



Strengthening Governance Frameworks for Sustainable Resource Management: A Case Study of Mining, Petroleum, and Forestry Governance in Ghana

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ABSTRACT

Natural resources are central to Ghana's development, yet governance of mining, petroleum, and forestry remains uneven despite strong formal legal and institutional frameworks. This paper examines resource governance through polycentric governance theory and the resource curse thesis, drawing on legislation, government data, Afrobarometer surveys, mining scorecards, EITI reports, and an original stakeholder survey (N = 100) covering miners, community members, traditional leaders, District Assembly officials, regulators, and civil society representatives in an active mining district. Findings show that governance frameworks are weakened by fragmented responsibilities, weak enforcement, limited transparency, and widespread illegal small-scale mining (galamsey). In 2025, small-scale miners produced more gold than large-scale mines for the first time in over a century, although most small-scale operations remain unlicensed. Governance effectiveness and community participation explained 56% of variance in perceived local benefits, while reform support was high across stakeholder groups. The paper calls for stronger institutional coordination, decentralized enforcement, fair benefit-sharing, independent monitoring, and better implementation of existing laws.

Keywords: Decentralization, Ghana, Governance, Natural resource management, Resource curse

INTRODUCTION

Governance and Resource Management in Ghana

Governance refers to how decisions are made and implemented, including the granting of mining licenses, collection and distribution of royalties, and the extent to which local communities can participate in decisions about land and water resources. Ghana has the basic institutions needed for effective governance, including laws, a judiciary, the media, elections, and regulations for managing natural resources. However, the main challenge is not the lack of laws but the weak implementation and enforcement of these laws.

Ghana continues to face governance challenges. In the 2025 Transparency International index, Ghana scored 43 out of 100, showing no improvement since 2020. Similarly, the 2024 Mo Ibrahim Index ranked Ghana 7th out of 54 African countries, with a score of 62.2. However, this represents a decline of 14.9 points over the past decade.

Ghana's Constitution states that the country's mineral and petroleum resources are held by the President in trust for the people. This principle is also reflected in the Minerals and Mining Act, 2006 and the Petroleum Act, 2016. In principle, therefore, the benefits from natural resource exploitation should contribute to the well-being of citizens and local communities. In practice, however, many local communities continue to experience the negative effects of mining and other resource activities without receiving adequate benefits.

Mining, petroleum, and timber are important to Ghana's economy and generate significant government revenue. Gold remains the country's leading mineral export, although the mining sector experienced both periods of growth and decline in 2024.

Against this background, this study has three main objectives:

1. To examine Ghana's legal and institutional framework for managing minerals, petroleum, and forest resources.
2. To identify key governance gaps that hinder sustainable resource management.
3. To propose practical measures to improve governance, particularly through decentralization and stronger community benefit-sharing mechanisms.

LITERATURE REVIEW

The governance practices pertaining to natural resources emerge as a critical theme in the domain of development, particularly in countries with abundant natural resources that have failed to achieve sustainable development due to the presence of natural resources like minerals and oil. Scholars explain this representation through the resource curse theory, which suggests that resource-rich countries suffer from problems like corruption and slow economic growth due to the inefficiency of institutions. Ghana is analyzed concerning the theme where the country has not been subjected to violence related to natural resources, but still continues to face different facets of resource-related governance challenges.

Most scholars emphasize weak governmental practice as the major issue of governance in case of Ghana, rather than legislative issues. The studies dedicated to mining say that the problem is not only enforcing legislation since it does not tackle the reasons that cause illegal miners to exist such as higher poverty rates, unemployment, land scarcity, etc. It is also proved by (G. Botchwey & Crawford, 2025) who stated that the government has been promising to fight illegal mining; however, the practice of enforcement is not carried out properly because of political interference that obstructs holding accountable those involved in illegal mining. Evidence from broader natural resource governance reinforces this conclusion. Ghana has received international recognition for improving transparency in petroleum revenue management through the Petroleum Revenue Management Act, 2011 (Act 815), supported by initiatives such as the Extractive Industries Transparency Initiative (EITI) and assessments by the Natural Resource Governance Institute (NRGI). Nevertheless, transparency improvements at the national level have not been matched by equivalent accountability at the local level, particularly regarding the distribution and utilization of mineral royalties by district assemblies and traditional authorities (Extractive Industries Transparency Initiative, 2024; Natural Resource Governance Institute). This disconnect between national policy reforms and local implementation represents one of the recurring themes within Ghana's resource governance literature.

Recent scholarship similarly questions the effectiveness of enforcement-centered policy responses to illegal mining. Since 2017, successive governments have relied heavily on military-led operations and enforcement task forces to suppress galamsey, yet these interventions have produced largely temporary outcomes because they fail to address the structural socioeconomic conditions driving informal mining (Hilson & Maconachie, 2020). Comparative evidence from countries such as Peru suggests that sustainable governance requires a more balanced approach that combines regulatory enforcement with formalization programmes, livelihood diversification, and institutional capacity building. Collectively, these studies indicate that strengthening governance requires improving institutional coordination and accountability rather than introducing additional legislation.

In order to address the governance challenges at hand, this research draws upon two complementary theoretical frameworks: polycentric governance and the resource curse thesis. Polycentric governance refers to the notion that complex systems of environmental resources and natural resources function better when there are many interacting systems of governance rather than when there is a centralized system (Ostrom, 2010). Ghana governance of natural resources is conducted by various actors including national regulatory bodies, local government, traditional authority, mining firms, and community groups. This multiplicity of actors has largely resulted in inadequate governance characterized by fragmentation, lack of clarity, and low accountability (C. O.-A. Botchwey et al., 2026). The polycentric perspective is used in this study to analyze why institutional pluralism has not led to better governance outcomes.

On the other hand, the resource curse thesis sheds light on why countries with natural resources perform worse than those with no natural resources. In the context of Ghana, the oil industry has become an emblematic case in this argument. (Ayelazuno, 2014) asserts that the emergence of the petroleum sector has predominantly benefited elite political and economic classes. Conversely, (Obeng-Odoom, 2012) (Achina-Obeng & Aram, 2022) asserts that poor governance outcomes should not be viewed as an inevitable consequence of the wealth of the country's natural resource; instead, the outcome reflects the decisions made by the local institutions. Similarly, (Okpanachi & Andrews, 2012) posit that Ghana had relatively robust institutions, which were supposed to help the country circumvent the pitfalls other famous resource-rich countries had been going through as long as enough accountability and transparency mechanisms were in place. However, recent evaluations show that despite the establishment of institutions like the Public Interest and Accountability Committee, the latter has had severe difficulties in practicing its powers (Oppong, 2016). Together, these theoretical perspectives emphasise that the effectiveness of resource governance depends not merely on institutional design but on institutional performance.

The empirical literature on Ghana's artisanal and small-scale mining sector further reinforces this implementation gap. (Adu-Baffour et al., 2021) demonstrate that although regulatory authority is formally vested in the Minerals Commission, limited field capacity significantly constrains enforcement across dispersed mining sites. Likewise, (Hirons, 2014) finds that decentralisation has transferred relatively little practical authority to district governments, while the continued influence of traditional authorities has created overlapping governance structures and contested accountability. Other studies broaden this perspective by highlighting issues often overlooked within governance debates. Environmental research documents the severe health risks associated with mercury and cyanide contamination resulting from informal gold processing (Achina-Obeng & Aram, 2022), while livelihood studies show that participation in small-scale mining is often temporary and economically adaptive rather than permanent, suggesting that enforcement-only approaches overlook important socioeconomic realities (Adranyi et al., 2023). Gender-focused research further demonstrates that restrictive mining policies have disproportionately affected women, particularly those employed in mineral processing activities, thereby highlighting the need for more inclusive governance approaches (Zolnikov, 2020).

Research Gaps

Despite growing research on extractive industry governance in Ghana, important gaps remain. Previous studies largely examine mining, oil, and forestry separately, overlooking their shared constitutional ownership framework and interconnected institutional governance systems. This sector-specific approach limits a comprehensive understanding of governance challenges across Ghana's extractive industries. In addition, recent institutional reforms, including the establishment of District Mineral Offices as part of decentralization efforts, have received limited academic attention. Their effects on local participation, coordination, accountability, and resource governance remain insufficiently examined. This study addresses these gaps through an integrated analysis of Ghana's mining, petroleum, and forestry sectors. Drawing on the resource curse hypothesis and polycentric governance theory, it examines whether recent governance reforms have improved resource management and reduced longstanding governance challenges. The study also proposes practical recommendations to strengthen decentralization, institutional coordination, accountability, and community participation in natural resource governance.

Contribution of the Study

The paper makes four main contributions to the literature. First, it examines governance across Ghana's minerals, petroleum, and forestry sectors within a unified framework, highlighting their shared constitutional ownership structure rather than treating them separately. Second, it examines Ghana's 2025–2026 decentralization reforms, particularly the District Minerals Offices and GoldBod Taskforce, and identifies conditions necessary for effective implementation. Third, the study contributes original stakeholder evidence from a survey of 100 respondents in an active mining district, strengthening the predominantly qualitative literature on extractive resource governance in Ghana. Fourth, it incorporates gender and livelihood considerations into the analysis of access to justice, highlighting how these factors influence governance outcomes. Together, these contributions provide an integrated understanding of extractive resource governance and identify practical areas for strengthening decentralization, institutional coordination, accountability, and inclusive resource management in Ghana.

Hypotheses

The original stakeholder survey described in the Research Methods section was designed to test five hypotheses derived from the theoretical and empirical literature reviewed above:

H1: Perceived governance effectiveness is positively associated with stakeholders perceived local benefits from resource extraction, consistent with the resource curse literature's emphasis on institutional performance over institutional design (Obeng-Odoom, 2012); (Oppong, 2016).

H2: Community participation is positively associated with perceived local benefits from resource extraction, consistent with the polycentric governance expectation that outcomes improve when affected communities have a genuine role in decision-making (Ostrom, 2010).

H3: Community participation is positively associated with stakeholder support for governance reform.

H4: Perceived enforcement fairness is negatively associated with perceived drivers of illegal extraction, consistent with the political economy literature's argument that enforcement perceived as arbitrary or politically selective can itself sustain the informal sector it targets (G. Botchwey & Crawford, 2025); (Abdulai et al., 2025).

H5: Perceptions of gender-responsiveness in governance are positively associated with support for governance reform, reflecting the concern in the gender and livelihoods literature that enforcement-only strategies can alienate the groups, including women in ore processing and trading, whose support reform efforts most need (Zolnikov, 2020); (Adranyi et al., 2023).

These hypotheses are evaluated in the Results and Discussion section using the correlation and regression models reported under Stakeholder Survey Findings on Resource Governance.

RESEARCH METHODS

This study adopts a convergent mixed-methods design combining documentary/institutional analysis with quantitative stakeholder survey data. research design based primarily on secondary sources, complemented by nationally representative survey datasets, institutional performance indicators, and an original stakeholder survey. Key legal sources include the 1992 Constitution of Ghana, the Minerals and Mining Act, 2006 (Act 703, as amended by Acts 900 of 2015 and 995 of 2019), the Petroleum (Exploration and Production) Act, 2016 (Act 919), the Petroleum Revenue Management Act, 2011 (Act 815), and the Local Governance Act, 2016 (Act 936). These were supplemented by Ghana Statistical Service national accounts, Ghana Chamber of Mines reports, EITI reconciliation and validation reports, the CDD-Ghana Mining Districts Development Scorecard (2024), Afrobarometer Rounds 9 and 10, Transparency International's Corruption Perceptions Index, the Mo Ibrahim Index, Water Resources Commission monitoring data, Ghana Gold Board enforcement reports, and relevant peer-reviewed and professional literature published between 2015 and 2026.

Sources were selected based on their relevance to the study's three objectives and examined thematically across four governance dimensions: legal, financial, institutional, and community governance. Quantitative indicators included mining and quarrying GDP growth, gold production by large-scale and small-scale mining, water quality, EITI reconciliation performance, fiscal transparency, citizen perceptions of governance, and GoldBod enforcement activities.

The study also included an original stakeholder survey of 100 respondents from an active mining district. The sample comprised licensed artisanal and small-scale miners (30%), unlicensed ASM operators (30%), large-scale mining employees (10%), local community members (10%), traditional leaders (5%), District Assembly officials (5%), regulatory authorities (5%), and NGO/civil society representatives (5%). The survey employed purposive quota sampling within a single high-intensity mining district deliberately selected for the coexistence of licensed and unlicensed ASM activity. The design prioritises depth and stakeholder diversity within a high-relevance local context rather than national statistical representativeness. Findings from the survey are therefore interpreted as complementary, district-level stakeholder evidence that is triangulated with nationally representative secondary sources (Afrobarometer, EITI/GHEITI, CDD-Ghana district scorecard, and official production and enforcement statistics). The sample is 80% male, reflecting the demographic profile of the mining workforce encountered in the field; this imbalance is acknowledged as a limitation for gender-related inferences. A ten-item questionnaire assessed governance effectiveness, fairness of enforcement, causes of illegal extraction, community participation, local benefits, and environmental impacts. The survey instruments demonstrated high internal reliability, with Cronbach's alpha values ranging from 0.90 to 0.95. KMO values of 0.88 to 0.94 further indicated that the data were suitable for factor analysis.

RESULTS AND DISCUSSION

Current Status of Ghana's Resource Governance Framework

Ghana's legal framework for resource governance is built around a small number of core statutes, summarized in Table 1. The Minerals and Mining Act, 2006 (Act 703), as amended in 2015 and 2019, is the principal law governing mineral rights, licensing, and royalties, currently set at 5 percent of the value of minerals won. The Petroleum (Exploration and Production) Act, 2016 (Act 919) governs upstream oil and gas activity, replacing the earlier PNDCL 84 of 1984. Revenue from petroleum is managed under the Petroleum Revenue Management Act, 2011 (Act 815), which established the Annual Budget Funding Amount mechanism and the Ghana Petroleum Funds, along with a Public Interest and Accountability Committee tasked with independent oversight.

Table 1. Key Legislation and Institutions Governing Natural Resources in Ghana

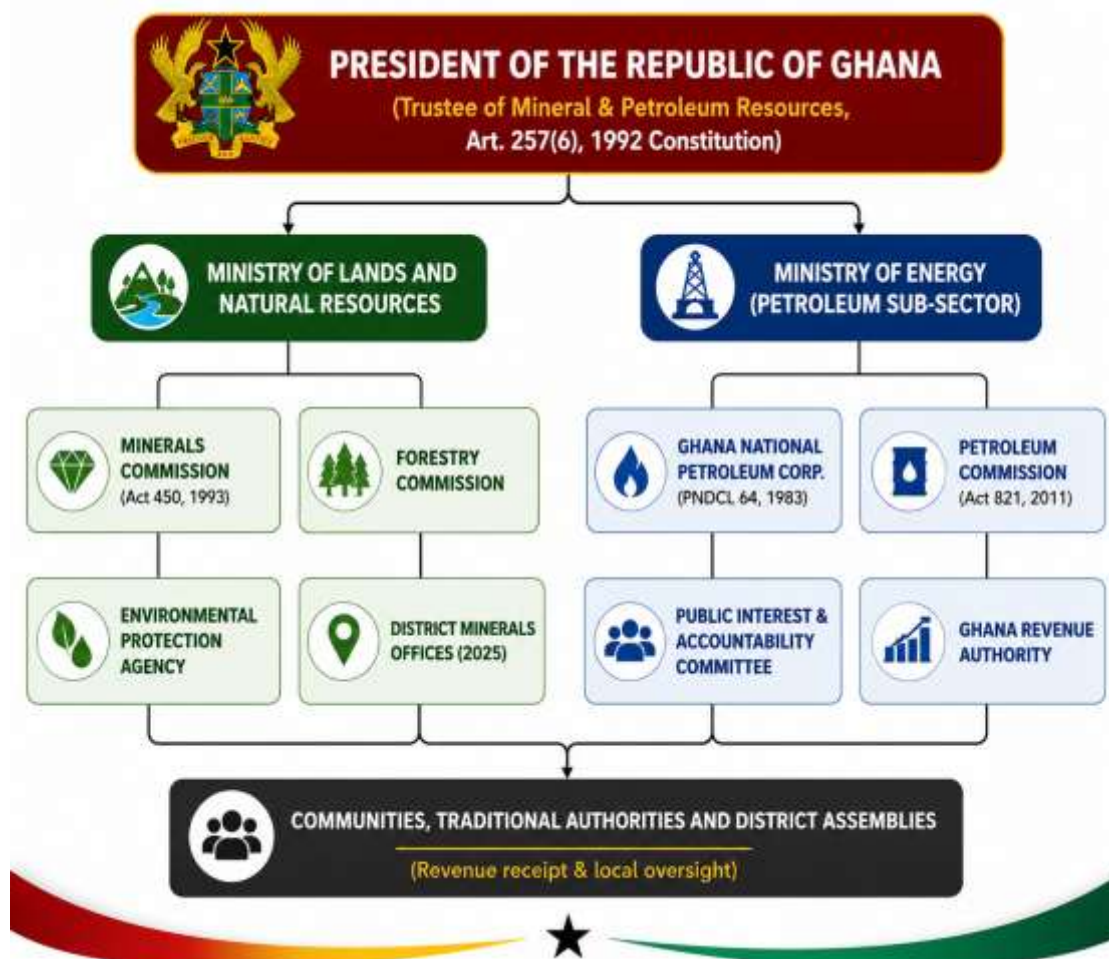
Instrument / Institution	Year	Primary Focus
Constitution of the Republic of Ghana	1992	Vests ownership of minerals and petroleum in the President in trust for citizens
Minerals and Mining Act (Act 703, amended by Act 900 and Act 995)	2006	Principal law on mineral rights, licensing, and royalties
Minerals Commission (Act 450)	1993	Regulation and coordination of mineral sector policy
Petroleum Revenue Management Act (Act 815)	2011	Petroleum revenue collection, savings, and public reporting
Petroleum Commission (Act 821)	2011	Regulation of upstream petroleum operations
Petroleum (Exploration and Production) Act (Act 919)	2016	Governs oil and gas exploration and production

Local Governance Act (Act 936)	2016	Decentralized administration through District Assemblies
District Minerals Offices	2025	Decentralized licensing and mining governance services

Source: Compiled by the authors from the Republic of Ghana's statutory instruments and the Ministry of Lands and Natural Resources (2025).

Figure 1 illustrates Ghana's institutional architecture for natural resource governance. It shows that constitutional ownership of natural resources is implemented through two parallel governance pathways: minerals are administered through the Ministry of Lands and Natural Resources, while petroleum is overseen by the Ministry of Energy. Each pathway is supported by its own regulatory institutions, revenue management mechanisms, and accountability arrangements. However, the figure also highlights a critical governance challenge: the transition from national policy formulation to local implementation. At this interface, where district assemblies, traditional authorities, and local communities become central actors, governance arrangements are often fragmented, institutional responsibilities overlap, and accountability mechanisms weaken. This disconnect between strong national governance structures and comparatively weak local implementation represents one of the central governance challenges examined in this study.

Figure 1: Institutional structure of natural resource governance in Ghana



Simplified institutional structure of natural resource governance in Ghana. Source: Author's construction based on statutory mandates described in Table 1.

Governance Challenges Confronting Natural Resource Management

Several recurring governance challenges emerge from the documents reviewed for this study, summarized in **Table 2** and discussed in turn below.



Table 2: Principal Governance Challenges and Their Institutional Locus

Challenge	Institutional Locus	Illustrative Evidence
Legal and institutional fragmentation	Minerals Commission, EPA, Forestry Commission	Concessions licensed without matching environmental or forestry approval
Weak enforcement of anti-galamsey measures	Inter-Ministerial Committee on Illegal Mining (from 2017)	National emergency declared in 2021; illegal mining persisted through 2024-25
Limited fiscal transparency at district level	District Assemblies, Office of the Administrator of Stool Lands	Royalty receipts tracked centrally but poorly reported locally
Incomplete decentralization	District Minerals Offices (2025)	Licensing authority historically centralized in Accra
Political interference	Local government, regulatory appointments	Documented linkage between illegal mining and local political networks
Environmental degradation and weak monitoring	Environmental Protection Agency	Documented pollution of the Pra, Ankobra, and Birim rivers
Inadequate engagement of traditional authorities	Chieftaincy institutions, mining companies	Recurring land and compensation disputes

Source: Compiled by the author from the literature reviewed above and government sources cited throughout this section.

Legal and Institutional Fragmentation

Managing natural resources in Ghana is complicated by the involvement of multiple agencies of government, each with its own statutory mandate and none with overall responsibility for coordinating the others (Adu-Baffour et al., 2021). Among the actors involved are the Ghana National Petroleum Corporation, the Environmental Protection Authority, the Forestry Commission, the Ministry of Lands and Natural Resources, and the Minerals Commission, among other actors.

Typically, the involvement of all these institutions should work on the overall benefit of the Ghanaian society since each institution has its department, and area of specialization. However, in reality, the coordination gap between these institutions leads to a disaggregated and ineffective governance.

It is this disaggregated system that creates the scenario whereby a concession granted by the Minerals Commission could take place in a specific area without the involvement of the EPA or without being done in a protected area under forest reserves without being approved by the Forestry Commission. Coordination gap is therefore one of the issues that have been used to explain the emergence of illegal mining in Ghana. No single agency in this fragmented structure is explicitly responsible for the gendered dimensions of mining activity, such as the occupational and health risks concentrated among women in ore processing, which means these effects are liable to fall through the same institutional gaps as environmental and forestry approvals.

Weak Enforcement and the Persistence of Galamsey

Illegal small-scale mining has been described as a national emergency by Ghana's National Consultative Dialogue on Small-Scale Mining, convened in 2021 after years of protest by civil society, the Ghana Bar Association, and religious bodies over the destruction of rivers and forest reserves. An Inter-Ministerial Committee on Illegal Mining was established as early as 2017, and successive governments have launched task forces, military-police joint operations, and public awareness campaigns, yet the practice continued to expand

rather than contract through the following years. Gold accounts for well over 90 percent of Ghana's mineral exports, and the mining and quarrying sub-sector grew by 12.9, 14.8, and 17.1 percent year-on-year in the first three quarters of 2024 alone (Ministry of Finance, 2024), which means the economic incentive to overlook unlicensed mining, particularly where local employment and political patronage are involved, is substantial.

The scale of unlicensed production is substantial: in 2025, small-scale miners produced 3.11 million ounces of gold, accounting for 52.4 percent of national output and surpassing large-scale mining's 2.83 million ounces (47.6 percent) for the first time in over a century, according to data presented at the Ghana Chamber of Mines 98th Annual General Meeting (Modern Ghana, 2026). Yet an estimated 70 to 90 percent of small-scale mining operations in Ghana remain unlicensed, according to convergent assessments by the World Bank, Reuters, and the Minerals Commission (World Bank, 2025a; Reuters, 2024). This means that while small-scale mining output provides a reasonable upper bound for illegal (galamsey) production, the two are not identical, as some ASM gold is produced under legal licenses. SWISSAID further estimates that approximately 34 tonnes of ASM gold went undeclared in 2023, suggesting a significant shadow economy in gold production that official production figures do not capture (Andonova et al., 2025). The core governance failure here is not an absence of law but an enforcement system that has repeatedly proven unable, or in some documented cases unwilling, to apply the law consistently once it reaches the district and community level. This is consistent with the original stakeholder survey conducted for this study, in which enforcement fairness was rated only moderately ($M = 3.02$ of 5) and was significantly negatively associated with reported drivers of illegal extraction ($r = -.48$, $p < .001$), suggesting perceived unfairness in enforcement may itself help sustain the sector it targets.

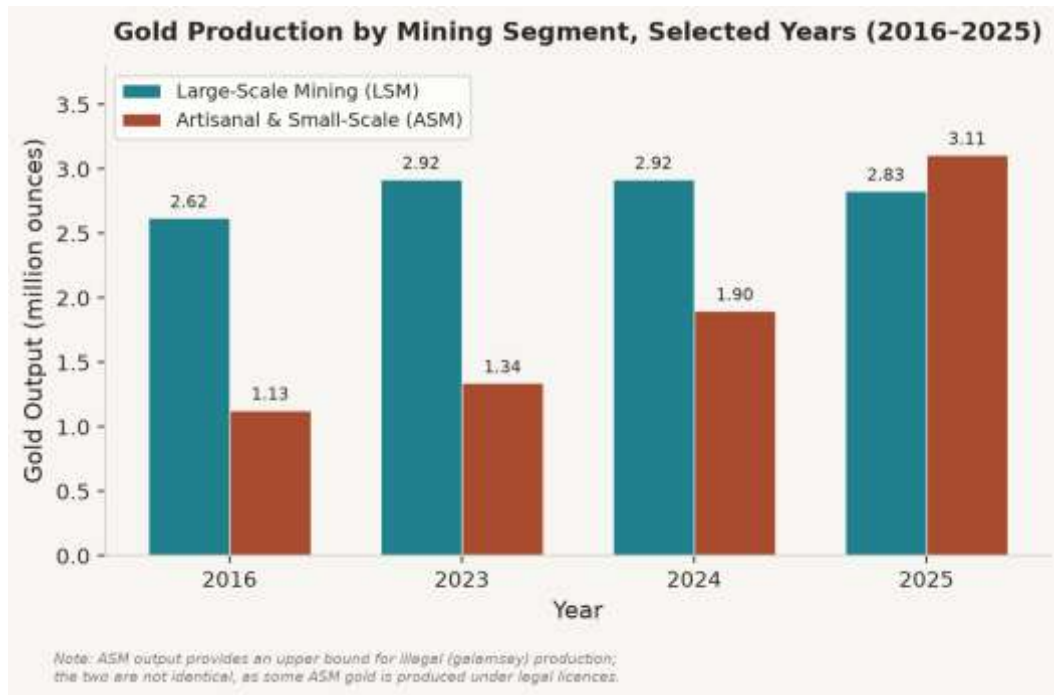
Figure 2 illustrates just how volatile the sub-sector's official growth trajectory has been. After three consecutive quarters of double-digit expansion in 2024, the mining and quarrying sub-sector contracted by 8.2 percent year-on-year in the fourth quarter before recovering only marginally, by 1.4 percent, in the first quarter of 2025 (Ghana Statistical Service, 2025). Overall GDP continued to expand at 6.5 percent in the second quarter of 2025, but the mining and quarrying sub-sector contracted again by 2.8 percent year-on-year in the third quarter of 2025 (Ghana Statistical Service, 2025; World Bank, 2025b), confirming a pattern of sharp volatility that persisted beyond the period captured in the original growth data. A sector this volatile, and this economically significant, cannot be governed effectively through episodic task forces alone; it requires steady institutional capacity that does not rise and fall with the political cycle. **Table 3** presents gold production by sector from 2016 to 2025.

Table 3: Gold Production by Sector - Large-Scale Mining (LSM) vs. Artisanal and Small-Scale Mining (ASM), 2016–2025

Year	LSM Output (oz)	ASM Output (oz)	ASM Share (%)	Notes
2016	2,620,033	1,134,635	30.2	World Bank/Delve report
2023	2,920,000	1,336,000	31.4	Chamber of Mines
2024	2,920,000	1,900,000	39.4	Reported; not official GCM publication
2025	2,830,000	3,110,000	52.4	Chamber of Mines 98th AGM; first time ASM > LSM in over a century

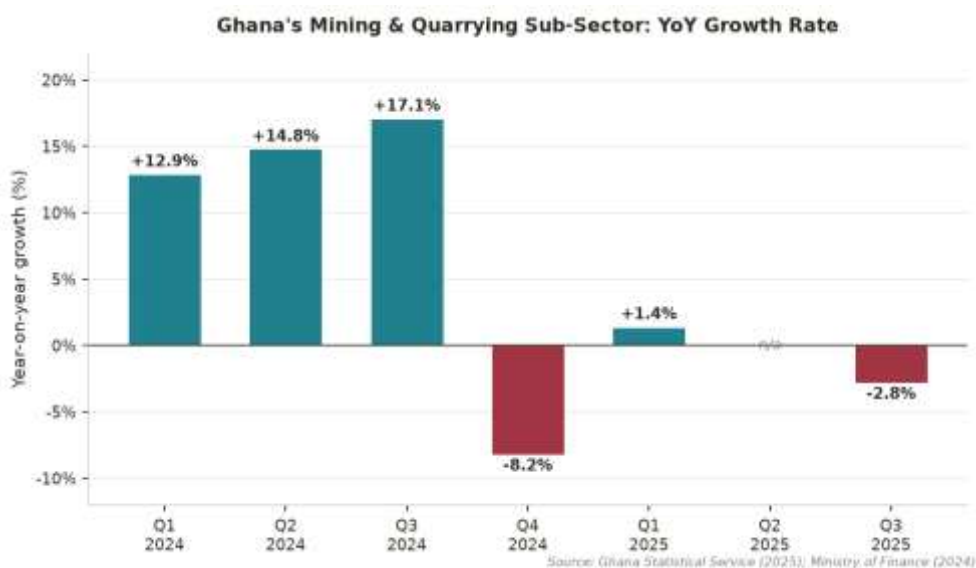
Source: Modern Ghana (2026); Ghana Chamber of Mines; World Bank (2025a); Reuters (2024). Note: ASM output provides an upper bound for illegal (galamsey) production, but the two are not identical, as some ASM gold is produced under legal licenses.

Figure 2: Gold production by mining segment, selected years (2016–2025).



Gold production by mining segment, selected years (2016–2025). Source: Modern Ghana (2026); Ghana Chamber of Mines; World Bank (2025a); Reuters (2024).

Figure 3: Year-on-year growth rate of Ghana's mining and quarrying sub-sector, Q1 2024-Q3 2025.



Year-on-year growth rate of Ghana's mining and quarrying sub-sector, Q1 2024-Q3 2025. Source: Ghana Statistical Service (2025), Ministry of Finance (2024), and World Bank (2025b).

Oil Governance and the Resource Curse Debate

Ghana discovered commercial oil in 2007 and was widely expected to avoid the resource curse. It already had a multiparty democracy, peaceful power transfers, and a revenue management law passed before oil production began conditions that usually reduce the risks of volatility, corruption, and elite capture.

More than a decade later, the results are mixed. Communities near the Jubilee Field, especially fishing and farming groups, report little improvement in living standards from oil revenue. Some even face new problems, such as restricted fishing zones and changes in migration driven by oil-sector jobs (Ayelazuno, 2014). (Obeng-

Odoom, 2012) argues this shows the resource curse is not automatic: the real issue is how Ghana chose to manage and distribute oil revenue, and who has the power to question those decisions.

The Public Interest and Accountability Committee (PIAC) was created to address exactly this problem. (Oppong, 2016) finds that PIAC has a clear legal mandate to review and publish independent assessments of petroleum revenue use. However, it has no enforcement power, its membership is influenced by the executive, and its reports compete with the government's own budget messaging. As a result, PIAC produces transparency (it publishes numbers) but little real accountability (there are few consequences when problems are revealed).

This gap between transparency and accountability appears in both the oil and mining sectors: reporting systems often work reasonably well, but they rarely lead to meaningful consequences for those who ignore the findings.

Recent Policy Developments (2025–2026)

Much of the existing literature on extractive governance in Ghana predates the latest reform cycle initiated in 2025 under the Mahama administration. This period is important because it provides an opportunity to assess whether recent policy changes have translated into measurable institutional and enforcement improvements and to update the existing literature.

One of the major reforms is the decentralization of small-scale mining licensing. Under the new system, small-scale mining licences require approval from district committees, shifting decisions previously concentrated in Accra closer to local communities (News Ghana, 2026; Minerals Commission of Ghana, 2026). District-level coordinating bodies involving the Minerals Commission, Forestry Commission, and Environmental Protection Authority (EPA) have also been established to improve inter-agency coordination. However, whether District Chief Executives will be formally assessed on environmental compliance and enforcement remains uncertain. This is therefore treated as an announced reform rather than a confirmed outcome.

The Ghana Landscape Restoration and Small-Scale Mining (GLRSSMP) Project, a US\$103.3 million initiative supported by the World Bank and the Government of Ghana since 2022, has strengthened regulatory coordination through one-stop permitting, support for mining cooperatives, training, technology upgrades, and gold traceability systems (Ministry of Lands and Natural Resources, 2025). Digital monitoring of earth-moving equipment has also expanded under Legislative Instrument 2404, which requires excavators to be registered and geofenced to authorized concessions. By early 2026, more than 1,400 excavators were reportedly being tracked, while 4,300 had been registered overall and 1,864 equipped with GPS movement-detection systems (Graphic Online, 2026; The Catalyst Ghana, 2026). NAIMOS also reported seizing 78 excavators and immobilizing 90 others. However, whether monitoring coverage can match the scale of mining equipment remains uncertain.

Enforcement accountability has also been strengthened through the establishment of the GoldBod Taskforce in July 2025 under the Ghana Gold Board Act, 2025 (Act 1140). Officers were provided with body cameras and GPS-tracked vehicles, while field operations require written authorization from the Chief Executive of the Gold Board (Ghana Gold Board, 2025). In the first quarter of 2026, the Gold Board reported 205 compliance inspections, 53 enforcement operations, 81 seizure cases, and gold seizures valued at GH¢256.67 million. It also issued 273 new licences, while royalty receipts reached GH¢2.01 billion, representing a 40% year-on-year increase (Ghana Gold Board, 2026).

Licensing enforcement has similarly intensified. The Minerals Commission revoked 278 small-scale licences in October 2025 and more than 300 additional licences by February 2026, particularly targeting expired permits, regulatory breaches, and foreign “fronting” arrangements (Minerals Commission of Ghana, 2026). By mid-2026, more than 578 irregular licences had reportedly been revoked. Cabinet also approved a review of the Minerals and Mining Act, 2006, while Legislative Instrument 2462 governing mining in forest reserves was revoked. A new medium-scale mining category was introduced to address the gap between small- and large-scale operations (Reuters, 2026; Minerals Commission of Ghana, 2026).

Environmental enforcement has also strengthened. In January 2025, the EPA directed an immediate halt to mining activities in and around water bodies under the Environmental Protection Act, 2025 (Act 1124), with the

Minerals Commission, Water Resources Commission, and security agencies tasked with enforcement (Environmental Protection Authority, 2025).

These reforms indicate a significant shift in Ghana's governance approach, but they do not demonstrate that the governance problem has been resolved. Rather, they reinforce this study's central argument: Ghana has historically faced less of a shortage of policies than a shortage of effective implementation. The success of the 2025–2026 reforms will therefore depend largely on sustained enforcement, institutional coordination, accountability, and capacity at the district level. Table 4 summarizes key reform and enforcement indicators for 2025–2026.

Table 4 :2025–2026 Reform and Enforcement Indicators

Indicator	Value	Date	Source
Excavators registered	4,300	Jul 2026	Graphic Online (2026)
Excavators with GPS trackers	1,864	Jul 2026	The Catalyst Ghana (2026)
Unclaimed excavators at Tema Port	3,000+	Jul 2026	Graphic Online (2026)
Excavators seized (NAIMOS)	78	H1 2026	Ministry of Lands (2026)
Chanfang machines destroyed	2,800+	H1 2026	Ministry of Lands (2026)
GoldBod compliance inspections	205 (10 regions)	Q1 2026	Ghana Gold Board (2026)
GoldBod seizure cases	81	Q1 2026	Ghana Gold Board (2026)
Gold seized value	GH¢256.67 million	Q1 2026	Ghana Gold Board (2026)
Licenses issued by GoldBod	273	Q1 2026	Ghana Gold Board (2026)
MIIF royalty receipts	GH¢2.01 billion (+40% YoY)	Q1 2026	Ghana Gold Board (2026)
Irregular SSM licenses revoked	578+	Oct 2025–Feb 2026	Minerals Commission (2026)
Act 703 review status	Cabinet approved; submitted to Parliament	Jul 2026	Reuters (2026)
LI 2462 (forest reserve mining)	Revoked	2025–2026	Minerals Commission (2026)
New medium-scale licensing category	Introduced	2026	Minerals Commission (2026)

Source: Compiled by the author from Ghana Gold Board (2026), Minerals Commission of Ghana (2026), Graphic Online (2026), The Catalyst Ghana (2026), Ministry of Lands and Natural Resources (2026), and Reuters (2026).

Gaps in Fiscal Transparency and Revenue Management

Ghana's petroleum revenue management framework is relatively transparent by regional standards, supported by published reports and independent oversight. Mineral revenue management, however, remains less consistent.

Ghana achieved an EITI validation score of 82.5/100 in 2024, with a 98.4% reconciliation rate in the 2023 GHEITI report, indicating strong national-level disclosure (EITI, 2024; GHEITI, 2025). However, substantial gaps remain at the local level.

The CDD-Ghana Mining Districts Development Scorecard (2024), covering eight mining districts, recorded an average governance score of 38.4/100. Fiscal transparency scored only 24.0/100, while local management committee effectiveness was 14.5/100. The assessment also found that less than 10% of mineral royalties reach mining communities, below the recommended 30% threshold (CDD-Ghana, 2024). Under the existing framework, 80% of royalties goes to the Consolidated Fund and 20% to the Minerals Development Fund, with subsequent allocations to District Assemblies, Stools, and Traditional Councils (EITI, 2024).

Although some royalties are returned to local institutions and landowning communities, tracking their use after leaving central government remains difficult. Limited community access to information on revenues received and expenditures weakens local accountability and benefit-sharing. Afrobarometer Round 9 (2022) supports this concern: 46% of Ghanaians believed communities do not receive a fair share of resource revenues, while only 39% considered extraction benefits greater than its negative impacts (Afrobarometer, 2022). Table 5 summarizes these fiscal transparency and benefit-sharing indicators.

Table 5 : Fiscal Transparency and Local Benefit-Sharing Indicators

Indicator	Value	Source
EITI overall validation score	82.5/100 (Moderate)	EITI (2024)
GHEITI reconciliation match rate	98.4%	GHEITI (2025)
MDDS average district governance score	38.4/100	CDD-Ghana (2024)
Fiscal transparency (citizens' score)	24.0/100	CDD-Ghana (2024)
LMC effectiveness (citizens' score)	14.5/100	CDD-Ghana (2024)
Royalties reaching mining communities	<10% of total	CDD-Ghana (2024)
Recommended minimum community share	≥30% of total	CDD-Ghana (2024)
Royalty to Consolidated Fund	80%	EITI (2024)
Royalty to Minerals Development Fund	20%	EITI (2024)
District Assemblies share (via OASL)	55% of OASL remainder	EITI (2024)
Stools share (via OASL)	25% of OASL remainder	EITI (2024)
Traditional Councils share (via OASL)	20% of OASL remainder	EITI (2024)
Active mining licences	2,072	EITI (2024)

Source: Compiled by the author from EITI (2024), GHEITI (2025), and CDD-Ghana (2024).

Limited Decentralization and Local Governance Capacity

Ghana’s Local Governance Act, 2016 (Act 936) provides a framework for decentralization through metropolitan, municipal, and district assemblies. However, natural resource governance has historically remained centralized in Accra, limiting local participation. This began to change in 2025 with the establishment of District Minerals Offices to support the Minerals Commission in licensing and regulating mining activities (TRT Afrika, 2025).

By 2026, District Mining Committees had become operational for small-scale mining licensing, while offices were opened in Bibiani, Akim Oda, Kyebi, and Damang, with additional regional facilities planned in Kumasi, Tarkwa, Bole, Tamale, Wa, and Bolgatanga (Minerals Commission of Ghana, 2026).

Despite these developments, the reform has important gaps. District Mining Committee arrangements do not specify gender quotas or reserved seats for women, despite women's significant roles in mineral processing and trading. The GLRSSMP project was rated Moderately Satisfactory by the World Bank because of slow progress in ASM-related activities, although land-use planning reached 82% of its mid-term target (World Bank, 2025c). Furthermore, 35 district land offices were established in 2025, with additional offices planned for 2026 (Trends na Africa, 2026).

The effectiveness of decentralization will ultimately depend on whether district institutions receive adequate authority, staffing, and resources. Survey respondents rated community participation moderately ($M = 2.99/5$), while participation significantly predicted support for governance reform ($\beta = .28, p = .015$), indicating that meaningful local participation is essential for successful decentralization. This finding is consistent with broader evidence that decentralisation reforms in Ghana advance furthest when they do not threaten politically valuable resources (Arhin, Benyin, et al., 2026).

Political Interference and Weak Accountability

Several recent analyses of Ghana's mining sector point to the entanglement of illegal mining with local political networks as one of the harder problems to solve through legislation alone. Where illegal mining operations provide employment, cash flow, and informal political support in a constituency, local and even national officials face a direct incentive to under-enforce existing law. This is consistent with what (G. Botchwey & Crawford, 2025) describe as a pattern of democracy capture in the sector, in which formal democratic accountability mechanisms coexist with informal arrangements that blunt enforcement. These patterns align with the competitive-clientelist political settlement that has shaped public-sector reform trajectories in Ghana (Arhin, Dzokoto, et al., 2026). Citizen perception data reinforces this diagnosis: Afrobarometer Round 10 (August 2024, $n = 2,400$, margin of error plus or minus 2 percentage points) found that 74 percent of Ghanaians believe corruption increased over the previous year and 82 percent say the government is handling corruption badly (Afrobarometer, 2025). A separate national tracking poll conducted in 2025 found that 38 percent of respondents believe galamsey has improved under the Mahama administration, 10 percent say it has worsened, and 44 percent say it remains unchanged, suggesting that while early reform efforts are registering with the public, nearly half see no tangible change (National Tracking Poll, 2025). The same Afrobarometer Round 9 survey (2022) found that 85 percent of Ghanaians support tighter regulation of natural resource extraction, yet only 51 percent believe citizens have a voice in extraction decisions, with 40 percent disagreeing (Afrobarometer, 2022). **Table 6** compiles citizen survey evidence on resource governance and corruption.

Table 6 : Citizen Survey Evidence on Resource Governance and Corruption

Survey Indicator	Percentage	Year	Source
Support tighter regulation of resource extraction	85%	2022	Afrobarometer R9
Communities receive fair share of revenues	46%	2022	Afrobarometer R9
Communities do NOT receive fair share	46%	2022	Afrobarometer R9
Benefits of extraction outweigh negative impacts	39%	2022	Afrobarometer R9
Citizens have a voice in extraction decisions	51%	2022	Afrobarometer R9
Citizens do NOT have a voice	40%	2022	Afrobarometer R9
Corruption increased over past year	74%	2024	Afrobarometer R10

Government handling corruption badly	82%	2024	Afrobarometer R10
Galamsey has improved under Mahama	38%	2025	National Tracking Poll
Galamsey has worsened under Mahama	10%	2025	National Tracking Poll
Galamsey unchanged under Mahama	44%	2025	National Tracking Poll

Source: Afrobarometer (2022, 2025); National Tracking Poll (2025). Afrobarometer R10 conducted August 2024, n = 2,400, margin of error $\pm 2\%$.

Environmental Degradation and Weak Monitoring

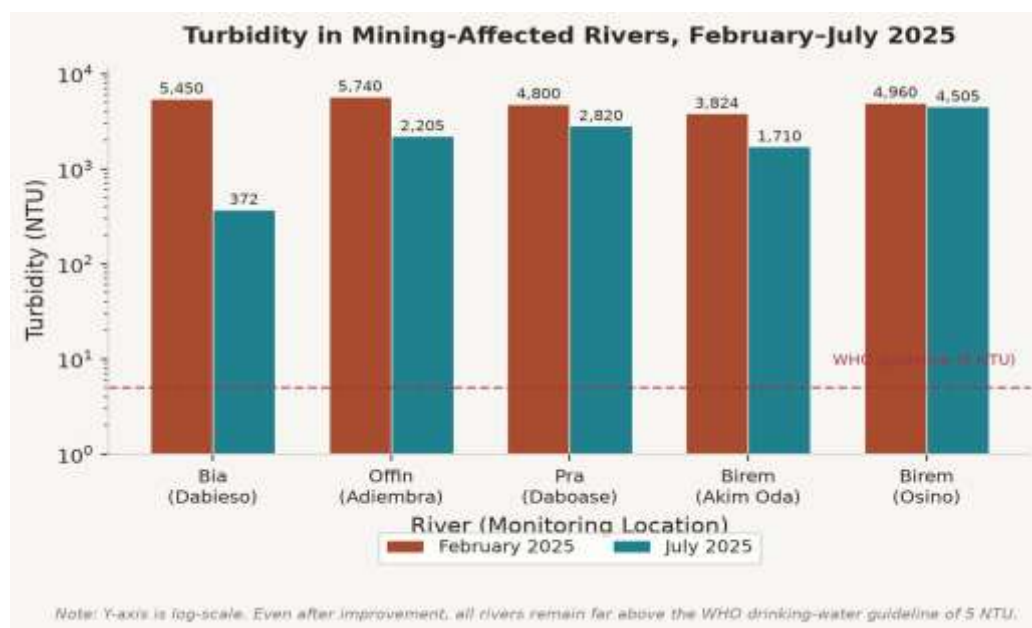
Various rivers including those of Pra, Ankobra and Birim have faced a huge amount of pollution due to illegal mining as shown in data regarding the turbidity and heavy metal contamination. According to monitoring data by Water Resources Commission for the period of February till July 2025, a huge degree of disturbance is presented by the following statistics: for river Bia in Dabieso, the turbidity is 5450 NTU, for Offin in Adiembra 5740 NTU, for river Pra in Daboase, the turbidity is 4800 NTU and for river Birem in Akim Oda, it is 3824 NTU; all of them being against the WHO guideline value of 5 NTU (Water Resources Commission, 2025). The figures showed some improvement in July 2025, with the river Bia showing a drop of 93.2%, while river Pra showed improvement of 41.3%, though the rivers' overall level remained high. Ghana Water Company Limited presented the reports about turbidity exceeding 14000 NTU stating that it should be lower than 2000 NTU for efficient treatment – a total of 16 contaminated rivers are reported to belong to this group (ISS Africa, 2024; Ghana Web, 2024). Peer-reviewed studies have also provided evidence of mercury levels above the limits found by WHO in rivers Pra and Birim, while the cadmium levels in river Pra exceeded the permissible limits of WHO of 0.003 mg/L (Media Foundation for west Africa, 2025). Despite the fact that there are the requirements for conducting an environmental impact assessment from Environmental Protection Agency, it still does not have the necessary monitoring capacities especially for satellites and remote areas where illegal mining occurs.

Table 7 : Turbidity Levels in Mining-Affected Rivers, February-July 2025

River (Location)	Feb 2025 (NTU)	Jul 2025 (NTU)	Change (%)	WHO Guideline (NTU)
Bia (Dabieso)	5,450	372	−93.2	5
Offin (Adiembra)	5,740	2,205	−61.6	5
Pra (Daboase)	4,800	2,820	−41.3	5
Birem (Akim Oda)	3,824	1,710	−55.3	5
Birem (Osino)	4,960	4,505	−9.2	5

Source: Water Resources Commission (2025), via The Custodian Ghana. WHO guideline value for drinking water turbidity is 5 NTU. Ghana Water Company Limited reported turbidity of 14,000 NTU in some water bodies (ISS Africa, 2024).

Figure 4: Turbidity levels in mining-affected rivers, February-July 2025. Source: Water Resources Commission (2025), via The Custodian Ghana; ISS Africa (2024).



Inadequate Engagement of Traditional Authorities

Traditional leaders play a central part in resource management in Ghana because of their customary authority over land, an authority that shapes land access, community relations, and resource management outcomes well beyond what the formal statutory framework alone would predict (Hirons, 2014). Their involvement is indispensable to the implementation of mining, forestry, and other development initiatives, particularly in rural areas where customary land tenure and state regulation coexist and where, as (Hirons, 2014) documents from fieldwork in three mining districts, the unresolved question of where chiefs fit within a formally secular decentralised system leaves local resource politics contested rather than settled. Thus the effectiveness of governance in the area of resources management depends both on compliance with laws and on interaction between the state bodies, traditional authorities, and the local population.

Even though traditional leaders are constitutionally and traditionally relevant in terms of resource governance, their role in the resource management arena is limited to mere consultations. Although the requirement that stakeholders need to be involved even before the approval of any mining and forestry project exists, it is not always complied with fully, and consultations are either not undertaken adequately, irregularly, or only to fulfill formal requirements. Hence, the issues arising from the questions of land ownership, compensation and resettlement, issues of benefit sharing, and environmental issues will continue emerging among the mining industries, the local population, traditional authorities, and the government. Due to the intersection of traditional and legal land regulations, the issue of governance becomes more complicated, and this is proved by the results of the stakeholder's questionnaire conducted at this research indicating that the level of traditional authorities' involvement is rated at the moderate level without a positive correlation with other governance factors. In order to enhance the position of traditional authorities, new governance practices should be implemented.

Gender and Livelihood Dimensions of Artisanal and Small-Scale Mining Governance

Governance approaches to artisanal and small-scale mining (ASM) in Ghana have traditionally prioritised licensing and enforcement, often treating miners as a homogeneous population engaged solely in illegal extraction. However, growing evidence suggests that ASM is characterised by diverse livelihood strategies and differentiated social roles that have important implications for policy design. Women, for example, are heavily represented in ore processing, transportation, trading, and food vending rather than in mineral extraction itself. Consequently, enforcement measures targeting illegal mining frequently have unintended socioeconomic consequences for women, many of whom lose their primary source of income despite not being the principal focus of regulatory interventions. Furthermore, women involved in ore processing are disproportionately

exposed to environmental and occupational health risks, particularly mercury contamination, underscoring the need for governance approaches that address both livelihood security and public health (Achina-Obeng & Aram, 2022); (Zolnikov, 2020).

The livelihoods literature similarly demonstrates that participation in ASM is often dynamic rather than permanent. Many rural households combine mining with farming, petty trading, and other informal economic activities, shifting between livelihood options in response to seasonal conditions, commodity prices, and household needs (Adranyi et al., 2023). This suggests that enforcement-only strategies, implemented without regard to local livelihood patterns, are unlikely to achieve sustainable outcomes and may instead exacerbate rural poverty and economic vulnerability.

These findings highlight the need for a more inclusive governance approach that extends beyond regulatory compliance and law enforcement. Effective ASM governance should incorporate livelihood diversification, gender-responsive policies, occupational health protections, and pathways for formalising not only extraction activities but also the processing and support services that sustain the sector. Integrating these social and economic dimensions into governance frameworks would improve policy effectiveness, strengthen community acceptance, and contribute to more equitable and sustainable management of Ghana's artisanal and small-scale mining sector. In the original stakeholder survey, perceptions of gender-responsiveness in governance were weakly negatively associated with support for reform ($r = -.20, p < .05$), a pattern consistent with the concern, raised above, that enforcement-only strategies can alienate exactly the groups, including women in ore processing and trading, whose support reform efforts most need.

Stakeholder Survey Findings on Resource Governance

The thematic governance gaps identified above are echoed directly in the original stakeholder survey conducted for this study. **Table 8** summarizes the demographic profile of the 100 respondents, and **Table 9** reports composite scores on the ten governance constructs together with whether scores differed significantly across the eight stakeholder groups.

Table 8 : Demographic Profile of Survey Respondents (N = 100)

Characteristic	Category	%
Sex	Male	80.0
	Female	20.0
Age group	26-35 years	30.0
	36-45 years	34.0
Highest education	Secondary/SHS/Technical	37.0
	Tertiary (Diploma/Degree)	25.0
	Postgraduate	15.0
Primary stakeholder group	Licensed ASM miner	30.0
	Unlicensed ASM miner	30.0
	Large-scale mining employee	10.0
	Local community member	10.0

Characteristic	Category	%
	Traditional leader / District Assembly official / regulator / NGO (each)	5.0
Main sector of familiarity	Mining	89.0

Source: original stakeholder survey conducted for this study.

Table 9: Governance Composite Scores and Differences Across Stakeholder Groups (N = 100)

Composite (1-5 scale)	M (SD)	Level	Differs by group
Governance Effectiveness	3.00 (1.05)	Moderate	Yes (p = .013)
Enforcement Fairness	3.02 (1.07)	Moderate	No (p = .094)
Drivers of Illegal Extraction	3.01 (1.05)	Moderate	Yes (p = .019)
Community Participation	2.99 (1.03)	Moderate	Yes (p = .007)
Local Benefits	2.99 (1.07)	Moderate	Yes (p = .005)
Environmental Impacts	2.99 (1.07)	Moderate	Not tested
Institutional Coordination	3.00 (1.00)	Moderate	Not tested
Traditional Authorities	3.01 (1.05)	Moderate	Not tested
Gender Dimensions	3.00 (1.05)	Moderate	Not tested
Reform Support	2.96 (0.98)	Moderate	No (p = .767)

Source: original stakeholder survey conducted for this study. Group differences tested by one-way ANOVA across the eight stakeholder groups; “not tested” indicates a composite not compared across groups in the underlying analysis.

All ten scales showed moderate mean agreement (approximately 3.0 on the 1-5 scale) rather than clearly positive or negative evaluations, consistent with the mixed, unevenly-applied governance picture documented in the sections above. Where scores did differ significantly across stakeholder groups, the pattern was consistent: regulatory officers, District Assembly officials, large-scale mining employees, and licensed ASM miners rated governance effectiveness, participation, and local benefits more favorably, while community members and unlicensed ASM miners rated them lowest. Reform support, by contrast, was moderate to high across every group and did not differ significantly, indicating that even the stakeholders least well served by the current system want the system reformed rather than abandoned.

Correlations among the composites reinforce the enforcement and participation gaps discussed above. Governance effectiveness was most strongly associated with local benefits ($r = .70$, $p < .001$) and, more moderately, with community participation ($r = .47$, $p < .001$) and enforcement fairness ($r = .39$, $p < .001$), and was negatively associated with reported drivers of illegal extraction ($r = -.42$, $p < .001$). Enforcement fairness was itself negatively associated with drivers of illegal extraction ($r = -.48$, $p < .001$), consistent with the argument, developed above, that perceived unfairness in enforcement can itself sustain the informal sector it targets rather than suppress it.

Two regression models tested which composites best predict perceived local benefits and support for governance reform. Governance effectiveness ($\beta = .56$, $p < .001$) and community participation ($\beta = .16$, $p = .043$) jointly explained 56% of the variance in perceived local benefits ($R^2 = .56$, adjusted $R^2 = .53$), a large effect. Support for reform was predicted less strongly overall ($R^2 = .15$) but significantly by community participation ($\beta = .28$, $p = .015$) and environmental impacts ($\beta = .26$, $p = .025$), while governance effectiveness and enforcement fairness were not significant unique predictors once the other variables were accounted for. Read together with the descriptive results, this indicates that improving perceived governance effectiveness would do the most to raise how fairly communities feel they benefit from resource extraction, while expanding community participation specifically, more than any other single lever measured here, would do the most to build support for further reform.

Taken against the five hypotheses set out in the Literature Review, the survey data support H1 through H4 and reverse H5. Governance effectiveness predicted perceived local benefits (H1: $\beta = .56$, $p < .001$), as did community participation, both for local benefits (H2: $\beta = .16$, $p = .043$) and for support for reform (H3: $\beta = .28$, $p = .015$). Enforcement fairness was negatively associated with reported drivers of illegal extraction as predicted (H4: $r = -.48$, $p < .001$). Perceptions of gender-responsiveness in governance, however, were weakly negatively rather than positively associated with support for reform (H5: $r = -.20$, $p < .05$); rather than rejecting the underlying concern, this reversal is consistent with it: respondents who rated governance as more gender-responsive may have been reporting a status quo they were relatively satisfied with and therefore saw less need to reform, whereas those most alienated by current arrangements, including women in ore processing and trading, wanted change regardless of how gender-responsive they judged the present system to be.

These survey findings need to be interpreted as reflecting trends in the district that has been surveyed, rather than being representative for national purposes; the purposive, quota sample utilized here provides insufficient support for making the same generalization about the findings as the nationally representative Afrobarometer data used elsewhere in this paper. Nevertheless, when read in conjunction with the legal and institutional review above, the findings contribute a stakeholder level of empirical information to an overall picture based on documents and secondary statistics, and indicate the same trend: it is the quality of governance and participation, and not the development of new laws, that stakeholders identify as key factors determining success in reform processes.

Theoretical Applications

The findings speak back to the two theoretical frameworks that organized this study, and to a third, complementary lens.

Polycentric governance

Ostrom's (2010) account of polycentric governance predicts that multiple, overlapping centres of authority can produce more responsive resource management than a single central regulator, provided those centres coordinate. Ghana's institutional architecture already fits the descriptive half of that prediction: national regulators, District Assemblies, traditional authorities, mining firms, and community organizations all hold some piece of decision-making authority over resource governance. What this study's evidence adds is a more precise account of why the responsiveness half of the prediction has not followed. The survey's strongest single result, that governance effectiveness alone explained more of the variance in perceived local benefits than any other composite ($\beta = .56$), together with the documentary finding that national-level EITI disclosure has consistently outpaced district-level fiscal transparency, indicates that Ghana's polycentric system is fragmented rather than coordinated: authority is distributed, but the mechanisms that would let those centres act on shared information and hold one another accountable are largely absent. This extends Amoak et al.'s (2025) and this paper's own reading of Ghana's mining regions: institutional plurality is a necessary but not sufficient condition for the responsiveness polycentric theory promises, and the missing ingredient, in this case, is horizontal accountability between centres rather than the existence of the centres themselves.

Resource curse thesis

The resource curse literature is divided between deterministic readings, in which resource wealth itself drives poor governance outcomes, and contingent readings, in which the outcome depends on the institutional and policy choices a country makes (Obeng-Odoom, 2012); (Okpanachi & Andrews, 2012). The evidence assembled here favours the contingent reading. Ghana's petroleum sector shows genuinely strong disclosure alongside weak downstream accountability through the Public Interest and Accountability Committee (Oppong, 2016), while its mineral sector shows the reverse pattern in places, comparatively weak national coordination alongside pockets of strengthening district-level enforcement since 2025. Both patterns are more consistent with governance choices producing uneven outcomes within a single country than with resource wealth mechanically producing poor governance outcomes across the board. Similar policy-to-practice gaps, where formal frameworks outpace institutional capacity, have been documented in other complex governance domains in Ghana (Dzokoto et al., 2026). The stakeholder survey reinforces this: reform support was moderate to high across every stakeholder group, including unlicensed miners who benefit least from the current system, which is difficult to reconcile with a deterministic resource curse but consistent with a system whose institutional choices are seen by those closest to it as changeable.

Institutional bricolage

This is a third lens in better understanding the phenomenon of the persistence of hybrid arrangements seen in the interaction of statutory entities and traditional authorities as noted in the section Inadequate Engagement of Traditional Authorities. The notion of institutional bricolage, as introduced by Cleaver (2012), allows to rely on the fact that rather than being created from the scratch in accordance with formal rules, natural resources governance is achieved through the use of combinations of new statutory rules with existing traditional practices and institutions. In fact, the relatively low correlation of survey scores on traditional authorities' engagement, on the one side, and the persistence of land issues and compensation disputes and consultation requirements, on the other side, is typical of the situation where formal and informal institutions exist simultaneously and influence each other without necessarily overruling each other. Thus, the need to use the notion of bricolage in order to explain the reasons for similarity of formal consultation processes and the way they were supposed to work can be argued.

Limitations

Study Limitations

This study has several limitations that should be borne in mind when interpreting the findings. First, the original stakeholder survey (N = 100) was conducted in a single active mining district using purposive quota sampling. While the quota design ensured representation across key stakeholder groups (licensed and unlicensed ASM operators, large-scale mining employees, community members, traditional leaders, District Assembly officials, regulators, and civil-society representatives), the sample is not statistically representative of Ghana as a whole. Survey-based regression results and composite scores should therefore be read as reflecting patterns within the studied district rather than national prevalence. Nationally representative secondary sources (Afrobarometer Rounds 9 and 10, EITI/GHEITI reports, CDD-Ghana Mining Districts Development Scorecard, official production and enforcement data) provide the primary basis for broader claims about Ghana's resource governance.

Second, the sample is demographically skewed (80% male). This imbalance limits the statistical power and generalizability of findings related to gender-responsiveness in governance and the livelihood effects of enforcement on women in ore processing and trading. Future work should incorporate explicit gender quotas. In addition, secondary sources provide different estimates of the proportion of small-scale mining operations that are licensed, ranging from 70% to 90%. Rather than resolving this discrepancy, the study reports the available range and recognizes the uncertainty in existing estimates.

Third, this is a single-country case study, and some reforms examined, particularly the District Minerals Offices and GoldBod Taskforce, were still being implemented during the study period. Consequently, government

statistics for 2025–2026 primarily measure activities and enforcement actions rather than verified long-term outcomes. Determinations of sustained effectiveness therefore remain premature.

Fourth, many governance measures used in the study, including the stakeholder survey composites, are perception-based. Although objective environmental indicators (river turbidity levels far exceeding WHO guidelines, heavy-metal contamination) are presented descriptively, geographically matched environmental monitoring data were not available for statistical linkage with governance perception scores. Consequently, ecological conclusions remain analytically separate from the regression models.

These limitations do not invalidate the triangulation of documentary, administrative, and stakeholder evidence, but they do constrain the scope of inference. The survey is not intended to estimate national prevalence; rather, it provides stakeholder-level evidence that complements national documentary and survey sources.

Future research should expand spatial sampling to multi-regional, stratified designs across mining, petroleum, and forestry zones, integrate explicit gender quotas, and employ spatial regression or structural equation modelling to correlate physical water-quality and contamination parameters with local governance scores. Such designs would provide a stronger objective assessment of governance performance and policy impact.

CONCLUSION AND RECOMMENDATIONS

The statement regarding Ghana’s resource governance structure does not imply that there are some prohibitive flaws in it, rather there may be many issues connected with inconsistent application of this system. From the point of view of various legislation, there are plenty on regulations and authorities in Ghana in terms of resource governance and particularly in regard to forms of petroleum earning management where the country has a well-trusted transparency record. Being more specific, Ghana lacks uniformity in environmental regulations; their implementation in practice differs significantly based on the political aspects like who benefits from the ignorance in regard to such regulations; there is inconsistency in the process of tracking mineral revenue; there are also significant discrepancies in the way local authorities and communities are treated as stakeholders according to the regulations.

In conclusion, the study provides the follow recommendations based on the conducted analysis of the issue of Ghana’s governance system:

The recommendations provided below are based not only on theoretical framework as it is obvious from the below discussion but also take into account the polycentric concept of governance which points out the lack of correspondence between the different authorities involved in the governance system. Where the resource curse thesis, read as contingent rather than deterministic, points to institutional choices as the lever that matters, the recommendations to track gold end-to-end and tie licenses to restoration target the specific choices, around traceability and post-extraction obligations, that the discussion above identifies as currently weak. And where institutional bricolage points to the risk of formal reforms failing to engage the customary authority structures they must work alongside, the recommendation to protect communities builds consultation and consent into license conditions rather than treating them as a one-off formality.

Table 10 : Priority Recommendations for Strengthening Ghana's Resource Governance

Priority	Recommended action	Why it matters
Protect rivers	Enforce permanent no-mining buffer zones around rivers, streams, wetlands, and water-treatment catchments; publish water-quality results monthly.	The pollution crisis is immediate: the Pra, Ankobra, Offin, Birim, Densu, and Oti rivers have all been named in EPA enforcement notices as severely affected (Environmental Protection Authority, 2025).



Make enforcement credible	Investigate financiers, license holders, public officials, chiefs, equipment owners, and gold buyers, not only site workers.	Arresting miners alone does not dismantle the networks that fund, protect, and profit from illegal mining, a pattern this paper's discussion of political interference and democracy capture describes directly.
Formalize selectively	Offer fast, affordable one-stop licensing only in geologically verified, environmentally suitable zones; exclude riverbanks, forests, cocoa areas, and protected lands.	Formalization should not become permission to mine everywhere. The GLRSSMP framework already supports mapped zones, permitting reform, and cooperatives (Ministry of Lands and Natural Resources, 2025).
Tie licenses to restoration	Require reclamation bonds, site rehabilitation plans, mercury-control measures, settling ponds, and independent inspections before renewal.	Operators should bear restoration costs rather than leaving contaminated pits and waterways for communities to absorb.
Track gold end-to-end	Require traceable gold purchasing through licensed aggregators, auditable records, and sanctions for traders who purchase unverified gold.	Illegal mining is sustained by a market for untraceable gold, not simply by access to land; GoldBod's exclusive purchasing mandate is a first step in this direction (Ghana Gold Board, 2025).
Improve local accountability	Publish district-by-district license data, royalties received, expenditure, reclamation obligations, inspection outcomes, and enforcement cases.	This addresses the fiscal transparency gap identified earlier in this paper directly: national-level disclosure has outpaced local-level accountability.
Protect communities	Make community consent, grievance mechanisms, compensation, child-labour prevention, gender safeguards, and health monitoring standard license conditions.	Mining harms are social as well as environmental, particularly where farming, schooling, and water access are disrupted.
Create real alternatives	Pair enforcement with viable livelihoods: land restoration jobs, agriculture and cocoa support, skills training, and legal cooperative mining where appropriate.	A purely coercive approach is unlikely to hold where illegal mining remains a major source of rural income, consistent with this paper's discussion of livelihood dynamics.

Sources: Environmental Protection Authority (2025); Ghana Gold Board (2025); Ministry of Lands and Natural Resources (2025); Minerals Commission of Ghana (2026); and the discussion sections of this paper.

Ethical Approval:

The stakeholder survey involved adult human respondents. Informed consent was obtained from all participants. The study was conducted in accordance with institutional ethical guidelines of the lead author's institution; formal ethics committee review was not required for this low-risk, anonymous perception survey of adults in a non-clinical setting. No personally identifiable information was collected.

Conflict of Interest:

There are no potential conflicts of interest to disclose

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