

Review

# Illicit Chinese Small-Scale Mining in Ghana: Beyond Institutional Weakness?

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Received: 2 September 2019; Accepted: 23 October 2019; Published: 25 October 2019



**Abstract:** While the engagement of Chinese migrants in small-scale mining in Ghana has gained traction in scholarship, the extant literature pays little attention to how the relationship between the so-called formal institutions (e.g., the Minerals Commission and Ministry of Land and Natural Resources) and informal institutions (e.g., the chieftaincy and customary land institutions) enables illegalities in the mining industry. This paper addresses this gap in the literature, focusing on the relationship between formal state and informal customary land institutions in the small-scale mining sector. Using an institutional analytical framework, we argue that the increasing involvement of the Chinese in small-scale mining in Ghana is an expression of a bigger and deep-seated problem characterized largely by uncoordinated interactions between key state and customary institutions. This, we suggest, creates parallel operations of formal and informal systems that promote different levels of agency and maneuvering among actors—breeding uncertainty, bureaucratic logjams, and illegalities in the mining industry. Based on our findings, we recommend that a more efficient coordination between the relevant state and traditional land governing institutions could curb the proliferation of illegal mining activities, and in particular, those involving Chinese migrants. As part of the conclusion, we suggest that future empirical research be conducted to explore the interactions between formal and informal institutions and how they affect mining activities.

**Keywords:** small-scale mining; institutional disconnection; Chinese miners; informality; traditional authority

## 1. Introduction

Since the early 2000s, about 50,000 Chinese gold miners have migrated to Ghana to engage in small-scale mining (locally known as *galamsey*), defined as the exploitation of mineral deposits through the use of rudimentary equipment and involving low levels of production with minimal capital investment, and by law reserved for only Ghanaians [1–7]. The influx of Chinese miners to Ghana has mainly been driven by high gold prices, increasing cultural cooperation between Ghana and China, and the largely informal nature of small-scale mining in Ghana, which enables easy entry by locals and foreigners into the business [2,3]. Before the arrival and involvement of Chinese miners in this industry in Ghana, the sector was characterized by informalities and illegalities, where Ghanaians in mining communities usually extracted gold without a license, using rudimentary methods [8]. In collaboration with local actors, however, the Chinese miners have imported more sophisticated machines that have gradually replaced the rudimentary methods and implements used by their Ghanaian counterparts. Given the prohibition by law on foreigners' engagement in small-scale mining in Ghana, the continued

engagement by Chinese in the industry has attracted extensive interest from scholars and analysts, whose debates could be categorized according to the following four main arguments.

The first and most common debate asserts that formal state institutions are weak or under-developed, and thus are unable to regulate the mining activities [3]. Second, some scholars have argued that there is a lack of political will to fight illegal Chinese businesses, ostensibly because politicians and high ranked government officials also benefit from such illicit activities [9,10]. Third, state and local actors (such as chiefs and landowners) with varying agencies connive with the Chinese miners, by “sheltering” the latter from statutory regulatory authorities in Ghana [11]. Ghanaians thus provide crucial local information such as how to navigate certain terrains and local laws. Consequently, the Chinese miners, with their modern technology, extract the minerals and share the proceeds with their local counterparts [12]. Fourth, others blame the phenomenon of illegal small-scale mining on excessive bureaucratic processes involved in procuring a mining license in Ghana, which often encourage “shortcuts” among actors to circumvent legal procedures [13].

While these arguments are significant in explaining the rapid growth in the illicit small-scale mining business, the ongoing discussions have not captured all the dynamics of the subject matter. For instance, there are also emerging arguments linking the rapid increase in artisanal and small-scale gold mining to “acute lack of jobs and accompanying poverty nationwide”, for details, see [14]. However, we show in this article that the existing literature fails to sufficiently explore the interaction between formal institutions (e.g., the Minerals Commission and Ministry of Land and Natural Resources) and informal institutions (e.g., the chieftaincy and customary land institutions), and how it affects mining activities. While it is not possible to tease out all the nuances in the scholarly debates of formal and informal institutions in this paper, we use formal and informal institutions here to denote liberal/Western-style and African traditional governance systems (that have endured from pre-colonial to post-colonial periods), respectively. The literature reveals hybrid operations between the two institutions in contemporary times, while still indicating that formal and informal institutions essentially perform different core functions [15,16]. Drawing on qualitative data from existing literature, legislation, and print and electronic media discourses regarding the proliferation of illicit small-scale mining in Ghana, this article critically examines the interaction between formal and informal institutions in the small-scale mining sector, assessing how this has contributed to the proliferation of Chinese involvement in illicit mining in Ghana.

Using an institutional analytical framework, the study demonstrates that state and customary institutional relations are “disjointed” (unintegrated, uncoordinated) as far as regulating the mining sector is concerned. This disconnect aids the agency of networked and individual actors—both locals and Chinese migrants—to perpetuate illegal small-scale mining, which has created enormous environmental, political, and economic implications for the mining communities and Ghana as a whole. This claim also goes contrary to the predominant views of distinct formal and informal spaces, and the weaknesses of the former being the cause of illicit mining activities [9], but somewhat supports recent scholarship on hybridity [17,18]. We focus on the constitution of Ghana and its accompanying acts on the one hand, and the position of traditional/informal institutions (principally the chieftaincy) and other stakeholders on the other hand, in relation to how their positions and interactions affect illegal mining. In view of this, we draw on customary land, which comprises stool, family and individually owned lands, because both large- and small-scale mining in Ghana primarily take place on customarily owned land. The existing scholarship underscores the fact that illegal mining has a long history in Ghana, predating Chinese participation in the business. Thus, our argument mainly attempts to point out how an ill-coordinated institutional mandate further breeds the activity, which now involves foreigners.

In the subsequent sections, we first provide an overview of China’s pursuit of resources in Africa through the growing relationship between China and African countries, and how this is driving the influx of Chinese miners to Ghana. The next section briefly outlines the major theoretical debates on institutions in Africa, examining the link between formal and informal institutions in Ghana. It then delves into the unintegrated and incoherent interaction between the constitution of

Ghana and the chieftaincy system as formal and informal institutions, respectively, and how the nature of their relationship shapes mining activities in the country. Subsequently, we outline the customary land tenure system, Chinese illegal mining activities, and how the non-integrated nature of institutions promotes illegalities in the small-scale mining industry, and then propose some policy recommendations. The paper concludes by arguing that the increasing involvement of Chinese miners in the small-scale mining sector in Ghana is an expression of a deep-rooted problem shrouded in institutional disjuncture. Thus, we propose an agenda for future research.

## 2. China's Pursuit of Resources in Africa

Sino–Africa relations date back to the 1960s during Africa's struggle for independence and self-rule. Ghana established formal relations with China in 1960 during the tenure of Kwame Nkrumah, Ghana's first president [19,20]. The independence of African countries in the 1960s coincided with the Cold War epoch [21]. During the Cold War, China's foreign policy was primarily centered on gaining ideological support from newly independent African States [22]. As Nkrumah argued at Ghana's independence, the colonization of Africa accompanied by the institution of capitalism eradicated pre-colonial African socialism and egalitarianism, leading to an unequal distribution of resources, which stratified the African society into the rich and poor [23]. The need to reintroduce socialism into Africa as a political and development ideology thus led to the establishment of political and economic relations with the socialist states of the East, especially China.

Relations between China and African countries, however, were severely affected following post-independence political instabilities across Africa between the 1960s and 1980s, when some African leaders reprioritized relations with the West within the same period [24]. However, since the dawn of the millennium, there has been a resurgence of relations between China and Africa. In particular, the rise of China as a global economic and political power and the search for resources to sustain its economic growth drove a revival of relations between China and African countries. China's intent has been to leverage and expand access to Africa's energy and mineral resources through soft and interest-free loans [21,25]. As a result, the outflow of energy and mineral resources from Africa to China has increased significantly over the years. For instance, China imports about 30 per cent of its oil, 80 per cent of its cobalt, and 40 per cent of its manganese from Africa [25].

China's insatiable demand for resources is due to its quest to sustain high economic growth [26], and the growing consumption of its growing affluent class, estimated at 500 million by 2020. China leads the global demand for gold. For instance, of the total of 4345.1 tons of global demand for gold in 2018, China alone consumed 1151.43 tons, making it the world largest consumer of gold for six consecutive years [27]. China's gold consumption rose by 5.73 per cent between 2017 and 2018, a growth rate which is driven by an increasing demand for jewelry and gold bars, and by industries for other purposes. The increasing investment in gold by the rich in China is a result of fluctuations in the real estate, security, and capital markets. In addition, the Chinese government aims to continually accumulate gold as a cornerstone of its monetary policy, as well as encourage its citizens to own gold as a store of value. As a result, the increasing affluent class in China continues to have a voracious appetite for gold.

Despite also being the largest producer of gold in the World, China's local gold production falls short of domestic demand. For example, China's total production stood at 429.4 tons in 2017 and 404.1 tons in 2018, indicating a reduction in production by 5.87 per cent [28–30]. Thus, while local demand for gold in China increased by 5.73 per cent in 2018, local production fell by 5.87 per cent in the same period. In order to meet the high domestic demand for gold, China imports significant quantities of gold from other countries. Thus, the high demand for gold and other mineral resources saw China's engagement, for example, in South American and African countries' extractive industries [31], with thousands of Chinese gold miners migrating to Africa in search of gold. For instance, since 2005, over 50,000 Chinese gold miners have entered Ghana, most of whom are said to be engaged in illegal small-scale gold mining in the country [2,4,5].

Gold production is an important sector of Ghana's economy, accounting for 96.68 per cent of the total earnings from exported minerals in 2015. Currently, Ghana is the largest producer of gold in Africa and is ranked eighth globally, producing 136.2 tons in 2018 [32]. Gold production in Ghana comprises both large-scale mining, largely dominated by multinationals, and small-scale mining, reserved by law for Ghanaians only. The small-scale mining sector consists of 30 per cent registered and 70 per cent unregistered mining operations across the country [33]. The small-scale mining sector directly employs about one million people and supports the livelihoods of about 4.5 million people, as well as accounting for 35 per cent of total gold production in Ghana [33,34]. In particular, illicit or unregistered small-scale mining in Ghana has expanded in the past decade as a result of increasing involvement of Chinese miners in the sector. Given the small-scale nature of their operations in the non-renewable natural resources sector in Ghana, Chinese are unable to engage in large-scale mineral exploration and extraction in the same way as the large U.S. corporate bodies. Thus, Chinese organizations focus on providing services to other large mining entities in the extractive industry; yet these services are plagued by illegalities, as most companies also offer services to small-scale miners or end up working in this sector, contrary to the rules and regulations in Ghana [7] (p.37).

Consequently, there has been a correspondent increase in smuggling and illicit flow of gold from Ghana and other African countries to China. A recent report by Voice of America [35] indicates that China is a major destination for illicit gold from Africa. The illegal gold trade costs African countries billions of dollars each year in terms of revenue loss. For example, gold with an estimated value of \$2.3 billion left the shores of Ghana through illicit gold trade in 2016 alone [36].

The increasing involvement of Chinese miners in illicit mining and gold trade in Ghana has attracted public concern and varied debates among scholars and analysts [3,37]. While some scholars have attributed illicit small-scale mining to many factors, including institutional weakness, corruption, and cumbersome bureaucratic processes of acquiring a mining license, this study further explores the subject matter, demonstrating that the drivers of illegal small-scale mining in Ghana are complex and deeply-rooted in the legacy of colonial institutional ordering, which has since created a disjuncture between Western-style institutions and African-style institutions. To provide a background to this conundrum, we briefly examine the major existing theoretical debates on institutions in Africa in the next section.

### 3. Theorizing Institutions in Africa

Academic discourse has mostly converged at a notion that institutions and bureaucracies in Africa are weak. This attribute of weakness is reflected in and is usually reinforced by issues such as elite capture, corruption [38,39], inadequate infrastructure [40,41], and the legacies of illegitimate colonial institutions [42,43]. We consider institutions as rules that govern individuals' lives and different organizational components of a state—political, economic, and social interactions—and comprise both formal rules (constitutions, laws, property rights), and informal constraints (sanctions, taboos, customs, traditions, and codes of conduct) [44] (p.97) [45], with the primary purpose of creating order and reducing uncertainty in society. While the histories, sources, categories, and functions of both formal and informal institutions in Africa are significantly captured in the literature [16], the characteristics of these institutions, and how they shape the economic transactions, remain contentious.

One of the most influential and thought-provoking works on the logic of African institutions comes from Patrick Chabal and Jean-Pascal Daloz in their essay, *Africa Works*. Chabal and Daloz [38] contend that African institutions can best be understood as spaces of "institutionalized disorder," where perverse corruption is both a major cause of and a product of ineffective institutions. They define institutional effectiveness in terms of the "Weberian ideal-type" bureaucracies, where institutional effectiveness is obtained by organizing their structure, purposes, and resources to provide rule-based governance which is fair, rational, and predictable. Arguing further, they show that African institutions are captured by clientelistic and patron networks, where rules of the game succumb to actor-networks that further perpetuate dysfunctionality. Thus, bureaucracies in Africa run counter to "Weberian"

prescriptions. Bierschenk [46] and Acemoglu and Robinson [43] argue that the prevalence of ineffective institutions in Africa is a manifestation of colonial legacy. To Bierschenk, colonial development regimes left incomplete and contradictory reforms that make bureaucracies highly disintegrated—resembling never-finishing “building sites.” He further suggests that colonization created “formal” institutions that were superimposed on existing pre-colonial African institutions, and this affects modern state infrastructure [46]. Such conditions weaken the modern institutions and provide undue agency to private and state agents, who perpetrate opaque business transactions.

The distinction between the public and the private space is thus blurred, which enables collaborative extraction and exploitation of resources by elites and their cronies [39]. Many institutions in Africa have a “twilight character:”

[ . . . ] they are not the state, but they exercise public authority. They defy clear-cut distinction. In fact, as we venture to study the political contours of public authority and the political field in which it is exercised, we are saddled with a paradox. On the one hand, actors and institutions in this field are intensely preoccupied with the state and with the distinction between state and society, but on the other hand, their practices constantly befuddle these distinctions. [39] (p. 673)

Lund argues that by this nature, African institutions cannot stamp their authority, which is in line with the views of Luiz and Stewart [47] that Africa is a zone of institutional voids. This perspective is, however, contrary to the views of Weintraub [48] and Bayart [49], who posit that the distinction between public–private or formal–informal is a Western thought, which does not have analytical purchase in the African contexts that have had a history of amalgamated European–African authority. Suggestively, the locus of institutional power is negotiated, unstable, and fluid, partly in line with Foucault’s view of power as “omnipresent,” revolving around actors and never controlled or being possessed [50,51]. In view of these, Alexander [52] argues against transplanting Weberian institutional norms to Africa and the Global South. Thus, viewing institutions in Africa via Western canons alone obscures a great deal of understanding of how the systems function on the continent [16].

A relatively recent but growing body of literature suggests that African political systems and institutions could best be described as “hybrid,” a form of governance which embraces both formal and informal rules, to address debates on the formal–informal duality [53]. Boege [18] believes that hybrid approaches create avenues for modern practices to embrace customary norms, thereby respecting and utilizing traditional African systems in modern governance. Thus, the application of formal rules should resonate with the baggage of informal norms and cultures that govern the daily lives of the people, and scholars should explore this aspect of the debate [44]. Yet, others believe that hybridity is not a useful concept, and hybrid operations may not serve as a panacea to institutional challenges in Africa, partly because the so-called local and Western norms are not always distinct, and thus should not be viewed as “others,” with incompatible philosophies [54]. Moreover, hybrid systems may produce negative outcomes, because the discourse and practice of hybridity usually fail to disaggregate local contexts, and thus do not address historical and existing inequalities and power imbalances (e.g., of gender and class) that characterize the administrative systems in the Global South [17].

Although the foregoing debates provide an extensive background to institutions in Africa, the approach taken in this article does not depend solely on any of these stances. We do not focus on the supposed weakness of formal or informal institutions (as separate entities) or grapple with their distinct functions. Our approach somewhat resonates with hybridity (by linking formal and informal arenas). Nonetheless, we do not pursue hybridity as a central focus, because the existing articulations of the concept remain unclear, and also imply insignificant formal–informal integration [17], while a substantial debate about hybrid governance is beyond the remit of this article. It will be seen, however, that aspects of each of these views have implications on our discussion on small-scale mining in Ghana. We now turn attention to how the “disjointed” relation between state bodies and customary institutions functions against constitutional provisions on land and natural resource governance.

### *The Constitution, Chieftaincy, and Land Deals in Ghana: Association or Dissociation?*

Chieftaincy is an African indigenous system of governance with executive, judicial, and legislative arms and powers. In Ghana, as in other parts of Africa, chieftaincy institutions are governed by “chiefs” whose symbol of authority is the stool/skin, depending on customary and cultural practices [55]. According to Article 277 of the 1992 Constitution of the Republic of Ghana, a “chief” refers to a person, who, hailing from the appropriate family and lineage, has been validly nominated, elected or selected, and enstooled, enskinned, or installed as a chief or queen mother in accordance with the relevant customary law and usage [56]. The chieftaincy institution has endured from pre-colonial to post-independence periods in Ghana. Article 270 (2b) of the 1992 Constitution reiterates state support for the chieftaincy institution [57]. For instance, Article 270 (3a) indicates that the laws of Ghana shall be consistent with the customary provisions laid down by the Regional and National House of Chiefs, while Articles 271–276 instruct that the House of Chiefs on the one hand, and the heads of Ghana’s Judiciary (i.e., the Appeals and Supreme Courts) on the other hand, should strike a balance between customary laws and liberal state laws—thus suggesting an intended integration of the two traditions.

Chiefs remain key actors in Ghana’s development. At least 80 per cent of the country’s land is held by the various traditional authorities as stool/skin lands per customary law, while the central government owns only 10 per cent for public development [55]. The chieftaincy institution performs two main functions: statutory (settlement of disputes and the codification of customary laws) and non-statutory (socio-economic development).

Chiefs provided political leadership in pre-colonial Ghana in the past when the British introduced Indirect Rule, a system of government through the chiefs whose legitimacy and power enabled the British to easily extract the needed natural resources, labor force, and taxes for the colonial enterprise [58]. Before this epoch, chiefs in southern Ghana exercised control over lands under their jurisdictions see [57]). In northern Ghana, however, chiefs only had political authority, while lands were administered by the *Tindana*—the earth priest [59]. When colonial rule was instituted, chiefs lost their autonomy and were subjugated by the colonial government. Chiefs in the south continued to control lands but, this time, as prescribed by the colonial rulers. In the north, the *Tindana* lost their control over lands to chiefs, who also conducted colonial business over their subjects [60].

After independence, subsequent governments have also sought to limit the autonomy of chiefs through drastic laws, such as barring chiefs from active politics [57]. For example, Kwame Nkrumah’s Convention People’s Party government set up new urban and local councils to take over from chiefs the levying of local rates on economic resources and sites. Nkrumah established the Local Government Ordinance, and elected local councils to replace native authority, put in place by the colonial administration. Following this was the enactment of the Stool Lands Control Act, 1960 (Act 79); the Administration of Lands Act, 1962 (Act 123); and the Concessions Act, 1962 (Act 124), among others. These legal instruments appropriated land rights to the state and further weakened the economic muscle of chiefs, as they could no more extract royalties [60]. However, such measures were reversed, to some extent, by subsequent governments.

The 1992 Constitution reversed the trend, entrusting stool and skin lands and property to their respective jurisdictions. However, it seems the “liberating” nature of the 1992 Constitution has not resolved the discord between and challenges with formal and informal structures. In northern Ghana, for instance, the *Tindana* have always wanted to reclaim their lost natural right as custodians of lands, which they lost since colonialism; the chiefs have also attempted to retain remnants of the powers vested in them by the colonial system of Indirect Rule; and non-chiefly families, clans, and ethnic groups who were forcefully (re)grouped under dominant chiefdoms, have demanded their lands and self-determinations back from “illegitimate chiefs” [61,62]. The case of southern Ghana (e.g., among the Asante), however, differs, as chiefs have always been custodians of natural resources and wielders of political power before state interference [57].

Articles 267–269 of the 1992 Constitution specifically unravel the contentions between customary and state institutions in natural resource management. Article 267(1) states that all stool lands shall

be vested in the appropriate stool or skin on behalf of, and in trust for, their respective subjects in accordance with customary law and usage, and such lands shall be managed by the Office of the Administrator of Stool Lands (Article 267.2), to which all rents, dues, royalties, and revenues accruing from these resources must be paid (Article 267.2a). Any sale of land and property shall be examined and certified by the respective Regional Lands Commission (Article 267.3). According to Article 267.6, 10 per cent of the revenue accruing from stool lands shall be paid to the office of the Administrator of Stool Lands to cover the administrative expenses and the remaining revenue shall be disbursed in the following proportions: (a) 25 per cent to the stool through the traditional authority for the maintenance of the stool in keeping with its status; (b) 20 per cent to the traditional authority; and (c) 55 per cent to the District Assembly, within the area of authority in which the stool lands are situated.

To ensure effective coordination, the Administrator of Stool Lands and the Regional Lands Commission are tasked to consult with the stools and other traditional authorities and make available all data on land transactions (Article 267.7), while informing all state agencies (Article 267.8). In addition, parliament must determine the functions and limits of regional Lands Commissions and administrators of Stool lands (Article 267.9). To further enforce these regulations, Article 268.1 postulates that any transaction, contract, or concession by individuals, groups, or the government of Ghana, for the exploitation of any mineral, water, or other natural resources, must be subject to ratification by the parliament. This exercise of the mandate by parliament must be conducted through key bodies such as the Minerals Commission, Forestry Commission, Fisheries Commission or any other relevant entity, depending on the natural resources to be exploited (Article 269.1–2) [56].

Enhancing the 1992 Constitution further, other supplementary regulations, such as the Minerals and Mining Act 703 (2006) [63], Minerals and Mining (General) Regulations (L.I. 2173) of 2012 [64], and the Minerals and Mining Policy of Ghana [6], all place the control of mineral and natural resource transactions under the state while traditional rulers become the owners of these same lands; thus, ownership does not amount to the right to use. This appears to have created an institutional dissociation, which gives agency to actors from both formal and informal institutions to navigate the system for private and group benefits at the blind side of the state. To illustrate this, we turn to the next section, which discusses the Chinese involvement in illicit small-scale mining in Ghana, and demonstrates the unintegrated nature of formal and informal institutions, which breeds such activities.

#### 4. Unpacking Customary Land Ownership and Chinese Small-Scale Mining in Ghana

##### 4.1. Acquisition of License and Persistent Illegalities

The growing demand for gold in China as the leading global consumer of gold is the driving force behind the influx of thousands of Chinese miners to Ghana. The growing diplomatic relations between Ghana and China has created an enabling environment for Chinese migrants. Estimates suggest that 70 per cent of Chinese miners in Ghana come from Shanglin County, an impoverished area in the southern Guangxi province where news of the gold rush spread by word of mouth [2,65]. Small-scale mining in Ghana is attractive to Chinese miners from Guangxi for several reasons. First, mining activities in Guangxi province have been shut down, rendering many gold miners jobless, and thus motivating a search for gold mining opportunities outside of China. Second, the informal nature of small-scale mining in Ghana enables locals to connive with their Chinese counterparts. Before leaving their country, Chinese miners acquire loans from their families to purchase mining equipment to be shipped to Ghana. Acquisition of mining equipment is facilitated by three companies in Shanglin, which sell mining equipment mainly to Shanglin miners abroad [66].

In Ghana, the Ministry of Lands and Natural Resources has the overall responsibility to regulate the mining sector. The Minerals Commission, which is a government agency under the above ministry, is the main promotional and regulatory body for mineral-related transactions. Currently, the mining sector is regulated by the Minerals and Mining Act, 2006 (Act 703). The act enables small-scale miners to apply for a mining concession of a maximum of 25 acres. The act strictly reserves small-scale

mining for only Ghanaians. Considering this legal provision, it baffles many how Chinese and other foreign nationals are involved in small-scale mining in Ghana. Yet, it is worth noting here that as a recent study shows, foreigners could legally participate in the small-scale mining sector by providing technical and/or contracted services to small-scale Ghanaian miners. This provision was, however, revised in 2014, restricting the role of foreigners in the provision of services to Ghanaian miners, for details, see [67]. Thus, some Chinese enter the industry as service providers but later become owners of mining concessions. For instance, in northern Ghana, Chinese miners present themselves as service providers on mining concessions belonging to chiefs [68]. Crawford et al. [69] (p.77) reveal that a Chinese mining company, Shaanxi Mining (Ghana) Limited (SMGHL), which used to provide mining support services to two licensed local concession holders in Gbane in the Talensi district of the Upper East region, has acquired the concessions and established “a multi-million dollar state-of-the-art, high-tech underground mine on the sites of [the] two local [ . . . ] concession holders.” This case is a clear example of how some licensed Ghanaian small-scale mining operators sublease their concessions to Chinese miners, as well as indicating how Chinese service providers enter small-scale mining. This means locals who sublet their licenses do so against the law. However, most Ghanaian miners are compelled to sublease their concessions or enter into partnerships with Chinese miners because the former cannot afford the cost of acquiring mining licenses, machinery, and small-scale mining operation [12]. The proliferation of such illegalities may be because the small-scale mining deals are mainly negotiated at the local level involving actors within the customary land institution [70].

As documented earlier, customary land institutions control about 80 per cent of the land in Ghana, with chiefs and other traditional leaders as custodians [55]. Customary land comprises stool, family, and individually owned lands. Chiefs directly administer stool lands while family heads administer family lands. The 1992 Constitution of Ghana also entrusts in chiefs the allodium of all customary/stool lands that are held in trust for their subjects. However, the same Constitution entrusts in the state ownership of resources either underneath or on the surface of all lands. Reflecting on these constitutional provisions, there have been tensions between the customary or chieftaincy institution administering right or access to land and the state controlling land-based resources. While the state has the sole responsibility of granting licenses for the extraction of land-based resources such as minerals, access to mineralized lands is negotiated among various actors, including those of the customary land institution [71]. The Minerals and Mining Act (2006) is the main legislation engaging with the intersection between mining and customary land institutions. In this context, whereas the Minerals Commission and Ministry of Land and Natural Resources issue licenses for small-scale mining, miners need to pay compensation to customary owners of the land on which mining activities take place [72].

The process of acquiring a license for small-scale mining is often characterized by long and cumbersome bureaucratic procedures [8,14,73]. The process starts by identifying an area of interest and developing a site plan for approval by district officials of the Minerals Commission. The proposed site plan is assessed to check whether it overlaps with the existing mining concessions. If cleared, the application is then sent to the Minerals Commission at the national level, where the proposed site plan is again georeferenced against existing concession maps of Ghana. In the case where there is no overlap, the proposed site plan is recommended and forwarded to the Ministry of Lands and Natural Resources for issuance of a license. However, before a permit is finally issued, members of the community where the mining activities will take place are given a 21-day notice of the proposed concession. Anyone likely to be affected, including dispossession and damages to property (e.g., crops) must write to the Minerals Commission and Land Evaluation Board, stating clearly the potential damages and desired compensation [73]. A committee may be set up to consider the potential losses detailed in the letter and negotiate compensation for the affected, who are often farmers [72].

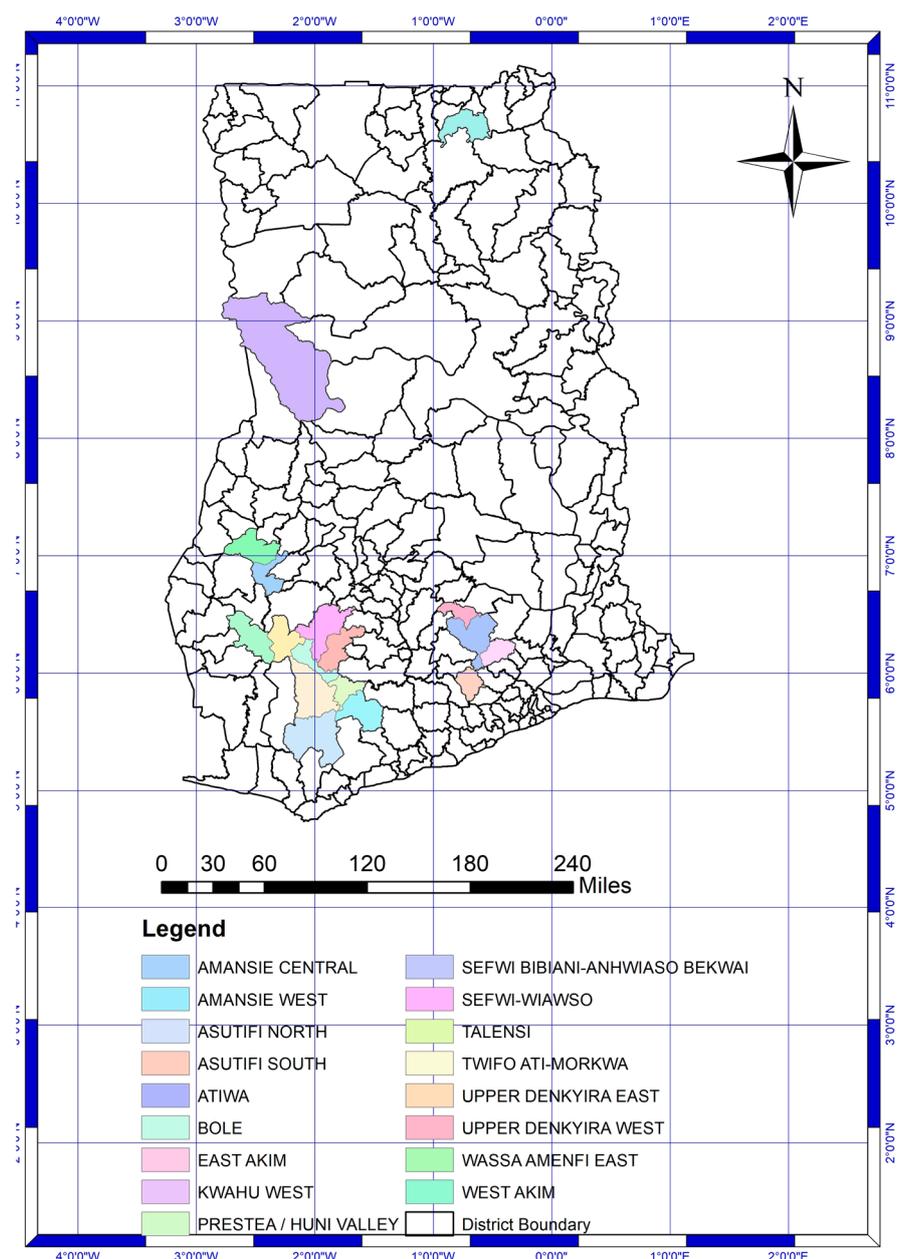
Despite the protocols laid down for negotiating compensations, (prospective) miners often ignore the procedure, and engage with landowners informally or even begin mining before the compensation is paid [37]. Moreover, traditional leaders and chiefs who superintend over customary mineralized lands, particularly stool lands, must be consulted and “appreciated” by being paid a fee before mining

can begin. To illustrate, in the Upper Denkyira East Municipality of the Central Region, Crawford and Botchwey [3] observed that chiefs must give the final clearance before mining commences, often involving financial payments. Such payments may continue throughout the mining period as chiefs may demand additional payments in the course of mining [37]. These informal negotiations are the only way customary land actors (chiefs and local people) are involved in the formal process of concession acquisition.

Although customary law is constitutionally recognized, the legislative provision for license acquisition ensures that customary land actors remain involved in the process in a peripheral way, through informal negotiations. Despite the relegation of the customary institution from the formal processes of concession acquisition, however, miners cannot hold concessions or engage in mining activities without the consent of the chiefs, landowners, and farmers. It is therefore notable that state and customary land institutions involved in small-scale mining operate in a disconnected manner and with different levels of agency. This institutional disjuncture partly creates a bureaucratic and expensive nature of the license acquisition process—including payments of both official and unofficial fees—discouraging miners from acquiring a license [69].

Evidence suggests that some Chinese miners have acquired mining concessions by only engaging chiefs, family heads, and farmers [12]. To these Chinese miners, the acquisition of lands from the above groups is the most important process. Because of the powers of chiefs as custodians of lands, Chinese miners see them as the authorities responsible for the administration of minerals. Therefore, by acquiring land from chiefs, the Chinese believe they are operating legally [74]. For instance, in Amansie West, Bach [75] reveals that Chinese miners may appear in mining communities claiming that they have already paid for the land and granted permission by the paramount chief to mine. In some instances, Chinese miners negotiate informal concession deals with chiefs during which land is leased to the former for mining activities. The proceedings from such informal deals are then shared between the Chinese miners and chiefs [2].

These informal mining deals are not new, as they have characterized the small-scale mining sector for decades because state institutions have long marginalized the industry in terms of policy innovations. As illustrated above, unlicensed small-scale mining operations are estimated to account for 70 per cent of the existing small-scale and artisanal mining operations in Ghana [76,77]. Thus, most small-scale mining operations in Ghana remain informal and illicit. This suggests the participation of Chinese miners in the sector is only an expression of existing informalities and illegalities that have characterized the industry for decades, resulting from the disjointed nature of the Minerals Commission and customary land institutions [13]. However, the involvement of Chinese migrants in the illegal mining industry has become a threat to national security because of its pervasiveness across the country (see Figure 1) and associated vast ecological damage, courting local resistance and resulting in immense destruction of lives and property [12,69].



**Figure 1.** A map of Ghana showing districts of widespread illegal mining. Source: Authors' construct (2019).

#### 4.2. Chinese Involvement in illicit Small-Scale Mining: Implications and Community Resistance

Although illegal small-scale mining and its impacts are not new in Ghana, the proliferation of Chinese miners has revolutionized the sector, and (re)shaped the local economies and social relations. The use of excavators, bulldozers, and trench drills, among other equipment, has reduced the drudgery and manual methods of mining [2]. With the mechanization and intensification of the industry, large areas of land could be dug and excavated in a few days. The arrival of modern equipment and capital has incentivized local miners to partner with Chinese miners. Yet, the use of these types of machinery also comes with large-scale environmental degradation, destruction of farmlands, and pollution of water bodies, particularly rivers that serve as sources of potable water for mining communities [3,78]. For instance, alluvial mining including the use of mercury and cyanide has polluted and degraded water bodies, such as the Offin, Ankobra, Prah, and Birim rivers, which serve several communities along their banks [77,78]. Vast swathes of cocoa farms and forests have been destroyed with earthmoving machines, leaving large open pits that pose safety concerns in the mining

communities [2]. Additionally, illicit mining activities have contributed to the loss of revenue through tax evasion [7].

The revolution in the sector has also brought social challenges to mining communities. The Chinese miners outcompete existing self-employed Ghanaian artisanal miners, resulting in loss of livelihoods of the latter, forcing many local miners to seek employment under their Chinese counterparts. There have been reports of human rights abuses and poor treatment of Ghanaian workers at Chinese mines [2]. Moreover, there has also been a surge in armed robberies, where local gangs target the Chinese mining operations and gold shipments. Increasing armed robbery has culminated in the proliferation of small arms in mining communities as Chinese miners acquire arms to protect themselves and their mines, begetting further resistances from locals, most of whom have been affected by Chinese encroachment. The reported human rights abuses, massive environmental destruction, and loss of livelihoods caused by the activities of Chinese miners have angered the youth of mining communities. For instance, in northern Ghana, a local opposition group in Gabane, where a Chinese company, SMGHL, has been mining, staged a demonstration in the early part of 2012 to register their displeasure, as well as to challenge the legal basis of the company's operation. A second demonstration in that same year turned into a violent confrontation between the local opposition group and workers of the company, causing damage to the company's property [69]. Similarly, in southern Ghana, the youth of Manso-Nsiena in the Ashanti region organized a massive public protest in mid-2012 against the Chinese mining activities and consequently destroyed mining equipment belonging to the latter [12].

These protests across the country in 2012 and beyond brought the activities of Chinese miners and accompanied environmental, social, and economic impacts to the attention of the media, public, and state institutions, including the presidency. The Ghanaian public expressed their resentment toward the illegal activities of Chinese miners and called for the abolishment or regularization of the business, as well as the reclamation of abandoned mining sites across mining communities in the country. In particular, the citizenry was upset about the inability of the state institutions to regulate or stop Chinese miners in the sector. The outcries of Ghanaians prompted the then-sitting president, John Dramani Mahama, to act, by setting up an inter-ministerial task force to "crack down" on all illegal miners, both locals and foreigners.

#### *4.3. State Response to Illegal Chinese Miners through Inter-Ministerial Task Force*

In May 2013, President John Dramani Mahama inaugurated a five-member Inter-Ministerial Task Force to clamp down on illegal small-scale mining. The ministries included the Ministry of Lands and Natural Resources, Ministry for the Interior, and Ministry of Defense. The task force was mandated to "seize all the equipment the illegal miners use, arrest and prosecute both Ghanaians and non-Ghanaians engaged in illicit small-scale mining, deport all non-Ghanaians engaged in the practice, and revoke licenses of Ghanaians who have sub-leased their concessions to non-Ghanaians" [79]. Despite such clear delineation of the mandate of the task force, the Ghanaian public was divided about the role of the group and its effectiveness in fighting illicit small-scale mining. While a section of the public lauded the president's initiative, others doubted the effectiveness of the idea, questioning why the government took so long to respond to the issue. Indeed, the lack of swift response from the state was quickly blamed on the weaknesses of state institutions. Some political analysts were also skeptical of the task force's ability to deliver on its mandate, as cracking down on Chinese miners may have political ramifications for the Ghana–China relations [80].

In spite of these concerns, the task force carried out its activities as mandated. This, however, was not without further public criticisms and accusations that the task force targeted only Chinese miners and destroyed their property, a claim dismissed by the chairperson of the task force. In 2013, the task force dismantled hundreds of illegal mining sites and evicted thousands of Ghanaian and Chinese miners from sites [81]. Over 4500 illegal Chinese miners were arrested and deported in the same year [66]. This caught the attention of the Chinese authorities, who sent a delegation to Ghana to discuss the issue with the Ghanaian government. In the middle of 2013, the then Chinese ambassador

to Ghana, Gong Jianzhong, also made a courtesy call to the then Minister for Lands and Natural Resources, Alhaji Inusah Fuseini, who was the chairperson of the Inter-Ministerial Task Force, to review the status of bilateral relations between Ghana and China. As part of the discussions, the ambassador proposed a new model for relations between the two countries under which the Minerals Commission could allow Chinese miners to work with licensed Ghanaian small-scale mining companies to enable them to transfer technical knowledge to their Ghanaian counterparts for the development of artisanal mining in Ghana [82].

Although the crackdown reduced the number of illegal Chinese miners, the task force could not wholly stop illegal mining involving foreigners (Chinese) and locals. This is probably because the task force was only composed of actors from state institutions without the involvement of customary land actors such as chiefs, who directly engage with illegal miners through land transactions. The exclusion of the customary land actors in the fight against illegal small-scale mining suggests a disconnect between the state and customary institutions in the small-scale mining sector. Following the crackdowns, illegal Chinese mining became concealed, as miners hid in remote mining communities where they were protected by chiefs and the local people to escape arrest by the task force [83]. With this protection, the Chinese migrants have continued to engage in illegal small-scale mining despite the task force's clampdowns.

Perhaps overlooking a key element of the root cause of illicit small-scale mining in Ghana—which we argue is the disconnect between state and customary institutions—the New Patriotic Party (NPP), which was in opposition in 2013, promised to stop the menace when voted into power. The NPP somewhat saw its victory in the 2016 general elections as the people's mandate to act on illicit small-scale mining—"an electoral IOU it had to honor." Thus, the President, Nana Akufo-Addo, launched "Operation Vanguard" in 2017 to stop illegal small-scale mining, first in the Ashanti, Eastern and Western Regions, and later in the Central Region. Operation Vanguard is a Joint Military Police Task Force that comprises 400 servicemen drawn from the military and police service. An inter-ministerial committee alongside the Minister of Defense, the Minister for the Interior, the Chief of Defense Staff, and the Inspector General of Police, supervise the task force. Again, customary land actors have been excluded from the composition of "Operation Vanguard" and the second phase of the crack down, although chiefs have been generally called upon to assist the task force in the fight against illegal small-scale mining.

To make the work of "Operation Vanguard" easier, a six-month ban was placed on all forms of small-scale mining in the country. The task force carried out its work, and by February 2018, about 1000 illegal miners, comprising both Chinese and Ghanaians, were arrested [84]. In addition, several pieces of mining equipment were seized, while hundreds of makeshift shelters belonging to the miners were also destroyed. Those arrested were either fined or jailed, or deported in the case of foreign nationals.

It is worth noting here that this is not the first time that a militarized approach has been taken to stop illicit mining in Ghana. Military actions have always been a part of the strategies of the government to halt illegal mining activities [70]. However, the military strategy, as well as other approaches, such as simplifying the licensing process and provision of alternative livelihood opportunities for illegal miners, have all failed to put an end to illegal mining operations. The government has historically prescribed technocratic solutions, often involving state institutions and actors to stop illicit small-scale mining, without paying attention to the fact that the sector is controlled formally by the Ministry of Lands and Natural Resources and the Minerals Commission, and informally by the customary land institutions. Given the constitutional mandate that the two arenas must coordinate in natural resource governance, the continued institutional disconnect, as the foregoing evidence suggests, breeds conflict, tensions, and maneuvering, further promoting illegality and uncertainty in the industry.

Based on our findings and analysis, we propose the following policy recommendations to strengthen the connection between the so-called formal and informal institutions to perform their designated functions. First, an autonomous, vibrant and robust civil society should participate in the design, formulation, and implementation of mining policy at all levels: national, regional, and local.

The civil society must have the capacity to ensure transparency and monitoring, and to put pressure on all stakeholders to play by the rules. It must work in tandem with other parastatal institutions to play an oversight role in regulating the mining industry. To prevent civil society from being just another added institutional arena, its key role must be to help deepen institutional development, including working to strengthen coordination among the institutions involved in the mining industry, particularly between the Minerals Commission and the Ministry of Lands and Natural Resources, and the chieftaincies and customary land institutions. Second, the state must show guarded enthusiasm for Chinese engagement, in that China's recourse to an undemocratic approach to operating businesses in the country (and elsewhere, such as South America and other African countries) has a tendency to stifle Ghana's institutional development. Chinese mining organizations and individuals have failed to adhere to the mining laws. Here, negotiating directly with individuals, local elites, and chiefs without recourse to the established mining rules has the tendency to weaken national, regional, and local institutions' resource governance coordination efforts that are essential in regulating mining activities cf. [31]. In addition, chiefs and other customary representatives must also be regular actors in state institutions in charge of lands and natural resources. Customary actors should not only be informed or consulted but must be integral to all mining transactions. The foregoing discussion indicates that traditional institutions and actors are only informed of the licensing process after endorsement by the Ministry of Lands and Natural Resources and the Minerals Commission. This pushes customary and local actors to also exercise their agency, by engaging in separate negotiations, e.g., between chiefs and miners at the local level, which is unlawful. Moreover, as chiefs and other customary landowners feel marginalized in the licensing process, they often abandon their role as monitors of mining activities, leaving only the state security forces, who generally know very little about the local terrain, and thus cannot effectively address the illegality without local support.

## 5. Conclusions

Contrary to the dominant narratives of the drivers of illegal small-scale mining in Ghana, we have argued that the proliferation of the phenomenon is largely a result of the uncoordinated, and thus functionally parallel, nature of formal institutions (the Minerals Commission and the Ministry of Lands and Natural Resources) and informal institutions (the chieftaincy and customary land institutions) responsible for natural resource management. While the 1992 Constitution, for instance, bequeaths natural resources to the state, the same constitution holds that traditional leaders (mainly chiefs), families, and individuals own land [37,73], thus creating parallel and disjointed institutions, and promoting the proliferation of illegal mining activities.

Because of the hitherto unconstrained access of chiefs and landowners prior to state control of minerals, coupled with some formal bureaucracies, landowners often give out sites for mineral prospecting without passing through the requisite state institutions. This is exacerbated by the failure of formal and informal institutions to work in an integrated manner. The condition of institutional disconnection makes it possible for Ghanaians to illegally sublet their licenses to their Chinese counterparts who have the capital and technology. This illegality is not limited to ordinary Ghanaians alone. Chiefs also navigate the system by conniving with Chinese and other locals to perpetuate the illegality supposedly at the blind side of the state, by secretly giving out lands or shielding miners from state surveillance [85]. These findings are in line with Jacobs' [86] research in Namibia, where Chinese buy licenses of local small-scale miners because the latter often lack the necessary skills and technical know-how, as well as the required funds to purchase the necessary machinery. Further, Gonzalez-Vicente's [31] work, for instance, highlights the opposite trend in Peru and Ecuador where Chinese companies negotiate directly with the central elites, and thus disregard local authorities in the process. This somewhat contradicts Ghana's case but still indicates the tension and disconnect between the state and local institutions, suggesting that with the current institutional architecture, illegal small-scale mining will continue, not only in Ghana but also in similar socio-political settings.

While Ghanaians aid their Chinese partners in the illegal mining business, the comparative advantage of the latter tends to provoke local resistance, which spills into the national discourse. Locals have reacted violently to Chinese encroachment and destruction of farms belonging to mining communities, water bodies, and forest reserves. With their superior capital and technology, Chinese miners mostly outcompete their Ghanaian counterparts, thus pushing the latter out of business, forcing them to seek jobs in Chinese mines.

In essence, the proliferation of illicit mining activities involving Chinese migrants in Ghana is largely a result of the inability of formal and informal rules and actors to coordinate their respective mandates to effectively regularize activities in the sector. This has lent agency to individuals and groups to manipulate the system, conniving with foreigners (Chinese) in the process, for private gains against the state.

While acknowledging the multiple and interconnected factors contributing to illicit small-scale mining in Ghana, this study offers further in-depth insight into the complex world of the mining industry, thus problematizing the significant role of the formal–informal institutional disconnection in the continual illegality in the small-scale mining industry. The study, therefore, provides the basis for future research on the relations between formal–informal institutions in natural resource governance in Africa and other similar settings across space and time. More importantly, further longitudinal and comparative research on how the relationship between formal and informal institutions shapes extractive resource management would be highly welcome. Such an approach would offer new insights into how these institutions have developed and interacted over time.

**Author Contributions:** Conceptualization: S.D.; methodology: J.B. and S.A.P.; validation: S.D.; formal analysis: J.B. and S.A.P.; investigation: J.B., S.A.P. and S.D.; resources: J.B. and S.A.P.; data curation: S.D.; writing—original draft preparation: J.B., S.A.P. and S.D.; writing—review and editing: J.B., S.A.P. and S.D.

**Funding:** This research received no external funding.

**Conflicts of Interest:** The authors declare no conflict of interest.

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