).

The ASM sector in Africa is currently experiencing significant shifts and disruptions in both scale and nature. For example, whereas it was once mainly composed of uneducated and unskilled rural poor, the extraordinary unemployment rates have now driven many young African university graduates into both licenced and unlicensed ASM operations, as observed in Ghana (Boafo & Arthur-Holmes, 2025, p. 3).

Zimbabwe provides another pertinent example of this problem, where about 30,000 graduates are produced annually in a country with an unemployment rate exceeding 90% — pushing many into the informal economy, with the ASM sector, particularly the artisanal and small-scale gold mining (ASGM) sub-sector, as the preferred option (Hilson, 2016). Consequently, the number of ASM and illegal miners involved in the gold, diamond, chromite, and lithium sectors in Zimbabwe exceeds one million (Traoré, Hilson & Hilson, 2024), with ASGM miners accounting for over 500,000 (Manduna, 2025b; Hilson, 2016). The lithium sub-sector has recently attracted more than 5,000 illegal miners at the Sandawana lithium mines in Mberengwa district and Mutoko lithium mines in Mutoko district (Mujuru, 2023). “In some cases, illegal miners ‘invade’ concessions marked for large-scale mining companies, resulting in conflicts between illegal miners and the mining firms” (Boafo & Arthur-Holmes, 2025, p. 6). Similar incidents are common in South Africa, where *zama zamas* invade large-



scale mines either through underground shafts connecting with over 6,000 abandoned and derelict mines or by colluding with formal mine workers to gain entry through the gates (Manduna, 2025b; Manduna, 2024).

Furthermore, there is an exponential increase in the number of foreign nationals, both documented and undocumented, actively involved in Africa's ASM and illegal mining sectors (Manduna, 2025a; Manduna, 2024; Boafu & Arthur-Holmes, 2025). In South Africa, more than 75% of the illegal miners are undocumented foreign nationals from mainly Lesotho, Mozambique, Zimbabwe, and the Democratic Republic of Congo (DRC) (Manduna, 2025b; Manduna, 2024; Manduna, 2023; Clark, 2018; Chuma, 2021). In Zimbabwe, Ghana, and the DRC, while the local populations dominate both the illegal and ASM sectors, there is a growing number of Chinese nationals (most of whom are in collusion with the local political and business elites), actively involved in these two important sectors, which are legally reserved for locals (Manduna, 2022). In Ghana, between 2008 and 2016, the country saw an influx of more than 50,000 Chinese miners engaged in illegal mining activities. In 2019, about 33 Chinese nationals were arrested for illegal gold mining in Ghana (Nadig, 2023). "On December 20, 2024, a group of 17 Chinese nationals was arrested for their direct and active involvement in illegal gold mining operations in the Walungu and Mwenga territories of the South Kivu Province [DRC], but surprisingly, after instructions from Congolese government officials in Kinshasa, they were released without any legal penalties or fines" (Tom, 2025, para. 4). Moreover, the DRC police arrested another three Chinese nationals on 4 January 2025 in the eastern part of the country for possessing 10 gold bars and US\$400,000.

Similarly, in 2023, Nigeria's Economic and Financial Crimes Commission (EFCC) arrested several illegal and unlicensed Chinese nationals operating in unauthorised mining activities (Nadig, 2023). The case in point here is Dang Deng, a Chinese national and managing director of lithium mine Sinuo Xinyang Nigeria, who was convicted for illegally possessing 25 metric tonnes of assorted crude minerals (Nadig, 2023).

Another distinct feature of contemporary ASM and illegal mining in Africa is the high prevalence of foreign-owned companies, mainly Chinese owned, operating in these strategic sectors. For example, in Zimbabwe, a "court ordered a Chinese mining company to stop illegal mining operations on the lands of Mutoko residents" (Boafu & Arthur-Holmes, 2025, p. 6). In addition, in the DRC, "there are more than 450 mining companies in the South Kivu Province, mostly run by Chinese nationals, but unfortunately, they are operating illegally due to a lack of compliance with current Congolese mining codes" (Tom, 2025, para. 3).





In Nigeria's states of Niger, Zamfara, and Edo, several illegal Chinese companies are engaged in unlawful mining activities (Nadig, 2023). These revelations highlight Chinese extractive imperialism, where extensive mineral extraction and money laundering occur in mining communities, with geological wealth and scandal often intertwined. This brings to mind the idea proposed by Icarus Complex (2024), in a video on the Magaliesberg biosphere near Johannesburg, that "God stumbled here, and dropped his treasure chest of gold and diamonds and platinum and chrome. The issue we have to decide: is it a blessing or is it a curse?"

One of the notable colonial legacies is the coexistence of mining operations with two sub-sectors: the transnational and indigenous large-scale commercial miners, and the small-to-medium scale artisanal and illegal miners. The former is protected and regulated by clear government policies, legal frameworks, and institutional structures, while the latter largely operates at the margins of the State as self-governing actors (Manduna, 2025b). In many countries, this subsector is criminalised, unregulated, derided, and remains informal. Although it provides sustainable livelihoods for millions in the region, it also presents significant economic, social, ecological, political, business, and community challenges.

Conceptualisation, economic contribution, drivers, and actors

The sector is challenging to define, as it varies across different jurisdictions due to differences in the level of regulation, criminalisation, and informal practices. According to Hilson & Maconachie (2020, p. 125), the ASM sector refers to "low-tech, labour-intensive mineral extraction and processing carried out mostly by local people." Supporting this view, Hentschel, Hruschka, and Priester (2003, p. 5) observe that "broadly speaking, artisanal and small-scale mining refers to mining by individuals, groups, families or cooperatives with minimal or no mechanisation, often in the informal (illegal) sector of the market."

Understanding the sector is further complicated by the attempts to categorise it into three groups: (a) artisanal mining, (b) small-scale mining, and (c) illegal, informal, or irregular mining. In West Africa, efforts have been made to differentiate the first two subsectors, with artisanal mining referring to informal activities carried out manually without mechanisation, on a very small scale, while small-scale mining involves larger informal operations, characterised by "the presence of permanent, fixed installations that are established once an ore body is confirmed" (Hentschel, Hruschka & Priester, 2003, p. 5). In South Africa, the two are defined distinctly, as:

'**Artisanal mining**,' which refers to traditional and customary mining operations using traditional or customary ways and means. This includes the activities of individuals mainly using rudimentary mining methods, manual, and



rudimentary tools to access mineral ore, usually available on the surface or at shallow depths (Department of Mineral Resources and Energy, 2021, p. 6).

‘**Small-scale mining**,’ which refers to a prospecting or mining operation that does not employ specialised prospecting, mechanised mining technologies, chemicals including mercury and cyanide or explosives, or the proposed prospecting or mining operations that do not involve investment or expenditure which exceed such amount as may be prescribed (Department of Mineral Resources and Energy, 2021, p. 6). On the other hand, Interpol (2022, p. 7) defines illegal mining “as an umbrella term covering both illegal extraction and trade of minerals, including the illegal use of toxic chemicals (such as cyanide and mercury) in mining activities.” This article considers the expanded conception of illegal mining, which includes all actors throughout the entire value chain of this sector, from marginalised populations risking their lives to forage for mineral deposits, to their syndicate leaders, benefactors/financiers, and the buyers of these illegal minerals. Nonetheless, considering common drivers, the ASM sector can be broadly grouped into five categories, as shown in Table 1.1.

Table 1: Categories of ASM

Classification	Explanation
Influx/rush	This type of ASM is marked by a surge of miners flocking to newly found mineral sites. It frequently occurs in South Africa, Zimbabwe, Madagascar, and Brazil.
Permanent/traditional	A form of ASM that takes place year-round, often serving as the main economic activity for these communities. It is prevalent in many parts of Sub-Saharan Africa.
Permanent cohabitation	A form of ASM found in communities connected to large or medium-scale mining. ASM miners operate in abandoned or disused mines, e.g. <i>zama zamas</i> in South Africa.
Shock/push	A specific kind of ASM emerges in response to unforeseen events such as natural disasters, conflicts, commodity price changes, economic downturns, and large-scale layoffs in various sectors. This is illustrated by the SAPs in Sub-Saharan Africa, which had severe economic repercussions, driving many laid-off Africans into illegal mining operations.
Seasonal	A form of ASM that exists alongside various seasonal livelihood activities, such as subsistence farming and livestock rearing.

Source: Adapted from Manduna (2025) and UN Environment Programme (2020).



The ongoing discovery of minerals and the presence of abandoned, decommissioned, and ownerless mines in Southern Africa make an informal economy inevitable. Thousands of marginalised individuals take risks searching for alluvial minerals just beneath the surface and leftover minerals in some of the deepest mineshafts globally. The root causes driving people into illegal mining in Africa are often overlooked. Chief among these are deep-seated inequality (covering income, wealth distribution, and regional differences), rising unemployment, and poverty caused by neoliberal policies and the Covid-19 pandemic, commodity super-cycles from the mid-1990s to today, and regional political, social, and economic instability (Chuma, 2021). Supporting this, Mkhize (2017, p. 32) states that, “an increase in unemployment, poverty and the entry of large numbers of illegal immigrants into the country has contributed to an increase in illegal mining.”

Meanwhile, the ASM sector is a double-edged sword. On the one hand, it makes a significant contribution to the economy and sustainable livelihoods for marginalised groups in both rural and urban areas. As of 2024, more than 45 million people are directly employed in the ASM sector worldwide, and over 225 million people globally depend on the ASM sector for their livelihoods (ZELA, 2020; United Nations Environment Programme, 2020).

Furthermore, the ASM sector is responsible for producing and supplying 20% of the global diamond output, 20% of the global gold output, and 80% of the global sapphire output. This marks a significant increase since 2003, when about 13 million people were directly employed in the sector, while approximately 80 to 100 million individuals depended on it indirectly (Zimbabwe Environmental Law Association [ZELA], 2020; United Nations Environment Programme, 2020). ASM activities offer several spillover benefits, such as natural resource management, rural development, mineral diversification, and market linkages. In particular, within the Southern African Development Community (SADC) region, the ASM sector plays a vital role in supporting the livelihoods of millions of people (ZELA, 2020).

Artisanal miners in the DRC produce approximately 20% of the nation's cobalt, a critical component for global industries such as electronics (Matambo, 2025). In Zimbabwe, this sector significantly contributes to economic growth, generating more than 60% of the country's foreign reserves, which accounts for over 13% of its gross domestic product (GDP), and attracts substantial foreign direct investment (FDI) into the country. In 2024, the sector contributed more than 65% of the total gold deliveries (Mapuranga, 2025). In Tanzania, the sector accounts for over 20% of gold export revenue. Table 1.2 presents the estimated number of people directly employed in the ASM and informal mining sectors,



along with their dependents, in selected African countries, and Figure 1.1 shows the concentration of ASM and illegal mining operations in Africa.

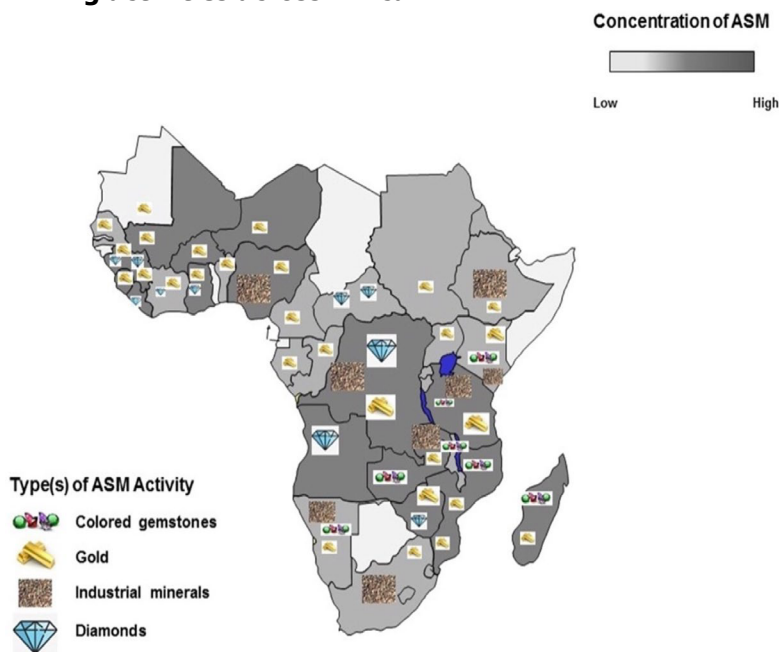
Table 2: Estimated number of people directly involved in the ASM and informal mining sectors and their dependents in selected African countries

Country	Directly working in ASM	Estimated No. of dependents
Tanzania	1.5 million	9 million
Ghana	1.1 million	4.4 million
Zimbabwe	1 million	3 million
Ethiopia	500 thousand	3 million
Nigeria	500 thousand	2.5 million
Madagascar	500 thousand	2.5 million
Niger	450 thousand	2.7 million
Central African Republic	400 thousand	2.4 million
Eritrea	400 thousand	2.4 million
Mali	400 thousand	2.4 million
Sierra Leone	300 thousand	1.8 million
Guinea	300 thousand	1.5 million
DRC	200 thousand [in cobalt alone]	1.2 million
Sudan	200 thousand	1.2 million
Burkina Faso	200 thousand	1 million
Angola	150 thousand	900 thousand
Uganda	150 thousand	900 thousand
Chad	100 thousand	600 thousand
Côte d'Ivoire	100 thousand	600 thousand
Liberia	100 thousand	600 thousand
Malawi	40 thousand	--
South Africa	30 thousand	250,000

Source: Data extracted from Manduna (2025b), UNECA (2011) and Hilson & McQuilken (2014).



Figure 1: Distribution and concentration of ASM and illegal mining activities across Africa



Source: Boafo & Arthur-Holmes (2025, Fig.1).

Drivers and outcomes

This section explores the drivers and motivations behind the rapid growth of the ASM sector worldwide, with a special focus on Southern Africa. This occurs despite the fact that, in many regional countries (e.g., Zimbabwe, South Africa, Tanzania, Zambia, and DRC), the sector is heavily criminalised (Manduna, 2025b). It should be noted that the rapid growth of the sector, especially in the global south, is mainly due to the de-agrarianisation process, which involves the significant decline of agriculture as the primary enabler and source of sustainable rural livelihoods. Globally, many peasants are shifting from agrarian-based livelihoods to mining-related ones (United Nations Environment Programme, 2020; Lahiri-Dutt, 2018a; Lahiri-Dutt, 2018b).

Furthermore, the increase in commodity prices, particularly for critical minerals and rare earth elements, provides another possible explanation for the surge in ASM and illegal mining in Africa. Table 1.3 below shows the 10 most profitable minerals for the illegal and ASM sector in 2025.

**Table 3: The 10 most profitable minerals mined by the illegal and ASM sectors in Africa in 2025**

Mineral	Average Price (US\$)	Countries with ASM operations
Gold	2,300-2,450/oz	Many African countries, including South Africa, Ghana, Burkina Faso, Mali, Sudan, Tanzania, DRC, Côte d'Ivoire, Guinea, and Zimbabwe
Tantalite/Coltan	120-150/kg	The DRC and Rwanda
Lithium (petalite, spodumene in ore form)	400-800/ton(ore)	Zimbabwe, Nigeria, Mali, and the DRC
Gemstones (sapphires, rubies and emeralds)	Huge variations, but high-grade stones can be worth thousands of US\$ per carat	Tanzania, Mozambique, Zambia, Kenya, and Madagascar
Chrome	200-250/ton (depending on grade)	South Africa and Zimbabwe
Wolframite (tungsten ore)	20,000-25,000/ton (WO ₃ Content)	Uganda, Rwanda, and the DRC
Manganese	200-300/ton (depending on grade)	Zimbabwe, South Africa, Ghana, and Gabon.
Copper (high-grade surface ore)	8,000-9,500/ton(refined equivalent)	Zambia and the DRC
Fluorspar	300-500/ton (depending on grade)	Morocco, Namibia, Kenya, and South Africa
Quartz (for silicon and jewellery)	80-200/ton (industrial)	Ghana, South Africa, Burkina Faso, Namibia, and Mozambique

Source: Adapted from Mining Zimbabwe (2025).

Although the prices of critical minerals and rare earth elements (REEs) have recently experienced significant fluctuations, these prices have generally been rising (International Energy Agency, 2025), thereby attracting increased attention from the illegal and artisanal and small-scale mining sectors. Several factors explain this rise: growing demand for clean energy technologies, market speculation, geopolitical dynamics as China solidifies its dominance in REEs, and vulnerabilities in the supply chain. Additionally, in recent years, gold prices have risen markedly and reached record highs in April 2025, with some sources citing a staggering US\$3,500 per ounce. Many factors contribute to this increase: heightened global market uncertainty, rising geopolitical tensions, a weakening



US dollar, reduced gold supply, de-dollarisation efforts, and gold's traditional role as a safe-haven asset. Consequently, many individuals, particularly in the global south, have shifted their focus from agriculture to mining, leading to a surge in the number of people involved in the ASM sector.

Commenting on this, Manduna (forthcoming a, p. 8) argues that “[T]he causes for this great exodus are multiple, stratified, complex and slippery as they are local, national, regional and global in nature... It should be noted that the shift has had (and continues to have) far-reaching national, regional and global implications in natural resource governance and management, as well as extractivism trends, movements, debates and discourses.” Supporting this viewpoint, Bofo and Arthur-Holmes (2025, p. 1) argue that “significant contributing factors include rural poverty, unemployment, limited livelihood options, access to mineral-rich lands, declining agricultural productivity due to climate change, and the need for funds to support rebel activities.”

Additionally, in many African countries, there is a general lack of harmonisation and synchronisation between national, regional, and international laws, standards, and conventions related to mining in general and the ASM sector in particular, which offers an illuminating explanation for the sector's growth.

Existential threats posed by the ASM sector

Like in many countries around the world where ASM miners operate, the ASM sector presents various economic, social, ecological, and security challenges in Southern Africa. Economically, the sector is a hub for illicit financial flows (IFFs), mineral smuggling, tax avoidance, tax evasion, sabotage, theft of infrastructure and minerals, and disruption of large-scale mining operations, among other issues. While condemning the criminal activities of *zama zamas* in South Africa, Gwede Mantashe, the Minister of Mineral and Petroleum Resources, lamented that “[O]ur communities here say we must give licences to [the illegal miners]... If they say so, we’ll come here and hear them out and have a hearing that please give licences to steal gold to Mozambicans, Zimbabweans and Lesotho nationals. It’s a criminal activity. It’s an attack on our economy by foreign nationals in the main” (Stoddard, 2025, para. 23). The Minister further stated that “there can be no two ways about it, it is criminals attacking the economy. Precious metals illicit trade is estimated in 2024 to be about R60-billion. That R60-billion is a leakage on the value of the economy of the country. It’s a serious criminal activity and we support *Operation Vala Umgodi*”¹ (SABC News, 2025, para. 6).

A 2023 documentary by Al Jazeera, *Gold Mafia*, placed Zimbabwe at the centre and featured top politicians, bureaucrats, bankers, ecumenical leaders, and business figures from Zimbabwe, South Africa, the United Kingdom, and the



United Arab Emirates. It uncovered a complex web of unscrupulous dealings involving the laundering of billions of dollars and the cleaning of illicit money in Southern Africa's gold industry, particularly in the ASM sector. In one case, the documentary revealed that Zimbabwe's ambassador-at-large and presidential envoy, Ubert Angel, was involved in laundering a staggering US\$1.2 billion intended for gold investments in Zimbabwe.

Supporting this, while attributing the issue to Zimbabwe's porous borders with its neighbours, *Maverick Citizen* (2021) and Manduna (2022) indicated that Zimbabwe loses an estimated US\$1.5 billion worth of gold through smuggling each year. To put this into perspective, Zimbabwean Finance Minister Mthuli Ncube lamented that the country loses between 30 and 34 tonnes of gold (or between US\$1.8 and US\$2 billion) to South Africa due to smuggling (Manduna, 2022; *Maverick Citizen*, 2021). Consistent with these figures, Zimbabwe's Home Affairs Minister, Kazembe Kazembe, reaffirmed that the country loses an estimated US\$100 million each month (*Maverick Citizen*, 2021).

On the ecological front, the ASM miners exacerbate the second contradiction of capitalism, or the metabolic rift, simultaneously damaging the planet through megamining of especially critical minerals while trying to save it through transitioning to clean energy powered by the energy transition minerals (Riofrancos, 2025). Commenting on this while referencing the exponential growth of the ASM sector in Africa, notably in the critical minerals subsectors, Boafo & Arthur-Holmes (2025, p. 1) argue that the sector creates "a sustainability transition paradox – advancing long-term social and technological transformation while simultaneously intensifying sustainability challenges such as environmental degradation and water pollution."

In many Southern African countries where Chinese miners are involved in illegal mining, there has been a significant escalation in environmental destruction as Chinese operators mechanise the industry using advanced technologies (bulldozers and excavators) previously unseen in the sector. This leads to extensive toxic land and water pollution, heavy metal contamination, and widespread land degradation, prompting governments in Ghana, South Africa, Zambia, and Zimbabwe to respond with firm measures through joint police and military operations and bans on illegal mining (Bester, 2025; Manduna, 2025a).

On the security front, the illegal and ASM sectors contribute significantly to Africa's overall violence and crime statistics (Manduna, 2025a) in a continent where, since colonial times, violence has been a commodified and valorised commodity as a productive force of capitalism (Mbembe, 2019). In what has become a permanent feature of the spatio-temporal everyday realities of African illegal and ASM sectors, these two sectors engage in serious criminal



activities, including possession of illegal weapons, electricity cable theft, robbery, kidnapping, human trafficking, drug smuggling, IFFs, gold and money laundering, irregular and illegal migration, forced labour, shootouts with security forces, sexual offences, transnational organised crimes, underground gas explosions, tax evasion, gangsterism, murder, and assault.

Government responses to threats and the ASM sector resistance

Broadly, the methods employed by African governments to address the threats posed by illegal ASM miners reflect Mbembe's (2019) concept of necropolitics or Foucault's (1976) idea of biopower. That is to say, these methods echo the dark side of democracy or its nocturnal body, rendering these precarious miners not only killable but also killed – not only physically but also socially and politically (Manduna, 2025b; Manduna, 2024); neoliberal authoritarian practices that determine who is excluded and included, who dies and who lives, and who is marginalised and privileged. These methods include xenophobic and community vigilante attacks on foreign ASM miners (notably in South Africa); widespread arrests by mine security officers, police, and military personnel; extrajudicial killings; and the implementation of institutional, legislative, and regulatory frameworks aimed at annihilating ASM miners and their operations.

For instance, many severe police and military operations were carried out in various African countries to eliminate these two sectors – with widespread human rights violations being a common feature documented in all cases. South Africa conducted Operation Prosper and Operation *Vala umgodi* (i.e., close the mine), Zimbabwe carried out Operation *Chikorokoza Chapera* (illegal mining has ended), *Chikorokoza Ngachipere* (artisanal mining must end), and Operation Vanguard, while Ghana implemented Operation Vanguard and Operation Halt. In each of these cases, there were many deaths – including politically-motivated killings of miners – resulting from state-sponsored, state-supported, and state-permitted violence, as well as state-induced starvation (Manduna, 2025b; Bester, 2025). Delegated to the margins of the state, the ASM miners tend to employ Scott's (1985) weapons of the weak to counter the state-sponsored, state-allowed, and state-assisted forms of violence (Manduna, 2024):

- “The illegal miners’ strategic alliance and collusion with powerful politicians and senior police officers have been vital for the *zama zama*’s governance on the margins of the state” (Manduna, forthcoming a, p. 14).
- Bribing the formal police, mineworkers, and other security personnel to gain access to mining fields through the main entrance (Mkhize, 2017, n. 47).
- Field (2022) notes that “turf wars between rival gangs, or shootouts between illegal miners and security officers are commonplace”.



- Incorruptible and uncompromising formal mineworkers, police officers, and mine security guards (along with their family members) are targeted for kidnapping or killing.

Alternatives

To tackle the existential threats posed by the ASM sector in the SADC while promoting resource sovereignty, ecological conservation, sustainable livelihoods, and responsible mining, this article suggests aligning continental and regional mining agreements with national ASM policies, regulations, and legislation. The continental and regional mining agreements include: (a) the Yaoundé Vision for ASM of 2002, (b) the Harare Guidelines on Small and Medium Scale Mining of 1993, (c) the African Mining Vision of 2009, (d) the SADC Protocol on Mining of 2000, and (e) the SADC Mining Strategic Plan (MSP) of 2001. The first two identified the challenges currently faced by the ASM sector as ecological, social, financial, technical, commercial, and legal issues (ECA-SA, 2004, p. 39). Regarding the usefulness of adopting the first two agreements, Manduna (forthcoming[b]) suggests that:

The two guidelines further provide a framework that encourages the regional governments to regularise and formalise the ASM subsector in order to make the subsector a sustainable, developmental and inclusive space. According to these two guidelines, governments are encouraged to enact and implement unambiguous, consistent, and clear rules and regulations that govern the ASM subsector. Furthermore, the two guidelines encourage the regional governments to provide a stable and conducive business operating environment for the ASM subsector and establish strong, capable, responsive, efficient, and effective institutional frameworks that govern the conduct of the subsector.

As a result of this harmonisation, governments in the SADC region must adopt and implement the following strategic alternative policy pathways: (a) formalising and regulating the sector to reduce gang violence, IFFs, productivity and ecological challenges, as well as curb widespread gold smuggling; (b) eliminating arbitrage opportunities that create price differences between mineral finds sold by ASM miners and large-scale miners (LSM); (c) aligning gold delivery prices from the ASM sector with international market rates, and providing ASMiners with technology, financial support, training, and conducive working conditions; (d) updating outdated colonial mining laws and policies to align with current global and regional conventions on inclusivity, sustainability, and responsibility; and (e) designating the ASM sector as a strategic economic sector reserved exclusively for empowering local communities.

Furthermore, this article urges SADC governments to streamline the processes for applying, registering, and managing ASM mineral rights. This



involves ensuring these rights are transferable, making compliance easier, and providing sufficient security of tenure. It also recommends that SADC governments adopt and enforce internationally recognised health, safety, and occupational standards for ASM miners. They should simplify the ASM taxation system by establishing a standard tax regime based on each ASMiner's percentage of gross income. This system should include levies, taxes, and all other payments collected from ASM miners. Additionally, setting up financial schemes such as savings, credit, and loan programmes specifically aimed at supporting ASM growth and development is advisable. Moreover, Southern African governments must address the underlying causes that compel people to enter the ASM sector, many of which are political, economic, and social in nature.

REFERENCES

- Bester, V. (2025). *The Untold Story of Zama Zama Miners in South Africa*. Springer Cham. <https://doi.org/10.1007/978-3-031-82783-9>
- Boafo, J., & Arthur-Holmes, F. (2025). Sustainability transition paradox: emerging dimensions of illegal artisanal and small-scale mining of critical minerals in Africa. *Resources Policy*. Volume 108, 105673. <https://doi.org/10.1016/j.resourpol.2025.105673>
- Bond, P. (1998). *Uneven Zimbabwe: a study of finance, development and underdevelopment*. Trenton, NJ: Africa World Press.
- Bond, P. (2025, January 30). South Africa's Stilfontein mine disaster reveals a regional labour crisis. *Global Labour Column*. <https://globallabourcolumn.org/2025/01/30/south-africas-stilfontein-mine-disaster-reveals-a-regional-labour-crisis/>
- Chuma, M. (2021). *Reframing Artisanal and Small-Scale Gold Mines as a Livelihood Strategy and the Role of Law in Constituting Livelihood Assets*. [Unpublished Doctoral Thesis.] University of the Witwatersrand.
- Clark, C. (2018, May 1) Illicit gold trade fuels conflict in South African mining town. *Al Jazeera*. <https://www.aljazeera.com/features/2018/5/1/illicit-gold-trade-fuels-conflict-in-south-african-mining-town>
- Department of Mineral Resources and Energy. (2021). *Discussion Document: Artisanal and small-scale mining policy 2021 Second Draft, V2, (2021)*. GN 258 Gazette 44538. https://www.gov.za/sites/default/files/gcis_document/202105/44538gen258.pdf
- Economic Commission for Africa Southern Africa Office (ECA-SA) (2004). *Harmonization of Mining Policies, Standards, Legislative and Regulatory Frameworks in Southern Africa*. United Nations Economic Commission for Africa Southern Africa Office.
- Field, T. (2022, August 4). Why illegal artisanal mining in South Africa is out of control. *Mail and Guardian*. <https://mg.co.za/thought-leader/opinion/2022-08-04-why-illegal-artisanal-mining-in-south-africa-is-out-of-control/>
- Foucault, M. (1976). *The History of Sexuality Vol. 1: The Will to Knowledge*. Penguin.
- Hentschel, T., Hruschka, F., & Priester, M. (2002). Global Report on Artisanal and Small-Scale Mining. Mining, Minerals and Sustainable Development, a project of the International Institute for Environment and Development. <https://www.iied.org/sites/default/files/pdfs/migrate/G00723.pdf>
- Hilson, G. (2016). Farming, small-scale mining and rural livelihoods in Sub-Saharan Africa: A critical overview. *The Extractive Industries and Society*, 3(2), 547-563.



- Hilson, G., & Maconachie, R. (2020). Entrepreneurship and innovation in Africa's artisanal and small-scale mining sector: Developments and trajectories. *Journal of Rural Studies*, 78, 149-162.
- Hilson, G., & McQuilken, J. (2014). Four decades of support for artisanal and small-scale mining in sub-Saharan Africa: a critical review. *The Extractive Industries and Society*, 1(1), 104-118.
- Icarus Complex (2024, October 4). God Stumbled Here. [video] Youtube. <https://www.youtube.com/watch?v=ZY9TJSASwKU>
- International Energy Agency (2025, May 21). Global Critical Minerals Outlook 2025. <https://www.iea.org/reports/global-critical-minerals-outlook-2025/executive-summary>
- Interpol. (2022). Illegal mining and associated crimes: A law enforcement perspective on one of the most lucrative crimes. <https://www.interpol.int/content/download/17495/file/ILM%2020Illegal%20mining%20-%20Report.pdf>
- Lahiri-Dutt, K. (2007). Roles and status of women in extractive industries in India: Making a place for a gender-sensitive mining development. *Social Change*, 37(4), 37-64.
- Lahiri-Dutt, K. (2018a). Extractive peasants: reframing informal artisanal and small-scale mining debates. *Third World Quarterly*, 39(8), 1561-1582.
- Lahiri-Dutt, K. (2018b). *Reframing the debate on informal mining: Between the plough and the pick: Informal, artisanal and small-scale mining in the contemporary world*. The Australian National University, Australia: ANU Press.
- Manduna, K. (2022). Overpromising and underdelivering: Zimbabwe's extractive industry indigenisation and uneven development. [Unpublished Doctoral Thesis]. University of the Witwatersrand. <https://wiredspace.wits.ac.za/server/api/core/bitstreams/2421cf49-4966-49e1-a389-d6f3b87945d5/content>
- Manduna, K. (2023, August 16). Zama Zamas: Victims, Not Criminals. *The Sunday Times*. <https://www.timeslive.co.za/sunday-times-daily/opinion-and-analysis/2023-08-16-kennedy-manduna-zama-zamas-victims-not-criminals/>
- Manduna, K. (2024). Authoritarianism, State Violence, and Vigilantism: Security Challenges Posed by Illegal Miners in South Africa. *International Group on Authoritarianism and Counter-Strategies*. <https://irgac.org/articles/authoritarianism-state-violence-and-vigilantism-security-challenges-posed-by-illegal-miners-in-south-africa/>
- Manduna, K. (2025a). *Extractive Industry Indigenisation in Zimbabwe: Neoextractivism, Resource Nationalism and Uneven Development*. Routledge.
- Manduna, K. (2025b). Governance at the margins of the state: contextualising the spatial and temporal realities of illegal mining in contemporary South Africa. *The Extractive Industries and Society*, 23, 101694.
- Manduna, K. (forthcoming a). The violent interregnum, authoritarianism and resistance: excavating the *Zama Zamas'* agency and subjectivities in South Africa. *New Polit. Sci. Rev.*.
- Manduna, K. (forthcoming b). *The role and contribution of the artisanal and small-scale gold mining sector in achieving Vision 2030 in Zimbabwe*. Routledge Press.
- Mapuranga, R. (2025, February 10). Gold deliveries increase by over 31%, driven by ASM growth. *Mining Zimbabwe*. <https://miningzimbabwe.com/gold-deliveries-increase-by-over-31-driven-by-asm-growth/>
- Matambo, R. (2025, March 4). Artisanal Mining in Zimbabwe: A Complex Narrative of Balancing Economic Gains and Social Strife. *ACCORD*.



- <https://www.accord.org.za/conflict-trends/artisanal-mining-in-zimbabwe-a-complex-narrative-of-balancing-economic-gains-and-social-strife/>
- Maverick Citizen. (2021). Report on cartel power dynamics in Zimbabwe.
<https://www.dailymaverick.co.za/article/2021-02-09-zimbabwe-explosive-cartel-report-uncovers-the-anatomy-of-a-captured-state/>
- Mbembe, A. (2019). *Necropolitics*. Duke University Press.
- Mining Zimbabwe (2025, July 16). Ten highest paying minerals for artisanal and small-scale miners in 2025. *Mining Zimbabwe*. <https://miningzimbabwe.com/ten-highest-paying-minerals-for-artisanal-and-small-scale-miners-in-2025/>
- Mkhize, M. (2017). New Interventions and Sustainable Solutions: Reappraising Illegal Artisanal Mining in South Africa, *South African Crime Quarterly*, 2017, 61, 67-75.
- Mujuru, L. (2023, September 5). For villagers in Zimbabwe, lithium boom might prove a bust. *Global Press Journal*.
<https://globalpressjournal.com/africa/zimbabwe/villagers-zimbabwe-lithium-boom-might-prove-bust/>
- Nadig, S. (2023). Arrests and attacks: tracking China's illegal mining in African countries. *Mining Technology*. <https://www.mining-technology.com/features/arrests-and-attacks-tracking-chinas-illegal-mining-in-african-countries/>
- Riofrancos, T. (2025). *Extraction: The Frontiers of Green Capitalism*. W. W. Norton & Company.
- SABC News. (2025, January 23). Illegal mining is war on economy: Mantashe. *SABC News*.
<https://www.sabcnews.com/sabcnews/illegal-mining-is-war-on-economy-mantashe/>
- Scott, J. (1985). *Weapons of the weak: Everyday forms of peasant resistance*. Yale University Press
- Stoddard, E. (2025, January 15). The 'surrender or starve' saga in Stilfontein is a chronicle of deaths foretold. *Daily Maverick*. <https://www.dailymaverick.co.za/article/2025-01-15-stilfontein-surrender-or-starve-deaths-foretold/>
- Tom, A. (2025, January 28). China's illegal mining operations in the Democratic Republic of Congo. Harvard Kennedy School, Carr-Ryan Center999 for Human Rights.
<https://www.hks.harvard.edu/centers/carr-ryan/our-work/carr-ryan-commentary/chinas-illegal-mining-operations-democratic>
- Traoré, M., Hilson, G., & Hilson, A. (2024). Reimagining entrepreneurship in the artisanal and small-scale mining sector: Fresh insights from sub-Saharan Africa. *Africa journal of management*, 10(2), 176-207.
- United Nations Economic Commission for Africa. (2011). *Minerals and Africa's Development: The International Study Group Report on Africa's Mineral Regimes*. United Nations Economic Commission for Africa.
- United Nations Environment Programme. (2020). Mineral Resource Governance in the 21st Century: Gearing extractive industries towards sustainable development.
<https://wedocs.unep.org/20.500.11822/31641>
- Zimbabwe Environmental Law Association (ZELA) (2020, November 13). Illicit Gold Trade and Smuggling: Vulnerabilities Exposed by Rushwaya Case. <https://zela.org/illicit-gold-trade-and-smuggling-vulnerabilities-exposed-by-rushwaya-case/>



ENDNOTE

¹ *Operation Vala Umgodi* is a South African initiative aimed at combating illegal mining operations and related crimes. It is a multi-agency effort involving specialised units of the South African Police Service, the South African National Defence Force, and other government departments.

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