



## Review article

# Assessing inclusiveness for indigenous communities in mineral rights allocation in Ghana

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## ABSTRACT

Ghana is blessed with an abundance of mineral resources. These mineral resources are situated in indigenous communities, but the ownership is vested in the government. Indigenous communities where these resources are located are mostly marginalized. Significant legal reforms have been implemented to ensure the inclusivity of these indigenous communities in allocating mineral rights, yet the problem persists. This research investigates the legal framework that governs the allocation of mineral rights in Ghana and the impact thereof on the empowerment of indigenous communities, bringing attention to the difficulties that indigenous communities must overcome to have access to and benefit from mineral resources. To this end, one hundred and eight (108) documents, including legislations and reports on mineral rights allocation in Ghana, were analyzed using thematic analysis. The study found that the current legal framework is deficient in providing sufficient protection for the rights of indigenous communities. Specifically, the absence of a workable scheme for mineral rights allocation from various stakeholders to these indigenous communities is an identifiable lapse in the current legal framework. The findings of this research are relevant to policymakers, legal practitioners, and other stakeholders to improve the rights and well-being of indigenous communities following the analysis of the legal complexities and implications associated with the allocation of mining rights distribution of ensuing royalties *inter alia* expounded in this paper.

## 1. Introduction

Mineral resource exploration and exploitation are essential to a country's social and economic development [1–3]. Many countries have explored and exploited an extensive amount of mineral resources. Over 3.3 billion tons of iron were mined worldwide in 2019 and research further predicts a 2.7 % increase till 2026 [4]. The extraction and development of mineral resources are regulated by laws and guiding principles [5]. Due to the varying legal systems of various countries, the meanings and terminologies related to mineral rights become different in a larger context [6]. Generally, mineral rights denote property rights that grant the holder the authority to mine an area for the minerals in that location [7,8]. In many mining countries, mining processes can be ambiguous due to the rights of indigenous communities to land leased for mineral resource extraction [8].

Ghana is endowed with gold, diamonds, bauxite, and manganese, among other valuable mineral resources [9,10]. Ghana's mining industry has positively impacted the country's economy, making significant contributions to the generation of foreign exchange, the creation of employment opportunities, and the expansion of infrastructure [11]. Mineral resources in Ghana are the property of Ghanaians, but its management is vested in the hands of the government following the Minerals and Mining Policy's provisions [12].

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The existing system allows the State to decide royalty rates, negotiate the terms of mining deals, and transfer mineral rights to mining companies.

However, the Minerals and Mining Act 2006 does not guarantee the rights of indigenous mining communities that host operations [13]. Thus, indigenous communities' rights to their land and natural resources, including owning, utilizing, developing, and controlling the land and resources traditionally associated with their communities, are not well protected. The quest for national ownership of minerals became important during Ghana's struggle for independence [14]. After this period, private investors took control of the mineral ownership controlled by the State [15]. This affected the country's political and economic spheres. These happened in the Economic Recovery Program (ERP), which resulted in the transfer of ownership of minerals from the State to the interests of Multinational Corporations [16]. This period was particularly notable for the transition from underground mining to surface mining, which increased the frequency with which land was at the centre of disputes resulting from conflicting interests between mining communities and Multinational Corporations in question [17]. As a result, indigenous communities lost control of the land that belonged to them to multinational corporations instead.

Against this backdrop, several researchers have explored Ghana's mining and mineral resource issues [6,18–20]. Some of these researches have examined why Ghana's mineral resource extraction for the past century and a half has not resulted in widespread development [9,21]. Others have explored why a smaller share of the profits made from mining operations are being distributed to the communities that are most immediately impacted by the operations [18]. Also, some researchers have examined the course of increasing the developmental contribution of mineral wealth and how a cash transfer may be beneficial to overcoming corruption and poor governance in Ghana [22]. Consequently, the knowledge gaps in these extant research conducted by researchers include (a) insufficient details on the specific provisions in mineral laws that regulate mineral exploitation and exploration investments; (b) lack of clarity on the different meanings and terminologies related to mineral rights in different countries' legal systems; (c) insufficient information on the flaws in Ghana's Minerals and Mining Act 2006 regarding the rights of indigenous mining communities; (d) the research discussed this field does not investigate the impacts of mineral rights allocation to indigenous communities in Ghana and how these allocations will empower these communities.

With a dearth of discussion into the legal regulatory framework that governs mineral rights, this paper contribute to filling up the lacuna. Consequently, the paper examines explicitly the legislative frameworks in Ghana to protect indigenous communities during the process of mining rights distribution, promoting sustainability, eradicating poverty, empowering indigenous women, creating capacity and social cohesiveness, and recognizing and protecting indigenous peoples' rights. This paper provides valuable insights for policymakers, mining firms, and indigenous communities to work towards a more inclusive and sustainable mineral resource governance in Ghana.

In sum, this paper examines legislative frameworks and mechanisms that are currently established in Ghana to protect indigenous communities during the process of mining rights allocation. In this pursuit, the crux of this study is premised on the following objectives:

- (a) To evaluate the current legal framework that governs the allocation of mineral rights in Ghana
- (b) To find out the efficiency of the legislative provisions established to protect the mineral rights of indigenous communities in Ghana
- (c) To assess the impediments that indigenous communities face in the expression of their rights and claim to royalties in Ghana
- (d) To recommend changes that should be made to mining laws and policies to improve the legal protection afforded to indigenous communities in Ghana

The research was guided by the following Research Questions (RQ);

- (a) What is the current legal framework governing the allocation of mineral rights in Ghana? Q1
- (b) How effective are the legislative provisions aimed at protecting the mineral rights of indigenous communities in Ghana? Q2
- (c) What are the main challenges faced by indigenous communities in Ghana regarding expressing their rights within the existing legal framework? Q3
- (d) What specific changes should be recommended to Ghana's mining laws and policies to enhance the legal protection of indigenous communities? Q4

This research remains significant, and novel from existing research in many ways. First, given the rather limited study that has effectively analyzed the challenges of mineral rights allocation vis-à-vis the rights of the indigenous mining community, the paper, beyond assessing the legal framework, addresses the impact of mineral rights allocation on indigenous communities in Ghana with emphasis on the legal empowerment and protection of rights within the frame of mineral resource governance. Secondly, the paper evaluates the current legal framework governing the allocation of mineral rights in Ghana. It assesses the efficiency of legislative provisions designed to protect the mineral rights of indigenous communities. This detailed analysis of the legal framework and its implications for indigenous communities adds a novel dimension to the existing body of research on mineral resource governance. Thirdly, this study holds policy relevance worthy of translating into specific changes regarding mining laws and policies fit to enhance the legal protection of indigenous communities in Ghana by offering practical insights for policymakers, mining firms, and indigenous communities. This proactive approach toward improving the situation for indigenous communities makes this study different regarding its potential impact on policy and practice.

## 2. Literature review

### 2.1. Contributions of mining and stakeholders involved in mining in Ghana

Ghana's mining sector contributes significantly to the country's overall economy. It is one of the primary industries contributing to government revenue and foreign exchange earnings [14]. Research by Ref. [23] adds that the gold mining business in Ghana has a long history, dating back to pre-colonial era when it was carried out on a much smaller scale. In particular, gold mining significantly contributes to Ghana's economy and accounts for more than 90 % of the country's mining sector's revenue. Ghana is the second most significant producer of gold in Africa, and mining activities, including large-scale mining and Artisanal and Small-scale Mining (ASM), contribute considerably to the country's economy [24,25]. These researchers [26] assert that since the government launched its Economic Recovery Programme (ERP) in 1983, the mining industry has had a considerable comeback, attracting investment from the United States and other countries.

Another research [27] states that Ghana's large-scale gold mining sector employs 28,000 individuals. In contrast, the small-scale gold, diamond, and quarry sectors employ over one million people [27]. Mining activities in indigenous communities have encouraged infrastructure construction, improving connection and access to fundamental conveniences for the local communities [28]. Research by Ref. [29] affirms that mining activities typically necessitate the construction of infrastructure, including roads, railways, ports, and power supply systems. Mining activities in rural places have enhanced infrastructure development, improving residents' togetherness and access to basic amenities [28].

Research by Ref. [30] adds that mining firms contribute to the public finances by paying various levies, including corporation taxes, royalties, and other taxes and fees. Mining firms frequently develop corporate social responsibility activities intending to assist in the areas where they operate [30]. These activities include constructing infrastructure, education, and healthcare programs, programs to teach skills, and providing job opportunities.

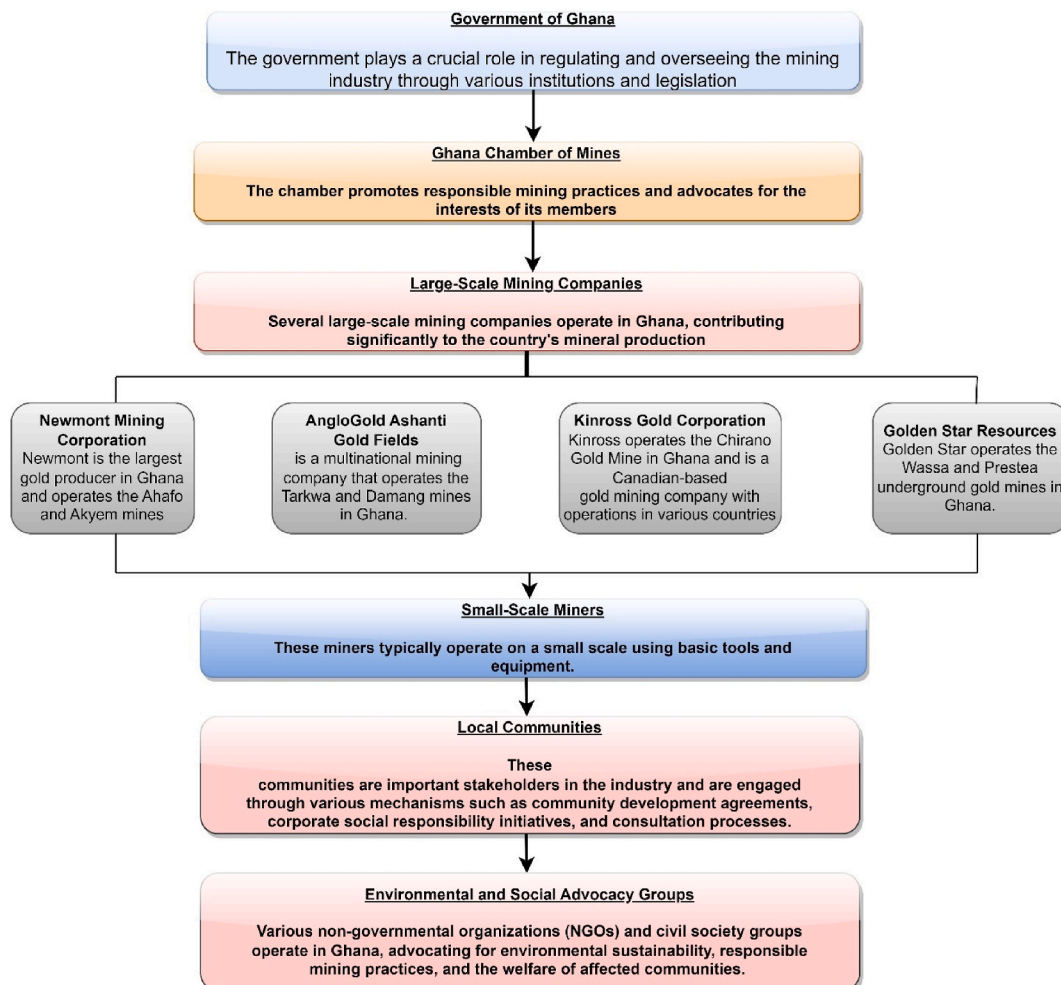


Fig. 1. Various Stakeholders in Ghana's mining industry.

Bush [31] highlighted the consequences of pro-poor mining policies like the Indigenisation and Economic Empowerment Act and the Statutory Instrument for Community Share Ownership Trust. Bush's study emphasized the role of these policies in utilizing mineral resources to empower local indigenous communities. The findings showed that these policies were influential in improving rural livelihoods and stimulating entrepreneurship in communities close to mines. Additionally, the study demonstrated the potential for direct and indirect relationships between the mining sector and the local economy, including providing food supply, manufacturing of mining inputs, security services, and labor supply by the local community.

Mabhena and Moyo [32] researched the Community Share Ownership Trust Scheme and Empowerment in the Gwanda Rural district of Zimbabwe. Their findings accentuated the importance of the Indigenisation and Economic Empowerment Act and the Statutory Instrument for Community Share Ownership Trust as strategies adopted by the government to empower local communities. The results confirmed the view that these policies were helpful in the development of infrastructure, the provision of public utilities, and the implementation of broad-based indigenisation policies. The research by Mabhena and Moyo [32] focuses on the important role of mining in contributing to Ghana's economy and emphasizes the importance of empowering indigenous communities by allocating mineral rights.

Mining in Ghana includes various stakeholders and key players with significant roles in the industry (see Fig. 1). These stakeholders and key players include miners, community members, government officials, policymakers, traditional leaders, nearby communities, and mining companies.

Basu [33] highlights the essential participation of miners and community members in artisanal and small-scale gold mining activities in Ghana. The study expounds the human health implications of mining activities on these stakeholders, shedding light on the potential risks and hazards they face. These findings highlight the need to consider the well-being and safety of miners and community members in the mining sector (Minerals and Mining [Health, Safety and Technical] Regulations, 2012 (L.I. 2182).

Emmanuel et. al [34] emphasizes the role of government officials and policymakers in addressing the environmental and health impacts of mining in Ghana. The research stresses the importance of effective governance and policy interventions to mitigate the negative consequences of mining activities on the environment and public health. This highlights the significance of regulatory frameworks and governance structures in the mining sector.

Wilson [35] points out the social and economic dimensions of mining, including the role of traditional leaders in artisanal and small-scale gold mining. The study emphasizes the social and economic implications of mining activities on indigenous communities and local leadership structures. This focuses on engaging traditional leaders in sustainable mining practices and community development initiatives.

The contribution of large-scale miners and mining companies is a critical aspect of the mining sector in Ghana. Basu [33] emphasizes the incorporated evaluation of artisanal and small-scale gold mining, which includes the participation of large-scale mining operations. The research emphasizes the environmental and natural sciences aspects of mining, highlighting the need for comprehensive evaluations that consider the influence of large-scale mining activities on the environmental landscape.

The literature generally highlights the diverse range of stakeholders and key players in Ghana mining, including their roles, responsibilities, and impacts on various dimensions such as human health, environmental sustainability, and socio-economic development.

## 2.2. Indigenous communities and their land rights in mining areas in Ghana

Indigenous communities in mining areas of Ghana are frequently faced with several challenges, including issues relating to land rights, environmental degradation, and socio-economic repercussions [27]. Some of these indigenous communities have been displaced due to mining activities.

Research by Walker [36] indicates that large-scale land appropriation displaces subsistence farmers and reworking agrarian social relations in northern Ghana. This finding highlights the negative impact of land snatching on indigenous communities, leading to social differentiation, intensified migration, and food insecurity [37]. According to Ref. [38] used a qualitative approach examined the challenges indigenous communities in Ghana's mining areas face regarding their land rights and traditional practices. Large-scale mining operations can threaten these rights, leading to disputes over land use and ownership. The displacement and relocation of these communities raise questions about legality and ethics. Efforts to address these challenges include advocating for the recognition of indigenous land rights and promoting meaningful consultation with affected communities. Ongoing concerns include the adequacy of compensation and the need for greater involvement of indigenous peoples in decision-making processes related to mining activities.

Bugri [27] utilized an integrated strategy for data analysis, integrating both qualitative and quantitative methods also to examine challenges that indigenous communities in mining areas in Ghana face in relation to their land rights, compensation practices, and perceptions of mining companies. The regulatory environment for compensation in mining communities is weak, and there is a lack of effective enforcement of constitutional requirements for fair, adequate, and prompt payment of compensation to the expropriated. Non-indigenous communities are disproportionately impacted by tenure insecurity, and compensation practices often exclude compensation for common resource rights. The study recommends targeted interventions to address the needs of marginalized land users, improvements in corporate social responsibility packages, and clear legislation to address compensation issues.

The report "Who Owns the World's Land?" [39] provides a global baseline of legally acknowledged indigenous and community land rights. This comprehensive overview highlights the implication of formal recognition and documentation of indigenous land rights as a means of protecting indigenous territories from land appropriation and promoting sustainable land management practices.

The main legislation used to regulate mining activity in Ghana is the Minerals and Mining Act of 2006 [40]. Before granting mining leases, consultation with the communities that may be impacted is required and recognition is given to the rights of landowners and

traditional leaders who own land [41]. In addition, it mandates the payment of compensation for the infringement of land rights and makes provisions for forming community development agreements. Also Ref. [42], asserts that some indigenous communities contend their land rights are not effectively safeguarded and that the compensation paid for land purchases is frequently inadequate. Conflicts between mining firms and indigenous communities have occasionally resulted in demonstrations, lawsuits, and violent cases. Thus Ref. [43], demonstrates that throughout the last few years, there has been a rise in the amount of campaigning and understanding surrounding the rights of indigenous communities located in mining zones. Civil society organizations, community leaders, and foreign institutions have all called for equal benefits and strengthened protections for the indigenous communities that have been impacted. The government of Ghana has demonstrated a desire to address these concerns and has acted to enhance rules and encourage responsible mining operations by strengthening existing regulations and compensation packages for indigenous communities [44].

More so Ref. [45], believes it is important to always recourse to specificity in the analysis of claims of mining rights. Within Ghana's mining industry alone, the impact of land rights or mining rights on indigenous communities may vary depending on the location, the particular mining project, and the stakeholders involved. Ghana's mining sector and communities face a significant challenge in the form of inadequate compensation for the loss of land rights caused by mining activity [46]. Conflict, environmental degradation, and a lack of economic and social development are all driven by insecure land tenure, threatening indigenous communities' cultural survival and essential resources. Indigenous communities in Ghana's mining zones encounter obstacles to their people's land rights and cultural inheritance. For environmentally friendly and socially responsible mining operations, it is necessary to acknowledge and respect their customary land ownership, guarantee and encourage their meaningful participation in decision-making processes, and encourage fair benefit-sharing.

### 2.3. Legal framework and existing legal measures for mineral rights allocation in Ghana

Several indigenous communities in Ghana's mining areas encounter difficulties with their people's land rights and cultural inheritance [47,48]. It is necessary for environmentally friendly and socially responsible mining operations to acknowledge and respect their customary land ownership, to guarantee their participation in decision-making processes, and to promote fair benefit-sharing. Implementing the legal framework for Artisanal Small-scale Mining (ASM) in Ghana face problems such as outmoded legislation, formal licensing agencies, land tenure issues, compliance monitoring, and inefficient collaboration among stakeholders [49]. To add up Ref. [50], suggests that the non-alignment of the States' exclusive rights and indigenous communities right to landownership after discovering minerals create tensions between traditional communities and governments in mining communities. Additionally, the historical experiences of colonial practices that infringed upon customary and mineral rights contribute to these tensions [46]. More so Ref. [51], add that Ghana's current land tenure system, which seems to bequeath most mineral-rich areas to the State, to the marginalization of indigenous communities, is counterproductive to Ghana's efforts to achieve the Sustainable Development Goals (SDGs).

Mensah (2021) explored the allocation of mineral rights in Ghana and found that the allocation of mineral rights follows a legal framework driven mainly by an institutionalized system administered by the State. The researcher argued that a decolonizing socio-legal lens is best suited for transforming perceptions about ASM legality, legitimacy, and access to property rights in legally plural contexts like Ghana [52]. Minerals Development Fund Act (Act 912), passed in 2016 into law in Ghana, provides the legal framework for allocating mineral rights in the country. Mining communities in Ghana are some of the poorest in the country despite a sizable mining industry and a well-developed system for distributing revenues from mineral exports [6]. Ghana's Mining Act (2016) serves as a basis for Ghana's legal framework for mining rights allocation. This Act maintains that indigenous communities in Ghana are the owners of all mineral resources; however, the President (State) is the exclusive custodian of all minerals. The researchers investigated Ghana, Namibia, South Africa, and Tanzania's mineral rights frameworks to understand the tensions in mining communities better. The researchers made recommendations that formalizing communities' rights with mining companies and social licenses to operate may assist in building transparency and the "trust" required amongst stakeholders in mining regimes [53]. Per the findings and outcome of the researchers [6], they realized that granting mining rights on indigenous community lands triggers tensions and conflicts, often worsened by ineffective and inadequate administrative capacity.

Also Ref. [54], using household surveys, focus group discussions, and key informant interviews, described the challenges to livelihoods and the implications of a mining-induced resettlement program in Ghana within the framework of a dualist land tenure regime. The researchers focused on the impacts of the program on sustainable development. The outcome of their research affirmed that Ghana's land ownership system needs some serious rethinking. In a related study Ref. [55], discusses the allocation of mineral rights in Ghana. The researcher touts that the framework includes stability and development agreements that safeguard investors from changes in Ghana's fiscal policies. Hence, using the Sikaman Gold Mining (SGM) Project as a test case, the researcher analyzed the impact that shifts in fiscal policies have on the viability of mineral projects and evaluated the general risk associated with investing in the mineral industry of Ghana.

In addition Ref. [13], unravels that the legislative safeguards now in place in Ghana regarding mineral rights are insufficient to ensure the protection of human rights and make the most of the benefits for the nation [19]. The detrimental impact that mining activities have on human rights is exacerbated by the absence of a comprehensive corporate social responsibility policy as well as incoherent institutional and regulatory frameworks in the mining and environmental sectors. Also, the current mining law in Ghana does not adequately collect income from the mining sector, which results mainly in financial losses to the State [56].

In furtherance Ref. [12], substantiates the seemingly upheld claim that Ghana's existing mineral rights legislation is outdated and impedes the maximum realization of entitlements due the indigenous people within mining communities [29]. The research investigated the efficiency of the legislative procedures currently in place in Ghana for the management of mineral rights. Ghana's most

vulnerable component of its mining industry was found to be the aspect of regulations on revenue management. Here, the researchers unravelled the efficacy of revenue management laws for oil and gas revenues in Ghana and proffered the adoption of Drysdale’s five principles of effective natural resource revenue management as a potent regulatory approach to avoid the problems associated with an influx of natural resource wealth.

### 3. Methodology

This research used a qualitative approach and, thus, utilized the Interpretive Document Approach (IDA) for a comprehensive discussion on “Assessing Inclusiveness for Indigenous Communities in Mineral Rights Allocation in Ghana.” This method shows a logical pattern that demonstrates impartiality in the data analysis [57]. This method verified the dependability and correctness of the data that was analyzed. This method also allowed the researcher to read and assess the data gathered multiple times. This method also enabled the researchers to search for the terms “Indigenous Communities,” “Legal Protection,” and “Mineral Rights Allocation in Ghana” by employing keywords and applicable information from recent studies [58]. More so, the researcher identified and categorized all analyzed documents and then eliminated invalid input based on a comprehensive study.

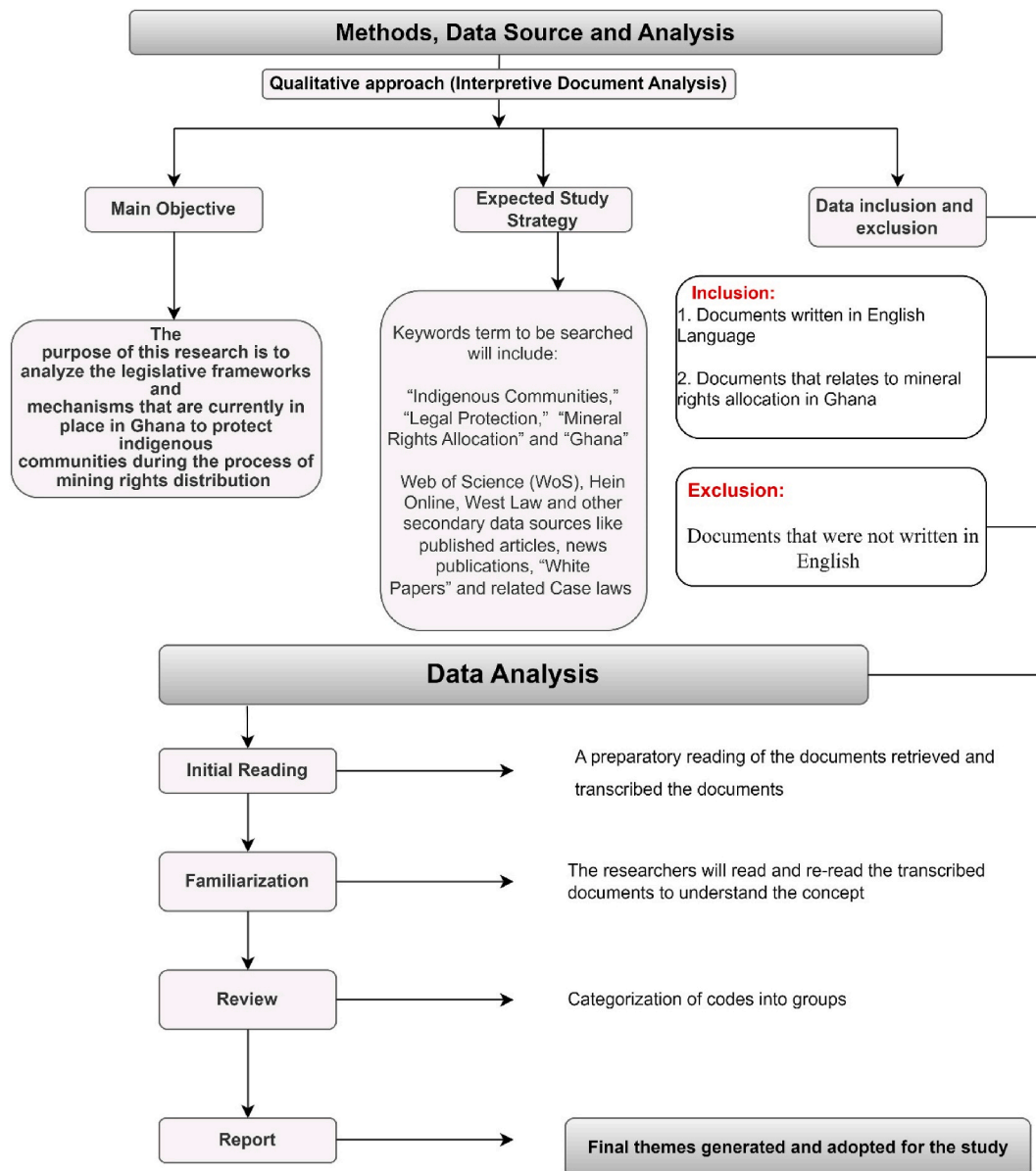


Fig. 2. Diagram showing Methods and Data Analysis. Source: Author’s Construct

### 3.1. Data sources

The researcher utilized secondary data sources for the study. Thus, the researcher used databases Web of Science (WoS), Hein Online, West Law, and other secondary data sources like published articles, news publications, “White Papers,” and related Case laws containing the most influential related research. The researcher searched terms like “Indigenous Communities,” “Legal Protection,” “Mineral Rights Allocation,” and “Ghana” in English till December 2022 (See Fig. 2).

### 3.2. Data analysis

The data and information needed for this study were found and extracted from the documents. Those were the primary data sources. To get started on the study, the researcher looked for previous research using the terms “indigenous communities,” “legal protection,” “mineral right allocation,” and “Ghana.” The researcher found hundred and eighteen (118) research publications in their initial search from Web of Science (WoS), HeinOnline, and Westlaw. The researcher excluded documents that were not written in English. Hence, after this screening process, a total of One hundred and eight (108) documents were utilized for this study. The documents found and retrieved included the reported measures affecting indigenous communities regarding mineral rights allocation. Documents such as studies on mineral and mining laws and indigenous communities, legislation, and other documents that elaborate on the effectiveness of existing legal frameworks to protect indigenous communities in mining areas in Ghana were analyzed.

The researcher also conducted an exhaustive search via the official websites of the Ghana Mining Repository and the United Nations (UN) to gather more information on mining and mineral laws and their rights allocation. The information found and retrieved was summarized, and the major concepts were organized into themes based on the objectives of the research study. The processes for screening the previous research are presented in Fig. 2. In addition to acquiring data, an analysis of the data was also performed. This made it possible to evaluate the degree to which the data had been saturated. Analysis of the data was performed with the use of thematic analysis.

First, a transcription of the data that had been gathered was done. Afterwards, the researcher reviewed and re-read the transcribed texts to comprehend the material thoroughly. The transcripts were coded manually because the researchers lacked access to any software to aid them. It was via the gathering of papers and their subsequent transcription that the codes were obtained. The researcher went one step further and grouped the scripts that shared similar ideas for additional evaluation where necessary. The researchers re-assessed the generated codes while simultaneously comparing them to the transcripts. Questions were posed to validate, confirm, and develop understandable interpretations concerning the data. This contributed to the formation of the themes (Fig. 2).

## 4. Results and discussion

Table 1 presents and discusses the themes generated from the documents gathered conclusively with the study objectives.

In the current study, the researcher examined mineral rights allocation in Ghana and how it will empower indigenous communities. As presented in Table 1, the summary of the situation of mineral rights allocation in Ghana has been presented.

**RQ1.** Legal framework and mineral rights allocation in Ghana are crucial to indigenous community development. Hence, to advance social justice, equitable development of resources, and sustainable resource management in Ghana, it is necessary to confer more power on the country’s indigenous communities in the framework of mineral rights. The Minerals and Mining Act of 2006 is Ghana’s primary legislation governing mineral rights (Act 703). The Act lays the legal foundation for the discovery, exploitation, and utilization of the country’s mineral resources in a manner that is consistent with international law, thus seeking to achieve a balance between attracting foreign investment and maximizing the benefits for the State as well as the communities who will be directly affected by the investment. The Act covers mining leases, restricted mining leases, and small-scale mining permits. According to Act 703, the President of Ghana is legally responsible for managing all of the country’s mineral resources on behalf of the people. This means that the President has the custodian role, but the management of the mineral resources is rather done by the Minerals Commission. The Ministry of Lands and Natural Resources under the Minerals Commission takes recommendations from the commission, acting on behalf of the President to grant mineral rights. These, however, need the approval of parliament since the minerals belong to the people and the people’s voices are represented by parliament. This indicates that the State retains ultimate ownership of all minerals, and the only way for private businesses or individuals to acquire the rights to utilize these resources is by acquiring a variety of licenses and agreements. The government has a 10 % equity stake in mineral activities without a financial commitment and can expand its involvement by agreement with the investor. The Ghanaian legal system balances government, private, and affected community interests in distributing and using mining rights [Minerals Development Fund Act, 2016 (Act 912), the Minerals Income Investment Fund Act, 2018 (Act 978)].

Although Ghana’s legal framework for mineral rights is quite robust, several difficulties still need to be resolved before the empowerment can trickle down to indigenous communities. There is always a high tension between mining companies and indigenous communities over land conflicts, inadequate compensation, and unfulfilled community development pledges. This is consistent with other research [59,60] even outside the study area that highlights the high tension between indigenous communities and the issues related to mining and its right allocation. More so, the development of local industries and the production of new employment possibilities can be aided by the mining industry’s promotion of local content. The legal framework governing Ghana’s mineral rights emphasizes community participation. Their worries, requirements, and goals can be considered if indigenous communities can actively participate in the decision-making processes associated with mining operations.

**Table 1**  
Themes of the situation of mining in Ghana and the extent of Indigenous Communities Empowerment.

Themes	Meaning/Implication	Current Situation in Ghana	Interventions
RQ1 Legal Framework and Allocation of Mineral Rights in Ghana	The set of laws and regulations that determine who can own mineral rights and how they should be distributed	(1) Indigenous communities have secure land and resource rights, as well as the ability to freely act, exercise their rights, and make progress toward their goals (2) The Minerals and Mining Act of 2006 provides the basis for Ghana's mining law, and the State of Ghana owns any minerals found in their unaltered form.	The government of Ghana has developed policies to allocate mineral rights to the most qualified individuals who can provide value to the sector.
RQ2 Legislative Provisions for Indigenous Community Rights	Rules and regulations governing the distribution of mineral rights in Ghana, as well as the rights of indigenous groups about this process	(1) Legal requirements for community participation in awarding mining rights to businesses in Ghana, and one of these criteria is community consent. (2) The disparity between land and mineral rights, on the other hand, has proven to be a substantial barrier to the empowerment of Ghana's indigenous groups.	The allocation of rights to mining corporations and individuals to carry out minerals exploration and production
RQ3 Challenges Faced by Indigenous Communities in Asserting Mineral Rights	The challenges encountered by indigenous communities when they attempt to assert ownership or control over mineral resources located on or beneath their traditional grounds.	The mineral resources are deemed public property, and as such, they have to be handled in a way that is beneficial to the general populace of Ghana. This signifies that the government possesses the authority to allot mineral rights and make decisions on exploiting these resources. The proximity of mining operations to areas owned by indigenous communities creates substantial potential for infringement of the rights of indigenous people.	Efforts are being made to guarantee that communities are reimbursed appropriately for the property they own.
RQ4 Recommendations for Improving Legal Protections for Indigenous Communities	Guidelines to improve the legal protections afforded to indigenous communities and the rights that they possess.		

The overarching goal of Ghana's legal framework for mineral rights is to achieve a balance between encouraging investment and looking out for the best interests of the State and the indigenous communities that are directly affected by the mining industry. Thus, for indigenous communities to be empowered, a comprehensive strategy that integrates legal protection, community interaction, and environmentally responsible activities is required. Researchers [47,61,62] are of a similar opinion that comprehensive strategies established by various stakeholders will help empower indigenous communities in mining areas. Indigenous communities in Ghana have the potential to become active players in the development and administration of mineral resources if they are allowed to participate in decision-making processes, their rights are respected, and their cultures are protected.

**RQ2.** The fact that Ghana has legislative provisions for indigenous community rights relating to mineral rights allocation demonstrates that the country is dedicated to preserving the interests of local populations negatively impacted by mining activity. The indigenous communities of Ghana have had their rights and interests protected by the State through the implementation of legislative requirements. However, the extraction of mineral resources has frequently destroyed the surrounding environment and conflicts with indigenous communities that have a historical claim to the land and its resources.

Ghana has enacted several legislative provisions to ensure equitable mineral rights allocation and protect the interests of indigenous communities. The 1992 Constitution of Ghana and other mining-related laws emphasize the significance of community engagement, equitable compensation, and environmentally responsible development. However, issues must be resolved before these provisions can be successfully implemented. The Free Prior and Informed Consent (FPIC), which has been enacted through the collective effort of organizations like the Conservation International (CI) and the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), mandates that mining corporations obtain FPIC from the communities that their mining activities may impact before beginning mining operations on their territory. FPIC ensures that communities are fully consulted and have the right to make informed decisions regarding the potential implications of mining on their territory. The Minerals and Mining (Compensation and Resettlement) Regulations, 2012 (L.I. 2175) lays forth the guidelines for equitable compensation and resettlement of populations that have been negatively impacted. Mining firms must compensate local people for the loss of land, ways of life, and any other adverse effects that can be traced back to mining operations.

The Minerals Development Fund Act of 2016 established the Minerals Development Fund (MDF) to administer mineral royalties and disburse monies for the development of mining communities. This was done to comply with the Minerals Development Fund Act of 2016. A sizeable percentage of the Mining Development Fund (MDF) is allocated to programs that advance the health, safety, and economic growth of mining communities, particularly indigenous groups whose lives are negatively impacted by mining activity. Despite legislative measures, there are still difficulties to overcome to adequately protect the rights of indigenous populations in Ghana



regarding mineral rights. Research by Ref. [6] also believes that although governments and stakeholders will institute a robust legislative system, there will continue to be gaps that must be addressed. These obstacles still exist because of the lack of uniformity in enforcing the laws and regulations now in place, which results in mining firms sometimes failing to comply fully with FPIC and community development agreements. More so, there may still be challenges for indigenous communities to overcome to participate fully in decision-making processes.

The question of how successful the legislative provisions for indigenous community rights are regarding the allocation of mineral rights is a complex. Even while these rules have been formulated and enacted to safeguard the legal rights and economic interests of indigenous communities, there are still a lot of challenges in terms of implementation and enforcement. The government of Ghana has to tighten its legislative framework to guarantee the fair distribution of mineral rights and maintain the legal standing of indigenous groups. This can be accomplished by improving the enforcement of regulations already in place, increasing the amount of consultation and involvement with communities impacted by mining, and conducting more in-depth environmental and social impact evaluations of mining operations.

**RQ3.** Indigenous communities have mostly been marginalized and excluded from the decision-making processes surrounding extracting and exploiting mineral resources in their traditional territories throughout history [18]. Indigenous communities have been put in a difficult position when claiming their mineral rights due to this lack of acknowledgement of their rights, resulting in several obstacles and disadvantages. Although these researchers [63–65] used a different method, their research supports the assertion that indigenous communities are marginalized. As a direct consequence, individuals or groups of persons from indigenous mining communities experience limited access to information and legal complexities in an attempt to express and register their interests to the mining firms involved, as well as the government responsible for mining activities in indigenous communities.

Consequently, mining companies can use uncertainties in land ownership and land tenure systems to justify their activities, which exposes indigenous communities to exploitation. Indeed, there is often the possibility that indigenous communities would get compensation that is either insufficient or unfair based on the quantum of minerals extracted and the magnitude of havoc usually left unattended [66]. It is possible that the economic benefits of mining operations may not be dispersed equitably among the residents of the community, which will exacerbate the already existing economic inequities.

Governments and mining firms can develop a more egalitarian and sustainable approach to mineral extraction that respects indigenous populations' distinctive cultural and environmental heritage if they respect and maintain the rights of indigenous communities. Legal protections for the land and natural resource rights of indigenous communities need to be bolstered so that they can more effectively handle the issues that have arisen. It is essential to include indigenous communities in decision-making processes right from the start of any project. However, this is especially true for green energy endeavors that include mining for transition minerals on traditional indigenous lands. Establishing and enforcing social and environmental protections that align with international norms should be the responsibility of both governments and firms.

A case to exemplify the challenges of indigenous communities in Ghana is the *Tanchara Community and Azumah Resources Limited*.<sup>1</sup> The Mineral Commission of Ghana in 2009 granted Azumah Resources Limited about 2000 square kilometres of concession rights in Tanchara, a community in the Upper West Region of Ghana, without consultations from the community. The Azumah Resources Limited damaged the land due to their mining operations and also polluted the environment, especially the community drinking water, due to the toxic chemicals used in mining, like mercury and cyanide [27]. The community leaders assembled to protect their lands, values, and traditions. Through endogenous development attempts, they worked with their existing indigenous organizations and cultural practices to challenge the mining threat. The Tanchara community's struggle against Azumah Resource focuses on the significance of community-driven approaches, cultural preservation, and the recognition of indigenous rights in natural resource management.

## 5. Theoretical and practical implications of the study

Ghana operates under a mineral ownership regime, where mineral resources belong to the people, but in essence, all minerals in their natural state are reserved in the Republic.

It is possible that empowering indigenous communities in Ghana by providing them with legal protection for the allocation of mineral rights may have substantial implications for sustainable development. Thus, when indigenous communities are included in this process and are afforded legal safeguards, it can result in several beneficial outcomes for the communities and the larger aims of sustainable development. Participation of indigenous communities in the decision-making processes can be ensured by including them in allocating mineral rights.

When indigenous communities are given more attention, they are better able to contribute to the growth and development of their areas, which in turn helps to create an economic expansion to benefit all parties involved. The empowerment of indigenous communities in distributing mineral rights helps ensure that they profit directly from these economic opportunities, which can lead to reduced poverty (SDG 1) and improved livelihoods. Mining activities can negatively affect the surrounding environment, such as the destruction of habitats, the polluting of water sources, and the cutting down of trees. The empowerment of indigenous communities can result in improved environmental protection practices (SDG 11). This is because indigenous communities typically have a more in-

<sup>1</sup> Tanchara is a indigenous community in the Upper West region of Ghana and Azumah Resource Limited is an Australian mining company which was granted rights to prospect for gold in the Tanchara community without proper consultation or consent from the community.

depth grasp of the local ecosystems and are more likely to be invested in the sustainable management of natural resources.

Nevertheless, although these possible good implications exist, there may still be challenges. To cite just one example, guaranteeing the successful application of legal protections, equitable benefit-sharing systems, and appropriate environmental safeguards will be necessary. Additionally, for indigenous people to fully participate in the process and make decisions based on accurate information, sufficient capacity-building and assistance must be provided for such groups.

## 6. Conclusion and policy recommendations

Legal protection for the allocation of mineral rights in Ghana has the potential to be a significant step toward empowering Ghana's indigenous communities as a whole. The government can develop a more inclusive and sustainable approach to resource management by recognizing and protecting the rights of these communities to own, manage, and benefit from mineral resources discovered within their ancestral grounds. Indigenous communities will be able to exercise a greater degree of control over their resources if they are afforded the legal protection described above. This will result in expanded economic opportunities, social welfare, and cultural preservation. This research of hundred and eight (108) documents on the legal framework governing mineral rights allocation in Ghana and its impact on indigenous communities provides valuable insights into the challenges and opportunities associated with mineral resource management in Ghana. While the legal framework includes several legislative safeguards to protect indigenous communities' rights, gaps and loopholes must be addressed to ensure that these communities are empowered and benefit from mineral resources. This analysis highlights the importance of providing indigenous communities in Ghana with legal protection and position them for sustainable development and fair resource management. Policymakers, legal practitioners, and other stakeholders can work together to improve the rights and well-being of indigenous communities if they thoroughly understand the challenges of mining rights allocation within a legal context.

However, even though legislative frameworks are essential, the successful application of these frameworks is contingent on effective enforcement and cooperation amongst numerous stakeholders. These stakeholders include government agencies, mining firms, and local people. By addressing the issues and goals necessary for these people, Ghana can serve as a model for other nations working toward empowering indigenous communities and achieving sustainable development.

While this analysis provides valuable insights into the legal framework governing mineral rights allocation in Ghana, there are some limitations to this research. Firstly, this research is based solely on the documents available to the researcher, and the researcher did not conduct any primary research or interviews with stakeholders. This means that the analysis is limited to the information contained in these documents and may not reflect the perspectives of all stakeholders involved. Secondly, the research is limited to the specific context of Ghana and may not be generalizable to other countries or regions. The legal framework governing mineral rights allocation and its impact on indigenous communities may differ in other contexts, and our findings may not be applicable outside of Ghana. Thirdly, this research is limited to documents written in English, and we may have missed important information in other languages. Finally, this research is limited to the information available to us at the time of the research.

Ghana's indigenous communities' interests must be balanced with the country's need to extract mineral riches, which presents substantial issues for Ghana, as it does for many other resource-rich nations. The process of allocating mineral rights brings frequent disagreements between the government, mining firms, and indigenous communities. It is essential to implement legal mechanisms that safeguard indigenous communities' interests and ensure their active participation in decision-making processes to promote sustainable development and protect the rights of indigenous communities. This will ensure indigenous communities have a voice in the policies that affect them.

Based on the discussions, this research makes some recommendations to policymakers, governments, and various stakeholders that can empower indigenous communities regarding mineral rights allocation in Ghana (RQ4):

- (a) Indigenous communities in Ghana are entitled to have their customary land rights recognized and protected by the legal framework that governs the country. This acknowledgement must be per International Standards, such as those outlined in the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). Before giving mineral rights to indigenous communities' territories, the law must acknowledge that these communities have a special connection to the land they live on and stipulate that prior approval from these communities is necessary.
- (b) To protect indigenous communities' rights, putting the Free, Prior, and Informed Consent (FPIC) principle into practice is essential. The government and mining firms must get the informed permission of the communities that may be impacted before allocating any mineral rights within those communities' territories. The FPIC process guarantees that indigenous people have access to all relevant information, can evaluate the potential implications of mining activities, and have the right to say "no" to projects that may adversely affect their rights, livelihoods, and culture. The case<sup>2</sup> highlighted expounds this recommendation.
- (c) The legislative framework governing interactions between mining firms and indigenous communities should mandate a fair and equitable benefit-sharing approach. This requires establishing procedures for sharing royalties, employment opportunities, the development of infrastructure, and any other benefits that emerge from mining activity. Adequate resources must be made available to assist community development projects, improving the general well-being of the communities being impacted.

<sup>2</sup> Ibid Supra note at 1.

- (d) Establishing procedures for conflict resolution that are both effective and easily accessible is necessary to address any potential problems that may occur between mining firms and indigenous communities. These procedures should be fair, transparent, and culturally appropriate, allowing parties to voice their issues and grievances while fostering peaceful outcomes. It is necessary to strengthen the legal protections afforded to indigenous communities in Ghana about the allocation of mineral rights to guarantee those communities' rights, to keep the environment safe, and to encourage sustainable development.

Several potential future research directions need attention. Research is needed to understand the effectiveness of translating this equity in mineral rights into tenure security, particularly in the context of new commercial pressures on land in Ghana. There is a need to conduct comprehensive studies on the environmental and social impact of mineral extraction activities, including conflicts, surface water pollution, and the effects on forest livelihoods. Also, research could be done to address the limitations of this study by conducting primary research and interviews with stakeholders, expanding the analysis to other contexts, and updating the analysis as new information becomes available. Lastly, as Information and Communication Technology increases all facets of our daily lives, future research can also look into how digital technology can effectively address the issue of mineral rights allocation in indigenous communities. Digital technology is a compelling factor in future research on equity in mineral rights allocation. It will add to data-driven decision-making, thus facilitating community engagement and supporting innovative approaches to address the challenges faced by indigenous communities in the context of mineral resource management.

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The author declare that he has no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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