

Research Report for the High-Level Stakeholders Dialogue on Solutions to the Galamsey Crisis in Ghana: Mobilising Citizens Consensus



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Foreword

Illegal small-scale mining, widely known as galamsey, remains one of Ghana's most complex governance and development challenges. It devastates forests and water bodies, disrupts agriculture, endangers livelihoods, and fuels local insecurity. Despite the existence of strong mining laws and regulatory institutions, persistent weaknesses in enforcement, institutional coordination, and political commitment continue to hinder effective action.

As former UN Secretary-General Kofi Annan once observed, "Good governance is perhaps the single most important factor in eradicating poverty and promoting development." The fight against galamsey is, therefore, not only an environmental battle but a test of governance, leadership, and national will.

This report forms part of the national initiative titled "*Breaking the Gridlock: Resolving Polarisation-Induced Policy Paralysis in Ghana*," implemented by the Media Foundation for West Africa (MFWA) in partnership with the National Peace Council (NPC), the National Commission for Civic Education (NCCE), and other key institutions. The project investigates how political polarisation and institutional fragmentation contribute to policy inertia in addressing the galamsey menace.

The report consolidates findings from five thematic research studies that examine illegal mining through legal, environmental, socio-economic, agricultural, and security lenses. It provides an in-depth analysis of how systemic policy failures, partisan politics, and weak institutional coordination sustain the crisis, while presenting actionable and evidence-based recommendations for reform.

Through this publication, the MFWA and its partners aim to provide credible evidence to inform national dialogue, strengthen policy coherence, and guide decision-making toward sustainable solutions. The report serves as both a research contribution and a call to policy renewal. It urges all stakeholders: government, political parties, civil society, traditional and religious leaders, the private sector including mining firms and associations, and the media, to build consensus and act decisively to end the galamsey crisis in Ghana.

The MFWA acknowledges the invaluable contributions of the expert researchers, reviewers, and institutional partners whose commitment and insights have shaped this report. Their collective effort reinforces the belief that evidence, dialogue, and accountability must remain at the heart of Ghana's journey toward responsible and sustainable mining governance.

Sulemana Braimah

Executive Director

Media Foundation for West Africa (MFWA)

Background

Ghana's current Fourth Republic began 32 years ago as a multi-party democracy, with at least four political parties winning parliamentary seats. However, over the past 16 years, Ghana's democracy has evolved into a duopoly dominated by the current governing party, the National Democratic Congress (NDC), and the main opposition party, the New Patriotic Party (NPP), which lost power in the December 2024 elections. These two parties have alternated power every eight years.

The last 16 years has been characterised by intense partisanship and increasing monetisation of electoral campaigns, exacerbated by a “winner-takes-all” approach to governance. Political party loyalty increasingly overrides national interest and pertinent national policies. Some party loyalists are even prepared to harm others in the name of party interest.

What began as ideological polarisation—acceptable in a democracy—has gradually shifted into affective polarisation. Party allegiance often supersedes personal and cultural ties. This behaviour is often motivated by a desire to demonstrate unwavering party loyalty and attract recognition from party leaders, in the hope of securing appointments, contracts, or other forms of patronage.

A clear consequence of this growing affective political polarisation is the increasing difficulty political actors face in reaching consensus on critical national issues, resulting in policy paralysis. One such issue that has suffered from prolonged stalemate is Ghana's ongoing struggle with illegal small-scale mining (locally known as galamsey) and its devastating impacts.

Despite the existence of laws and enforcement mechanisms, successive governments have failed to effectively and collectively address the galamsey menace. Civil society organisations, media and advocacy groups have made efforts to curb illegal mining, but with no success. To a large extent, the limited success with ongoing and previous efforts may be attributed to little efforts (if any at all) in tackling what may be the root cause of the inaction on the menace – polarisation-induced policy paralysis.

The challenge is further complicated by the fact that many of those involved in galamsey directly and/or their financiers are also major funders of the two main political parties—the NDC and the NPP. This makes it politically costly for incumbent governments to act decisively on uprooting illegal mining, for fear of backlash or electoral loss.

In theory, Ghana has abundant and comprehensive mining laws. Yet, implementation and enforcement challenges have revealed a troubling disconnect

between legal architecture and practical outcomes. Despite the presence of numerous regulatory instruments and oversight bodies continue to be beset with weak enforcement resulting into wonton environmental degradation, investor uncertainty, and limited local benefits. This paradox, a surplus of mining legislations coexisting with weak developmental impact, reflects the paralysis of mining in Ghana.

The paralysis is not merely technical, but systemic. It is shaped by deeper structural, political, and institutional dysfunctions such as fragmented mandates, weak enforcement capacity, and policy incoherence, often exacerbated by political polarisation. As a result, the promise of the mining sector as a driver of sustainable development remains untaped.

The consequences of the policy paralysis on the galamsey menace are grave: nearly all water bodies in Ghana are heavily polluted, farmlands have been degraded, destruction of forest reserves; health crises in mining communities, threats to food security; communal violence between party supporters over galamsey sites, among others.

It is in this context that the Media Foundation for West Africa (MFWA), the National Peace Council (NPC), and the National Commission for Civic Education (NCCE) in partnership with the National House of Chiefs, the Christian Council of Ghana, the Office of the National Chief Imam, Catholic Bishops' Conference and Ministry of Lands and Natural Resource, is organising a high-level, two-day facilitated national stakeholder dialogue to seek common ground and actionable solutions to end the policy paralysis on galamsey. Other stakeholders for the dialogue are the Ministry of Environment, Innovation, Science and Technology; the Minerals Commission; the Environmental Protection Authority; the Forestry Commission; Water Resources Commission; the Parliamentary Select Committee on Lands and Natural Resources; the Parliamentary Select Committee on Environment; political parties; traditional and religious leaders; artisanal and small-scale mining associations; civil society organisations; media; youth and women's groups; academia; other advocacy groups; and development partners.

The proposed intervention dubbed: “*High-Level National Dialogue on Mobilising Citizens Consensus on Solutions to the Galamsey Crisis in Ghana*” is scheduled for 28 and 29 October, 2025. The national dialogue falls under the project called: “**Breaking the Gridlock: Resolving Polarisation-Induced Policy Paralysis in Ghana**”. It focuses on using counter-polarisation efforts to help address polarisation-induced policy paralysis in Ghana, with a focus on combating illegal mining in Ghana.

The initiative is anchored on dialogues, and facts and narratives, to help foster consensus on sustainable solutions to the problem. Five thematic papers were commissioned for experts to examine the impact of galamsey, the challenges and propose recommendations to addressing it. The expert papers focused on impacts

on the following: environment, forest reserve, health, water access, agriculture, and peace and security.

The papers are:

- a) The paralysis of mining laws and implications on economic development: a contextual analysis
- b) The ecological damage of illegal mining on water bodies and forest management,
- c) Environmental and socio-economic impacts of illegal mining on local communities,
- d) Drawing the linkages: Illegal mining, livelihoods, agriculture and food security in Ghana
- e) Illegal mining and implications on peace, community resilience and national security.

The dialogue featured presentations of the expert papers and inform structured discussions aimed at identifying practical steps for breaking the deadlock. The dialogue offered a contextual analysis of how institutional and political gridlock continue to hinder effective mining governance and presented forward-looking recommendations for reform. It:

- a. Analysed the impact of irresponsible minerals and mining laws and policies on economic development, especially in relation to revenue losses, environmental damage, and community discontent;
- b. Identified the challenges of implementing responsible mining laws and policies, with a focus on enforcement bottlenecks, legal fragmentation, and institutional weaknesses;
- c. Offered recommendations for responsible mining governance that align with global standards, emphasising transparency, sustainability, and inclusive development.

Also, to raise public awareness and interest in the galamsey crisis and the associated policy stalemate, feature documentary has been produced to inform conversation at the dialogue. It highlighted the origins of the problem, past and present efforts to contain it, and the ongoing impact. The documentary is being broadcast on major television networks and shared online to amplify visibility and public engagement.

To support uptake and implementation of the dialogue's outcomes, a series of media discussion programmes are being organised. These programmes will spotlight key outcomes, track stakeholder commitments, and follow up on concrete steps taken by various actors to fulfil their obligations. Also, an outcome document is being produced for follow-up actions, along with a lessons-learned report to inform future interventions in addressing polarisation-induced policy paralysis.

By addressing these objectives, the national dialogue will contribute to broader efforts to rethink natural resource governance in Ghana as a political, social, and developmental imperative rather than an arcane legal exercise.

It is hoped that the dialogue will inform policy to ensure institutional coherence, local capacity, transparency, fair revenue distribution, environmental stewardship, and dignified inclusion of citizens in mining governance, responsible and developmental mining regime.

The problem is not that Ghana lacks laws, but that its laws have not generated the discipline, fairness, and foresight that development requires. Thus, the legitimacy of mining institutions will grow when they act predictably, share information openly, and treat communities as equal stakeholders in national development. A unified mining governance architecture is essential. Therefore, a responsible and developmental mining framework, should seek to restore a balance between authority and accountability, efficiency and justice and local capacity and benefits. Transparency should no longer be treated as a voluntary courtesy to the public, but as a structural requirement of governance.

In this report the following themes are discussed and analysed:

The paralysis of mining laws and implications on economic development: a contextual analysis

The ecological damage of illegal mining on water bodies and forest management,

Environmental and socio-economic impacts of illegal mining on local communities,

Drawing the linkages: Illegal mining, livelihoods, agriculture and food security in Ghana

Illegal mining and implications on peace, community resilience and national security.



Paralysis of Mining Laws and Implications on Economic Development: A Contextual Analysis

Oliver Barker-Vormawor, Esq.

1. Introduction

Ghana is richly endowed with mineral resources. Ghana is known globally for gold as being the dominant mineral produced. Other precious minerals that are mined include bauxite, manganese, diamonds and other minerals.

Mining is one of the major primary economic activities in Ghana. It plays a vital part contributing significantly to foreign exchange earnings and the country's GDP. Over the years, the sector has contributed significantly to Ghana's socio-economic development through revenue generation, employment creation and increase in foreign direct investments.

This can somewhat be attributed largely to the institution of comprehensive and attractive legal, fiscal and institutional frameworks, which have helped to attract investments into the mining industry. Despite its potential, the mining sector continues to face regulatory, environmental, and socio-economic challenges.

This report examines the gaps and inefficiencies in Ghana's mining laws and policies, explores how these contribute to economic stagnation, and proposes strategic reforms to align Ghana's mining governance with responsible global practices.

2. Background and Purpose of the Report



Ghana's mining sector is deeply rooted in its history, having played a central role in its pre-colonial, colonial, and post-independence economic development. From the 7th and 8th centuries when gold attracted Arab traders, to the height of colonial exploitation when Ghana became known as the Gold Coast, and later to nationalisation and liberalisation efforts in the post-independence era, mining has shaped the country's economic and legal landscape. Successive legislative milestones from the Minerals Act of 1962 to the Minerals and Mining Act, 2006 (Act 703), and its amendments have sought to bring structure, fairness, and sustainability to the governance of Ghana's mineral wealth¹.

In theory, Ghana's mining laws are abundant and comprehensive. Yet, the 21st century has revealed a troubling disjunction between legal architecture and practical outcomes. Despite the presence of numerous regulatory instruments, oversight bodies, and reform efforts, the mining sector continues to be beset with weak enforcement, environmental degradation, investor uncertainty, and limited local benefits. This paradox, a surplus of mining legislation coexisting with weak developmental impact, reflects what this report refers to as a paralysis of mining laws.

This paralysis is not merely technical, but systemic. It is shaped by deeper structural, political, and institutional dysfunctions such as fragmented mandates, weak enforcement capacity, and policy incoherence often exacerbated by political polarisation. As a result, the promise of the mining sector as a driver of sustainable development remains unrealised.

This report is developed within the framework of the national project titled "Breaking the Gridlock: Resolving Polarisation-Induced Policy Paralysis in Ghana." This project investigates how entrenched partisanship and institutional fragmentation contribute to stagnation in public policy implementation across various sectors.

3.Objectives of the Report

The overarching purpose of this report is to explore the disjuncture between Ghana's robust mining legal regime and its underwhelming developmental outcomes. It seeks to offer a contextual analysis of how institutional and political gridlock continues to hinder effective mining governance, and to present forward-looking recommendations for reform.

Specifically, this report aims to:

¹ See Adu, S. A., *The History and Politics of Mining in Ghana*, Ghana Publishing Corporation, 2010, pp. 15–20.

- i. Provide an overview of Ghana’s minerals and mining laws and policies, including the historical evolution and current institutional framework;
- ii. Analyse the impact of irresponsible minerals and mining laws and policies on economic development, especially in relation to revenue losses, environmental damage, and community discontent;
- iii. Identify the challenges of implementing responsible mining laws and policies, with a focus on enforcement bottlenecks, legal fragmentation, and institutional weaknesses;
- iv. Offer recommendations for responsible mining governance that align with global standards, emphasising transparency, sustainability, and inclusive development.

By addressing these objectives, the report contributes to broader efforts to rethink natural resource governance in Ghana as a political, social, and developmental imperative rather than an arcane legal exercise.

4. Methodology



This report employs a qualitative research approach grounded in legal, policy, and institutional analysis. It is designed to provide a comprehensive understanding of Ghana’s mining laws and their developmental implications. The methodology combines both descriptive and analytical techniques to evaluate the legal and policy frameworks governing the mining sector, and to assess their effectiveness within the broader context of governance paralysis in Ghana.

4.1 Scope of Work and Research Methods



The scope of this assignment includes:

- i. A desk-based literature review of both primary and secondary sources of laws regulating the mining sector in Ghana;
- ii. A historical and institutional analysis of the evolution and current state of mining legislation and regulatory bodies;
- iii. An impact assessment of mining laws and policies on economic development, focusing on revenue generation, environmental sustainability, and community welfare;
- iv. An examination of legal and institutional challenges, including enforcement bottlenecks, policy inconsistencies, and regulatory overlap;
- v. The development of practical, forward-looking recommendations for reforming mining laws and governance frameworks in Ghana.

To execute the above scope, the report relies on the following research methods:

- i. **Legal and Policy Document Analysis:** This involves a thorough examination of primary legal texts, including the Minerals and Mining Act, 2006 (Act 703) and its amendments, subsidiary legislation, constitutional provisions, and intersecting laws on land, the environment, and local governance.
- ii. **Review of Secondary Literature:** Scholarly articles, legal commentaries, policy briefs, and academic studies were reviewed to enrich the analysis, and provide theoretical grounding for the concept of legal and policy paralysis.
- iii. **Comparative Analysis:** Global best practices in mining governance were reviewed to benchmark Ghana's regulatory framework against international

standards, particularly in areas such as transparency, accountability, and community participation.

- iv. Contextual and Thematic Analysis: The report explores the social, economic, and political dimensions of Ghana's mining regulation, with a focus on how systemic dysfunctions such as institutional fragmentation and political interference contribute to policy inertia.

5. Historical Context of Mining in Ghana



Mining in Ghana predates not only independence, but, also the colonial contact. Gold mining in Ghana in particular has a very long history, with evidence suggesting that extraction began centuries before European contact. Gold working and trade in the area can be traced to at least the 7th and 8th centuries A.D., when Arab traders were drawn by the abundance of deposits.² Long before the Portuguese arrival in 1471, local populations were engaged in artisanal mining, employing techniques such as alluvial panning, shallow pit digging, and shaft mining.³ Oral traditions and early European accounts describe the Akan forest states, including Adanse, Denkyira, Wassa, and Akyem, as centres of vibrant gold production.⁴

The socio-political role of gold was equally significant. Among the Asante; for instance, gold was not only a means of acquiring firearms and foreign goods, but,

² Asumda, David Asumda, Francis Situma Situma, and Kariuki Muigua Muigua. "GHANA'S REGULATORY FRAMEWORK AND SUSTAINABILITY IN THE MINING SECTOR." *UCC Law Journal* 4, no. 1 (2024): 158-189. TE Anin, *Gold in Ghana* (4th edn Selwyn Publishers, Accra 1994).

³ Ofosu-Mensah, Emmanuel Ababio. "Historical overview of traditional and modern gold mining in Ghana." *International Research Journal of Library, Information and Archival Studies* 1, no. 1 (2011): 006-022.

⁴ Ibid

also the foundation of political authority and symbolism, epitomised in the Golden Stool of the Asantehene.⁵ Gold dust functioned as a currency in everyday exchange, while gold nuggets were monopolised by rulers as part of state regalia.

When Europeans reached the coast in the late 15th century, the area was already widely known as the “Gold Coast,” reflecting its centrality to long-distance trade.⁶ The Portuguese, followed by the Dutch, Danes, and English, established forts and castles such as Elmina (1482), primarily to secure access to gold. For much of the 16th and 17th centuries, the region’s gold trade underpinned European expansion and sustained the rise of coastal and inland Akan polities.⁷

By the late 19th century, under formal British colonial rule, large-scale mechanised mining took shape. Legislation such as the Gold Mining Protection Ordinance of 1905⁸ restricted the participation of indigenous populations, barring them from owning mercury and other resources necessary for processing gold.⁹ This led to the consolidation of mining rights in the hands of British and foreign investors, effectively relegating Ghanaians to the roles of labourers and artisanal miners.¹⁰

In 1905, the Gold Mining Protection Ordinance was followed by the passage of the Mercury Ordinance¹¹, which made it illegal for indigenes to own mercury. Following independence in 1957, the Ghanaian state enacted new laws to reclaim control over mineral wealth. These colonial ordinances were replaced by the Mining and Minerals Act, 1962 after relating to land and minerals in 1962. The Minerals Act of 1962 vested ownership of all minerals in the President on behalf of the people, while the Concessions Act and the Administration of Lands Act restructured mineral rights and land administration.

The Minerals Act, 1962 (Act 162) which vested the ownership of minerals in “*the President on behalf of the Republic and in trust for the People of Ghana*”¹², also tightened the area and duration provisions relating to mineral rights¹³, and gave the President

⁵ Arhin, Kwame. "Gold-mining and trading among the Ashanti of Ghana." *Journal des africanistes* 48, no. 1 (1978): 89-100.

⁶ Asumda, David Asumda, Francis Situma Situma, and Kariuki Muigua Muigua. "Ghana's Regulatory Framework and Sustainability in the Mining Sector." *UCC Law Journal* 4, no. 1 (2024): 158-189.

⁷ Ofosu-Mensah, Emmanuel Ababio. "Historical overview of traditional and modern gold mining in Ghana." *International Research Journal of Library, Information and Archival Studies* 1, no. 1 (2011): 006-022.

⁸ Gold Mining Protection Ordinance (Cap. 149).

⁹ Asumda, David Asumda, Francis Situma Situma, and Kariuki Muigua Muigua. "Ghana's Regulatory Framework and Sustainability in the Mining Sector." *UCC Law Journal* 4, no. 1 (2024): 158-189.

¹⁰ Ofosu-Mensah, Emmanuel Ababio. "Historical overview of traditional and modern gold mining in Ghana." *International Research Journal of Library, Information and Archival Studies* 1, no. 1 (2011): 006-022.

¹¹ Mercury Ordinance (1982).

¹² *Ibid*, s 1

¹³ FS Tsikata, 'The Vicissitudes of Mineral policy in Ghana' (1997) 2 Resources Policy 9-14.

the power to demand the sale to a state agency of minerals produced in Ghana at a negotiated price determined by the High Court¹⁴.

The Administration of Lands Act, for its part, required that payments in respect of stool lands be made, not directly to the representatives of the owning community, but to the Minister who would allocate portions for the maintenance of the traditional authority, projects for the benefit of the people of the area, and the local government bodies in the area. The last was the Concessions Act, 1962¹⁵ which provided for the establishment of a tribunal and gave the Minister in charge power to determine a concession where the holder unreasonably refused to vary a term which had become oppressive due to a change in economic conditions, the holder had lost the financial ability to develop it, or the land specified had not been developed or used in accordance with the object for which the concession was granted during the eight years preceding the application of the Minister¹⁶.

The economic crisis of the late 1970s and early 1980s; however, led to stagnation in the sector until reforms under the Structural Adjustment Programme of the 1980s re-attracted foreign investment. Prior to the Structural Adjustment Programme, the mining sector saw no significant new investments in Ghana's mining sector. Output in almost all the mines declined and the sector contributed relatively little to gross national earnings because production of Ghana's flagship mineral, gold, had declined to about 283,000 ounces per annum.¹⁷

The Structural Adjustment Programme introduced in 1983 ushered in a series of reforms that reshaped Ghana's mining sector. Legislative changes were implemented to create a more favourable environment for foreign investment, accompanied by the introduction of environmental regulations and other sectoral reforms. In 1986, the Minerals and Mining Law was enacted to guide and promote the systematic growth of the industry. This was followed in 1989 by the passage of the Small-Scale Gold Mining Law, the Mercury Act, and the Precious Minerals Marketing Corporation Act. Collectively, these laws sought to formalise and regulate small-scale mining, control the use of mercury in gold extraction, and provide state-recognised marketing outlets for gold produced by artisanal miners. The institutional framework established under these statutes also mandated the provision of technical support to small-scale operators. These interventions attracted renewed investment, revitalised the mining industry, and substantially boosted national gold output.

¹⁴ Ibid

¹⁵ Concessions Act, 1962 (Act 124)

¹⁶ Ibid s 3

¹⁷ Asumda, David Asumda, Francis Situma Situma, and Kariuki Muigua Muigua. "GHANA'S REGULATORY FRAMEWORK AND SUSTAINABILITY IN THE MINING SECTOR." *UCC Law Journal* 4, no. 1 (2024): 158-189.

Although Ghana's mining sector has transformed from indigenous artisanal practices through colonial domination to post-independence state control and eventual liberalisation, the contemporary landscape is marked by greater complexity. Beginning the 1980s, successive reforms introduced legislation that liberalised the industry, encouraged foreign investment, revitalised gold production, and established regulatory frameworks for environmental management and small-scale mining.

This momentum continued with the passage of the Minerals and Mining Act, 2006 (Act 703), and its subsequent amendments, alongside a suite of regulatory instruments aimed at modernising the sector. However, despite the expansion of legislation and the establishment of multiple regulatory bodies, Ghana's mining sector has slipped into what may be described as a state of regulatory and developmental stagnation.

This paralysis is evidenced by weak enforcement, duplication of institutional functions, limited technical capacity, and recurring policy reversals. Such deficiencies have eroded investor confidence and curtailed the sector's ability to serve as a driver of inclusive and sustainable growth. In effect, the growth in legal instruments has not translated into stronger governance outcomes. Instead, entrenched political partisanship, fragmented oversight structures, and inadequate accountability mechanisms have produced inertia that risks eroding earlier gains. This outlook underscores the urgency of rethinking the institutional design of mining governance in Ghana today.



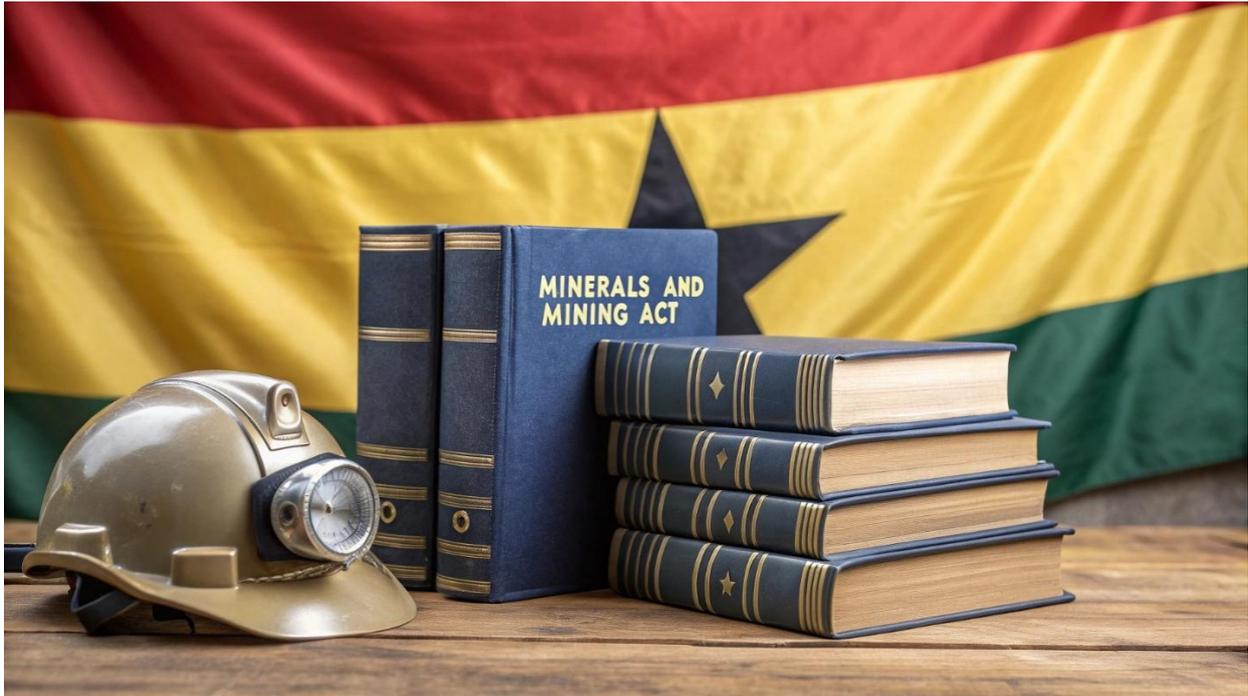
6. Overview of Ghanaian Mining Laws

Mining, which entails the exploration and exploitation of mineral resources, is a regulated activity in Ghana. The regulatory framework is expansive and has evolved over time, reflecting the country's shifting political, economic, and environmental priorities.

Long before Ghana attained independence, colonial authorities had already established legal regimes to control access to and benefit from mineral wealth. Since then, successive governments have progressively refined and expanded the legal architecture to respond to emerging challenges such as land rights, environmental protection, local participation, and revenue accountability. Today, mining in Ghana is governed by a complex interplay of constitutional principles, statutory instruments, and administrative guidelines, all designed to ensure that the exploitation of mineral resources serves the broader national interest.

At the heart of this regulatory regime is the recognition that mineral resources are of strategic national importance and must be managed in a manner that balances private investment with public interest. The law establishes clear rules on how mineral rights are granted, who qualifies to hold them, and the processes by which mining operations are monitored and enforced. It also sets out the obligations of mining companies toward local communities, environmental sustainability, and revenue contribution to the state. Over time, the regulatory system has grown more sophisticated, incorporating not only issues of ownership and control, but also broader concerns about transparency, corporate accountability, and long-term social and ecological impacts of mining activities.

The following section provides an overview of the legal framework that governs mining in Ghana, with a focus on its constitutional foundations and statutory evolution. It outlines how the current regulatory architecture has been shaped by historical developments, policy choices, and institutional mandates, and highlights the key features that define the legal control of mineral resources in the country. This overview sets the stage for a deeper understanding of the principles, procedures, and obligations that structure the mining sector today.



a. Colonial Foundations and the Constitutional Evolution of Ghana's Gold Mining Regime



As already intimated above, Ghana's contemporary gold mining laws and regulatory framework are deeply rooted in a colonial legacy that imposed foreign control over mineral wealth and institutionalised the *regalian principle*, where all minerals were deemed to be the property of the sovereign. This legacy, sustained

through post-independence legislation and constitutional codification, continues to shape the country's mining governance. Understanding the paralysis within Ghana's mining laws requires an appreciation of this historical continuity and the evolving legal architecture that governs gold exploitation today.

b. Centralisation and Foreign Domination of Gold Mining



Under colonial rule, mining legislation was deliberately structured to centralise authority over mineral resources in the British Crown. The enactment of the Gold Coast Mining Ordinance of 1907, together with subsequent amendments in 1926, 1938, and 1947, marked a decisive consolidation of British dominance over gold exploitation. These

ordinances criminalised unlicensed prospecting and trading, thereby safeguarding the colonial economy and systematically restricting African participation.

The 1936 Minerals Ordinance went further by vesting all mineral rights in the Crown, granting government unfettered discretion to allocate or revoke mining concessions, and mandating permits for virtually all mineral-related activities. This framework entrenched a model of exclusion, privileging foreign capital and enabling companies such as Ashanti Goldfields Corporation to secure extensive concessions with official backing.¹⁸ Conversely, indigenous operators, particularly artisanal miners, were pushed to the margins, and their activities rendered illicit within the colonial legal order.¹⁹

c. Post-Independence Reforms and Legal Nationalisation



With the attainment of independence in 1957, the Ghanaian state inherited both the regalian principle and a centralised legislative infrastructure.

However, the newly sovereign government embarked on a mission to redefine mineral ownership and control in the national interest. Under President Kwame

¹⁸ Ayelazuno J and Mawuko-Yevugah L, 'The World Bank and the Politics of Mining in Ghana' (2019) *Journal of Contemporary African Studies* 37(1), 65.

¹⁹ Sewordor K, 'Decolonising Ghana's Small-Scale Gold Mining Industry' (2020) *The Extractive Industries and Society* 7(3), 904–913.

Nkrumah's socialist-leaning policies, Ghana pursued a deliberate course of mineral nationalisation. This culminated in the passage of the Minerals Act, 1962 (Act 126), which vested all minerals in the President of Ghana "on behalf of and in trust for the people of Ghana."²⁰

Although Act 126 safeguarded private rights existing before its enactment, it simultaneously granted the government broad powers to nationalise concessions through executive instruments. This law served not only as a declaration of sovereignty over resources, but, also as a legal framework for state-led mining operations. State-owned enterprises such as State Gold Mining Corporation (SGMC) and Ghana Consolidated Diamonds were established to produce and market minerals. This period also saw a restrictive exchange control regime and high taxes that hindered private sector participation. By the late 1970s, Ghana's mining sector had entered a period of stagnation due to inefficiency and under-investment.²¹

7.The Constitutional Embedding of Mineral Ownership



The regalian doctrine introduced by the colonial regime and affirmed by the 1962 Minerals Act became entrenched in Ghana's constitutional development. Each

²⁰ Minerals Act 1962 (Act 126), s 1.

²¹ Tsikata (n 1) 10.

successive constitution - 1960, 1969, 1979, and 1992 - reinforced the colonial practice that ensured that ownership of the minerals was legally assigned to the people and were deemed to be held in trust by the President as representative of the State.

The 1960 Constitution, which inaugurated Ghana's First Republic, concentrated executive authority in the office of the President and, by implication, reinforced state sovereignty over natural resources. While the text did not expressly mention mineral ownership, its broader centralisation of power effectively preserved the post-colonial state's control of the mining sector and continuity with the colonial model of state dominance.

The 1969 Constitution, which ushered in the Second Republic following a period of military rule, reintroduced parliamentary democracy while retaining strong executive authority. In respect of natural resources, it upheld the regalian principle by affirming state control over mineral wealth. Rather than displacing this doctrine, the Constitution deferred to statutory instruments such as the Minerals and Mining Act, 1962 (Act 126), which had already vested ownership of minerals in the state, thereby ensuring continuity of the centralised legal framework.

The 1979 Constitution, which established the Third Republic, set out a more elaborate democratic framework with stronger commitments to accountability and decentralisation. Nonetheless, in the domain of natural resources, it continued the tradition of state custodianship over mineral wealth. Mineral ownership was affirmed as a collective national asset, to be administered by the executive on behalf of the people, thereby sustaining the regalian principle within a framework that sought greater transparency in governance.

8. Mineral Rights under the 1992 Constitution of Ghana



The 1992 Constitution, which ushered in the Fourth Republic and remains Ghana's supreme law, offers the most explicit constitutional articulation of mineral ownership. Article 257(6) vests all natural mineral resources in the President, to be held in trust for the people of Ghana. In doing so, it codifies the regalian principle within a constitutional framework, consolidating sovereign control over mineral wealth in the state.

This arrangement empowers the executive to direct exploration, licensing, and management, thereby institutionalising state dominance as the organising principle of Ghana's mineral governance. The provision reflects both colonial and post-independence legal continuities; particularly, the vesting of mineral rights in the state under the Minerals Act, 1962 (Act 126), and now serves as the constitutional foundation for all subsequent mineral rights regimes and regulatory structures.

Article 257(6) of the 1992 Constitution provides that:

“Every mineral in its natural state in, under or upon any land in Ghana, rivers, streams, watercourses throughout Ghana, the exclusive economic zone and any area covered by the territorial sea or continental shelf is the property of the Republic of Ghana and shall be vested in the President on behalf of, and in trust for the people of Ghana.”

This provision makes clear that all mineral resources in their natural state belong to the Republic of Ghana and not to private individuals, even when the minerals are located on privately held land. The provision is comprehensive, extending the state's ownership from land-based deposits to marine and offshore territories within Ghana's jurisdiction, including the exclusive economic zone and continental shelf. It reflects an intent to safeguard national sovereignty over natural resources and prevent private or foreign monopolisation of mineral wealth.

Importantly, Article 257(6) also introduces a fiduciary trust element by stating that mineral resources are held "on behalf of, and in trust for the people of Ghana."²² This imposes a constitutional obligation on the President and the executive to manage Ghana's mineral wealth not merely as state property, but as a public trust, to be administered transparently and for the equitable benefit of current and future generations.

In addition to vesting ownership in the state, Article 268(1) of the Constitution adds a layer of parliamentary oversight by requiring that:

*"Any transaction, contract or undertaking involving the grant of a right or concession by or on behalf of any person including the Government of Ghana, to any other person or body of persons, howsoever described, for the exploitation of any mineral, water or other natural resource of Ghana made or entered into after the coming into force of this Constitution shall be subject to ratification by Parliament."*²³

This requirement serves as a constitutional check on the executive's discretion in granting mining leases and concessions. It ensures that mining leases, especially those with foreign investors, are subject to public scrutiny and democratic accountability through parliamentary ratification. The provision is particularly significant in guarding against opaque or exploitative agreements that could harm national interests or deprive communities of fair compensation and development benefits.

Together, Articles 257(6) and 268 reflect a dual constitutional approach to mineral rights in Ghana; i.e. ownership and sovereignty as well as oversight and accountability.

The Constitution also indirectly reinforces the state's developmental obligations with regard to mineral exploitation through its Directive Principles of State Policy (Chapter 6), particularly Article 36(9), which calls on the state to ensure that natural

²² Article 257 of the Constitution, 1992.

²³ Article 268 of the Constitution, 1992.

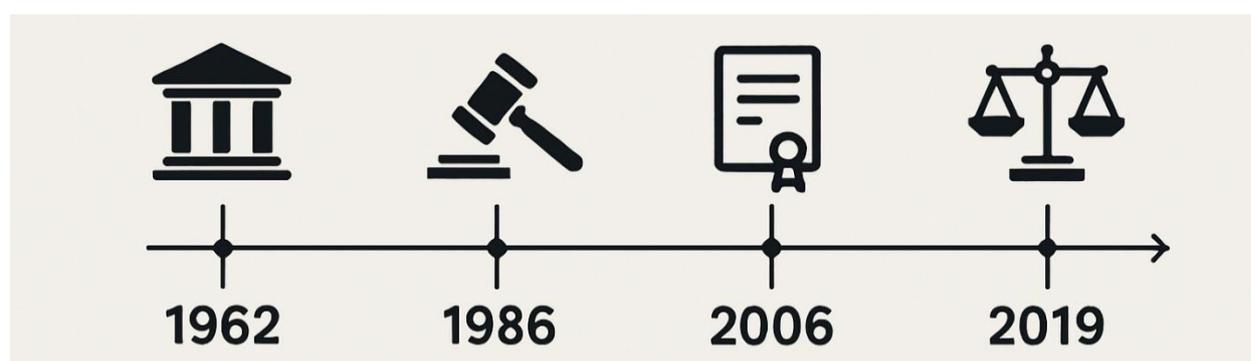
resources are used “to promote the development of the country and the well-being of the people.”

Apart from the constitution which is the fundamental law, the legal framework governing mining in Ghana can broadly be classified into core laws (statutory legislation) and complementary laws (subsidiary legislation). Core laws are Acts of Parliament that form the primary legal foundation for the mining sector. These include, the Minerals and Mining Act, 2006 (Act 703), which is the principal legislation regulating all aspects of mineral exploration and exploitation in Ghana and its amendments, such as the Minerals and Mining (Amendment) Act, 2010 (Act 794) and Act 995 of 2019. Other core laws include the Minerals Commission Act, 1993 (Act 450) and the Minerals Income Investment Fund Act, 2018 (Act 978) as well as the Kimberley Process Certificate Act, 2003 (Act 652).

In contrast, complementary laws are supporting instruments enacted under delegated authority to operationalise or clarify the provisions of core legislation. These typically take the form of Legislative Instruments (LIs) and regulations issued by relevant authorities. Examples include the Minerals and Mining (Licensing) Regulations, 2012 (L.I. 2176), the Minerals and Mining (Compensation and Resettlement) Regulations, 2012 (L.I. 2175), and the Minerals and Mining (Health, Safety and Technical) Regulations, 2012 (L.I. 2182).

Against this backdrop, the next section will examine the core legal instruments governing the mining sector in Ghana, with a particular focus on their relevance to gold mining and the structural challenges that contribute to policy paralysis.

9. Statutory Framework



Prior to the enactment of the current principal mining legislation the Minerals and Mining Act, 2006 (Act 703), Ghana’s mining sector was governed by a fragmented and outdated collection of laws, many of which had become inadequate for modern regulatory demands. These ranged from the Minerals Act, 1962 (Act 126) which entrenched state ownership, but employed cumbersome nationalisation powers to military-era regulations like Mining and Minerals Law, 1986 (PNDCL 153), Mercury

Law 1989 (PNDCL 217), Small-Scale Gold Mining Law 1989 (PNDCL 218), and PNDCL 219 (1989) which created the Precious Minerals Marketing Corporation.

These laws were increasingly unsuitable for modernisation goals posing serious barriers to investment and sustainable development. Their repeal enabled the consolidation of mining law under Minerals and Mining Act 703 and its amendments, paving the way for a unified, transparent, investment-friendly, and environmentally sound regime.

9.1 Key Repealed Laws



i. *The Minerals Act 1962 (Act 126)*

In 1962, the Minerals Act, 1962 (Act 126) was passed which Act provided for the vesting of the “entire property in, and control of all minerals in, under or upon, any lands in Ghana, all rivers, streams and watercourses throughout Ghana and land covered by territorial waters” in the President of the Republic of Ghana in trust for the people of Ghana. Minerals therefore became the property of the State regardless of where they were found. At this point, ownership of land became divorced from ownership of minerals found in, on or over the land.

While this Act was significant for establishing state ownership over all minerals in Ghana, it largely mirrored the centralised command-style governance of the post-independence era. Its key limitation was the excessive concentration of powers in the executive, particularly the President, who could nationalise mining concessions through executive instruments without adequate parliamentary oversight.²⁴

The Act also lacked a modern regulatory framework for licensing, taxation, or environmental management, making it increasingly unresponsive to the growing need for private sector involvement, transparency, and sustainability in mining operations. Furthermore, it failed to distinguish between large-scale and small-scale mining, lumping all forms of extraction under a rigid administrative framework that stifled flexibility and innovation.

²⁴ Minerals Act 1962 (Act 126), s 1; see also Tsikata F, *The Vicissitudes of Mineral Policy in Ghana* (UNU/INRA, 1997) 2–4.

ii. *The Mining and Minerals Law 1986 (PNDCL 153)*

In 1986, the Minerals and Mining Act, 1986 (Act 153) repealed Act 126. Similar to the provision in Act 126, Act 153 provided for the vesting of all minerals, wherever located within the territorial land and waters of Ghana in the President.

This law represented a shift towards liberalisation in the mining sector, with a goal of attracting foreign investment. However, it fell short in several respects. It did not provide a stable fiscal regime, leading to investor uncertainty over royalties, tax holidays, and export obligations.²⁵

Additionally, PNDCL 153 offered minimal environmental safeguards; it made only passing references to “good mining practices” without imposing concrete obligations or penalties. Its provisions were also silent on community engagement and benefit-sharing, leaving affected communities without a structured avenue for compensation or inclusion in mining-related decisions. The lack of coordination between licensing and environmental authorities further weakened its practical implementation.

iii. *Mercury Law, 1989 (PNDCL 217)*

The Mercury Law was enacted to regulate mercury use in artisanal mining. However, this law was narrow in scope and largely unenforceable in practice. It did not include any binding obligations for training miners in safe mercury use, nor did it establish a mechanism for monitoring and penalising violations²⁶ As a result, mercury continued to be used indiscriminately, polluting rivers and posing severe health risks to miners and surrounding communities. The absence of collaboration between the Minerals Commission and the Environmental Protection Agency (EPA) further hindered enforcement allowing environmental harm to remain unchecked.

iv. *Small-Scale Gold Mining Law, 1989 (PNDCL 218)*

The Small-Scale Gold Mining Law, 1989 (PNDCL 218) represented Ghana’s first serious attempt to formally recognise and regulate artisanal and small-scale mining (ASM), an activity that had been carried out informally for centuries. Before its enactment, small-scale mining was largely criminalised under colonial and early post-independence statutes, which reserved mineral rights for the state and licensed large-scale, often foreign, operators. PNDCL 218 thus marked a policy shift: it sought to legitimise the operations of Ghanaian small-scale miners and to harness their contributions to the national economy within a formal regulatory framework.

Despite this progressive intent, the law’s structure revealed significant limitations that ultimately constrained its effectiveness. It imposed restrictive operational conditions that failed to reflect the realities of artisanal production. For instance,

²⁵ PNDCL 153 (1986), s 21; see Aubynn A, ‘Sustainable ASM in Ghana’ (2017) in *Mining Journal of Ghana*.

²⁶ PNDCL 217 (1989); see Hilson G, ‘Small-scale mining, poverty and economic development in sub-Saharan Africa’ (2009) 34(1) *Natural Resources Forum* 15–26

miners were only permitted to operate within concessions not exceeding 10 hectares, and the use of explosives, a tool often essential for accessing ore bodies in hard rock formations, was strictly prohibited. These restrictions limited productivity and discouraged investment in improved technology. In addition, the law confined small-scale operations to Ghanaian citizens, a clause intended to preserve local participation but which inadvertently fuelled the proliferation of informal partnerships between Ghanaian licence holders and foreign nationals who provided capital and machinery.

The licensing process established under the law was another major barrier to formalisation. Although intended to simplify access to mineral rights, it remained highly centralised, requiring approvals from the Minerals Commission in Accra and the Minister responsible for Lands and Natural Resources. For miners located in remote areas, the process was bureaucratically burdensome, time-consuming, and expensive. Moreover, many applicants lacked the literacy, documentation, or financial resources to navigate the application process, pushing them to operate outside the formal system. The cost of registration, coupled with the delays in permit issuance and the perceived risk of arbitrary revocation, made informal mining a more practical and economically rational alternative for many operators.

In terms of institutional design, PNDCL 218 suffered from a regulatory vacuum. It provided no framework for sustained capacity building, extension services, or access to credit and technology for small-scale miners. Similarly, there were no structured provisions for occupational health, environmental management, or safety training, despite the sector's high vulnerability to accidents, pollution, and child labour. Without institutional support, small-scale miners remained largely excluded from state-led development planning, perpetuating their marginalisation within Ghana's mining economy.

By failing to bridge the gap between policy recognition and practical support, PNDCL 218 entrenched a two-tiered mining economy: a well-capitalised, formally regulated large-scale sector on the one hand, and an informal, loosely monitored artisanal sector on the other. Over time, the persistence of informality led to escalating environmental degradation, conflicts over land and water resources, and widespread illegal mining (*galamsey*). The absence of a clear, long-term formalisation pathway meant that the law's intended developmental benefits, job creation, local wealth retention, and poverty reduction, were never fully realised.

From a governance perspective, the paralysis inherent in PNDCL 218 exemplified Ghana's broader regulatory dilemma: legislation was enacted to legitimise and regulate small-scale mining, but without adequate institutional capacity, political commitment, or socio-economic support mechanisms to enforce or sustain compliance. The law's implementation thus reproduced the very problems it sought

to resolve, informality, environmental harm, and uncollected royalties, while deepening the disconnection between mining policy and community development.²⁷

v. *Precious Minerals Marketing Corporation Law, 1989 (PNDCL 219)*

The Precious Minerals Marketing Corporation Law, 1989 (PNDCL 219) was enacted as part of a suite of reforms under the Provisional National Defence Council (PNDC) intended to regularise and modernise Ghana's mining sector. The law established the Precious Minerals Marketing Corporation (PMMC) with a mandate to purchase, assay, value, and market gold and other precious minerals produced in the country; particularly, from small-scale miners. Its primary goal was to create an official channel for gold trade, curb widespread smuggling, and ensure that the state captured a greater share of mineral revenues.

While the creation of the PMMC represented an important step toward formalising mineral marketing, the institution quickly encountered operational and structural weaknesses that undermined its effectiveness. The Corporation lacked the financial capacity to purchase gold in sufficient volumes, leading to chronic delays in payments to miners. Many small-scale miners, who depended on immediate cash flow to sustain operations, found it impractical to sell through the PMMC, and instead turned to informal buyers who offered faster transactions. The Corporation also faced logistical and technical constraints, including inadequate assay and refining facilities, limited regional presence, and outdated valuation methods, which made it uncompetitive compared to private and illicit traders.

The PMMC's statutory monopoly on gold exports was further eroded by the rise of an extensive network of unlicensed middlemen and smugglers who offered higher prices driven by global market differentials and weak enforcement. This situation significantly undermined confidence in state-run marketing, as miners perceived the PMMC as bureaucratic and unresponsive to market dynamics. The resulting exodus of small-scale producers to illicit trade channels reduced state revenues, weakened regulatory oversight, and entrenched the informal economy surrounding gold production.

Institutionally, the PMMC suffered from inefficiency and poor governance, reflecting broader challenges in Ghana's parastatal management during the late 1980s and 1990s. Its operations were constrained by political appointments, limited managerial autonomy, and a lack of reinvestment in modern trading infrastructure. Consequently, it failed to perform its intended developmental role of linking artisanal miners to formal markets and global value chains. Instead, it became

²⁷ PNDCL 218 (1989), ss 3–5; see Hilson G and Potter C, 'Why is illegal gold mining so common in Ghana?' (2005) *African Development Review*.

emblematic of the persistent gap between legislative ambition and administrative execution that characterises Ghana’s mining governance framework.

In 2025, the Gold Board Act (Act 1140) repealed PNDCL 219 and replaced the PMMC with the Ghana Gold Board, a new entity intended to correct the institutional failures of its predecessor. The Gold Board is designed to serve as a more autonomous and commercially oriented body responsible for regulating, monitoring, and promoting gold trading, including the establishment of traceability systems to curb smuggling and enhance transparency. It also aims to integrate artisanal and small-scale miners into formal supply chains through improved licensing, training, and digitalised marketing systems.

Collectively, the repealed laws reflected a disjointed regulatory regime that hindered long-term development. By repealing these fragmented and partially effective laws and consolidating the mining legal framework under Act 703 (and subsequent amendments in Acts 900 and 995), Ghana achieved a more streamlined statutory architecture.

9.2 Key Legislations Currently Regulating Mining in Ghana



i. Minerals Commission Act, 1993 (Act 450)

This Act establishes the Minerals Commissions Act was enacted in response to the need for a centralised and professional governance structure for Ghana’s mining

sector. Thus, it establishes the Minerals Commission as the regulatory authority for the mining sector. It essentially provides for the compositions and functions relating to the regulation and management of the utilisation of minerals in Ghana, and for related matters.

The primary objective of Act 450 was to create an autonomous, expert-driven body mandated to manage, regulate, and promote mineral exploration and exploitation. Previously, Ghana's mining governance was fragmented across multiple statutory bodies, leading to inconsistent policy implementation and resource mismanagement. By establishing the Minerals Commission, Parliament aimed to centralise authority, ensure consistency in policy direction, and create a one-stop regulatory agency for both large-scale and small-scale operations. The mandate to coordinate mineral sector policies, advise the Minister, and report to Parliament²⁸ demonstrates a deliberate attempt to balance executive responsiveness with democratic accountability.

By creating a regulatory entity, the Commission initially founded under PNDCL 154 (1984) and later entrenched through Act 450 laid the framework for modern mineral governance in Ghana. Its establishment enabled subsequent laws (Acts 703 and its amendments Act 900, Act 995) to delegate detailed licensing, environmental, fiscal, and enforcement responsibilities to a designated authority. The Commission's professionalisation has contributed to policy coherence and sector stability, even though some critics highlight ongoing capacity gaps and uneven enforcement.

ii. The Minerals and Mining Act, 2006 (Act 703)

The Minerals and Mining Act, 2006 (Act 703) marked a significant turning point in Ghana's legal and regulatory framework for the mining sector. It repealed and replaced the Minerals and Mining Law of 1986 (PNDCL 153) and sought to harmonise Ghana's mining legislation with international best practices in order to attract foreign direct investment, ensure fiscal stability, and provide clearer regulatory structures. In essence, Act 703 became the central statute governing the ownership, exploration, licensing, and exploitation of mineral resources in Ghana.

The introduction of the Minerals and Mining Act, 2006 represented a deliberate effort by Parliament to overhaul Ghana's outdated and fragmented mining legislation. With the primary objectives of modernising regulatory structures, enhancing revenue generation, and securing environmental and social safeguards, Act 703 consolidated all previous statutes including colonial-era ordinances and PNDC laws into a single, cohesive framework.

The legislative rationale emphasised two key principles: clarity and inclusivity. By harmonising licensing for large-scale and small-scale miners and codifying environmental assessments, community consultation, and local procurement

²⁸ Minerals Commission Act, 1993 (Act 450), ss 1–4.

obligations, the law aimed to reposition Ghana's mining sector in line with both its constitutional mandates and international best practices.

Innovations included the establishment of transparent processes (e.g., first-come-first-served licensing), timelines for application approvals, and statutory powers for the Minerals Commission to monitor compliance and enforce sanctions. Another key innovation was formal recognition of artisanal mining declaring small-scale permittees subject to the same legal framework as large miners, thus reducing policy fragmentation.

As part of its core provisions, the Act emphasised local ownership and sovereignty over the sector by reaffirming the regalian principle by vesting all minerals in the President of Ghana, to be held in trust for the people. This constitutional embodiment (in line with Article 257(6) of the 1992 Constitution) entrenched state control as the organising principle of mineral governance, centralising ultimate authority in the executive. Similarly, the Act implements the Constitution by providing mechanisms for accessing compensation to lawful right holders in land and occupiers whose rights were disturbed by mining operations. It recognised surface rights but subordinated them to mineral rights, creating structural tensions between mining companies and local communities.

Also, Act 703 established a tiered licensing structure, around reconnaissance licences, prospecting licences, mining leases, restricted licences, and small-scale mining licences. Licences were granted by the Minister for Lands and Natural Resources, acting on the advice of the Minerals Commission. This was subject to Parliamentary ratification.

With respect to fiscal provisions, made under the Act, there were mandated royalty payments of between 3% and 6% of a mining company's total revenue. It provided for corporate tax obligations, surface rentals, and other levies, while enabling fiscal incentives under Ghana's investment laws to apply to mining companies.

With particular regard to Small-Scale Mining, Act 703 formally recognised small-scale mining as distinct from large-scale operations, though participation was restricted to Ghanaian citizens. In practice, bureaucratic hurdles and limited access to credit and technology continued to marginalise artisanal miners.

Finally, the Act affirmed the Minerals Commission as the agency with regulatory oversight. The Minerals Commission was charged with policy formulation and regulatory oversight, while the Inspectorate Division of the Minerals Commission ensured compliance with technical and safety standards. Act 703 also incorporated provisions for environmental protection, requiring Environmental Impact Assessments (EIAs) and compliance with EPA regulations.

Act 703 was operationalised through six key Legislative Instruments (L.I.s) passed in 2012, including:

1. Minerals and Mining (General) Regulations (L.I. 2173)
2. Minerals and Mining (Licensing) Regulations (L.I. 2176)
3. Minerals and Mining (Support Services) Regulations (L.I. 2174)
4. Minerals and Mining (Compensation and Resettlement) Regulations (L.I. 2175)
5. Minerals and Mining (Health, Safety and Technical) Regulations (L.I. 2182)
6. Minerals and Mining (Explosives) Regulations (L.I. 2177)

These sought to provide greater detail on licensing, health and safety, resettlement, compensation, and technical standards.

10. Structural Weaknesses and Paralysis



Despite its comprehensive scope and modern design, the Minerals and Mining Act, 2006 (Act 703) has struggled to deliver the regulatory coherence and developmental impact it promised. While the Act consolidated Ghana's mining laws and aligned them with global investment standards, its implementation has exposed deep structural flaws within the country's mineral governance framework. Weak institutional coordination, excessive ministerial discretion, and limited enforcement capacity have collectively hindered effective regulation. In practice, the Act functions more as an investment facilitation tool than as an instrument of

developmental governance. This disjuncture between the law's intent and its execution has produced a regulatory paralysis in which compliance, environmental sustainability, and community development remain secondary to short-term revenue and political interests. The following discussion examines the principal institutional and policy weaknesses that have constrained the effectiveness of Act 703 and perpetuated inertia within Ghana's mining governance system.

At the core of this paralysis lies a governance model that privileges economic liberalisation and foreign investment attraction over social accountability and ecological protection. Although the Act was drafted to provide predictability and transparency, the persistence of executive dominance and administrative fragmentation has undermined its effectiveness. Institutions tasked with oversight, the Minerals Commission, the EPA, and the Forestry Commission, operate within overlapping jurisdictions and often pursue conflicting objectives. This diffusion of responsibility has created enforcement gaps, delayed decision-making, and fostered a culture of selective compliance.

A central weakness of Act 703 lies in the concentration of discretionary power in the executive. The Act vests extensive authority in the Minister responsible for Lands and Natural Resources, who, acting on the recommendation of the Minerals Commission, may negotiate, grant, suspend, revoke, or renew mineral rights on behalf of the President. Although intended to streamline decision-making, this concentration of licensing and regulatory power creates fertile ground for political interference and opaque decision processes.

It undermines the predictability that investors require and weakens procedural safeguards for affected communities. In theory, parliamentary ratification under Article 268 of the 1992 Constitution provides an institutional check on executive discretion; but in practice, scrutiny tends to be perfunctory. Parliamentary oversight is often limited to formal ratification rather than substantive evaluation of the public interest implications of mineral agreements. This imbalance entrenches executive dominance and reduces transparency in mineral resource governance.

Closely related to this is the problem of fragmented and overlapping mandates across key regulatory institutions. Effective mineral governance requires strong coordination among the Minerals Commission, the EPA, the Forestry Commission, the Water Resources Commission, and the relevant Metropolitan, Municipality, and District Assemblies (MMDAs). In reality, however, liaison among these bodies is weak, and institutional responsibilities frequently overlap. For example, while the EPA oversees environmental compliance, the Forestry Commission regulates access to forest reserves, and the Minerals Commission administers mineral rights, all often within the same geographical space. The absence of a unified regulatory framework leads to duplication, inefficiency, and conflicting directives. This fragmentation slows down permitting processes, blurs accountability when infractions occur, and creates opportunities for "forum shopping," where mining

entities exploit jurisdictional ambiguities to secure favourable outcomes or evade sanctions.

The weaknesses in governance are compounded by uneven and inconsistent enforcement. Although Act 703 and its subsidiary regulations clearly provide for sanctions, fines, and permit revocations, enforcement is erratic and often influenced by political and economic considerations. Even in ecologically sensitive areas or in cases of serious non-compliance, regulatory responses are delayed or limited to warnings. The perception that penalties are rarely applied undermines the deterrent value of the law and emboldens further infractions. The persistent gap between statutory rules and administrative action reflects a wider institutional inertia in Ghana's mining governance system, where well-crafted laws coexist with weak operational discipline.

In the area of small-scale mining, the Act's formalisation framework has proven inadequate to address deep-seated structural challenges. Although Act 703 legally recognises small-scale mining and establishes a licensing regime for Ghanaian operators, the process remains bureaucratic, centralised, and poorly resourced at the district level. Limited access to finance, modern technology, and geological information further constrains the ability of licensed miners to operate profitably. Many prospective operators, faced with complex procedures and long delays, are pushed into informality, where they can operate with lower costs and fewer regulatory hurdles. This dynamic fuels a vicious cycle in which informal mining proliferates, environmental degradation worsens, and compliant miners are disadvantaged, eroding the credibility of the formal system.

The shortcomings of environmental governance under Act 703 are particularly evident in ecologically sensitive areas such as forest reserves and river catchments. Although the law and its subsidiary instruments establish environmental assessment and compliance requirements, enforcement is weakest precisely where environmental risks are highest. Political lobbying, ministerial directives, and negotiated exceptions frequently override technical assessments and conservation goals. This selective application of environmental standards has resulted in the encroachment of mining operations into protected zones such as the Atewa Range, with significant ecological consequences. The absence of clearly defined "no-go zones" for mining creates space for ad hoc decision-making, undermining environmental integrity and cumulative landscape protection.

The Act also reflects persistent imbalances in community rights and compensation frameworks. While it recognises the payment of compensation for disturbance of surface rights, mineral ownership remains vested in the state, subordinating community interests to the grant of mineral rights. Many affected communities experience displacement, loss of farmlands, and environmental degradation with little or no meaningful redress. Compensation mechanisms often undervalue losses or are delayed, and social investments by companies remain limited and

discretionary. This structural inequity fuels tension between mining companies, local populations, and the state, weakening the perceived legitimacy of the mineral governance regime.

A further dimension of paralysis arises from district-level capacity deficits. Most of the institutions charged with implementing and monitoring mining regulations lack operational presence or resources at the local level. District offices of the Minerals Commission and EPA are understaffed, underfunded, and poorly equipped to conduct routine inspections or respond to complaints. As a result, many infractions go unreported or unaddressed, particularly in remote small-scale mining areas. The absence of strong local oversight not only weakens enforcement; but, also distances affected communities from the state, fostering mistrust and resistance to regulatory interventions.

Transparency deficits deepen these structural problems. Persistent data and disclosure shortfalls obscure licensing decisions, beneficial ownership details, royalty valuation methods, and compliance outcomes. The absence of an accessible and updated online cadastre limits public scrutiny and parliamentary oversight. Without regular disclosure of contracts, production figures, and enforcement actions, it becomes difficult to track accountability or detect conflicts of interest. This opacity reinforces public cynicism about corruption and rent-seeking in the sector, discouraging responsible investment and perpetuating policy inertia.

These institutional challenges are further compounded by policy inconsistency and regulatory drift. Since the passage of Act 703, successive amendments and policy initiatives have attempted to strengthen environmental safeguards and increase state revenues. Yet implementation has remained inconsistent, with competing signals between investment promotion objectives and environmental protection mandates. Decisions to permit or suspend mining in forest reserves, for instance, often shift with political cycles rather than being guided by long-term policy coherence. Such unpredictability discourages credible investors, heightens litigation risks, and contributes to a perception of instability within the regime.

Finally, the combined effect of weak enforcement, limited community participation, and visible environmental degradation has produced spillover harms and the erosion of social licence. Communities in mining-affected areas increasingly associate mining with dispossession, pollution, and inequality. In places such as the Atewa Range and Tarkwa-Nsuaem, grievances over land encroachment, water contamination, and inadequate social benefits have intensified local resistance and activism. This loss of social legitimacy elevates reputational risks for both government and industry, deterring responsible capital while emboldening unregulated operators. The resulting breakdown in trust between the state, communities, and investors perpetuates the cycle of paralysis that continues to define Ghana's mineral governance landscape.

The statute's formal completeness is undermined by executive concentration, fragmented institutions, under-resourced enforcement and opaque practice. The resulting inertia depresses developmental returns from mining, even as legal provisions proliferate. With the absent of a clearer ecological limits, stronger district capacity, routine transparency, and credible and depoliticised enforcement, the sector will continue to underperform against its inclusive and sustainable development potential.

The Minerals and Mining (Amendment) Act, 2015 (Act 900) and the Minerals and Mining (Amendment) Act, 2019 (Act 995)

Since the enactment of the Minerals and Mining Act, 2006 (Act 703), Ghana has introduced two major amendments to its mineral law regime, reflecting attempts to respond to persistent challenges in governance and enforcement; particularly, those associated with illegal small-scale mining (*galamsey*). The 2015 amendment (Act 900) and the 2019 amendment (Act 995) were both framed as corrective measures; yet, they also illustrate the piecemeal and reactive character of Ghana's mining law reforms.

Act 900 of 2015 arose out of two central policy concerns: the need for greater flexibility in determining royalty rates, and the escalating threat posed by unregulated mining. The amendment revised section 25 of Act 703, empowering the Minister for Lands and Natural Resources to set royalty rates by regulation rather than through fixed statutory provisions.²⁹ This was intended to give the state room to adjust fiscal regimes in line with fluctuations in global commodity prices and Ghana's domestic economic needs. In addition, Act 900 introduced enhanced enforcement powers by authorising the confiscation of equipment used in illegal small-scale mining operations.³⁰ This marked a significant departure from prior practice by equipping regulators with tangible tools to disrupt unlawful activity.

Act 995 of 2019 built upon this foundation but reflected the intensifying national crisis surrounding *galamsey*. By the late 2010s, unregulated mining had caused severe environmental damage, including widespread deforestation, water pollution, and land degradation, and had generated acute social and political pressure for reform. The amendment therefore escalated the punitive framework. It introduced mandatory custodial sentences of 15 to 25 years for offences such as mining without

²⁹ Ibid, s 2; see also Parliament of Ghana, Memorandum to the Bill (2015)

³⁰ Act 900, s 99(2); see also GNA, 'Parliament Passes Minerals and Mining Amendment Bill' (2015) <https://www.graphic.com.gh/news/general-news/parliament-passes-minerals-and-mining-amendment-bill.html> accessed 16 July 2025.

a licence or engaging in the unlawful sale and purchase of minerals.³¹ This was a marked shift from the discretionary penalties of Act 703, signalling the state's intention to adopt a zero-tolerance approach. Additionally, the Act inserted a new section 96A, explicitly barring foreigners from providing support services to small-scale mining enterprises; a measure designed to close a loophole that had allowed foreign actors, particularly from Asia, to indirectly fuel *galamsey*.

Together, Acts 900 and 995 embody Ghana's evolving legislative response to the tensions between promoting lawful mineral exploitation and combating illegal mining. While they strengthened enforcement powers and introduced greater fiscal flexibility, they also reveal the reactive nature of legislative change, responding to crises rather than proactively redesigning governance structures. Their effectiveness has been limited by the same structural weaknesses embedded in the broader regime: weak institutional capacity, political interference, and fragmented regulatory mandates. Consequently, despite harsher penalties and expanded ministerial discretion, illegal mining remains pervasive, underscoring the paralysis of Ghana's mining laws. Instead of delivering lasting solutions, these amendments risk entrenching a punitive but uneven enforcement culture that does little to address the underlying drivers of informality, such as unemployment, poverty, and barriers to legal small-scale mining.

Mining Related Legislation

In addition to the principal statutes that directly regulate the mining sector, Ghana's legal framework is supported by a number of ancillary enactments that bear significantly on mining operations. These laws address matters such as land administration, environmental protection, labour relations, taxation, and local governance, all of which intersect with mineral resource exploitation. The following discussion outlines some of the key legislative instruments that, while not exclusively mining statutes, play a substantive role in shaping the governance and practice of mining in Ghana.

i. The Minerals Development Fund Act, 2016 (Act 912)

The enactment of the Minerals Development Fund Act (Act 912) in 2016 was heralded as a milestone in Ghana's mining governance framework. Its primary objective was to formalise and improve the redistribution of mineral royalties, particularly to ensure that communities hosting mining operations directly benefit from the revenues generated. The Act created a statutory basis for the Minerals Development Fund (MDF), which had previously existed only by executive fiat since 1993, and

³¹ Minerals and Mining (Amendment) Act, 2019 (Act 995), s 3; see also GBC Ghana, 'New Minerals Law Imposes Stiffer Penalties for Illegal Miners' (2019) <https://www.gbcghanaonline.com/general/minerals-and-mining-act-amended-to-give-stiffer-punishment-to-illegal-miners/2019> accessed 16 July 2025.

introduced mechanisms intended to enhance transparency, accountability, and equitable development in mining-affected areas.

The mandate of the Fund is to provide “financial resources for the direct benefit of mining communities, a holder of an interest in land within mining communities, a traditional and local government authority within mining communities and an institution responsible for the development of mining in Ghana”³². The Act also provides financial resources for mining sector development and research, and to the Ministry of Lands and Natural Resources (MLNR) to support and develop its policy planning, evaluation and monitoring functions with respect to mining³³.

Objectives and Structure

Act 912 provides that 20 percent of all mineral royalties collected by the Ghana Revenue Authority be allocated to the MDF. The fund is then disbursed according to a statutory formula, with allocations directed to:

1. The Office of the Administrator of Stool Lands (OASL): which redistributes shares to traditional authorities, councils, and district assemblies.
2. Mining Community Development Schemes (MCDS): local-level schemes administered by Local Management Committees (LMCs) designed to channel royalties into projects directly benefiting mining communities.
3. Sectoral development agencies and institutions, including the Ministry of Lands and Natural Resources, the Minerals Commission, and the Geological Survey Department, to support research, monitoring, and policy implementation.

The establishment of the MCDS is one of the most innovative aspects of Act 912, as it explicitly mandates that mining communities, rather than district assemblies or chiefs alone, receive dedicated funding. By anchoring development spending in locally representative committees, the Act theoretically decentralises decision-making and aligns royalty spending more closely with community priorities.

Promise and Potential

On paper, the Act represents progress towards rectifying long-standing inequities in Ghana’s mineral royalty regime. Prior to its passage, disbursements were characterised by delays, misappropriation, and elite capture at both traditional and district levels. The MDF’s legalisation, combined with the stipulation of clear distribution percentages, was expected to reduce political discretion and create a predictable flow of resources for local development. Moreover, by mandating local-

³² Act 912 S1

³³ Act 912, 2(d) and 5(c-e).

level project design and review processes, the Act created space for community participation, potentially enhancing ownership and accountability.

Structural Weaknesses and Emerging Paralysis

Despite these reforms, the MDF Act has not fully realised its developmental promise. Scholars and policy reviews note several enduring weaknesses:

1. *Persistence of Elite Capture and Misuse:* Traditional authorities and district assemblies continue to interpret royalty allocations in ways that prioritise ceremonial or administrative expenditure over community development. Ambiguities in the constitutional language, particularly regarding the “maintenance of the stool”, have facilitated this misuse.
2. *Insufficient Funding:* Only 20 percent of mineral royalties are directed to the MDF, of which just a portion trickles down to the MCDS. Analysts estimate that mining communities require at least 30-35 percent of total royalties to address basic infrastructural and social needs, making the Act’s current formula inadequate.
3. *Weak Accountability Mechanisms:* Although the Act establishes a governing board and mandates reporting, in practice there are delays in disbursement, limited oversight of Local Management Committees, and minimal transparency in project implementation. This replicates the pre-Act problem of royalty capture by local elites.
4. *Policy Fragmentation:* The MDF exists alongside other statutory and policy mechanisms for resource revenue distribution (such as the Petroleum Revenue Management Act). However, unlike petroleum, mineral revenues remain trapped in a fragmented institutional landscape without a coherent framework for long-term savings, investment, or intergenerational equity.

In effect, despite the attempts and good intentions to improve living conditions in the mining areas, the Act contains stipulations that may hinder such development. First, the Act does not clarify how the portion of the royalties that is distributed to the traditional councils should be spent. Second, the mode of selecting and the composition of the LMCs can potentially expose them to cronyism and may limit local participation in decision making regarding how the mineral royalties are spent. Third, the Act missed an opportunity to mandate the GRA to transfer the 20 per cent of total mineral royalties directly to the MDF. Fourth, the percentage of mineral royalties designated to the MCDS scheme is most likely inadequate to develop the mining communities. Finally, the Act provides few mechanisms to ensure transparency and accountability in the distribution and spending of the mineral

royalties. Without addressing these challenges, the MDF may not achieve its stated objective of enhancing socio-economic development in the mining communities³⁴.

Implications for Economic Development

The MDF Act illustrates the paradox of Ghana's mining law regime: even when legislation is enacted to empower mining communities, weak institutional design, political interference, and inadequate funding undermine implementation. Consequently, host communities remain among the poorest in the country despite their proximity to resource wealth. The paralysis here is twofold: the state enacts laws with promising language, but without robust enforcement or adequate resource allocation, these laws become symbolic rather than transformative.

In economic development terms, this failure has ripple effects. Poorly compensated communities become resistant to mining activities, social tensions escalate, and the state forfeits the opportunity to leverage mineral wealth for inclusive development. Rather than functioning as a vehicle for empowerment, the MDF risks reinforcing patterns of dependency, elite rent-seeking, and distrust between mining communities and the state.

ii. [The Minerals Income Investment Fund Act, 2018 \(Act 978\) as amended by the Minerals Income Investment Fund \(Amendment\) Act, 2020 \(Act 1024\)](#)

The Minerals Income Investment Fund Act, 2018 (Act 978), later amended by Act 1024 in 2020, represents one of Ghana's most ambitious attempts to transform mineral wealth into long-term financial capital. The Act established the Minerals Income Investment Fund (MIIF) with a mandate to receive and manage royalties derived from mining operations, invest them prudently, and generate income for the benefit of current and future generations. Conceptually, the MIIF sought to insulate Ghana's mineral revenues from commodity price volatility, while ensuring that mineral wealth was not consumed immediately but channelled into productive investment portfolios that could underpin economic transformation.

The 2020 amendment sought to accelerate this vision by creating a Special Purpose Vehicle (SPV), Agyapa Royalties Limited, through which future mineral royalty streams could be securitised and monetised on international capital markets. This strategy, theoretically, was intended to raise upfront capital for infrastructure and development projects while allowing the state to retain a degree of ownership.

However, the execution of the Agyapa transaction sparked intense national debate. Civil society groups, opposition parties, and independent analysts criticised the process as opaque, alleging that it undervalued Ghana's mineral assets and risked mortgaging future generations' wealth for short-term fiscal gains. The absence of

³⁴ Päivi Lujala, John Narh 'Ghana's Minerals Development Fund Act: Addressing the Needs of Mining Communities' (in press) *Journal of Energy & Natural Resources Law*

broad stakeholder consultation, coupled with partisan contestation, eroded public confidence and ultimately stalled the implementation of the transaction.

This paralysis in the operationalisation of the MIIF highlights deeper structural weaknesses in Ghana's mining governance. First, it demonstrates how political polarisation can derail otherwise innovative legislation. Rather than functioning as a non-partisan sovereign wealth mechanism, the Fund became entangled in partisan struggles, undermining its legitimacy. Second, the controversy underscored the deficit of transparency and accountability in resource governance.

The limited disclosure of the valuation processes, ownership structures, and potential beneficiaries of the Agyapa arrangement entrenched suspicions of elite capture. Third, the MIIF framework exposed Ghana's broader institutional fragility, as its objectives have remained largely aspirational, with little demonstrable impact on economic diversification or intergenerational equity since its establishment.

Comparatively, other resource-rich countries have demonstrated that sovereign wealth vehicles can serve as critical instruments for stabilising national economies and building long-term wealth. Botswana's Pula Fund, for instance, channels surplus diamond revenues into carefully managed financial assets that support fiscal stability. Similarly, Norway's Government Pension Fund Global has become a global benchmark for resource-based wealth management, premised on transparency, accountability, and strict depoliticisation. Against these examples, Ghana's MIIF illustrates how well-intentioned legislation can succumb to paralysis when governance structures are weak, when political interests override technical design, and when public trust is absent.

The implications for economic development are profound. Instead of providing a predictable and sustainable flow of investment capital, the MIIF remains largely underutilised. Ghana continues to rely heavily on raw mineral exports without successfully converting royalties into transformative investments. The missed opportunity weakens fiscal stability and perpetuates the country's dependence on extractive rents, undermining long-term industrialisation and inclusive development. Unless the paralysis surrounding the Fund is resolved through stronger transparency, independent oversight, and genuine depoliticisation, the MIIF risks becoming yet another example of mining legislation whose promise is trapped in inertia rather than realised in practice.

iii. The Kimberley Process Certificate Act, 2003 (Act 652)

The Act establishes the legal requirement that any export or import of rough diamonds from Ghana must be accompanied by a Kimberley Process Certificate. Under Act 652, only holders of valid mining licences under the national Minerals and Mining Law may apply for a Kimberley certificate. Applications must follow prescribed forms and procedures. Exporters must submit periodic reports, declare

packaging details, and maintain comprehensive records, including serial numbers and shipment documentation. Failure to comply may result in suspension or cancellation of export privileges and criminal penalties, including fines on summary conviction.

The Act aims to align Ghana with the International Kimberley Process Certification Scheme (KPCS), a global mechanism launched in 2003 to prevent the trade in so-called “conflict diamonds”, mined in war zones and used to finance armed groups³⁵. As a participating country, Ghana thus commits to maintaining rigorous internal controls to verify the origin of rough diamonds destined for export.

Despite the legislative framework, Ghana has faced criticism over internal conflicts of interest; particularly, when the Precious Minerals Marketing Company (PMMC), which engages in buying and trading, also functions as the de facto issuer of Kimberley certificates. Independent observers note that mixing commercial and regulatory roles may compromise the integrity of certification and has led to Ghana being placed on probation at Kimberley Process plenary meetings as early as 2007.³⁶

In addition to key core legislation, Ghana as part of the plethora of laws governing mining also has subsidiary legislation which plays a crucial role in contemplating and giving effect to the provisions of the primary legislation discussed above. The subsidiary legislation (also known as legislative instruments or regulations) is made under the authority of an enabling Act. For instance, in the case of the Minerals and Mining Act, 2006 (Act 703), regulations are made to provide operational clarity, enforce standards, and ensure regulatory compliance. These instruments cover a wide range of matters that the principal Act could not exhaustively address, such as royalties, health and safety, compensation, licensing procedures, and local content requirements.

Subsidiary Legislation on Mining

- a. **Minerals (Royalties) Regulations, 1987 (LI 1349)** – This regulation provides for the calculation and payment of royalties by mineral right holders to the state³⁷. It ensures that Ghana derives fiscal benefits from the commercial exploitation of its mineral resources. The regulation prescribes how royalties are to be assessed, the rate applicable, and the timeframe for payment. This instrument is critical to revenue mobilisation, as royalties form a significant portion of the government’s income from the mining sector.
- b. **Minerals and Mining (General) Regulations, 2012 (L.I. 2173)** – L.I. 2173 provides comprehensive operational guidelines for mineral right holders. It addresses staffing obligations, the proper disposal and reporting of minerals,

³⁵ Wright, Clive. "Tackling conflict diamonds: the Kimberley process certification scheme." *International Peacekeeping* 11, no. 4 (2004): 697-708.

³⁶

³⁷ Mineral(Royalties) Regulation 1

and standards for reconnaissance, prospecting, and mining operations. It also deals with requirements for mineral samples, annual reports, and demarcation of mining areas. This regulation essentially operationalises many provisions of the Minerals and Mining Act and ensures a uniform code of conduct for mining companies. Its broad scope makes it a foundational instrument for day-to-day compliance and regulatory supervision.

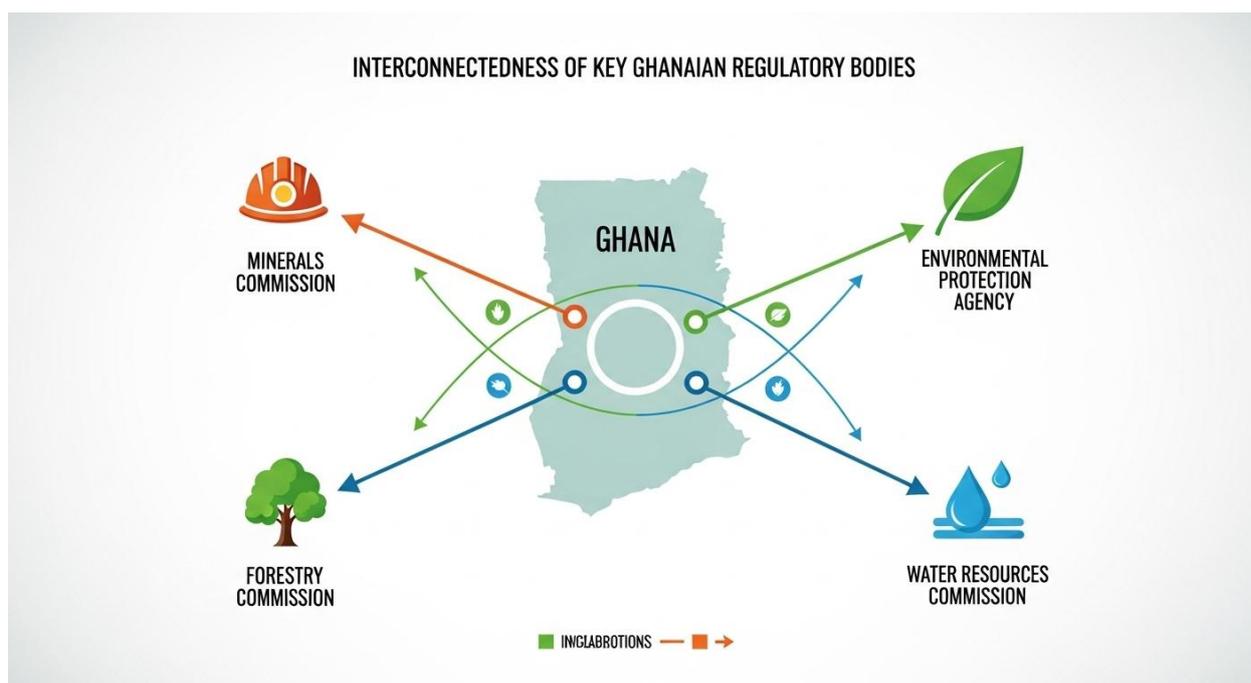
- c. **Minerals and Mining (Support Services) Regulations, 2012 (L.I. 2174)**- This regulation governs entities that provide support services to the mining sector, such as drilling companies, assay laboratories, and mine support contractors. The Minerals and Mining (Support Services) Regulations establish that support services may be provided to a holder of a mineral right by persons registered in accordance with the Regulation. Support service providers may be registered as a 'Class A' or a 'Class B' provider.
- i. A 'Class A' support service provider is a person who offers more extensive contract mining services. These include mining and ancillary construction services, works which are provided specifically and exclusively for the mining industry (e.g. construction of a heap leach pad and haulage roads), assay laboratory services, and supply of mining equipment and spare parts (reg. 2).
 - ii. A 'Class B' support service provider must be Ghanaian and provides services specifically and exclusively to a mineral right holder, including contract mining services for small scale mining, reclamation, re-vegetation and management of mining operations and haulage services to and from mine sites (reg. 2).
 - iii. The provider shall additionally submit monthly and annual reports to the Commission on the mineral rights holder's activities (reg. 4). Under regulation 6, the support services provider must comply with the mining and environmental laws and Regulations. By formalising the operations of auxiliary service providers, this regulation helps professionalise the industry, ensure quality control, and enhance local content participation by regulating the environment in which these businesses operate.
 - iv. **Minerals and Mining (Compensation and Resettlement) Regulations, 2012 (L.I. 2175)** - The Minerals and Mining (Compensation and Resettlement) Regulations list the requirements for compensation and resettlement for any land affected by minerals and mining operations in Ghana. A person whose interest in land is affected by the grant of a mineral right may submit in writing a claim for compensation to the holder of this mineral right (reg. 1). Compensation needs to consider impact on crops, deprivation of land, commercial structures which affect business and immovable property (reg. 3).

- d. **Regarding resettlement, the holder of a mining lease must conduct extensive research (reg. 8)** in order to be able to prepare a comprehensive resettlement plan. They themselves must resettle displaced persons on suitable alternative land, bearing in mind the economic well-being and socio-cultural values, with the objective of improving livelihoods (reg. 6). The Regulation stipulates that fair and adequate compensation must be paid before mining activities begin and outlines the process for valuation, negotiation, and dispute resolution. This legal framework is essential in minimising social conflict, ensuring justice for affected communities, and upholding human rights in resource development.
- e. **Minerals and Mining (Licensing) Regulations, 2012 (L.I. 2176)** - This instrument sets out the procedures for the application, renewal, and transfer of mineral rights such as reconnaissance, prospecting, and mining licenses. It streamlines the licensing process and provides clear timelines, documentation requirements, and decision-making procedures. It also enables transparency and predictability in the acquisition and management of mineral rights, which is crucial for investor confidence and accountability in resource governance.
- f. **Minerals and Mining (Explosives) Regulations, 2012 (L.I. 2177)** - This regulation governs the importation, storage, transportation, use, and disposal of explosives in the mining industry. Given the hazardous nature of explosives, the regulation imposes stringent safety standards, licensing requirements, and supervision protocols. It also mandates training for personnel and regular inspections. The goal is to minimise accidents, environmental damage, and misuse of explosives, thereby protecting workers, communities, and national security.
- g. **Minerals and Mining (Health, Safety and Technical) Regulations, 2012 (L.I. 2182)** - L.I. 2182 sets out detailed requirements on health, safety, and technical operations in the mining industry. It covers issues such as underground safety, ventilation, shaft maintenance, machinery standards, personal protective equipment, and occupational health. It also mandates safety audits and the appointment of safety officers. This regulation ensures the protection of workers, promotes operational efficiency, and aligns Ghana's mining practices with international safety standards.
- h. **Minerals and Mining (Ground Rent) Regulations, 2018 (L.I. 2357)** - This regulation provides guidelines on the payment of ground rent by mineral right holders to landowners or the state. Ground rent is an important aspect of benefit-sharing and serves as compensation for the occupation and use of land. The regulation clarifies who is eligible to receive rent, how it is calculated, and payment timelines. It aims to reduce disputes and promote harmony between mining companies and landholding communities.
- i. **Minerals and Mining (Mineral Operations – Tracking of Earth Moving and Mining Equipment) Regulations, 2020 (L.I. 2404)** - L.I. 2404 introduces a requirement for mining companies to install tracking systems on earth-

moving and mining equipment, such as excavators, bulldozers, and haul trucks. This is a response to the growing menace of illegal mining (galamsey) and the unauthorised use of heavy machinery in unregulated operations. The regulation enhances surveillance, accountability, and enforcement by enabling real-time tracking of equipment, thus supporting national efforts to combat environmental degradation.

- j. **Minerals and Mining (Local Content and Local Participation) Regulations, 2020 (L.I. 2431)** - This regulation seeks to increase Ghanaian participation in the mining sector, both in terms of employment and procurement. It mandates mining companies to submit local content plans, hire Ghanaians in specific roles, and procure goods and services from local suppliers. It also sets quotas for local ownership and participation in supply chains. The regulation is part of a broader policy to retain more value from mining within the Ghanaian economy and build local capacity.
- k. **Income Tax (Minerals Income Investment Fund Exemptions) Regulations, 2020 (L.I. 2433)** - This regulation provides tax exemptions for contributions to the Minerals Income Investment Fund (MIIF). It clarifies the income streams that qualify for exemption, such as capital gains and interest derived from MIIF investments. The purpose is to strengthen MIIF's financial position and incentivise contributions that will, in turn, be invested in long-term national development projects. It forms part of the broader strategy to transform mineral revenues into enduring wealth.

11. Mining-Related Legislation and Institutional Frameworks



Ghana's mining industry is regulated through a range of statutes that extend beyond the *Minerals and Mining Act, 2006 (Act 703)*. Several related enactments and subsidiary instruments establish the environmental, forestry, and water governance structures that interact with mineral development. Together, they define the institutional environment in which mineral exploration, extraction, and rehabilitation occur. The main instruments include the *Environmental Protection Agency Act, 1994 (Act 490)* and its accompanying *Environmental Assessment Regulations, 1999 (L.I. 1652)*; the *Forestry Commission Act, 1999 (Act 571)*; the *Water Resources Commission Act, 1996 (Act 522)*; and the *Environmental Protection (Mining in Forest Reserves) Regulations, 2022 (L.I. 2462)*. Each of these statutes creates an agency with distinct responsibilities but interlinked mandates relating to mining.

a. Environmental Protection Agency Act, 1994 (Act 490)

The *Environmental Protection Agency Act* established the Environmental Protection Agency (EPA) as the principal state authority for the protection and management of Ghana's environment. The Agency operates under the Ministry of Environment, Science, Technology and Innovation. Its functions include the coordination of policies related to the environment, the preparation of environmental action plans, the regulation of industrial discharges, and the enforcement of environmental standards.

Under the Act, any person undertaking an activity likely to have significant environmental effects must obtain a permit from the Agency. The EPA therefore serves as the gatekeeper for mining projects, ensuring that environmental impact assessments (EIAs) are conducted before operations commence.

The Agency also monitors compliance with environmental conditions, requires the submission of periodic reports, and may suspend or revoke permits where necessary. Through these powers, the EPA integrates environmental considerations into mineral development and provides the framework for continuous environmental oversight.

b. Environmental Assessment Regulations, 1999 (L.I. 1652)

The *Environmental Assessment Regulations* made under Act 490 detail the procedures for environmental permitting. Mining projects fall within undertakings that automatically require an environmental impact assessment. The process begins with a screening report submitted by the proponent, followed by scoping to determine the issues to be examined. The proponent then prepares an environmental impact statement (EIS) which is subject to public disclosure and review.

After the review process, the EPA issues an environmental permit that allows the project to proceed, subject to compliance with specified mitigation and monitoring measures. The Regulations also provide for the preparation of Environmental Management Plans (EMPs) and Annual Environmental Reports to demonstrate continuing compliance. These instruments have become a central part of the approval process for mining and related infrastructure, ensuring that potential effects on land, water, air quality, and biodiversity are assessed before operations begin.

c. Environmental Protection (Mining in Forest Reserves) Regulations, 2022 (L.I. 2462)

These Regulations, issued under Act 490, specifically govern the conduct of mining within Ghana's forest reserves. They set out the conditions under which prospecting or mining may take place, the procedures for applying for consent, and the environmental obligations of operators. Under the Regulations, no person may undertake reconnaissance, prospecting, or mining in a forest reserve without the written approval of the Minister responsible for Lands and Natural Resources, acting on the recommendation of the Forestry Commission and the EPA.

L.I. 2462 prescribes requirements relating to buffer zones, reclamation, and biodiversity management plans. It also establishes offences and penalties for unauthorised activities in forest reserves. The Regulations aim to balance mineral development with forest conservation by providing a clear process for evaluating and managing mining proposals within protected areas.

d. Forestry Commission Act, 1999 (Act 571)

The *Forestry Commission Act* established the Forestry Commission as a corporate body responsible for the regulation and management of Ghana's forest and wildlife resources.

The Commission consolidates the functions of the former Forest Department, Wildlife Department, and the Timber Export Development Board. Its duties include the protection, development, and sustainable management of forest reserves, national parks, and wildlife sanctuaries, as well as the issuance of permits for timber and forest produce. Mining activities that occur within forest reserves or areas adjacent to them therefore fall under the supervision of the Forestry Commission.

The Commission advises the Minister responsible for Lands and Natural Resources on whether to grant consent for mining in forest areas and monitors restoration after mining operations cease. Through this mandate, it acts as a custodian of forest ecosystems affected by mineral exploitation.

e. Water Resources Commission Act, 1996 (Act 522)

The *Water Resources Commission Act* created the Water Resources Commission (WRC) as the institution responsible for the regulation and management of Ghana's water resources. The Commission's powers cover both surface and groundwater. It issues water use permits for activities involving abstraction, damming, or diversion, including those connected to mining operations.

Mining companies must obtain WRC approval before using water for ore processing, washing, or cooling. The Commission also establishes water use regulations, develops river basin management plans, and monitors water quality to prevent pollution. It operates through catchment-based secretariats that work with the EPA and other agencies to ensure the sustainable use of water in mining areas. The Act recognises water as a finite national resource that must be managed in the public interest.

f. Institutional Interaction and Coordination

The statutory frameworks described above create an interdependent system of institutions. The Minerals Commission administers mineral rights under the *Minerals and Mining Act*; the EPA regulates environmental impacts; the Forestry Commission manages forest reserves; and the Water Resources Commission controls water use and quality. These institutions are required to exchange information, provide technical advice, and participate jointly in the permitting process for mining operations.

In practice, a mining project in Ghana requires several approvals: a mining lease from the Minerals Commission, an environmental permit from the EPA, water use authorisation from the WRC, and in cases involving forest reserves, ministerial consent upon the recommendation of the Forestry Commission. Each institution maintains its own monitoring arrangements, reporting requirements, and compliance obligations. The combined effect is a multilayered regulatory environment.

12. The “GoldBod”: Between Innovation and Discontents



The passage of the Ghana Gold Board Act, 2025 (Act 1140) represents one of the most ambitious institutional reforms in Ghana’s mining sector since the liberalisation era of the 1980s. Enacted to replace the Precious Minerals Marketing Corporation (PMMC), the new Ghana Gold Board is presented as a modern, technocratic intervention designed to formalise gold trade, enhance traceability, and curb the growing menace of illegal mining and smuggling.

In principle, the Act signals an attempt by the State to reclaim control over gold flows and restore confidence in Ghana’s mineral marketing architecture. Its emphasis on digital traceability systems, due diligence standards, and structured oversight over artisanal and small-scale mining (ASM) appears to reflect a progressive policy shift towards transparency, accountability, and alignment with international responsible sourcing norms.

Yet, beneath this veneer of innovation lies a complex web of institutional contradictions and unresolved structural weaknesses. The Gold Board Act is not a radical break from past failures; but more accurately, a continuation of the same historical tendency to equate legality with legitimacy, and formal compliance with justice. The State’s fixation on legality, through licensing, certification, and enforcement, risks obscuring deeper questions of legitimacy that relate to fairness, environmental responsibility, and the equitable distribution of benefits within the gold economy.

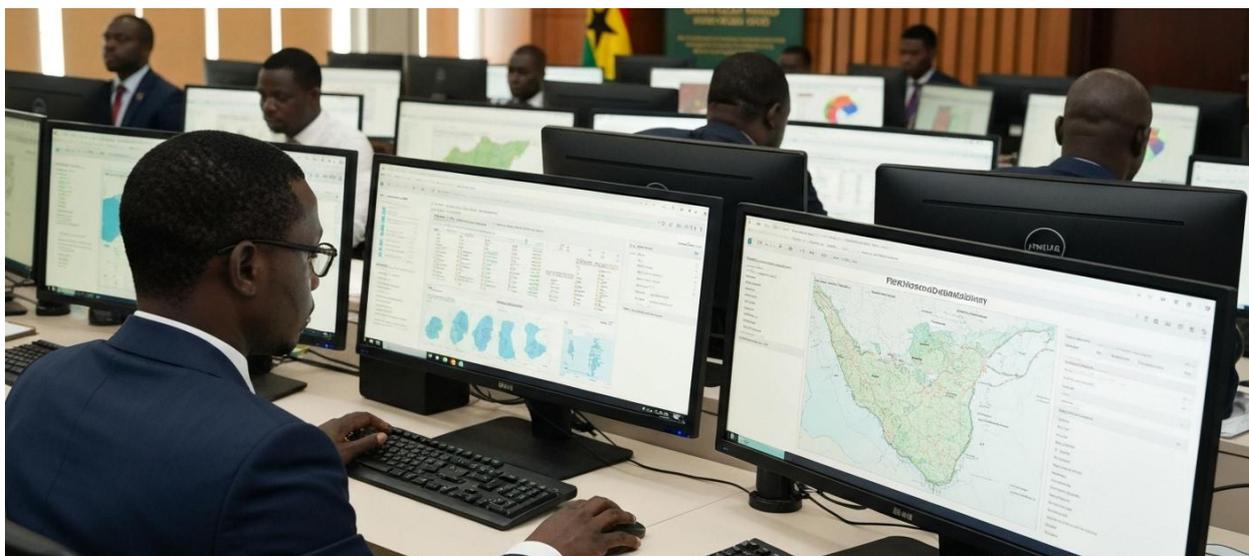
In a context where the distinction between legal and illegal gold is often blurred, formal institutions can inadvertently legitimise illicit practices, producing what may be termed a “veneer of legality.” Under this framework, gold extracted through ecologically destructive or socially exploitative methods may nonetheless be rendered “lawful” once it passes through certified export channels, thereby

reproducing the same moral and ecological contradictions that have long haunted Ghana's resource governance.

The Gold Board Act thus sits uneasily between *innovation and its discontents*. While it promises a new era of efficiency and oversight, its underlying institutional design raises old questions about concentration of power, market competition, and the uneven treatment of actors within the mining sector. The Act's focus on regulating and sanitising small-scale mining appears to sidestep the complicity of larger corporations, licensed dealers, and politically connected exporters in perpetuating illegal gold trade. By centring enforcement on the most vulnerable actors in the value chain, the law risks reproducing the same asymmetries that have historically marginalised artisanal miners and obscured elite capture at the upper echelons of the industry.

This paper critically examines the Gold Board Act through the twin lenses of innovation and legitimacy. It situates the Act within the wider institutional history of Ghana's mineral governance, interrogating how it seeks to reconfigure the relationship between legality, responsibility, and economic power in the gold sector. The analysis argues that while the Act embodies important innovations in regulatory design and digital traceability, it ultimately fails to resolve the fundamental governance dilemma of distinguishing lawful gold from legitimate gold. By reproducing the logic of centralisation and selective enforcement, the Act risks entrenching rather than transforming Ghana's gold economy. The discussion proceeds to explore the law's institutional architecture, its market implications, and the broader political economy of gold regulation, before advancing proposals for a more legitimacy-centred and developmental approach to mineral governance.

a. The Promise of Innovation: Design and Institutional Architecture



The Ghana Gold Board Act, 2025 (Act 1140) is conceived as a flagship reform to restore credibility and control to Ghana's gold value chain. Its preamble presents an ambitious vision: to regulate, monitor, and promote trade in gold, to curb smuggling and illicit sales, and to ensure the traceability and integrity of all gold exported from Ghana. At its core, the Act replaces the Precious Minerals Marketing Corporation (PMMC), a parastatal long criticised for inefficiency, delayed payments, and weak market competitiveness, with a new institutional structure, the Ghana Gold Board (GGB). The Board is envisaged as a technically competent and commercially responsive entity that can bridge the longstanding gap between regulation and market efficiency.

Structurally, the GGB is granted extensive powers that blend regulatory and commercial functions. It is mandated to issue export licences, supervise gold assaying and valuation, regulate buying agents, oversee the export of refined and unrefined gold, and ensure compliance with traceability and due diligence standards. These provisions mark a shift from the purely transactional role of the PMMC towards a more integrated oversight function that extends across the gold supply chain.

The Board's statutory objectives also include supporting the formalisation of artisanal and small-scale mining operations, promoting responsible sourcing practices, and establishing a robust digital gold traceability system. In principle, these innovations signal a modern, technology-driven approach to mineral governance that aligns with global best practices such as the OECD Due Diligence Guidance for Responsible Supply Chains and the London Bullion Market Association (LBMA) standards.

A major innovation under the Act lies in its commitment to traceability and transparency. The introduction of digital gold tracking systems, combined with mandatory assaying and certification procedures, seeks to close the loopholes that have historically enabled illegal gold to enter formal markets. Through these measures, the Act aims to create an end-to-end digital trail that captures the origin, movement, and export of gold, thereby curbing smuggling and money laundering.

This represents a departure from Ghana's previous reliance on manual record-keeping and discretionary reporting, which were vulnerable to manipulation and underreporting. In theory, such digital systems should enhance the credibility of Ghana's gold exports and improve compliance with international anti-money laundering frameworks.

The Act also aspires to foster greater efficiency in gold marketing. By consolidating multiple gold marketing functions under one statutory entity, it seeks to remove redundancies and streamline the permitting and export processes. This is complemented by the Board's power to establish subsidiaries and enter joint ventures, a provision that signals a more entrepreneurial orientation. The GGB is,

on paper, designed to be more agile than its predecessor, with the flexibility to partner with private entities, attract investment, and respond swiftly to market dynamics. This corporate-commercial hybrid model is presented as an institutional innovation aimed at reconciling public accountability with market competitiveness.

Governance provisions under the Act also attempt to introduce safeguards for professional management and oversight. The GGB is administered by a governing board comprising representatives from the Ministry of Lands and Natural Resources, the Bank of Ghana, the Minerals Commission, and the Ghana Revenue Authority, alongside industry experts.

This multi-stakeholder composition appears to promote inclusivity and coordination across key agencies involved in gold regulation and fiscal policy. It reflects an awareness of the need for inter-agency coherence, a chronic weakness in Ghana's mining sector governance. The inclusion of private sector and technical expertise on the board suggests an effort to balance bureaucratic oversight with industry knowledge, potentially enhancing institutional responsiveness and technical depth.

Beyond structure and oversight, the Act's policy intent resonates with the language of reform and renewal. By asserting control over the gold trade, the state seeks to restore fiscal integrity, secure foreign exchange earnings, and curb the smuggling networks that have drained national revenue for decades.

The creation of the GGB thus embodies the state's aspiration to transition from a reactive, fragmented approach to a system of integrated gold governance. It also reflects Ghana's ambition to align with emerging global discourses on ethical minerals, responsible supply chains, and sustainable resource governance. In its design, the Act gestures toward a vision of a transparent, technology-enabled, and accountable gold economy, one in which both the state and local actors benefit from the nation's mineral wealth.

However, even within this architecture of innovation, there are early signs of institutional tension. The dual role of the Gold Board as both regulator and participant in the gold trade introduces potential conflicts of interest that mirror the very inefficiencies that plagued the PMMC. The promise of integration and efficiency risks collapsing into administrative overlap and market concentration if not carefully managed.

Similarly, while the Board's mandate to formalise the small-scale mining sector is laudable, its institutional focus appears to privilege surveillance and control over empowerment and capacity-building. These contradictions foreshadow the deeper discontents explored in the next section, where the question is not whether the Gold Board is legal or functional, but whether it is legitimate, just, and transformative in the broader context of Ghana's gold economy.

b. The Discontents: Legality, Legitimacy, and the Politics of Gold



Beneath the technical sophistication and institutional promise of the Ghana Gold Board Act, 2025 (Act 1140) lies a deeper conceptual dilemma that speaks to the heart of Ghana's mineral governance crisis: the conflation of legality with legitimacy. The Act projects a vision of order through legal compliance, certification, and traceability. It assumes that once gold passes through formal state-sanctioned mechanisms, whether by licensing, export documentation, or digital tracking, it automatically becomes "responsible" and "lawful." Yet, this approach ignores the moral, ecological, and distributive questions that determine whether an activity is socially legitimate. In doing so, it risks institutionalising a *vener of legality*, a system in which the appearance of compliance substitutes for genuine accountability and ethical governance.

This veneer is sustained by the Gold Board's emphasis on *formalisation through control*. The Act treats legality as a technical condition to be met through registration, documentation, and digital traceability rather than as a component of a broader social compact between the state, miners, and affected communities. However, legality in a context of deep structural inequality and environmental degradation does not necessarily equate to justice.

A mining operation may comply with every procedural requirement under the law and still devastate local ecosystems, exploit labour, or dispossess communities. Conversely, many small-scale miners who operate outside the formal regime do so not out of criminal intent, but as a rational response to systemic exclusion from capital, technology, and licensing opportunities. The failure to recognise this distinction between legal compliance and moral legitimacy renders the Gold Board's regulatory vision fundamentally narrow.

The inability to distinguish between legal and illegal gold is not simply a matter of administrative weakness; it is a structural feature of Ghana's gold economy. In practice, much of the gold exported from Ghana is an indistinguishable blend of output from licensed operations and informally sourced ore that enters the legal supply chain through intermediaries and aggregators. The Gold Board's traceability provisions rely on declarations and documentation issued by licensed dealers; yet, these mechanisms are easily manipulated. Once illicit gold is declared, assayed, and certified, it assumes a legal identity indistinguishable from gold mined responsibly. The Board's systems, therefore, may succeed in tracing gold through paper or digital records, but not in verifying the legitimacy of its origin. What emerges is a paradoxical regime where illegality is not eliminated but laundered through the state's own instruments of legality.

This problem reflects a deeper institutional blindness in the architecture of the Act. The law assumes that illegality resides solely at the margins, among small-scale miners, informal traders, and unlicensed operators, while ignoring the complicity of larger, better-connected actors within the formal system. Licensed exporters, refineries, and concession holders often act as conduits for laundering gold sourced from illegal operations. Yet, the enforcement gaze of the Gold Board is primarily directed downward, towards the most visible and vulnerable actors in the supply chain. By disproportionately targeting the artisanal and small-scale mining sector, the Act reproduces a long-standing policy bias that criminalises poverty, while absolving elite participation in the illegal gold economy.

This selective enforcement also carries political undertones. The politics of gold in Ghana have long been shaped by the interplay between state control, patronage, and rent-seeking. By placing the Gold Board under ministerial oversight, Act 1140 reinforces the centralisation of discretionary authority that has historically compromised regulatory independence. The Board's decisions on licensing, export approvals, and traceability compliance can easily become entangled with political interests. In such a context, legality becomes contingent not on objective compliance but on proximity to power. The resulting system is one in which the state both polices and participates in the market, blurring the line between regulation and rent extraction.

Moreover, the moral and environmental implications of the Gold Board's approach raise questions about the legitimacy of state authority in the mining sector. Legitimacy cannot be derived from law alone; it must emerge from fairness, accountability, and the perceived integrity of institutions. When local communities see "legal" mining operations destroying forests, polluting rivers, or displacing farmers without adequate compensation, the distinction between legal and illegal loses meaning. The law, in such instances, becomes complicit in perpetuating injustice under the guise of order. The Gold Board's heavy reliance on compliance metrics, licences issued, exports tracked, and gold certified, obscures the

substantive outcomes of governance: ecological balance, livelihood security, and distributive justice.

The discontents of the Gold Board Act, therefore, lie not only in its implementation, but in its conceptual design. By privileging legality over legitimacy, it risks legitimising irresponsibility and embedding moral hazard within the very structure of gold governance. The deeper tragedy is that the law may succeed in formalising the illegal without transforming the unjust. In the absence of robust mechanisms to verify ethical sourcing, ensure community participation, and balance regulatory enforcement with developmental support, the Gold Board could become yet another institutional innovation that sustains, rather than disrupts Ghana's historical mining paradox, where legality thrives even as justice withers.

c. Institutional and Market Contradictions

The Ghana Gold Board Act, 2025 is presented as a reformist measure aimed at harmonising gold regulation and marketing, yet its institutional design reveals a series of contradictions that blur the lines between regulator, market actor, and political instrument. The most fundamental of these contradictions lies in the Board's dual identity: it is simultaneously charged with regulating the gold trade and actively participating in it. This duality creates structural tension between the imperatives of market competition and the logic of state control; a tension that is neither resolved nor adequately managed within the framework of the Act.

The Gold Board's statutory powers encompass both regulatory and commercial functions. It is empowered to issue export licences, monitor compliance, and enforce standards across the gold value chain, while at the same time engaging in gold purchasing, refining, marketing, and export activities through subsidiaries or joint ventures. In essence, the same institution that sets the rules of the market is also a direct participant within it. From the perspective of competition law and market fairness, this arrangement undermines the principle of a level playing field. It grants the Gold Board privileged access to market information and regulatory discretion; advantages that no private trader can rival. The result is a quasi-monopolistic structure where the state acts as both referee and competitor, compromising transparency and deterring private investment.

This institutional hybridity reproduces the market distortions that the Act purportedly seeks to correct. One of the key failures of the former PMMC was its inability to compete effectively with private and informal gold traders, whose agility and pricing flexibility made them more attractive to small-scale miners. The Gold Board inherits the same commercial mandate, but without resolving the underlying tension between market competition and state intervention. The danger is that the new institution, under the banner of reform, may merely replicate the inefficiencies of the PMMC while expanding its regulatory authority. In effect, the Act risks

replacing an obsolete monopoly with a more sophisticated one; a “monopoly with algorithms”, legitimised by the rhetoric of digital traceability and responsible sourcing.

Beyond its market role, the Gold Board’s creation adds yet another layer to Ghana’s already fragmented institutional landscape. The Act does not clearly define its relationship with existing regulatory and fiscal bodies such as the Minerals Commission, the Bank of Ghana, and the Ghana Revenue Authority. Each of these institutions has pre-existing mandates that overlap with aspects of gold regulation. The Minerals Commission issues mineral rights and monitors compliance; the Bank of Ghana regulates export receipts and repatriation of foreign exchange; and the Ghana Revenue Authority oversees taxation and customs. The introduction of the Gold Board, with powers that intersect all three, risks deepening bureaucratic overlap and administrative friction.

Instead of consolidating coherence, the Act may further fragment authority across an already crowded regulatory field. This pattern of institutional layering, creating new agencies without dismantling or clarifying the mandates of old ones, reflects a chronic pathology in Ghana’s governance reforms: an obsession with innovation that multiplies bureaucracy rather than rationalises it.

The problem is not simply one of overlapping jurisdictions but of regulatory hierarchy and accountability. The Gold Board is placed under the supervision of the Minister for Lands and Natural Resources, who also oversees the Minerals Commission and influences the policy direction of the EPA. This arrangement concentrates power within a single political office while creating multiple semi-autonomous agencies with intersecting responsibilities.

The resulting system is one of administrative dependence disguised as institutional pluralism. In practice, the Minister retains the capacity to influence both policy and enforcement, perpetuating the same executive dominance that has historically undermined regulatory independence in the mining sector.

Another contradiction lies in the Act’s market orientation and distributive logic. The Gold Board’s stated purpose is to ensure fair and transparent marketing of gold, yet its operational focus is directed primarily at the ASM sector. It is this segment of the market that is subject to the Board’s traceability systems, export monitoring, and licensing oversight. Large-scale mining companies and established gold refineries, which already dominate Ghana’s formal gold exports, are largely exempted from the same level of scrutiny.

This asymmetry creates an uneven regulatory landscape where the most economically powerful actors operate with minimal interference, while small-scale miners face heightened surveillance and compliance costs. The policy emphasis on

disciplining the ASM sector thus functions as a symbolic gesture of enforcement that leaves systemic inequities in the gold market untouched.

From a developmental perspective, this selective focus exposes the class and political economy biases embedded in Ghana's mining legislation. The Gold Board's interventions are framed as measures to sanitise the ASM sector; yet, they do little to challenge the market concentration and capital dominance that shape the broader gold economy.

The law targets the visible, fragmented, and politically weak actors while neglecting the opaque networks of financiers, exporters, and refineries that mediate both legal and illegal gold flows. This reproduces a regulatory culture that criminalises informality while insulating elite networks from meaningful accountability. The danger is that the Gold Board's institutional power will be used to legitimise exclusion rather than to create a more equitable and developmental mining order.

These contradictions raise deeper questions about the philosophy of reform that underpins Act 1140. By centralising authority, expanding state participation in the market, and entrenching selective enforcement, the law continues Ghana's long-standing pattern of technocratic reforms that address symptoms rather than structures. The creation of a new institution is celebrated as evidence of progress, even as the fundamental problems of coordination, competition, and distributive justice remain unresolved. The innovation, therefore, lies not in the reconfiguration of power but in its rebranding; a continuation of old logics under the guise of new governance.

In the end, the Gold Board Act exposes the tension between state innovation and institutional inertia. It represents a government seeking legitimacy through legal reform, but unable or unwilling to dismantle the power asymmetries that sustain illegality and inequality in the gold sector. The next section turns to this paradox more directly by examining how the Board's focus on small-scale miners reproduces exclusion rather than integration, and how Ghana's gold governance remains caught between formalisation and marginalisation.

d. Between Formalisation and Exclusion: The ASM Paradox

The Ghana Gold Board Act positions itself as a key instrument for the formalisation of ASM; a sector long viewed by policymakers as the epicentre of illegality, environmental degradation, and lost state revenue. In the official narrative, the Act represents a decisive state intervention to bring discipline, transparency, and accountability to small-scale gold production through traceability systems, export certification, and digital monitoring.

Yet, a closer examination reveals that the law's design and implementation reproduce a deeper paradox: the pursuit of formalisation becomes a vehicle for exclusion. By framing the ASM sector primarily as a problem to be controlled rather than as a livelihood system to be developed, the Act perpetuates a regulatory order that polices the poor while leaving the structures of elite accumulation intact.

The Gold Board's approach to formalisation is rooted in an administrative logic that privileges surveillance over support. Its traceability framework focuses on documentation, registration, and data capture rather than on the social and economic conditions that sustain informality. Miners are required to register, sell only to licensed buyers, and comply with environmental and safety standards, yet the institutional mechanisms to enable such compliance are weak or absent.

Access to credit, modern technology, and technical assistance as conditions essential for the transition from informal to formal operations, remain beyond the reach of most small-scale miners. As a result, the law imposes obligations without providing capacity, turning compliance into an economic burden. Those unable to meet the high cost of formalisation are rendered illegal by default, reinforcing the divide between "good miners" who can afford to be compliant and "bad miners" who cannot.

This exclusionary dynamic mirrors the long-standing asymmetry in Ghana's mining economy. Small-scale mining sustains hundreds of thousands of livelihoods across rural Ghana, often in regions where alternative economic opportunities are scarce. Yet, it is persistently framed within policy discourse as a threat to national development rather than as a legitimate component of it.

The Gold Board Act, while rhetorically affirming the importance of ASM, operationalises this ambivalence through restrictive compliance mechanisms that criminalise survivalist mining. The state's response to the ASM economy remains disciplinary rather than developmental, characterised by raids, confiscations, and bureaucratic hurdles rather than capacity-building, cooperative models, or market access support. In this sense, the Gold Board functions less as a facilitator of inclusion and more as an extension of the state's coercive apparatus in the gold economy.

Moreover, the Act's selective focus on the ASM sector masks the broader political economy of illegality. By concentrating regulatory enforcement on artisanal miners, the law deflects attention from the larger, systemic networks that sustain illegal gold flows; networks that often involve licensed dealers, politically connected intermediaries, and export houses.

The Gold Board's traceability systems, while presented as tools of transparency, are most stringently applied to small-scale miners, while large-scale and corporate operators remain largely exempt from comparable scrutiny. This selective

enforcement reinforces the perception that legality is contingent on scale and status, not on conduct. It criminalises the visible poor while rendering invisible the illicit practices of the powerful.

The Board's market design also reproduces structural inequalities in access and pricing. By granting itself and its subsidiaries significant authority over gold purchasing and export certification, the Gold Board effectively centralises the marketing of ASM gold. This consolidation limits the bargaining power of small-scale miners, who are compelled to sell within officially sanctioned channels at prices determined by state or quasi-state institutions. In an economy where gold price fluctuations directly affect livelihoods, such centralisation risks replacing the exploitative middleman with an equally unaccountable bureaucracy. The promise of fair pricing and transparency thus becomes elusive, as miners continue to operate at the margins of a market structured to favour institutional actors and politically connected traders.

At the normative level, the formalisation agenda of the Gold Board Act reflects a deeper misunderstanding of informality itself. Informality is not merely a state of legal non-compliance but a rational response to structural exclusion. For many miners, entering the formal economy entails costs, licensing fees, taxes, and environmental obligations, that far outweigh the benefits, especially when state support and enforcement are unreliable.

A genuine formalisation policy would therefore require rethinking the relationship between the state and small-scale miners, moving from coercion to collaboration. This would mean designing participatory models of governance in which miners, local communities, and civil society organisations have a voice in policy implementation, environmental management, and market regulation.

By failing to embed such participatory structures, the Gold Board Act risks reinforcing the social marginalisation of the ASM sector. It creates an appearance of order without addressing the historical injustices that have long excluded artisanal miners from equitable participation in Ghana's mineral wealth. The language of "sanitisation" and "traceability" thus functions as a new form of state rationality; one that legitimises control while masking structural inequality. In this sense, the Act embodies the paradox of formalisation without empowerment, legality without legitimacy, and regulation without justice.

In the broader context of Ghana's mining governance, the Gold Board's approach to small-scale mining reveals the persistence of what may be termed extractive paternalism: a belief that the state must discipline and correct the behaviour of miners rather than partner with them in creating a fair and sustainable gold economy. This paternalism not only undermines social trust but also erodes the very legitimacy that the Act seeks to build. By continuing to view small-scale miners as subjects of regulation rather than as stakeholders in development, the state

reproduces the same patterns of dependency, exclusion, and environmental degradation that previous reforms failed to resolve.

Ultimately, the Gold Board Act's attempt to formalise the ASM sector reflects both an innovation in form and a stagnation in substance. It introduces new technologies and bureaucratic processes but remains captive to old logics of control, centralisation, and exclusion. The paradox of formalisation lies in its double effect: it promises integration while producing marginalisation, and it seeks order while deepening inequality.

Unless the state redefines its relationship with small-scale miners, anchoring governance in inclusion, legitimacy, and justice; the Gold Board will stand not as a transformative innovation but as a sophisticated continuation of Ghana's long history of regulatory paralysis dressed in the language of reform.

e. The Paradox of Legitimation. Artisanal Mining Between Necessity and Illegitimacy

The most revealing contradiction in the Act 1140 lies in the government's evolving relationship with ASM. Once denounced as a national crisis that polluted rivers, destroyed forests, and symbolised lawlessness, ASM has now been rebranded as "critical" to the economy. This rhetorical reversal marks not a change of conviction but a shift of necessity. Having failed to eliminate the practice through enforcement, and facing mounting economic pressures, the state has found itself tethered to the very activity it still condemns half-heartedly. The Gold Board's creation therefore reflects a deeper institutional accommodation: a reluctant legitimisation of ASM not out of belief in its virtue, but out of dependence on its output.

The legitimisation of ASM under the Gold Board Act is not primarily normative but "pragmatic" - not to be confused with rational. With the closure of the PMMC and the consolidation of state control over gold marketing, ASM has become the principal source of gold flowing into the Gold Board's value chain. Official data indicate that approximately 52 percent of the gold purchased or exported under the Gold Board framework originates from ASM sites. This reality exposes a fundamental truth: Ghana's gold economy is now structurally reliant on the very informal sector it claims to reform. In practice, the state's gold marketing infrastructure cannot survive without ASM, even as its policy rhetoric positions small-scale miners as the problem rather than the foundation of the system.

This dependence is not incidental. Official data indicate that over 52 percent of the gold exported through the Gold Board originates from ASM operations. The state's gold marketing infrastructure, therefore, is now materially sustained by the same informal practices it set out to discipline. In effect, ASM has become the economic backbone of the formal gold trade, blurring the boundary between legality and

illegality. What the state once framed as environmental delinquency has become indispensable to its fiscal stability. The irony is striking: the Gold Board, created to sanitise gold trading, is now institutionally dependent on the very sector whose practices have rendered Ghana's water bodies toxic and its forest reserves endangered.

This dynamic has produced what may be described as a moral retreat masked as policy innovation. Confronted by the impossibility of eradicating ASM, the state has chosen to domesticate it, folding it into legality while downplaying the scale of its environmental devastation. The language of "critical" now substitutes for the language of "illegal." Yet this shift does not resolve the legitimacy crisis surrounding ASM; it only displaces it. The state's embrace of legality, through traceability systems, certification processes, and export documentation, creates a thin veneer of order over a practice that remains ecologically and socially destructive. The government's survival strategy, therefore, has become one of managing illegitimacy rather than transforming it.

The paradox runs deeper. The concept of ASM, and citizens participating in resource extraction rather than leaving it to foreign corporations, carries powerful *social legitimacy*. It resonates with historical demands for economic inclusion and national ownership. For many Ghanaians, small-scale mining represents a democratic claim to the nation's mineral wealth; a corrective to the postcolonial pattern of foreign domination in extractives.

In this sense, ASM as an idea embodies a legitimate aspiration: that Ghanaians, not multinationals, should benefit from Ghana's gold. The problem lies not in this aspiration, but in its practice. The methods through which ASM is conducted, river dredging, unregulated mercury use, deforestation, and land degradation, have stripped it of its moral and ecological legitimacy. The distinction between the legitimacy of *concept* and the illegitimacy of *practice* is precisely what the Gold Board Act fails to confront.

This dependence on ASM also exposes the fragility of state authority. The government's sudden reversal, from waging a moral crusade against *galamsey* to embracing ASM as "critical", signals not a triumph of reform, but a capitulation to political and economic realities. The state's regulatory posture has shifted from prohibition to preservation, not because ASM has become cleaner or more responsible, but because the state itself has become entangled in its survival.

The inability to enforce environmental compliance while relying on ASM for foreign exchange earnings and rural employment has trapped the government in a cycle of moral contradiction. It must defend the practice it cannot reform, legitimise the actors it cannot control, and sanitise an economy it cannot sustain. In this context, the Gold Board performs an act of institutional theatre. It offers the appearance of governance, issuing licences, certifying exports, and proclaiming traceability, while

masking the persistence of widespread illegality and environmental collapse. The state's claim to authority rests increasingly on the management of appearances rather than the transformation of realities.

It can scarcely name even five ASM concessions that are fully compliant with environmental and safety standards; yet, continues to export gold certified as legitimate. The paradox is that the more ASM destroys the environment, the more the state depends on its output to prove that its reforms are working.

The Gold Board thus embodies the contradictions of Ghana's current mining moment: a government clinging to legality for dear life while legitimacy slips away. What began as a campaign to rescue the environment has evolved into an exercise in institutional self-preservation. The law has become both shield and trap, shielding the state from the moral implications of its dependence, while trapping it in the same cycle of environmental harm, social injustice, and regulatory pretence that it sought to end.

f. Rethinking Legitimacy: Beyond Legal Formalism

The contradictions exposed by the Ghana Gold Board Act illuminate a broader malaise within Ghana's resource governance architecture: a deep-seated faith in legal formalism as a substitute for legitimacy. Successive mining laws and institutional reforms have proceeded from the assumption that governance failures can be corrected through the multiplication of statutes, permits, and compliance systems.

Yet this faith in legal instruments has produced diminishing returns. Legality, while necessary, has not been sufficient to command trust, produce justice, or protect the environment. The result is a system that performs law without embodying legitimacy; a legal order that regulates the appearance of compliance while concealing the persistence of injustice.

To move beyond this impasse requires a reorientation of Ghana's mining governance from a law-centred to a legitimacy-centred paradigm. Legitimacy, unlike legality, cannot be conferred solely by the state; it must be earned through fairness, accountability, and social consent. It demands not only that the law be obeyed, but that it be experienced as just. In the context of gold mining, legitimacy encompasses ecological stewardship, equitable participation, and the protection of community interests. It asks a more fundamental question than legality does: not simply *Is this mining operation authorised by law?*, but, *Is it fair, sustainable, and socially defensible?*

A legitimacy-based framework would require three major shifts in the philosophy and practice of mineral governance.

First, the basis of accountability must expand beyond procedural compliance to include *substantive justice*. Environmental licences, traceability systems, and export certifications should not merely verify paperwork, but should measure the real impacts of mining on water bodies, land use, and community welfare. This could be operationalised through the introduction of a “Legitimacy Index” a composite metric that integrates social, environmental, and governance indicators into the evaluation of mining operations. Mines that meet legal requirements but fail legitimacy tests on environmental integrity or community benefit would be subject to corrective measures or exclusion from certified supply chains.

Second, legitimacy requires inclusive governance. The Gold Board and other regulatory bodies should institutionalise mechanisms for community and civil society participation in decision-making, monitoring, and enforcement. Legitimacy grows when those most affected by mining, local communities, traditional authorities, women’s associations, and youth groups, can influence the rules that govern their environment and livelihoods.

This participatory approach would transform mining governance from a hierarchical system of control into a deliberative framework of shared responsibility. The introduction of community-based monitoring committees, supported by transparent data platforms, would make it possible for citizens to track compliance, report violations, and contribute to environmental oversight in real time.

Third, a legitimacy-based framework must redefine the relationship between the state and small-scale miners. Rather than treating ASM as a problem to be policed, the state must recognise it as a developmental constituency. This means designing policies that integrate small-scale miners into the formal economy through access to credit, technical training, and environmentally responsible technology. Cooperative models should be encouraged, where groups of miners operate within shared concessions under collective environmental and safety standards. The state’s role should shift from punitive enforcement to facilitative partnership, providing incentives for compliance rather than punishment for failure. By doing so, formalisation becomes a pathway to empowerment, not exclusion.

At the level of market governance, legitimacy also demands a new ethic of traceability. The current system privileges documentary legality, the possession of certificates, licences, and assay reports, without interrogating the social or environmental conditions under which the gold was produced. Ghana could pioneer a second-generation traceability regime that links documentation to field verification, community validation, and environmental audits.

Each certified batch of gold should carry a “social and ecological passport,” detailing not just its legal source but its legitimacy credentials: absence of mercury contamination, restoration of mined land, fair labour conditions, and community

development contributions. Such a model would align Ghana's gold governance with global movements toward ethical minerals and responsible supply chains, while restoring integrity to the notion of legality itself.

The broader implication is that legitimacy must become both the metric and the method of governance. A mining regime that aspires to sustainability cannot rely solely on the coercive power of law; it must cultivate moral authority and social trust. This requires transparency in contract negotiation, publication of beneficial ownership data, and accessible reporting on royalty disbursement and environmental compliance. Institutions like the Gold Board should be evaluated not by the volume of gold exported, but by the degree of ecological restoration achieved, livelihoods sustained, and conflicts prevented.

Ultimately, the shift from legality to legitimacy is not an abandonment of law but its redemption. It seeks to restore coherence between what is lawful and what is just, between state authority and social accountability.

The Gold Board Act, in its current form, represents an innovation in design but not in philosophy. Its promise will remain hollow until Ghana's mineral governance is grounded not merely in compliance, but in conscience, a system where the right to mine is inseparable from the duty to protect, and where legality serves legitimacy rather than replacing it.

g. Towards a Developmental Gold Regime

If Ghana's gold sector is to escape its cycle of regulatory paralysis and moral ambivalence, it must move beyond the current fixation with legality toward a developmental vision anchored in legitimacy, justice, and sustainability. The Ghana Gold Board Act, 2025 (Act 1140) presents a structural opportunity, but whether it becomes a transformative reform or yet another bureaucratic shell will depend on the philosophical direction the state chooses to pursue. The challenge is not merely to manage the gold economy more efficiently, but to reimagine it as a vehicle for national renewal: one that restores ecological integrity, redistributes value, and redefines citizenship in relation to natural wealth.

The starting point for this transformation is institutional coherence. The proliferation of agencies with overlapping mandates, the Gold Board, Minerals Commission, EPA, Forestry Commission, and Bank of Ghana, has produced fragmentation without accountability. A developmental regime would require the establishment of a Unified Minerals Governance Council (UMGC) to coordinate strategy, planning, and data integration across the sector. This Council should not replace existing institutions but harmonise their roles, eliminate duplication, and ensure a single transparent chain of accountability from licensing to export. Such coherence would strengthen oversight and end the institutional competition that has made regulation vulnerable to manipulation and delay.

Equally crucial is a reform of gold marketing and pricing to prevent the re-emergence of monopolistic structures under the Gold Board. The state should withdraw from direct commercial participation and instead position the Board as a *facilitator* of a competitive and transparent gold market. This can be achieved by licensing independent aggregators, mandating price transparency through a digital trading platform, and publishing real-time buying rates indexed to the London Bullion Market price. Rather than functioning as a monopolistic buyer, the Board should guarantee market integrity, setting standards, verifying compliance, and arbitrating disputes, while allowing fair competition to drive efficiency and innovation.

A developmental gold regime must also integrate the informal and formal economies in a way that turns formalisation into inclusion rather than punishment. This requires a comprehensive support system for small-scale miners: access to credit through a *Gold Development Fund*, technical assistance for mercury-free technologies, and structured training in safe and environmentally responsible practices. These interventions should be designed as collective infrastructure investments rather than individual handouts, delivered through community mining cooperatives that share equipment, training, and environmental responsibility. Over time, this cooperative model could transform ASM from a fragmented survivalist activity into a professionalised, socially legitimate, and environmentally sustainable sector.

At the moral core of this new regime should be a Gold Responsibility Compact (GRC), a national social contract between the state, mining companies, small-scale miners, communities, and civil society. The Compact would define shared ethical commitments: respect for ecological limits, fair labour conditions, gender inclusion, transparency in revenue management, and local benefit-sharing. Each participant in the gold value chain would be required to sign and uphold the Compact as a condition for licensing or certification. Public reporting on adherence to the Compact could be institutionalised through annual *Gold Responsibility Reports* audited by independent bodies and made available to citizens. This would convert legitimacy from an abstract principle into a measurable social expectation.

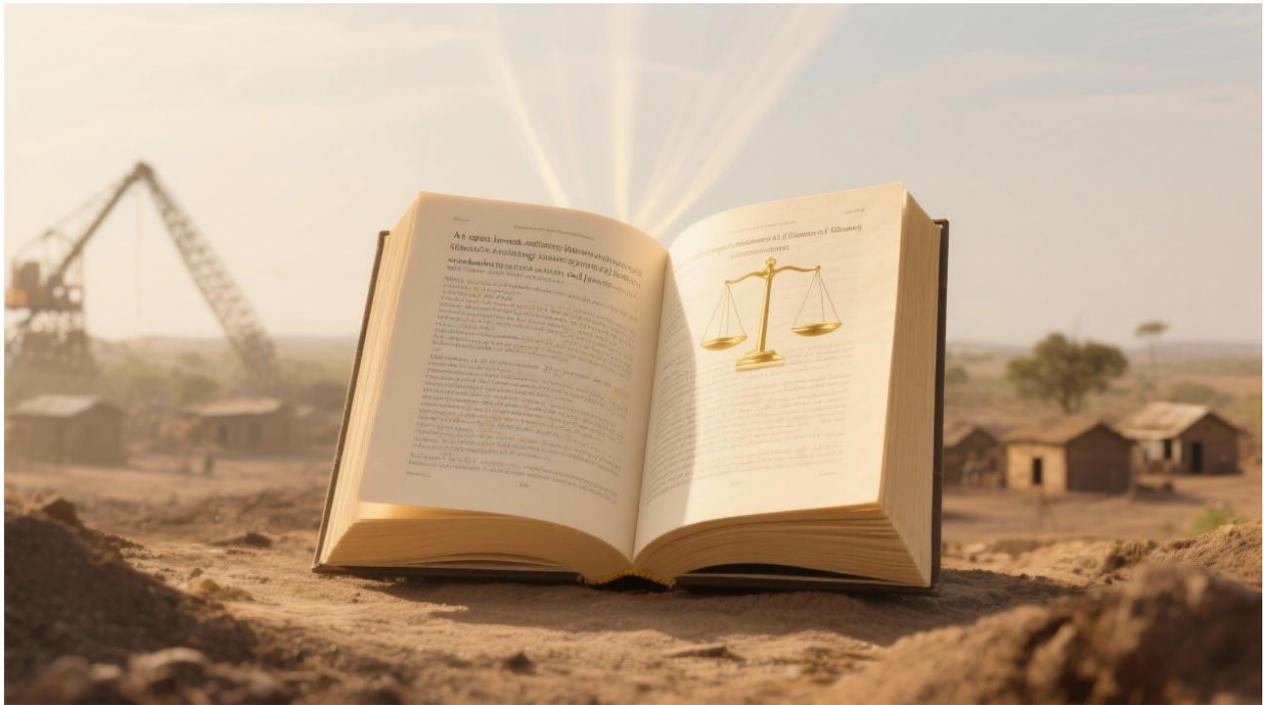
To operationalise legitimacy as a governance principle, Ghana could also pioneer a National Legitimacy Framework for Extractives (NLFE). This framework would set minimum benchmarks for transparency, community participation, environmental recovery, and equitable benefit-sharing across all mining activities. It would link compliance not only to domestic law but to international commitments on climate, biodiversity, and human rights. Mining entities that exceed baseline legitimacy standards could be rewarded with preferential access to credit, tax incentives, and international certification, while repeat violators would face restrictions or exclusion from export markets. In this way, legitimacy becomes both a moral and economic asset.

The state's role, in such a system, must evolve from command-and-control to partnership and stewardship. Instead of governing through coercion and crisis management, the state should enable a self-regulating ecosystem of responsibility, where citizens, markets, and communities co-produce governance. This would require cultivating civic trust through transparency. All data on gold production, export, and royalty distribution should be published in open formats accessible to citizens and journalists. The secrecy that currently shrouds mining contracts and export figures must give way to a culture of radical openness. Legitimacy grows where information flows freely.

Finally, the moral horizon of reform must confront the ecological devastation that underpins Ghana's current gold economy. Environmental recovery should no longer be treated as an afterthought to extraction. The state must adopt a Restoration First Policy, requiring mining revenues to be reinvested in reforestation, river remediation, and the rehabilitation of degraded lands before they are used to finance recurrent expenditure. This is not only a moral imperative but an economic one: the future of gold is inseparable from the survival of the environment that sustains it. The legitimacy of mining, therefore, will depend not on how much gold Ghana extracts, but on how much life it restores.

In the final analysis, a developmental gold regime is not defined by the efficiency of institutions but by the integrity of outcomes. The challenge before Ghana is not to legalise extraction, but to humanise it; not to multiply laws, but to rebuild trust. The Gold Board Act, in its current form, is an important institutional innovation, but its promise will remain unfulfilled unless it is guided by a new moral and political imagination, one that treats legitimacy as its foundation, rather than as a by-product. Only then can Ghana's gold economy evolve from a site of contradiction into a model of justice, stewardship, and shared prosperity.

13. Inferences and Implications



The Gold Board Act, 2025 (Act 1140) stands at the intersection of ambition and ambivalence; a reform that promises to modernise gold governance yet exposes the unresolved contradictions of Ghana’s extractive state. In form, the Act represents a decisive institutional innovation: a bid to centralise oversight, formalise artisanal mining, and restore credibility to gold trading. In substance, however, it illustrates the limits of governance by legality. By clinging to legal formalism as a substitute for moral and political legitimacy, the state risks institutionalising the very contradictions it set out to overcome. The Act thus embodies both the hope of reform and the fatigue of repetition; a technocratic response to a moral crisis.

Across Ghana’s mining history, legality has served as the grammar of control; legitimacy, by contrast, has been its missing vocabulary. The Gold Board Act reproduces this historical pattern. It codifies procedure but struggles to command faith. It regulates the trade in gold but leaves unaddressed the trade in trust. The state’s dependence on artisanal and small-scale mining, the same sector it once condemned, reflects both its economic vulnerability and its political accommodation.

The rebranding of ASM from “illegal” to “critical” symbolises a deeper transformation: the retreat of the state from moral authority to administrative survival. The Gold Board’s traceability and certification systems, while progressive on paper, risk transforming law into ritual and documentation into disguise; legalising what remains illegitimate in practice.

What emerges from this analysis is the imperative to restore legitimacy as the organising principle of mineral governance. Legitimacy demands more than compliance; it demands conscience. It asks not only that the law be enforced, but that it be just; not only that mining be legal, but that it be responsible. The future of Ghana's gold economy therefore lies not in the proliferation of new statutes or agencies, but in the cultivation of ethical institutions; institutions that derive their authority from fairness, transparency, and moral credibility rather than from coercion or convenience.

A developmental gold regime must thus rest on three pillars: coherence, inclusion, and restoration. Coherence will require an integrated institutional framework that eliminates duplication and restores accountability across the gold value chain. Inclusion will mean transforming small-scale mining from a tolerated necessity into a legitimate and empowered sector, anchored in cooperative enterprise, technological innovation, and environmental care. Restoration will demand that Ghana reimagine mining as an act of stewardship, that every ounce of gold extracted carries with it a measure of ecological renewal and social investment.

Ultimately, the question is not whether Ghana can regulate gold, but whether it can govern it justly. The measure of success will not be found in export volumes or compliance statistics, but in the rivers that run clear again, the communities that share in prosperity, and the trust that returns to public institutions. When legality and legitimacy finally converge, when mining becomes not only lawful but rightful, Ghana will have achieved what this generation's reforms have long sought but never secured: a gold economy that reflects the country's highest values rather than its deepest contradictions.

a. Legal Abundance, Developmental Deficit: Understanding the Paralysis of Ghana's Mining Regime

As this report has shown, Ghana's mining sector has long stood at the intersection of law, politics, and economic aspiration. From the early post-independence nationalisation of mineral wealth through the liberalisation reforms of the 1980s and 1990s to the proliferation of sector-specific statutes in the twenty-first century, the country has accumulated one of the most elaborate legal and institutional architectures in sub-Saharan Africa. Yet the proliferation of laws has not produced a commensurate transformation in developmental outcomes. The contradiction is stark: Ghana is rich in mining legislation but poor in mining governance results. This chapter characterises that contradiction as the paralysis of mining laws; a condition in which the continuous expansion of the legal framework masks a persistent incapacity to translate law into sustainable, equitable, and accountable development.

The paralysis of Ghana's mining regime is not the result of legislative neglect, but of institutional excess without coherence. Each reform, from the Minerals and Mining Act, 2006 (Act 703) and its amendments to the Minerals Income Investment Fund Act, 2018 (Act 978) and the recent Gold Board Act, 2025 (Act 1140), has sought to modernise, formalise, or redistribute control. Yet these reforms have too often multiplied authorities, reinforced executive dominance, and prioritised short-term fiscal or political objectives over systemic transformation. The outcome is a form of regulatory fatigue: laws accumulate, institutions proliferate, but enforcement weakens; coordination falters, and policy coherence dissolves. What emerges is a regime that functions energetically at the level of enactment but sluggishly at the level of execution.

This chapter concludes the study by unpacking the developmental implications of this paralysis. It analyses how irresponsible and poorly aligned mining laws and policies undermine economic development, through lost revenues, environmental degradation, weak community welfare, and an unstable investment climate. It then interrogates the institutional and political challenges that continue to frustrate responsible mining governance, despite decades of legal reform. Drawing on both domestic and global experiences, the chapter argues that Ghana's developmental deficit in mining governance stems less from a lack of legislation than from a lack of legitimacy and institutional purpose.

The discussion proceeds in three parts. First, it examines the economic consequences of legal and policy irresponsibility in the mining sector, including the fiscal, social, and environmental costs of regulatory inertia. Second, it explores the structural and political constraints that impede the emergence of responsible mining governance, ranging from ministerial overreach and institutional fragmentation to data opacity and policy inconsistency. The final section outlines strategic recommendations for realigning Ghana's mining regime with global trends in responsible resource governance. It proposes a legitimacy-centred, developmental approach that integrates transparency, environmental stewardship, and community participation as core pillars of mining law and policy.

In sum, this chapter situates Ghana's mining experience within a broader global dilemma: the coexistence of legal abundance and developmental scarcity. By tracing the disconnect between the country's expansive legal architecture and its modest developmental returns, it calls for a new generation of reforms grounded not in legal proliferation, but in moral coherence, institutional discipline, and developmental purpose.

b. The Nature of Legal Paralysis in Ghana's Mining Sector

The concept of legal paralysis captures a paradox central to Ghana's mineral governance experience: the existence of numerous, well-intentioned mining laws and institutions that nonetheless fail to deliver coherent regulation or developmental outcomes. In essence, the paralysis is not a product of legislative absence but of legislative *over-activity*; a continuous process of reform and amendment that multiplies frameworks without resolving the underlying dysfunctions of enforcement, coordination, and accountability. Ghana's mining regime exemplifies what may be termed "regulatory congestion": too many rules, too little clarity, and an ever-widening gap between normative aspiration and administrative reality.

1.1 The Architecture of Excess

From the Minerals Act of 1962 (Act 126) to the Minerals and Mining Act, 2006 (Act 703) and its subsequent amendments in 2015 (Act 900) and 2019 (Act 995), the legal evolution of Ghana's mining sector has been driven by a recurring impulse to consolidate, modernise, and attract investment. Each legislative cycle has introduced new mechanisms, from small-scale mining regulation to environmental assessment, royalty distribution, and sovereign wealth management. However, rather than achieving systemic coherence, this cumulative layering has created a fragmented institutional order where multiple agencies share overlapping responsibilities with limited coordination or unified strategy.

Key statutes such as the Minerals Development Fund Act, 2016 (Act 912) and the Minerals Income Investment Fund Act, 2018 (Act 978) sought to address revenue management and community benefit gaps but instead expanded bureaucratic complexity. The recent Ghana Gold Board Act, 2025 (Act 1140) continues the trend, adding yet another institution to manage small-scale gold trade and traceability, without clearly rationalising its relationship with the Minerals Commission, the Precious Minerals Marketing Corporation, or the Bank of Ghana. This cumulative proliferation has produced a state of institutional crowding, in which mandates overlap, accountability blurs, and policy coherence erodes.

1.2 The Persistence of Centralised Discretion

Despite its complex architecture, Ghana's mining regime remains heavily centralised. The Minister for Lands and Natural Resources, acting on the advice of the Minerals Commission, retains extensive discretionary powers to grant, suspend, or revoke mineral rights. This concentration of authority, a colonial inheritance maintained through successive constitutions, has often subordinated institutional autonomy to political expediency.

While parliamentary ratification under Article 268 of the 1992 Constitution was designed as a democratic check, in practice it has become procedural rather than substantive. Mining agreements are frequently approved with limited scrutiny, reflecting a deeper pattern of executive dominance and institutional deference.

Such concentration of discretion undermines predictability for investors and weakens the moral legitimacy of the regulatory process. Decisions regarding mineral concessions, environmental permits, and community resettlement often appear ad hoc, negotiated through political patronage rather than transparent criteria. The result is a regime that formally operates under the rule of law but substantively functions through administrative discretion; a defining feature of Ghana's legal paralysis.

1.3 Fragmentation and the Erosion of Coherence

Beyond executive dominance, the paralysis of mining laws also manifests in fragmented institutional mandates. The Minerals Commission regulates licensing and inspection; the EPA oversees environmental compliance; the Forestry Commission manages forest reserves; the Water Resources Commission governs water use; and local assemblies are expected to monitor community impacts. Yet these bodies seldom coordinate effectively.

Permitting processes are sequential rather than integrated, resulting in duplication, delays, and blurred lines of accountability. In many cases, institutional mandates collide rather than complement each other, creating gaps that opportunistic actors exploit through regulatory arbitrage and forum-shopping.

This fragmentation extends to data and policy alignment. Different agencies maintain separate databases, often using incompatible formats, which obstructs information-sharing and strategic planning. Without a centralised repository for mineral rights, environmental permits, and compliance records, the state struggles to monitor cumulative impacts or enforce sanctions consistently. Consequently, enforcement becomes selective, compliance becomes transactional, and the integrity of regulation collapses under its own procedural weight.

1.4 Policy Inconsistency and Developmental Drift

The proliferation of mining legislation has also generated policy inconsistency, especially between economic and environmental objectives. While one set of policies promotes aggressive mineral exploitation to boost foreign exchange earnings, another seeks to protect forests, water bodies, and local livelihoods.

The absence of a clear national hierarchy of objectives means that regulatory decisions oscillate between these competing imperatives. This oscillation

undermines long-term planning, deters responsible investment, and erodes trust among communities.

Moreover, the state's fiscal dependence on gold revenues and its political dependence on small-scale mining constituencies have produced a pattern of reactive governance; policy by crisis rather than design. This was evident in the shifting stance on *galamsey*: from the "war on illegal mining" to the subsequent embrace of artisanal mining as "critical" to national development. Such reversals illustrate the deeper governance fatigue at the heart of Ghana's mining regime a system caught between moral posturing and political pragmatism, unable to sustain a coherent developmental vision.

1.5 The Developmental Cost of Paralysis

The consequences of this paralysis are profound. Regulatory uncertainty discourages long-term investment in exploration and value addition; inconsistent enforcement weakens deterrence and emboldens non-compliance; and fragmented institutions inflate transaction costs while diluting accountability.

Communities bear the brunt of environmental degradation and social displacement, while the state forfeits revenue and legitimacy. The outcome is a developmental deficit: a mining sector that generates wealth without transformation, exports minerals without building capacity, and enacts laws without enforcing them.

Thus, the paralysis of Ghana's mining laws is both structural and philosophical. It reflects a governance model where law is treated as an end rather than a means, a ritual of reform that substitutes for substantive change. Overcoming this paralysis requires more than technical amendments; it demands a fundamental re-alignment of legal purpose with developmental intent, so that mining law becomes not merely a framework for extraction, but an instrument of justice, stewardship, and shared prosperity.

c. Economic Implications of Irresponsible Mining Laws and Policies

The economic consequences of Ghana's mining law paralysis are neither abstract nor peripheral. They manifest in lost revenues, weakened institutional credibility, degraded environments, and stunted local economies. The failure to operationalise mining laws as effective instruments of governance has produced a pattern of irresponsible regulation laws that exist to signal order but that, in practice, perpetuate disorder.

This irresponsibility is not rooted in the absence of legal standards, but in the state's inability to enforce them consistently and to align mineral governance with broader

developmental priorities. The result is a paradoxical economy: rich in mineral output, poor in developmental returns.

2.1 Fiscal Leakages and the Mirage of Mineral Wealth

At the macroeconomic level, weak regulatory enforcement and opaque fiscal regimes have curtailed the state's ability to mobilise revenue from mining. Ghana's tax and royalty structures under the Minerals and Mining Act, 2006 (Act 703) and its subsequent amendments were designed to attract investment by providing flexibility in royalty rates and fiscal terms. Yet the same flexibility has undermined predictability and accountability. The discretionary authority of the Minister to vary royalty rates and approve stability agreements has produced wide disparities in effective taxation across operators.

These structural weaknesses, coupled with the poor monitoring of gold exports and under-declaration by some large-scale producers, have resulted in significant fiscal leakages. The Minerals Income Investment Fund (MIIF), intended to capture and invest a portion of mineral revenues for intergenerational benefit, has faced legitimacy challenges due to weak governance safeguards and political contestation.

Consequently, Ghana's mineral wealth continues to generate short-term fiscal inflows without long-term developmental conversion. The inability to transform royalties into productive capital reinforces the country's dependence on primary extraction, perpetuating a cycle of *resource abundance without prosperity*.

2.2 The Local Development Deficit

At the subnational level, the disconnect between mineral extraction and community welfare remains stark. The Minerals Development Fund Act, 2016 (Act 912) sought to ensure that a share of royalties benefits mining-affected communities through local development projects. In practice; however, disbursements have been irregular, delayed, and inadequately monitored. Local Mining Community Development Schemes (LMCDS), though envisioned as vehicles for participatory development, often lack the technical capacity and fiscal transparency to manage funds effectively.

This weak redistribution mechanism has deepened local inequalities. Mining districts contribute substantially to national output but remain characterised by poor infrastructure, unemployment, and environmental degradation.

The absence of clear accountability for royalty utilisation has also eroded community trust, fuelling social tensions and resistance to mining operations. The developmental deficit, therefore, is not simply a matter of inadequate revenue generation, but of failed revenue governance, a breakdown in the moral and institutional compact between the state and its citizens.

2.3 Environmental Degradation and the Cost of Ecological Neglect

The paralysis of mining law is most visibly inscribed on Ghana's landscape. Regulatory failures have allowed extensive environmental degradation, particularly through unregulated small-scale and illegal mining. The EPA and other enforcement agencies remain chronically under-resourced, limiting their ability to conduct regular inspections, enforce reclamation bonds, or prosecute violations. This has resulted in widespread deforestation, siltation of rivers, and mercury contamination ecological externalities that impose long-term economic costs far exceeding the short-term benefits of extraction.

The economic implications of this degradation are profound. Polluted water sources increase public health expenditure, reduce agricultural productivity, and burden local governments with remediation costs. Studies suggest that the cumulative cost of environmental damage from mining in Ghana rivals, if not exceeds, annual royalty inflows. This inversion, where the costs of extraction are socialised and the benefits privatised, epitomises the irresponsibility of existing mining laws and policies. Environmental neglect thus becomes not just an ecological crisis, but a fiscal one.

2.4 Institutional Credibility and Investor Confidence

A further dimension of the economic impact lies in the erosion of institutional credibility. Investment thrives on predictability, transparency, and the even-handed application of rules. Yet Ghana's mining laws, while outwardly modern, operate within a political economy marked by discretionary enforcement and regulatory opacity.

Disputes over licensing, contract renegotiations, and environmental compliance have increasingly found their way to courts or arbitration, reflecting investors' mistrust in administrative resolution.

This credibility deficit increases the country's risk premium, discourages long-term capital investment, and diverts resources toward legal and bureaucratic negotiation rather than productive activity. The paradox is that while Ghana's legal frameworks were designed to attract foreign investment, the weak enforcement of those very frameworks has made responsible investors wary and opportunistic ones emboldened.

The law's paralysis thus perpetuates a dual economy: one governed by informal networks of access and influence, and another constrained by procedural inertia.

2.5 The Opportunity Cost of Policy Incoherence

Finally, the cumulative effect of fiscal leakages, weak redistribution, environmental degradation, and institutional erosion is a vast opportunity cost, the lost potential

of mineral wealth to catalyse structural transformation. Ghana's mining laws have historically prioritised extraction over value addition, resulting in an enclave economy disconnected from manufacturing, technology, and human capital development. While legislative reforms such as the Local Content and Local Participation Regulations aimed to reverse this trend, inconsistent implementation and weak monitoring have limited their impact.

The failure to align mineral policy with national industrial strategy has left Ghana trapped in the low-value segment of the global mineral value chain. Export earnings fluctuate with commodity cycles, fiscal buffers remain thin, and industrial linkages are minimal. This developmental stasis is the ultimate expression of legal paralysis: a governance system that continuously regulates but rarely transforms.

In sum, the economic implications of irresponsible mining laws and policies are systemic and self-reinforcing. Fiscal losses weaken public investment; environmental degradation erodes the resource base; institutional mistrust deters responsible capital; and social discontent undermines stability. What emerges is a developmental paradox, a mining sector that sustains the economy without developing it, and a legal regime that commands authority without producing accountability.

d. Challenges in Achieving Responsible Mining Governance

Efforts to build a responsible mining framework in Ghana have been repeatedly undermined by a deeper crisis of governance, a crisis that is institutional, political, and moral all at once. The proliferation of laws has not produced a culture of responsibility, largely because the institutions entrusted with enforcing those laws remain fragmented, under-resourced, and politically dependent. What has evolved is a regulatory order that performs legality but struggles to embody legitimacy. The challenge, therefore, is not the absence of responsible mining policy, but the inability of the state to sustain integrity in its practice.

One of the central barriers lies in the design of Ghana's mineral administration. Overlapping mandates between the Minerals Commission, the Environmental Protection Agency, the Forestry Commission, and the Water Resources Commission create a maze of authority without clear hierarchy. Each institution operates within its own legal silo, with limited coordination and diffuse accountability. As a result, permitting processes are protracted, enforcement is inconsistent, and regulatory gaps become opportunities for exploitation. The political economy of mining thrives in this confusion; actors learn to navigate between agencies, securing favourable decisions from one to offset restrictions from another. Over time, this institutional cacophony normalises non-compliance and rewards political influence over procedural fairness.

Equally debilitating is the pervasive shortage of capacity at the subnational level. Most mining activities occur in districts that lack adequate technical expertise, logistics, or staffing to monitor compliance. District assemblies and local offices of the Minerals Commission often operate with a handful of officers responsible for hundreds of active sites. The state, in effect, is absent from where mining actually happens. This spatial and administrative disconnect means that illegal operations flourish under the radar, environmental degradation goes unreported, and communities have little recourse when their lands or livelihoods are affected. The law's reach ends where its enforcement should begin.

Political dynamics further complicate the pursuit of responsible mining. The authority to grant or revoke licences remains concentrated in the hands of the Minister for Lands and Natural Resources, whose decisions are inevitably influenced by political calculations. Successive governments have treated mineral rights as instruments of patronage, rewarding allies or financiers while ignoring procedural safeguards. This culture of discretion undermines both investor confidence and public trust. It also weakens the autonomy of the regulatory agencies, which are pressured to align enforcement with political interests rather than statutory mandates. When the institutions meant to guard the integrity of the sector are themselves enmeshed in partisan considerations, the idea of "responsible mining" becomes more slogan than policy.

Transparency, or the lack of it, is another thread running through the paralysis. Ghana's licensing regime, despite rhetorical commitments to openness, continues to operate in relative obscurity. Details of mineral rights, beneficial ownership, and contract terms are not routinely published. Even parliamentary ratifications under Article 268 of the Constitution often occur without prior disclosure, reducing oversight to ritual rather than scrutiny. This opacity is costly: it fuels public suspicion, erodes investor predictability, and conceals the extent of rent-seeking within the sector. Without transparent data, civil society oversight remains weak, and communities cannot meaningfully hold the state or companies accountable for promises of development or environmental restoration.

The deeper challenge, however, is philosophical. Mining governance in Ghana remains trapped in a twentieth-century mindset that equates legal enactment with progress. Every crisis, whether environmental, fiscal, or social, has been met with the drafting of yet another law or the creation of another agency. Yet the structural logic of enforcement has remained unchanged: centralised, politicised, and reactive. This legal inflation gives the illusion of reform while reproducing the same pathologies of discretion, fragmentation, and inertia. What passes for progress is often a rebranding of the status quo.

Responsible mining governance, in contrast, requires a different temperament, one that values coherence over proliferation, and moral authority over bureaucratic expansion. It demands a shift from reactive lawmaking to anticipatory regulation;

from secrecy to radical transparency; from coercive enforcement to partnership with communities and responsible investors. Until that shift occurs, Ghana's mining laws will continue to multiply while their credibility declines, and the promise of responsible mining will remain suspended between rhetoric and reality.

e. Global Trends and Lessons for Responsible Mining Governance

Across the world, the conversation about mining has shifted from the arithmetic of extraction to the ethics of governance. Countries that once measured success by output now measure it by legitimacy, by how mining contributes to human development, respects ecological limits, and distributes benefits fairly across generations. In this emerging consensus, responsible mining is no longer a voluntary aspiration but a defining standard of credibility in the global economy. Ghana's legal and policy trajectory sits uneasily within this evolution: its frameworks are increasingly elaborate, but its governance culture has yet to internalise the values that make those frameworks meaningful. Understanding global trends therefore helps to reveal both what Ghana has achieved and what remains unfinished in its reform journey.

The past two decades have seen a reorientation of international mining standards around three intersecting principles, transparency, sustainability, and participation. The Extractive Industries Transparency Initiative (EITI) has become the normative baseline for resource governance, requiring the publication of payments, contracts, and ownership data. Countries such as Mongolia and the Philippines have gone further by integrating EITI standards directly into domestic law, turning disclosure from a moral gesture into a legal obligation. Parallel to this, the OECD Due Diligence Guidance for Responsible Mineral Supply Chains has recast the responsibility of states and companies alike, extending accountability beyond borders to include the entire value chain of mineral sourcing, trade, and consumption. Under this framework, legality is not sufficient: the provenance of minerals must be demonstrably free from human rights abuses, conflict financing, and ecological harm.

In the environmental sphere, responsible mining has been defined increasingly through the lens of sustainability. The International Council on Mining and Metals (ICMM), representing some of the world's largest mining companies, now requires members to align with global environmental, social, and governance (ESG) performance standards. This has influenced jurisdictions such as Canada, Chile, and Botswana, where mining laws are explicitly tied to sustainability objectives and periodic performance audits. In these countries, environmental licences are not mere procedural hurdles but dynamic instruments that track compliance throughout the life of a mine. The implication is clear: modern mining governance

treats the environment not as an externality but as a co-owner of the law's legitimacy.

Equally transformative has been the rise of participatory governance. Latin American states, in particular, have embedded community consultation and free, prior, and informed consent (FPIC) into their legal frameworks, a principle now recognised as customary in international law. Peru's 2011 Prior Consultation Law and the regional court decisions interpreting it have reshaped how extractive projects are authorised, shifting decision-making power closer to affected populations.

The result has not been the end of conflict, but the creation of new democratic spaces where contestation can occur within the boundaries of legality and mutual respect. In contrast, Ghana's mining governance still relies heavily on top-down engagement and post hoc compensation, a model that preserves state control but sacrifices legitimacy at the community level.

These global developments underscore an important lesson: responsible mining is not merely about technical compliance, but about moral coherence. Laws must reflect the values they claim to protect. A mining regime that guarantees disclosure but tolerates impunity, or that celebrates formalisation while enabling environmental devastation, cannot claim responsibility. Many of Ghana's current challenges, from weak enforcement to politicised discretion, would not withstand the scrutiny of these emerging global norms. The gap is not one of knowledge but of commitment: the willingness to align domestic institutions with the moral and procedural standards that now define responsible resource governance.

At the same time, Ghana possesses advantages that could be harnessed to close this gap. Its democratic tradition, independent judiciary, and civil society activism provide a foundation for participatory oversight and institutional accountability. The country's adherence to the EITI and its relatively robust legislative base offer starting points for deeper reform. What remains is to translate these commitments into a new social contract around mining that internalises transparency, sustainability, and inclusiveness as binding obligations rather than rhetorical ambitions.

Learning from international experience does not require imitation, but adaptation. Ghana need not reproduce the institutional models of Chile or Canada; it must, instead, cultivate a distinctly Ghanaian framework of responsible mining, grounded in its constitutional principles and social realities. That means integrating global due diligence standards into domestic licensing, establishing independent monitoring mechanisms for environmental performance, and ensuring that communities are not passive observers but active participants in governance. It also means reframing mining not as a fiscal instrument for short-term revenue

generation but as a developmental enterprise, a sector whose legitimacy depends on how responsibly it sustains the nation's natural endowment.

The global trajectory of mining governance points toward convergence around one truth: that the right to extract carries an equal duty to protect. Countries that have embraced this ethos are redefining competitiveness, attracting investment not through permissiveness but through credibility. For Ghana, the lesson is simple yet profound. The world no longer rewards those who mine the most, but those who mine best. To remain relevant, the country must move from legal abundance to responsible coherence, aligning its mining laws with the ethics, expectations, and accountability mechanisms that shape the global mining frontier.

f. Recommendations for Rebuilding a Responsible and Developmental Mining Framework

Reversing the paralysis of Ghana's mining laws requires more than legislative ambition. It calls for a deliberate redesign of how institutions function, how power is exercised, and how trust is built. The future of Ghana's mining governance will depend on whether it can produce coherence where there has been fragmentation, predictability where there has been discretion, and fairness where there has been exclusion. The following recommendations outline broad directions for reform that would restore purpose and credibility to the country's mining framework.

The first priority is institutional coherence. Ghana's mining sector operates through a patchwork of agencies that pursue overlapping mandates with limited coordination. A unified governance architecture is essential. The establishment of a National Minerals Governance Council, or an equivalent inter-agency body, could provide the strategic alignment currently missing. Such a council should not add another layer of bureaucracy but serve as a central platform for planning, data integration, and cross-agency accountability. Its role would be to ensure that mineral licensing, environmental permitting, and community engagement occur within a shared national framework rather than as isolated administrative acts.

A second reform area concerns local capacity and accountability. Mining laws often assume enforcement capacity that does not exist at the district level. The Minerals Commission and the Environmental Protection Agency should be resourced to establish fully functional district inspectorates, equipped with technical staff and real-time monitoring tools. Local authorities must be able to inspect sites, verify compliance, and respond to community complaints within defined timelines. Publicly accessible reporting on inspections, infractions, and corrective measures would strengthen deterrence and signal that the law operates where extraction occurs.

Reform must also address transparency and public oversight. Ghana has made progress through participation in the Extractive Industries Transparency Initiative, but disclosure remains selective. The country should move toward an open data regime in which all mineral rights, ownership details, and environmental performance records are routinely published. A digital cadastre linked to the Ghana Revenue Authority, the EPA, and the Lands Commission would allow citizens, investors, and oversight bodies to track compliance and payments in real time. Transparency should no longer be treated as a voluntary courtesy to the public but as a structural requirement of governance.

The redistribution of mineral revenues deserves renewed attention. The Minerals Development Fund Act promised to channel benefits to mining communities, yet the share of royalties remains modest and transfers are frequently delayed. The Fund's allocation formula should be reviewed to guarantee predictable funding to host districts, with a minimum share reserved for social infrastructure and environmental rehabilitation. Community development agreements should be legally enforceable, not left to corporate discretion. These measures would help align national extraction with local development and reduce the resentment that fuels conflict in mining areas.

Another essential dimension is environmental stewardship. Mining legislation should establish clear ecological boundaries and cumulative impact thresholds that cannot be waived by ministerial fiat. Sensitive ecosystems such as forest reserves, headwaters, and biodiversity corridors should be explicitly declared off-limits to mining. Environmental performance must be tracked through continuous monitoring and periodic audits conducted by independent experts. Offenders should face mandatory remediation obligations backed by reclamation bonds large enough to discourage negligence. Protecting Ghana's natural capital is an economic necessity, not a moral accessory.

Attention must also turn to the artisanal and small-scale mining sector, which now provides a large share of Ghana's gold exports but operates with minimal oversight. The state's approach should evolve from episodic crackdowns to structured inclusion. Cooperative licensing, access to mercury-free processing technology, and technical extension services would create pathways to formalisation that are viable and attractive. Artisanal miners should be treated as development partners whose success depends on environmental responsibility and adherence to collective standards, rather than as adversaries to be policed.

At the macro level, fiscal and investment policy should reinforce integrity. Stability agreements and tax incentives must be limited to transparent, time-bound terms approved by Parliament. The Minerals Income Investment Fund should be restructured to function as a genuine sovereign investment vehicle, managed under clear rules of public accountability and independent valuation. Future securitisation of mineral royalties must follow open parliamentary debate and full publication of

transaction documents. The goal is to ensure that Ghana's mineral wealth finances long-term national assets rather than short-term fiscal expediency.

Finally, the country's mining governance needs a new ethical foundation. Law can command compliance, but it cannot command respect unless it is seen as fair and consistent. The legitimacy of mining institutions will grow when they act predictably, share information openly, and treat communities as equal stakeholders in national development. A national conversation about mining and the public interest, involving traditional authorities, civil society, industry, and government, could lay the groundwork for a social compact that binds economic ambition to environmental and human integrity.

A responsible and developmental mining framework, therefore, is not one defined by the number of statutes in force, but by the coherence of the institutions that apply them and the trust they inspire. The reforms proposed here seek to restore balance between authority and accountability, efficiency and justice. If implemented with seriousness, they would transform Ghana's mining sector from a site of contention into a cornerstone of sustainable national development.

12. Conclusion

The story of Ghana's mining laws is one of ambition restrained by inertia. Over time, the country has built an impressive body of legislation that appears, on the surface, to reflect modern regulatory standards. Yet behind this architecture lies a governance system that has struggled to turn legal progress into material transformation. The problem is not that Ghana lacks laws, but that its laws have not generated the discipline, fairness, and foresight that development requires. This chapter has described that condition as the paralysis of mining laws, a state in which regulation proliferates while purpose dissipates.

The economic consequences of this paralysis are visible in every layer of the sector. Fiscal leakages drain public revenue. Communities near mining sites remain underdeveloped and distrustful of state institutions. Environmental degradation continues to erode the foundations of agriculture, water security, and public health. These outcomes are symptoms of a deeper failure of governance: a failure to treat law as an instrument of justice rather than as an ornament of administration. When legal systems prioritise procedure over substance, enforcement becomes selective, responsibility diffuses, and the very idea of sustainable development loses credibility.

Across the world, mining governance is being redefined by new expectations of transparency, ethical conduct, and environmental accountability. Responsible mining is no longer measured only by compliance with national law but by alignment with global norms of fairness and sustainability. Ghana stands at a

crossroads within this evolving landscape. It has the democratic institutions, professional expertise, and social awareness needed to lead, yet its policies remain bound to habits of discretion and short-termism that belong to an earlier era of extraction.

The reforms outlined in this chapter are intended to break that cycle. Institutional coherence, local capacity, transparency, fair revenue distribution, environmental stewardship, and the dignified inclusion of artisanal miners together form the scaffolding of a responsible and developmental mining regime. Achieving these reforms will demand political restraint as much as technical design. It will require leaders who are willing to limit their own discretion, empower regulatory institutions, and open the sector to public scrutiny. Development will begin not when new laws are passed, but when existing ones are applied with integrity and consistency.

In the end, the measure of Ghana's mining regime will not be the number of statutes it contains, but the trust it earns from its citizens and the confidence it inspires in the global community. The country's mineral wealth is finite, but its capacity for institutional renewal is not. If Ghana can transform its mining governance from a system of legal abundance into one of developmental purpose, it will have achieved something far more enduring than economic growth. It will have proven that law, when grounded in legitimacy and guided by justice, can become a genuine instrument of national progress.

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The Ecological Damage of Illegal Mining in Water Bodies and Forest Management in Ghana

Dr. Kwadwo Ansong Asante and Dr. Lydia Osei



1. Introduction

Ghana occupies an estimated total land area of 23 884 245 hectares with a 550 km long coastline. The estimated national population is around 35 million, with a growth rate of 2.5% per annum (GSS, 2024). The country is endowed with substantial mineral resources such as gold, diamonds, manganese and bauxite throughout its ecological zones, and is one of the main gold producing countries of the world. Gold mining constitutes a greater portion of the country's Gross National Product (GNP) accounting for over 90% of all mineral revenues annually and paradoxically, it is the bedrock of the country's Economic Recovery Programme. In 2023, Ghana was ranked as Africa's largest gold producer and the 10th largest globally, with gold production rising from 3.7 million ounces in 2022 to 4 million ounces in 2023; and the sector accounted for 8.8% of domestic revenue, 8.6% of total government revenue and about 8.1% of its Gross Domestic Product (GDP), including quarry. The production growth was driven primarily by the expansion in the output of small-scale gold mining (Ghana Chamber of Mines, 2024).

For the past two decades, the Small-Scale Mining (SSM) sector has evolved in terms of scale and significance. There is an upsurge in the number of individuals involved in the sector and an increase in mechanisation within the artisanal small-scale mining (ASM) operations, these, contributing to the output of the sector. Small-scale mining is widely undertaken in the country by both licensed and unlicensed operators, and has been carried out for many years – dating back to over 1000 years, generating employment.

The socio-economic impact of illegal small-scale mining in Ghana is multifaceted. It accounts for about 35% of the country's total gold production and contributes significantly to the total amount of gold reserves (Adranyi et al., 2024). By the end of May 2025, the sector's total gold export reached a new record of 41 tonnes, which translated into \$4 billion (EnergyCapital Power, 2025). Illegal small-scale mining is a major source of livelihood for most rural populations across the country. It provides employment to many youth and unskilled labourers; particularly, in rural areas where formal employment opportunities are few (Bansah et al., 2018). For some time now, it has been estimated that illegal mining provides direct employment to about one million people (see McQuilken and Hilson, 2016), with another innumerable figure benefiting indirectly from illegal mining operations. Illegal mining, for example, provides raw materials to local Blacksmiths for making jewelry (Bansah et al., 2018). Considering the upsurge in the scale of operations over the years, this figure is clearly an underestimation. Baddianaah et al. (2022) pointed out that about 70% of locals in gold-endowed areas engage in illegal mining due to poverty and lack of lucrative alternative livelihoods. This has resulted in social impacts such as increased teenage pregnancies and school drop-outs, poor levels of education and child labour. According to Osei et al. (2022), illegal mining plays a pivotal role for miners; thus, a ban on ASM operations has devastating effects such as job loss and financial hardship for many. A ban on illegal small-scale mining can

be a catalyst for worsening poverty levels among miners and communities that depend on galamsey for survival (Dery Tuokuu et al., 2020).

Despite its socio-economic relevance, illegal small-scale mining is a double-edged sword. While it offers significant livelihood opportunities to millions, its unregulated nature generates severe ecological repercussions that derail development. Environmental contamination by exploitation of gold has become a serious problem in Ghana, and presently illegal small-scale mining seems to be better known for its deleterious effects on the environment than for its socio-economic importance. The ecological impact of illegal mining is so dire that it overshadows any potential benefits the sector offers. For the purpose of this undertaking, the focus is an in-depth analysis of the negative ecological implications of illegal mining in Ghana.

Ghana faces an unprecedented environmental crisis due to illegal small-scale mining activities, commonly known as “galamsey”. This rampant practice has devastated vast areas of the country's landscape, contaminated water bodies (about 60%) and degraded fertile soils through the indiscriminate use of toxic chemicals like mercury, cyanide, arsenic and lead. These pollutants have rendered many water sources unsafe for drinking (without treatment), irrigation, or aquatic life, bioaccumulating in fish and entering the human food chain. The consequences extend beyond environmental damage to threatening public health, food security, and the livelihoods of millions who depend on these natural resources.

The effects of these heavy metals on humans range from mild eye, nose and skin irritations through severe headache, stomach ache, diarrhea, hematemesis, vomiting, dizziness, to organ dysfunction and deformities. Mercury (Hg) contamination by gold (Au) mining activities is also a great concern in Ghana because Hg is used to effectively extract gold in small-scale mining. Mercury was not utilised in artisanal (small-scale) gold extraction. Its use began only about 45 years ago when it became too difficult for small-scale miners to extract gold from rocks. This has attracted a growing number of people with minimal skill to use mercury to extract gold making the chemical ubiquitous in mining sites. The optimal Hg to Au ratio (Hg:Au) is about 1 (v/v), but gold washers in Ghana commonly add greater quantities (Hg:Au = 4:1) to ensure that all available gold is amalgamated (Babut et al., 2003). Therefore, Hg may be inhaled by the workers and also contaminate soils, tailings, stream sediments and water close to the processing sites. Indeed, Hg pollution of river water, sediments, soil and mine workers in Ghana has been widely documented (Golow and Adzei, 2002; Adimado and Baah, 2002; Golow and Mingle, 2003; Babut et al., 2003) and it is likely that some small-scale miners have died through Hg intoxication. Figure 1 shows the flow sheet of artisanal (small-scale) gold extraction in Ghana.



Figure 1: A typical flow sheet of artisanal (small-scale) gold extraction in Ghana.

When mercury is brought into contact with gold particles in sediments or crushed ore, it forms an “amalgam” - a soft mixture of roughly 50% mercury and 50% gold. To recover gold from the amalgam, it is heated to evaporate the mercury, leaving the gold behind. In the course of their activities and through heating, mercury is released into the atmosphere and ecosystem contaminating water bodies, fish, soil, vegetables and crops as depicted in Figure 2.

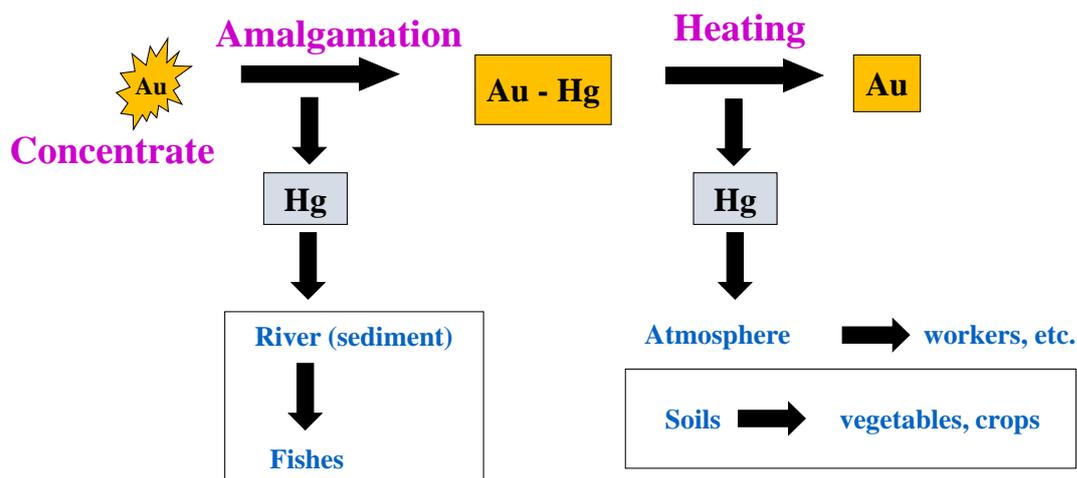


Figure 2: Release of mercury into the ecosystem.

Earlier studies had also reported on arsenic and other trace elements in soil, human urine, and tailing dams from mining communities in Ghana with the attendant environmental impacts (Asante et al., 2007; Antwi-Agyei et al., 2009; Asante et al., 2012; Adjei et al., 2012; Bempah et al., 2013; Kessey and Arko, 2013; Mensah et al., 2015). The government of Ghana, responding to public outcry against the negative

effects of galamsey, acted swiftly and placed a ban on illegal small-scale mining activities in April 2017. This ban stopped both 'legal' small-scale and the illegal artisanal miners from carrying out any such activity. However, the ban was short-lived and the activities continued about a year after. Beyond this ban, all other attempts made by the government to curb illegal mining and its devastating effects, have so far proven futile.



2. Review of the State of Ecological Damage of Illegal Mining, Level of Toxicity of Water Bodies, Health Hazards, and Destruction of Forest Reserves



Artisanal and small-scale mining has a long history in Ghana. However, it was in 1989 that the PNDC government recognised its legitimacy through the enactment of Small-scale Mining Act, PNDC Law 218, which was later integrated into the current Mining Act 703 in 2006. The Act provided a blueprint for its formalisation, reserving SSM solely for Ghanaians. The Act legalises small-scale mining by creating the Small-Scale Mining Project, within the Minerals Commission which is mandated to license and regulate operations of artisanal miners. Bureaucratic inefficiency, limited institutional capacity, inadequate monitoring, and corruption have continued to undermine the intended benefits of the formalisation of the sector. This has left many artisanal miners operating informally, vulnerable to exploitation, and in on-going conflict with state authorities. According to Amoyaw-Osei (2025), about 380 active licenses as of November 2024, and about 750 small-scale mining licenses in 2023, represent just about 10% of all SSM activities (i.e. about 90% of all SSM is done illegally).

Regularising the several hundreds of artisanal/galamsey mining (i.e. the 90% illegal mining) could easily overwhelm the regulatory institutions. As the industry is getting increasingly destructive, fears have been expressed that, illegal small-scale

gold mining in Ghana might be a resource curse rather than a blessing. This is because a number of communities have lost their sources of potable drinking water and farmlands, giving away their cocoa farms to the galamseyers in exchange of money.

The problems associated with illegal mining include soil degradation, siltation of river bodies, diversion of river channel, removal of vegetative cover and loss of biodiversity, pollution by heavy metals and other contaminants, destruction of food and cash crops, depletion of forest reserves and degradation of the quality of river bodies, among others.

Speaking on “The Challenge of Galamsey for Sustainable Development – The Social and Economic Challenge” at a public forum organised by the Ghana Academy of Arts and Sciences on 3rd June, 2025, Ing. Dr. Kenneth Ashigbey, the current Chief Executive Officer of the Ghana Chamber of Mines examined the devastating impact of galamsey on Ghana's sustainable development, with a focus on the cocoa industry, forest degradation, loss of taxes and royalties, and livelihood destruction. The analysis revealed the social costs of galamsey, including increased crime, prostitution, drug abuse, and increasing school dropout rates. He urged Ghanaian leadership to act urgently, warning that inaction could lead to the country's extinction. He added that leadership failure and greed have enabled this ecological terrorism, posing an existential threat to Ghana's survival. He called for decisive action to address the menace, recommending policy interventions, enforcement, and accountability, and concluded with a rallying cry for collective action to save Ghana from the destructive consequences of galamsey.

Speaking on Ecological and Environmental Damage, at the same public forum organised by the Ghana Academy of Arts and Sciences, Mr. Erastus Asare Donkor from the Multimedia Group-Ghana reported that a total of 44 forest reserves had been affected by illegal mining. Ashanti Region tops with 14, followed by Western North Region (12), Western Region (11), Upper East Region (4), Eastern Region (2) and Savannah Region (1).

The activities of galamsey have caused widespread environmental degradation, including deforestation, soil degradation and destruction of cocoa farmlands, threatening the long-term sustainability of cocoa production. Many cocoa farmers have been forced to abandon their farms due to the encroachment of illegal mining activities, leading to the loss of income and livelihoods. The impact of illegal mining on the cocoa sector poses a significant threat to Ghana's economy, as cocoa is a major export crop and a significant contributor to the country's GDP.

On climate change implications vis-à-vis deforestation and green gas emissions, Mr. Asare Donkor stated that the rampant deforestation caused by illegal mining activities is not only an environmental catastrophe; but, also a significant contributor to climate change. Furthermore, the mining process itself involves the burning of fossil fuels and release of other greenhouse gases, such as methane, further exacerbating the climate crisis. He continued that the Forestry Commission

estimates that, about 35,000 hectares of forests have been degraded. To wit, vast areas of forests have been cleared, releasing stored carbon into the atmosphere and diminishing nature's ability to absorb greenhouse gases. These emissions trap heat in the atmosphere, leading to rising temperatures, erratic weather patterns, and long-term changes in our climate system.

At the same public forum, speaking on “Galamsey Repair – Health and Ecological Costs”, Prof. Ellis Owusu Dabo from the School of Medical Sciences, Kwame Nkrumah University of Science Technology (KNUST) reported high prevalence of malaria in mining areas, increase in prevalence of HIV/AIDS, birth defects/deformities, and mercury and arsenic poisoning. Also, mercury can cause kidney diseases as well as cardiovascular and skin diseases. He added that mercury in drinking water could also result in muscle weakness, vision loss, speech and hearing impairment.

In a documentary POISONED FOR GOLD by Mr. Erasmus Asare Donkor of Joy FM, Prof. Osei Sampene, a Pathologist and Senior Lecturer at KNUST, detailed a deformed baby (preserved in formalin) he examined from the uterus of a dead mother in Bibiani where the dysmorphic baby had 6 fingers, 6 toes, fused eyes, malformed head with no identifiable sex (no genitals) and traced the cause of the deformity to appreciable levels of mercury, cyanide, lead and arsenic in the placenta, through which babies get their feed, oxygen, etc. to survive. He added that he examined three other babies with extreme deformities from the Central, Ashanti and Western Regions. This is a clear case of how heavy metals concentrations can alter the developmental stages of a foetus and concluded that this could be a widespread catastrophe which needs further public health research.

2.1 River Systems and Studies Conducted by CSIR-Water Research Institute

Of the global water budget, only 3% is available as freshwater (Groundwater, Surface water, others) with 97% being seawater, and of the available 3% freshwater, only 13% is accessible with the remaining 87% locked up in glaciers and icecaps. This means that a paltry 0.4% of the global water is accessible to mankind as freshwater (Figure 3). In Ghana, the rivers are classified into three (3) systems. The Volta River System, South-Western River System and the Coastal River System with the contribution of each river system indicated below.

VOLTA RIVERS (70%)

(Black, White, Red, Oti and Main Volta)

(Contribute 64.7% of total runoff in Ghana)

SOUTH-WESTERN RIVERS (22%)

(Bia, Tano, Ankobra, Birim, Offin and Pra)

(Contribute 29.2% of total runoff in Ghana)

COASTAL RIVERS (8%)

(Ochi-Amissah, Ochi-Nakwa, Ayensu, Densu, Tordzie)

(Contribute 6.1% of total runoff in Ghana)

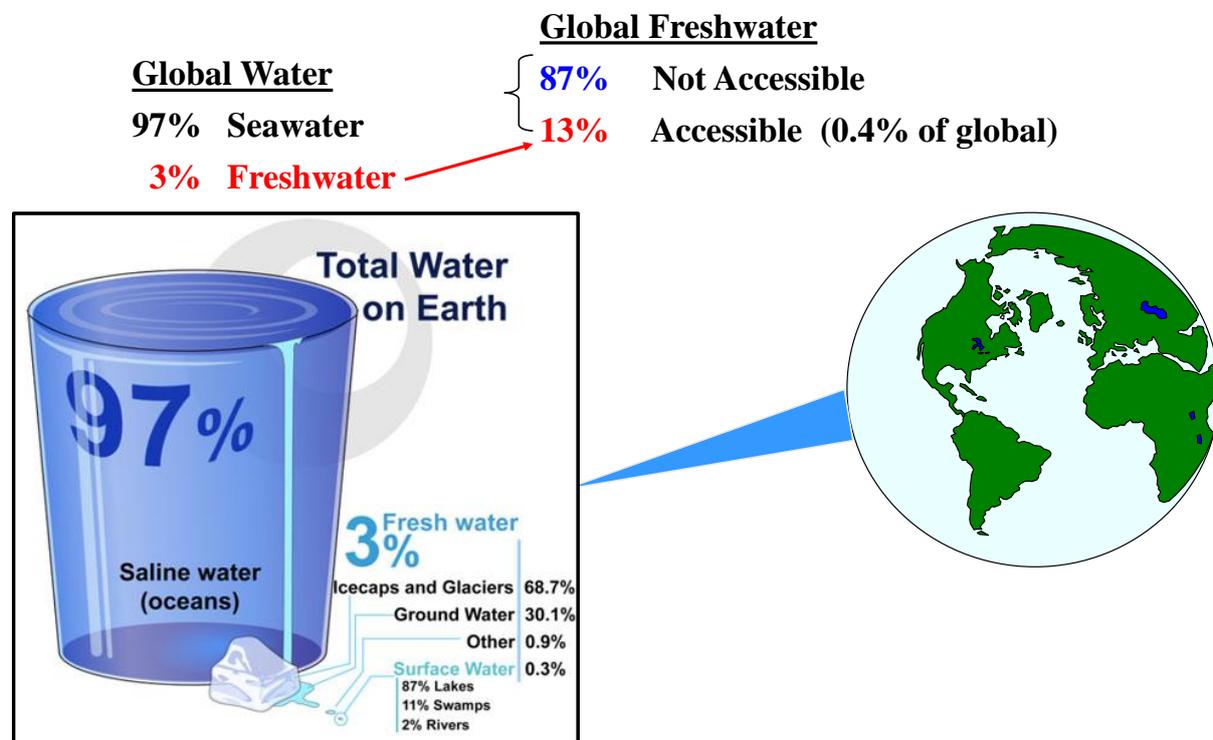


Figure 3: The global water budget

The water quality index (WQI) used to assess the quality of the rivers, is a classification system that uses an index calculated from selected water quality parameters (eg. pH, dissolved oxygen, biochemical oxygen demand, ammonia-nitrogen, nitrate-nitrogen, phosphate-phosphorus, faecal coliform, total suspended solids, temperature and conductivity), by integrating values of key water quality variables into a single number from 0 to 100. The index classifies water quality into one of four categories: Class 1: Good (>80), Class 2: Fairly Good (50 – 80), Class 3: Poor (25 – 50), and Class 4: Grossly Polluted (<25). Most of our water bodies are presently in the Class 3 state. This raises a serious concern as it adds to the cost of water treatment by the Ghana Water Limited (GWL), as amplified by their several calls to halt illegal mining. The current situation has resulted into water

scarcity in some areas in Ghana. As a result, there is the need for Ghanaians, water managers and policy makers to know the magnitude of the problem and the cost involved in restoring the polluted water bodies to the natural state.



Figure 4: The state of South-western rivers in 2018.



Figure 5: The state of South-western rivers in 2024. Arrows indicate GWL intake points.

Currently, all the south-western rivers are polluted and turbidity levels are very high (Figures 4 and 5). This has raised national concern and a call for public action. In order to assess the extent of pollution caused by illegal mining activities, CSIR-Water Research Institute periodically conducts studies on water bodies in the country. Results of such studies generally indicate high levels of total suspended

solids, turbidity and occasionally, other harmful chemicals in the rivers. For instance, in July 2018, a study was carried out to examine the status of water and sediment quality in eight endemic regions of illegal mining to ascertain the outcome of the ban on the water quality of the rivers in 2017. Procedures outlined in the Standard Methods for the Examination of Water and Wastewater (2017) were followed for the laboratory analyses. Results of the study indicated that the rivers were high with total suspended solids (TSS), turbidity and color, suggesting inflow of wastewater from the illegal mining activities and some run-offs. The background levels of turbidity required in surface freshwaters in Ghana is 5 NTU (WRC, 2003a; 2003b), just as in drinking water (WHO, 2017; GSA, 2017). The turbidity levels of the waters were very high in relation to the guideline value. The turbidity in all the waters exceeded the guideline value and ranged from 12 NTU to 4,645 NTU (Darko et al., 2021). The highest value of 4,645 NTU was observed at Ayiem on River Ankobra. The turbidity is contributed by the high TSS present in these waters. Color had a strong correlation with turbidity ($r = 0.95$) and TSS ($r = 0.94$), suggesting that the pollution originates from the same sources. Low levels of metals were found in both water and sediment. However, very high concentrations of iron were detected in both water and sediment. Mercury concentrations were low in the water column but relatively higher in the sediment. A comparison of the general water quality status of the water bodies in the Pra Basin in 2013 and 2018 using the Water Quality Index (WQI) showed a marginal improvement in quality in 2018 over 2013 in the Pra Basin. The improvement of water quality in 2018 (Figure 6) was attributable to the ban.

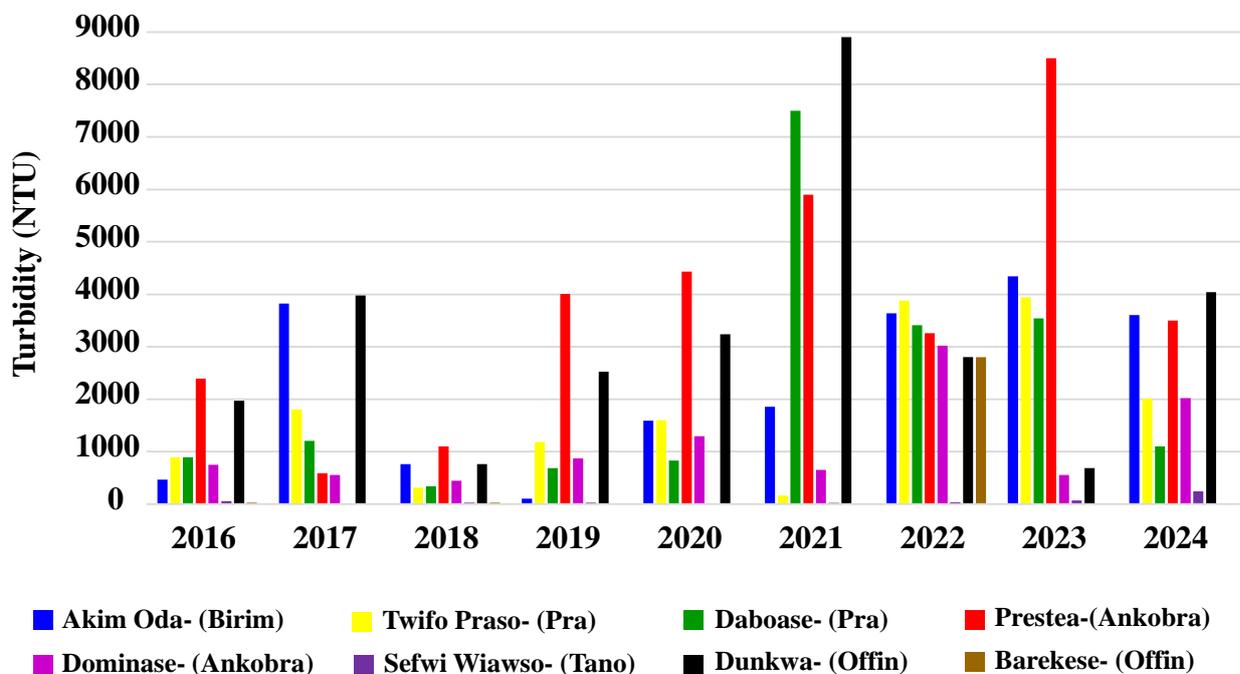


Figure 6: Turbidity measurements from some sites of major basins between 2016 and 2024.

2.2 Land Vegetation and Reclamation Techniques

According to the Encyclopedia Britannica, Ghana has three principal types of vegetation- from the north to the south. These are the Coastal Savanna, Rainforest Zone and Northern Savannah. The Coastal Savanna consists of a mixture of scrub and tall tress (Guinea grass) with giant anthills. The Northern Savannah consists mainly of tall Guinea grass with scattered low trees such as the shea butter tree and species of acacia and baobab. The Rainforest vegetation is predominantly evergreen and tropical semi-deciduous forest. The dense forest zone formerly covered an area of about 30,000 square miles (78,000 km²) but farming activities and timber exploration have reduced it to less than 8,000 square miles (21,000 km²) which include about 6,000 square miles (15,500 km²) of reserved forest (Nimako, 2023).

Albert Kobina Mensah in his book *Soil Pollution and Remediation* (2025), chronicled early reclamation efforts primarily planting fast-growing vegetation to stabilise the soil and reduce erosion. However, these practices were often superficial and did not address the underlying issues such as soil contamination and long-term sustainability of the ecosystem. The late 20th and early 21st centuries saw significant advancements in reclamation techniques which began to incorporate soil amendments, such as organic matter and lime to improve the fertility and pH levels. These amendments helped to create conditions more conducive to plant growth and supported the reestablishment of native vegetation.

Another milestone in the evolution of reclamation is the development of phytoremediation techniques which involve the use of plants (such as ferns, Indian mustard and poplar trees) to remove, stabilise, or neutralise contaminants and absorb heavy metals from the soil. This gained popularity as a cost-effective and environmentally friendly approach. According to A. K. Mensah, in recent years, the concept of “ecosystem reclamation” has gained prominence. This involves the reconstruction of natural habitats and the reintroduction of native species, aimed at creating a self-sustaining environment. This holistic approach recognises the interconnectedness of various ecological components and seeks to restore ecological balance.

2.3 Estimated Cost of Treatment

For unpolluted water, it costs between GHC1 and GHC3 to treat the water for public consumption. However, with the issue of galamsey setting it, it costs between GHC11 and GHC15 to treat the water, increasing the cost of treatment for GWL. The Table below indicates the drainage area, length, width and average annual discharge of some river basins. Based on the information, the estimated volumes of water in each basin can be estimated as indicated in Table 1. Assuming the cost of treating the galamsey-impacted water is even GHC10 per 1 cubic meter, it will cost an estimated GHC48.3 billion to treat the Pra basin, GHC12 billion for the Ankobra basin, GHC45.1 billion for the Tabo basin and GHC80.4 billion for the Black Volta, and all these are direct costs.

Table 1: Estimated volumes of water and treatment cost for some basins in Ghana.

| RIVER BAINS | DRAINAGE AREA (KM ²) | DRAINAGE LENGTH (KM) | AVERAGE WIDTH (M) | MINIMUM WIDTH (M) | MAXIMUM WIDTH (M) | AVERAGE ANNUAL DISCHARGE (M ³ /S) | ESTIMATED VOLUME (BILLION M ³) |
|-------------|----------------------------------|-------------------------|-------------------|-------------------|-------------------|--|--|
| PRA | 23,168 | 325 | 98 | 8 | 196 | 153 | 4.83 |
| ANKOBRA | 8,366 | 230 | 65 | 41 | 125 | 38 | 1.20 |
| TANO | 16,061 | 512 | 48 | 28 | 76 | 143 | 4.51 |
| BLACK VOLTA | 142,056 (33,302 in Ghana) | 1,363 (688 in Ghana) | 52 | 29 | 181 | 255 | 8.04 |

Source: Authors' calculation; Philip Gyau-Boakye & Kwabena Kankam-Yeboah, 2016.

Identification and Analysis of Key Actors involved in the Menace

As indicated earlier, galamsey is endemic in large sections of the country as an avenue for rural employment and livelihoods, with the economies of some rural communities dependent almost entirely on it. Thirteen (13) out of the 16 regions of Ghana are gold mineralised, and faced with rural poverty and unemployment. People sacrifice their conscience indulging in galamsey as a worthwhile lucrative alternative employment. It is propped up by traditional authorities, unbridled political interests, the youth and women in rural mining communities, among others.

High-handed deployment of the military ended up with accusations of complicity and corruption, and not even ministerial committees on galamsey have escaped the label of corruption (Amoyaw-Osei, 2025). Reports in the media (Television, Newspapers, Electronic) have also identified foreign nationals, particularly Chinese as culprits. The artisanal small-scale sector reserved for Ghanaians is effectively captured by foreigners. Foreign capital inflow and other illicit sources persistently fuel galamsey. Also, foreign gold business interests consolidate their influence through corrupting local authorities, political figures and communities. Leadership of political parties and operatives turn to take interest in and/or urge their followers into galamsey, compromising the fight (Amoyaw-Osei, 2025). In addition, local people not only front perpetrators, but protect and defend them, sometimes against arrests. Also, the continually soaring high price of gold provides impetus for the degrading galamsey, as a tiny amount of gold extracted is a fortune.

Farming land tenancy arrangements are typically informal, favouring ready conversion of arable lands for galamsey with enticing monetary offers to chiefs. Furthermore, labour intensiveness of cocoa cultivation renders it less competitive to galamsey, luring some farmers/landowners to offer their farmlands to galamsey operators for instant earnings. Destructive effects are without limits. Forests are mowed destroying biodiversity and removing the carbon sink for greenhouse gas sequestration, etc., water bodies polluted, and road, rail infrastructure, and utility lines destroyed.

One of the challenges of overcoming this menace is the lack of clarity on exact roles and the relationships among the respective institutions (fragmented oversight) in the small-scale mining sector on social support and regulatory mandate for effective discharge of responsibilities, enforcement, reporting and use of the expected outcomes. Some institutions perceive environmental issues outside their domain, and have nothing to do with Impact Assessment, hence Minerals Commission for instance, during mining licensing process would pause and advise applicants to submit Environmental Permit (from EPA only as evidence), presupposing that the outcome of the Impact Assessment has no input to the mining license decision-making. This above, inadvertently impedes inter-institutional confidence, corporation and sharing of intelligence on sector issues.

3. Methodology for the Assignment



Secondary data comprised of a desk review and research data from the Council for Scientific and Industrial Research- Water Research Institute (CSIR-WRI) were sourced for the completion of this report. Due to the scope of work in this research,

the use of secondary data was an appropriate means of collating current knowledge on the research topic.

The review involved a google scholar search for articles relating to the assignment, in addition to engagements with notable figures who have mounted several platforms to speak against this menace and participation in public fora. Articles retrieved were comprehensively analysed based on their objectives and research findings. This approach provides a summary of what is currently known on galamsey in Ghana, especially pertaining to its ecological blueprints.

Additionally, data from empirical studies conducted by the CSIR-WRI were retrieved and analysed. The CSIR-WRI is a highly reputable institution with expertise in scientific research. The institute has conducted studies on water pollution and related environmental challenges, and thus, has a repository of reliable data. Data from CSIR-WRI was accessed by the consultant who has several years of experience working at the Institute. Through field visits, collection of water and sediment samples from river basins across the country, these were analysed in the laboratories of CSIR-WRI to inform the findings on the extent of water pollution caused by galamsey activities.

4. Analysis of Practical Recommendations for Mitigating the Impact



Restoration Framework for Galamsey-Affected Areas

Phase 1: Assessment and Emergency Measures (Months 1-6)

Comprehensive Environmental Mapping

- Conduct detailed soil and water quality testing in all affected regions
- Use satellite imagery and drone technology to map degradation hotspots

- Identify priority areas for immediate intervention

Emergency Declaration

- Designate critically affected water bodies and forests as emergency zones
- Implement immediate bans on all mining activities in these areas

Phase 2: Active Water Quality Restoration (Months 6–36)

Water Restoration Techniques

Phytoremediation: Using aquatic plants like water hyacinth to absorb heavy metals from contaminated rivers

- Bioremediation: Introducing mercury-metabolising bacteria to break down toxic substances
- Constructed Wetlands: Building artificial wetland systems to filter pollutants
- Dredging and Filtration: Removing contaminated sediments from riverbeds

Challenges and Solutions

Major Challenges

- High costs of remediation technologies
- Weak enforcement of mining regulations
- Resistance from communities dependent on galamsey incomes
- Limited technical expertise locally

Proposed Solutions

- Political will to enforce regulations and allocate adequate resources
- Temporary Mining Moratorium: Proposed 3–5 year suspension to facilitate reclamation
- Community education and sustainable alternative livelihood programmes
- Community participation in ensuring local ownership of restoration efforts
- Multi-stakeholder collaboration (government, NGOs, private sector)

Proposed costs of interventions for the restoration of water bodies are presented in Table 2.

Table 2: Cost estimates for proposed key interventions.

| Intervention Type | Unit Cost Estimate (USD) | 5-Year Projection (USD) | Source |
|---|---------------------------------|--------------------------------|--|
| Enforcement (task force, drones, patrol) | \$8M/year | \$40M over 5 years | Ministry of Lands & Natural Resources 2021 budget for anti-galamsey taskforce |
| Enrichment Planting (Native species) | \$3,000 per hectare | \$15M for 5,000 ha | Based on Forestry Commission (2020), average cost for seedling procurement, planting, maintenance over 5 years |
| Phytoremediation | \$150K per site | \$3M for 20 sites | Adapted from studies on phytoremediation in West Africa (Asamoah et al., 2019; UNEP project pilots in Nigeria and Ghana) |
| Riverbank Stabilisation | \$50 per meter | \$5M for 100 km | FAO & IUCN, confirmed by local riverbank bioengineering pilot in Pra Basin (WRC Ghana, 2018) |
| Education & Training | \$500,000 per year | \$2.5M over 5 years | UNDP Ghana and CSIR-led community capacity building cost in riverine districts (2020–2022 reports) |
| Sediment Dredging | \$1M per major site | \$10M for 10 rivers | EPA Ghana + Ghana Water Company Limited dredging estimates (2021) |

5. Conclusion



The proliferation of galamsey undermines investor confidence and tarnishes Ghana's international reputation as a responsible mining jurisdiction, threatening long-term foreign direct investment in the extractive sector. The Ghana Chamber of Mines has consistently highlighted how illegal mining reduces government revenues through tax evasion, loss of royalties, and smuggling of gold outside official export channels. Galamsey also creates unfair competition for licensed small-scale and large-scale miners, who face higher operational costs due to compliance with environmental and labour regulations. A durable solution to illegal mining must confront the root cause: lack of viable economic alternatives. Galamsey thrives not only because of gold's allure; but, also due to the collapse of rural economies, widespread youth unemployment, and the absence of state investment in job creation. Attempts to eliminate galamsey without addressing these structural gaps risk entrenching poverty and social unrest. The continuous degradation of the country's water bodies will compound the cost of water treatment by GWL and contaminate fish and food crops with the potential to cause severe food insecurity if not halted. Appreciable levels of mercury, cyanide, lead and arsenic in examined placenta, led to babies with extreme deformities. This is a clear case of a dire public health challenge that requires further research.

6. Recommendations

- a. Make farming lands in mining communities more productive through special extension support to turn subsistence agriculture into intensive cultivation and farm produce packaging with commercialisation and market-driven growth in mind, for the sector to become competitive and lucrative.
- b. Increase awareness of chiefs and other traditional leaders on land documentation process to end the era of informal land transaction for the protection of tenant farmers.
- c. Pay competitive compensations to farmers to render farming equally lucrative. Especially for cocoa farmers, government efforts should be geared towards improved production and incomes from cocoa production which contributes significantly to Ghana's GDP.
- d. Provide extension support services for food crop cultivation in the rehabilitation of cocoa farms.
- e. Prepare compensation (resettlement) Action Plan for each affected farmer, and farmers made to sign a legal documentation binding them not to divest their cocoa farms to galamsey.
- f. The penalty for galamsey offences in forest reserves should be reviewed and the Forests Protection Act (1974) accordingly amended to align with the "polluter-pays-principle".
- g. Declare water bodies/riparian areas "no-go areas" for ASM with strong deterrent environmental sanctions and property forfeiture.
- h. Convert galamsey into formal artisanal small-scale mining (ASM) cooperatives for mass employment opportunities. And there should be transparent and coordinated institutional system for ASM governance.
- i. Politicians and political office holders should be barred from engaging in small-scale mining.
- j. Increase education/awareness on the devastating impacts of galamsey in mining communities to effect behavioural change among participants in the sector and with this improved awareness that can form the basis for a revolt against illegal mining operations.

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The Environmental and Socio-Economic Impact of Illegal Mining on Local Communities in Ghana

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1. Introduction

Illegal mining, known locally as *galamsey*, has evolved into a national crisis in Ghana. While small-scale gold mining has been practiced for centuries, particularly in Akan regions such as Wassa and Akyem, it has escalated dramatically in recent decades, morphing into an unregulated industry that undermines environmental governance and community welfare³⁸.

Historically, gold mining was conducted using artisanal methods and supported rural economies. However, the liberalisation of the mining sector in the 1980s, coupled with weak enforcement capacity and rising global gold prices, triggered an explosion in informal mining³⁹. Many youth, unable to find gainful employment, entered into *galamsey* as a last resort to earn a living. The sector became increasingly attractive to foreign actors and has been marked by the use of heavy machinery, harmful chemicals, and degradation of once-productive farmlands and rivers.

Small-scale mining is permitted under license, but most *galamsey* operations occur outside of this framework. The Minerals and Mining Act, 2006 (Act 703) and its amendments outline regulatory controls, yet enforcement is patchy and often undermined by political patronage and corruption⁴⁰. Despite Ghana's reputation as a relatively well-governed, peaceful, and democratic country, its Artisanal and Small scale Gold mining (ASGM) sector is characterised predominantly by informality, criminality and deleterious environmental and human development effects, which include the ferocious denuding of the country's vegetation cover, toxic pollution of water bodies, and serious health and safety hazards inflicted on the rural populace in mining areas⁴¹.

The MFWA's project: "*Breaking the Gridlock: Resolving Polarisation-Induced Policy Paralysis in Ghana*," aims to promote evidence-based discourse that transcends partisan divides and drives sustained policy reform. This paper contributes to that objective by presenting a rigorous, but accessible analysis of the socio-ecological costs of illegal mining and pathways toward remedy.

³⁸ Ofosu-Mensah, E. A. (2011). Historical overview of traditional and modern gold mining in Ghana. University of Ghana.

³⁹ Hilson, G. (2001). A contextual review of the Ghanaian small-scale mining industry. International Institute for Environment and Development (IIED)

⁴⁰ Minerals and Mining Act, 2006 (Act 703). Government of Ghana

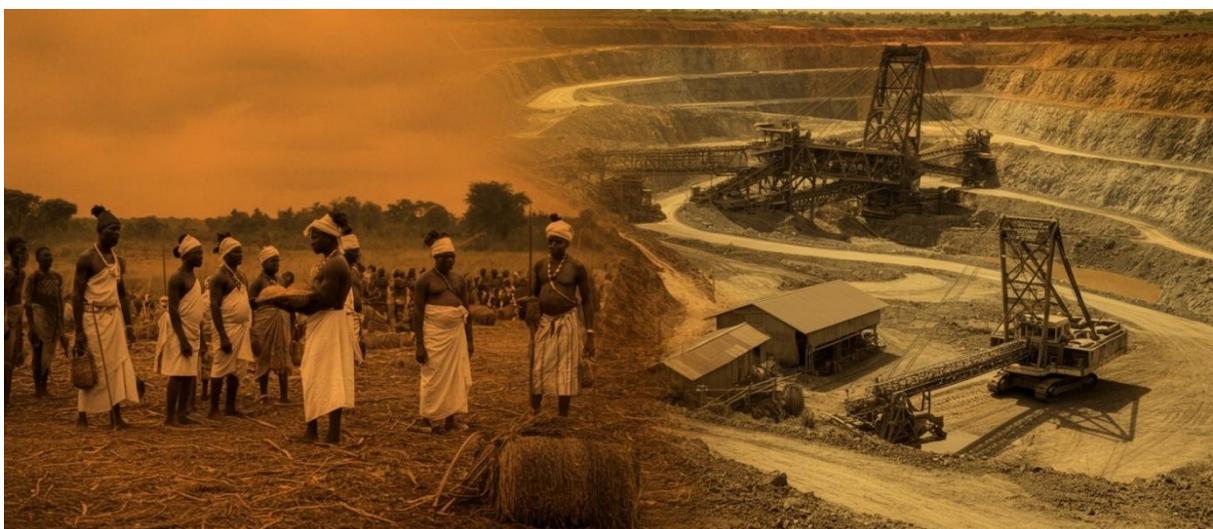
⁴¹ Ayelanuzo and Aziabah (2025) State Capture in the Militarized Fight Against Illegal Small-Scale Goldmining in Ghana

2. Methodology



This study employs a qualitative desk review methodology, triangulating data from a wide range of sources. These include: academic studies, government and agency reports (i.e., the Environmental Protection Authority (EPA), Minerals Commission, and Water Resources Commission), civil society publications, investigative journalism pieces, court rulings, historical accounts and oral testimonies documented in existing literature. Although the study does not include new fieldwork, it synthesises credible and recent secondary sources to draw generalisable conclusions. The focus is on major mining regions in Ghana which reflect the most representative environmental and social impacts of illegal mining activities.

3. Background



Gold mining in Ghana, has been central to the country's identity, economy and interaction with the outside world for centuries. The abundant presence of gold in the forest and savannah belts of southern and northern Ghana established the country as a focal point of precolonial trade and later European imperial interest. From indigenous forms of alluvial mining through the era of colonial mechanised extraction to the rise of contemporary multinational corporations and small-scale mining, the trajectory of gold mining in Ghana has been both dynamic and complex.

Although gold has been mined in Ghana for centuries, three "gold rushes" have been experienced, with the first occurring in the late nineteenth century and the second immediately after World War II. The third gold rush occurred from the early mid-1980s, when the government opened up the mining sector for foreign direct investment under the World Bank/IMF-directed Economic Recovery Program (ERP) (1983–1986)⁴².

Prior to the advent of European colonialism, gold mining in Ghana was primarily conducted by indigenous communities using methods adapted to local ecological and social conditions. These methods included surface and riverbed panning, pit digging, and underground tunnelling, largely without the use of modern tools. These operations were widespread in Akan states such as Denkyira, Akyem and Asante, as well as in northern regions like Bole⁴³. These activities were organised around the social organisation of gold mining along lineage and clan systems⁴⁴. Gold served not only as a medium of exchange; but, also as a symbol of political authority and spiritual power, embedded within the customs and chieftaincy structures of precolonial Ghanaian societies. Chiefs often regulated access to gold-bearing lands, controlled the redistribution of gold revenues, and oversaw mining activities in ways that reflected indigenous governance systems.

The late 19th and early 20th centuries witnessed the formal consolidation of British colonial rule over the Gold Coast, during which gold mining underwent profound transformation. The colonial government facilitated the entry of British capital into the sector, promoting the development of industrial mining in areas such as Obuasi, Tarkwa, and Prestea. These operations involved deep-shaft underground mining and the introduction of cyanide processing, allowing for more efficient extraction of gold from low-grade ore. The formation of companies such as Ashanti Goldfields Corporation epitomised the shift from indigenous artisanal mining to large-scale, capital-intensive production dominated by expatriate firms⁴⁵. European mining interests were protected and subsidised by colonial policies, including land expropriation, favourable tax regimes, and the marginalisation of local miners who

⁴² Nana Akua Anyidoho & Gordon Crawford (2014) Leveraging national and global links for local rights advocacy: WACAM's challenge to the power of transnational gold mining in Ghana, *Canadian Journal of Development Studies / Revue canadienne d'études du développement*, 35:4, 483–502, DOI: 10.1080/02255189.2014.936369

⁴³ Ofosu-Mensah, E. A. (2011). Historical overview of traditional and modern gold mining in Ghana. *International Research Journal of Library, Information and Archival Studies*, 1(1), 6–22

⁴⁴ Ntewusu, S. A. (2015). A social history of gold mining in Bole, northern Ghana: From pre-colonial to recent times. *Transactions of the Historical Society of Ghana*, (17), 1–26. <https://www.jstor.org/stable/90016957>

⁴⁵ Allen, G. K. (1958). Gold mining in Ghana. *African Affairs*, 57(228), 221–240. <https://doi.org/10.1093/oxfordjournals.afraf.a004401>

were often restricted to menial labour roles. This created a dual economy where the formal sector generated profits for foreign shareholders while the indigenous population faced increasing displacement and exclusion from mining benefits.

In addition to economic reorganisation, colonial mining brought significant socio-environmental consequences. Indigenous agricultural systems were disrupted, sacred lands were appropriated for concessions, and traditional authorities lost control over key aspects of land governance. Environmental degradation, including deforestation, soil erosion and water pollution became endemic in many mining regions. Governance structure imposed during the colonial period institutionalised forms of exclusion and laid the foundations for contemporary patterns of resource inequality and socio-environmental conflict. The colonial legacy of elite and foreign control over Ghana's mineral wealth continued to inform debates around mining governance in the postcolonial era.

Following Ghana's independence in 1957, efforts were made by successive governments to reclaim national control over the mining sector. The first post-independence administration under Dr Kwame Nkrumah nationalised key mining operations and established the State Gold Mining Corporation (SGMC) to manage operations. There was also a concerted effort to train Ghanaian mining engineers, geologists, and managers. However, despite initial gains, inefficiencies, corruption and lack of capital investment led to the stagnation of state-owned enterprises⁴⁶.

The third gold rush occurred from the early mid 1980s, when the government opened up the mining sector for foreign direct investment under the World Bank/IMF-directed Economic Recovery Program (ERP) (1983–1986). However, under the ERP, the World Bank argued for the liberalisation and privatisation of the mining sector; which became a central pillar of Ghana's economic reform programme⁴⁷. Privatisation occurred with the government selling its gold mines, which had been nationalised after independence to private companies. A legislative framework specific to mining was created for the first time with the Minerals and Mining Law of 1986 (PNDCL 153). This mining law was developed with "technical assistance" from the World Bank and in line with the Bank's strategy for mining that it promulgated continent-wide.⁴⁸

Significant changes occurred with this policy: the shift in large-scale mining practices from underground mining to open pit surface mining as a more profitable option. This had major implications for local communities. First, land resources came under significant pressure, given the large-scale demands for land by surface mining in comparison with underground mining. 70 per cent of the land surface in the (former) Wassai West District in the Western Region, an area of 2,354 square

⁴⁶ Allen, G. K. (1958). Gold mining in Ghana. *African Affairs*, 57(228), 221–240. <https://doi.org/10.1093/oxfordjournals.afraf.a004401>

⁴⁷ Owusu-Koranteng, D. 2008. "Mining Investment and Community Struggles." *Review of African Political Economy* 35 (117): 467–473.

⁴⁸ Nana Akua Anyidoho & Gordon Crawford (2014) Leveraging national and global links for local rights advocacy: WACAM's challenge to the power of transnational gold mining in Ghana, *Canadian Journal of Development Studies / Revue canadienne d'études du développement*, 35:4, 483–502, DOI: 10.1080/02255189.2014.936369

kilometres, had come under gold mining activity by the early 1990s in concessions granted to eight transnational mining companies. Second, surface mining entailed the use of cyanide for gold extraction, with associated environmental problems due to cyanide spillages. Third, whereas underground mining was more labour-intensive, surface mining was based on capital-intensive technologies and equipment, which required less unskilled and more skilled labour, resulting in redundancy for local unskilled miners and in-migration of skilled labour⁴⁹.

The liberalisation of the mining sector in the 1980s and 1990s resulted in an increase in gold production, making Ghana one of the leading gold producers in the world. Multinational mining corporations established or expanded operations, attracted by favourable investment conditions and high global gold prices. Very generous terms to private mining companies were contained in the legislative and policy framework, including low taxes and royalty payments, low import duties on equipment, high retention of revenue and repatriation of profits⁵⁰. While these investments increased foreign direct investments in the sector, they also reignited debates over land rights, revenue distribution and the social impacts of large-scale mining⁵¹.

Affected communities often experienced involuntary displacement, loss of farmland and exposure to environmental hazards with limited compensation or recourse. The perceived imbalance between corporate profits and community well-being has been a recurrent source of tension, reflected in protests, legal disputes and calls for reforms in the current mining laws; particularly, the Minerals and Mining Act, 2006 (Act 703)⁵².

Simultaneously, artisanal and small-scale mining (ASM) has emerged as a critical, though often informal, component of the gold mining landscape in Ghana. A particularly urgent issue in the past two decades has been the proliferation of illegal/galamsey and underregulated (ASM) mining activities. Galamsey activities just like underregulated small and large scale mining activities have been linked to deforestation, pollution of major rivers and destruction of arable land. The use of mercury, unsafe mining methods and encroachment on legally protected lands have drawn criticism from host communities, environmental groups and citizens across the country.

In response, the government has launched several military-led campaigns to clamp down on illegal and under regulated mining particularly ASM activities, with mixed results. The state has ordered successive military operations and taskforces to fight the problem including but not limited to Operation Vanguard, Operation Halt I,

⁴⁹ Nana Akua Anyidoho & Gordon Crawford (2014) Leveraging national and global links for local rights advocacy: WACAM's challenge to the power of transnational gold mining in Ghana, *Canadian Journal of Development Studies / Revue canadienne d'études du développement*, 35:4, 483-502, DOI: 10.1080/02255189.2014.936369.

⁵⁰ Akabzaa, T., and A. Darimani. 2001. Impact of Mining Sector Investment in Ghana: A Study of the Tarkwa. A study drafted by Government Structural Adjustment Participatory Review Initiative (SAPRI).

⁵¹ Campbell, B. (2008). Regulation & legitimacy in the mining industry in Africa: Where does Canada stand? *Review of African Political Economy*, 31(100), 367-385.

⁵² Peters, W. (2013). History of gold mining in Ghana. Retrieved from <https://www.ghanaweb.com/>

Operation Halt II, and the GALAMSTOP taskforce⁵³. While these operations have occasionally disrupted some illegal activities, they have been largely unsuccessful and criticised for human rights abuses and unsustainability.

Today, Ghana remains one of the top gold-producing countries in the world, with gold accounting for a significant portion of its export revenues. However, the historical legacies of inequality, environmental degradation, food security and contested land rights continue to pose challenges to the sector's sustainability.

4. Historical Origins of Artisanal Mining to Mechanised Mining



Artisanal mining has a long history in Ghana spanning several centuries before the European explorers arrived. By some accounts, mining of gold in the Gold Coast can be traced as far back as to the sixth century when gold was the magnet that attracted the Arab traders to some parts of the country as early as the seventh and eighth centuries. It is an integral component of the organisation of rural populace in the ecosystem they were born. An organisation of production that revolves around the inextricable relationship between culture and the environment. Before the modern day artisanal and small-scale mining, traditional artisanal mining was a means of survival in gold-rich communities. It existed side by side with and supplemented farming as their modes of production and social reproduction⁵⁴. To date, ASM endures as a livelihood activity.

⁵³ Ayelanuzo and Aziabah (2025) State Capture in the Militarized Fight Against Illegal Small-Scale Goldmining in Ghana

⁵⁴ Ayelanuzo and Aziabah (2025) State Capture in the Militarized Fight Against Illegal Small-Scale Goldmining in Ghana

The current position of ASM in Ghana is shaped around push and pull factors. The push factors include land dispossession, poverty, rising unemployment in farming communities and the collapse of traditional livelihoods, which force people out of agriculture and other economic activities. The pull factors that attract people into ASM include perceived quick financial returns, low barriers to entry, local knowledge of mining, and rising demand for gold which presents mining as a more lucrative and accessible livelihood option compared to farming. Together, these factors explain the rapid growth of ASM in mining-affected communities, as people struggle to rebuild their lives in the face of displacement, economic exclusion and environmental degradation⁵⁵.

The transformation of Ghana's small-scale mining sector since the 1980s has been shaped by a combination of economic reforms, labour displacement, and increasing community dependence on artisanal mining as a key livelihood strategy. During the economic downturn of the early 1980s, Ghana adopted structural adjustment programmes aimed at revitalising the economy by targeting key productive sectors, including mining. These reforms led to the opening of new mines and the rehabilitation of existing ones, many of which were divested to private interests.

The new and rehabilitated mining operations of the late 1980s and 1990s primarily relied on near-surface deposits that, while extensive, had relatively low gold grades. To remain viable, these operations needed to process large volumes of ore efficiently, requiring capital-intensive, highly mechanised methods, rather than labour-intensive approaches. Consequently, significant numbers of mine workers many of whom had no skills outside of mining were laid off. This wave of retrenchment saw many displaced workers turn to artisanal and small-scale mining, often without securing the necessary legal permits. Thus, small-scale mining became a refuge for those excluded from the formal mining economy⁵⁶.

The economic and social upheavals in proximate communities caused by large-scale mining have also led to an increase in ASGM activities, as communities affected by these large-scale mining activities have sought to diversify their livelihoods in response to the disruption to farming as an income source, and the takeover of farmlands for large scale mining. In many large-scale mining areas, ASGM which has a long history in Ghana, has become the main means of livelihood for erstwhile agrarian rural populations who are attracted to the financial prospects of artisanal mining⁵⁷.

Wassa Association of Communities Affected by Mining (WACAM); a community rights and environmental advocacy organisation corroborates this position. The large scale mining operations mainly surface mining created an intense

⁵⁵ Wacam (2018) Asetsena Pa Newsletter; Ayelanuzo and Aziabah (2025) State Capture in the Militarized Fight Against Illegal Small-Scale Goldmining in Ghana

⁵⁶ Minerals Commission (2015) Artisanal & Small Scale Mining (ASM) framework

⁵⁷ Hilson, G., and C. Garforth. 2013. "‘Everyone Now is Concentrating on the Mining’: Drivers and Implications of Rural Economic Transition in the Eastern Region of Ghana." *The Journal of Development Studies* 49 (3): 348–364.

competition between agriculture and mining activities for land. Most rural communities that hitherto depended on agriculture activities as their major source of livelihood have ceded their farms and lands to mining activities without compensation or with very minimum compensation which did not restore livelihoods. Land takeovers restrain people especially women from having access to forest products like firewood, snails, and palm fruits that serve as source of income for community women. In instances that compensation payments have been made, the affected people have complained about the process not being fair, the amount being paid late and inadequate. In a communities such as Akyem Saaman, affected people received as low as GHS 1000.00 for an acre of cocoa farm from mining companies. With no alternative means of livelihood, communities that are affected are left with no option but to take part in sometimes life threatening illegal mining activities to sustain their livelihood⁵⁸.

The informal and often artisanal operations being carried out within a framework outside the law became regarded as illegal as they operated on concessions of large scale multinational mining companies. This led to a trend of perpetual confrontation and conflict with security agencies. In recognition of the potential of the activity to contribute to the economy and to address the rather unacceptable subsisting situation, in 1986 government laid the foundation for recognition of ASM operations and its associated activities with the enactment of PNDC Law 153. This early legislation used the term “small scale mining” which was also deemed to include artisanal mining, and set the stage for formalising the ASM subsector, acknowledging its importance in Ghana's mineral landscape. Two years later, in 1988, a World Bank study confirmed and highlighted the subsector's relevance and the pressing need for its formalisation by revealing alarming annual revenue losses of up to \$10 million due to gold smuggling and other irregularities. The Minerals Commission with the World Bank's assistance aim to formalise the sector led to the passage of the Small-Scale Gold Mining Act of 1989 (PNDC Law 218) along with other laws; notably, that governing the use of mercury, the Mercury Act, 1989(PNDCL 217), and that which transformed the Diamond Marketing Corporation into the Precious Minerals Marketing Corporation (PMMC), under the Precious Minerals Marketing Corporation Act, 1989 (PNDCL 219). These legislative changes sought to streamline and regulate the ASM sector⁵⁹.

In 2006, ASM regime was integrated into the new Minerals and Mining Act, 2006 (Act 703). Sections 81 to 99 apply to Small Scale Mining. Section 86 of the Minerals and Mining Act, 2006 (Act 703) provides that the size of land in respect of which a licence may be granted for small-scale mining shall be determined by the number of blocks prescribed under the law. The interpretation section of the Act further defines a “block” as an area measuring 21 hectares⁶⁰. There is no mention of artisanal mining. In Ghana, Artisanal and Small Scale Mining is subsumed under

⁵⁸ Wacam (2018) Asetsenapa Newsletter

⁵⁹ 2020 Ghana EITI technical report on the ASM

⁶⁰ Minerals and Mining Act ,Act 703 ,Section 86

Small Scale Mining (SSM). Therefore, even though Act 703 refers to small scale mining, this includes the artisanal operators⁶¹.

Artisanal and Small Scale Mining has evolved from the artisanal stage through the use of rudimentary equipment such as: shovels, pick axes and sluice boards to currently semi-mechanised operations involving the use of equipment such as excavators, bulldozers and Washing Plants. According to Minerals and Mining Act 2006 (Act 703), Small scale mining operation means mining operation over an area of land in accordance with the number of blocks prescribed. The duration of small scale mining licence is five years and renewable upon satisfactory performance during the first term⁶².

Today, ASM is a major sub-sector in Ghana's mining subsector catering to the livelihood of millions of Ghanaians around the country. This is contributing to the informal economies of their local communities. It employs an estimated one million people and supporting approximately 4.5 million more⁶³. The industry also serves as a major source of minerals for the country's jewellery industry serving the country's goal to diversify its economy through value addition.

Furthermore, ASM activities have often served as the frontier to larger-scale exploration efforts, where they identify mineral-rich areas that are subsequently the focus of substantial industrial investment by large scale mining companies. In some cases, ASM operators contribute to the development of their communities such as investment in local infrastructure, schools and health.

Production wise, ASM makes a contribution to Ghana's production of gold. It was responsible for 43% (2.1 million ounces) of the total output of gold in 2018, 36% in 2019, and 30% in 2020. ASM has, in addition accounted for about 100% of the diamond production of Ghana, indicating its entrenched and centralised nature as a key player in the mineral economy of the nation.⁶⁴ Irrespective of these contribution, It is difficult to get the accurate number of people engaged in the industry. Some authoritative sources estimate that between 70 and 85 per cent of artisanal small-scale miners are operating illegally in the country⁶⁵.

Over the past decade, Ghana has experienced a major influx of foreign miners, particularly from China, into the artisanal small-scale gold mining sector. Beginning around 2006 and intensifying with rising gold prices after 2008, tens of

⁶¹ Minerals Commission (2015) Artisanal & Small Scale Mining (ASM) framework

⁶² Minerals and Mining Act Act 703,2006

⁶³ McQuilken, J., and Hilson, G. (2016). Artisanal and small-scale gold mining in Ghana: Evidence to inform an 'action dialogue

⁶⁴ Minerals Commission 2021, Special training session for Judges and Magistrates on the offences and penalties under the under Ghana's Mineral's and Mining Act,2006, Golden Tulip hotel ,Kumasi

⁶⁵ University of Ghana (2024). *UG Climaxes 2024 DSRA Celebration with a Focus on Galamsey and the need to Preserve the Environ-ment*. <https://ug.edu.gh/news/ug-climaxes-2024-dsra-celebration-focus-galamsey-and-need-preserve-environment> ;Eduful, M., Alsharif, K., Eduful, A., Acheampong, M., Eduful, J., and Mazumder, L. (2020). The illegal artisanal and small-scale mining (galamsey) 'menace' in Ghana: is military-style approach the answer? *Resources Policy*, 68: 101732, 1–14; ⁶⁵ Ayelanuzo and Aziabah (2025) State Capture in the Militarized Fight Against Illegal Small-Scale Goldmining in Ghana

thousands mainly from Shanglin County, Guangxi, and known locally as the “Shanglin gang” entered the country, often bypassing immigration controls via neighbouring Togo or tourist visas. The exact numbers of such irregular migrants is not known, precisely due to the evasion of immigration laws. But it can be safely stated that the large majority were from China and that they numbered in the tens of thousands to fifty thousand⁶⁶. Though Chinese nationals dominate the foreigners engaged in galamsey in Ghana, some also come from other neighbouring African countries such as Togo, Burkina Faso, and Mali and non-African countries such as India, Serbia, Armenia, Russia, and Ukraine. The involvement of foreigners in ASGM especially the nationals of China, is linked directly to the mechanisation and semi-industrialisation that it has witnessed during this current era of mining.⁵⁴ Their arrival marked a significant shift in the dynamics of Ghana’s artisanal mining, with irregular migration making exact numbers difficult to determine.

Ayelanuzo and Aziabah (2025) argue that what was once regarded as Traditional artisanal and small-scale mining (TAM) has evolved into Capitalist Medium-Scale Mining (CMM); a highly mechanised and profit-driven enterprise. This perspective underscore that the sector’s transformation from a relatively sustainable, subsistence-based livelihood for the subaltern classes into a capitalist, profit-oriented industry has resulted in severe and, in many cases, irreversible ecological damage to Ghana’s natural environment^{54, 67}.

Mechanised artisanal and small scale mining, which is being conducted with heavy mining equipment, changed the ASM history. It has also signaled the start of the capitalist elites' use of mining to evict rural people just as the large scale companies that hitherto relied on artisanal mining for subsistence. In order to increase their profits, the power elites use the pull factors to invest money in CMM. They do this by purchasing large mining equipment, obtaining large land areas as mining concessions and employing labourers to work on these concessions⁵⁴.

A fairly structured hierarchy of operators exist within this highly mechanised ASM activities. They range from buyers through concession owners, ghetto or pit owners, miner to women and children who provide some form of support services, such as pounding food and transporting ore. The relationship between these actors can also be described as contentious. This is because buyers usually prefinance the activities of these groups and expect repayment in the form of gold. There are also problems between ghetto owners, on one hand and miners and women who work for them over meagre payments⁶⁸.

The increasing use of mechanised equipment and the widespread informal and often illegal nature of many operations have significantly expanded gold output from the

⁶⁶South China Morning Post, 7 July 2013

⁶⁷ Crawford, G., and Botchwey, G. (2017). Conflict, collusion and corruption in small-scale gold mining: Chinese miners and the state in Ghana. *Commonwealth & Comparative Politics*, 55(4), 444–470.

⁶⁸ Commission on Human Rights and Administrative Justice (2008) The state of human rights in mining communities in Ghana

ASGM sector. What began as survival-based, labour-intensive artisanal activity has, in many instances, transformed into capital-intensive, semi-industrialised mining ventures blurring the lines between traditional small-scale mining and commercial operations. As a result, Ghana's ASM gold production has surged dramatically from just 17,250 ounces in 1990 to an estimated 1.6 million ounces in 2016 highlighting the sector's growing contribution to national gold output, albeit through methods that often defy the sustainability of resource governance. Gold production from ASM in 1990 was below 20,000 ounces, and this accounted for less than 5% of the total gold produced that year. In 2016, gold produced from ASM increased significantly to 1.6 million ounces, accounting for close to 40% of the total gold produced in the country^{61, 69}.

Ayelanuzo and Aziabah (2025) draw the conclusion that it is consequently dishonest for Ghanaian state authorities to discursively describe CMM as small-scale mining (ASM) and then award licenses to the capitalist class as ASM operators⁵⁴. Similarly, it is problematic for the capitalist class to apply for and consider itself ASM operators, even if their contiguous concessions span many kilometers.



⁶⁹ Owusu O, Bansah KJ, Mensah AK. (2019). "Small in size, but big in impact": socio-environmental reforms for sustainable artisanal and small-scale mining. *Journal of Sustainable Mining*, 18(1), 38–44.

5. Legal and Regulatory Framework for Artisanal and Small-Scale Mining



Built on the 1992 Constitution of the Republic of Ghana, the main legislation regulating the operation of the mining industry in Ghana is the Minerals and Mining Act, 2006 (Act 703), as amended by Act 794 of 2010, Act 900 of 2015, and Act 995 of 2019. While Act 703, as amended, governs all mining activities, sections 81 – 99 apply exclusively to small scale mining.

In Ghana, all minerals in their natural state are owned by the state and held in trust by the President; meaning, individuals or entities cannot mine without obtaining legal authorisation. The Minerals and Mining Act, Act 703, requires that anyone engaging in mineral exploration or mining including small-scale mining must first secure a mineral right or license. Specifically for small-scale mining, Section 82 mandates that no person may operate without a valid license issued by the Minister or an authorised officer, reinforcing the need for formal regulation and legal compliance in the sector. Section 1 of the Minerals and Mining Act, Act 703, states that “Every mineral in its natural state in, under or upon land in Ghana, rivers, streams, water-courses throughout the country, the exclusive economic zone and an area covered by the territorial sea or continental shelf is the property of the Republic and is vested in the President in trust for the people of Ghana).

Section 9(1)(2) of Act 703 also provides for mining activities requiring a mineral rights. It provides that despite a right or title which a person may have to land in, upon or under which minerals are situated, a person shall not conduct activities on or over land in Ghana for the search, reconnaissance, prospecting, exploration or mining for a mineral unless the person has been granted a mineral right in

accordance with this Act. Activities conducted under a mineral right shall be limited to the activities permitted by the mineral right.

Furthermore, section 10 states that unless otherwise provided in this Act, a mineral right shall not be granted to a person unless the person is a body incorporated under the Companies Code, 1963 (Act 179), under the Incorporated Private Partnerships Act, 1962 (Act 152) or under an enactment in force⁷⁰.

With emphasis on small scale mining activities Section 82, sub-sections 1 and 2 provide that

(1) “Despite a law to the contrary, a person shall not engage in or undertake a small scale mining operation for a mineral unless there is in existence in respect of the mining operation a licence granted by the Minister for Mines or by an officer authorised by the Minister.”

(2) “An application for a licence shall be made in a form the Minister may direct to the office of the Commission in the designated area and shall be submitted with a fee the Minister may determine”.

This underscores the legal obligation for all mining activities, including artisanal and small scale operations, to be carried out under a valid mineral right.

Section 83 provides that qualification of an applicant for small scale mining. It states that a licence for small scale mining operation shall not be granted to a person unless that person:

- (a) is a citizen of Ghana,
- (b) has attained the age of eighteen years, and
- (c) is registered by the office of the Commission in an area designated under section 90 (1).

The Centre for Environmental Impact Analysis (CEIA) and the Accra Mining Network in further, state that any small-scale mining activity by individuals, group or companies without the following three key requirements is an illegal operation; “galamsey”, which must not be tolerated by all stakeholders:

- License issued by the Minister for Lands & Natural Resources: SSM Reserved for Ghanaians and Licence is Site Specific
- Environmental Permit issued by the EPA (Act 703, Section 18; EPA Act 490 and LI 1652)
- Operating Permit issued by the Minerals Commission ⁷¹

⁷⁰ Section 10 .Minerals and Mining Act ,2006,Act 703

⁷¹ Centre for Environmental Impact Assessment and Accra Mining Network (2021) Handbook for sustainable artisanal small-scale gold mining

To acquire an ASM license, the Minerals and Mining (License) Regulations, 2012 (L.I. 2176), under the Grants of small-scale mining licences (pursuant to regulations 202 to 216) provides

detailed procedures to follow. See Table 1.

Table 1: ASM License Application Procedure

Step 1: Identification of an area of interest

Before the application for a small-scale mining licence, applicant must conduct a cadastral search at the Minerals Commission to ensure the designated area of interest is not under a pending licence or not an already licenced area. This research of the designated area is done to have a swift application process.

Step 2: Submission of an ASM Licence Application Form

Once a designated area is investigated, the applicant can then submit an application to the Minerals Commission through their district office. And pursuant to the Regulation, section 202 clearly states the particulars needed to apply for a small-scale licence

- Application for a small-scale mining licence should be submitted to the district office of the commission in-person or by a representative of the applicant;
- All-important particulars should be clearly stated including name, postal address, residential address, phone number and email;
- The applicant must provide a copy of the national identification card;
- Before the application process, the applicant should have copies of certified company incorporation documents;
- A copy of the Cadastral Search Report, indicating that the area of interest is free immediately prior to submission of the application;
- Clearly state the mineral of interest in the designated area interested to mine
- Applicant must provide evidence of payment of the applicable fees

Step 3: Review and Pre-Licensing Site Inspection

The Minerals Commission will thoroughly review the application submitted within a period of ten days for errors or falsified information provided by the applicant. The district officer will work with the applicant to resolve application discrepancies in the application. If the application is considered to be adequate by the Commission, the district officer of the commission will conduct a pre-licensing site inspection to the designated area of interest to determine whether the plan submitted by the applicant is exactly the same depicted on the ground.

Step 4: Environmental Permit

A letter from the Minerals Commission is issued to the applicant to obtain an environmental permit from the EPA.

Step 5: Consideration of Application for ASM Licence

Upon submission of the EPA permit, the Minerals Commission will consider the application together with the Prelicensing Inspection and make recommendation to the Minister.

Step 6: Notice of Grant or Rejection for ASM licence

When the minister approves a recommendation to grant the application and notifies the Minerals Commission accordingly, the Minerals Commission gives notice of the grant to the Applicant by means of a Notice of Grant of Small-Scale Mining License. The notice requires the applicant to pay the applicable mineral right fees to the Commission and annual ground rent to the Office of the Administrator of Stool Lands. Where the Minister approves a recommendation to reject the application and notifies the Minerals Commission accordingly, the Minerals Commission gives notice of the rejection to the Applicant, including the reasons for the rejection.

Step 7: Acceptance of Grant of an ASM License

The applicant is required to pay applicable fees and give notice to the Minister and the Minerals Commission in writing of acceptance of the grant within 60 days after being notified by the Minerals Commission of the grant.

Step 8: License Agreement

After the applicant pays the applicable fees prescribed, the Minerals Commission prepares the license agreement for the applicant to endorse. The agreement is then sent to the sector minister for the minister to endorse on behalf of the Government of Ghana.

Step 9: Registration of License

On receipt of the signed agreement, the applicant is required to stamp and register it with the Lands Commission. Applicant is also required to swear an oath and obtain a certificate of proof from the High Court Registry.

Step 10: Secure Regulatory Permit

The applicant will be issued a letter to acquire necessary permits from regulators including Water Resource Commission.

Step 11: Operating Permit

Upon receiving the regulatory permits, the applicant will take the regulatory permits, the signed agreement and a cover letter from Minerals Commission to

the Chief Inspector of mines to obtain an Operating Permit before the commencement of mining activity.

Source: Centre for Environmental Impact Assessment and Accra Mining Network (2021) Handbook for sustainable artisanal small-scale gold mining.

The following laws and regulations also apply to operations of ASM:

- Minerals and Mining (Amendment) Act, 2019 (Act 995);
- Minerals and Mining (General) Regulations, 2012 (L.I. 2173) Regulations 24-25
- Minerals and Mining (Support Services) Regulations, 2012 (L.I. 2174) Regulations 2(2) & 5
- Minerals and Mining (Compensation and Resettlement) Regulations, 2012 (L.I. 2175)
- Minerals and Mining (Licensing) Regulations, 2012 (L.I. 2176) Regulation 202-256
- Minerals and Mining (Explosives) Regulations, 2012 (L.I. 2177)
- Minerals and Mining (Health, Safety & Technical) Regulations, 2012 (L.I. 2182) Regulation 469-492
- Minerals and Mining (Tracking of Earth Moving & Mining Equipment) Regulation, 2020 (L. I. 2404)
- Minerals and Mining (Local Content and Local Participation) Regulation, 2020 (L.I. 2431)
- Environmental Protection Act, 2025, (Act 1124)
- Environmental Assessment Regulations, 1999 (LI 1652)
- Environmental Protection (Mining in Forest Reserves) Regulations, 2022 (L.I. 2462)
- Forestry Commission Act (1999) Act 571
- Water Resources Commission Act, 1996, Act 522

Other Relevant Policies

- The Minerals and Mining Policy of Ghana, of 2014;
- The National Environmental Policy, of 2012;
- The Ghana National Land Policy, of 1999;
- National Environmental Policy
- National Water Policy
- Multilateral Mining Integrated Project of 2017 (MMIP)
- Community Mining Scheme- The Small-Scale and Community Mining Operational Manual of 2021⁷²

⁷² GHEITI 2021-2022 Mining Sector Report

- The Responsible Cooperative Mining and Skills Development Programme, 2025 (COMSDEP)

Figure 1: Key Governmental Institutions and their Roles

| Ministry of Lands and Natural Resources | Role | Responsibility |
|---|-------------|--|
| Ministry of Lands and Natural Resources | Policy | Ensures sustainable management of natural resources, formulates policies and regulations for environmental protection, stakeholder rights, and sustainable mining practices. Issues licenses and permits for LSM and ASM operations, enforces compliance. |
| Minerals Commission | Regulator | Develops and coordinates mineral sector policies, regulates and manages mineral resources. Serves as a technical adviser to the Minister of Mines, plays a pivotal role in the regulation, licensing, and monitoring of mining operations, including ASM. |
| Inspectorate Division of the Minerals Commission | Compliance | Conducts regular inspections and audits of mining sites, including small-scale mining operations, to assess compliance with approved mining plans, environmental standards, safety protocols, and other regulatory requirements. Oversees and regulates ASM operations, focusing on promoting responsible mining practices and preventing illegal mining activities. |
| Environmental Protection Agency | Regulator | Ensures effective protection, preservation, and improvement of the country's environment. Collaborates with regulatory bodies to ensure that ASM operations are carried out in an environmentally responsible manner. Evaluates the impact of ASM operations on the environment before granting environmental permits. |

| | | |
|---|------------|--|
| Forestry Commission | Regulator | All mining operations within forest reserves require a Forest Entry Permit issued by the Forestry Commission. This permit is mandatory even after obtaining mineral rights, EPA environmental approval, and water-use permits ⁷³ |
| Ghana Geological Survey Authority | Compliance | Collects geo-scientific data, serves as a National Repository for data generated by public and private entities, including mining and mineral exploration companies. |
| Lands Commission | Policy | Provides an integrated and efficient system for the administration and management of lands in the country. |
| Water Resources Commission | Regulator | Prevent mining operations from mining in water bodies; Enforcing sanitation standards in the ASM subsector; provide surveying and mapping services where necessary. The role of the commission is to provide national water maps to the Minerals Commission which will help in the demarcating lands for ASM. |
| Ministry of Local Government and Rural Development | Policy | Provides policy directions for local governance in Ghana. Decentralised governance that will help to increase the participation of small-scale miners in policy formation. |
| Ghana Revenue Authority | Compliance | Responsible for mobilising taxes from the ASM subsector. Provide receipts of taxes received from ASM actors. The GRA is the sole institution set up to tax all institutions including the ASM subsector. GRA comes up with strategies to mobilise taxes from the ASM subsector. |
| Ghana Gold Board (GoldBod) | Compliance | The Ghana Gold Board (GoldBod) is a body corporate established by an Act of Parliament (ACT 1140) in the year 2025 to oversee, regulate and undertake the buying, selling, assaying, refining, exporting and other related activities in respect of Gold and other Precious Minerals in Ghana. ⁷⁴ The GoldBod |

⁷³ Environmental Protection (Mining in Forest Reserves) Regulations, 2022 LI2462

⁷⁴ Ghana Gold Board(GoldBod) <https://goldbod.gov.gh/about-us/>

| | | |
|--|---------------|--|
| | | per section 78 of ACT 1140, took over the rights, obligations, assets, liabilities and workforce of the Precious Minerals Marketing Company (PMMC) Limited. |
| Ghana National Association of Small-Scale Miners (GNASSM) | Industry Body | Umbrella body of all registered small-scale miners in Ghana. Encourages adherence to rules and regulations governing ASM activities. Strives to increase membership and facilitates the formalisation of artisanal and small-scale operations. Promotes transparency and accountability within the sector. |
| Ministry of Gender and Social Protection | Policy | Gender equity in mining areas, Policies to reduce child labour in mining sites. |
| Office of the Administrator of Stool lands | Compliance | Responsible for collecting, managing, and disbursing revenues from stool lands—lands controlled by a stool |

Source: GHEITI 2021-22 Mining Sector Report; 2020 Ghana EITI technical report on the ASM sector

6. Negative Consequences of Irresponsible Mining in ASGM in Ghana



In mineral rich African countries, the ASGM industry has helped with employment creation and expansion of national as well as local economy of host communities. The ASGM accounted for 35% of revenue from the mining sector in 2019. It also contributed to 7% of the country's GDP from the gold mining sector⁷⁵.

Nevertheless, as ASGM operations rapidly expand, incoherent or weak legislation and enforcement, use of obsolete technologies, among others have led to limited economic benefits to the miners, host communities and the mineral rich countries. It which manifest itself in significant environmental damage and health burdens at the local level.⁷⁶

6.1 Environmental and Human Health Challenges

One of the most critical impacts is widespread deforestation, which has led to the loss of biodiversity and the degradation of vital ecosystem services. Satellite imagery indicates a marked decline in forest cover in districts like Tarkwa–Nsuaem, Prestea–Huni Valley, and Atiwa. These areas, once characterised by dense forests and ecological richness, now face the extinction of native flora and fauna, disruption of

⁷⁵ Taux, K., Kraus, T. and Kaifie A. (2022): Mercury exposure and its health effects in workers in the artisanal and small-scale gold mining (ASGM) sector—a systematic review. *Int J Environ Res Public Health* 19(4):2081. <https://doi.org/10.3390/ijerph19042081>

⁷⁶ Basu, N., Clarke, E., Green, A., Calys-Tagoe, B., Chan, L., Dzodzomenyo, M., Fobil, J., Long, R. N., Neitzel, R. L. and Obiri, S. (2015): Integrated assessment of artisanal and small-scale gold mining in Ghana— part 1: human health review. *Int J Environ Res Public Health* 12(5):5143–5176. https://doi.org/10.3390/ijerph1205_05143

rainfall patterns, and diminished carbon sequestration capacity⁷⁷. Between 2011 and 2015, there was expansion of ASGM in cocoa-growing areas in southern Ghana. The rate of expansion of galamsey increased from 12,376 ha (+113%) for 2011–2013 to +13,414 ha (+58%) for 2013–2015. So, the galamsey area has more than tripled from 10,907 ha in 2011 to 36,696 ha in 2015⁷⁸. Several protected forest reserves, in vicinity of a river, are directly encroached on by galamsey. The Anhwiaso East, the Tano Ofin Extension, the Upper Wassaw, the Oda River, the Subin Shelterbelt, the Denyau Shelterbelt, the Tano Nimiri, the Pra Anum, and the Atewa Range are among the most affected reserves. The destruction of these forest reserves increased from 53 to 603 ha between 2011 and 2015 within the change area⁷⁹. As a result of these high-level of degradation, the World Bank in 2021 approved \$103.4 million for Ghana under the Ghana Landscape Restoration and Small-Scale Mining project to reverse land degradation caused by mining and strengthen integrated natural resource management in about 3 million hectares of degraded landscapes⁸⁰.

Furthermore, the amount of “mine water” stagnant water in abandoned pits expanded from 1.52 ha in 2008 to 200 ha in 2013; an increase of more than 13,000%. Stagnant water exists because when mining operations move on, concession holders do not reclaim land despite requirements ensured during the licensing processes⁸¹ (Hausermann et al., Ayelanuzo and Aziabah (2025)).

The pollution of water bodies such as rivers, basins, sub-basins, and tributaries/streams is one of the most serious and life-threatening menace of mechanised and medium-scale mining. This is noticeable in the alarming rate of the pollution of rivers and drying up of water bodies⁸². (Hilson, 2017; Eduful et al., 2020; Ayelanuzo and Aziabah 2025).

Additionally, the use of toxic chemicals such as mercury and cyanide in gold extraction processes has resulted in the pollution of major rivers, including the Pra, Ofin, and Ankobra.

⁷⁷ Snapir, B., Simms, D. M., Waine, T. W. (2017). Mapping the expansion of galamsey gold mines in the cocoa growing area of Ghana using optical remote sensing. *International Journal of Applied Earth Observation and Geoinformation*, (58), 225–233; Ayelanuzo and Aziabah (2025) State Capture in the Militarized Fight Against Illegal Small-Scale Goldmining in Ghana

⁷⁸ Ibid.

⁷⁹ Snapir, B., Simms, D. M., Waine, T. W. (2017). Mapping the expansion of galamsey gold mines in the cocoa growing area of Ghana using optical remote sensing. *International Journal of Applied Earth Observation and Geoinformation*, (58), 225–233; Ayelanuzo and Aziabah (2025) State Capture in the Militarized Fight Against Illegal Small-Scale Goldmining in Ghana

⁸⁰ World Bank. (2021, August 30). *Ghana to reverse land degradation with World Bank support* [Press release]. <https://www.worldbank.org/en/news/press-release/2021/08/30/ghana-to-reverse-land-degradation-with-world-bank-support>

⁸¹ Hausermann H., Adomako J., and Robles M. (2020) Fried eggs and all-women gangs: the geopolitics of Chinese gold mining in Ghana, bodily vulnerability, and resistance. *Human Geography*, 13(1), 60–73; Ayelanuzo and Aziabah (2025) State Capture in the Militarized Fight Against Illegal Small-Scale Goldmining in Ghana

⁸² Hilson, G. M., and Maconachie, R. (2017). Formalising artisanal and small-scale mining: Insights, contestations and clarifications. *Area*, 49(4), 443–451. <https://doi.org/10.1111/area.12328>; Eduful, M., Alsharif, K., Eduful, A., Acheampong, M., Eduful, J., and Mazumder, L. (2020). The illegal artisanal and small-scale mining (galamsey) 'menace' in Ghana: is military-style approach the answer? *Resources Policy*, (68), 101732, 1–14; Ayelanuzo and Aziabah (2025) State Capture in the Militarized Fight Against Illegal Small-Scale Goldmining in Ghana.

This contamination poses a significant threat to aquatic life and the health of communities reliant on these water bodies for drinking, fishing, and irrigation. The Ghana Water Company and the Water Resources Commission have consistently raised alarms about the rising costs and risks of water purification in these heavily impacted zones⁸³. Moreover, air and noise pollution caused by machinery and gold-burning practices have led to increased respiratory illnesses and general discomfort in adjacent communities; particularly, affecting children and the elderly⁸⁴. Reports from the EPA, University of Mines and Technology, and the Water Research Institute confirm these trends, highlighting long-term ecological damage that could take decades to reverse⁸⁵.

A study conducted in Dunkwa – on – Offin, an ASGM community by Kwaansa et al⁸⁶., (2010) found that the mean urinary mercury concentration in small-scale miners (1.23 µg/L; range: 0.32–3.62 µg/L) was higher than that in farmers (0.69 µg/L; range: 0.08–2.31 µg/L); while Asante et al., (2007) compared urinary mercury concentrations among Tarkwa miners (3.6 µg/L; range: 0.50–9.4 µg/L), to non-miners living in the same area (4.3 µg/L; range: 1.1–12 µg/L), and non-mining Accra residents (3.1 µg/L; range: 1.4–5.5 µg/L). Similarly, a study by Calys-Tagoe⁸⁷ et al., (2015) in Tarkwa an ASGM community in Ghana revealed that a total of 121 injury episodes involving 95 miners, with an estimated injury rate calculated to be 5.4 per 100 person years from the 404 miners interviewed.

Hence, it can be concluded that a number of scientific studies as well as anecdotal evidence have linked negative health, environmental and socio-economic and socio-cultural challenges to operations of ASGM in Ghana. Strong evidence suggests elevated mercury exposures in workers and ASGM community members, as well as in nearby biotic and abiotic environmental media. There is also some evidence that ASGM miners and community members are exposed to other heavy metals, such as arsenic and cadmium; mobilised during the mining process. Though data on types, severity and frequency of injuries among ASGM miners in Ghana is limited, studies from other countries, preliminary investigations of injuries in ASGM in Ghana, and reports of unsafe working conditions in Ghana suggest that injuries are common among ASGM miners.

⁸³ Water Resources Commission (2022). Annual Report on Water Quality and Pollution Trends.

⁸⁴ EPA Ghana (2021). Environmental Assessment of Small-Scale Mining in Western and Ashanti Regions

⁸⁵ Khazini, L., Dehkharghanian, M. E., & Vaezihir, A. (2021). Dispersion and modeling discussion of aerosol air pollution caused during mining and processing of open-cast mines. *International Journal of Environmental Science and Technology*, 1-12

⁸⁶ Kwaansa-Ansah, E., Basu N. and Nriagu, J. (2010): Environmental and occupational exposures to mercury among indigenous people in Dunkwa-on-Offin, a small scale gold mining area in the south-west of Ghana. *Bull Environ Contam Toxicol* 85(5):476 – 480. <https://doi.org/10.1007/s00128-010-0141-7>

⁸⁷ Calys-Tagoe, B., Ovadje, L., Clarke, E. and Basu, N. (2015): Profile of injuries associated with small-scale gold mining in Ghana. *IJERPH* 12 (7): 7922 - 7937

6.2 Socio-Economic Impact on Local Communities



6.2.1 Livelihood Disruptions

Beyond ecological degradation, illegal mining has inflicted severe socio-economic damage on local communities. Chief among these is the displacement of farmers and the destruction of arable land, which has led to a sharp decline in agricultural productivity especially in cocoa and staple crop cultivation. The point is that, both the artisanal and commercial mechanised mining require one key resource, land. Because it involves the acquisition of huge tracts of land, this inescapably involves the grabbing of land marginalised community groups farm or mine on. They are, thus, not only dispossessed, but their livelihoods are destroyed.

Dispossession or grabbing applies to landed or landless peasant. Because they are alienated from their land, their ability to access and use it have been directly or indirectly interdicted by the activities of mining operators⁸⁸. Farming activities close to or adjoining these mining activities are equally forced to cease. Cocoa farms are often flooded by the tailings of these mining operators, and the chemicals used in mining render these farms unproductive. Access to farms are blocked, and the sources of water hitherto depended on for mining activities are diverted and polluted by the miners for their activities⁸⁹. The degradation and loss of farmland have forced many families to abandon their livelihoods, exacerbating rural poverty and food insecurity. Additionally, the lack of clear land tenure and overlapping claims among traditional authorities, individuals and miners has sparked conflicts and, in some instances, violence. Women, who play a central role in subsistence farming, have been disproportionately affected, facing both economic disempowerment and loss

⁸⁹ Siaw, D., Ofosu, G., & Sarpong, D. (2023). Cocoa production, farmlands, and the galamsey: Examining current and emerging trends in the ASM-agriculture nexus. *Journal of Rural Studies*, 101, 103044.

of household food supplies.⁹⁰ Land takeovers for mining activities also restrain women from having access to forest products like firewood, snails, and palm fruits that serve as source of income for community women. In instances that compensation payments have been made, the affected people have complained about the process not being fair, and the amount being paid late and inadequate. In a community such as Akyem Saaman, affected people have received as low as One thousand Ghana Cedis (GHS 1000.00) for an acre of cocoa farm as compensation for the takeover of their farms for mining activities. With no alternative means of livelihood, communities that are affected are left with no option but to take part in sometimes life threatening illegal mining activities to sustain their livelihood.⁹¹ The convergence of these environmental and socio-economic pressures underscores the urgent need for comprehensive, community-inclusive strategies to address the illegal and irresponsible mining crisis.

6.2.2 Public Health Impact

Illegal gold mining practices have introduced serious public health risks in affected communities; particularly, through widespread and unregulated use of mercury in gold extraction. Often handled without protective equipment or proper containment measures, mercury exposure has resulted in neurological damage, developmental disorders, and other chronic health conditions⁹². Medical studies and field reports have linked this exposure to cases of mercury poisoning, miscarriages, and congenital deformities, especially in mining-intensive zones.

In addition to chemical exposure, galamsey activities contribute to elevated rates of respiratory illnesses, skin infections, and waterborne diseases such as cholera, dysentery, and typhoid.⁹³ Dust emissions from excavation sites, coupled with fumes from open burning of gold amalgam, degrade air quality, affecting both miners and nearby residents. The health risks are further compounded by the absence of sanitation infrastructure in informal mining settlements, where overcrowding and poor hygiene conditions accelerate disease transmission.

Ghana is also running out of fresh water from its rivers. Bearing in mind that these are the sources of water for the Ghana Water Company Limited (GWCL), which treats and distributes water to Ghanaians. A recent case in point is the pollution of the Pra river in the Central Region of Ghana. The GWCL issued a press release in August 2024, which reported that about sixty per cent of the catchment capacity of the Pra is silted because of illegal mining. As a result of this, the river is recording an average

⁹⁰ Addai, H., Adjei, K. J., Eshun, B., Chemah, D. N., & Appiah, W. (2024). Interrogating the impact of illegal artisanal and small-scale mining on agriculture at east akim municipality. *Acc journal xxx*, 7.

⁹¹ Wacam (2018) Asetsenapa Newsletter

⁹² Nunoo, S., Manu, J., Owusu-Akyaw, F. K., & Nyame, F. K. (2022). Impact of artisanal small-scale (gold and diamond) mining activities on the Offin, Oda and Pra rivers in Southern Ghana, West Africa: A scientific response to public concern. *Heliyon*, 8(12).

⁹³ Gyamfi, O., Sørensen, P. B., Darko, G., Ansah, E., Vorkamp, K., & Bak, J. L. (2021). Contamination, exposure and risk assessment of mercury in the soils of an artisanal gold mining community in Ghana. *Chemosphere*, 267, 128910.

turbidity of 14,000 NTU which is far above the maximum of 2,000 NTU; the parameters within which the water can be treated for drinking⁹⁴.

And vulnerable groups particularly children, pregnant women and the elderly face the greatest health burdens, highlighting the urgent need for integrated public health interventions in galamsey-prone areas.

6.6.3 Child Labour

Child labour remains a pervasive and troubling feature of illegal mining operations in Ghana. In many galamsey-prone areas, children particularly underage boys are engaged in hazardous, physically demanding tasks, such as digging, carrying heavy loads, and working in unstable pits. Girls, on the other hand, are commonly involved in washing sediment, transporting materials, or selling gold, often under exploitative conditions.⁹⁵

This early and unsafe integration into the informal labour market disrupts children's access to formal education, leading to high dropout rates and weakened academic outcomes. As a result, child labour in illegal mining not only violates national and international child protection standards; but, also perpetuates intergenerational cycles of poverty, curtailing opportunities for social mobility and long-term development. The normalisation of children's participation in galamsey activities undermines both community resilience and national human capital development, necessitating urgent multisectoral interventions.

6.2.4 Social Fragmentation

The influx of miners, including many external actors, has significantly altered the social dynamics in formerly cohesive rural communities. Tensions have risen as competition over resources and uneven benefits have created divisions among residents. In some areas, vigilante groups and local militias have emerged some established to protect mining interests, others formed to extort illegal operators. This volatile environment has undermined local governance and led to sporadic violence.

Traditional authorities, once central to conflict resolution and land allocation, have in some cases lost legitimacy due to perceived or actual complicity in illegal mining operations⁹⁶. Their roles are often contested, weakening communal bonds and local institutional authority. Women have been disproportionately affected by the resulting instability. Increased economic hardship, combined with displacement and reduced access to secure livelihoods, has diminished their autonomy and social

⁹⁴ Ayelanuzo and Aziabah (2025) State Capture in the Militarized Fight Against Illegal Small-Scale Goldmining in Ghana

⁹⁵ Addo, A. M., Nyantakyi, E. K., Appiah-Adjei, E., Ackerson, N. O. B., Yeboah, S. I. I. K., Borkloe, J. K., ... & Owusu, M. (2023). Environmental and health impacts of mining: a case study in Kenyasi-Ahafo Region, Ghana. *Arabian Journal of Geosciences*, 16(5), 334.

⁹⁶ Takyi, S. (2024). Natural resources extraction and education in Ghana: Understanding the impact of gold mining on children's education in the kenyasi community (master's thesis, oslo metropolitan university).

standing⁹⁷. Moreover, several NGOs have reported a troubling rise in gender-based violence in galamsey-affected communities, often exacerbated by the influx of transient male workers and the absence of effective protective services.

7. Political Economy and Stakeholder Analysis

Illegal mining in Ghana thrives within a deeply entrenched and multifaceted political economy, shaped by the competing interests of various state and non-state actors. This complexity has significantly undermined governance, enforcement, and reform efforts within the small-scale mining sector.

7.1 Local Political Actors

Local political actors have emerged as influential stakeholders in the perpetuation of illegal mining in Ghana. Frequently, these individuals are implicated in shielding galamsey operations, motivated by a combination of electoral incentives, financial patronage networks and political expediency. In many cases, politicians at the district and constituency levels leverage relationships with illegal miners to secure campaign financing or consolidate voter support; particularly, in mineral-rich regions where galamsey constitutes a significant source of livelihood⁹⁸.

Such political entanglements compromise the impartiality and credibility of enforcement mechanisms, as authorities may be pressured to overlook illegal activities or suspend crackdowns during politically sensitive periods. The instrumentalisation of galamsey for electoral gains has led to a cycle of selective enforcement and policy reversals, where meaningful reform efforts are routinely stalled or undermined once political costs become apparent. This dynamic contributes to the broader problem of governance paralysis that continues to hinder long-term, sustainable solutions to the illegal mining crisis⁹⁹.

7.2 Traditional Authorities

Traditional authorities have historically held significant influence in matters of local governance, land administration and community dispute resolution in Ghana. In the context of small-scale mining, their roles have become increasingly complex, and at times, contradictory. While some chiefs and family heads have entered into informal leasing arrangements with illegal miners, often in pursuit of short-term

⁹⁷ International Labour Organization (2021). Child labour in mining and quarrying in Ghana.

⁹⁸ Abdulai, A. G., Buur, L., & Stacey, P. (2025). Party political campaigning and the illegal extraction of gold in Ghana. *World Development*, 192, 107008

⁹⁹ Aziabah, M. A., & Ayelazuno, J. A. (2024). The failure of the militarised fight against 'Galamsey' in Ghana: A critical overview of the class and political dynamics. *Journal of Planning and Land Management*, 3(2), 38-51.

financial gains, others have emerged as vocal opponents of galamsey due to its destructive impact on land, water resources, and communal cohesion.¹⁰⁰

However, those traditional leaders who resist illegal mining often face structural limitations, including a lack of legal authority, logistical support and security guarantees. Their capacity to enforce communal by-laws or protect customary lands is further undermined by competing claims over land ownership, political interference and the absence of coherent coordination with state institutions. This internal fragmentation among traditional leaders has made it difficult to present a unified front against galamsey and has, in some cases, eroded public trust in traditional leadership within affected communities¹⁰¹.

7.3 Security Agencies

Security agencies, notably the police and military play a critical but controversial role in the governance of Ghana's small-scale mining sector. While these institutions are mandated to support enforcement operations and protect national resources, multiple reports and investigations have revealed troubling patterns of bribery, collusion and selective enforcement in galamsey-affected areas. Security personnel have been implicated in providing protection to illegal mining operations, leaking information on planned raids, or simply turning a blind eye in exchange for financial inducements¹⁰².

Such conduct do not only reinforces a culture of impunity; but, also undermines public confidence in state institutions, particularly in communities already marginalised by environmental harm and economic disruption. The blurred line between law enforcement and complicity contributes to an accountability vacuum that frustrates efforts to implement sustained and impartial anti-galamsey interventions. Addressing this issue requires institutional reform, improved oversight mechanisms, and the depoliticisation of security assignments related to resource governance.

7.4 Foreign Actors

Foreign involvement; particularly, by Chinese nationals has significantly intensified the scale, capitalisation, and technological sophistication of illegal mining operations in Ghana. These actors frequently operate through informal partnerships with local agents, providing access to excavators, dredging equipment and financial

¹⁰⁰ Ampaw, E. M., Chai, J., Jiang, Y., Dumor, K., & Edem, A. K. (2023). Why is Ghana losing the war against illegal gold mining (Galamsey)? An artificial neural network-based investigations. *Environmental Science and Pollution Research*, 30(29), 73730-73752.

¹⁰¹ Asori, M., Mpobi, R. K. J., Morgan, A. K., Apoanaba, T. A., Katey, D., Ampofo, S. T. & Appiah, D. O. (2023). Is illegal mining socio-politically entrenched? An opinion piece of the interaction between formal politics and chief dominance in mineral governance, and its influence on fighting Galamsey in Ghana. *GeoJournal*, 88(2), 1953-1963.

¹⁰² Aziabah, M. A., & Ayelazuno, J. A. (2024). The failure of the militarised fight against 'Galamsey' in Ghana: A critical overview of the class and political dynamics. *Journal of Planning and Land Management*, 3(2), 38-51.

capital that far exceeds the means of typical artisanal miners.¹⁰³ The influx of foreign capital has transformed galamsey from a predominantly subsistence-level activity into a semi-industrial enterprise with far-reaching environmental and social consequences.

This collaboration between foreign operators and local stakeholders further complicates governance and enforcement. The overlapping interests of economic profiteering, political patronage, and institutional complicity have fostered a regulatory environment where enforcement is often inconsistent, selective, or timed to serve electoral interests. Such conditions have produced a policy paralysis, wherein systemic reform is continuously undermined by short-term political calculations and entrenched interests across multiple levels of governance¹⁰⁴.

8. Policy Gaps And Stalemates

Despite a legal framework governing small-scale mining in Ghana, the country continues to face significant challenges in enforcement and policy coherence. These gaps have enabled illegal mining to persist and flourish in many parts of the country. Some of them are discussed below:

8.1 Enforcement Failures

Despite the existence of legal framework regulating small-scale mining; notably, the Minerals and Mining Act, 2006 (Act 703) and its subsequent amendments, enforcement remains critically weak. Chronic under-resourcing of regulatory bodies, such as the Minerals Commission, Environmental Protection Agency, and district-level task forces, has severely limited their ability to monitor operations, conduct inspections, and implement sanctions effectively. Many local offices lack basic transportation, technical equipment and trained personnel required to carry out enforcement mandates.

Moreover, widespread corruption within enforcement agencies has further eroded the integrity of anti-galamsey efforts. Field reports and investigative accounts reveal that some officials accept bribes, selectively apply regulations or collude directly with illegal miners. These practices foster a culture of impunity, enabling illegal operations to persist openly in defiance of national laws. Without systemic reforms to address these enforcement failures, regulatory initiatives will continue to falter, undermining public trust and weakening the overall legitimacy of resource governance in Ghana.

¹⁰³ Modern Ghana News (2023). Investigative Report on Foreign Involvement in Galamsey

¹⁰⁴ Lindström, A. (2025). Deforestation and Illegal Gold Mining: A Comparative Analysis of Governmental Strategies in Ghana, Sierra Leone and Zimbabwe.

8.2 Institutional Overlap and Poor Coordination

A significant structural challenge in Ghana's efforts to regulate small-scale mining lies in the institutional fragmentation among key regulatory bodies. Agencies such as the Minerals Commission, Environmental Protection Agency, and Forestry Commission all play critical roles in managing mining activities; yet, their mandates often overlap without clear boundaries or coordination frameworks. This has resulted in operational redundancies, inconsistent policy implementation, and blurred lines of accountability.

The absence of a unified command structure or inter-agency coordination mechanism has made enforcement fragmented and inefficient. For example, site inspections, license verification, and environmental compliance checks are often duplicated or delayed due to poor communication among agencies. Additionally, stakeholders report confusion regarding which institution holds ultimate authority in regulating specific aspects of small-scale mining operations. These inefficiencies not only hamper timely enforcement; but, also create opportunities for illegal miners to exploit regulatory loopholes and evade oversight. Addressing this issue requires an institutional realignment that clarifies roles, enhances inter-agency coordination, and promotes shared accountability in the governance of Ghana's mineral resources.

8.3 Partisan Politicisation

Efforts to combat illegal mining in Ghana have been significantly undermined by partisan politicisation, wherein anti-galamsey campaigns are frequently aligned with electoral cycles and political interests rather than guided by long-term policy goals. Enforcement actions tend to intensify during election off-seasons and wane during politically sensitive periods, reflecting a broader tendency to use environmental regulation as a tool of political strategy, rather than public service. This cyclical and inconsistent approach has eroded public trust, especially in affected communities that witness selective crackdowns, uneven application of the law, and abrupt policy reversals.

The politicisation of enforcement also discourages institutional continuity across successive administrations, as new governments may abandon or dilute previous efforts for political expediency. As a result, legitimate small-scale miners face regulatory uncertainty, while illegal operators exploit these inconsistencies to continue harmful practices. Ultimately, these dynamics weaken environmental governance, exacerbate natural resource depletion, and obstruct efforts to build a sustainable and transparent mining sector. Addressing this challenge requires stronger accountability mechanisms, institutional independence, and the deliberate depoliticisation of regulatory enforcement.

9. Recommendations

9.1 Institutional Reform

Addressing illegal mining in Ghana requires robust institutional restructuring and policy harmonisation. A critical first step is the establishment of a unified inter-agency task force that consolidates the enforcement functions of key institutions such as the Minerals Commission, Environmental Protection Agency, Forestry Commission, and relevant security agencies. This task force must operate under a clearly defined mandate with independent oversight mechanisms to ensure transparency, accountability, and insulation from political interference.

Additionally, there is a pressing need to review and streamline existing mining laws; particularly, the Minerals and Mining Act, 2006 (Act 703) and its subsequent amendments. Regulatory loopholes and inconsistencies within the legal framework continue to be exploited by both licensed and illegal operators and complicit actors. A comprehensive legal audit should be undertaken to enact laws that will protect the environment and socio cultural wellbeing of the people. In view of the aforementioned:

- mining sector policies and laws must declare Forest Reserves, Globally Significant Biodiversity Areas, Ramsar Sites, Wild Life Sanctuaries, National Parks and Cultural Sites as 'No Go Zones' for mining operations.
- Section 17 of Act 703 which grants water rights to mining companies should be removed from the Act and replaced with provisions that will protect water bodies. Ghana is gradually becoming a water-stressed nation and the Act must be seen to be working towards the objective of protecting water bodies in mining communities.
- In line with the signing and ratification of the Minamata Convention on Mercury (2013) Article (7), the State should put in place measures to prevent the use of mercury in mining and to repeal the use of mercury in all mining related-laws.
- Information that the host mining communities and the public may require to make informed decisions on environmental and nature protection; socio-economic-cultural rights, should be disclosed to the public at no cost to the public and host mining communities.
- To protect rivers and streams from pollution, siltation and discharges of harmful contaminants, the buffer zone allocation to protect such water bodies from an active mining area to the water body should be at least 200 metres from the water body.

9.2 Community Engagement & Empowerment

- The policies and legal framework must also include and reflect human rights provisions, and mining companies must be required to observe, promote, and

respect human rights in all mineral development and related activities in host communities.

- The policies should also include participation of host communities and Civil Society Organisations (CSOs) in environmental standard enforcement. Mining communities' livelihoods have been destroyed, their rivers have been polluted, the air has been polluted with dust; there is excessive noise from rock blasting, and their houses have cracked as a result of the vibration from rock blasting. The regulatory bodies in charge of ensuring mining operation standards reside elsewhere.
- The Free Prior and Informed Consent Principle should be internalised in the Minerals and Mining Act.
- Host communities should be involved in the processes leading to the acquisition of the mineral rights, and the process should be based on the "Free, Prior, and Informed Consent" (FPIC) concept. The Free, Prior, and Informed Consent should form the basis for the decision-making processes in the entire life cycle project implementation.

9.3 Transparency And Accountability

Ensuring transparency in the governance of Ghana's mineral resources is essential to dismantling the networks that enable illegal mining. A foundational step is to establish a publicly accessible online registry of all mining licenses, concessions, and permit holders. This platform should include geospatial data, license durations, environmental commitments, and beneficiary ownership disclosures. Such transparency will empower civil society, journalists, and affected communities to track mining activities, expose illegal operations, and demand greater compliance from both companies and regulators

In parallel, legal protections must be enacted and enforced for journalists, community whistleblowers, and environmental defenders who expose illicit mining operations and associated corruption. Intimidation, violence, and legal threats against these actors not only undermine public accountability; but, also restrict the flow of critical information needed for effective reform. Strengthening Ghana's whistleblower legislation and ensuring swift prosecution of those who harass or harm media professionals is essential for creating a culture of openness and civic vigilance.

9.4 National Consensus Building

The persistent failure to sustainably address illegal mining in Ghana reflects a broader lack of national consensus on natural resource governance. To overcome the current policy gridlock, it is imperative to facilitate inclusive, non-partisan dialogue platforms that bring together a broad coalition of stakeholders including CSOs, traditional authorities, youth groups, community leaders, and political actors across party lines. These forums should be guided by evidence, rooted in shared

national interests, and aimed at building long-term consensus on regulatory reforms, environmental protections, and equitable resource distribution.

Equally important is the need to de-link enforcement agencies from direct political appointments to promote institutional neutrality and professionalism. Agencies such as the Minerals Commission, Environmental Protection Agency, and specialised anti-galamsey task forces must operate independently of political cycles and influences. This will help to ensure that enforcement actions are based on law and evidence, not electoral expediency thereby restoring public trust and ensuring the continuity of reforms across successive administrations.

9.5 Impose a Moratorium on Mining Licences

The state should temporarily suspend the issuance of new mining licences to allow for a thorough review of existing operations, strengthen regulations, and prevent further environmental damage.

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Drawing the Linkages: Illegal Mining, Livelihoods, Agriculture and Food Security in Ghana

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1. Introduction



This research investigates the impact of illegal mining on livelihoods, agriculture, and food security in Ghana, driven by the increasing prevalence of unregulated mining activities that threaten sustainable development. While mining contributes to economic growth through job creation, foreign exchange earnings, and infrastructural development, illegal mining - commonly known as "galamsey" has led to severe environmental degradation, including deforestation, water pollution, and land destruction.

A core aspect of this report is an analysis of Ghana's legal and policy frameworks governing mining activities. Despite the existence of comprehensive legislation, such as the Minerals and Mining Act of 2006, (Act 703), challenges persist in enforcement, regulatory capacity, and institutional coordination. These shortcomings often allow illegal mining to operate unchecked, compounding environmental and social issues.

The report also examines the specific challenges posed by illegal mining to rural populations. It highlights how illegal mining disrupts traditional livelihoods by encroaching on farmlands, contaminating water sources, and leading to displacement. Such disruptions threaten food security by reducing land available for cultivation; degrade soil fertility, and increase food prices due to diminished agricultural productivity.

Lastly, the report explores the social and economic ramifications, including community displacements, conflicts, and other related factors that undermine local development efforts at combating illegal mining. It emphasises that combating illegal mining does not only requires stricter enforcement of existing laws; but, also

sustainable practices, community engagement, and policies that mitigate environmental harm while promoting economic resilience.

Ghana covers an area of 239,567 km² (92,497 sq mi), spanning diverse ecologies, from coastal savannas to tropical rainforests. According to 2024 estimates from World Bank data, Ghana, with an estimated population of approximately 35 million, ranks as the second most populous country in West Africa. The country has the potential to produce variety of minerals including limestone, silica sand, kaolin, stone and salt (Coakley, 2003). The main minerals produced by large-scale companies are gold, diamond, bauxite and manganese, while industrial minerals such as kaolin, limestone and silica sand are mainly produced by small-scale operators. Ghana is among the world's top producers of gold (Coakley, 2003). Ghana ranks seventh in the world for gold production (Amponsah, et al., 2023). Since the colonial era, gold has contributed to over 90 percent of Ghana's GDP, making the mining industry significant to the country's socioeconomic development (Amoatey, et al., 2017). Over 28,000 people are employed in the mining sector, which includes 300 small groups and 23 big companies (Amoatey, et al., 2017).

Ghana has the right institutions, rules, and laws set up to effectively regulate and monitor mining operations, promote development, while minimising environmental degradation (Asumda, 2022). However, the mining sector continues to encounter various regulatory challenges, including the inability to oversee multiple regulations, insufficient human and institutional capacity, and a lack of communication among regulatory agencies. The challenges also include difficulty in resolving several rules and disputes among agencies, low institutional and human capabilities, poor institutional cooperation and coordination, and political intervention in permit issuing (Asumda, 2022).

The mining industry in Ghana was shaped by the establishment of the Minerals Commission in 1986 and other legislative changes. The Minerals and Mining Act of 2006, (Act 703) which created a comprehensive legal framework governing mining operations, was a significant turning point (Anaafo, et al., 2023). The President of Ghana is vested with all minerals by the legislative framework and regulatory policies, operating in the best interests of and on behalf of all Ghanaians. The minister responsible for lands and natural resources is thus empowered to negotiate, issue, cancel, suspend, or renew mineral rights under the mining law on behalf of the president, as per Section 5(1) of the Minerals and Mining Act, 2006, Act 703.

According to Ghana's Minerals and Mining Act, 2006 (Act 703), a small-scale gold mining operation is any successful and economical method of extracting gold that does not require significant financial outlays by a single person, a group of people no more than nine, or a cooperative society composed of ten or more people. The Small-scale mining is predominantly a poverty-driven activity, often undertaken in the poorest and most remote rural areas of a country by a largely itinerant, and

poorly educated people with few employment options (World Bank Group, cited in Aryee, 2003).

Illegal mining accounts for more than 25% of global gold production, and an estimated 20 million individuals mine illegally worldwide (Erusani & Aji, 2021). The rise of artisanal and small-scale mining (ASM) characterised by low technology, limited productivity, minimal capital investment, and a lack of formal regulation is increasingly prevalent in developing contexts such as Ghana, often driven by local participation (Baddianaah et al., 2022). Illegal mining presents both positive and negative implications for Ghana and other developing countries. On one hand, it contributes to employment creation and enhances household incomes; particularly, within rural communities. On the other hand, it poses significant challenges to livelihoods, food security, and sustainable development. These challenges include farmland degradation, soil erosion, and broader environmental deterioration resulting from unregulated mining activities. Illegal mining contribute to water pollution, soil degradation, river siltation, and plant loss (Padhiary & Kumar, 2024). Additionally, cases of exposure to toxic chemicals through ingestion and inhalation have been documented (Darkwa & Acquah, 2022). Given these dynamics, it is critical to examine the interlinkages and impacts of illegal mining on agriculture, food security, and broader socio-economic systems within the country.

2. Overview of Mining Policies and Laws in Ghana



Ghana's legislative framework and regulatory policies play an important role in the mining sector; particularly, in ensuring sustainable and responsible mining

practices and addressing socioeconomic issues concerning the environment. The sector is overseen by the Ministry of Lands and Natural Resources, which is responsible for formulating policies and ensuring sustainable development of the industry. The Minerals Commission serves as the main regulatory body, granting licenses and monitoring compliance with mining regulations. Despite the existence of various regulatory policies, challenges within the existing framework has led to inadequate compliance with mining laws, negatively affecting development and the environment.

An in-depth study of the current legislative framework reveals certain shortcomings that have greatly impacted and intensified illegal mining activities throughout the nation (Bansah, 2023; Kumah, 2022a; Heipon, 2016; Hilson and Potter, 2003). The complex and rigorous registration process has been identified as an issue in the regulatory framework (Adu-Baffour et al., 2021; Hilson, 2017; Aryee et al., 2003). This, to a large extent, explains why so many years after the legalisation of small-scale mining, an overwhelming majority of Ghana's ASM miners continue to operate illegally, that is, without licenses (Teschner, 2012; Banchirigah, 2008; Hilson and Potter, 2003). The law allows the provision of mining licenses only to Ghanaian citizens who are 18 years or over and registered by the district centre in the designated area (Section 83). But this procedure by which individuals have to obtain small-scale mining licenses has been described by most miners as tedious and expensive; hence, most small-scale miners operate illegally (Kumah, 2022a; Banchirigah, 2008).

1.1 Legislative and Policy Framework Governing Mining in Ghana

Ghana has long been recognised as one of Africa's leading gold producers. To manage this critical sector, a robust legal and policy architecture has evolved to regulate both large-scale and small-scale mining operations. The core objective of this framework is to facilitate mineral resource exploitation that is economically beneficial, environmentally sustainable, and socially responsible. The key legislations regulating mining in Ghana are as follows:

2.1.1 The 1992 Constitution

Article 257(1) of the 1992 Constitution Ghana provides that public lands and other public property are vested in the President on behalf of, and in trust for, the people of Ghana. This means the President is not the owner but a custodian, acting in the public interest. Natural resources, including minerals, are national assets and must be managed to benefit all Ghanaians. State agencies like the Minerals Commission, EPA, and Lands Commission are mandated to regulate their use. This constitutional provision underpins state authority over land allocation and resource management. It justifies government actions to curb illegal mining and ensure environmental sustainability. Illegal small-scale mining (galamsey) violates this principle by degrading land and harming communities. Such activities undermine the trust placed in the state to protect public property. Responsible mining must align with

national development and environmental protection goals. The Constitution reinforces the need for equitable and sustainable use of Ghana's resources.

Article 41(K) of the 1992 Constitution places a duty on every citizen to protect and safeguard the environment. This obligation reflects the shared responsibility of Ghanaians in preserving natural resources for current and future generations. Citizens are expected to avoid actions that cause environmental harm, including pollution, deforestation, and land degradation. In the context of mining, this means rejecting illegal practices that destroy forests, water bodies, and farmland. Environmental protection is not just a state duty, but a civic one, requiring active public participation. This principle empowers communities to hold individuals and companies accountable for environmental abuse. It reinforces the idea that sustainable development begins with responsible citizenship and collective action.

2.1.2 Small-Scale Gold Mining Law, 1989 (PNDC Law 218)

The Small-Scale Gold Mining Law, 1989 (PNDC Law 218) was promulgated to legitimise and regulate small-scale gold mining in Ghana. It provided a simplified licensing process for Ghanaian citizens to engage in artisanal mining, formally recognising the sector and offering legal protection for operators. The law required miners to register with the Minerals Commission and operate within designated areas. However, access to legal permits remains fraught with bureaucratic delays, lack of awareness, and limited institutional support, which has inadvertently incentivised illegal mining (Botchway & Nyame, 2023). These implementation challenges eventually led to the integration of the law into the more comprehensive Minerals and Mining Act, 2006 (Act 703).

2.1.3 The Minerals and Mining Act, 2006 (Act 703)

The primary legislation governing mining in Ghana is the Minerals and Mining Act, 2006 (Act 703), as amended by the Minerals and Mining (Amendment) Act, 2015 (Act 900) and the Minerals and Mining (Amendment) Act, 2019 (Act 995). It declares that the Republic of Ghana owns all minerals in their natural condition, and the President holds them in trust. A mineral right, which includes mining, prospecting, and reconnaissance licenses, must be applied for by anybody who wants to search for, explore, or extract minerals. The Minister of Lands and Natural Resources grants these rights in accordance with the Minerals Commission's recommendations. The Act mandates that mining companies demonstrate financial and technical capacity, employ and train Ghanaians, and compensate affected communities. Environmental and forestry permits are required before operations begin. Companies must pay royalties, rents, and fees, while the government holds a 10% free stake in large projects. It also allows for stability agreements, promotes transparency, protects the environment, and sets penalties for illegal mining, ensuring responsible use of Ghana's mineral resources.

2.1.4 The Minerals Commission Act, 1993 (Act 450)

The Minerals Commission is the regulatory authority established under Act 450 to oversee the efficient and transparent administration of mineral resources. Its roles include the evaluation of mining applications, policy advisory functions, and inspection of mining sites. However, the challenges in monitoring unlicensed mining operations, especially in remote areas, remain significant due to limited resources and institutional capacity (Hilson & Osei, 2022).

2.1.5 The Minerals Income Investment Fund Act, 2018 (Act 978)

As amended by the Minerals Income Investment Fund (Amendment) Act, 2020 (Act 1024), it is an Act to establish a Fund to manage the equity interests of the Republic in mining companies, to receive mineral royalties and other related income due the Republic from mining operations, and to provide for the management and investment of the assets of the Fund and for related matters.

2.1.6 Environmental Protection Authority (Act 1124)

In 2025, the EPA Act, 1994 (Act 490) was repealed and replaced by the Environmental Protection Act, 2025 (Act 1124). The Environmental Protection Agency (EPA) was established to regulate the environmental impacts of economic activities, including mining. However, enforcement gaps and political interference have hindered the EPA's ability to sanction defaulters; particularly, in the informal mining sector. Act 1124 aims to incorporate international conventions into domestic law and develop domestic rules for environmental protection and preservation. It restates and consolidates existing environmental laws, elevating the EPA to an authority to regulate, protect, coordinate, and exercise general oversight over climate change and the environment.

2.1.7 Minerals Development Fund (MDF)

The Minerals Development Fund was established under the Minerals Development Fund Act, 2016 (Act 912) to ensure equitable and sustainable development in mining communities. The fund is managed by a board and receives contributions from mining companies based on their mineral production. It is responsible for financing development projects, infrastructure, and social interventions in mining communities to enhance their socioeconomic well-being.

2.1.8 Environmental Protection (Mining In Forest Reserves) Regulations, 2022 (L.I 2462)

It provides a comprehensive legal framework aimed at regulating mining activities within forest reserves to ensure environmental sustainability and resource conservation. These regulations specify areas where mining activities are prohibited, such as globally significant biodiversity areas, cultural sites, and high conservation value zones, thereby protecting critical ecological and cultural assets from harmful mining practices. Sobeng et al. (2018) and Yoda (2024) highlight that the legalisation of L.I. 2462 reveals critical gaps in both policy and research. It

remains unclear how this policy shift affects biodiversity, carbon stocks, and emissions. While the economic contributions of gold mining are undeniable, its ecological costs have received limited attention. The government has presented the environmental Protection (Mining in Forest Reserves) Revocation Instrument, 2024 to parliament. The new LI Seeks to work LI 2462 in order to limit mining in the nations forest reserves.

2.1.9 Ghana Gold Board Act 2025 (Act 1140)

This Act oversees, monitor, and undertake the buying, selling, and export of gold and other precious minerals was passed into law by Parliament on Friday, 28 March, 2025. As part of efforts to revitalise the local economy, President John Dramani Mahama initiated the establishment of the Ghana Gold Board (GoldBod), which falls under the Ministry of Finance. The introduction of the Ghana Gold Board Act, 2025, aims to combat gold smuggling and illegal mining, strengthen state control over the mineral trade, and prevent the loss of national resources. The Act imposes stringent penalties for smuggling gold, increases the cost of illegal activities, and deters such behaviour. Additionally, the Gold Board has enhanced its enforcement efforts. The Ghana Gold Board is expected to play a pivotal role in formalising the small-scale gold mining sector, ensure better regulation, and provide support services for industry players.

2.2 Recent Reforms and Institutional Responses or Interventions

Recognising the deepening crisis posed by illegal mining, the Government of Ghana has introduced a series of interventions. These include the following:

- The Inter-Ministerial Committee on Illegal Mining (IMCIM) was formed to coordinate national efforts against illegal mining.
- In 2017, Ghana's Lands and Natural Resources Minister imposed a ban as part of efforts to end illegal mining and its negative impact on the environment.
- The Operation Vanguard and Operation Halt task forces were deployed with military support to dismantle illegal mining operations.
- Community Mining Schemes (CMS) was launched as a formalised alternative, allowing local miners to operate under regulated conditions with environmental safeguards.
- Technological tools such as drones and a digitised mining cadastre system were piloted to enhance transparency and monitoring.

While these initiatives reflect political will, they remain constrained by limited grassroots ownership, fluctuating political support, and weak follow-up mechanisms. According to Yeboah (2023), some of the reasons for the failure of government interventions aimed at combating illegal mining activities include inadequate legal and institutional structures, political interference, and a lack of political will. Again, Yeboah (2023) asserts that in order for state enforcement authorities to effectively monitor and oversee illegal mining operations, they require extra funding, technology, equipment, and human resources. Inadequate

planning, poor stakeholder management, and a lack of cooperation among the government, the Minerals Commission, and local chiefs all undermined the nation's efforts to stopping illegal mining.

3. Analysis of the Impact of Illegal Mining

3.1 Impact on Livelihoods



The global mining industry is a significant economic driver, generating \$711 billion in revenue from the top 40 companies in 2022 (Demeubayeva, 2023; Dou et al., 2023; Hodge et al., 2022). It significantly contributes to the gross domestic product (GDP), employment, and foreign exchange earnings of many countries worldwide (Ahadjie et al., 2021; Kabore et al., 2021). In Guinea, for instance, the Papua New Guinea Extractive Industries Transparency Initiative reported that the industries contributed 89% to exports, 29% to GDP, and 10.1% to corporate tax, salary and wage tax, dividends, and royalties in 2020 (Yamarak and Parton, 2021). In Ghana, Kenya, Tanzania and other parts of developing economies where mining operates, whether on a large or small scale has contributed to per capita income through job creation, resulting in improved livelihood status of people (Apollo et al., 2017; Mwakesi et al., 2020).

Artisanal small-scale mining and its related activities are often carried out in Ghana along with subsistence farming. Some recent studies (Maconachie and Hilson, 2018; Yankson and Gough, 2019) have revealed that, the two activities are becoming primary sources of livelihood for several rural residence in mineral rich communities of the country. Some evidences have revealed that in Ghana, ASM directly employs an estimated number of one million of economic vibrant population, and supports close to 4.5 million individuals in other sectors of the economy (McQuilken and Hilson, 2016). As a result, Ghana was ranked second to

Tanzania in terms of the number of people participating in ASM as an economic activity in Africa (Hilson, 2016).

The economic benefit of mining is tremendous. The mining industry generates billions of Ghanaian cedis (GHS) from exports and accounts for 6% of Ghana's GDP, making it a major source of foreign exchange earnings (Owusu et al., 2016; Owusu-Antwi et al., 2016). According to Söderholm & Svahn (2015), government budgets rely heavily on the money collected from taxes and royalties paid by mining firms. This money enables investments in social programmes and infrastructure that contribute to economic growth. Along with tax income, jobs created by the mining industry contribute to lower poverty rates and higher living conditions in the areas where mining operations are conducted. However, mining communities are among the poorest in the nation, despite the anticipated advantages of gold mining (Appiah & Buaben, 2012).

3.2 Impact on Agriculture



Ghana's agriculture industry is considered to be the most important economic sector, employing over 29.75% of the workforce (Asravor & Sackey, 2023) and contributing roughly 18.27% of the nation's GDP (Statista, in 2024). Mining and agriculture have a lot in common (Cuba et al., 2014). Competition for resources such as land usually results in conflict (Aragon & Rud, 2012). Mining often has long-term effects on agriculture due to competition between mining and agriculture for resources including water and land use (Adjei et al., 2021; Duncan, 2020).

Illegal gold mining causes disastrous effects on the environment particularly agricultural land, causing many people to view the activity as dirty and unsustainable (Ofosu-Mensah, 2010; Schueler et al., 2011; Ericsson and Löf, 2019; Atta and Tholana, 2021). Illegal mining has increasingly encroached on agricultural land, competing with farming for space and resources. (Ansah and Smardon, 2015; Danyo and Osei-Bonsu, 2016; Ndabi, 2017; Atta and Tholana, 2021). With agriculture

being one of the main sources of livelihood for the majority of people in Ghana (International Fund for Agricultural Development, 2011; Sugden, 2013; Andrieu et al., 2020), sustainable and productive agriculture should be given the necessary attention as its productivity relies greatly on access to quality land and water. Environmental Protection Agency (2016) estimated that the quality of land for agricultural use (in mining operation communities) is fast diminishing largely due to the activities of illegal mining. For example, in Nadowli-Kaleo District in the Upper West Region, illegal mining has impacted the environment resulting into loss of farmlands, destruction of crops and forest cover, and pollution of water bodies (Prosper and Guan, 2015).

Rural populations' livelihoods, especially those dependent on agriculture, are threatened by small-scale mining. One of the effects of these is the destruction of farmlands (Acquah, et al., 2020; Bagah, et al., 2016). Farming operations have been severely interrupted by mining (Addai, et al., (2025)). The structure, fertility, and long-term production of the soil have been weakened by the use of dangerous chemicals. Farmers in affected regions have reported experiencing increased erosion and lower yields. For instance, Darkwa and Acquah (2022) document the experience of a middle-aged female farmer who stated: *"Our farms have been heavily affected, with regular erosions and a deterioration of the fertility of the soil; this has led to a lower yield of farm produce and a lowering in its quality because of the unsafe chemicals used on the land."* This account reflects broader findings that associate non-compliance with mining regulations with land-use conflicts and declining agricultural productivity.

The issue of soil erosion is further compounded by the absence of effective land reclamation measures. Boateng, (2018) and Asante, et al., (2007) note that frequent excavation of soil without restoration has worsened land degradation, negatively affecting both farmland and surrounding settlements. As a result, farmers' incomes and overall living standards are directly impacted. In addition to land-based challenges, small-scale mining also contaminates water sources that rural communities rely on for drinking, cooking, and sanitation. Water bodies such as rivers and streams are polluted by the proximity of mining operations and the discharge of toxic substances. The rise in mining activities may call for the altering of agricultural land into mining areas, affecting the availability of arable land for farming (Obodai, et al., 2024). Arifeen, et al. (2021).

3.3 Impact on Food Security



Food security according to (FAO 1996) exists “when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life”. More recent additions to this definition include social access to food (e.g. through social protection and safety net), governance, and right to food (Ballayram, & Fitzroy, 2015). The modern world's food security crisis is linked to illegal mining because factors like deforestation, global warming, increased floods, droughts, desertification, bush farming due to excessive gas emissions, biodiversity changes, and other harmful practices have a direct impact on food productivity. While food security continues to surge in developed countries, it faces a gradual decline in developing countries.

In Ghana, this is as a result of the substitution of arable lands for mining among other probable causes. The widespread practice of illegal mining has become a grave threat to the world's food supply. Communities are at risk of food insecurity as a result of this illegal activity, which does not only damages the environment; but, also threatens food production. Illegal mining and food security have a complicated relationship with wide-ranging effects that demand immediate response.

As of 2015, about 800 million people were chronically undernourished. A projected 161 million children under 5 years were malnourished. Furthermore, 500 million people were obese. Two billion people suffered from inadequate essential micronutrients for their health safety. The FAO estimated that to satisfy the growing demand driven by population growth and dietary changes, food production will have to increase by 60% by 2050 (Food and Agriculture Organisation, 2015).

According to Harvey, et al., (2014), flooding is by far the most disruptive weather extreme that affects mankind and their source of livelihood globally. Catastrophic flooding has occurred recently all over the world (Thomas, 2017), and a large

percentage of those affected live in rural areas, particularly in developing countries. Rural communities in developing countries, for instance, are particularly impacted by these flood extremes because of how heavily they depend on rain-fed agriculture and a low capacity to respond to climate-related disasters (IPCC, 2012).

Ghana is one of the vulnerable countries to floods in Sub Sahara Africa (Aggrey, 2015; Amoateng et al., 2018, Almoradie, et al., 2020) with devastating effects, especially for the urban poor and farmers in the northern part of the country (Okyere, et al., 2013). For example, in 2017, Ghana experienced extreme floods that affected about one million people (IFRC, 2017; Adegoke et al., 2019). Studies by Amoakwah, et al., (2020), and Bempah and Ewusi (2016) recorded cases of food poisoning as a result of “lead, cadmium or cyanide” and high levels and traces of metallic substances in aquatic foods and agricultural produce. Antwi-Boateng and Akudugu (2020) also indicated poor yields from farm lands and spikes in food prices (Agyei-Okyere et al., 2019; Botchwey et al., 2019) as causes of food insecurity resulting from illegal mining.

This affects vulnerable people such as women and persons differently-abled (Arthur-Holmes and Abrefa Busia, 2020). Hauserman, et al., (2018) have also indicated a chain of issues that leads to food insecurity such as destruction of the soil structure and hydrology as a result of the use of heavy equipment such as excavators. Further, the destruction of farm lands, abandonment of farming by farmers and moving into illegal mining because of the immediate returns, lead to shortages of food in markets with accompanying higher prices, which affect the expenditure of consumers.

3.4 Impact on Social & Economic Development



In Ghana, mining activities have an impact on society in both positive and negative ways. On one hand, mining contribute substantially to the nation's GDP, helps to improve infrastructure, creates jobs, and supports community development through corporate social responsibility (CSR) initiatives. On the other hand, it leads to social disruptions, conflicts, and displacement of local communities. One of the

positive social impacts of mining is the creation of employment opportunities. Mining activities require a workforce, that extend from skilled workers to supporting staff, creating jobs for individuals in communities. These jobs opportunities can help reduce poverty, improve livelihoods, and boost the overall well-being of local communities (Aryee, 2016). Furthermore, companies that mine often engage in corporate social responsibility initiatives to support community development. These initiatives can include the construction of schools, healthcare facilities, and community infrastructure, as well as investments in education and skills training programmes. Such contributions can improve social services, promote human capital development, and raise occupants' standard of living (Akabzaa & Darimani, 2001).

However, mining can also have negative social consequences. Mining activities can affect traditional livelihoods and cultural practices of local communities, which can lead to social tensions and conflicts. In many cases, mining operations have resulted in displacement of communities, leading to loss of land, homes, and access to natural resources (Aryee, 2016). To curb these negative social impacts, effective stakeholder engagement and community participation are of essence. Meaningful engagement can foster trust, promote social cohesion, and facilitate the development of mutually beneficial relationships between mining companies and local communities (Akabzaa & Darimani, 2001).

3.5 Impact on Education



Despite the multiple legislative frameworks, researchers indicated that there are millions of children who are involved in child labour in small-scale mining (Hilson, 2008). Nearly 70% of these young people labour in hazardous activities, such as mining, application of agricultural chemicals and pesticides, and use dangerous machinery. They also work as domestic staff in houses, behind the walls of workshops, and concealed from plantations. (Rajae et al., 2017). Another research

found that the majority of Nepali children working in mines and quarries began working before the age of 14, with 11% starting before the age of 8. This demonstrates that children work while in elementary or lower secondary school. They either mix job and study, or drop out of school (Hilson, G. 2012).

Mining activities have contributed to increase in school dropout rates among youth in Ghana's mining communities. In Akwatia, for instance, only 42 out of 88 pupils enrolled in school successfully completed their education, reflecting a dropout rate of 52.27%. Similarly, in Apinamang, located in the Kwaebirem District, the dropout rate stood at 42.28%. An interview of six individuals engaged in illegal mining who had discontinued their education revealed that the primary reason for dropping out was lack of financial support from their families (Aubynn, 2009).

Many young individuals engaged in illegal mining believe that the income it generates offers a viable path to an improved livelihood. Although the dynamics of employment are complex shaped by various unobservable factors such as household preferences and familial expectations, empirical evidence indicates that child labour significantly undermines school attendance. In addition, many schoolchildren struggle to balance educational commitments with income-generating activities (Aubynn, 2009). Notably, in some mining communities, teachers themselves participate in illegal mining as a means of supplementing their low incomes. This practice does not only compromises their professional responsibilities; but, also inadvertently influences pupils and students to view mining as a more attractive alternative to formal education.

3.6 Impacts on Health



Illegal mining has become a major issue in many developing nations, particularly in resource-rich areas such as West Africa. In Ghana, the increase of uncontrolled

artisanal and small-scale gold mining, has created major environmental and public health issues. While the economic motives for illicit mining are widely established, the health risks are frequently disregarded. Prolonged exposure to dangerous compounds such as mercury and dust particles, along with a lack of protective equipment and poor working conditions, has led to an increase in respiratory ailments, skin problems, and other occupational illnesses. Itchy/red eyes, weariness, persistent headache, numbness, metallic taste, and skin rashes are the most common health concerns connected with toxic metals in ASM (Afrifa et al., 2017; Kumah and Adum Nyarko, 2018; Mensah et al., 2016).

Despite several research documenting increasing heavy metal concentrations in soil, water, food, and the human body, only a small number of studies report real health issues associated with heavy metal pollution. These studies primarily demonstrate a greater prevalence of illnesses caused by arsenic poisoning, including respiratory infections, diabetes mellitus, skin disorders, lung, liver, blood, and breast cancer (Armah et al., 2012; Attiogbe et al., 2020); Armah et al. (2012), neurological issues (Basu et al., 2011); and diarrhea (Attiogbe et al., 2020); and kidney disease and diarrhea caused by cadmium contamination (Attiogbe et al. (2020). Other research implemented hazard quotients and indices for health risk assessment, stating unacceptable cancer and non-cancer risks from pollution with multiple types of heavy metals (Ansa-Asare et al., 2015; Bempah et al., 2016; Bempah and Ewusi, 2016), or arsenic in particular (Akoto et al., 2018; Bortey-Sam et al., 2015a; A. K. Mensah et al., 2020), chromium (Armah and Gyeabour, 2013), or mercury. The dangers are greatest for children (Akoto et al., 2018; Armah and Gyeabour, 2013; Bortey-Sam et al., 2015b; A. K. Mensah et al., 2020).

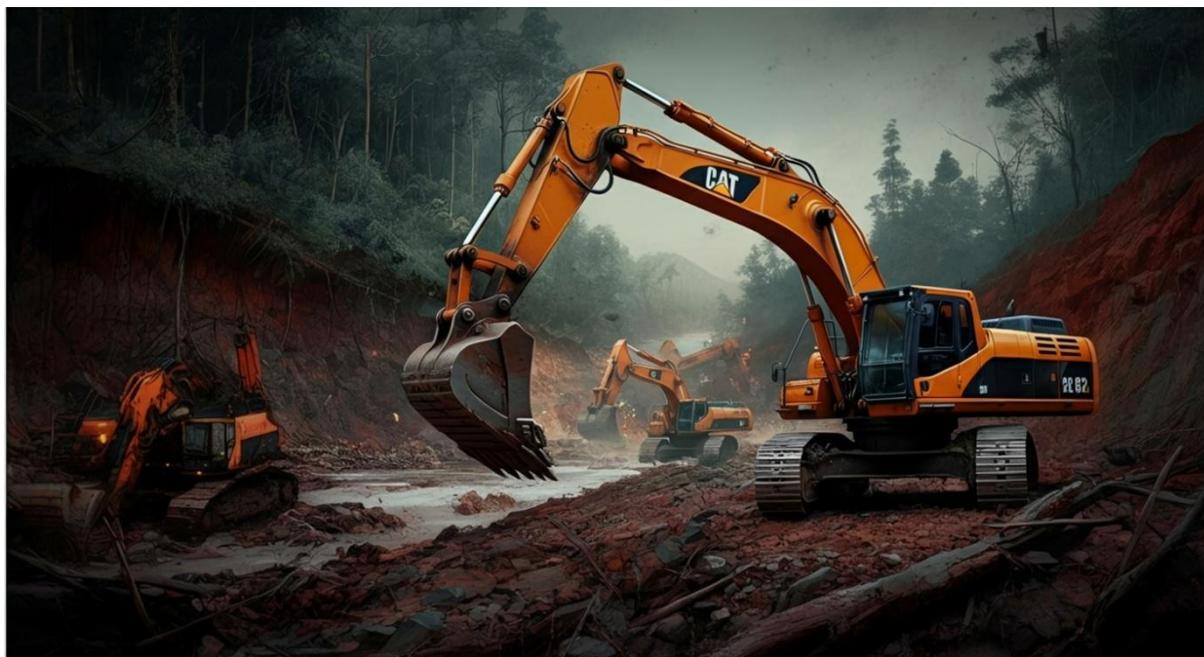
Health concerns about radionuclides (naturally occurring radioactive particles that may come to the surface due to mining and pose lung cancer risks) were investigated but not found: all values remained below the ICRP and WHO reference levels in all studies (Doyi et al., 2013; Faanu et al., 2011; Klubi et al., 2020; 2017). Six studies have shown dangers in abandoned and exposed gold mining pits with polluted water (Baah-Ennumh and Forson, 2017; Ferring and Hausermann, 2019; Hausermann and Ferring, 2018; Kumah and Adum), Nyarko (2018; Ofosu-Mensah, 2017; Wan, 2014). These dangers include falling ('death traps'), drowning, and becoming mosquito breeding grounds, which increases malaria prevalence. Two studies investigate the consequences of dust exposure in LSM, with inconsistent results. In a study of miners in Ghana's Upper West Region, the expected effects on pulmonary and respiratory disorders, as well as vascular difficulties (e.g., high blood pressure and blood coagulability), were not found among self-reported health concerns (Antabe et al.). Ayaaba et al. (2017), Baah-Ennumh and Forson (2017), and Jonah and Abebe (2019) observed higher rates of respiratory infections and lung disorders (asthma, pneumonia, bronchitis, emphysema, and TB), whereas Antabe et al. (2017) noted odor discomfort from dust. One research reported on a cholera epidemic in East-Akim Municipality (Eastern Region), with 40% of the patients being galamsey

miners, which was linked to a lack of safe drinking water and sanitation at such mining locations (Opare et al. 2012).

Studies on injuries describe bruises, cuts, lacerations, contusions, and fractures caused by sliding and falling, being struck by (falling) items, or handling equipment and tools (Amponsah-Tawiah et al., 2014; Calys-Tagoe et al., 2017; Nakua et al., 2019b). These injuries were caused by the failure to wear personal protection equipment (PPE), excessive working pressure, overtime labour, and the use of outmoded equipment. The injury rate was higher among galamsey miners (29%) than company miners (23%), among workers in unlicensed ASM operations (6.1 injuries/100 person-years) than licensed ones (4.2/100 person-years), and among females (11.97/100 person-years) than males (5.03/100 person-years) (Calys-Tagoe et al., 2017).

Several research have examined the psychological impacts of mining. Wan (2014) links these to a misunderstanding of the cultural significance of farming, in which farmers risk losing their farms to mining activities or receiving inadequate compensation in the event of relocation. Adverse psychological consequences may also emerge from stress at work, continual noise, gender-based discrimination in the workplace, perceived unfairness, fear of losing farmed land, land grabbing, and worry about work safety, as well as adverse effects on health, livelihoods, and welfare in general. (Antabe et al., 2020; Hausermann and Ferring, 2018; Wan, 2014). Solastalgia is a type of distress caused by environmental and landscape change that results in a loss of sense of place and belonging (Antabe et al., 2020). According to Ferring and Hausermann (2019), women are experiencing psychological distress as a result of concerns about rising malaria infections in their children and the associated health costs; polluted water sources; and destroyed farming land, which puts pressure on the availability and price of cassava, plantain, and other food crops, causing them to worry about feeding their children adequately.

4. Challenges of Irresponsible Mining and Implications



Illegal mining poses challenges to environmental integrity, sustainable development, and the welfare of local communities. Illegal mining operates outside of the legal frameworks and regulatory control. It frequently results in deforestation, water contamination, and land degradation. In addition to harming the environment, illegal mining affects government revenues, weakens governance, and increases societal instability. The combined effects of these affect livelihoods, agriculture, and food security which are essential to resilience and survival of communities. These are discussed in detail below:

4.1 Challenges of Illegal Mining on Livelihoods

Illegal mining negatively affects local populations' livelihoods by destroying their conventional sources of income. Illegal miners frequently cause people to be displaced from their original homes. They disrupt farming activities, which are crucial for livelihoods and food security of communities. When individuals are displaced from their homelands, it has a significant impact on their livelihoods. Communities that have been displaced find it difficult to locate other sources of income, which result in poverty and unstable finances.

The cycle of poverty in these areas is deepened and social inequality is made worse by the lack of job opportunities and sources of income. Furthermore, social tensions and conflicts within impacted communities may occur as a result of illegal mining. Increased social inequalities and conflicts among community members may emerge from disputes over mining rights, resource access, and mutual benefits. In addition to undermining community cohesion, such disputes take money and attention away from community development programmes. When local livelihoods are destroyed,

it leads to food insecurity, a rise in poverty, conflict, and quality standard of living is compromised which slow down overall economic growth.

4.2 Challenges of Illegal Mining on Agriculture

Three billion people in rural areas rely on agriculture, with 475 million (80%) living on small farms globally (Gumbo et al., 2024). Ghana's economy is mostly dependent on agriculture for jobs, revenue, and food production. Agricultural production in mining communities has been threatened by illegal mining operations, especially in rural areas where farming is crucial for lives and food security. Crop yields and agricultural production suffer as a result of soil and water pollution and degradation of agricultural fields. This is attributed to pollution of soil by chemicals and heavy metals from illegal mining. These contaminants have the ability to seep into the soil and change its nutritional content and fertility. Commonly utilised in mining operations and heavy metals like lead, arsenic, and mercury can build up in the soil over time, endangering plant health and lowering plant growth and production (Amankwah & Anim-Sackey, 2021). Illegal mining reduces agricultural production, which has a number of negative impacts on the economy and food security.

Illegal mining can also damage water supplies, which are essential for irrigation and maintaining agricultural operations. Water bodies can get contaminated by the use of hazardous chemicals and the inappropriate disposal of mining waste, rendering them unfit for irrigation (Obiri et al., 2016; Mujere & Isidro, 2016). Irrigating crops with tainted water can harm plant development, lower agricultural yields, and make the crops unfit for human consumption (Amankwah & Anim-Sackey, 2021). This is evident when large amounts of water are utilised to process mineral ore (Suglo et al., 2021), when mining waste is dumped into waterways, and when seepage occurs from tailings and waste rock impoundments (Emmanuel et al., 2018). It has the potential to contaminate water bodies with heavy metals like mercury. According to studies, rivers, water and wells close to gold mining areas have significant concentrations of metallic mercury (Hg) (Malik et al., 2010). And when these waters move into agricultural lands, they may damage food crops. For instance, Tuffuor & Takora (2024) and Dube et al. (2024) observed a link between rising water and mercury use, and the increase in illegal mining-related activities. Additionally, most water bodies have become opaque brown due to debris and chemical components from illegal mining activities (Kusi-Ampofo & Boachie-Yiadom, 2012) as a result of runoff and wastewater from illegal mining, making them unsafe for residential and agricultural usage.

In addition to having an impact on farmers' lives, decreased agricultural output brought on by soil and water contamination also increases reliance on imported agricultural goods. Consequently, this strains foreign exchange reserves and impairs the agricultural sector's overall economic performance (Amankwah & Anim-Sackey, 2021).

Protecting agricultural lands and guaranteeing sustainable food production need the implementation of measures to prevent soil and water pollution, such as

appropriate waste management and the adoption of alternative mining techniques that reduce the use of harmful chemicals (Amankwah & Anim-Sackey, 2021). It also requires a multifaceted strategy to address the decline in agricultural output, including the promotion of ecologically friendly mining methods, sustainable land management practices, and efficient regulation and enforcement of mining operations.

4.3 Challenges of Illegal Mining on Food Security

One major negative effect of illegal mining is land degradation that affects agro-based livelihoods (Mkodzongi & Spiegel, 2019; Munyoka, 2020; Macheka et al., 2021; Magidi & Hlungwani, 2023). Land degradation is as a result of deforestation, making it susceptible to landscape destruction and soil erosion (Marther et al., 2020). This also makes fertile lands unsuitable for agricultural practices. The soil becomes unusable for farming when heavy rock material from open-pit mining is mixed with topsoil, which has extremely low water retention, low organic content, low nutrients, and highly poisonous components (Kinimo et al., 2018). For example, research on how mining affects agricultural lands and food security in Kyebi, Ghana's Eastern region, revealed that illegal mining operations have degraded the area, destroying crops and contaminating soils. This suggests that agricultural production and animal husbandry in rural areas may be negatively impacted by land degradation brought on by mining.

Ibrahim (2015) explains that the shift from agriculture to mining has led to poor yields, food shortages, reduced land for farming, and a drop in agricultural exports which puts local food supply at risk. Illegal mining also damages farmlands and forest reserves, affecting food security. Boadi et al. (2016) found that in two Ghanaian communities in the Offin shelterbelt forest reserve, 2.5 km² (4.4%) of the reserve was destroyed in just five years, with illegal mining alone causing 0.88% of annual degradation. Forest reserves help regulate rainfall and microclimate. Appiah et al. (2009) mentioned that local communities depend on farmlands for a living.

Boadi et al. (2016) added that illegal mining harms local people's lives and threatens sustainable forest management. They also found that it destroyed water bodies and cocoa crops, reducing farming from 90% to 76%, showing the financial harm caused. Danyo and Osei-Bonsu (2016) reported that from 2012 to 2016, food production in galamsey areas like Ashanti, Brong Ahafo, Eastern, Central, and Western dropped, while the Consumer Price Index in those areas was above the national average, affecting agriculture's GDP contribution. They concluded that galamsey is a major cause of low food production, high food prices, and high living costs.

Aborah (2016) found that food production in the Amansie West District of Ashanti steadily dropped from 2008 to 2012, especially for crops like yam, cocoyam, cassava, and plantains. Cassava decreased by 46%, yam by 82%, cocoyam by 43%, and plantains by 8%. Maize and rice production increased, but these were not from areas

affected by illegal mining. The total land under cultivation dropped from 12,911 Ha to 7,873 Ha, a 39% decrease.

Half of the miners had taken over land previously used for farming. Approximately, 51% of farmers said their land was taken, and 59% said they were not properly compensated. Farming labour also reduced as many joined mining. About 90% of the population in these farming communities support illegal mining, run by powerful local figures and foreigners, which leads to environmental damage, loss of plantations, pollution, poor health, and long-term poverty. Eshun et al. (2017) noted poor living conditions in mining areas, including polluted water, land loss, and job losses. Mensah (2018) added that people fear food insecurity because essential food has to be brought from cities due to reduced local farming.

4.4 Challenges of Illegal Mining on Social and Economic Development

Socially, illegal mining operations often lead to social conflicts, violence, and the breakdown of community structures. These negative social consequences erode social capital, undermining the cooperation, trust, and collective action necessary for sustainable economic development. The resulting instability can also deter investment and impede long-term economic growth (Tschakert & Singha, 2007). The influx of illegal miners - often from other regions or countries - strains local resources, heightens competition for limited opportunities, and triggers disputes over land ownership and access to mineral-rich areas. These tensions frequently result in social unrest and fractured community relationships. Social capital, which refers to the networks, trust, and shared norms that foster collective action, is critical to community resilience. Its erosion disrupts local cooperation, limiting the ability of communities to undertake joint development projects or manage shared resources effectively. Without trust and cohesion, members may be reluctant to collaborate, share resources, or invest in communal initiatives. The breakdown of social capital also deters external investment, as investors are generally attracted to areas with stable social conditions and supportive community networks. Regions affected by social conflict and violence linked to illegal mining tend to present high-risk environments, discouraging both public and private investment.

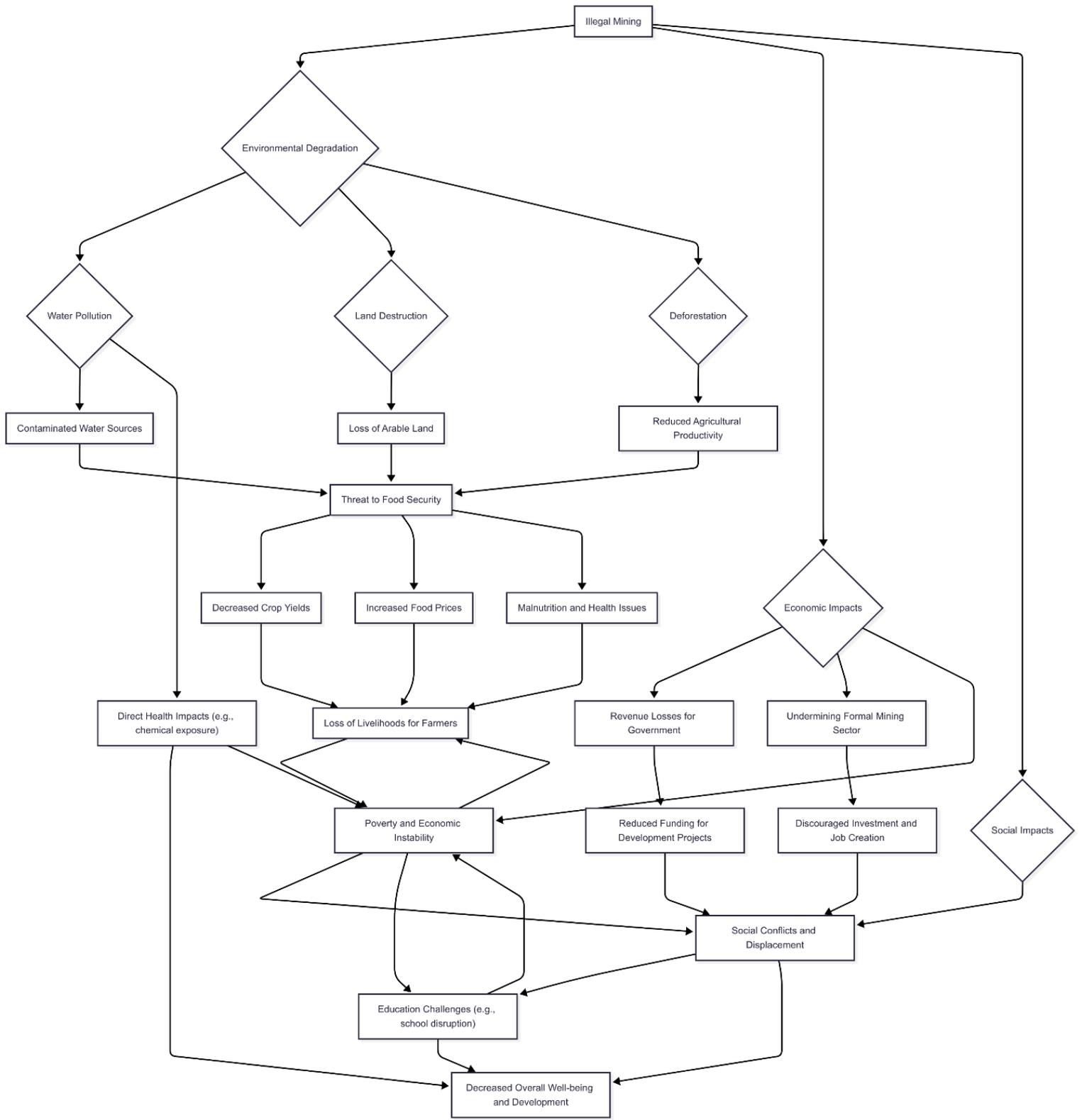
Additionally, weakened social capital hampers the implementation of effective governance and regulatory enforcement. Trust and cooperation among stakeholders - community members, regulators, and companies - are essential for ensuring compliance with mining regulations and addressing social and environmental concerns. When these relationships deteriorate, governance becomes fragmented and ineffective, exacerbating the harmful impacts of illegal mining. Mitigating the erosion of social capital requires inclusive governance, active community engagement, and platforms for dialogue. Strengthening community-based organisations, promoting social cohesion, and facilitating meaningful participation in decision-making processes are critical steps toward restoring trust and fostering sustainable and inclusive development.

Economically, illegal mining operations often evade taxes, royalties, and other regulatory fees, leading to substantial revenue losses for the Ghanaian government. This significantly limits the state's ability to fund development projects and deliver essential services (Hilson & Potter, 2005). Research by Crawford and Botchwey (2018) indicates that illegal mining has contributed to a notable decline in government revenue from the mining sector, estimating losses of approximately \$2.3 billion in tax revenue between 2010 and 2017. This deprives the government of critical funds needed for infrastructure, social services, and economic development initiatives. Unlike legal mining companies - which are required to pay corporate taxes, royalties, and comply with environmental and labor regulations - illegal miners operate outside the formal regulatory system. The informal nature of their operations makes it difficult for authorities to monitor their activities or ensure revenue collection. Additionally, limited enforcement capacity and resource constraints further weaken government efforts to curb illegal mining and recover lost revenue. This creates a vicious cycle of revenue losses which undermine the government's ability to invest in enforcement and regulatory infrastructure, which in turn allows illegal mining to flourish.

In addition to revenue loss, illegal mining distorts the formal mining sector. Operating informally, illegal miners avoid the costs associated with compliance such as labour protections and environmental safeguards; thereby, gaining an unfair cost advantage over legally operating companies (Hilson & Potter, 2005). This undermines the competitiveness of formal mining firms, discouraging investment, limiting expansion, and reducing job creation. Furthermore, the widespread reliance on illegal mining as a source of livelihood creates economic vulnerability for individuals and communities. Illegal mining is typically associated with irregular income, lack of social protection, and limited access to financial services. Without formal employment arrangements, many miners are excluded from health insurance, pensions, workplace safety protections, and other social safety nets. This increases their exposure to health and financial risks perpetuates long-term poverty and instability.

In many cases, economic hardship and limited alternative opportunities push individuals into illegal mining. However, the sector's informal nature inhibits long-term economic security. The lack of access to credit, savings, or formal financial systems restricts miners' ability to invest in education, entrepreneurship, or future planning.

Figure 1: A summary flow chat of the linkage between illegal mining and its impacts



5. Conclusion

Tackling illegal mining in Ghana requires a multifaceted approach that balances environmental integrity, economic development, and social justice. It demands political will, community participation, and sustained commitment to building a resilient and sustainable future for all Ghanaians. The persistent challenge of illegal mining in Ghana has emerged as a significant threat to the nation's environmental sustainability, economic stability, and social well-being. The widespread prevalence of artisanal and small-scale mining, often conducted outside the bounds of formal regulation, has led to profound environmental degradation, notably deforestation, land erosion, water pollution, and loss of biodiversity. These ecological issues directly undermine agricultural productivity - a sector vital to Ghana's economy and the livelihoods of a majority of its population. Furthermore, illegal mining has exacerbated food insecurity by encroaching on arable land, contaminating water sources, and decreasing the land's fertility. The displacement of farming communities, coupled with the loss of productive farmland, results in reduced food production, increased food prices, and heightened vulnerability among rural populations.

Additionally, the economic impacts are not limited to environmental damages; significant revenue losses occur due to tax evasion, and the formal mining sector is undermined by unfair competition, discouraging investment and employment. The social implications are equally grave. Many individuals involved in illegal mining operate in hazardous conditions, often lacking social protections, health safeguards, and/or access to credit. This informal sector perpetuates cycles of poverty, economic instability, and community disintegration. Without a cohesive strategy that combines strict enforcement, community participation, and sustainable development, the cycle of illegal mining is likely to persist, further jeopardising Ghana's long-term prospects for growth and environmental preservation.

6. Recommendations

Enhanced Regulatory Enforcement and Legal Reforms



Strengthening regulatory enforcement is essential to effectively monitor and implement mining restrictions. This requires a comprehensive investment in institutional capacity, including adequate and sustained funding, modern equipment, and continuous training of enforcement personnel. Legal frameworks must be reviewed and reformed to eliminate loopholes, clarify mandates, and ensure swift and deterrent prosecution of illegal mining. Moreover, introducing clear incentives and support mechanisms for miners to transition into formal, sustainable practices will help promote compliance and reduce resistance. Coordination among enforcement agencies, judiciary, and local authorities must also be improved to ensure cohesive and transparent implementation of mining laws.

Community-Based Approaches and Participatory Governance



Engaging local communities as active partners in environmental stewardship and land governance is critical to achieving lasting solutions. By fostering inclusive decision-making processes and recognising traditional knowledge systems, communities can play a central role in safeguarding natural resources. The establishment of local monitoring committees and well-structured community mining programmes can enhance transparency, build trust, and promote a sense of ownership and accountability. These participatory approaches not only empower residents to take charge of their environment; but, also help reduce the economic and social appeal of illegal mining by offering legitimate and locally accepted alternatives.

Promotion of Sustainable Alternative Livelihoods



Diversifying rural economies must be prioritised by the government in collaboration with development partners to reduce dependence on illegal mining. This involves targeted investments in artisanal industries, sustainable agriculture, ecotourism, and skills-based vocational training tailored to local contexts. Supporting value chains in agro-processing, renewable energy, and climate-resilient enterprises can create meaningful employment and long-term income opportunities. By providing viable economic alternatives, communities are less likely to resort to environmentally destructive practices, thereby contributing to both poverty reduction and ecological preservation.

Environmental Rehabilitation and Education



Comprehensive land restoration programmes are crucial to reversing the environmental damage caused by illegal mining. Large-scale reclamation initiatives should focus on reforestation, soil restoration, and rehabilitation of water bodies to revive ecological integrity and support livelihoods. Equally important is sustained environmental education through public awareness campaigns that inform communities about the long-term social, economic, and ecological costs of illegal mining. By promoting a culture of environmental responsibility and stewardship, these efforts can empower citizens especially the youth to actively participate in conservation and sustainable resource management.

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Yoda A.S.S. (2024). As Ghana pushes mining in forests, a cautionary tale from a fading forest. [https //news.mongabay.com/2024/08/as-ghana-pushes-mining-in-forests-a-cautionary-tale-from-afading-forest/](https://news.mongabay.com/2024/08/as-ghana-pushes-mining-in-forests-a-cautionary-tale-from-a-fading-forest/). Accessed on 30-01-2025.

Illegal Mining and Implications on Peace, Community Resilience and National Security in Ghana



Professor Kwesi Aning and Mustapha Abdallah

1. Introduction

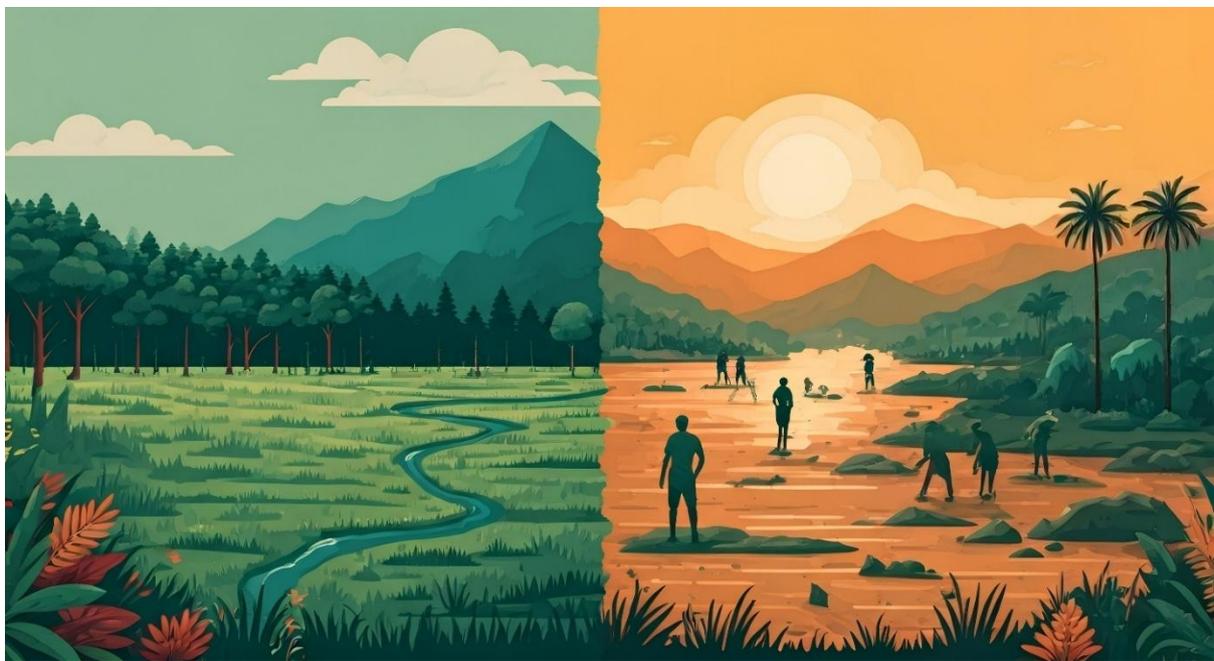
Illegal artisanal small-scale gold mining (ASGM) in Ghana, widely known as *galamsey*, has long been an important source of employment, especially for rural populations (McQuilken & Hilson, 2016). Increasingly, however, *galamsey* has expanded and is now not only an environmental and economic issue; but, also a national security concern (Tuffuor & Takora, 2024) posing an existential threat to Ghana. It is now a profound challenge to national security, social cohesion, and economic survival. Underpinning *galamsey* are an interlocking set of activities that undermines legitimate governance, exacerbates community vulnerability, encourages illicit financial flows, organised criminal activities (OC), (Ayambire, et al. 2024; Crawford and Botchway, 2017), and now ready to challenge the authority and presence of the state (<https://gapnews.media>, 2024). Despite successive government interventions, illegal mining persists, reflecting deeper political, economic, and institutional gridlocks. The unregulated and often-illegal aspect of this sector—*galamsey* has grown increasingly destructive over the last two decades. The sector has become an avenue not only for economic survival; but, also for illicit enrichment by political actors, foreign nationals, and transnational organised criminal (TOC) groups (Bokpe and Boateng, 2024).

The scale of devastation caused by illegal mining is extensive: According to the Forestry Commission (FC), at the *State of the Nation's Forests* briefing, "... The scale of *galamsey* destruction of Ghana's forests is alarming, with 34 major forest reserves significantly affected. This has resulted in the destruction of over 4,726 hectares of forest land, which are crucial for regulating the climate, preventing soil erosion, and providing habitats for diverse species" (Arthur-Mensah. 2023). Forests are decimated, water bodies contaminated with mercury and other toxins, and arable land rendered infertile. These environmental consequences are inseparable from the social toll on affected communities, including the displacement of livelihoods, leading to President John Mahama declaring the multidimensional impact of *galamsey* as "... a national emergency" (GNA, 2025). Closely related to the economic and environmental threats, is the rise of armed vigilante and criminal groups, and increased youth vulnerability to exploitation (Mensah & Tuokuu, 2023). Additionally, the issue of *galamsey* has become highly politicised. Political parties have been accused of either shielding or weaponising the menace for electoral and economic gain (Yeboah, 2023; Frimpong-Boateng, 2021). State institutions such as the Ghana Police Service (GPS), Ghana Armed Forces (GAF), and regulatory bodies have, in some instances, been complicit in perpetuating the problem due to corruption, collusion, or weak enforcement capacity (ibid).

It is against this backdrop, that this report aims to contextualise illegal ASGM within Ghana's broader socio-political and security framework. In doing so, it seeks to provide an analysis of the threats posed by *galamsey*, its connections to organised

crime, and the multidimensional power dynamics that sustain it. Ultimately, the goal is to propose actionable, consensus-driven policy options that address the evolving challenge of illegal mining while fostering peace, community resilience, and national security. The report adopts a qualitative research approach to data collection and analysis. It focuses on desk review of academic literature, policy briefs, and media and other investigative reports.

The Report is structured into six sections. Section 1 reviews existing literature with the view to highlighting existing gaps. This is an important approach to lay the foundations for the subsequent arguments. Subsequently, the succeeding sections are discussed along themes emerging from the literature review and the gaps identified. To this end, the second section examines and discusses threats and insecurities created by this activity and within illegal mining sites, while the third section focuses on organised criminal networks and their related illicit activities. In section four, the Report highlights what it perceives as the emerging secretive power dynamics and regulatory capture; a state of affairs that Kwadwo Appiagyei-Atua (2024) characterises as the development of a ‘galamstate’, while section five examines the implications on peace, resilience and national security, reflecting on Galtung’s theoretical perspectives of positive and negative peace. The final section offers practical steps for coordinated national response and concluding remarks.



2. Literature Review: Illegal Mining, Criminal Networks, and National Security in Ghana



Illegal mining, particularly ASGM, has evolved into a critical governance and security challenge in Ghana. Scholars and policy practitioners have highlighted the environmental, social, and economic implications of *galamsey*, but fewer studies systematically link it to organised crime, elite capture, and state fragility—gaps this review seeks to address. The review focuses on issues on environmental destruction and displacement of livelihoods, political economy of *galamsey* and state complicity, organised criminal networks and illicit financial flows, weak regulation, information control and institutional fragmentation. It also reviews issues of polarisation and policy paralysis, and concludes by highlighting the gaps.

Legal frameworks exist to regulate the operation of the ASGM in Ghana including the Small-Scale Gold Mining Law (PNDC Law 218) of 1989, which was subsequently incorporated into the Minerals and Mining Act of 2006 (Act 703). In 2020, the New Patriotic Party (NPP) government introduced a community mining scheme followed in 2021 with Small-scale Community Mining and Operational Manual. The aim of the laws and community mining guidelines were to ensure that small-scale miners who are self-employed, also operated in an environmentally friendly and sustainable manner. Despite these frameworks, the sector has continuously faced the challenge of non-compliance, resulting in what Crawford and Botchwey describe as “incalculable environmental damage to both land and water bodies” (Crawford & Botchwey, 2017). Rivers such as the Pra, Offin, Birim and Ankobra have been polluted with mercury, leading to adverse health and livelihood effects in affected communities (Armah et al., 2013).

McQuilken and Hilson note that ASGM accounts for a major portion of Ghana's gold output, but largely occurs outside formal regulatory systems, exacerbating environmental damage and institutional inertia (McQuilken and Hilson, 2016). Scholars such as Mensah and Tuokuu observe that government interventions, including *Operation Vanguard*, *Operation Galamstop* and *Operation Halt (1&2)*, and the ban on small-scale mining have not yielded sustainable results, as miners return to abandoned sites due to a lack of alternative livelihoods (Mensah & Tuokuu, 2023). While this points to a weak adaptive capacity among communities and the absence of resilient, sustainable development frameworks, it also shows the complicity of state actors within the wider context of political economy discourse.

Scholars have argued that *galamsey* has become both an economic enterprise and a political tool. For instance, Abdulai (2017) and Frimpong-Boateng (2021) stress that the menace is a **more of a political problem, requiring political solutions** (Abdulai, 2017; Frimpong-Boateng, 2021). The works of Crawford and Botchwey (2017) reveal how political elites, including Members of Parliament and local government actors, have provided covert support to illegal miners, especially during election seasons (Crawford and Botchwey, 2017).

As a result, some have argued that the expressed commitment to fight the menace is at best a mere media rhetoric, and at worse, a grand collusion between political elites, security forces, some traditional leaders and the local communities (<https://www.myjoyonline.com/chiefs-politicians-others-cited-in-bni-report-on-galamsey/>, 2017). Such collusion, they argue, have undermined the fight through various layers of bribery and corruption (Crawford and Botchwey, 2017). Professor Frimpong Boateng's Report, concurs with this assertion and contends that:

“many party officials from the national to the unit committee levels had their friends, personal assistants, agents, relatives, financiers [...] engaged in the illegal mining” (<https://www.modernghana.com/news/1226663/report-on-the-work-of-the-imcim-so-far-and-the.html>) posing significant challenges to the fight. Not only political elites, similar reports by media outlets have uncovered how **national security operatives are directly involved in or protect illegal mining operations** (thefourthstategh.com/2024/09/17543/). These dynamics reveal a troubling convergence of abuse of state power and its complex collusion with criminal enterprises.

Illegal mining is no longer confined to poor and unemployed youth. It is increasingly linked to transnational organised criminal (TOC) networks. In Ghana, these linkages manifest in several ways. The CDD-Ghana (2022) points out that **dirty money from *galamsey* finances political campaigns**, further compromising state integrity.ⁱ A study by Eduful, *et al.*, (2020) indicate the prevalence of **trafficking in women and minors for sexual exploitation**, as unregulated mining camps become hotspots for gender-based violence and informal economies.

The use of armed guards, some of whom are retired military personnel, shows the sophistication and militarisation of *galamsey* operations. This evolution from informal mining to militarised criminal syndicates has elevated *galamsey* to a national security threat (Yeboah, 2023). Consequently, a number of interventions including deployment of security forces and drones for surveillance have become key features of fighting the menace.ⁱⁱ Despite these interventions, institutional fragmentation and opaque governance hinder the attainment of the expected outcomes. Government efforts to deploy drones for surveillance, for instance, have been criticised for lacking transparency. The Ministry of Lands and Natural Resources has withheld critical information on drone operations under the guise of national security (<https://www.ghanaweb.com/GhanaHomePage/NewsArchive/I-m-yet-to-see-the-drones-NPP-bought-to-fight-galamsey-Lands-minister-1978889>). This lack of accountability continues to create a parallel governance structure, where impunity flourishes. Additionally, while the security forces themselves are accused of corruption and complicity in the crime, multiple agencies—the Minerals Commission, Environmental Protection Agency (EPA), Water Resources Commission (WRC) and Forestry Commission (FC) operate with little coordination, creating overlaps and enforcement gaps (Teschner, 2012).

There is consensus among key stakeholders: the government, academics, the media and civil society organisations (CSOs) that *galamsey* remains a national security threat. Nevertheless, the operations of the security agencies and the response of policy makers has not translated into systemic reform. Instead, it has offered legal cover for the central government to bypass scrutiny while weaponising security forces against poor miners, often excluding elite perpetrators from accountability.

Thus, between the two alternating political parties that form governments—the National Democratic Congress (NDC) and the New Patriotic Party (NPP), polarisation-induced policy paralysis remains a defining barrier to addressing illegal mining. As Yeboah notes, government responses since 1989 have failed due to “lack of proper planning of programmes” (2023). But more important is the fact that there is political manipulation of the various interventions, often after each election cycle. The reluctance to hold politically connected individuals accountable, coupled with a fragmented policy environment, results in a stalemate that sustains the *galamsey* economy.

Frimpong-Boateng’s report also indicates how the dissolution of the Inter-Ministerial Committee on Illegal Mining (IMCIM) and selective prosecution of offenders have deepened public disillusionment with state institutions. This erodes trust and weakens collective community resilience, especially when victims of environmental degradation see perpetrators walk free.

While the reviewed literature offers significant insight into the environmental, economic, and political aspects of illegal mining in Ghana, several gaps persist. Few studies have systematically analysed *galamsey* through a national security lens. Most research stops at environmental and regulatory concerns without

interrogating its links to organised crime and arms trafficking. From the analysis, the role of women in mining zones both as victims of trafficking and actors in informal economies is under-researched. The intersection of *galamsey* with sexual exploitation and gender-based violence remains anecdotal. While few media reports and particularly the famous Frimpomg Boateng's report highlight political involvement, there is inadequate analysis of how illegal mining finances political campaigns and fuels elite capture. Moreover, most of the documents reviewed focus on macro-level policy responses, with limited exploration of how communities are or can be empowered to build resilience and resist exploitation. Although media reports have highlighted the infiltration of national security operatives into illegal mining networks as an alarming trend, it is understudied and requires further exploration. The sum total of the state's failed interventions, according to Appiagyei-Atua, is the development of a galam-state that, where:

... state capture is evident. This is a setting in which the ruling elite, criminal gangs and/or powerful businessmen capture and manipulate policy formulation and formation, and influence the decision-making process to their own advantage. We are also seeing a gradual descent of the state into a galam-state. A galam-state, like a narco-state, is a state that is captured and linked to a higher form of grand corruption. In a galam-state, galamsey practice is "normalised" and the people are silenced or limited to mere criticism of the negative practice while these criticisms are met with a counter-narrative (clothed in legalese and big English) indicating that, compared to the previous regime, strenuous efforts are being made or have been made by the government in power to deal with the menace. A galam-state is identified by the types of state institutions captured (the legislative, executive, judiciary, regulatory agencies, public works ministries) by large private firms, political leaders, high ranking officials, and interest groups such as transnational criminal networks. Also, in a galam-state, there is a perfect blend between criminally-minded politicians and politically-minded criminal gangs, creating a hybrid form of governance. In such a scenario, the traditional role of the State to arrest, investigate, prosecute, adjudicate cases, convict accused persons and incarcerate or fine them – key ingredients of resilience factors or the ability to withstand and disrupt TOC as a whole – are compromised. A weakened criminal justice system in turn promotes patronage and clientelism, with the latter contributing to creating hybrid forms of governance. The next stage in the consolidation of the galam-state would be the formation of mafia-style criminal gangs whose typology includes militia and guerrilla groups exercising identifiable membership and territorial control (Appiagyei-Atua, 2024).

The above literature review underscores the fact that illegal mining in Ghana is a **multi-layered and multidimensional threat**, impacting environment, community stability, and state security. However, the **nexus between *galamsey* and national security, elite patronage, state capture and organized crime** remains under-

will be equipped to tackle strategic security and crisis management issues requiring rapid, coordinated and comprehensive responses' (Republic of Ghana, 2020).

Yet, another critical security document is the Security and Intelligence Service Act 2020 (Act 1030) which relates to the National Security Council (NSC), provides for the establishment of regional and district security councils; specify and coordinate the activities of the agencies responsible for the security of the State and to protect and preserve the unity and stability of the State, and to provide for related matters. In conjunction with these two documents is the National Signals Bureau, 2020 (Act 1040), which is to provide an integrated signals system for the national security and intelligence agencies for the purpose of: (a) the security of the State; and (b) protecting and preserving the unity and stability of the State.

These three documents demonstrate that, in terms of threat identification, Act 1030 empowered the councils under the NSC namely the Regional (REGSEC), Metropolitan (MESEC); Municipal (MUSEC) and District (DISEC) which all operated as committees of the NSC to perform the functions of the Council in the regions and districts. In terms of their specific functions, REGSEC's were to 'provide early warning to Government of the existence or likelihood of any security threat to the region, to the country or to the Government', while DISEC's were to 'provide early warning to Government of the existence or likelihood of any security threat to the district, to the country or to the Government'. In formally establishing an Act that guided the functions of the NSC and its ancillary structures, were brought under the authority of the NSC, to Parliamentary and Judicial oversight; and second, improve the centralisation of the three existing intelligence services under the control of one body. The above raises very difficult fundamental questions about the failure of the security institutions and their oversight bodies to protect Ghana from what has been described in sections 1 and 2 of this Report.

3.2 Threats and Insecurity from Illegal Mining



Illegal mining, or *galamsey*, poses significant and multidimensional threats to peace, security, and community resilience across Ghana. At the heart of these threats lies severe environmental degradation, particularly the contamination of major rivers such as the Pra, Ankobra, and Offin with mercury and other

hazardous chemicals used in gold extraction. This pollution does not only compromise drinking water and agricultural viability; but, also heightens food insecurity and public health risks in rural communities (Mensah & Tuokuu, 2023). Deforestation caused by illegal mining operations further exacerbates Ghana's climate vulnerability, increasing the frequency and intensity of floods and soil erosion (Armah, et al., 2013).

These environmental challenges are deeply intertwined with social tensions, as competition over land, mineral resources, and the profits from *galamsey* often ignites local conflict. In many mining communities, actors such as youth groups, traditional leaders, and migrant labourers compete for control over mining sites, leading to the erosion of social cohesion and the rise of inter-group and inter-ethnic rivalries. (Crawford and Botchway, 2017) The absence of effective state presence and dispute resolution mechanisms allows these tensions to escalate into violence, sometimes prompting the formation of vigilante groups.

Compounding these challenges is the growing militarisation of illegal mining zones. Criminal networks and vigilante groups often equipped with firearms have emerged as de facto authorities in some areas, operating with impunity and using violence to protect their interests. These networks are increasingly sophisticated, employing private militias or retired military personnel to fortify their activities. They have been known to intimidate local populations and aggressively resist state-led enforcement operations, such as *Operation Vanguard* and *Operation Halt* (Yeboah, 2023). Further undermining the state's authority is the politicisation of anti-galamsey efforts and the alleged complicity of elements within Ghana's security institutions. Reports by civil society groups and the media have implicated some members of the national security and military apparatus in shielding illegal miners or facilitating their operations in return for bribes (Frimpong-Boateng, 2021). One notable example involved a galamsey site in Adansi North District (Ashanti Region) reportedly operating under the protection of national security officers (<https://www.myjoyonline.com/police-arrest-illegal-miners-at-a-site-under-national-security-protection-in-adansi-north-district/>). These revelations have cast doubt on the integrity of the state's commitment to eradicating *galamsey*.

The issue is further intensified by poor regulatory enforcement and a lack of transparency in information management. Despite the introduction of surveillance technologies such as drones and the deployment of security forces, operations remain poorly coordinated and largely unaccountable. Data on interventions are often classified under the guise of national security, which restricts oversight and undermines public trust. This information vacuum leaves communities vulnerable to misinformation and manipulation by criminal actors. Collectively, these interlinked threats erode the legitimacy of state institutions, weaken community cohesion, and create a fertile ground for radicalisation, organised crime, and illicit financial flows.

3.3 Organised Criminal Networks and Illicit Activities

Illegal mining in Ghana is increasingly interconnected with organised criminal



networks and a wide range of illicit activities, posing profound threats to national security, governance, and social cohesion. A key aspect of this convergence is the laundering of proceeds from *galamsey* operations through informal financial systems. These illicit funds are often channeled into political financing; particularly, during electoral cycles, where they are used to bankroll parties and candidates—thereby undermining democratic accountability and incentivising state complicity (CDD-Ghana, 2022). Simultaneously, gold extracted through illegal means is traded on black markets, bypassing official channels and contributing to transnational money laundering schemes that deprive the state of critical revenue. However, the taskforce established by the GoldBoD has begun a crackdown on illegal traders. Just four days after the government announced a nationwide ban on foreign involvement in the local gold trade, the GoldBod Taskforce arrested 10 Chinese nationals in Asankragua in the Western Region. Briefing the media on the crackdown, the Chief Executive of the GoldBod, Sammy Gyamfi, noted that engaging in illicit gold trade would no longer be tolerated (<https://www.myjoyonline.com/goldbod-taskforce-arrests-10-chinese-in-illegal-gold-trading-bust/>).

Alongside financial crimes, *galamsey* settlements have become hotspots for human trafficking and sexual exploitation. These unregulated, male-dominated mining communities; particularly, in the Western and Ashanti regions, serve as destinations for trafficked women and children who are coerced into sex work or

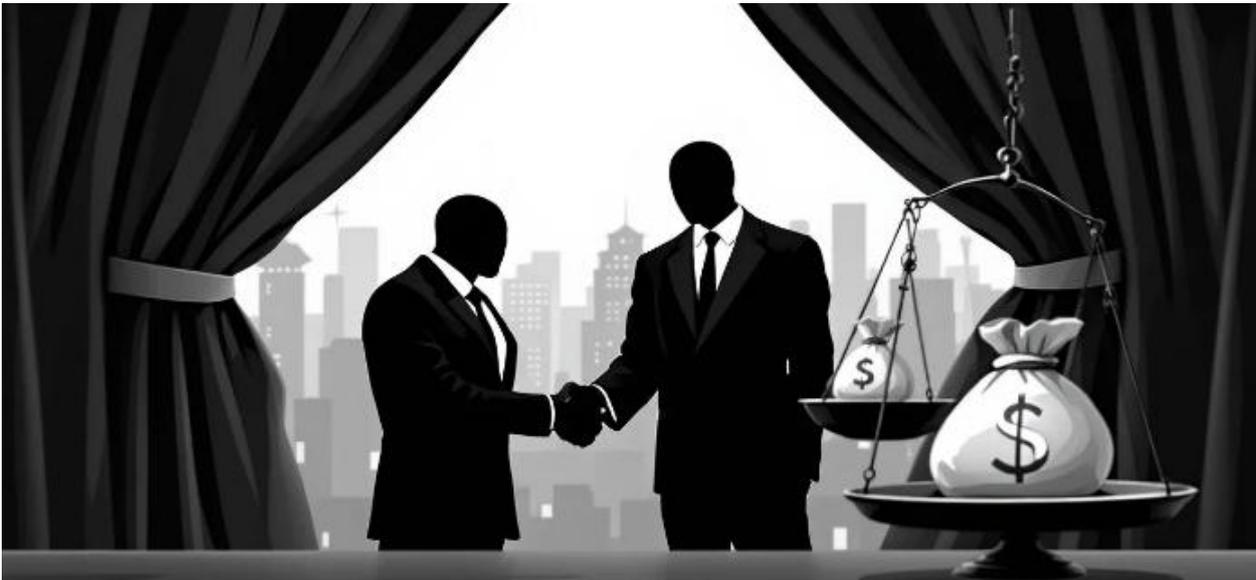
forced labour (Eduful, et. al., 2020). Prostitution and human trafficking has increasingly become lucrative business in galamsay host communities, attracting sex workers from neighbouring countries (<https://www.ghanaweb.com/GhanaHomePage/features/Galamsey-Economy-The-good-bad-and-ugly-1977918>).

A 2013 study in Obuasi in the Ashanti Region reveals that many boys drop out of school to mine in galamsay sites, while girls face sexual exploitation under economic pressure, often with family complicity.ⁱⁱⁱ Both genders suffer health risks and social consequences. The study further highlights that traditional child protection systems are weak, community awareness of legal protections is low, and local authorities lack the will or capacity to intervene. As a result, child labour and exploitation persist with little accountability or legal redress. The lack of legal oversight in such enclaves allows for widespread gender-based violence and the normalisation of exploitation, compounding the socio-economic vulnerabilities of marginalised groups.

Equally concerning is the role of *galamsey* zones in the trafficking of narcotics and small arms. Evidence indicates that illegal mining camps function as nodes in broader smuggling corridors, where drugs and weapons are transported and exchanged by transnational syndicates. Media reports indicate that due to the physical nature of the *galamsey* activities, site workers such as machine operators, labourers and security guards tend to use illicit drugs such as Indian hemp, energy drinks mixed with tramadol, cocaine, heroin and other chemicals (<https://www.ghanaweb.com/GhanaHomePage/features/Galamsey-Economy-The-good-bad-and-ugly-1977918>). Armed groups frequently use weapons to secure control over mining sites or enforce dominance against rival factions, while narcotics serve as both currency and a tool for coercion within the illicit economy. This fusion of extractive crime, arms proliferation, and drug trafficking creates a volatile security landscape that challenges the state's authority and exacerbates local instability.

Compounding these threats is the involvement of political elites and influential actors in perpetuating and protecting these criminal networks. Investigations by civil society and media have exposed how high-level figures exploit their power to manipulate mining licenses, obstruct enforcement actions, and even deploy state security apparatuses to safeguard illegal operations (Frimpong-Boateng, 2021; Yeboah, 2023). This elite complicity does not only embeds corruption within the state apparatus; but, also obstructs meaningful reform and enforcement, making policy interventions largely ineffective

3.4 Secretive Power Dynamics and Regulatory Capture



The persistence of illegal mining in Ghana is underpinned by entrenched and opaque power dynamics, elite complicity, and systematic capture of regulatory institutions. These conditions have fostered an environment in which *galamsey* thrives—not merely as an economic activity, but as a politically protected and institutionally-enabled enterprise. At the core of this phenomenon is the use of illegal mining as a vehicle for political patronage and campaign financing. As reported by Yeboah (2023) and detailed in the Frimpong-Boateng Report (2021), politicians from both ruling and opposition parties have relied on proceeds from illegal mining to fund electoral campaigns. This has created perverse incentives for political elites to shield *galamsey* operators from law enforcement, thereby legitimising and entrenching their activities. Investigative journalism and civil society reports have further highlighted the role of so-called “party big men” in sustaining illegal mining, where electoral gains are prioritised over the rule of law (Abdullahi, et al., 2025).

This political protectionism is mirrored in the compromise of state institutions; particularly, the security sector and local administrative bodies. Numerous accounts have documented the involvement of national security operatives, military personnel, and district-level officials in *galamsey* operations. Similarly, political party officials have become complicit in the illegal mining. The high-profile Akonta Mining case exemplifies this pattern, as revealed in CitiNews reports and several media outlets (https://www.myjoyonline.com/some-government-officials-and-politicians-are-involved-in-illegal-mining-asantehene/#google_vignette). Although the Minerals Commission, the regulatory body for mining companies, issued a press release indicating that Akonta Mining had no licence to operate in the Tano Nimir Forest Reserve, (<https://www.mincom.gov.gh/press-releases/alleged->

[operations-of-akonta-mining-ltd/](#)) the then President, Nana Addo Dankwa Akufo-Addo, reportedly cleared the company, according to a Citi News report (<https://citinewsroom.com/2023/01/akufo-addos-defense-of-akonta-mining-firm-unfortunate-ken-ashigbey/>). The Chief Executive Officer of the Ghana Chamber of Telecommunications and convenor of the Media Coalition Against Illegal Mining, Kenneth Ashigbey expressed reservations about the President's defence of Akonta Mine (ibid)^{iv}, suggesting political complicity, which complicates the fight. The Frimpong-Boateng Report (2021) also named state actors involved in facilitating or protecting these activities. Such revelations expose the blurring of boundaries between regulators and violators, corroding the legitimacy of state enforcement and weakening institutional integrity.

Compounding this institutional weakness is the fragmented and weak regulatory framework governing small-scale mining. Oversight responsibilities are dispersed across multiple agencies—such as the Environmental Protection Agency, the Minerals Commission, and local district assemblies, creating regulatory overlaps, competition, and inefficiencies. Teschner argues that this fragmentation erodes accountability and fosters bureaucratic rivalries (2012). As a result, licensing processes remain opaque, enforcement is applied inconsistently, and political interference frequently distorts technical decision-making. Issuance of licenses has thus become a political game, generating debates about which of the two main political parties has issued more than the other. While the politics creates difficulties to monitor and regulate the miners, it also allows galamsey operators—often fronting for political elites or operating under the guise of formal permits to exploit grey areas in the law.

Adding to the problem is the withholding of critical information under the guise of national security, which reinforces a culture of strategic ambiguity. Successive governments have shielded anti-galamsey operations—such as drone surveillance, arrests, and enforcement outcomes—from public scrutiny (<https://thefourthstategh.com/2024/09/17543/>). This deliberate opacity allows selective enforcement and political manipulation of the law while obstructing citizen oversight. As noted Yeboah, the current approach to security remains reactive, ambiguous, and detached from community-based frameworks that could enhance transparency and public trust (Yeboah, 2023). These secretive power dynamics, institutional vulnerabilities, and regulatory loopholes have normalised illegal mining and insulated its actors from accountability, making the fight a complex one.

3.5 Implications on Peace, Resilience, and National Security



Illegal mining has evolved from a localised environmental challenge into a profound threat to peace, community resilience, and national security. At the community level, *galamsey* has become a potent driver of violent conflict; particularly, in areas where land tenure is ambiguous or contested. As Abdulai notes, competition over mining sites frequently ignites disputes among local youth, traditional leaders, and foreign actors, especially Chinese nationals (2017). These tensions often result in violent confrontations, protests, and retaliatory attacks that fracture local cohesion. The perception that some chiefs and political figures are complicit in facilitating or benefiting from illegal mining activities only deepens mistrust and undermines traditional and political legitimacy (Crawford and Botchway, 2017).

From the perspective of Johan Galtung’s peace theory, these dynamics reflect not only a disruption of **negative peace**—the absence of direct violence; but, also a fundamental breakdown of **positive peace**, which involves the presence of justice, equity, and structural well-being (Galtung, 1969). The pollution of rivers, destruction of farmlands, and degradation of ecosystems associated with *galamsey* weaken the adaptive capacity of communities and diminish their resilience. As Armah, et al., argue, environmental degradation severely threatens agricultural livelihoods and food security, pushing rural youth into informal, and often criminal, mining networks (2013). This erosion of traditional livelihood systems constitutes what Galtung terms **structural violence**—conditions that systematically deny people the opportunity to reach their full human potential. Even in the absence of overt conflict, such structural violence precludes genuine peace.

At the national level, illegal mining has emerged as a critical security concern. Successive Ghanaian administrations, including that of the immediate former President, Nana Adu Dankwah Akufo-Addo, and the incumbent president, John Dramani Mahama, have acknowledged *galamsey* as a direct threat to national stability. In 2017, President Akufo-Addo declared that he was “prepared to put his

presidency on the line” (<https://www.graphic.com.gh/news/general-news/i-will-put-my-presidency-on-line-to-stop-galamsey-president.html>) to fight illegal mining, while the incumbent President John Dramani Mahama, during his “Thank You Tour” on Tuesday, July 15, in the Western North Region, described galamsey as a national emergency and called for the arrest of rogue taskforces (<https://www.myjoyonline.com/mahama-declares-galamsey-a-national-emergency-orders-arrest-of-rogue-taskforces/>). The question is, are these declarations genuine commitment to fight the menace? While many remain skeptical about the commitment to fight the menace, it also allows and increases the ability of criminal syndicates and politically connected actors to operate parallel power structures sometimes with armed protection and official cover, undermining state authority and the rule of law. The exposure of illegal mining operations under the protection of national security personnel, as in the 2023 Adansi North District case illustrates the extent of institutional compromise (<https://www.myjoyonline.com/police-arrest-illegal-miners-at-a-site-under-national-security-protection-in-adansi-north-district/>). Moreover, the use of national security prerogatives to withhold information about anti-galamsey operations fosters a climate of strategic ambiguity, thereby weakening public oversight and accountability (<https://thefourthstategh.com/2024/09/17543/>).

In sum, illegal mining in Ghana poses a triad of interlinked threats: it disrupts local peace, weakens community resilience, and compromises national security architecture. Although few individuals enrich themselves, viewed largely through Galtung’s lens, *galamsey* is both a source of direct conflict and a form of structural violence that entrenches poverty, inequality, and institutional mistrust. In this report, the contention is that it cannot be addressed solely through environmental enforcement or military interventions. Rather, a holistic strategy is required—one that integrates environmental justice, community empowerment, and political accountability. Rebuilding peace in affected communities must involve restoring livelihoods, enforcing equitable land rights, and ensuring that state institutions act transparently and without political interference.

4. Practical Steps for a Coordinated National Response



The above analysis has highlighted key issues and challenges within the *galamsey* mining industry. Addressing these complex challenges and their impacts on the environment, governance, and local communities requires a holistic and multi-sectoral strategy. A coordinated national response must not only focus on enforcement; but, also ensure inclusive participation, building resilient communities, and ensuring transparency and accountability across institutions. The following practical steps outline key areas of intervention that can contribute to a sustainable and effective solution:

- **Reform Enforcement Institutions**
 - Depoliticise operations and related enforcement units.
 - Establish independent oversight mechanisms to regulate and monitor the deployment of security forces in mining areas
 -
- **Community-Led Governance**
 - Empower local authorities and traditional leaders to enhance community ownership and accountability in managing natural resources.
 - Institutionalise Community Mining schemes within clear, enforceable, and transparent regulatory frameworks
 -
- **Market Regulation**
 - Implement gold traceability systems to track the flow of minerals from source to export. The taskforce established by the Goldbod is significant in this sense.
 - The crackdown by the Goldbod on informal gold buyers and exporters to reduce illegal trade and loss of state revenue should be sustained.

-
- **Financial Monitoring**
 - Strengthen collaboration with the Bank of Ghana and the Financial Intelligence Unit (FIU) to identify and trace illicit financial flows associated with illegal mining.
 - Enforce anti-money laundering (AML) laws, particularly in relation to political party financing
-
- **Gender and Human Security Protections**
 - Establish safe shelters, psychosocial services, and legal assistance for women and vulnerable populations in mining zones.
 - Mainstream gender-sensitive approaches in all mining-related national policies and programmes.
-
- **Transparent National Dialogue**
 - Promote inclusive and non-partisan forums to depolarise public discussions on mining governance.
 - Ensure the implementation of key recommendations from the Inter-Ministerial Committee on Illegal Mining (IMCIM) and civil society actors, including those highlighted in the Frimpong-Boateng Report (2021).

5. Conclusion

Illegal mining in Ghana known as *galamsey* is both a symptom and a driver of systemic governance failure, institutional fragility, and elite-driven polarisation. It thrives in an environment marked by regulatory capture, political interference, fragmented oversight, and deep socio-economic disparities. What began as a survival strategy for the economically marginalised has evolved into a highly organised criminal enterprise—one that implicates political elites, security operatives, and transnational networks.

The consequences of *galamsey* extend far beyond environmental degradation. It fuels violent conflict in mining communities, erodes the adaptive capacity of rural livelihoods, facilitates human and arms trafficking, and undermines the credibility of state institutions. The convergence of criminal networks, elite complicity, and weak regulation has turned illegal mining into a national security threat—capable of destabilising governance systems and fragmenting social cohesion.

Efforts to address this menace through military-style interventions and securitised strategies while sometimes necessary—have been inconsistent, reactive, and often compromised by the very institutions mandated to enforce them. The politicisation of anti-*galamsey* campaigns, the opacity of state responses, and the use of national security justifications to withhold critical information further weaken public trust and civic engagement.

Tackling illegal mining requires more than short-term enforcement. It demands long-term structural reforms, starting with the depoliticisation of small-scale mining regulation, transparent licensing, and the accountability of public officials—including those in the highest echelons of power. There is a pressing need for an inclusive national dialogue that goes beyond blame to address systemic power asymmetries, resource governance, and the role of political financing in perpetuating illegality.

Building resilience will also mean restoring community livelihoods, rehabilitating degraded environments, and empowering local actors—especially youth, women, and traditional authorities—as co-creators of sustainable alternatives. Civil society, the media, and academia must be enabled to play their watchdog roles without fear or obstruction, while regional cooperation is essential to addressing cross-border dimensions of illicit mining.

Ultimately, resolving the *galamsey* crisis is a test of Ghana's democratic maturity and governance integrity. Only a coordinated, inclusive, and justice-oriented approach—grounded in transparency, rule of law, and genuine political will—can dismantle the entrenched networks sustaining illegal mining and restore peace, resilience, and national security.

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