

MA Thesis

The Large Impact of Small-scale Mining

A study on scale-making and the licit conventions by hybrid governors – structuring cohabitation forms on small-scale alluvial gold mining sites in the Eastern-Region of Ghana



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1. Introduction

1.1 Gold mining in Ghana

Gold mining has a long history within West-Africa hence the practice is well embedded within the Ghanaian society and the practice of small-scale mining is well over 2,000 years old. Many studies have addressed small-scale mining in Ghana. The focal point of the present thesis is the practices and their implications of alluvial small-scale mining in two Ghanaian localities. As an addition to the existing literature, it will problematize two issues: categories and typologies defining ‘small-scale’ and the binary constructs of ‘legality’ and ‘illegality’ as produced by the law. This thesis will exemplify how merely focusing on these constructs might cause blindness for other important nuances within the small-scale mining sector, such as the role of hybrid governors. Additionally, the notion of scale-making will be discussed and this thesis will illustrate how scales are *created* matters, rather than irrevocably existing entities (cf. Tsing 2000). How these notions relate to the small-scale mining sector will be elucidated in the following paragraph, but first it is important to address the historical embeddedness and ubiquity of gold mining in Ghana.

During the seventh and eighth century, Hilson (2002d) states – citing Dumett (1998) there were three main mining categories; alluvial, shallow pit and deep shaft. Alluvial was the most ubiquitous method and had been carried out by people of the Akan and Ashanti – two of Ghana’s ethnic-groups – for centuries. Alluvial gold is characterized by the fact that water has transported the mineral away from the gold-source and deposited it near a waterbody. Most miners extracting the gold were farmers who had taken on the job as a seasonal occupation during the dry season. However, the large demand coming from the Arabic traders called for a full-time work force and improved specialization. Moreover, during the fifteenth century Europeans also started showing interest in the golden grounds of Ghana – especially since the gold reserves on the European continent were running out. After the Portuguese had been in control of the gold trade for 150 years, their empire collapsed and in 1642 the Dutch took over. The following years were characterized by a constant struggle between the Dutch and English for power over the gold monopoly which they had labeled ‘the Gold Coast’ (ibid: 18). Ghana experienced its first gold rush in 1895, during which the country’s gold production increased with 400% (ibid: 21). A second gold rush followed between 1928 and 1929 after which the gold output remained rather stable over the following years, up until Ghana’s independence in 1957. Gold remains Ghana’s most important economic product (Hilson 2002d: 25) and since 1989 even the small-scale sector got

legalized. Before this formalization, the sector had been treated as informal, unmonitored and uncontrolled – all the while providing employment to thousands of people (Hilson 2001: 4). Additionally, the sector had been considered predominantly artisanal with little mechanization and which consequently only produced small quantities of gold (Teschner 2012: 313). Yet after the legislation aimed to formalize the sector had put into place, the sector continued to develop and expand. This resulted into many licensed small-scale concessions throughout Ghana of which one in Ekorso.

1.2 Introducing Ekorso

During my fieldwork period I resided in Ekorso – a community with approximately 1500 inhabitants. Ekorso was located in the Atiwa district in the Eastern Region of Ghana (see map 1.1-3). It could be reached by the tar road passing through the community. Ekorso predominantly was a farming community, in which most of its inhabitants could foresee in their livelihoods by cultivating cash crops such as cacao. Additionally, the community also had a history with small-scale mining. For years non-licensed small-scale miners, coming from different parts of Ghana, came to the community to mine the precious mineral. They usually lived in houses of families that lived in Ekorso which consisted of several connected rooms with separate entrances, enabling them to rent one of those rooms.



Map 1.1 Ghana's Eastern Region (Google maps)



Map 1.2 Ekorso's location within the Eastern Region (Google maps)



Map 1.3 Satellite image of Ekorso and the neighboring mining area (Google earth)

Most people living in Ekorso belonged to the Akan, an ethnic group that inhabited most of Southern Ghana (van der Geest 1998: 452). The Akan were the largest ethnic group within Ghana (Abel et al. 2005: 113). The name Akan is an umbrella term which covers different sub-groups, such as the Asante, Akuapem and Akyem. Yet, all Akan are believed to have traced a common origin and thus to descend from the same region and ancestors. The

majority of the people in Ekorso belonged to Akan-Akyem and spoke the corresponding language of 'Twi'. The Akan had their own belief system in which nature and ancestors are highly respected (van de Geest 1998; Abel et al. 2005). Moreover, they had a matrilineal kinship system and were dominantly virilocal – the latter was illustrated by my host family where, after establishing their relationship, my 'host mother' moved into the house of my 'host father'. The Akan tradition also left a very visual trace within Ekorso, with the Adinkra symbols¹ engraved into chairs, painted on houses and woven into cloth. However, one of Ekorso's elders elaborated on why the community – considered 'Akan-land' – nowadays was a place which harbors many ethnic-groups. He stated that the land which made up Ekorso used to belong to Akan's. However, the forefathers of the current population of Ekorso sold certain land plots, which was why Ekorso turned into a mixture of land belonging to Akan-Akyem's, Krobo's; an ethnic group originating from the coastal area and Ga's from Greater-Accra, Volta and Eastern Region. A remark on the difficulty of discussing these ethnic-groups without their in-depth historical context is in place. Describing them as done above – alike some informants and ethnographic writings addressing these ethnic-groups – seems to imply that these groups are or have been spatially bounded. As elaborated by informants, the numerous ethnic-groups descended from the same spatial place, however this should not create the suggestion that they have lived in confined, isomorph places and unitary groups ever since (cf. Gupta and Ferguson 1992). In that light, the community of Ekorso should be regarded as both "a demarcated physical space *and* clusters of interaction" (ibid:8). Systems of land clearly illustrated the result of these constant interactions between the various ethnic-groups. Before the land was sold, most plots used to be family land, entailing that ownership was acquired through kinship. Land would thus be inherited by the oldest of the family – a custom in which gender was of no influence. However, the elder elaborated that a significant amount of land had found its way to individual owners who do not always partake in the custom of inheritance. Nevertheless, the importance of the Akan influence in the procedures of land rights and other customs should not be underestimated for they are the first-comers of that area. Lentz (2005: 157) addresses the significant influence of first-comers compared to late-comers and stats the following:

Claiming membership of the group of first-comers to an area is the most widespread strategy to legitimate land rights in West-Africa (...), since first-comers are believed to have

¹ Adinkra symbols were symbols that expressed a general truth, such as the 'Gye Nyame' symbol – commonly used throughout Ghana, which stands for the supremacy of God.

established special relationships with the spirits of the land. These pioneers and their descendants often allocate land to later immigrants, grant the right to build houses and bury their dead, and mediate in conflicts over territorial boundaries and land use.

Consequently, despite Ekorso being different clusters of interactions with influences of different ethnic-groups, since the Akan were the first-comers their customs were prevailing. Hence the position of the chief remained of great importance in, *inter alia*, land related issues. Ekorso's chief – or Abusua Panin in Twi – was the head of the community. His traditional position was thoroughly embedded within Ghanaian society and protected by law. In Ekorso, the chief was supported by a group of male elders and the queenmother; a senior woman who had to keep an eye out for the social relations within the community. Chiefs in Ghana were seen as the spokesperson of the community, who articulated the community's needs and priorities (Ubbink 2007: 127). Since most of Ghana's land was so-called stool land – entailing that land was vested in a customary community – the chief decided on issues regarding land tenure. Additionally, according to Ubbink (2007), one of the chief's tasks was to decide on matters concerning natural resource management, therefore he had to ensure that the land and nature belonging to the community was being preserved (ibid: 128). This evidently had large consequences for miners wanting to extract gold from Ekorso's ground while without the permission of the chief, mining would be impossible. However, the way the chiefs and elders viewed gold and gold mining also showed large Akan influences. While most people in Ekorso were Christians and belonged to one of the six churches in the community, some – amongst whom the chief and elders – adhered to a mixed belief in which they combined Christian values and a more nature-based belief stemming from the Akan tradition. In this nature-based belief gold is regarded to have spirit-like nature, meaning it can come and disappear to its liking. Consequently, the chief and elders stated that they found it undesirable for women to enter the mine-site, especially women in their (early) adolescence. Their presence would chase away the gold and if women during their menstruation would come to the mine-site, the land would be spoiled. The chief mentioned that even men who do not wash themselves properly during their wives' menstruation are a danger to the gold in the ground. To restore the quality of the land after it had been spoiled, every 40 days the landowner should sacrifice a sheep. The sheep should be partly consumed and partly distributed on the land. Additionally, libation should be performed with one bottle of schnapps resulting in a purified land. However, the two concession owners I often spoke with stated that they were Christians and therefore did not adhere to such beliefs. Another Akan-

related belief which affected the mining activities was the so-called ‘taboo-day’. Every Tuesday was taboo-day in Ekorso and surrounding communities, meaning that no mining activities could take place. According to an informant, taboo day originated from the day on which the forefathers of the community fought for the land and this day and the prohibition to mine had to be respected.

1.3 The study: contesting constructs

Since the legalization of the sector in 1989, scholars have been able to turn to the law for a definition of ‘small-scale’. However, the law is not too extensive on what small-scale entails. It merely states that small-scale concessions have a maximum of 25 acres (Ferring et al. 2016: 172). A concession larger than that is considered large-scale. Scholars have built upon this categorization and produced typologies based on ethnographic fieldwork. One of these typologies of small-scale mining in Ghana is provided by Hilson (2002c):

Small-scale mining refers to operations of individual Ghanaians or organized groups of Ghanaians (4–8 individuals), or cooperative of 10 or more individuals, which are entirely financed by Ghanaian resources at certain limit, and carried out on full time basis using simple equipment and tools.

Alike Hilson (2002c), other scholars have also illustrated that small-scale is mostly characterized by artisanal practices (Buxton 2013; Hentschel et al. 2002). While typologies as such are helpful when analyzing the small-scale mining sector, Ferring et al. (2016) have problematized these typologies, since the small-scale sector is much more heterogenic than most typologies seem to imply. Along these lines, this thesis illustrates this heterogeneity based on ethnographic data collected on two different small-scale mine-sites and their corresponding mining companies: Ekorso (Key Empire) and Asamama (ATK-mining, hereafter ATK) – located within a radius of five kilometers and alongside the river Birim. Both operations mine alluvial gold. Small-scale alluvial gold mining can be categorized into two different categories: shallow- and deep alluvial mining (Aryee et al. 2003: 134). As the typology suggests, shallow alluvial mining implies extracting gold from shallow gold-deposits – often not exceeding a depth of three meters, while deep alluvial mining requires constructing pits with a depth of seven to twelve meters (ibid). Both Key Empire and ATK fell within the category of alluvial deep mining. The miners themselves, however, referred to their practice as surface mining. Exemplifying the sector’s heterogeneity by juxtaposing these

two small-scale sites problematizes the notion of scales and illustrates how ‘small-scale’ is not something which irrevocably exists within the world. Rather, this categorization and the typologies are *created*, respectively by law and by scholars. Since the sector is in a state of continuous change, this thesis will argue that scholars should be cautious after having defined ‘small-scale’ for it should not create a certain scope in which one is blinded for other nuances within the sector.

Furthermore, opening up the conceptualizations regarding small-scale and acknowledging the heterogeneity (cf. Ferring et al. 2016) enables anthropologists to observe interesting articulations between different small-scale miners. Since the articulations addressed in this theses occurred within the same concession, they are rather forms of cohabitation. Both the various small-scale mining manifestations and different forms of cohabitation can (continue to) exist due to the implicitness of the law. The silences within the small-scale mining legislation allows for (non-state) actors to (re)install their own conventions regarding mining methods and the social structures of their concession and operation. Therefore, this thesis will concern itself with exemplifying how licit conventions by hybrid governors structure cohabitation forms. Besides addressing cohabitation forms between small-scale mining actors, this thesis will also address another form of cohabitation shaped by licit conventions: cohabitation between small-scale miners and landowners.

A second problematization this research will address concerns the binary categorization of ‘legal’ and ‘illegal’. Likewise opening up the construct of ‘small-scale’, broadening our perspective on (il)legality also exposes nuances which otherwise will be missed when only focusing on the binary categorization as produced by the law. As mentioned previously, the variety in mining practices and the cohabitation forms can (continue to) exist due to the silences of the law and the conventions by hybrid governors. However, these conventions cannot be placed within the legislative framework and be classified as either legal or illegal. Therefore, this thesis argues that the notion of ‘licitness’ is a better fit: practices not definable as either legal or illegal – yet condoned by the actors involved. Thus this thesis will elaborate on the law’s effect for both its explicitness and its implicitness and what the subsequent licit conventions look like on two small-scale mine sites. Moreover, it will illustrate how the licit conventions of hybrid governors structure cohabitation forms through the notion of temporality: the sequence of mining activities when extracting the gold.

The following paragraph will discuss the fieldwork and reflect on methodological choices made before and during the research. The second chapter provides a theoretical

framework by which the ethnographic data will be analyzed addressing the notions of (il)legality, hybrid governance, licitness and forms of cohabitation. The third chapter will elucidate the legal perspective on small-scale mining and exemplify its room for licit conventions. Following, the fourth chapter provides a mine-site comparison through which the notions of hybrid governance, licitness and cohabitation between different small-scale miners is demonstrated. The fifth chapter addresses a different form of cohabitation; cohabitation between miners and landowners. This cohabitation form again illustrates how the licit practices on the studied small-scale mine-sites can only be understood in the light of temporality. Finally, chapter six elaborates on the main conclusions based on the research's findings.

1.4 Fieldwork in Ekorso: a word on methodology

Before discussing methodology, a word on the process leading up to the fieldwork is in place for it helped shaping the research. This thesis bases itself on fieldwork conducted in January until April 2016 in two localities in the Eastern Region of Ghana: Ekorso and Asamama. Initial research ideas resulted into a research proposal with a focal point on the role of gender in the small-scale mining sector. This research would be conducted in co-operation with a Dutch NGO; which implemented their programs on small-scale mine-sites and worked towards fair-trade certification. Their upcoming program would include a gender component, hence the suggested collaboration. However, after several conversations with the NGO while in the Netherlands, there were still some uncertainties regarding our cooperation. Therefore, beginning of January while in Ghana I contacted them again which lead to a meeting at their main office in Accra. They explained how they had been working in Ekorso on both the mine-site – licensed by the small-scale mining company Key Empire – and for the people living and working in the community. During the meeting they agreed upon the collaboration, which would entail them providing me with information about the program implementation and the results of their base-line study they had conducted beforehand. Moreover, they would accompany me to Ekorso and help me with a proper introduction to the chief. A few days after the meeting we – one of the project managers of the NGO, a driver and me – left Accra and drove towards Ekorso, all in a four-wheel pickup truck. A reflection on this experience will follow – for it was an important and defining moment in my research. In Ekorso, the project manager introduced me to their contact person within the community: mister Asiedu. After hearing about my intentions of living in the community, he immediately suggested that

I would live with him, his wife and two daughters. Some acknowledgement has to be given to the role of mister Asidu. During my first few weeks of fieldwork, his hands-on approach towards supporting me in my research almost turned him into a research assistant. Starting with introducing me to Ekorso's chiefs and the small-scale concession owner in Ekorso. Not to say I would not have met these individuals without mister Asidu's help, but it definitely simplified things. After having been properly introduced to Key Empire it needed not much time to realize that the mine-site was rather gendered: it completely lacked the presence of women. Mister Asidu told me that there was another mine-site nearby where I would be ensured of meeting women that mined to provide a livelihood for themselves and their families. Thus, the next day we took a five-minute taxi drive to Asamama and walked to the concession of ATK-mining. Indeed, there were many women mining for gold. However, after some weeks I came to the conclusion that the collaboration between myself and the NGO was not as effective as I had hoped. Our communication had been poor and I never received the promised documents. Moreover, the gender component was harder to grasp than I initially prepared myself for. It was definitely present but more implicit than I expected and consequently, I started to drift away from my research proposal. This happened because before I could get to the implicit gender component, there were so many aspects of the sector I needed – and wanted – to understand first. Why do these small-scale mining sites look completely different? What are all these different people on the mine-site doing exactly? What mining methods are they using, and why? Partially, I was able to ask myself these questions due to the lack of my technical expertise about small-scale mining. On the other hand, this also called for cautiousness while there were only a few people with the proper technological knowledge: the concession owners. This implied some critical thinking, careful reflection and talking to other individuals to shine a light on matters from a different perspective – so I would not find myself simply taking on the terminology of the concession owners. These initial questions quickly resulted into questioning where to place the different activities of both mine-sites within the legal framework – and how to interpret their activities if they did not fit within that framework. Consequently, I decided to focus on these aspects of both concessions. However, since I resided in Ekorso, this was where I gathered most of my data – both within the spatial demarcated community and on its neighboring mine-site. Therefore, ATK's concession in Asamama mainly served as a site with which I could validate the data I gathered in Ekorso, which resulted in a very effective site comparison.

The heart of cultural anthropology is fieldwork based on participant observation “which hinges on the dynamic and contradictory synthesis of subjective insider and objective

outsider” (Robben and Sluka 2007: 1). Therefore, I knew that in order to conduct decent fieldwork as an ‘objective outsider’, I also needed to become an ‘insider’ This process certainly had its challenges. As mentioned previously, upon arriving in a four-wheel drive, it was hard to shake the NGO-persona of coming to work for the purpose of “the development” of the community. As Ferguson (1999) illustrated; anthropologists may find themselves in a situation where certain metanarratives – in Ferguson’s case the metanarrative of “modernity” – can become local tongue. I encountered the same in Ekorso where, after the community had hosted several NGO’s that had built school buildings and constructed water pumps – the NGO terminology and the expectations regarding their presence had become intermingled with the informants’ personal narratives. There have been several occasions that exemplified the latter and how some people in Ekorso subsequently interpreted my persona. Firstly, after a few days of being in Ekorso, the chief and elders wanted to show me where ‘my NGO’ was going to build the health clinic. Secondly during an interview with the same chief and elders they elaborated on the danger of mining in the area of Ekorso. When I asked them about possible solutions they stated that money and jobs could solve the problem, both had to be provided by either the government or NGO’s. Thirdly, when having organized a meeting with several landowners in which we discussed compensation, they all had similar narratives: they had been cheated by the mining company and wanted additional compensation money. Afterwards, the concession owner – one of my key informants – had overheard people talking about this particular meeting in which I, in name of the NGO, supposedly would determine if they landowners in the position of receiving additional compensation. It became clear that I had to re-define myself. It took some weeks in which I constantly emphasized my role as a mere student who was sent by her university to do research. Moreover, I have to acknowledge that it was extremely helpful to have a key-informant with a certain status and embeddedness within the community who often took the time to explain my position to other people. Additionally, by showing behavior which was non-conformant to the behavior of other people of “my NGO” – riding a bike, staying at a local house, eating their food and using the same toilets – quickly showed people how my role and purpose differed than what they intentionally had expected. This involvement, *sine qua non* for participant observation (Robben and Sluka 2007) – which in practice meant things such as sitting through hour-long church services in a language I could not understand every Sunday morning – significantly increased my embeddedness within the community and made it easier for people to open up to me. This trust and familiarity, which established itself during my fieldwork, enabled me to study Ekorso as a demarcated place *and* a cluster of interactions between people cohabiting

the same place (Ekorso) while at times in different spaces (cf. Gupta and Ferguson 1992: 8). There were informants living and working in the space of a small-scale licensee and company owner – connected to other small-scale concession owners through a national assembly; those within the space of small-scale miners – connected due to their mobility and ability to follow the gold; and people in the space of landowners – connected to a larger market through selling their cash-crops. These spaces created interesting articulations when coming together within the same field of small-scale mining. The recognition of these different imagined spaces was highly important for it helped my objective outsider's position. Acknowledgement of these spaces helped me in seeing and reflecting on the wider context in which to place some of the narratives of my informants.

Nevertheless, creating a communicative context within this complex field during and after re-defining my persona, was an ongoing learning process. Yet I cannot amplify enough how much the setting in which I was hosted contributed to this. There were three main reasons why the location of mister Asidu's house largely benefited my process of becoming an insider. Firstly, the house was located alongside the road leading up to the mine-site, therefore I could watch (and greet) the miners going to and coming from the site. Secondly, mister Asidu's wife was cook, who owned a small provision shop and sold her food. Every morning many people, especially miners, would pass by and buy her food. Finally, one of Ekorso's three water pumps was right next to the house, therefore, I could witness a constant coming and going of people fetching water. Consequently, just as important, people living and working in Ekorso witnessed my presence, which created plenty of room for daily casual communication. Thus, those days on which I did not go to either one of the mine-sites could easily turn into a very effective fieldwork day by just sitting in front of the shop and having small, yet valuable, conversations with people living and working in Ekorso. However, an important remark is the fact that the language barrier was a rather difficult one to overcome. While English bought me quite a far, it cannot be ignored that lacking the ability to speak the local language often left me feeling inadequate to fully comprehend my surroundings. Especially when focusing on small-scale mining and farming; sectors that do not necessarily require a degree. Consequently, many informants did not speak English and casual conversations could therefore not move beyond the regular formal greetings – which was an absolute shame when walking around on one of the mine-sites. An obvious solution was to use a translator. Since those who were quite proficient in the English language were people with a prominent position within the community (concession owners or the assembly man – the political head), I had to be cautious in picking the right translator. Letting a concession

owner translate landowners in conversations on compensation would definitely influence the answers given by the landowners. However, since I had several willing translators, it ended up working out fine.

As mentioned previously, doing fieldwork is a constant learning process. Even after feeling I have obtained a certain embeddedness and finding informants who speak English, situations arose which showed me that language is not the only difficulty to overcome and consequently made me rethink parts of my research methods. As Malinowski (2012: 48) pointed out, it is inevitable to overstep the boundaries of the local etiquette. I encountered such a situation after having organized a meeting with landowners to discuss compensation matters. The assembly man was willing to translate, which enabled me to talk to several landowners in one day and briefly map the general stories of different experiences. However, after these semi-structured interviews and discussing them with my key-informant, he posed the interesting question whether these people were actual landowners or if they were farmers who cultivated someone else's land. It was suggested that I would go to one of my informants, of whom I knew to be a landowner, for verification. I figured that I could just run the list of names by him upon which he would tell me whether people were landowners or not. I ran into him while sitting outside with two other men living in Ekorso. We started talking and I asked him if he knew all those owning land. He said he did but as soon as I started mentioning names of the people who had attended the meeting, the mood changed. He seemed a little angry and eventually walked off. The following day I turned to my key-informant and discussed the incident. He stated that the landowner might have been uncomfortable because he knew that people had presented themselves to me as landowners while in fact they were farmers, but he did not want to throw people under the bus. I immediately understood that I had offended an etiquette. Being in Ekorso had created the impression that most people were very open and often shared their emotions and stories publicly. However, this situation made me realize that even in a cultural setting as such, there obviously were matters which could better be discussed privately. Thereupon the next day I decided to meet up with the landowner at his house. I apologized for any uncomfortable feelings I might have caused and I quickly discover that within this private setting, he felt much less reluctant to let me in on this rather sensitive information.

Thus, in alignment with Robben and Sluka who stated that "success in fieldwork is more a function of personal ability than of previous training in specific techniques" (2012: 1), I surely benefited from certain personal traits. Yet fieldwork remained an ongoing learning

process which enabled me to develop myself as a “scientific instrument” with both research- and interpersonal relations skills (ibid: 6).

2. Theoretical framework

The present chapter provides a theoretical framework by which the ethnographic data collected while doing fieldwork in the community and mine-site of Ekorso and Asamama will be analyzed. Firstly, it will elaborate on the heterogeneity of the small-scale sector and the notion of ‘scale-making’ (cf. Tsing 2000). Additionally, it will discuss hybrid governance in a small-scale mining context and subsequently on the production of ‘(il)legality’ and ‘licitness’ (cf. Abraham and van Schendel 2005; Heyman 2013). Thereafter, along these lines, the chapter will elaborate on two different cohabitation forms – between different small-scale mining actors and between small-scale miners and landowners. The chapter will argue that both forms are structured by the implicitness of the law and the subsequent licit conventions implemented by hybrid governors.

2.1 Producing (il)legality and authority

Practices of small-scale mining in Ghana appeared in enormous variety. The wide range of, *inter alia*, exploration and extraction techniques, organization and labor intensity made Ferring et al. (2016) label the sector as ‘heterogenic’. Regulating such a heterogenic field might harbor some difficulties, however, the Ghanaian government has tried doing so ever since formalizing the sector in 1989. The accompanying legislation produced the dividing line between what was considered legal and illegal – respectively practices either conform or non-conform to the letter of the law. Through clauses incorporated in the law, the state established its subterranean sovereignty, entailing that miners had to be granted permission to access and extract gold from the subsoil. This permission was symbolized in a license, which therefore materialized the divide between legal and illegal mining. This license permitted miners to mine on a demarcated concession, ‘galamsey’ – the term used by many Ghanaians to refer to illegal miners – thus either mined on unlicensed land or on licensed land but without permission of the licensee.

While the state positioned itself as paramount authority – wanting to exercise sovereignty over the minerals in the subsoil – the Ghanaian state did recognize other authorities. The institution of chiefs – together with their traditional councils as established by customary law and usage, was guaranteed in the Ghanaian constitution (Ubbink 2007: 129). However, the Minerals and Mining Act (2006), which regulated the small-scale mining sector, did not acknowledge any other non-state authorities within the small-scale mining sector. Despite this lack of lawful acknowledgement, the position of chiefs was deeply rooted

in the customs of Ghanaian communities. This often resulted into a situation in which ‘chiefs, as well as other state and non-state actors, engage in a constant struggle to establish and consolidate their authority, and to legitimize their governance actions’ (Geenen 2016: 6). Chiefs are, therefore, one of the hybrid governors influencing small-scale mining and whose influence on the sector has been studied by scholars. Other hybrid governors, such as transnational companies (TNC’s), have also been studied. Since TNC’s were only allowed to license large-scale concessions this research has focused on hybrid governance within a large-scale mining context, entailing large-scale concessions – often licensed by TNC’s – operating in a Ghanaian locality (Geenen 2016; Hentschel et al. 2002; Hilson 2001; Luning and Pijpers forthcoming 2017). These studies have shown how, despite the state nominating itself as sovereign authority, other non-state authorizers also implement and uphold certain conventions and regulations. However, hybrid governance in a small-scale mining context has not yet received the same amount of attention.

Scrutinizing the legislation on small-scale mining shows the many implicit clauses it incorporated. In trying to formalize the sector, the law contained several clauses on various aspects of mining, such as: applying for a license, environmental considerations (*inter alia* mercury use) and selling the mined minerals. However, some clauses were quite implicit and did not entail any guidelines regarding the execution of the clauses. It is therefore these hiatus’ of the law that allow for hybrid governors to (continue to) install their own conventions. Since hybrid governors within a small-scale setting have not yet been the focal point of many studies, a question which dawned and with which this thesis will concern itself is which actors have the intellectual, financial and authorial superiority within a small-scale mining context and can therefore impose their conventions onto others? The fact that sovereignty is not merely established at the level of the state has been acknowledged by Emel et al. (2011: 73), who state the following:

Sovereignty is negotiated at the level of the global-nation scale, it is territorialized at the local scale. Thus, we must also keep attuned to the ways in which local populations living in the space of extraction are constantly interrupting state-capital projects .

Thus, since sovereignty is territorialized at the local scale and because of the law’s implicitness, the conventions that fill those hiatus’ cannot be placed within the legislative framework and be classified as either legal or illegal. In their article on international crime, Abraham and van Schendel (2005) invite us to think about these binary categorizations. They

propose to discuss issues of legality without taking the state as a definite starting point. Moreover, they differentiate between what is produced by the state ('legal') and what people involved condone and consider to be legitimate ('licit'). While studying illicitness, they add, one should not equate the state with law and order since illicit practices are an active part of any state. The idea that the state should not unquestionably be equated to law and order is endorsed by the presence of hybrid governances (Geenen 2016; Luning and Pijpers forthcoming 2017; Ubbik 2007). Moreover, Abraham and van Schendel (2005) point out that both law and crime develop through ongoing struggles over legitimacy, in which the dominant and ruling groups decide upon what is (il)legal. These struggles, however, have never resulted in a self-evident boundary between what is legal and what is not. Therefore, both licit and illicit practices coexisting in social life and being imbricated in state processes (ibid: 7). This resonates with Heyman's (2013) call for viewing (il)legality not as states of being, but rather as processes or social-political projects, which are reproduced and changed over time. However, when researching the small-scale mining sector, it is inevitable to make certain generalizations. Therefore, some scholars have decided to limit themselves to the categories 'legal' and 'illegal' when analyzing the mining practices they encountered during their research (Hilson 2001; Hilson 2002b; Ferring et al. 2016; Luning and Pijpers forthcoming 2017; Teschner 2012; Yakovleva 2006). However, "when we shift our nomenclature to the distinction between 'licit' and 'illicit', we refer less to the letter of the law than to social perception of activities defined as criminal" (Abraham and van Schendel 2005: 18). Thus, when doing so certain highly interesting nuances can be observed and analyzed which, when staying within the categories produced by the law, would be missed and left out. The following section will elaborate on the social structures which are being shaped by the licit conventions by hybrid governors.

2.2 Sharing grounds: forms of cohabitation

Gold mining is a practice that concerns utilizing plots of land. In Ghana a significant amount of land was so-called 'stool-land'; meaning that land is vested in a stool or a customary community. Traditional authorities, who were considered to be custodians of stool-land, had the tendency to act as landlords (Ubbink 2007: 123). Consequently, it was highly unlikely that land plots were free of ownership claim – making forms of articulations and issues surrounding land tenure ubiquitous in the world of mining. Many studies have addressed various forms of articulations, such as articulations between miners and traditional authorities (Luning and Pijpers forthcoming 2017), articulations between large-scale miners and

community groups (Hilson 2002a; Li 2013) and articulations between large-scale mining companies and small-scale operators (Hilson 2002b; Luning and Pijpers forthcoming 2017; Teschner 2013). These articulations might result in land use competition and conflicts – of which innumerable have occurred in Ghana in recent years – (Hilson 2002b: 149) but they can also lead to a harmonious relationships and forms of ‘managed cohabitation’ agreements with a ‘cooperative partnership’ (Andrew 2003: 122).

When looking deeper into the literature addressing articulations and cohabitation forms between large- and small-scale operations, we find most scholars identifying the small-scale miners who encroach onto the licensed concession as *galamsey*. In Ghana this was a relevant and pervasive issue while, despite the possibility of getting licensed, 85 percent of small-scale gold miners operated without a license (Hilson and Potter 2003: 243). The reason for this significant number of non-licensed miners has mainly been attributed to the cumbersome and long registration process, filled with unreasonable and excessive paperwork (Teschner 2012: 309). Thus, many miners did not even consider getting registered due to these expensive, time consuming and bureaucratic procedures (Hilson and Potter 2003: 255). However, small-scale cannot be equated to *galamsey* since – despite being outnumbered by non-licensed miners – Ghana had numerous licensed small-scale operations. It is therefore remarkable that scholars thus far have not concerned themselves with articulations and cohabitation forms within the licensed small-scale sector. This might partially be due to the fact that the interpretation of ‘small-scale’ has been hard to grasp. The law namely only stipulates the concession size which makes it ‘small-scale’, but it does not incline a ‘delineation of “artisanal” or “small-scale” operations’ (Ferring et al. 2016: 172). Scholars provide typologies based on their ethnographic findings. These typologies entail possible characteristics of ‘small-scale’, such as the amount of extracted ore, the methods used for prospecting, extracting and washing, and the mining population – those who mine and those trying to benefit from mining spin-offs. The latter often leads to small-scale becoming ‘subsumed within an essentializing category of poverty-driven, labor-intensive activities undertaken by uneducated, itinerant populations in rural of developing nations’ (Ferring et al. 2016: 171). All the while, terminologies based on mining methods often resulted in scholars nominating the sector ‘artisanal and small-scale’ – referring to mining practices characterized by the use of rudimentary equipment tools. However, some scholars have acknowledged that while employing the term ‘artisanal and small-scale mining’ themselves, that it was merely a subset of the variety existing within the small-scale mining sector (Seccatore et al. 2014: 663). Thus, while these different typologies are valuable and necessary for anthropological

research, some caution has to be taken while, according to Ferring et al (2016: 171) ‘current characterizations of small-scale mining [are] overly generalized’ and assumptions regarding miners and mining activities often ‘reflect an uncritical deployment of small-scale mining discourses that may or may not reflect what is happening in diverse mining contexts’ (ibid). This incongruence between certain characterizations and what is happening in diverse contexts partly arises from Tsing’s (2000) notion of scale-making. In her study on different scales in a globalizing world, she states that we should bring scales up for discussion and acknowledge that scales are *created* and do not unquestionably and irrevocably exist. When referring to globalism, Tsing states that its ‘automatic association of particular scales with particular eras makes it very difficult to notice the details and idiosyncrasies of scale making – thus, the more reason to foreground this issue’ (ibid: 348). The same can be said about scales in mining. While the law provides two concrete scales: large- and small-scale, the reality is that the creation of these scales in different contexts is an ongoing process influenced by different actors on different levels; (political and traditional) authorities, (non-) licensed miners, the community etc. Consequently, and inevitably, neither categorizations nor typologies will ever fully cover the entire small-scale mining context. They, however, remain to be helpful tools for anthropological research but they should not lead to blinding us in seeing what ‘small-scale’ can be besides these categories produced by the law and the ethnographically based typologies.

Thus, answering to the call of Ferring et al. (2016) for opening up the conceptualizations of small-scale mining combined with the notion of scale-making in the back of our minds, enables us to observe and analyze the diversity of manifestations, each having different organizational structures and employing different mining methods. These varieties could (continue to) exist due to the implicitness of the law and the subsequent role of hybrid governors and their licit conventions. These licit conventions, therefore, established and shaped the social interactions and cohabitation forms. How these small-scale cohabitation forms are shaped and managed, however, has never been studied. Nevertheless, articulations could not only be found between different miners. Most concessions usually consisted of several farming plots with different landowners cultivating their own square meters, which resulted in an intertwined relationship between agriculture and alluvial small-scale mining. These articulations resulted in an interesting dynamic of ownership claims. The law structures this relationship by obliging the licensee to pay compensation. However, the legislation on the matter left room for personal interpretations and the installment of conventions or reinforcement of traditional customs by hybrid governors. The law, namely, is

implicit about the exact proceedings. It does not address any specifics, such as the amount of money, how to assess what amount is reasonable or the timeframe in which the compensation ought to be paid. Thus, negotiating the details was left up to the mining company and the landowners. These proceedings illustrate the effects of the law through both its explicitness and its silences whereby the silences gave room to other actors – such as chiefs, elders and license holders – to capitalize on the situation and to become authorizers that reinforce local, or produce and uphold self-established conventions. Li (2003) has addressed the issue of compensation and how it was structured by ‘a logics of equivalence’: people deciding on what matters can be compensated based on quantifications and standardizations. She states that ‘a logic of equivalence enables companies to make the costs of mining activity appear commensurate with the benefits derived from compensation agreements’ (ibid: 30). These logics of equivalence that result in compensation-schemes can, however, never fully satisfy the different parties involved, since some matters are not considered quantifiable or because people used different criteria and calculations in determining the equivalence. They therefore might cause indifferences and conflicts. Li continues by saying that the disputes caused by compensation agreements can be resolved with technical and legal frameworks (2013: 26). Therefore, looking at the Ghanaian context in which the legal framework is implicit, dispute resolutions heavily relied on the technical framework. Thus, the one with the advanced technical knowledge had a privileged position and was able to act as an authorizer in the matter. This exemplifies Li’s acknowledgement in which she states that ‘compensation agreements can sidestep legal frameworks and exploit existing power asymmetries’ (ibid: 31). Since the license holders were usually more knowledgeable in matters regarding mining, they could seize upon the knowledge gap that existed between them and the landowners or local chiefs and implement their own conventions. This illustrates how authorizers within the sector of small-scale mining did not necessarily have to be actors that had obtained their authority due to their relation to the state or to chieftaincy, but actors that due to their involvement, connections and knowledge about the practice of mining are able to position themselves as local authorizers. However, analyzing how these small-scale mining authorizers operate and what their implemented conventions looked like in a small-scale mining context has not yet been studied before. Moreover, since conventions are highly influenced by individual knowledge and motives, different small-scale mining operations will implement different conventions. Therefore, juxtaposing two different small-scale mine-sites allows for a more in-depth analysis of local conventions by different hybrid governors.

3. Legal perspectives on small-scale mining

The present chapter will elucidate the legal framework addressing small-scale mining. It will first give a brief historical outline regarding the implementation of the legislation serving to formalize the small-scale mining sector and the legal definition of ‘small-scale’.

Subsequently, the chapter will elaborate on the rules and regulations presented by the legal documents and it will emphasize the implicitness of the law for these silences of the legal framework have great implications.

3.1 Brief historical outline

During the 1980s, the Ghanaian government wanted to improve the investment climate for the mining sector and did so by implementing the Minerals and Mining Law 1986 (PNDCL 153). The passing of this law eventually also led to the decision of legalizing small-scale mining in 1989 (Hilson and Potter 2005: 107). The Minerals and Mining Law has been amended several times, but the most recent revision resulted into the Minerals and Mining Act, 2006. The decision to legalize small-scale mining was made after the realization that the Ghanaian state was losing potential income due to smuggling routes that small-scale miners were using to sell their produces (Hilson 2001: 4). The governments’ motive for eliminating the smuggling channels was to create a significant economical increase. Moreover, since the underprivileged part of society befitted mostly from informal industries such as gold mining, the decision to formalize the sector was also driven by the search for means to alleviate poverty. Thus, by legalizing small-scale mining, the policy makers had anticipated on creating economic opportunities for Ghanaians with a low income that would only be able to make small investments and had little starting capital. The small-scale mining sector would therefore be highly poverty-driven and characterized by its low level of technology (Ferring et al. 2016: 173). However, a lot has changed within the small-scale mining sector since the latest amendment in 2006. Many changes arose due to the fact that the sector had not only hailed people who were pushed into the sector driven by poverty but it also attracted individuals with a reasonable starting capital who could invest in machinery such as tipper trucks and excavators. These methods and technologies allowed for mining larger areas in a much more productive and profitable way than artisanal miners. When the law was implemented, the occurrence of such changes within the sector were not taken into consideration. However, these changes turned the small-scale sector in an even more heterogenic field (cf. Ferring et al. 2016) resulting in research and policy-makers failing to

address all the shifts which occur in different localities and in different small-scale mining context (ibid: 182). A subsequent, and important question to answer is what definition of ‘small-scale’ is provided by the law and how it shapes the field. In search for an answer, we have to scrutinize the Minerals and Mining Act (2006).

3.2 State rules and regulations

One of the prime characteristics of small-scale mining was the concession size. The law stated that small-scale mining formally meant that the concession was no larger than 25 acres (Ferring et al. 2016: 172). Concessions larger than 25 acres were considered to be large-scale. Other characteristics of small-scale mining concerned the conditions that had to be met in order to become a license holder. One had to be Ghanaian, at least eighteen years of age and officially registered by the Minerals Commission (2006: section 83). If these individual requirements were met, one could start the procedures of obtaining a license. Possessing a license was the final characteristic of legal small-scale mining as defined by the minerals law:

Despite a law to the contrary, a person shall not engage in or undertake a small scale mining operation for a mineral unless there is in existence in respect of the mining operation a licence granted by the Minister for Mines or by an officer authorized by the Minister (2006: section 82 (1)).

Thus, to a certain extent the law illustrated *what* small-scale mining is (mining on an area below 25 acres), it clarifies *who* are allowed to mine, but it does not make any statements about *how* small-scale mining activities should be realized. The only comment concerning preferred methods could be found in section 93, which merely stated that the wining, mining and producing of minerals should be done ‘by an effective and efficient method and shall observe good mining practices, health and safety rules and pay due regard to the protection of the environment during mining operations’. Thus, the legal framework surrounding small-scale mining in Ghana did not provide clear guidelines about regulations or practices and was rather implicit about many aspects regarding the sector. This situation allowed for an incredible range of mining manifestations which could (continue to) exist. Despite the inability of any categorization or typology to fully define the small-scale sector, the legal framework does shape the field and the articulations between the actors involved. The law is able to do so since it produces authority and legality. While mining for minerals concerns exploiting the subsoil, it is important to first identify who claims ownership of the subsoil –

and thereby the minerals – and thus, who has the final authority over the ground below surface. The Ghanaian law states the following:

Every mineral in its natural state in, under or upon land in Ghana, rivers, streams, water-courses throughout the country, the exclusive economic zone and an area covered by the territorial sea or continental shelf is the property of the Republic and is vested in the President in trust for the people of Ghana (2006: section 1).

This section clearly produces legal authority for the state – with the president as its formal head – regarding the subsoil of Ghana. Even though the Ghanaian minerals belong to the people of Ghana, the president exercises full ownership rights. However, the authorization hierarchy continues when the sovereign state and the president delegate the authorization over the subsoil rights:

(...) the Minister on behalf of the President and on the recommendation of the Commission may negotiate, grant, revoke, suspend or renew mineral rights in accordance with this Act (2006: section 5(1)).

It is the minister responsible for mines (2006: section 111) who received the authorization to grant licenses – allowing people to mine a designated area in Ghana. As mentioned previously, obtaining a license is one of the requirements when wanting to get involved in legal small-scale mining. Not possessing a license implies not having formal permission to mine and the mining activities would therefore be considered illegal. This ‘subterranean sovereignty’, or national sovereignty over mineral wealth (Luning and Pijpers forthcoming 2017), in which all the minerals and other resources in the subsoil belong to the state is referred to as a public system. Not all countries and their legal frameworks allow for a public system, some legislation rather allows for a private system. When a nation operates under a private system, the landowner owns both the land up and under the topsoil. Therefore, individuals or companies interested in the resources underneath the ground have to negotiate with the landowner to come to an agreement (Emel et al. 2011). Ghana endorsed a public system, in which the state authorized individuals, granting them temporal rights to the subsoil. This system raises questions about the implications it has for the people living and working on the surface of the subsoil. The land suited for gold mining largely depends on access to water since there cannot be any gold mining without enough water to wash the

gravel and thereby extract the gold particles. Considering that settlements and subsequently agriculture also developed and centers itself near water bodies, it seems evident that one often encounters a direct link between agricultural- and (small-scale) mining. Therefore, before a concession is utilized for gold extraction, it usually functioned as farmland with different land plots owned by various landowners. As mentioned previously, landowners utilizing the surface often obtained their land rights through inheritance. They cultivate the land themselves, or have farmers working the land for them – producing crops for private consumption or to generate an income. The public system, therefore, creates an interesting dynamic between landowners – who cultivate and have ownership over the surface or topsoil of the land, and the licensee – holding the subsoil rights. Thus, the licensee and landowners cohabit the same plot of land, but their ownership claims refer to different strata. The law states the following about this situation of conflicting interests:

Where land is required to secure the development or utilization of a mineral resource, the President may acquire the land or authorize its occupation and use under an applicable enactment for the time being in force (2006: section 2).

Through this section, the law establishes the authority for the state to occupy a plot of land, including the topsoil, if the land is considered necessary for mining practices – despite any type of topsoil landownership already in place. The law, however, does not specify *when* land is required to secure the development or utilization of a mineral resource. It does not mention the requirements and who decides upon this necessity. Apparently land can transition from farmland into land that is required for the mining of minerals. A possible interpretation of this transition is that it takes place somewhere during the licensing process, since licensing a potential mining area can happen through two different pathways. The first path starts with an aspiring licensee identifying an area of interest. That individual contacts the Minerals Commission to further identify whether this area can become a licensed concession. What follows are formalities; produced by the state and incorporated in the law that are required when embarking on the legalization or licensing process. The second pathway differs from the first one since it is not an individual submitting an area to the Minerals Commission but instead the Minerals Commission creating ‘designated areas’, that are then made “available to interested Ghanaians”². Designated areas are further specified as “area[s] designated as a small scale mineral operation area by the Minister by a notice published in the Gazette”

² <https://www.newsghana.com.gh/minerals-commission-debunks-gnassm-claims-over-issuance-of-licences/>,

(Minerals and Mining Act 2006: section 111-1(d)). Thereupon, the applicant must follow the same legal formalities implemented by the government as the individual personally submitting an area.³ It is therefore likely that as soon as land is demarcated as a (potential) concession – either by private initiative or by designation by the Minerals Commission – it becomes “required to secure the development or utilization of a mineral resource” (ibid: section 2). This interpretation of the law section implies that landowners have no choice but to give up their land when the state decides upon regarding their land as required for minerals extraction and authorizes its occupation to licensee. When the paperwork has been finalized and the license is granted to “a person, a group of persons, a co-operative society or a company” (ibid: section 85(a)), the license is valid “for a period not more than five years from the date of issue in the first instance” (ibid) However, a mining operation often anticipates on working on a specific area for a longer time, especially since small-scale mining companies are legally allowed to work on a maximum of two small-scale concessions at the same time. They therefore sometimes have two – practically bordering – licensed concessions, making the mine-life of the entire mining operation exceed those initial five years. The law allows for a license extension but does not explicitly specify the exact extension period. The law states that the initial license “may be renewed on expiry for a further period that the Minister may determine” (ibid). An important acknowledgement deriving from this is that the transfer of ownership rights from a landowner to a licensee is not a definite or permanent property transfer. The ownership rights are legitimate for as long as the license is valid. When the license runs out the land has to be reclaimed and the ownership rights return to initial landowner. However, the law does not provide a time restriction in which is determined for what period the landowners have to give up their ownership rights. This results in many landowners pondering over the same question regarding when they can reclaim their land, without ever receiving a satisfying answer. This illustrates how the silence of the law structures the social interactions, since both parties – the licensee and the landowners – start their relationship with different hopes and expectations. Where the licensee is mainly focused on creating maximum profit for a period that allows the mining company to feel it fully utilized the area, the landowners feel they benefit most from regaining the land as soon as possible so they can resume cultivating the land and generate an income. To make the up for the temporal loss of ownership rights, the law obliges licensee to pay compensation:

³ Ibid

Where a licence is granted in a designated area to a person other than the owner of the land, the licensee shall pay compensation for the use of the land and destruction of crops to the owner of the land that the Minister in consultation with the Commission and the Government agency with responsibility for valuation of public lands may prescribe (2006: section 94).

The law does not specify the height of the compensation and it does not provide any further guidelines as to how the negotiations about the height should be carried out. Further procedures are left entirely to the licensee and the landowner. The law thus merely stipulates that the licensee ought to pay compensation for ‘the use of the land’ and ‘the destruction of the crops’. Paying for land use seems sensible and straightforward since in order to extract the gold, the licensee needs to reach the subsoil and obviously cannot do so without damaging the topsoil. Paying for the land would allow for standardized compensation prices – one acre would easily translate itself into a set monetary amount. However, the law does not provide such standardized rates, leaving room for licensee to hold on to their own prices. Moreover, as chapter five will illustrate, interpretations of actual land *use* differ through the implications of temporality. ‘Destruction of the crops’ can also be understood in various ways. The law does not specify which crops correspond to what prices and whether the price depends on the state of the crop at the moment of destruction or if it has to be considered what price the crop will eventually sell for on the market. It is therefore unclear what exactly is considered to be compensational: the crops as encountered by the licensee or the suffered loss of income. As Li (2013) illustrates with two cases considering compensation paid by mining companies for the used water resources in South-America – things are always made comparable and exchangeable, but it might not always be possible to make those things quantifiable, standardized and equivalent. The notion of ‘equivalence’ in the context of mining, as explained by Li, ‘make[s] it possible to reconcile different forms of value, such that, for example, the potential consequences of mining development can be offset with monetary compensation’ (2016: 19; 20). Therefore, the vagueness of the Ghanaian mining law about what can and what cannot be held compensational, leads to negotiations between land- and license owners in which they themselves decide upon equivalences. Due to the lack of legislative guidance these negotiations result into somewhat improvised compensation strategies. Whether these compensation strategies have full legal support might be debatable, but by no means could they be considered to be illegal, simply because the law does not

address the topic. This clearly illustrates how the law, by producing (il)legality, leaves significant room for licit conventions by hybrid governors.

4. Small-scale in different localities

The present chapter will elucidate different small-scale mining practices of two mine-sites based on the ethnographic data collected at the concessions of Key Empire (Ekorso) and ATK-mining (Asamama). The emphasis will lie on Key Empire's concession for it was situated within the community in which I resided. Firstly, an explanation of Key Empire as a company, its concession and their mining methods will be provided. Secondly, a similar explanation will be given regarding ATK-mining's concession.

By juxtaposing the two mine-sites and making a comparison illustrates, the great diversity in manifestations of small-scale mining operations can be clearly illustrated. Along those lines, the comparison will show how narrow and pre-defined definitions of 'small-scale' might result into missing certain important nuances within the sector. Moreover, through analyzing the two operations, the notions of (il)legality and (il)licitness will be discussed in the light of the conventions which are being upheld by the concession owners who function as hybrid governors. Especially how those conventions structure the cohabitation forms on the concession.

4.1 Key Empire

4.1.1 The story behind the company

Key Empire is founded and run by its CEO Emmanuel. Emmanuel, a Ghanaian from a town in the Eastern region; around an hour drive up north from Accra, was in his early thirties and when asked about his occupation he said he usually referred to himself as entrepreneur. After graduating from the University of Ghana in Accra, he started several companies in export and software. In 2007 one of his friends from Abu Dhabi, whom he had met at University campus through activities Emmanuel participated in whilst being a student politician, approached him with a quite specific request. His friend needed one kilo of gold and figured that Emmanuel could help him with acquiring the desired amount. However, Emmanuel, by that time, had never seen gold before. This event, he said, marked the start of his "gold journey". In his search for the precious mineral, Emmanuel traveled to several communities with prevalent mining activities. In one particular community, Obuasi, he spoke with non-licensed small-scale miners who mined on the concession of the large-scale mining company AngloGold. He informed about the timeframe in which they thought they could mine a kilo of gold. They stated that it would take them around one to two months. Emmanuel ended up going to several sources to collect gold and an agreement between him and his friend from Abu Dhabi

was made, which entailed Emmanuel buying small quantities of gold with his own money, shipping it to Abu Dhabi, after which money would be transferred back to Emmanuel. After several shipments of smaller quantities, the gold would be melted together in Abu Dhabi. Within a couple of months, they achieved their goal and the final quantity of gold successfully reached the United Arab Emirates. Thereby the initial partnership ended but it had sparked Emmanuel's enthusiasm and interest for the small-scale mining sector. He therefore decided to get informed and to do some research at the Minerals Commission and Natural Resources Ministry so he could, in his words, "be part of the business". This "informal research" led to him wanting to acquire a licensed concession so he could start setting up his own mining operation. He started to identify an area, located around an hour drive from Ekorso. Whilst at the start of the process of getting licensed, he received yet another request from Abu Dhabi for an even larger amount of gold. However, since Emmanuel was investing his money into the expensive procedure of acquiring a licensed concession, the original payment system they had in place – in which Emmanuel paid for and shipped the gold before money would be transferred into his bank account – was not an option this time around. Therefore, the significant amount of money would be transferred to him all at once, but not without some form of collateral. After deciding what property would serve as collateral, formal documents were signed and as Emmanuel phrases it; "the ball started rolling". Everything went according to plan, until the last kilo: "I got in touch with somebody who said can supply the kilo in a day. I guess maybe I was getting a bit greedy or so. And maybe I was also losing patience (...). Unfortunately, what they sold to me was copper and glass". This scam got him in a very tight situation for he was running out of money. While it being an enormous setback, Emmanuel said it pushed him further into the sector. After he had contacted the men from Abu Dhabi to inform them about the situation and to request for some time to find a solution, they replied by saying that they had no time to wait and that he could always sell the property that functioned as collateral if he was in need of money. In the mean while he was seven months into the licensing process, which would expectedly take up to a year and a half in total. Feeling pressured and exploring his options, Emmanuel came up with a solution: "so I called my friend and said 'look, I'll see if I want to – I can do a galamsey'. I mean illegal mining". The operation would be set up on the land that he was processing but which had not officially been licensed. His relations agreed upon the idea, therefore the next step was renting the right equipment and employing miners. They mined for around a month in which they were able to extract the final kilo. However, since there were still some days left before the equipment had to be returned, Emmanuel decided to

take advantage of the situation and keep on mining. He knew that what he was doing was not according to the law. He therefore contacted the Minerals Commission to enlighten them about his situation and the choices he had made: “I told him [an executive of the Minerals Commission] that I am actually processing [the land] but because of the situation I could not have waited. I told Minerals Commission my story, though unofficial, I mean the few people I know there. They told ‘me Emma, though it is illegal but the law really does not criminalize it (...) and so it is not really a problem as far as you are not destroying somebody’s crops and you [respect] the community’”. He therefore continued the non-licensed operation. The operation eventually expanded to a point where it could no longer be considered a small undertaking for Emmanuel employed around 250 people. Thus, what started as a temporary practice as a means to solve the scamming problem, turned into an active and producing non-licensed operation that lasted for around six months. After six months the Minerals Commission granted him the license for the concession. Therewith, Emmanuel and his company acquired their first licensed concession in 2011. By that time Key Empire had already done some prospecting for the land in Ekorso. Therefore, Emmanuel decided to also start the process of licensing the land near Ekorso. The license was granted and since 2012 Key Empire has been mining in Ekorso. Emmanuel’s vision for Key Empires new concession was different from what he had been doing so far. He wanted to have a more mechanized operation and move away from what is called ‘suagum’ in Twi, the local language (see figure 1). Suagum translates itself into ‘carrying and depositing’ or ‘fetch and pour’ (Ferring et al. 2016: 179).



Fig. 1. Suagum with traditional washing plant on the concession of ATK-mining (picture by author)

Suagum is usually associated with galamsey and mostly relies on manpower since it is done using a traditional washing plant. Moreover, it requires little starting capital. Mechanizing the operation was preferred due to security reasons – which will be further elucidated when discussing ‘suagum’ in the paragraphs yet to come – and financial considerations. Emmanuel elaborates by stating that using the suagum method caused him to rely on quite some employees, whom in total received 1/3rd of the profit. Furthermore, deducting the rent of the equipment and the fuel left the company with little profit. Therefore, the mining methods used on the concession in Ekorso differ greatly from the methods the company had used thus far.

Emmanuel’s story about his involvement in the small-scale mining sector is interesting for several reasons. First of all, it confirms what Teschner states in his article, namely that “gold moves between registered and unregistered actors with ease” (2012: 309). When embarking on the partnership with his friend from Abu Dhabi, Emmanuel’s quest for gold led to him buying gold from non-licensed miners. This gold, therefore, was extracted ‘illegally’ by ‘unregistered’ actors. However, after buying the gold, the gold was then shipped to the United Arab Emirates by a legal exporter. It shows how the “perceived dichotomy of formal and informal actors in the sector does not actually exist” (ibid: 308) but instead the supply chains are highly intertwined in a “semi-formal” chain (ibid: 309). This again invites us to rethink the categories of ‘legal-’ and ‘illegalization’. As Heyman (2013) states; thinking of (il)legalization as ‘processes’ instead of ‘states of being’, opens up room for asking questions related to the situation as previously described in which a commodity chain is not consistently legal or illegal. It therefore becomes essential to question the origination, implementation and reproduction of “particular sets of classifications [and] justifications” (Heyman 2013: 304) that are upheld by states, hybrid governances or scholars. Besides illustration how commodity chains go in and out of legality, this situation also illustrates how people and their companies can “weave in and out of legality” (Abraham and van Schendel 2005: 9). Even though Emmanuel and his company eventually mined on a legal concession, they have a history as galamsey. Moreover, Emmanuel’s story also shows how even people working for the state on municipal level – executives of the Minerals Commission – acknowledge the non-existing binary categories of legal- and illegality by stating that mining without a license is illegal – since the law states that licenses should be obtained – though not criminalized. This implies that the law does not further stipulate the consequences of mining without possessing a license. This again problematizes the binary categories as produced by the law and employed by scholars. Furthermore, the statement of the executive of the

Minerals Commission, being part of the municipality, also invites us to rethink the role of the state regarding matters of legislation:

Another useful rethinking is to go beyond the dichotomization of state and nonstate to recognize diversity and processuality of state activities and agents, likewise for the nonstate side, and to look at interpenetration processes across the useful but limited state—nonstate conceptual divide (ibid).

Shifting away from the categories ‘state’ and ‘non-state’ enables us to see beyond those notions and to analyze the production of (il)legality. This importance is exemplified by the fact that, as mentioned previously, the production of (il)legality is not merely allotted to the state or other political non-state actors but also to non-political actors whom have acquired the position of regulators due to their superior knowledge in certain matters. This will be more explicitly illustrated in the following paragraph, which will show how a small-scale mining company also produces illicit regulations due the implicitness of the law and the acceptance of other actors involved. This aligns with one of arguments of Abraham and van Schendel (2005), namely that states should not be equated with law and order.

4.1.2 The Ekorso concession

Before Key Empire licensed the concession in Ekorso, the community had already experienced quite some mining practices in their surrounding areas. The non-licensed miners that were mining the area came from outside Ekorso. The miners were both digging pits and mining on the river Birim, where they extracted gravel⁴ from the riverbed. The latter is done using a mining method that is referred to as ‘dredging’ or, in local terms, ‘ChangFa’ – named after the engines it runs on. A dredge is a floating metal construction covered with wooden planks (see figure 2.1 and 2.2) which is kept floating by the empty plastic barrels attached to the bottom. The Changfa engines – which are located on one end of the dredge – pumps up water, which then enters the pressure hose. The function of this hose is to disturb the bottom of the pit that contains the gold. The gravel that has been loosened up is then sucked into the second hose. This second hose has a pyramid shaped construction attached to it, which serves as a drilling device (see figure 2.3). Fixed to the two hoses is a long metal bar. While the hoses disappear in the water to the bottom of the pit, the miners hold onto the metal bar and

⁴ The difference between gravel and soil depends on the particle size. The miners I spoke to all refer to the gold containing sediment as ‘gravel’.

rock it back and forth while standing on the dredge (see figure 2.1). This motion loosens the gravel inside the bottom of the pit so it can be sucked into the hose and onto the washing board – allocated on the dredge – where the soil is separated from the gold.



Fig. 2.1 Two dredges in one of Key Empire's old pits while loosening the bottom of the pit and extracting the gravel (picture by author)



Fig. 2.2 A dredge in one of Key Empire's old pits (picture by author)

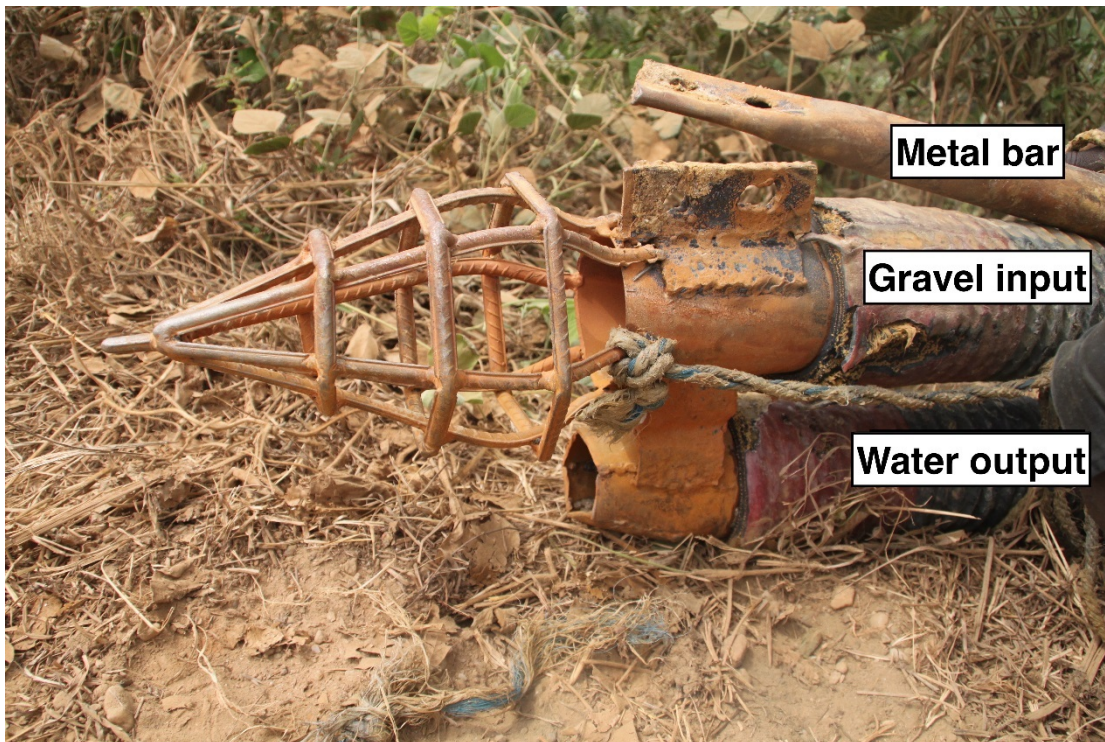


Fig. 2.3 Hoses attached to the engines (picture by author)

Dredging highly affects the environment for it alters the bedding of the water body and can therefore even redirect entire rivers. Since the Mining Act states that a small-scale operation should mine paying “regard to the protection of the environment during mining operations” (Minerals and Mining Act 2006, section 93), dredges are not allowed on the part of the river Birim flowing through the concession. However, the miners working on the dredges might not have had the state’s approval to mine, they did have the support of the local chief and elders. Their acceptance is highly important since, as one respondent puts it; “if the chief says ‘no’, you cannot mine”. Before starting their operation Key Empire, therefore, had to settle two things; they had to obtain the chief’s approval and they had to relocate the dredges. The acceptance of the chiefs and elders was established through a significant sum of money – meant for community development: building a chief’s palace, a clinic and restoring the school buildings. However, removing the dredges from the concession was not all that easy, since they had been mining in Ekorso for years and were therefore socially highly embedded. Emmanuel elaborated that consequently “the elders of the town stood up for the workers of the dredges and so the activities only increased”. Therefore, for the first couple of years after licensing the concession, articulations between Key Empire and non-licensed miners were troublesome. However, Key Empire eventually was able to successfully cohabit with the community and non-licensed miners and the company was able to grow and expand its mining activities. At the time of my visit, the company also employed another twenty-six people. Three out of the twenty-six were from Ekorso, while the others resided in neighboring villages. It was not by choice that Key Empire mostly employed people from outside of Ekorso. Emmanuel stated that the miners from Ekorso were familiar with galamsey practices, with which you extract gold every day and thus receive money on a daily basis. They were therefore a bit hesitant when Key Empire offered them a monthly salary instead. Consequently, the available jobs were soon taken by people from outside of Ekorso. They took on the positions of all-round workers who are involved in all phases of the extraction process, machine operators and security team members.

4.1.3 Mining methods

In the search of the precious mineral, the most valuable knowledge is where it is allocated in the ground. Therefore, before Key Empire could start constructing pits, they first had to prospect the land. The aim of prospecting is to get an indication of the amount of gold in the sub-soil by digging small pits and washing the gravel (see figure 3). Key Empire asked local

people to do the prospecting, for they are the ones mining the land for years and therefore had greater geographical knowledge about the gold in the ground. Twenty-five pits were dug on the concession, with a depth varying between four and a half to seven meters deep. Since the land was un-mined, it was still covered in vegetation. Using heavy machinery such as excavators would do a lot of damage to the land; therefore, the pits were dug manually. After two to three days of digging they reached the bedrock, which marked the maximum reachable depth. Samples were then taken from the three different types of strata encountered: the top-, middle soil and bedrock. These samples were then washed to get a proper estimate of the gold in each three layers of all twenty-five prospecting pits. All together this is quite a time consuming undertaking, especially when considered that digging a small pit will only be matter of hours when using an excavator. Nonetheless, this process is highly important for its result provided the company with the knowledge of where to construct their first pit.

Constructing a pit took the excavators around four to five days (see figure 3). The depth of the pit depends on where the gravel is located. A pit can thus vary between six to nine meters deep. Another three to four days are needed to bring the gravel up to surface level. Thus, ideally, the construction of a pit and taking the gravel out would take up to a week. However, this is without regarding external factors, such as machinery failure and weather circumstances. Key Empire's machinery, such as the excavators and tipper trucks, were quite dated and had the tendency to break down. Depending on what part had to be repaired, fixing could take several days. Spare parts had to come from Kumasi, a two-hour drive from Ekorso. Moreover, a mechanic had to be called in and brought to the site to repair the broken machine. Thus, all in all broken machinery could heavily delay the mining process. Furthermore, mining also heavily depended on the weather. Ghana knows two seasons: the dry- (December until March) and wet season (April until November). Therefore, in March, the last month of my fieldwork, the rainy season was about the take over from the dry season. The rain could come in out of nowhere and it could continue to pour for hours. For farmers the wet season is great and highly needed, whereas miners dread the rain for it means that the pits will fill up with water. When the rain breaks out during the process of constructing a new pit and getting the gravel on surface level, they subsequently have to pump the water out before being able to continue.



Fig. 3.1 (Left) Local miners creating a pit for prospecting on Key Empire's concession

Fig 3.2 (Right) Excavators creating a pit and extracting the gravel on Key Empire's concession (both pictures by author)

After the gravel had been taken out of the pit, the company could start with processing or washing the gold containing sediment. It took a tipper truck several loads to export the gravel from the pit and to heap it near Key Empire's washing station. The washing area was where the gravel was washed so the gold particles can be separated from the soil. Before elaborating on further proceedings of Key Empire's washing methods, a short sidetrack has to be made in which the process of gold extraction is elucidated. As mentioned previously, in the case of alluvial mining, gold can be found the gravel. Gravel can consist of small gold particles, sand, clay and stones. Sometimes gravel clearly differentiates itself from other soil such as sand by its color. There are many methods for washing the gravel (using a washing board, washing plant or sluice box) but in all cases, having access to water is essential. The washing plants are constructed in such a way that the top- is higher than the bottom part so the water can run down (see figure 1 for washing plant, see figure 2 and 4 for sluice box). Additionally, washing plants contain 'blankets'. Since gold is heavier than other soil types that make up the gravel, washing the gravel on a form of washing plant enables the gold to sink into the blankets, which then contain the precious mineral while the other sediments run down. Subsequently the blankets are taken out of the washing plant and washed manually. After disposing most of the sand and stones, the residual is a concentrated material with a high gold density, which most miners at the two visited sites referred to as 'the black' due to its color.

Key Empire's washing station was allocated on a permanent place on the concession. This can be derived from its concrete floors and the water recycling system – four connected large pits enabling water to flow through before flowing back into the river Birim – created surrounding the washing area. Key Empire's washing station characterized itself by the

machinery surrounding the cement platform. Next to the platform they had placed a so-called ‘tromel’ (see figure 4).



Fig 4. Tromel at Key Empire’s washing station (Picture by Emmanuel)

Using the tromel was the first stage of Key Empire’s washing method. A tromel is a screened cylinder and its purpose is to separate bigger stones and rocks from the gravel. After an excavator fills the tromel with gravel, the rotating movement of the cylinder pushes the larger stones towards the other side of the tromel where they are deposited in a pit. The smaller particles, which contain the gold, pass through the screen and end up in the sluice box. A sluice box is not a standard component of a tromel. Key Empire attached a sluice box for it makes the gravel easier to wash in the stages to come, which eventually leads a higher percentage of recovery and less tailings.⁵ According to Emmanuel, the estimated percentage of tailings lost to the tromel was around 25% while 75% of the gold is recovered.⁶ However, the tromel takes quite some processing time; it may take several weeks to wash the total amount of gravel coming from one pit.

After the gravel had passed through the tromel and the attached sluice box, the washing continued manually. Key Empire’s employees took the blankets from the sluice and washed them in a self-constructed metal box filled with water. After washing all the blankets, the water was partially taken out and the remaining black in the metal box was shoveled into pans. The black was then poured into a self-constructed traditional washing plant (see figure

⁵. Due to a lack of proper equipment, a reasonable amount of gold is washed away by the water together with other sediment. This processed gravel of which the gold has not been extracted is referred to as ‘tailings’.

⁶ This estimation was somewhat confirmed by a manager from another small-scale mining company who stated that a tromel recovers around 80% with 20% tailings.

1 for traditional washing plant). This stage needed quite some manual labor since the pans passed at least four pairs of hands before ending up at the washing plant. At the washing plant the black, again, was trapped in the blankets, which received yet another washing. This residual went through one more process; a final washing on a washing board. After washing the blankets from the washing board, the miners were left with a material with a high gold density. They then reached the final state of processing the gravel, which was panning. This meant scooping the residual material into a pan to which water and washing powder was added. The washing powder made the soil softer and therefore made it easier to separate it from the gold particles. By letting the material move through the pan the heavier (gold) particles would settle to the bottom while the other materials could be washed off. Finally, mercury was added, which enables gold to agglomerate. The end result was a metal colored (due to the mercury), egg-sized ball (the size, obviously, depends on the amount of processed gravel and the extracted gold).

4.1.4 New purposes for old pits

The aftermath of mining is an empty pit that, seemingly, no longer serves a purpose since excavators have taken most of the gravel out. However, some gravel always remains inside the pit. The excavator can reach up to the bedrock but while digging it cannot prevent parts of the over bedding, coming from the walls of the pit, falling in. Therefore, already at the stage of creating a pit – a percentage of gold is left inside the pit and was not recovered by the mining company. According to Emmanuel, extracting the remaining gold would be too expensive. The material left in the pit is a mixture of non-valuable soil and a small percentage of gold. Therefore, processing that material would cost Key Empire significant amount of energy and money while resulting in a minimal gold recovery.

As mentioned previously, the articulations between Key Empire and the non-licensed miners that mined the land prior to Key Empire had not always been cordial. The non-licensed miners wanted to mine the area and received full support of Ekorso's chief and elders. Thus, in early 2016, Key Empire decided that instead of reclaiming the mined pits straight away, to let the dredges return to the concession to mine the left-over gravel in the old pits which the mining company itself did not extract for the same reason as they did not extract the remaining gold from the constructed pits – it would be too expensive. The dredges could keep whatever they mined and sell the gold to a buyer of their own choice. When I asked Emmanuel why Key Empire did not dredge the old pits itself he stated that it is

not the preferred method for the mining company, because it would mean they would have to spend money on fuel while it would not generate a significant income. Moreover, extracting gold with a dredge takes longer compared to the method Key Empire was currently using. Furthermore, this recent arrangement served two important purposes. Since Key Empire was not going to mine the remaining gravel itself – letting the dredges in and having them pay a percentage of what they extract as entering fee – Key Empire was able to make some money out of this agreement. More importantly, it established social stability between the mining company, the chief and elders of Ekorso and the non-licensed miners. As Emmanuel states: “So putting them in the old pits is the best way forward. Now there is peace. Before this solution, there were always problems”. This social project resonates with the case elaborated by Luning and Pijpers (forthcoming 2017) concerning large-scale mining company Newmont. The large-scale company allowed artisanal miners on their concession for denying them access would create serious tensions and might have had an influence on Newmont’s social license to operate. However, a question that dawned was whether Key Empire’s solution fell within the legal framework. The company namely did not employ the people working on the dredges, while the law stipulates that only the person licensed may mine; in this case Emmanuel and his company Key Empire. As a response to this question Emmanuel stated that he considered the dredgers his ‘subcontractors’, with whom he had ‘verbal contracts’. When asked whether this construction is legal he replied by saying that it is “a hundred percent legal” since they are his subcontractors, yet he acknowledged that “they never tested it in court”. This is a clear example of a licit agreement. Its illicitness derives from the fact that when tested in court, it is debatable whether it would be considered as ‘legal’; yet it is fully condoned by both the license holder, the non-licensed miners and the community of Ekorso – elders and chief included. This solution therefore seemed to kill two birds with one stone. However, a consequence it brought forth is that the reclamation of the land and transferring the ownership rights back to the original landowners was postponed. Key Empire is obliged to reclaim the land post-mining – or when their license period runs out which is after a maximum of twenty years. Since a small-scale mining company is legally allowed to license two concessions at the same time – a sum of maximum fifty acres – they are expected to have fully utilized that land within those twenty years. However, while staying in Ekorso, I had the opportunity to talk to several concession owners since there were many concessions located within a relatively small radius. Therefore, one concession owner had let me in on a well-known trick that many concession owners supposedly used. Many small-scale companies indeed licensed two concessions but licensed other concessions

through subsidiary companies. This licit trick enabled the holding company to have a significant amount of land available for them to mine. Since the mine-life of a single pit in alluvial small-scale gold mining is relatively short – depending on the method used and compared to hard rock mining where the pits are much deeper, causing the mine life of a single pit to be years – the small-scale sector is highly migratory (Andrew 2003). It is a constant process of creating new pits, digging up the gravel and extracting the gold. Therefore, a small-scale company prefers to have several licensed concessions within the same area so they can mine a more substantial amount of gold without having to set up several different operations. This licit practice had several consequences. The first consequence was while it takes quite some time to license an area, concession owners run the risk that the licenses of the concessions they started out with expires long before their latest acquired licenses run out. This implies that, according to the law, the original landowners can re-claim their land. This causes quite some inconveniences for the concession owners. The first inconvenience has to do with the (semi) permanent constructions placed on the first concessions, such as security checkpoints and washing stations. The mining company ought to relocate these constructions and provide the remaining concessions with new infrastructure. The second inconvenience is the fact that after reclamation, the landowners will restart cultivating the land. Subsequently, parts of what used to be the concession will then be utilized by farmers, while miners will occupy neighboring parts of the land. This brings forth safety risks for both parties. Not to say Key Empire takes advantage of the implicitness of the law by licensing more than two concessions through subsidiary companies, but Emmanuel did elaborate on a contract he wrote up for the landowners that he either compensated or was going to compensate. The contract stated that the landowners agreed to Key Empire utilizing the land for some years after the land had been mined and reclaimed. Therewith, Emmanuel elaborated, Key Empire established that they did not have to return the land to the previous landowners immediately post-mining for reasons mentioned above. However, this illicit agreement did leaves landowners without an inkling with regard to the time-frame after which they could expect to restart cultivating their land plots. After talking to several landowners, what stood out is that there seemed to be incongruence regarding the exact definition of ‘post-mining’. Most landowners stated that Key Empire did not specify the duration of the mining and reclamation period. They, therefore, expected the land to be returned after Key Empire had utilized the land. Landowners had observed how Key Empire mined their lands and had finished their mining practices for some years now. However, instead of fully reclaiming the land, the company had either reclaimed parts, or

they had brought in the dredges. Since there seemed to be little communication and transparency from the mining company towards the landowners, the landowners were left with many unanswered questions. All the while, Key Empire, as previously mentioned, intentionally wanted to hold on to the land plots for a prorogued period. Moreover, as Emmanuel explained, the company wanted to create what they called ‘demonstration farms’. These farms ought to serve as prove that it is well possible to farm after the land has been mined – this as a response to an often heard argument that mining significantly deteriorates the quality of the land. Whilst during my fieldwork this idea had yet to be executed but it already resulted in another delay of reclaiming and returning certain land plots. Therefore, Key Empire’s notion of ‘post-mining’ seemed to differ from how it was understood by the landowners; for it included their future plans for the concession, such as enabling the dredges to mine on the concession and creating demonstration farms.

Thus, analyzing Key Empire’s concession gives interesting insights in several aspects of small-scale mining. Firstly, the concession illustrates how the implicitness of the law enabled Emmanuel to become an authorizer based on his knowledge about the small-scale sector and its legislation. This illustrates how, as Heyman states (2013: 306) “legalization and illegalization involve not just official state laws and agencies, but also a wider sweep of professional knowledge and disciplinary regimes”. Emmanuel’s position as authorizer and the necessity for social stability led to the decision of allowing the dredges to mine. This convention illustrates how certain small-scale practices do not directly fit into the (il)legal categorization and shows how the notion of licit is a better fit. Moreover, it is important to note that this licit practice could only be installed due to the site-specific methodological choices. This will be elaborated more thoroughly when comparing these choices and the subsequent left-over gravel to those of ATK-mining. Additionally, Key Empire’s concession illustrates how licit conventions establish successful forms of cohabitation between different small-scale mining actors. Cohabitation, thus, is not merely allotted to large-scale and small-scale miners but also exists within the small-scale sector. Likewise, do these licit practices shape the social interactions between the mining company and landowners, which will be further elaborated in chapter five.

4.2 ATK-mining

4.2.1 The company and its concessions

The CEO of ATK-mining was Anthony. Anthony was often present at the mine-site but also regularly traveled around the country. Therefore, Anthony heavily relied on his site-manager, Dennis. Dennis lived in Accra but stayed near the concession for a good part of the week. Before ATK started their operation in Asamama, the land had not been mined before. Most miners were mining the river Birim. However, since the land belonging to the community of Asamama is stool-land, they had to meet with the chief and get his permission to mine. The money gifted to the community, as Dennis elaborated, was part of the social responsibility of the company. It therefore ought to be spent on renovation projects, building schools and health clinics or to create boreholes and water pumps. ATK started their mining operation in Asamama between 2014 and 2015. Dennis openly stated that ATK had many concessions under several subsidiaries; moreover, they licensed around sixty neighboring small-scale concessions surrounding Asamama. Thus far they had mined five to ten concessions and expect to continue mining for the coming five to ten years.

The concessions were located near, yet not directly bordering, the community of Asamama, for it took a twenty minute stroll through a bushy area to get to the actual mine operation. The entrance of the actual mining area was recognizable by the tables filled with food and drinks, sold by the women sitting behind them. Generating a small income from selling food items at mine-sites is an occupation typically carried out by women (Hinton et al. 2003; Yakovleva 2006). While Key Empire did not allow food sellers or food stalls at their concession because of the dust that could get into the food and because the company feared that workers would cluster around the food stalls during working hours, ATK condoned women to benefit from this spin-off from their mining operation. Besides food products, some women at the site also sold strong alcoholic beverages, packaged in small plastic bags and something which miners referred to as ‘snuff’; a type of drug which allegedly relieved physical pain. Since they were the only sellers in quite a large radius, the women seemed to make a reasonable income from selling their products. However, many women complained about miners buying their food under false pretense of paying at the end of the day but who never came back to give the women their money. The large number of miners present at the site each day made it hard to trace the ones leaving without paying.

The reason for the significant number of miners present at ATK’s site lied in the way they had organized their operation; allowing it to provide an income to many. The miners

could be divided into two types of workers, those officially employed by the mining company, and those considered 'casual workers'. ATK officially employed around thirty people. These employees were either machine operators or part of the security team. Their employment meant that they were insured in case something happened, and that they received a weekly salary. The vast majority of miners working ATK's concession – the ones washing the gravel using the suagum method (see figure 1) – did not work under the same conditions. They were, as Dennis called them, the 'casual workers'. When ATK started their operation in Asamama, the word about the work possibilities got out and hailed workers from varying regions of Ghana. The company knew they wanted to mine using suagum as their method, therefore, the miners seeking ways to earn money came to the site in gangs. These gangs are groups of twelve people with one gang-leader. The company accepted gangs through the principle of first come, first served. Anyone could come and ask for permission to work as long as they were at least 18 years of age. Around twelve to thirteen gangs were accepted to come and work on the concession. The suagum miners too received a weekly payment, but the amount varied from week to week for they were getting paid based on the amount of gold they had extracted.

4.2.2 Mining methods

As mentioned previously, prior to taking out the gravel, a mining company ought to know where the gravel is located in the ground. Therefore, ATK also prospected the land before utilizing it. Prospecting was done by an excavator, which dug a small pit. It would dig until the gravel was reached, which usually took the machine around twenty minutes. They then took samples of the gravel to get an indication of its gold density. Upon the results they decided whether constructing a pit was profitable. However, Dennis elaborated while the company sometimes knew that there was a significant amount of gold allocated deep in the ground, they sometimes preferred to work on a shallower pit first, for it is less expensive to construct. By extracting gold from that pit – which is a rather cheap expenditure but nonetheless generates an income – the company could accumulate some money before investing it creating the deeper pit. This aligns with the idea that mining is a sector in which debt plays a prominent role (Panella, 2010) – meaning, *inter alia*, that a miner or mining company always spends money (on equipment, fuel, licenses) before earning it back and making a profit by selling the gold. It is therefore a constant consideration regarding the sequence of the mining process.

ATK's pits were constructed in such a way that it was optimal when using the suagum method. The pits consisted of several levels (see figure 5). The deepest level being the bottom of the pit; marking the maximum depth the excavator could dig before reaching the bedrock. Higher up was the platform on which both the gravel was placed which was then washed by the suagum workers. Finally, there was the 'surface-level' (it was hard to tell what surface level was, since most of the site was covered in heaped sand coming from the pits), this was where the security and managers of ATK would sit under their red parasols, protected from the sun and keeping an eye on the workers.



Fig. 5 Pit and suagum gangs at ATK's concession (picture by author)

Thus, after the excavator created a pit and heaped the gravel onto the platform, the washing could take place. As mentioned above, the washing was carried out by around twelve suagum gangs. Suagum was done by using a traditional plant, which the gang members had to provide themselves. Gangs usually rented the washing plant and it was the gang-leader who made sure the washing plant was rented and paid for. ATK provided the water pump, which pumped the water from the river Birim onto the washing plant. If gangs provided their own pump, the mining company paid them thirty cedi's a day (between six and seven euro's). The gang members positioned themselves and lined up along the edge of the platform so the water coming from the sluice attached to their washing plant can directly flow into the pit. The twelve people making up the gang each had their own tasks and responsibility during the washing. There were those working the gravel, shoveling it into the pans. Another miner made sure that the pans were lifted from the ground and placed onto the head of one of the carriers. The task of the carriers was to walk back and forth between the gravel and the washing plant; where they deposit the gravel into the plant. Finally, there were those working

the washing plant and making sure the gravel passed through the deposit box and sluice smoothly. As an observer, initially I was impressed by the almost rhythmical precision of this procedure. It looked very organized and everyone involved seemed highly aware of their individual task and their responsibility as a gang member. Yet, it did not take long for the awareness came regarding the repetitive- and tediousness of the process. After every two hours of washing the blankets that covered the sluices of the traditional plant were taken off and washed. The residual material, which was contained by the blankets, was kept in a several plastic buckets or pans. Since the miners got paid based on the amount of gold they extracted, every gang had their own buckets. At the end of the day, the miners washed their blankets one final time, cleaned the washing plant and themselves; for they would be covered in gravel. They then took the buckets filled with the black to the back of a small building, which served as the on-site office. Behind the building is where the gang-leaders would continue with panning to get rid of the non-valuable materials before adding mercury. What was left was a combination of mercury and gold. They dissolved the mercury by burning the remnant. Whereas Key Empire let the refiner do the burning and melting, the miners working at ATK's concession did the first burning themselves. After the first burning, what was left was a golden lump. This golden chunk was presented to ATK, or rather to Dennis, who then weighed it and paid the gang leader the corresponding amount of money. The gang leader, in his turn, was responsible for dividing the money amongst his gang members. It took around a week for the suagum miners to wash the heaped gravel from one pit. This mining method was therefore extremely migratory. It was a constant process of creating pits, washing the gravel and relocating the washing plants to the next pit.

Thus whereas Key Empire had a mainly mechanized operation, ATK choose to have their gravel washed manually. Their main argument, as Dennis elaborated, was that it took a tromel too long to wash the gravel. Consequently, it took longer before you could sell your gold and therewith generate an income. However, the tromel did enable miners to recover more gold and create less tailings. But by using the suagum method, ATK ensured itself of a rather constant income since "you can wash everyday so you get gold everyday". Therefore, ATK did not mind the tailings that much for they wanted "quick money" which, according to Dennis, could only be established by using a traditional plant. Thus, while ATK washed every day, Key Empire on average did one washing per month. The company consequently could go for weeks in which money had to be spent on fuel, salaries and machinery – while no money was coming in. As mentioned previously, mining is a constant game of being in debt prior to generating an income (Panella, 2010). Consequently, ATK sometimes waited

with creating a deeper pit for it increase expenditures while the washing would continue. Key Empire on the contrary sometimes made the choice to put the washing on hold all together. This choice was at times motivated by the economic climate in Ghana and drops in the gold price. Since Key Empire only sold their gold once in a while, they would rather wait for the gold price to be acceptable. Both mining companies thus had their own motives and time-schedules by which they maneuvered through their debts and incomes. A final advantage of using the suagum method is the fact it creates employment. While Key Empire employed around thirty people, ATK was able to provide employment for over a hundred people. However, the word employment often has the connotation of contracted jobs with a set income. This is not the type of employment provided by ATK. Questions therefore dawned about the implications and consequences this type of employment had for the gang members and the circumstances they worked under. It was only right to ask a miner himself.

4.2.3 The story of a miner

Gospel, a man in his late twenties, lived in Asamama, the region he was raised and where he had gone to school. After Secondary School his grades were good enough for University but due to a lack of money he could not attend. He went to Senior High School instead where he became a visual art student. He specialized in weaving which, while he was twenty-two, landed him a scholarship to study abroad in London for six months. It was his first time in Europe but he already made such a good impression that they said they would offer him a job if he would stay in London. However, his teacher back in Ghana told him he had to return to finish his education first. By the time he had graduated, however, the school was not able to send him back to England, thus he never returned. He found himself educated, yet unemployed. It was one of the sisters of his mother who first got him introduced to mining, at the age of twenty-four. Since it generated a reasonable income he continued mining for three years. After three years he made up his mind about the next step and decided to join the police. In order to do so he had to fill out application forms for which he had to pay a significant amount of money. However, after his application, the government put a hold on the applications and told people to re-submit the following year. Two years later he submitted an application for the military but they did not accept him. Upon this disappointment he decided to start mining again. After a couple of months of mining, there were no more job possibilities at the site so Gospel had to return to the city he grew up and move back in with his mother. He lived there for some months before an old mining college called him and told

him about mining possibilities in Asamama. He decided to go for it and this eventually led him to ATK-mining. The money he earns from mining is good, he stated; “when you go, you get some money. If you do not go, you will not get any money”. This ‘casual work’, can be interpreted as highly unstable and insecure, yet many miners seemed quite content with this flexibility.

ATK employed quite some security who were on-site for the entire day. This was an entire different arrangement from Key Empire’s security; some of who work at the security point before entering the actual mining area, while others arrived after the company had closed so they can patrol throughout the night. The appearances of both security teams also differs greatly. While Key Empire’s security team could be recognized by their orange overalls, ATK’s security often wore company t-shirts but they could best be identified by the large guns they were carrying. Despite the level of security, Gospel acknowledged not feeling too safe while working at the site. The security members bossed the workers around and gave many commands. Moreover, the company and security team would not let you have a break, Gospel stated. The gang leader was the one deciding whether his gang is taking a break. However, due to the way the work was organized, it did not allow for many breaks. Every gang worked from the same pile of gravel without obvious boundaries. Consequently, tensions could arise when two gangs tried to exploit the same spot and overstepped each other’s self-claimed boundaries. This competitiveness obviously stemmed from the fact that the miners were getting paid based on the amount of extracted gold. Therefore, since ATK did not provide set times in which the miners were able to take a break, allowing your gang to have a break would mean that other miners would wash your gravel and subsequently result into less income. ATK’s way of managing these tensions – that sometimes even resulted in fights – was to let the miners pay for every fight they were involved in. During one of my visits to the concession, two neighboring gangs were quarreling and it seemed as if a fight was about to break out. When I asked Dennis why he did not send in any security to appease the miners, he responded by saying that he would rather let them fight and pay so they will learn not to fight at the site. Another reason for ATK to take on firm security measures was because of the reoccurring issue of miners stealing the black. Gospel explained the tricks that allowed him and his gang to steal the black. Sometimes, at the end of the day they would have a total of six pans of black, which they had to carry to the office for the final panning and first burning. However, by the time the some of the gang members reached the office, three pans had disappeared. The other three pans had been smuggled away by other gang members. Another well-known trick was to scrape your hand over the blanket while washing

the gravel and directly inserting it into your boot. The final trick Gospel had let me in on was that they from time to time cover the blanket with another, smaller, blanket that would thus hold the gold. They would roll up the smaller blanket and hide it way in their boots while they would wash the original blanket on the site. These practices were no secret to Dennis and ATK, therefore, increase patrols on the platform during the washing of the blankets and after closing the day and transporting the black to the office. The miners' motive to steal the black was because they could sell the gold for a higher price than what ATK offered them. ATK namely, *inter alia*, subtracted the fuel expenses. Thus, at times the narrative was told in such a way that made ATK seem to suffer from the aggressive and immoral behavior of the miners that could only be prevented and resolved by employing more security. However, having the gavel washed by several suagum gangs who work the same gravel while getting paid based on what they extract subsequently means results into increasing the level of security. It therefore has to be acknowledged that hiring more security is inherent to the methodological choices the company had made.

4.2.4 Cohabitation through residual gravel

ATK's method of choice for mining gold and the accompanying technology resulted in quite some tailings and left-over gravel. Compared to Key Empire's tailings, ATK's tailings were much more substantial since additionally to the tailings which were created during the construction of the pit, they also produced more tailings because of their mining method. The traditional plant was only able to extract a certain percentage of gold⁷, resulting in a significant amount of the mineral to flow back into the pit while washing the gravel. Consequently, ATK often re-mined the old pits themselves. Therefore, there were not many dredges active on the concession since they could only come in after ATK had re-washed the tailings themselves. Moreover, some gravel was left on the platform which did not get washed by the suagum miners because of the small quantity and because shoveling it into the pan would result in a mixture containing mostly sand. This left-over gravel was mined by a method locally referred to as 'kuli kuli' (see figure 6). Kuli kuli was a mining method characterized by manual labor and rudimentary equipment, such as small washing boards, shovels, pans and buckets. Most kuli kuli miners I encountered worked in pairs in which one collected the leftover gravel in a bucket and deposit it on the washing board while the other

⁷ Respondents' answers on the average percentage of gold extracted by a traditional plant varied between 40 – 70%

would do the actual washing. Since kuli kuli demanded little equipment, it required little starting capital and is, therefore, an affair which is rather accessible to many people.



Fig. 6 Kuli kuli miners on a non-licensed mine-site near Akyem Adukrom (photo by author)

Many respondents considered mining to be an affair mainly suited for men since it is physically very strenuous. However, women working as kuli kuli seemed socially rather accepted since it was highly noticeable most kuli kuli miners at ATK's concession were women, while there was only one woman doing suagum. The kuli kuli miners at ATK's concession were allowed to mine after the suagum miners had finished washing the entire load of gravel. It took the suagum miners several days to wash the gravel, thus in the meantime you could either find the kuli kuli miners in the old pits with shallow water mining the tailings, or they would hang around the pit the suagum miners were mining. They would rather wait for the suagum miners to finish, for this gave them access to 'fresh gold', since the gravel would not be as mixed with other sediments as the gravel on the bottom of an old pit. One of the most important differences between the suagum and kuli kuli miners was that, while they were both not officially employed by ATK, the gold the suagum miners extracted belonged to ATK and they were obliged to sell it to the mining company, but the kuli kuli miners did not work by the same agreement. Whatever they mined, they could keep themselves and sell to a buyer by choice. Thus, kuli kuli was not a washing method used by ATK's operation. Anthony briefly elaborated why he did allow kuli kuli practices on ATK's concession. He felt that, since most kuli kuli were women, the small money they earned by kuli kuli would be invested into their children. Moreover, they are no threat to ATK's profit for they are only able to extract a couple grams each time they mine. Emmanuel stated that Key Empire did not allow kuli kuli for it was considered to be too much of a risk with the

machines at work and with the possible danger of walls of pits collapsing. An important remark is that if Key Empire would allow kuli kuli activities on their site, they would only be able to mine the tailings in the old pits which is more hazardous than mining the left-over gravel on ATK's platform.

Thus, studying ATK's site and comparing it to Key Empire's concession proves some highly interesting insights. Firstly, this comparison illustrates the great diversity in manifestations of small-scale mining practices, which aligns with the argument made by Ferring et al. (2016) regarding the heterogeneity of sector. Additionally, the practices on both mine-sites allow for elaboration on the notions legal- and illegality for several reasons. Firstly, while they are useful tools in analyzing a mining context, we should be wary with being too fixated on these binary categories for it might lead to missing out on interesting nuances. Key Empire illustrates this by their licit conventions on allowing the dredges as sub-contractors, their conventions regarding post-mining practices and the agreements with the landowners on returning the land. ATK exemplifies this issue while it is not unambiguous whether the company's decision of letting the suagum miners wash their gravel falls within the legal framework. The law namely stipulates that only the person licensed may win, mine and produce minerals (Minerals and Mining Act 2006: section 93), however it does not further specify *how* these minerals ought to be mined. Therefore, due to the implicitness of the law, it is not equivocal whether this practice can be considered either completely legal or illegal. Using 'licit' when describing the practice would thus be better fitting. Another example of licitness on ATK's mine-site is the presence of kuli kuli miners mining the company's tailings in the old pits and the left-over gravel on the platform. When analyzing this practice through the lens of (il)legality as it is produces by the law, two arguments can be made. The practice could be considered illegal since the kuli kuli miners are not officially employed by ATK. Moreover, it can hardly be stated that kuli kuli can be seen as a part of ATK's washing method for the kuli kuli miners do not sell their extracted gold to the mining company. At the same time, labeling them as 'illegal miners' would not do their situation justice since they work on a licensed concession with complete consensus of the license holder. The (il)legal categorization thus does not suffice and employing licitness would be a better fit. Moreover, sticking with the notions of (il)legality enhances the risk of missing out on certain important nuances of small-scale mining practices, such as elucidated above. Additionally, analyzing licit practices depicts how cohabitation forms are not merely allotted to large-scale companies with encroaching small-scale miners but also exists within different small-scale miners. Key Empire established manageable cohabitation between the mining

company and the dredges. ATK's operation also exemplifies how different type small-scale miners can cohabit the same concession by allowing the kuli kuli miners to mine their tailings and left-over gravel. Both cohabitation forms came into existence due to the residual gravel on the concession, caused by the used technology to wash the gravel. This resonates with the study by Luning and Pijpers (forthcoming 2017) in which they illustrate how geological situations shape interactions between miners and affect the arrangements of cohabitation. Lastly, both sites clearly demonstrate how mining sites are "made through the unique interrelations of geology, customary and state land tenure policies (including tensions between them), miner knowledge, uneven access to technology and many more factors and objects" (Ferring et al. 2016: 171).

5. Compensate to cohabitate

The relationship between agriculture and goldmining has been subject to many studies. Scholars have addressed how the economic climate in Ghana combined with the seasonality of farming has drawn farmers to the mining sector (Hilson and Garforth 2012; Hilson and Potter 2003, Hinton et al. 2003). Others have illustrated how mining activities caused the dislocation of many farmers (Hilson and Banchirigah 2009; Hilson and Potter 2005). Another interesting facet of this intertwined relationship is what happens when a mining company licenses a plot of land within a farming community. The present chapter will elaborate on this relationship by firstly discussing farming in the locality of Ekorso. Secondly, this chapter will elaborate on the compensation schemes used by Key Empire, based on the case of Ekorso's queenmother. This situation will be analyzed in the light of Li's (2003) study on 'the logics of equivalence'; the establishment of what matters can be monetarily compensated and the logics which are used to make that decisions.

5.1 Agriculture in Ekorso

Agriculture has a long history in Ekorso. Most landownership is acquired through inheritance which brings forth family land that has been cultivated by the same families for generations. Land owners either manage the land themselves together with relatives, or have farmers cultivating the land for them. The farmland of Ekorso yields various crops such as yam, cassava, maize, plantain and okra. However, many farmers mostly cultivate the cash-crop cacao. Starting a cacao farm is a relative long term investment for it takes three to five years before the tree starts bearing fruit and becomes profitable. When the cacao tree is fully grown, it can be harvested twice a year; during the main crop-season (September until March) and the mid-crop season (May until August). The main crop-season accounts for the largest harvest⁸ and for this reason, most farmers in Ekorso mainly harvest during the main-crop season. This implies that farmers have to work the land for a substantial period before they can profit from the revenues. Nevertheless, cacao trees are ubiquitous and the main cash-crop in Ekorso and its vicinity. For many miners and farmers, the relation between cacao and gold was evident since cacao allegedly was an indicator of gold in the ground. Therefore, many landowners had experienced firsthand what the presence of gold within the subsoil could mean for them as landowners.

⁸ <http://www.icco.org/faq/58-cocoa-harvesting/131-what-time-of-year-is-cocoa-harvested.html>

To reiterate, the Mining law (2006) states that a spatially bound license is granted by the state to the licensee. This license enables the licensee to mine a demarcated area for an initial five years. The original landowners have to temporarily transfer their ownership and user rights to the licensee and in exchange they will receive an amount to compensate for the use of the land and the destruction of the crops. ‘Using the land’ and ‘destructing crops’ are rather wide concept and leave plenty space for personal interpretations. Consequently, since the law authorizes the licensee to dictate further proceedings, paying compensation is a process filled with personal conventions and discrepancy about highly important matters, such as *what* can be compensated and *how* to decide on the equivalence of these matters. During my fieldwork, I spoke with many landowners and farmers who elaborated on the issues they encountered with receiving compensation by Key Empire. One of the landowners was the queenmother of Ekorso. Following her situation will be elucidated. Her situation illustrates how the implicitness of the law gives room for hybrid governors to rise to the occasion and implement their own conventions and compensation schemes.

5.2 The story of a landowner

An organized meeting with several farmers and landowners of Ekorso allowed me to talk to them more thoroughly on matters such as land ownership and compensation. All of those present had owned land, which was now part of Key Empire’s concession and had therefore been compensated. After hearing many different stories of various landowners, the queenmother of Ekorso showed up to elaborate on her story. The queenmother is the senior woman of the community and has accompanying political and social responsibilities. She is considered to be the female co-ruler of the community. The present queenmother, however, was not traditionally chosen but she was upholding the position until they would be able to rightfully replace late queenmother. Nevertheless, everyone in the community would always refer to her as queenmother. Besides occupying this traditional position, she also owned a piece of land in Ekorso. The following is her story, combined with information drawn from several conversations with Emmanuel in which we discussed the matter.

The queenmother of Ekorso owned a total of seven acres of land allocated within Key Empire’s concession. She did not cultivate the land herself but rather had a farmer cultivating the land for her. There had been some negotiations between the her and Emmanuel considering temporarily transferring the ownership rights of parts of her land to the mining company. However, over time the once cordial relationship between Emmanuel and the

queenmother changed, leaving the queenmother feeling reluctant to sell her land to Key Empire. Not much later, the queenmother found out that Key Empire had been mining an area allocated on the border of her land and a plot of land owned by someone else. The over bedding dug up by the excavator, had been placed on the queenmother's land. According to Emmanuel the company had made the decision to heap the over bedding on that place since there was no other possibility for them to place it elsewhere. After the queenmother heard about the situation from the farmer cultivating her land, she invited Emmanuel over to meet with her and discuss the matter. Emmanuel stated that during that meeting both parties agreed upon the size of the land of which the ownership rights would temporarily would be transferred to Key Empire. Additionally, they also agreed on the amount of compensation money. These negotiations allegedly took place somewhere between May and June in 2015. Key Empire, according to the queenmother, was supposed to have paid the compensation by October that year, yet during my stay in Ekorso she still had not received any money. Moreover, two months prior to her appearance at the meeting I organized, Key Empire had started constructing a road passing straight through part of her land. When discussing the matter with Emmanuel, he elaborated on the difficulties he had encountered after heaping the over bedding on this specific piece of land. He stated that during his visit to the queenmother's house where they agreed upon the compensation height, she requested to have the entire sum of money straight away. According to Emmanuel, he told her that Key Empire was not able to supply her with the entire amount yet, but that they will pay as soon as they start mining her land. Taking the pace at which they were working at that time into consideration; Emmanuel offered to pay by December of last year. However, before being able to follow up on this agreement, another issue arose. The farmer whose land bordered that of the queenmother's made the allegation that the assumed borders were not the actual borders. This claim led to it being questionable whether the queenmother was the actual owner of the land on which the over bedding had been placed. Consequently, the next step would have been to let surveyors in to verify the boundaries after which compensation could be paid to the rightful landowners. During my stay, they had agreed upon a date but eventually the queenmother was not able to attend, therefore the appointment had to be rescheduled.

To reiterate, there were several issues between the queenmother and Key Empire. Firstly, the queen mother took offence of the mining company started using her plot of land without her knowledge or consent. Secondly, she claimed to have contacted Emmanuel about this matter and asked him to stop the company's activities but this did not prevent the

company from constructing a road on her land. Lastly she had not yet received any compensation for the land which was being exploited by the mining company. This story stood out from the ones told by other landowners, since it initially seemed as if was a completely different scenario. Where most landowners had already received compensation but were not satisfied with the amount, the queen mother did not seem to complain about the height but rather she criticized the time-period in which the compensation had to be paid. However, when scrutinizing the cases more closely, ultimately most predicaments seemed to have arisen due to personal interpretations regarding *what* can be compensated. To elucidate the matter, it is necessary to have another look at the legislation. By granting a mining license, the state authorizes a person to mine a demarcated area. Therewith, the licensee thus obtained temporal rights to the sub-soil, which ordinarily belongs to the state, for the entire duration of the license period. Since this licensing process often creates conflicting ownership claims regarding the land plots allocated within the concession, the licensee is lawfully obliged to pay compensation (Minerals and Mining Act 2006: section 94). This compensation ought to be paid for two aspects: the use of the land and the destruction of the crops. These two aspects both hold interesting implications. Firstly, compensating for using the land implies that the license only transfers *temporal* rights of using the land and do not establish a definitive transfer of property rights. This argument is obviously supported by the fact that a license has a certain duration after which it is no longer valid. Secondly, the law stipulates that the licensee should compensate for the destruction of the crops but does not further specify what this exactly entails. After planting crops, it takes a while before they can be harvested. Therefore, what the crop might be worth at the time of destruction differs from what the revenues might have been after harvesting. The law does not provide any guidelines as to how to assess the matter. Hence, this case allows us to further study how people in a mining context settle such issues when the accompanying legislation remains implicit.

Before further analyzing the context, it is highly important to recognize and elaborate on Emmanuel's position compared to the position of the landowners. As became clear in chapter four; Emmanuel was able to study at University level and is therefore highly educated. When entering the small-scale mining sector, he got himself informed so became rather knowledgeable on mining issues such as its legislation. Additionally, he had a social network which also enabled him to get well-informed – such as his acquaintances at the Minerals Commission. His knowledge about mining legislation, -practices and business combined with his license which gave him the authorization over the sub-soil, enables him to position himself as a hybrid governor. As Li (2013) has clearly illustrated, compensation is a

matter of deciding on equivalences; how things are made comparable and exchangeable based on forms of quantification and standardization. Moreover, Li uses the notion of equivalence to refer to two different yet related processes. Firstly, equivalence may refer to the scientific and technical tools which are used to make matters quantifiable and comparable. Secondly, equivalence can be a political relationship characterized by an ongoing negotiation concerning what counts as authoritative knowledge. She illustrates the latter in a case concerning a large-scale mining whose operation might have great environmental and social effects. Therefore, peasant farmers, agriculturalists, environmentalists and other critics found themselves in a constant struggle over who had the authoritative knowledge. This issue might have also arisen in Ekorso, were it not that in this context there was only one person who was considered most knowledgeable. This hierarchy of knowledge and authority in which Emmanuel was on top, established him as the main information provider. This resulted into him being able to capitalize on the implicitness of the law by implanting his own conventions and compensation schemes. This can be exemplified by the case of the queenmother. The law stipulating that the land use has to be compensated can be widely interpreted. For licensee this might entail that they have to pay when they start utilizing the land. However, landowners often obtained the plot of land through inheritance and viewed cultivating the land as a long-term investment, for it is something they can pass on to their children. One respondent explained that his land was originally owned by his late father but now him and his siblings were cultivating the land. Land therefore can have the same semantic as Li encountered for water in a locality on the border of Chile and Argentina. She stated that “the canal binds people through kinship ties as water rights passed from parents to children, and it is also a crucial element of community membership, since it requires users to fulfill certain obligations related to the maintenance and administration of the canal” (2013: 23). Thus, while the law makes it seem as if the land is easily quantifiable and commensurable with money, it can never really be standardized and therefore compensation payments are never truly equivalent. Additionally, the law not further specifying ‘land use’ increases incongruence between the licensee and landowners. As the queenmother pointed out, her issues started when Key Empire started to heap the over bedding on parts of her land plot. To her, this indicated that the company had used her land for mining related activities and consequently she wanted to be compensated. However, the mining company did not share that perception. Emmanuel stated that the company was definitely going to pay her but not until their mining activities would have reached her land. Merely heaping the over bedding – according to Emmanuel a solution born out of necessity – was not

regarded as a form of ‘using the land’. Therefore, paying compensation could be postponed. This compensation scheme had great economic benefits for the mining company. Within the mining sector, revenues are only yielded when selling the extracted gold, while the mining activities preceding selling the gold (prospecting, constructing pits, paying compensation) merely in debt a mining company. Consequently, postponing paying compensation allowed Key Empire to invest their thus far accumulated money into other matters so compensation can be paid later from the yielded revenues. This intertwined relationship between mining and debts has been addressed by Panella (2010) who used the concept ‘world of debt’ to describe the gold mining sector since “debt relations are (...) of a crucial importance in order to interpret the micro-dynamics on a mining site” (Panella 2010: 5). The fact that the law does not lay down a time-frame in which the compensation ought to be paid enlarges the room for mining companies to play around with the interpretation of the legislation and install their own licit conventions. As Emmanuel stated: “we cannot pay every farmer at the same time. It has to be gradual and it also has to be according to the way we mine”. He did acknowledge that the queenmother had to be compensated for the road which had been constructed on her land. However, he added that by constructing the road the company had not destroyed or destructed any crops they had been cultivating, since the maize had already been harvested while the cacao trees were not ready to be harvested yet. This remark brings us to the second stipulation of the law: compensating for the destruction of the crops.

Since compensation ought to be paid for the loss of crops, the legislation could have incorporated set amounts for different types of crops. However, the law neither provides such an overview, nor does it refer to a government body that offers specifications regarding values of crops. Upon asking Emmanuel about the existence of such an authority he mentioned the ‘Valuation Board’, a board of the Ministry of Lands and Natural Resources. They, according to their website, are responsible for advising on “all land-property valuations for rental, capital, rating and compensation purposes”.⁹ Emmanuel stated the company would only mention the Valuation Board if the negotiations became too difficult. However, none of the landowners Key Empire had compensated thus far had decided to get the Valuation Board involved. The reason being, according to Emmanuel, that Key Empire always offered a higher amount than the Valuation Board. Moreover, the room for negotiations which subsequently existed seemed to be highly appreciated by the company. This aligns with one of Li’s findings, namely that “compensation agreements allow companies to negotiate

⁹ <https://www.newsghana.com.gh/minerals-commission-debunks-gnassm-claims-over-issuance-of-licences/>

directly with communities, making it more difficult for (...) government agencies to block a project's approval" (2013: 30). Since in Ekorso, Emmanuel was most knowledgeable on these issues regarding legislation and government bodies, most landowners got their information from him. It is therefore questionable whether landowners even were fully aware of the existence of the Valuation Board and if so, whether they have ever verified if the amounts offered by Key Empire are indeed higher than what the Valuation Board would recommend. Due to the implicitness of the law and subsequently Emmanuel's position as authorizer enabled him to base his conventions on his personal interpretation and likings of the law. When elaborating on paying compensation for destructing the crops on the queenmother's land he stated the following:

The cacao which was there, is a very small cacao (...) And so as we speak we have not really caused any damage, in terms of income to her. If for instance if they are supposed to harvest the cacao [that is on the land now], it is going to take them like a year or a year and a half before they can harvest it.

This statement illustrates how his interpretation equates 'loss of crop' with 'loss of income'. This equation enables the mining company to take several nuances into consideration when deciding upon compensation; such as the maturity of the plants, the period until they would have been harvested and when, subsequently, the loss of income would have been suffered. Emmanuel stated:

So that for instance if I happen to be in the middle of two farmers and one farmer has cacao that he or she is going to harvest [in] a year and then there is another farmer who is harvesting it now. I will pay the farmer who is harvesting it now, because he is earning a certain income from it, but the [other one] is not. I will probably postpone [paying the compensation] for about five months or maybe six months or eight months or something. Because I know that it will not affect her income or his income in any way.

The important difference between 'loss of crops' and 'loss of income' lies in the fact that 'loss of income' allows mining companies to play around with temporality: deciding on the sequence of mining activities. Due to the implicitness of the law, they can install their own licit conventions which are based on, and serve, the timing of the company. What the case of the queenmother makes clear is that both landowners and mining companies highly value

temporality, but it expressed itself in different ways. Many respondents that were landowners expressed feeling cheated by the mining company since they had started utilizing the land before paying compensation. At the same time, the licensee has to consider the different expenses of the operation. The mining company constantly finds itself in between indebtedness and having revenues which are partly used to pay off certain debts, partly to invest and partly mere profit. As Li (2013) illustrated, a substantial part of compensation agreements and deciding on equivalence is based on calculations. However, the involved parties often have different views on what these calculations should entail. Since the legislation does not provide any further guidelines, the licensee can step in as an authorizer and implement his own licit conventions based on his knowledgeability. The landowners often follow his lead in the compensation schemes due to the knowledge gap. Thus, what this case illustrates is how the implicitness of the law, combined with the fact that the gold mining sector is a world characterized by indebtedness (Panella 2010) causes compensation schemes produced by mining companies. Producing these compensation schemes are possible due to temporality since temporality structures what is considered acceptable as equivalent to the land the landowners have to temporarily transfer to the mining company. Consequently, these compensation schemes shape the social structures between the actors involved and while these compensation agreements can “resolve disputes” they can “also lead to the multiplication of conflicts” (Li 2013:26).

6. Conclusion

The study presented in this thesis problematized the constructs of ‘small-scale’ and ‘(il)legality’. It firstly addressed the notion of ‘small-scale’. The Ghanaian mining law established the requirements for a concession to be small-scale: the concessions can maximally consist of 25 acres. Scholars have added to this categorization by creating different typologies based on ethnographic fieldwork. Based on ethnographic fieldwork in two different localities, this thesis analyzed two small-scale mining operations allocated within a five-kilometer span. This analysis showed how the two small-scale operations use different mining methods to extract the gold from the ground. Where Key Empire in Ekorso used a tromel to wash the gold containing gravel and consequently employed under thirty workers, ATK in Asamama used the suagum method which they outsourced to around 150 so-called casual workers. Juxtaposing these two mining operations resonates with the argument made by Ferring et al. (2016), namely that the sector is much more heterogeneous than the generalized characteristics dictated to the sector, such as low technology and mechanization, labor intensive, low capital investment and high risk (2016: 173), seem to imply. Ferring et al. therefore emphasize the need for an opening up of the conceptualizations of small-scale mining. These conceptualizations they refer to are inevitable and helpful, however, there is a risk of missing important nuances when merely focusing on these conceptualizations and generalizations. Along those lines, conceptualizations may make scales seem irrevocable – notions which unquestionably and unchangeably exist within the world. However, as Tsing (2000) argues, scales are *created* and *produced*. Moreover, she states, this process should be brought up for discussion so the details of scale-making can be scrutinized. The two different small-scale mining operations in two nearby communities that were studied during my fieldwork period vary greatly and thus illustrate how challenging it can be to create a fitting typology for the sector. Moreover, during my stay, both operations kept changing and evolving; using new equipment, trying different techniques and adjusting their mining ways to increase their efficiency – showing how practices of small-scale mining are ever-changing.

Furthermore, this thesis illustrated how opening up the conceptualizations of small-scale mining makes us susceptible to nuances within the sector. Not being completely guided by pre-defined typologies of what small-scale might be, made it possible to studying both concessions with an open vision, resulting in analyzing different mining manifestations occurring within the same small-scale concession. Key Empire allowed dredges to work in the old pits where they extracted the gravel from the bottom and walls of the pit. These

workers were not employed by the mining company but considered ‘sub-contractors’. The agreement they had with Key Empire was that they ought to pay a daily fee to the company, but they could keep their gold revenues. ATK also allowed other miners to extract gold from the left-over gravel they had dug up. These kuli kuli miners would collect the remaining gravel on the platform which had not been processed by the suagum workers. Since the revenues of the kuli kuli miners were rather small, they did not have to pay a fee nor were they by any means mining in name of the company. Most studies addressing articulations within the mining sectors have focused on cohabitation on large-scale concessions between a large-scale company and small-scale operators (Hilson 2002b; Luning and Pijpers forthcoming 2017; Teschner 2013) mining either with or without full consent of the license owner. However, this thesis illustrates how cohabitation also exists within the small-scale sector and between different small-scale actors.

What the present study additionally argues is how the heterogeneity of small-scale mining and the cohabitation forms within the sector can (continue to) exist due to the implicitness of the law. The Minerals and Mining Act (2006) has effect both through its specifications and its silences. The specifications shape the sector, while the silences leave room for hybrid governors to come in and (re)install their own conventions. Thus far, scholars have mainly addressed the implementation of conventions by either state-, traditional- or political authorities (Geenen 2016; Hentschel et al. 2002; Hilson 2001; Luning and Pijpers forthcoming 2017), therefore, the added value of the current study lies in the finding that individuals can also become hybrid governors through their knowledgeable. The concession owners of both mine-sites studied capitalized on the fact that the law does exhaustively specify issues such as mining methods and the payment of compensation. They were therefore able to implement their own conventions. Conventions such as owning more than two concessions under subsidiary companies, allowing the dredges on the concession and considering them as sub-contractors or enabling the kuli kuli miners to profit from the revenues they made by processing the left-over gravel. These conventions, however, do not necessarily fit within the legal framework, yet are fully condoned by the parties involved. Therefore, this thesis argues, that the notion of ‘licitness’ (cf. Abraham and van Schendel 2005) is better suited. These licit conventions by hybrid governors are highly important for they structure cohabitation forms – cohabitation forms as elucidated; between their company and other small-scale miners and cohabitation forms between their company and landowners. Since there is a highly intertwined relationship between gold mining and agriculture, articulations between landowners and miners are inevitable. Therefore, the law structures this

relationship by obliging the mining companies to pay compensation, yet at the same time, it is implicit about many aspects of the actual payment. Consequently, discussing what matters can be compensated and their monetary equivalent is left up to the licensee and the landowner. Li (2013) states that part of these compensation agreements depend on calculations. Since the licensee are often most knowledgeable, their calculations will predominantly be used in deciding on compensation. Additionally, the equivalent on which the compensation-schemes are stooled cannot be fully understood without the notion of temporality: the order in which the mining related activities are carried out. One of the aspects of compensation, which the case of the queenmother exemplified, is how interpreting 'destruction of the crops' as 'loss of income' allows for compensation-schemes which based themselves on when the loss of income will be suffered. This resulted into different landowners getting compensated at different times. The case therefore illustrated how temporality shapes social contacts and structures what is considered acceptable as equivalent.

Thus, by studying the practice of small-scale mining on two localities, this thesis illustrates the heterogeneity of the sector with its wide variety of methodologies and its fascinating licit conventions. The most important argument of the present study is while conceptualizations, categorizations and typologies are inevitable and useful, it should always be acknowledged that they are *produced*. With this acknowledgement it is recognized that the matters which are being defined are subject to change. Without this acknowledgement we as anthropologists are running the risk of missing out important and interesting nuances such as the cohabitation forms within small-scale miners or the licit conventions of hybrid governors. Such matters could be overlooked if we would analyze small-scale as a pre-defined sector with merely legal and illegal actors and state regulation. Moreover, being susceptible to such nuances not only does the small-scale mining sector more justice, it additionally opens up fascinating new anthropological research objects.

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