



“The License is Just a Piece of Paper”: Local Perceptions on Artisanal and Small-Scale Mining Formalization in Ghana

Richard K. Kumah

School of Environmental Studies, Queen’s University, Kingston K7L 3N6, ON, Canada

Corresponding Author Email: 17rkk1@queensu.ca

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ABSTRACT

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Despite artisanal and small-scale mining (ASM) being recognized in Ghana for decades as a legitimate livelihood source for rural folks, over 85% of ASM operations are carried out informally and outside state regulation due to limited understanding of the sector’s complex local dynamics in policy and literature. This therefore presents various environmental challenges. This paper explores local perspectives on why miners continue to operate ‘illegally’ inspite of existing formalization efforts by the state. The study uses a qualitative exploratory design that includes case studies and semi-structured interviews in selected mining communities and core mining regulatory institutions in Ghana to collect primary and secondary data. The findings reveal a lack of understanding of the multifaceted nature of the sector’s activities in policy on two interrelated fronts. First, there is little interconnection between formal policy efforts and pre-existing resource norms particularly regarding customary land systems. Second, findings further reveal a generic ASM formalization framework that fails to bring diverse forms of ASM operations under appropriate forms of control, undermining the capacity of some of the sector’s operators to comply with formal regulations. It is recommended that policy makers use a more bottom-up approach to ASM formalization in order to gain adequate and accurate understanding of these local level dynamics in policy.

1. INTRODUCTION

A common definition for artisanal and small-scale mining (ASM) has yet to be established across all jurisdictions despite many attempts [1]. In several contexts, either the level of sophistication employed by miners or a given production volume is used to categorize different activities in this mining subsector either as ‘artisanal’ or ‘small-scale’ [2, 3]. However, ASM is generally used to label a low-tech, indigenous and poverty-driven mining branch that has taken on increasing economic importance in several resource-rich developing countries where it is estimated to provide direct employment to 45 million people across 110 countries, with over 150 million people purported to derive their livelihoods from it indirectly [4, 5]. The sector’s contribution to global mineral outputs has also been well documented; ASM accounts for 20% of global gold, 20% of diamond and 80% of sapphires [6]. However, globally ASM activities remain a major threat to the environment given that 70 to 80% of the world’s ASM operations occur informally and unregulated [1]. The use of elemental mercury in artisanal gold mining for instance constitutes the largest source of anthropogenic mercury contamination of water bodies globally [7].

In Ghana, extensive evidence has been advanced in support of ASM’s potential to contribute to poverty alleviation; it provides direct employment to over 1 million rural folks, with the up/downstream industries also supporting the livelihoods of some 4.5 million people, accounting for 60% of the country’s mining labour force [8]. In 2018 for instance,

artisanal and small-scale mining accounted for 43% of Ghana’s total gold production [9]. In spite of these immense contributions, ASM also presents widespread social and environmental challenges in the form of land degradation, water pollution, occupational related hazards, among others, due to a high level of informality of operations [10].

In the ASM literature it has been argued that in order to mainstream the sector, safeguard the environment and mitigate other negative externalities, governments should develop appropriate ASM formalization frameworks to enhance accountability from operators [11, 12]. Developing regulatory frameworks to enhance the enforcement of property rights and legal documentation in ASM has been touted as a prominent tool in inducing formalization among local miners. It has been argued that this presents a reciprocal obligation situation where miners’ rights to land and minerals serve as credits collateral while their recognition as a legal entity imposes duties on them to comply with regulations [13]. This will enable governments secure better control of the ASM externalities and eventually eliminate informality in the sector [14]. However, in Ghana despite the promulgation of a legal framework in 1989 [15] aimed at regularizing its ASM sector, evidence suggests that more than 85% of various stages of ASM activities in Ghana are still carried out informally and outside the purview of state regulation [16, 17].

Much of the previous studies on ASM governance regime in Ghana focus on structural issues where a large-scale mining preference by the state over the indigenous ASM sector tends to frame regulatory frameworks that marginalize the latter [18,

19]. Other scholars identify the centralized and bureaucratic nature of ASM formalization procedures including lack of institutional coordination, law enforcement corruption and management flaws as drivers of informal mining in Ghana [8, 9]. Few studies however examine local perceptions about formal ASM policy efforts in relation to the underlying reasons for informal mining. This study brings some more nuances to these debates by examining the scope of Ghana's existing ASM institutional frameworks, vis-à-vis the experiences of key local stakeholders in relation to the drivers of informal mining. Using insights from semi-structured interviews conducted with various local stakeholders in selected mining communities and state and non-state mining related institutions in Ghana, the findings reveal a lack of understanding of the multifaceted nature of the sector's activities in policy on two related fronts. First, there is little interconnection between formal policy efforts and pre-existing resource norms particularly regarding customary land systems. Second, the findings suggest that the current ASM formalization frameworks are generic and do not account for the diverse forms of ASM operations in order to subject them to appropriate forms of control. I argue that the current formalization regime has been narrowly focused on 'licenses' or legal documentation and leaves other equally important socio-cultural and economic conditions that underpin the informal character of ASM operations. The study responds to recent concerns by field scholars and experts that persistent informality in artisanal and small-scale mining reflects a profound lack of understanding of the sector's dynamics by policy makers [20, 21].

The paper is organized into 5 sections; the next section situates the empirical analyses in this study within broader analytical literature on formalization in the light of formal policy efforts by the state to formalize ASM operations. The following section describes the methodological approach for the study. This is followed by an analysis and discussion of experiences and perspectives of local miners and other key stakeholders on the weaknesses of the ASM institutional frameworks. The final section summarizes the findings with policy recommendations.

2. FORMALIZATION AS POLICY INTERVENTION IN ASM

Formalization echoes broader development discourse that calls for the integration of the informal sectors of particularly developing economies into their formal national economies and the regulatory regimes [22]. The concept of informal economy is widely associated with the pioneering work of Keith Hart who contend that informality occurs in the developing world when formal economic rules are incompatible with the working skills and norms of the urban poor compelling them to resort to marginal economic activities for survival [23]. Ever since, theoretical debates underpinning the expansion and dynamics of informality have crystalized into different schools of thought [24].

However, it is the *legalist* view, often referred to as a neoliberal school of thought that has become the mainstream conceptualization of informality in recent years [14]. This view of formalization centres De Soto's [25] work on the 'extralegal' economy which explains informality solely as an outcome of hostile legal regimes where formal property laws fail to capture informal asset ownership norms. He argues that

poor people in developing countries control vast amounts of assets such as lands, livestock, crops among others, but such assets cannot be traded in the modern capitalist economy because they lack legal representation. The only real option left for governments of the developing world is "whether they are going to integrate those resources into an orderly and coherent legal framework or continue to live in anarchy" [25]. The hallmark of this view is its strong emphasis on legal titles through massive documentation of private property being extended to the informal sector. Formalization in this sense terminates with the issuance of a legal title [14]. This view of formalization is widespread, and has gained much traction in policymaking in the developing world because of its endorsement by major international bodies like the World Bank and the International Monetary Fund for its strong emphasis on legal reforms, private property rights and less regulation [22].

ASM formalization frameworks in many contexts including Ghana are largely conceived through this mainstream view; this mainly involves the re/drafting of mining policies to recognize ASM, enforce mineral rights regimes and secure land tenure rights of miners [13]. The outcome of these efforts is usually a 'paper formalization' or 'legalization': it involves the issuance of various mining operating permits such as mining lease, environmental, health and safety permits to local miners by the state [26]. Proponents argue that this kind of formalization will induce accountability from miners because it bestows rights and duties on miners. Thus, rights in the sense that legal titles enhance their access to credit markets while their recognition as legal entities (duties) compels them to comply with regulations [13, 14]. This creates a win-win situation where government benefits from ASM rents while the natural environment is protected since the moral hazard problem with informal mining will be eliminated.

However, there is mounting evidence in the ASM literature that formal titles or 'paper formalization' alone do not generate all of the required conditions for accountability within ASM. Some scholars find, for instance, that where ASM formalization frameworks ignore local socio-cultural contexts on the assumption that mining licenses are beneficial to all miners they risk failure [27]. Others note that inequality and exclusion can result from formalization efforts that do not account for the complex socioeconomic profiles of miners, especially those that ignore the livelihood dimensions of ASM can convert the most vulnerable 'informal' actors into 'illegal' actors [26]. For example, a generic formalization framework may be suitable only for a certain segment of miners such as "those who possess the capital, education, and social mobility necessary to meet the high threshold of 'legalized' artisanal mining" [28]. Moreover, other scholars note that where ASM formalization frameworks are not linked with institutional support schemes for miners (e.g., financial, technical and capacity building), mining licenses fail to guarantee miners' access to credit markets due to high market uncertainties [14]. Finally, it has been also noted that where ASM formalization frameworks are narrowly conceived around property rights and centrally administered from the top, they can lead to a situation where the ruling elite capture mining rights and concessions at the expense of poor miners [13]. A central thread from these divergent foregoing debates within the context of ASM shows that effective formalization goes beyond mere documentation or legal titles, and that adequate and accurate information and knowledge of the local contextual dynamics is crucial. Locating the ensuing empirical

analyses within these broad analytical frameworks, I argue that illegal mining persists in various forms within the contexts studied in Ghana because of the failure of existing frameworks to capture all of the sectors complex dynamics.

3. METHODOLOGY

The study adopts a qualitative exploratory design due to the unorganized nature of the phenomenon under investigation [29]. Primary data were obtained through semi-structured interviews via telephone with two principal groups of informants. The first group included 43 interviews with mostly miners (registered and illegal), and local family land owners and opinion leaders. These were complemented with the second group comprising 15 interviews with various state and non-state actors and institutions related to the subject matter. To attain rigour and validity, these multiple primary sources were complemented with secondary data from the extant literature on ASM formalization as well as relevant grey sources such as Ghanaian mining legislations and policies [30]. The telephone interview mode was adopted due to mobility challenges presented by the COVID-19 global pandemic and the significant impacts it has had on research involving in-person interactions. In this regard, four local research assistants facilitated participants' recruitment and the setting

up of these interviews which were conducted synchronously by the principal investigator via telephone. Given that a chunk of participants in this research (illegal miners) could be described as difficult-to-reach members of a population [29], and the sensitive nature of the topic, the snowball variation of purposive sampling was adopted to recruit all miners and local folks. This allowed participants to recommend others within their circles. To safeguard the identity of all miners, and also some state officials, the data are completely anonymous. Also, a silver lining in conducting this research via telephone due to COVID-19 pandemic was that it afforded greater anonymity to participants and enhanced greater openness and sharing of sensitive information [31]. The transcribed primary data were imported into QSR NVivo software for coding and analysis. The QSR Nvivo software was used to help store the large volume of textual data in one place and to enhance a more structured and organized analysis than a manual approach would have afforded. To attain descriptive and interpretive validity, a combination of direct quotes and inferences from the words of participants are used in discussing and reporting the meanings created by informants [32]. Primary data were collected between December 2020 and May 2021 from three mining communities in Ghana: Wassa Akropong and Bogoso in the south-western part and from Gbane in the Talensi district located in the north-eastern part of the country (Figure 1).

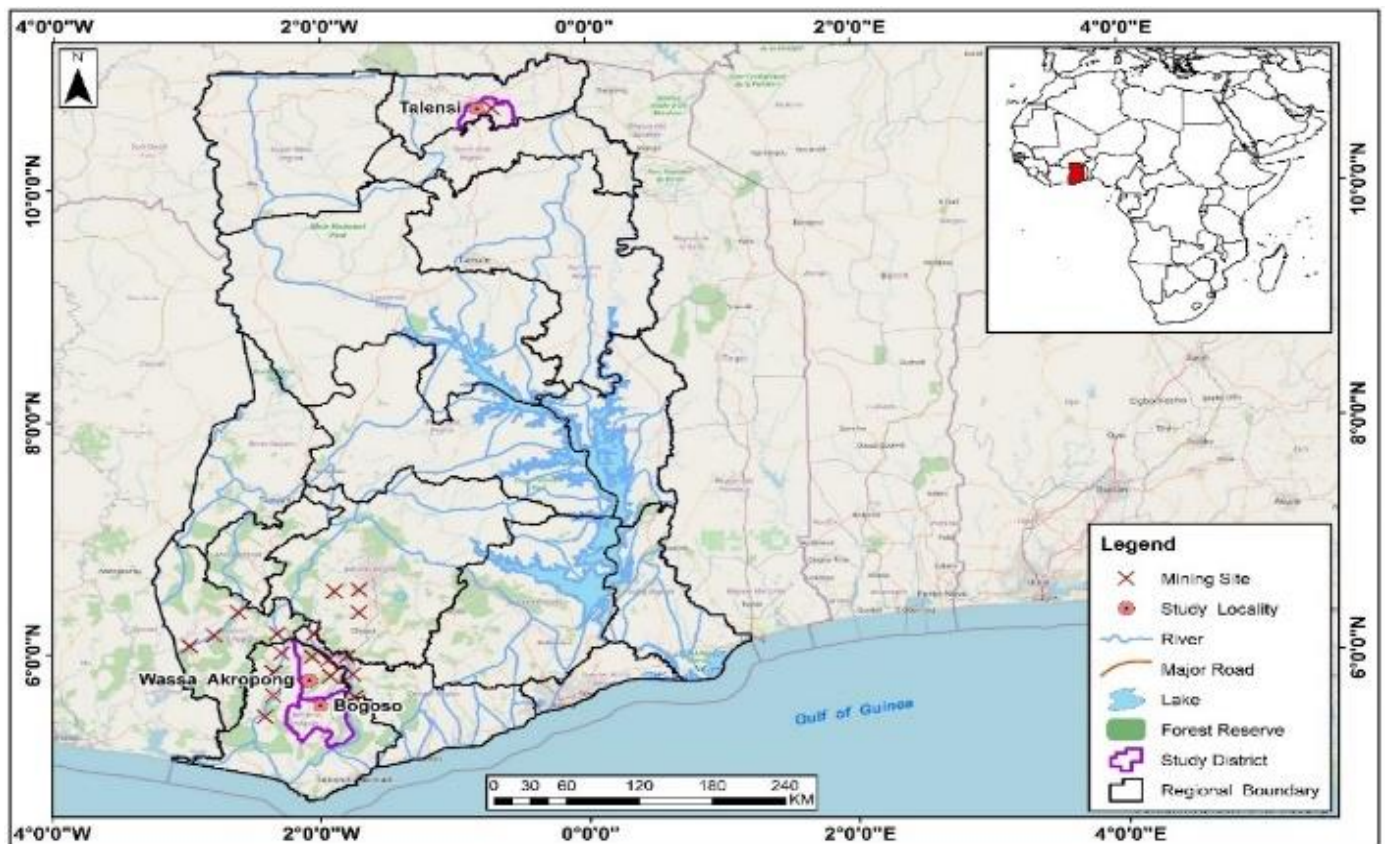


Figure 1. Map of study locations

Wassa Akropong is the capital town of Wassa Amenfi East Municipality, located in the south-western part of Ghana (Western Region) with a current municipal population of 148,150 based on projections from the 2010 national population and housing census [33]. Bogoso on the other hand is the capital of the Prestea-Huni Valley Municipality which has a current population of 211,918 and home to large-scale

mining companies like Golden Star Resources and Sankofa Mines. All communities are well-known mining hubs in Ghana. A recent study [34] on the spatial distribution of mining operations in Ghana shows that the Western Region, where Wassa Akropong and Bogoso are located has the largest concentration of any form of gold mining operations in the country: it hosts 10 out of the 14 large-scale mining companies

operating in Ghana, and 30% of all active registered small-scale miners are located in this region which is also believed to host the largest informal mining populations. Again, while agriculture remains the livelihood cornerstone of most rural Ghanaians, 77% of rural youths in communities within the Western Region rely on artisanal and small-scale mining for survival [33]. In Talensi on the other hand, 90% of its estimated district population of 81,194 derive their livelihoods from agriculture. However, extreme temperatures and protracted dry seasons stretching from October to May cause low agricultural productivity, low household income and food insecurity making the Upper East region one of the poorest in Ghana by incidence of poverty [35]. Small-scale mining of gold in particular is mentioned in the district's Medium Term Development Plan as a key coping strategy for the youth during lean farm seasons. Though there are a few registered small-scale mining companies in Talensi district, mining in the area is described in the larger sense as "unorganised, crude and a threat to the environment" and the exact number of people engaged in informal mining in the district is not known [35]. Therefore, the choice of all study communities was informed by the prevalence of illegal mining activities.

A key limitation of this study relates to a broader limitation of qualitative case study design: the problem of generalizability. Since the sample of participants drawn for this study was not meant to be statistically representative of the population, the findings and conclusions of this study is limited to the contexts studied. However, the implications of this findings for the analytical concepts on ASM formalization can be useful in other contexts with similar challenges [30].

4. RESULTS AND DISCUSSIONS

4.1 Formal titles versus informal 'titles': Evidence of disengagement

Given its deep embeddedness in customary and informal practices and norms, successful mainstreaming of artisanal and small-scale mining in Africa will depend on the extent to which formal policy efforts and frameworks adapt to these norms. As observed by Siegel and Veiga [13] within the context of Uganda, "ASM nearly always progresses in advance of legal system, which arrives only after customary practices and informal social arrangements are established." Such is the case of Ghana where historical accounts suggest that artisanal mining of gold in modern Ghana had traditionally been undertaken by natives for well over 2000 years [36, 37]. A chunk of what is known today as informal or illegal mining is reminiscent of an indigenous gold business which was largely organized under the tutelage of traditional rulers (chiefs) now supplanted by modern governance structures [38]. A key factor noted to be fuelling the expansion of informal mining in Ghana is the absence of a single or harmonized land tenure systems and land markets where over 80% of the country's lands are held under traditional land-owning systems largely controlled by local chiefs [39]. As Nyame and Blocher [40] note, it is not surprising that "spatially, gold-bearing rocks which form the most predominant resource for artisanal miners in Ghana fall predominantly within lands under customary or communal ownership." Despite attempts to centralize mineral rights, the state still grapples with dissonances between formal and informal structures in natural resource governance because the

mineral codes "place the control of mineral and natural resource transactions under the state while traditional rulers become the owners of these same lands" [8]. Acquisition of mineral rights including that for ASM is subject to complex formalization procedures and processes that are not necessarily attuned to these customary dimension which appears to be more embedded in informal mining in Ghana.

In this study local chiefs' influence and control over rural land as well as their traditional authority appears to be more legitimate in the eyes of some illegal miners than the formal routes to mineral rights acquisition. Findings suggest some illegal miners are not ignorant of the formal requirement and procedures for formalizing their businesses as widely believed [41]. In Talensi, an illegal miner explains why a formal mining license is not relevant to him:

Yes, I know I have to submit an application to the Minerals Commission and do other things to obtain a license, but that license to me is just a piece of paper they will give to you and say okay you can now go and mine here or there on your own land. The land is ours, and galamsey [illegal mining] is just like farming that we do to survive, and when you are farming on the land or even dig a well, you don't need a license, but when you dig for gold to sell and survive, that one they want you to go and pay for a license before you can do that. Here, even the chiefs and the Tindanas [Earth Priests] know there is no job for we the youth so when you approach them, they give you land to mine...I will not waste my time and money to apply for a license ...

Like the above miner, many other miners have elected to take the informal (illegal) route because of the ease of accessing informal 'titles' the customary way from local chiefs rather than their ignorance of the law. But it certainly relates to lack of awareness of the reality that one needs a license to mine no matter the form it takes. To these, ancestral link to land is all they needed to legitimize their mining businesses since their ancestors' lands belong to everyone and entrusted in the chiefs, so, they don't see the necessity for a formal license to mine [42]. Local chiefs' influence in the ASM space was preponderance among both licensed and illegal miners to a point where it seems impossible to execute any form of the activity without the consent of the relevant chief of the area. In Wassa Akropong for instance a chief's representative notes that those chiefs involved in illegal mining deals go as far as negotiating 'corporate social responsibilities' with prospective miners including foreigners 'acre by acre.' These claims reinforce abundance knowledge from the broader academic literature on ASM in Ghana that chiefs are key actors in Ghana's ASM space and some are largely responsible for the perpetuation of illegal mining solely because of their customary agencies over land [8, 43].

Other embedded socio-cultural practices relate to 'locational convenience' on the part of local miners. Discussions around 'designated areas' as a spatial control governance tool in ASM often revolve around economic viability of such areas as an incentive for miners wanting to formalize [44]. Indeed, an official of Ghana's Minerals Commission, the core licensing institution notes that lack of economically viable lands being demarcated for local miners remains a key contributor to illegal mining in Ghana. However, evidence gathered here suggests that the suitability of such demarcated zones to local miners go beyond economic viability of the land. They include other socio-cultural attachments to land, something rarely considered in ASM formalization frameworks. For example, in Talensi miners in

Gbane note they are resisting attempts by Earl International Group', a Chinese mining company to enclose their village mining lands. The explanation given for this resistance shows that miners would not want to be assigned lands in other villages that are not 'thier' lands: they want to stay close and mine on their ancestral lands. Again, in the southern communities where panning for alluvial gold is culturally engrained, most miners like the earlier quote from Talensi place this activity on the same footing with other economic activities like farming and do not see any illegality associated with the former. A miner in Bogosu captures it this way: "here the only jobs we know are 'dig-and-wash' [alluvial mining] and farming, which have all been handed over down to us by our forbearers ...they should allow us to do our job." Here, miners do not see the need to acquire a license in order to be able to undertake a traditional economic activity that has been historically executed informally. Thus, the above analyses clearly exemplify a scenario where formal rules and policies do not properly reverberate the intricacies of pre-existing socio-cultural practices associated with some aspects of ASM.

These divides between formalization efforts and informal norms in ASM are not peculiar to Ghana. In Philippines, Verbrugge and Besmanos [45] find that existing formalization regulatory efforts put a premium on mineral tenure rights and overlook the rights of the sector's massive informal workers which are deeply entrenched in socio-cultural practices. As noted by the authors some aspects of these socio-cultural practices even afforded greater 'subsistence security' to the sector's weakest participants than legal titles. Similarly, in a cross-regional assessment of formalization policies within the ASM sector in a number of countries, the United Nations Environment Programme (UNEP) identifies 'responsibility and engagement' as a key institutional area that needs improvement. The report, [46] asserts that "legalization is just one dimension of the process of formalization" and to achieve an all-inclusive formalization, public policy framing should account for the "different dimensions of ASM activities simultaneously." It stresses the fact that formalization is a shared responsibility between various stakeholders including miners' groups, traditional and local government authorities.

Within the context of Ghana, the substantial influence and authority of chiefs as custodians of customary norms suggests that their inclusion may bring to light most of the sector's socio-cultural dimensions that have not been fully understood yet in policy cycles like those cited above. Their level of influence over rural lands evidenced in their active role in ASM transactions presents them as a key voice for policy dialogue on ASM, a position corroborated by several other field scholars [43, 47]. Even though post-independence modern governance structures had sought to limit the powers of Ghana's traditional rulers, they remain key players in Ghana's development today [40]. The 1992 Republican Constitution of Ghana guarantees the legitimacy of the chieftaincy and customary institutions and reiterates the state's support for this institution. Article 270 of the Constitution indicates that where any law is inconsistent with customary practice and usage, members of Ghana's judiciary and relevant traditional House of Chiefs should collaborate to find a middle ground. Thus, the chieftaincy institution still plays statutory roles in dispute resolution and the codification of customary laws as well as non-statutory functions in socio-cultural and economic development [8].

Surprisingly however, it is well known that key local stakeholders in Ghana's ASM space including local chiefs and

various mining groups are hardly engaged in mineral rights decision-making processes including the formalization process which remains a highly centralized one [47]. In a recent local news for instance a prominent and highly revered Ghanaian traditional ruler, the 'Asantehene' who exercises customary ownership over substantial mining lands in the Ashanti Region of Ghana noted that some chiefs are involved in illegal mining because of government's failure to strategically engage traditional rulers in mineral rights decisions:

The Constitution says all minerals beneath the surface are entrusted in the President, but we have forgotten that you will need to pass through the land and meet people before you are able to dig out the gold. So, the concession map is drawn in Accra, not in the community or in the chief's palace, and the license is granted in Accra without consulting local chiefs...So, it is this loophole, and the fact that chiefs feel they are relegated that push some of them to also engage in illegal mining deals [48].

These contentions between formal and informal institutions can be linked to much broader debates on political systems in Africa where institutional weakness has been widely viewed as a colonial legacy where formal institutions based on rational-legal authority are superimposed on pre-colonial traditional institutions creating dialectical relationships between the two [8]. These tensions undermine effective functioning of the modern state institutions where different private and state agents wield undue agencies which enable 'opaque' deals to fester [8]. To bridge the formal-informal institutional divide in Africa, Boege et al. [49] envisage a 'hybrid political order' where formal governance structures embrace, respect and utilize customary norms. In the case of Ghana, Chieftaincy institutions are duly recognized as mentioned earlier, but with regards to mining, it is the case that "the medley of customs, colonial and postcolonial legislations has, if anything, worsened the uncertainty surrounding the ownership of mining land in Ghana" Botchway cited in [47].

However, despite repeated calls for chiefs to be strategically engaged in mineral rights decisions especially within the ASM strand, it still remains a puzzle in scholarship, policy and practice concerning the extent to which active participation of chiefs in mining decisions will actually enhance the formalization of the sector. A number of critical questions have yet to be answered; is it the case that traditional authorities enjoy too much influence accorded them under Ghana's current Constitution for which some are abusing their privileges to engage in illegality as suggested by some scholars [19]? If so, to what extent should traditional authorities be involved in ASM regulation: what level of control should chiefs exercise in the granting of ASM formal titles and mining concessions? So far answers to these questions are not clear from the 'engagement' literature on ASM and they will need to be taken up in further research.

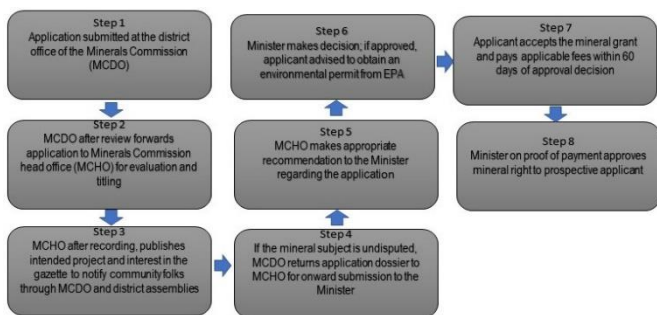
Admittedly, it is a complex and herculean task trying to configure the statutory role of traditional authorities in promoting ASM formalization when some have clearly pursued their parochial interests rather than the larger interests of their subjects and communities [43.]. It is well known for instance that chiefs appropriate their communities' share of mineral wealth for personal gains rather than on community developmental projects [50]. Even more troubling is the fact that some chiefs resist attempts by governments to make chiefs more accountable to their subjects. The recently passed *Land Act 2020* has a provision that has sought to empower

community folks to demand accountability from their chiefs on revenues from customary lands [51]. This Act assigns a fiduciary role to traditional authorities over their claims to land and empowers their subjects to demand accountability on how proceeds and royalties from such lands are expended by their chiefs even through the courts. However, it has been noted that some prominent chiefs are resisting the enforcement of this portion of the law in their traditional jurisdictions [52].

These complex challenges notwithstanding, what is undisputable however, is that despite their substantial influence at the local level, chiefs currently play no effective role in mineral rights decisions as far as the current ASM formalization framework is concerned. It is the contention of this author that successful mainstreaming of ASM will involve a deeper understanding and appreciation of these socio-cultural dynamics in policy. This can be realized when local chiefs are adequately engaged given that they are the key custodians of these norms.

4.2 One formalization process but different miners

Formal titling requirements remain a core component of ASM governance regime in Ghana where all forms of ASM operations are subject to a mineral right granted by the sector minister. Per the mining codes, prospective small-scale miners, either as individuals or groups can obtain a license to mine specified land areas, not exceeding 25 acres [53]. Information provided by the Minerals Commission, portrays the ASM formal licensing procedures as an 8-step linear and straightforward one (Figure 2) that a prospective licensee could follow to obtain a license [54].



Source: Construct based on Minerals Commission [54]

Figure 2. ASM licensing procedure

However, interactions with miners and many other stakeholders reveal that in reality these formal procedures are much more complicated and cumbersome as there are multiple auxiliary institutions involved aside from the core permitting ones, many of which the applicant will have to deal with directly. For example, findings suggest that applicants are responsible for a wide range of auxiliary services associated with ASM permitting process; hiring geological surveyors for developing site plans; legal consultants responsible for publishing the intended project in the gazette; registering as an enterprise with the Registrar General’s department; engaging the Land Valuation Division where there are disagreements over land compensations; among others, all of which elongate the permitting process and also inflate the cost of formalization.

This has been exacerbated by the centralized nature of minerals decisions which remain the sole mandate of the sector minister despite the presence of various district offices of the Minerals Commission in designated mining areas in Ghana

ostensibly to promote the formalization, supervision and management of small-scale mining operations in the country [53] (sec. 90). Again, while no aspect of the licensing procedure explicitly requires applicants to travel from their mining villages to the national capital for follow-ups, that has been the practice, according to miners interviewed. Several miners blame this centralized licensing regime for the excessive bureaucratic delays and exorbitant financial costs that often characterize the licensing process. These dimensions are well corroborated by earlier studies [55].

However, an interesting dimension that came to light as already implied in the previous section is the fact that local miners hold different perceptions about the environmental impacts of the kinds of mining they undertake and some have questioned the logic in placing all of the sector’s operations under one label with a generic licensing requirement and formalization process. Some illegal miners in the southern communities for instance claim that their activities mainly involve placer mining with traditional rudimentary implements along river beds and do not pose any significant threat to water bodies. These miners note that it is their counterparts in deep alluvial mining that cause more environmental damage and should require a license to operate. One miner in Bogosu for instance notes that;

From time immemorial we have been ‘doing dig and wash’ here but Pra, Ankobra, Daboase and all these rivers always remain unpolluted. Now our waters are getting bad because of those using heavy machines... Those are the people they should stop if they don’t have a license; for us they should allow us to earn our living...

Similarly, their illegal counterparts in Talensi do not generally believe that their type of mining should require a license since they do not perceive any significant associated environmental impacts. In fact, miners in Talensi blame all the ills associated with illegal mining on the type of mining done by their southern colleagues. One miner argues that

The type of galamsey [illegal mining] we do here in the north does not destroy any water bodies or the environment like the people in the south do. Here we do hard rock mining, and if you have the proper equipment to dig one pit underground, you can eat from it for your whole lifetime, so you don’t go around digging other places to destroy the environment like they do in the south. And here most of us cover the pit when we close for the day... so we cause no environmental harm. So, when you talk of license it is those in the south that need a mining license.

Indeed, a cursory analysis of Ghana’s core legal and regulatory instruments for ASM including *Act 703* [53] and the National Mining Policy [56] and other subsidiary legislations corroborates these assertions that the ASM sector is poorly defined and categorized: lack of a clear definition that distinguishes the different types of activities and miners that exist within the country’s ASM sector. It does appear that all mining operations outside large-scale mining are classified as ‘small-scale mining’ with a generic formalization framework that fails to link the various types of the sector’s operations to appropriate levels and forms of control. The landmark *Small-scale Gold Mining Law* for instance defines small-scale gold mining vaguely: “mining by any method not involving substantial expenditure by an individual or group of persons...” [15]. Similarly, the current mining law, *Act 703* focuses more on land size (which should not exceed 25 acres for ASM) and tenure rights in its definition of ‘small-scale mining’: “...mining operation over an area of land in

accordance with the number of blocks prescribed” [53]. Rarely is the term ‘artisanal mining’ which resonates more with subsistence miners [1] used in Ghana’s mining codes and the current institutional framework unreasonably requires that poor rural folks panning for shallow alluvial gold with rudimentary tools like picks, chisels and pans mainly for survival be subjected to the same formalization process and licensing regime as their counterparts in deep hard rock mining with sophisticated excavators, dredgers and trommels. By local conventions all unregistered miners are deemed to be engaged in illegal mining (*galamsey*).

However, in order to induce accountability from all miners, there is a need for a clear formalization framework that is differentiated in terms of procedure and cost and properly matched with the diverse forms of the sector’s operations. This will particularly cater for the survivalist strand like those from the above analyses which many scholars believe are still in the majority [42, 57, 58] and who need state support in order to conform to formal requirements. This author argues that on the basis of findings from this study that the current ASM institutional framework will need to be reconfigured in a way that accounts for subsistence mining: whether or not such miners need a ‘small-scale’ mining license to operate; or what kind of licensing regime will be more appropriate for them, and how to ensure they operate in a manner that is safe for themselves and the environment.

Some scholars have argued that it is the case that the current ASM legal and regulatory frameworks are outdated and fail to adapt to the growing sophistication of the sector [9]. However, such assertions focus primarily on the level of mechanization that has taken place in the sector in the last decade due to illicit infiltration by Chinese miners [19, 59]. An official of the Minerals Commission agrees with this view but throws in a caution:

Yes, the sector has gone through great transformation mainly because of the illegal activities of the Chinese. But we need to be careful when we call for change in the regulatory framework, let us not assume that every miner has benefited from this transformation ... We still have our unemployed young men and women out there in their masses, and all they do is to wake up in the morning and go to river beds to do ‘dig and wash’ with shovels, pans and chisels... I think we should also think about managing this group when we call for policy change and not just upgrade the existing framework to cater for mechanization.

The findings suggest that rather than the simplistic assumption that local miners are becoming complex and sophisticated in their operations, a multi-tier reclassification of Ghana’s ASM sector will be necessary to properly account for all of the existing diverse forms of activities and the complex socio-economic profiles of the sector’s miners. This remains a major weakness of the current ASM institutional frameworks. Other scholars have traced the homogenization of the ASM sector in Ghana to mining sector reforms championed by the World Bank during the 1980s where due to a large-scale mining bias, ASM was generally misconstrued as a platform for wealth creation rather than a survivalist one [60, 61]. Formalization frameworks that ensued were therefore calibrated to favor local entrepreneurship at the expense of broader underlying social, economic, political and cultural issues. These limited efficacies of ASM formalization regimes to account for the sector’s disadvantaged groups have been noted in other jurisdictions as well [46].

However, most scholars and industry watchers generally

agree that designing a more accurate classification framework to account for the diverse forms of operations within ASM is a necessary precondition for promoting accountability and sustainable practices within the sector [1]. In some jurisdictions, existing frameworks differentiate between ‘artisanal’ and ‘small scale’ mining. In Tanzania for instance, the mining policy emphasizes the need to balance the livelihoods of artisanal miners with their commercial counterparts: a separate licensing regime exists for the former [62]. Similarly, in Peru and Ecuador, ‘artisanal’ and ‘small-scale’ gold miners are differentiated and subjected to different licensing regimes; whereas the latter pays royalties and taxes, the former does not [46]. The analyses here suggest that the high level of informality and illegal activities within Ghana’s ASM sector can hardly be isolated from these regulatory lacunas which mainly hinge on a narrowly conceived formalization centred solely on ‘legalization’ with little attention to local dynamics. It also stands to reason that a blanket law enforcement in the sector involving traditional approaches of criminality and force [18] could only worsen the livelihood situations of many subsistence miners who may genuinely not be able to afford and comply with the current formalization process.

5. CONCLUSIONS

Despite increasing relevance of ASM in poverty reduction in Ghana, this mining branch still presents complex environmental and social challenges due to weak regulation. This paper explores local perspectives on the underlying reasons for illegal mining in spite of the existence of formal policy avenues for miners to legalize their mining activities. The findings demonstrate that there is little interconnection between formal policy efforts and pre-existing resource norms particularly regarding customary land systems. It also shows that the current ASM formalization frameworks are generic and do not account for the diverse forms of ASM operations in order to subject them to appropriate forms of control. The findings generally demonstrate the top-down nature of ASM formalization policies and profound information asymmetries that exist between policy and practice, calling for greater stakeholder engagement as key to eliminating the adverse impacts of illegal mining. They present local institutions and local actors as key stakeholders in sustainable and efficient ASM governance policies. Broadly, the findings underscore the need for collaborative governance systems that have been used successfully in other fields of natural resource governance to be explored in ASM governance frameworks as well.

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