

The ASM Industry and Ghana’s Industrialisation Vision: Moving beyond the Discourse of the “Galamsey” Menace.

The Third World Network – Africa (TWN-Africa) Position Paper on Artisanal and Small-scale Gold Mining (ASM) in Ghana

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1. Introduction

Traditional artisanal mining (TAM) by natives of the Gold Coast, the disparate territories which later fell within the demarcated territorial boundaries of the nation-state of Ghana, predated industrial/large-scale mining by several centuries. The mining of gold by the inhabitants of the Akan forest area of modern Ghana illustrates this clearly. The indigenous people of this area devised simple, but effective and sustainable technologies of mining, that supplied Europe with significant quantities of Gold between the thirteenth and nineteenth century. This traditional artisanal mining (TAM) – as distinct from present-day artisanal and small-scale mining (ASM) – served as one of the major sources of the gold that reached Europe via the trans-Saharan trade routes, prior to the landing of Portuguese on the Guinea Coast of West Africa (Hilson 2002; Ofosu-Mensah 2010, 2011, 2013). It was gold obtained through TAM that served as the driving force of the booming gold trade between the natives of the Gold Coast and the Portuguese and Arabs in the pre-colonial period. Indeed, as far back as between the 5th and 6th century the indigenes of the Gold Coast participated in the gold trade between the Phoenicians and Carthaginians and the people present-day West Africa (Ministry of Lands and Natural Resources [MLNR 2017: 1). We are informed by Ofosu-Mensah (2010: 124) that ‘Bono Manso noted to be the first of the powerful Akan Kingdom flourished on the gold trade during the trans-Saharan trade. Denkyira, then located near the site of the modern Obuasi gold mine, established power based on gold trade with European merchants at Elmina in the seventeenth century. Asante, Akyem, Twifu and Wassa had gold with which to obtain weapons from European trade establishments.’

This position paper makes three closely related arguments. First, TAM has changed profoundly over a long period of time, spanning formal colonialism in 1874, the early decades of the postcolonial years, and in the era of the dominance of free market development policies

between the 1980s and 2000s. What is so much reviled as the menace of ‘galamsey’ or ASM, is completely a different phenomenon from TAM, even if – and as is to be expected – they are interconnected. Second, the main driving forces of these changes, are both local and global; and revolve around the central role of the state (both colonial and postcolonial) as a “development” actor, as well as around global forces of capitalism such as transnational mining capitals, global governing institutions, and old and new imperialist states. Third – and situated in the political-economic context of Ghana’s quest to industrialise, partly, on the back of its natural resources – the ASM industry should be reinvented and integrated into the industrialisation plan of the country. This must be done in ways that envisage and make the ASM industry as one of the central nodes of the intersectoral and value-chain linkages which are to be forged to engender the structural transformation of the Ghanaian economy to an industrialised economy of scale and scope. The upshot of the three arguments is this: the ASM sector can be made environmentally sustainable while contributing to national development, especially providing income and employment to the poor segment of the rural populace who are involved in the sector. Therefore, it is important that current mining policies and visions, like the Africa and Ghana mining visions, factor in the ASM as one of the pillars of the success of these policies.

In the following pages, the arguments will be fleshed out in the following order: section two provides a survey of the ASM gold sector in Ghana, at pains to track the historical changes that it has undergone from the precolonial, colonial, early decades of the postcolonial era and the era of free market development policies between the 1980s and present. This narrative will necessarily be connected to the history of gold-mining and its role in the political economy of Ghana because the ASM industry is part of the broader mining sector of the country. The role of the state in the ASM sector is examined in the third section. The main theme of the discussion is

the policies and laws designed by the state (colonial and postcolonial) to regulate mining and to channel the country's gold-wealth to its "development". However, no discussion of the role of the Ghanaian state in the ASM industry, in terms its actions and inactions, will be logical and convincing without building the foundation of this discussion: that is addressing the questions just what is the state and why does it behave the way it does. So before discussing the role of the Ghanaian state in the ASM industry, section three begins with a brief theoretical and empirical discussion of exactly what the state is, what informs what it does or does not do, the notion of a unique "African state", and how or not this specific form of state is responsible for the "formal-informal" ASM industry of Ghana. The penultimate section surveys recent developments in the ASM industry, focusing on Chinese and foreign actors, the biased and extremely negative media reportage on the ASM industry, and the military action taken by the newly elected Akufo-Addo-led government – the government of the party ideologically committed to democracy and human rights – to stamp out galamsey. The last section focuses on the sub-title of this position paper: moving beyond the discourse of the galamsey menace. It states and discusses strategies to improve the sustainability of the ASM industry and the ways in which it may integrated into the industrialisation strategies of Ghana; particularly, strategies aimed at forging forward, mid, and backward linkages between the extractive industry and other sector of the national economy.

This position paper draws on mainly secondary sources such as scholarly and grey literature, as well as national and international policy and regulatory frameworks such as Ghana's Minerals and Mining Policy frameworks, statutory and legislative instruments on mining, the Ghana country's mining vision (CMV), ECOWAS Minerals Development Policy(EMDP) and the Africa Mining vision (AMV), as well as various policy documents with implications for ASM operations.

2. Survey of the ASM Gold Sector in Ghana: Historical Backdrop and Main Features

Most of the gold mining in the period preceding the mid-nineteenth century – that is the traditional artisanal mining (TAM) – was sedimentary; a method of mining in which miners recovered gold from the ground and then washed it out in the river banks with wooden calabashes. Some of the gold was also obtained from streams and in the sands located on the coasts of the water bodies, where it had been washed down by rain (Kimble 1963; Gocking 2005). Bosman (1698) states that the gold was obtained in or between hills and in river gravels where the streams enter the sea. Three main methods of TAM are discernible from the variegated methods used by the natives of the Gold Coast: shallow pit, deep shaft and alluvial. The latter was the most commonly used, and the rest, though used in some parts of the Gold Coast, was relatively rare. Alluvial mining entails retrieving sediments from rivers containing gold particles, which was then washed multiple times to distil gold from the sand (Hilson 2001: 16). Barbot (1732), provides, perhaps, one of the most vivid descriptions of TAM:

(Natives) plunge and dive under the most rapid streams, with a brass basin or wooden bowl on their heads, into which they gather all they can reach to at the bottom...When full, they return to the bank of the river, with the basin on their head again, where men and women are ready to receive and wash it...The gold comes up some in small grains, some in little lumps as big peas or beans, or in very fine dust (cited in Hilson 2001: 16)

By this method of mining, TAM draws closer to “gather and sell”, the original and English words used to describe the method, but pronounced as “galamsey” by the local people who could not read and write English.

The illegalisation of TAM – and to re-emphasise, the time-honoured means of social reproduction of the people of the Gold Coast as distinct from ASM – has long historical roots connected to colonialism and the colonial state. In harmony with its fundamental goal exploiting the natural resource of the Gold Coast, the British colonial state put in place measures that ultimately banned TAM. These measures constricted the mining rights of the natives to protect the profits of European companies rather than supporting local people in their efforts to make a living from the gold found under the belly of their lands. This signaled the beginning of state control and the illegalization of local or artisanal and small-scale mining (ASM) in the Gold Coast; a development that effectively prevented Gold Coasters from participating in the gold mining industry except as labourers (Hilson 2005). Having lost its etymological roots in the history of TAM, ‘galamsey’ gained its most reviled notion as not just illegal mining, but a social and environmental menace in Ghana. Indeed, ‘galamsey’ is not just one menace among many in Ghana, but the menace threatening the very existence of the country, and something to extinguished once and for all. Yet, if the new semi-industrial and small-scale mining, lumped together with TAM as ‘galamsey’, are decoupled from it, what remains will be closer to native people engaged with their traditional and time-honoured strategies of social reproduction – just like farming and blacksmithing and goldsmithing.

The misconception of ASM is that it is a “get rich quick scheme” and that the lure of ‘fast money’ is what is attracting these miners (Hilson 2011). However, many scholars fail to examine the history of ASM and its economic benefits to those who participate in it. Its contribution to wealth creation, employment and the economy make it one of the nation's most important livelihood activities, directly employing an estimated one million people and supporting approximately 4.5 million more (Hilson and McQuilken 2016).Ghana’s gold rush could provide

hundreds of thousands of jobs and many tax revenues, instead the people benefitting most are the illegal miners. What is happening here is an example of a country with rich natural resources, but weak governance. The new rush for resources in Ghana will affect the lives of millions; for some, it will be a path to prosperity but for others it will ensure they remain locked in poverty for decades to come (Hilson et al. 2007).

It is important at this stage to examine what drives people to mine illegally and why the industry is steadily growing, despite its illegality. Firstly, gold mines are attractive, especially for those hoping for a lucky break. In their search for a better life, large numbers of the unemployed, largely young people from communities near mine sites, move to the mining towns. Unfortunately, they are often unable to secure jobs due to their low educational qualifications (Siegal, Veiga 2009). Social injustice is another reason that forces people into this venture. All the major companies and corporate entities are located in the capital city of Accra with few regional branches in the regional capitals. As a result, jobs are concentrated in the large cities so people in the villages look to small-scale illegal mining or galamsey as a gainful “employer” no matter how objectionable this “employer” is (Tsuma 2006). Today, there is a high level of unemployment in Ghana. There are simply not enough jobs being created by the economy and therefore, the scale of unemployment inevitably pushes genuine job seekers into illegal mining (ghanaweb.com 2010).

Themes to be discussed further on the characteristics of the ASM gold industry in Ghana are:

1. The evolution of ASM mechanics and techniques

Traditional mining was relatively speaking, not labour intensive (Hilson 2001). The average size of labour required for a traditional mine varied with the scale of operations. In general, the traditional mine labour force was not different from those used in farming, which was the

dominant occupation in those times. The indigenous miner searched for and mined gold with his family members. The men dug the pits often with the help of their sons. It was an advantage for a man to have several wives, as they and their children provided the labour required for panning (Brenya 1998). Traditional mining required a small labour force because it was a part time job for the farmer-miner who used mining as a supplement to subsistence farming and craftwork (Hilson 2001). Thus, the scale of an indigenous mining operation was very limited in size. The most commonly used tool in shallow-pit mining was a digging hoe or adze. G. E. Ferguson, the Fante geologist and surveyor, stated that when passing through the Upper Birem Valley of Akyem Abuakwa in 1890, he noted that local diggers had developed a more specialised digging instrument – a kind of narrow bladed spade with a long handle (Nyame 2013). It was used to press the ends against the walls of the shaft for support in descent and ascent.

The modern small-scale artisanal miners utilise old techniques of digging their trenches with the same tools that were used in the olden days. However, the difference between the two is that, whereas the old traditional miners abandoned their shafts upon hitting the water table, the galamsey miners of today use of water pumps to pump the water from their shafts and continue with their activities (Nyame 2013). Galamsey is slightly more advanced than traditional mining in the application of mercury and cyanide to retrieve gold, whereas the native miners did not know how to recover the gold when it was locked up. Finally, there is a contrast between galamsey and traditional mining in terms of the labour used. In the past, mining was a family business, but now, companies hire others badly in need of employments, to mine for them.

The tale of indigenous African mining in Ghana has been one of resilience in the face of adversity, more specifically, poverty (Hilson 2001). Even when it was deemed illegal due to pressure for Britain, indigenous African mining technology survived and adapted to the changing

times by merging some scientific practices with it and in the process, creating a new mixture form of artisanal mining known as galamsey.

2. Environmental pollution caused by ASM – mechanics of small scale mining

The law in Ghana regarding small scale mining is that no mining is allowed within 500 metres of the water bodies (Hilson and Garforth 2011). However, many mining operators are now focusing their efforts on the rivers themselves, using electric machinery to lift mud up to the surface from the river bed. This is then treated with chemicals, including poisons such as cyanide, lead and mercury, to extract the gold before the waste is deposited back into the rivers (Ackah-Baidoo 2012). With most of these illegal miners being illiterates, they unknowingly use hazardous methods to process their gold. Mercury is poisonous, and when discarded into streams, it builds up in fish consumed by the locals. Aside from the dreadful consequences this has for aquatic life, the toxins are absorbed by humans because fish is a necessary food source and the rivers are often the only source of water for drinking and bathing (Hilson 2013). Dozens of people have died and hundreds more have been poisoned because of the after effects. Mercury in humans can cause kidney problems, arthritis, loss of memory, miscarriages and psychotic reactions (Tsuma 2009).

While the long-term effects are yet to be seen, the short-term effects are very visible and troubling. For example, within rural communities who rely on the water bodies as their only source of water, diseases such as cholera and rashes, are rampant. Mercury poisoning is another effect that heightens the environmental pollution. Mercury is a banned substance in Ghana, however these miners have very easy access to it (Hirons 2013). Once the water bodies have been contaminated with mercury, the living things within also become contaminated. Because of the lack of regulation, the chemicals used to extract the minerals are released into water bodies, which later go into the farming lands; so not only are the people drinking potentially harmful chemicals,

they are also eating them (Hirons 2013). A recent study conducted by the UN Industrial Organisation found that the majority of villagers sampled, including non-miners, carried unsafe levels of mercury in their bodies. The concentration found in fish was three times higher than levels deemed safe by the U.S. Environmental Protection Agency (EPA). Reports also state that, “in a week at least one person dies” as a direct result of the various pollution-related activities by illegal miners (CLP, Galamsey: Will Work for Gold, January 18, 2010).

3. Class dynamics/actors

The sharp rise in the price of gold from 2008 to 2012 sparked a modern-day gold rush as thousands of Ghanaians turned to gold digging. Even though the price of gold has since dropped, there has been no sign of these small-scale miners, known as galamsey, giving up in their search for gold. As to be expected, there are class differentiations and dynamics within the small-scale mining community. Primarily, there are those who do it purely for livelihood reasons – the poor. Thirty percent of Ghanaians live beneath the poverty line, and the most impoverished are unskilled and illiterate rural dwellers with very few employment options (Ofosu-Mensah 2011). When their backgrounds are checked, you will learn that more than often, they are children and descendants of those who lost their farming lands to large scale mining companies, where very little or no compensation was paid (Hiron 2013). The children of these families had to drop out of school because their parents could not afford it, and therefore have to turn to small scale mining, as a means of survival; therefore, the cycle continues. Due to their lack of education, they cannot even be hired to work ‘legally’ for the large-scale mining companies, so what other choice do they have than to participate in galamsey? These families work for their daily bread, and not for their futures. As stated by Dr. Kevin Telmer in his documentary, *The Money Stone*, small scale mining is not people in poverty, it is rather people taking the first step to escaping poverty. There is no flight of

capital or income associated with small scale mining because every penny earned stays within the local economy because these rural miners spend the money they make within their communities.

There is also an apparent class struggle within the miners themselves. Miners are divided into gangs, consisting of ten to fifteen members. Each miner typically has his own role in the group and is charged the different tasks. The leader or 'ghetto owner' is followed by the chisellers, who are responsible for extracting the gold carrying stones. Under them are the 'loco boys', who carry the stones up to the surface. These miners spend weeks digging a hole big enough to create a shaft deep enough to climb into. The hand dug tunnels can reach several metres in depth and miners descend and ascend with no harness or rope. Only a small minority of the gangs can afford equipment such as an air pump and water puller. Once underground, the chisellers explore the rock faces in search for traces of gold. When the precious metal is spotted, miners get to work with their chisels and hammers. As expected, it is very dark once underground, and the only thing used for light is a battery-operated flashlight attached to their hats. The heat is intense underground, as well, and miners use all possible methods to air the shaft. The last part of the mining process involves the transportation of extracted stones to a machine station, where Chinese-made technology is found (Hiron 2013). The stones are crushed by a machine named 'chan fra' into small pieces, until a fine sand is formed. The sand is then washed on inclined wooden boards, on which a series of blankets are located; these stop and retain the gold particles. The blankets are then shaken in basins, where the gold is finally collected. Mercury is added to separate the mineral. This process can take several hours before the ore is separated and ready to be sold. Usually, miners are not required to pay the machine owners for the use of their equipment. They are, however, required to sell the gold to them at a very low price. The machine owners then travel to major cities to sell the gold at market price (Hilson et al. 2013).

Another class within the mining company are the ones who do it for commercial purposes - those who have other means of making a living but choose to do small scale mining because they can make money faster. These are the well-educated and well-connected 'opportunistic entrepreneurs' who, due to their unique position and access to significant capital investment, are able to navigate through the barriers to obtain a licence (Hilson and McQuilken 2016).

4. Relationship between galamsey and big mining companies.

The entry of Europeans into a previously exclusively African field of activity revolutionised the mining industry in the Gold Coast (Hirons 2013). Across Africa, China is striking deals to secure access to raw materials vital to its economic growth. China's government has given Ghana a three-billion-dollar loan to develop its infrastructure. More than ten thousand immigrants arrive in Ghana every year, all hoping to make money (Hilson 2013). There have been several deaths in violent conflicts between armed Chinese miners and Ghanaians. Since 2005, it is estimated that over 50,000 Chinese immigrants have arrived in Ghana to mine illegally for gold. Some have been arrested and deported, but thousands remain (Hilson 2013). It is widely known that the police are being paid off by the big mining companies, and synonymously provide them with permits to mine, all in the full glare of local politicians. This shows the weaknesses in the governance and causes friction between big mining companies and the local miners. With what some see as the complicity of the Ghanaian government, the foreign miners smuggle powerful machinery in the country, which allows them to plough their way through the gold-rich soil much faster than the galamseys, who work with handmade tools (Busu et al. 2015).

Mention must be made of the apparent accusations being levelled against mining companies in certain gold-rich communities like Obuasi, Prestea and Bogoso (Aubynn 2017). Some practitioners of galamsey argue that their lands have been appropriated by mining companies

and as a result, they are unable to farm as a means of survival, hence, venturing into illegal mining. However, some mining companies in the Western and Ashanti regions have adopted the policy of corporate social responsibility by helping the unemployed youth to go into agriculture (Aubynn 2017). This policy, has unfortunately failed, the reason being that illegal miners do not see agricultural projects and ventures as a way of making money as much money as they would if they mined illegally. Farming is now known as “a poor man’s occupation” (Hilson 2015).

5. Women and Children Participation

One of the most devastating effects of illegal mining is children as young as seven years of age are the manual hands in the mining process. Classrooms have become empty in galamsey operation areas. Teachers and opinion leaders appear helpless at stopping this trend. Galamsey operations come with the attraction of money on a daily basis. Though many children are exploited by their employers, they get introduced to the world of galamsey by their families, and once they have got money to help take care of their homes, find it hard to quit (Koomson 2017).

The gender division of labour within galamsey is quite prevalent. For many others, it has become the only means of survival. Women in ASM are particularly marginalised. They may constitute up to 50 per cent of the labour force and are engaged largely as haulers and washers, and service providers (Koomsen 2017). Pregnant women sweat and labour in these pits, risking not only their lives, but the ones of their unborn children. Young mothers virtually live in the deadly pits - eating, bathing and nursing their young with no choice but to withstand the dangers involved. In the process, an unintentional generational cycle of hardship, poverty and danger are being set in motion.

6. Negative Social Implications of the Galamsey Industry

One major complaint concerning mining companies is the erosion of social values with the prevalence of prostitution, drug and alcohol use (Hirons 2013). According to CARE International, a non-governmental organisation working in Tarkwa, there are two types of sex workers in the area: mobile and resident sex workers. The resident sex workers service mostly the local workers employed with the large mines and the galamsey community. It is believed that the growing incidence of HIV cases in mining towns like Tarkwa (in fact the highest in the Western Region) is a result of the influx of sex workers to the area (Koomsmen 2017). The same reason can be assigned to Obuasi which has the highest HIV/AIDS cases recorded in the country (Akabzaa et al., 2007).

It is common knowledge among many residents of the various mining towns that an addictive drug sub-culture is growing in these areas. Mining, which involves excessive physical exertion, is tasking and risky hence, the high drugs use. The drugs used by these miners are preferred for their performance enhancing qualities, i.e. they consume them with the belief that it would stimulate them to work hard (Akabzaa, 2000). Marijuana or Indian hemp (cannabis sativa) and other addictive drugs are on the increase among galamsey operators.

3. The Role of the State in the ASM Sector

Key themes to be discussed under this section:

1. The state: what is it? What does it do or not do, and why?
2. History of the intervention of the colonial state in TAM

3. The history of the intervention of the post-colonial state in mining, between 1957 and now – the empirical role of the state (laws, acts and policies)
4. Formal-informalisation of ASM in GHana
5. The international dynamics shaping the role of the state in the Ghanaian mining industry: policies and regulations in whose interests the

As stated in the introduction, small-scale artisanal mining, which was a respected tradition in Ghana for centuries, became a persecuted profession after the British colonised the region in the early 19th century and banned the practice. This attempted to exclude the local people or the indigenous miners from the mining industry, which had been their main business up to the 1880s and turned it into the exclusive opportunity of European capitalists only (Ofosu-Mensah 2011; Hirons 2014). Moreover, small-scale galamsey mining was banned by the government because of the uneducated use of certain chemicals such as mercury and cyanide in the operations of the artisanal miners. In the course of the colonial period, a lot of mining firms that were working in the Gold Coast made extensive use of mercury to retrieve gold. With no rigorous legislations or environmental concerns regarding acquisition, use and disposal, mercury was the most appropriate choice for many of the gold-mining companies operating in the country (Hirons 2014). The Mercury Ordinance of 1933 was, therefore, passed by the colonial government to regulate the purchase and prohibit the sale of mercury to the natives. Through this legislation, the use of mercury by Ghanaian miners was regarded illegal (Hilson 2012).

Powerful individuals within the formal mining sector play a key role in ensuring that the gold produced through galamsey finds market in the formal gold market. In Ghana, this role is played under the domain of the District Small Scale Mining Centres, which are responsible for

marketing legal small-scale operations as well as collecting the gold for local consumption (Abdulai 2016). Powerful individuals – who hold top positions in government, traditional councils and in mining multinational companies - own these mining sites. Such individuals make it difficult to effectively clamp down on the influence of galamsey operations and keep the local demand for gold by acting as middlemen to the agencies responsible for regulating the mining industry. These individuals also keep the market chain for mercury open despite the ban of the substances in mining since 1933, prohibiting the trade and use of mercury in any mining operations (Tsuma 2009).

In attempt to regulate ASM, the Minerals Commission put out a framework that outlined the efforts and legislations being put into effect. The government conceded to the importance of artisanal mining and for that reason the Provisional National Defence Council (PNDC) administration legalised small-scale mining in 1989, because it is an important player in the country's mining sector (Ofosu-Mensah 2011). As part of the minerals sector restructuring and in an attempt to regulate the industry, the small-scale mining sector was formalised through the enactment of PNDC Law 218, the Small-Scale Gold Mining Law. Under this law, the Small-Scale Mining Project, a department of the Minerals Commission is responsible for registering and supervising small-scale miners in the country. The project has so far registered over 600 co-operative and individual small-scale miners (Akabzaa 2000).

Compared to other Sub-Saharan countries, Ghana is ranked rather high when it comes to its government capacity (Akabzaa 2000). In spite of this, the government is said to have major challenges with regards to its capacity in relation to the small-scale mining sector. In 1989, Ghana established the Precious Minerals Marketing Company (PMMC) with the objective of increasing the governmental income from the small-scale mining sector, as well as facilitating a market for the small-scale miners (Hilson 2003). However, as both Hilson and Teschner claim, the

organization does not only buy from the legal small-scale miners, but also from the galamsey (Hilson, 2003; Teschner, 2012); even the Chinese galamsey are also selling to the PMMC.

Despite the legalisation of their operations, some still operate illegally. The small-scale mining law requires them to register with the Minerals Commission who would grant them licences to operate in specific areas designated for small-scale mining operations but because of the frustrations they meet in the registration process, many of them opt to operate illegally. This has given rise to two groups of small-scale miners, those registered and licensed and those operating illegally (galamsey). Further, according to Hilson, most locals are reluctant to undergo training to become registered legal miners (200). This is because governmental policy processes have not been done with sufficient “stakeholder participation”. It is even reported that many managers and mine engineers state that efforts taken with regards to policymaking and implementation in the mining sector has been done very poorly (Hilson 2001), with very little conversation with the miners and those actually involved in the industry.

Table 1 gives a short history of legislations and laws passed in the attempt to regulate artisanal small-scale mining. Table 2 shows ongoing initiatives put on by the government of Ghana and other organizations in an effort to come up with solutions.

Table 1: The Regulatory Framework for Artisanal Small-Scale Mining in Ghana¹

YEAR	LAW OR REGULATION COVERING ASM	DESCRIPTION IN RELATION TO ASM
1989	Legalisation of small-scale gold mining	The Small-scale Gold Mining Law 1989 (PNDCL 218) regulates: registration activity, granting of gold-mining licences to individuals, groups and registered cooperatives, licensing of buyers, and the establishment of district centres to support applicants.

¹ Sources: Hilson and McQuilken (2016); Hilson (2001); ICMM (2015); Ghana Legal (2015); FAO (2015).

1989	Precious Minerals Marketing Corporation Law, 1989 (PNDCL 219)	Changed the Diamond Marketing Corporation into the Precious Minerals Marketing Corporation (PMMC) and authorised it to buy and sell gold.
1993	Minerals Commission Act, 1993 (Act 450)	Established the Minerals Commission (MinCom) as a corporate body and defines its functions and powers.
1994	Environmental Protection Agency Act, 1994 (Act 490)	Functions of the agency include the issuing of environmental permits, prescribing and ensuring compliance with environmental regulations.
1994	Water Resources Commission Act, 1996 (Act 552) and Water Use Regulations, 2001	Regulation of domestic and commercial water use and where MinCom, in consultation with the EPA, considers the proposed water use to require an environmental management plan.
1999	National Land Policy	Land policy plan that incorporates range of existing land laws and regulations for the first time.
2006	Minerals and Mining Act, 2006 (Act 703)	Act revising and consolidating mining and mineral law. Empowers the minister, after consulting MinCom, to designate areas for ASM operations. Repeals the Minerals and Mining Act, 1986 (PNDCL 153) and Small Scale Gold Mining Law, 1989 (PNDCL 218) among others and incorporates existing laws and regulations on the sale of mercury and minerals, use of explosives, requirement for environmental permits, etc.
2014	Inter-Ministerial Task Force on Illegal Mining	A presidential directive established an inter-ministerial task force to seize equipment and arrest and prosecute unlicensed small-scale miners and non-Ghanaians involved in operations.
2015	Minerals and Mining Amendment Bill, 2014 (Mineral Development Fund Bill)	Bill amending the Minerals and Mining Act, 2006 (Act 703). First, to enable the Minister of Lands and Natural Resources to prescribe the rate of royalty payments (formerly fixed at five per cent), and second, to enable the confiscation of equipment used in illegal artisanal and small-scale mining operations.
2016	Minerals and Mining Policy of Ghana	A broad policy document to guide the government in the management of minerals and mining with explicit objectives relating to the artisanal and small-scale mining sector.

Table 2: Ongoing ASM Initiatives in Ghana²

YEAR	INITIATIVE	PARTNERS	OVERVIEW
2008 – present	Natural Resources and Environmental Governance Framework	World Bank (International Development Association) and development partners Ministry of Lands and Natural Resources	Technical and budgetary support to improve natural resource and environmental governance through policy and institutional reforms and capacity building (World Bank, 2015). Multi-stakeholder workshops with over 1,000 participants in eight ASM office field locations. Developed Ghana ASM Framework identifying key issues and outlining a 1 to 10-year development plan for ASM (MinCom, 2015a).
2011 – ongoing	Certification efforts for ASGM in West Africa	Alliance for Responsible Mining Fairtrade International Solidaridad	Range of initiatives linking Western jewellers and consumers directly to ASGM cooperatives to certify the origin of minerals and minimum standards of production, and improve traceability and transparency of supply chains (Hilson, 2014; McQuilken, 2016).
2013	National Action Plan (NAP) on ASGM in accordance with Annex C of Minamata Convention on Mercury	United Nations Environment Programme United Nations Institute for Training and Research European Union Environmental Protection Agency Friends of the Nation Ghana	In the process of ratifying the Minamata Convention on Mercury to reduce, and where feasible, eliminate the use of mercury. Multi-stakeholder dialogues and workshops to sensitise and collect inputs to develop a national action plan — formalisation of ASGM, management of mercury use and trade, public health strategies (UNEP, 2013).
2015	Training Programme for Artisanal and Small-Scale Miners	University of Mines and Technology	Memorandum of Understanding for UMaT to train GNASSM members in various technical, management and

² Sources: Hilson and McQuilken (2016); Hilson (2001); Government of Ghana (2014); ICMM (2015); Minerals and Mining Act, 2006 (Act 703).

		Ghana National Association of Small-Scale Miners	health and safety aspects of ASM. Three-tiered programme (low, medium, high) with associated training manuals to equip miners with skills and promote best practice (UMaT, 2015).
2015	Re-categorisation of Mining Licenses	Ministry of Lands and Natural Resources (MinCom)	Reviewing the categorisation of ASM mining licences to account for changes in characteristics and enable foreign investment. The measures aim to reduce illegal foreign mining and increase the ASM tax and revenue base (MinCom, 2015a).
2015 - 2017	Computerised Licence and Administration System Project	Australian High Commission Ministry of Lands and Natural Resources (MinCom) Revenue Development Foundation (NGO experienced in revenue raising).	Technical assistance to improve the effectiveness, accountability and compliance of the management of mineral rights, mining licences and royalties. Support MinCom to develop a computerised administration system for the processing, management and monitoring of mineral rights and licences. Aims to help increase investor confidence and improve mining investment (Australian High Commission, 2015).

The Formal-Informalisation of ASM: Failure of state regulation of the sector

The government has allowed big mining companies to come in and take over the lands of those living there, so they feel they have no other choice than to participate in galamsey. The state has established a national security task force made of the military, the police, and immigration and custom officers. The use of force by the government is not sustainable, because these government officials cannot stay and regulate a particular land forever. Eventually, they must move on and

once they do, the miners return. What is rather sustainable, is for the government to provide an enclave in which these small-scale miners can continue mining but are properly supervised. The government can register these miners, inform them how to manage the environment but they must pay fees and taxes. There must be a way to formalize a segment of small scale mining that is actually recognized by the law. If the government actually formalized it, training could be provided (Ofosu-Mensah 2011).

What happens to all of the gold produced in small scale mines? Much of it is bought by the state's own gold trading body, the Precious Minerals Marketing Company (PMMC), or one of its 750 licensed agents. It openly states that it buys gold from small scale mines but claims it operates within the law and only buys from Ghanaians. However, as we all know, many of these mines are being operated illegally (Hilson 2016).

4. Recent Developments in the Sector Both in the Areas of Policy and Practice

1. Foreignisation of ASM in Ghana
2. Biased and negative media reportage on ASM: foreign large-scale mining companies (FLSMC) are angels?
3. Militarisation of the enforcement of laws on ASM – the paradox of liberal democracy?
4. New laws and policy frameworks (the MMIP, CMV,

In 2006 the policy framework for Ghana's mining sector was revised in what was called the 2006 Minerals and Mining Act (Act 203), replacing the Mineral and Mining Law 1986, PNDCL.153 (Techner 2013). The new framework was divided into distinct sections, where one entailed large-scale mining, and the other, section 81-99 applies to small-scale mining (Mining Act, 2006).

Throughout the past decades, China has to an increasing extent increased their cooperation with African countries, both through aid, but more so through the establishment of Chinese companies and foreign direct investments (FDI) within countries deemed to be rich with resources (2013). In the more recent period of mining, illegal Chinese miners play a significant role, not only in quantity, but also potentially in level of environmental degradation they are causing (Ayisi 2013). It is estimated that there are around 20 000 to 50 000 illegal Chinese miners in the country. As Kane describes, many Chinese miners are able to cross Ghana's borders on land, sea and air with no hardship(2013). Thus, an issue that becomes central in the analysis of the government's capacity to handle the situation is the state of its border control. The income from those operating illegally directly contributes to a situation where an increasing portion of the gold output disappears out of the country, without enabling Ghana to tax it (Hilson et al. 2013). Currently the tax rate for mining companies stands at 25%, but is currently considered by the government to be increased to 35% as well as introducing an extra 10% tax rate for all revenue (Booyenes, 2012). Along with a significant amount of unregistered locals, as according to the law, all small-scale mining conducted by any foreigners in Ghana is characterized as illegal, but is yet not stopped by the government (Hilson, 2001).

1. Media Reportage

Small scale miners produce about 15% of the world's gold right now. There are at least 10 million people directly involved in it in around 70 countries (Hilson 2011). The story that is rarely told in

the media is what a wonderful source of income it is for those living in impoverished communities, which is why it is happening. It is an effective way of delivering wealth to the poor, and it is a method of transferring wealth from the rich to the poor. According to Schiffrin (2009), the media cannot only expose wrongdoing but can also help decide and prioritize development policy by pursuing relevant issues on the agenda for public discussion and covering topics in a way that educates the public and policymakers and help societies decide how they want to approach certain developmental questions.

Small scale mining is continuously being cast in the media as an illegal activity, rather than a development opportunity (Hiron 2013). Hilson, &Adu-Darko (2014) mentioned that many studies conducted in Ghana on illegal mining, academic literature and the media reportage seemed to focus particularly on the environmental impacts of Chinese-infiltrated galamsey activities. As a whole, Ghana's media coverage of the mining industries has been unimpressive (Colmery et al, 2009). Media coverage is generally insubstantial and only 'skin-deep'. Different perspectives on the extractive industries are offered, for example, but rarely do articles engage the totality of the issue at hand or evenly present both pro and con arguments. Commentary on the issue at hand is regularly on provided by government officials and not the people actually involved. In-depth investigative articles, crucial to monitoring the illegal mining industry is notoriously lacking in transparency, and are simply not being written well (Colmery et al, 2009).

5. Moving beyond the Discourse of ASM Menace: Integrating the ASM Industry into Ghana's Industrialisation Strategies

1. The Linkages Approach
2. Application of the linkages approach to the ASM industry

3. Specific policy instruments

To ensure that illegal mining or galamsey is minimised, there must be a “holistic approach”, to solving the problems that the galamsey workers face (Hilson 2016). In this case it is proposed that the issue should be tackled from the educational side. The government, through the Ministry of Education, should come up with a curriculum that will contain short courses about mining and its effects on the environment (Hilson 2001). These courses will seek to portray the wrongfulness, hurtfulness and illegality of indiscriminate mining to the environment and the nation as a whole. The main point behind it is that, children would educate their parents about the ill-consequences of galamsey, and this will hopefully go a long way to discourage both practitioners and prospective ones (Ofosu-Mensah 2011).

Also, there is the need for co-operation between the public and the mining companies. The mining companies can, as part of their corporate social responsibilities, encourage industrial farming among the natives in barren areas. The companies can acquire agricultural machinery and embark on large scale plantations that would employ the youth in their plantations rather than resorting to illegal mining (Hilson and McQuilven 2016). The assurance of a steady income-generating job (i.e. on the plantation) would compel people to stop the dangerous galamsey work and go into paid plantation labourer jobs.

Finally, it is recommended that galamsey operations be legitimised and franchises granted to individuals or groups who wish to take part in the business (Hirons 2013). It is recommended strongly that the government through the Ministry of Local Government and Rural Development in collaboration with the National Commission for Civic Education (NCCE) form a unit to engage all prospective galamsey miners and educate them, in the local dialect, about proper mining

methods and careful use of chemicals such as cyanide and mercury before issuing them with certificates (Hilson 2011).