

Natural Resource Exploitation and National Security: A Case Study of Illegal Gold Mining in Ghana

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Abstract

This study fills a perceived gap in the scholarly literature regarding illegal gold mining activities in Ghana. The study goes beyond the socio-economic challenges of illegal mining to address the nexus between illegal gold mining activities and the national security of Ghana. The case study design with a qualitative methodology was used in this study to uncover the national security threats associated with illegal gold mining which is an acute problem in the country. Activities of illegal miners threaten the environmental and social unity of Ghana. Economically, the Government of Ghana is losing revenue from the gold mining sector because illegally mined gold is smuggled out of the country. Illegal miners are destroying cocoa farms, the critical cash crop that generates foreign exchange for the country. Illegal miners are destroying cocoa farms, the critical cash crop that generates foreign exchange for the country. Illegal mining has destroyed several forest reserves and farms, and also resulted in the pollution of rivers which serve as sources of potable water. Ghana's physical security is under threat as illegal miners acquire firearms to defend their activities. This study concludes that illegal mining is fueled by unemployment and poverty. Hence, to minimize illegal mining and protect the national security of Ghana, there is the need for government, the private sector, and other stakeholders to find alternative sources of livelihood for the illegal miners and also educate them about the national security implications of their actions.

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Keywords: Natural Resource Exploitation, National Security, Illegal Gold Mining, Ghana, socio-economic challenges

Introduction

Ghana's future prosperity and national security are intrinsically linked to the gold industry. Ghana is a resource rich country with sizable timber, diamond, manganese, bauxite, gold and crude oil deposits as shown in figure 1.

Figure 1: Map of Ghana Showing Locations of Some Natural Resources in the Country



Source: (Ikpe, 2016)

Ghana's natural resources serve as the primary source of domestic revenue for the country (Ghana Chamber of Mines, 2018: p. 10). Gold, principal among all the resources, generates the highest revenue for the country's economy. Gold contributed over 95 per cent of Ghana's mineral revenue in 2015 (Ghana Chamber of Mines, 2016). The mining sector accounted for 15.8 per cent of Ghana's domestic revenue in 2016

and approximately 2.16 billion of the country's gross domestic product (GDP) in 2017 (Ghana Chamber of Mines, 2018: p.10).

Ghana's gold mining sector is multi-dimensional, made up of large-scale multinational mining companies as well as artisanal and small-scale mining (ASM) groups. Large-scale mining is a capital-intensive venture, well-regulated, and conducted by multinational companies who employ sophisticated mining techniques in their operations (Guenther, 2018: p. 3). The Government of Ghana (GoG) is required by law to acquire not less than 10 per cent interests in the rights and obligations of the mining lease of large-scale mining operations (Guenther, 2018: p. 3). ASM on the other hand is a poorly regulated sector which employs unskilled labor and cheap primitive mining techniques in its operations (De Theije and Salman, 2018: p. 262). Even though ASM is a legal activity in Ghana, most of the people in the sector do not have mining permits from the Minerals Commission to engage in mining activities (Akabzaa and Darimani, 2001: p. 26). Hence, the sector is bedeviled with illegal miners commonly known in Ghanaian parlance as 'galamsey operators'. Galamsey is a pidgin name derived from the English words "gather and sell" (Mantey et al., 2017: p.12).

Galamsey activities are prevalent in almost every region in Ghana. Over one million galamsey operators were employed in the ASM sector in 2014 compared to 12,300 workers in the large-scale mining sector (Guenther, 2018: p.3; Temurçin et al., 2016: p.174). In the rural parts of Ghana, ASM is a major source of employment and livelihood for most people due to high rates of illiteracy, unemployment, and poverty in those areas (Al-Hassan & Amoako, 2014: p.149). According to Agyei, as of 2015, about 95 per cent of miners within the ASM sector were operating illegally (Agyei, 2016: p.21). The large number of illegal miners is a consequence of high unemployment, the high demand for gold and the profitability of the world gold market between 2012 and 2016. These root causes made illegal mining an attractive business for both local and international actors, especially the Chinese (Afriyie et al., 2016: p.499-501). Chinese miners have invested heavily into the ASM sector which was the impetus for large numbers of unemployed

youth to commence galamsey operations. Consequently, and ironically, the illegal gold industry is destroying Ghana's future (Akabzaa & Darimani, 2001).

Illegal ASM and galamsey mining is the proximate cause of Ghana's mining related national security concerns (Akabzaa & Darimani, 2001). Illegal mining is not just a socio-economic issue as some scholars would suggest. First, if a nation is to be secured, its people must be secured. As Peleri relates in his book, "National Security Imperatives and Challenges", the safety of the state is intrinsically linked to the safety of the individual identified by Abraham Maslow in his hierarchy of needs (Peleri, 2008: p.30-36). Second, a country's economic strength is one of the driving forces for its development. Ghana is losing important revenue which could be directed towards national objectives, through illegal mining. Third, the Government is forced to employ a significant portion of state security assets in its fight against internal instability associated with galamsey. This reduces availability of security assets for tasks such as border protection and contributions to the global rules-based order. The availability of security assets, as Mearsheimer argues in his "False Promise of International Institutions," is important because the anarchy of the international system requires states to constantly ensure that they have sufficient power to defend themselves and advance their material interests necessary for survival (Mearsheimer, 1995). Fourth, Chinese business groups have contributed to mass mechanization of galamsey which has accelerated environmental destruction in the country (Crawford, 2017: p.120). Chinese illegal miners have introduced heavy earth moving equipment and river dredging machines which have been catalysts for the large-scale destruction of farms and forest reserves as well as the pollution of rivers and streams with mercury, cyanide, and other dangerous chemicals (Al-Hassan & Amoako, 2014: p.150). This pollution in turn threatens the food, economic, and environmental security of the country. The Ashanti, Eastern, and Western Regions of Ghana are the worst affected by the environmental degradation associated with illegal mining (Guenther, 2018: p.7-11). Fifth, conflicts between both local miners, Chinese galamsey operators and local communities over concessional rights and water pollution are

becoming more violent. This escalation is linked to the proliferation of illegal firearms and increasing profitability of galamsey mining (Al-Hassan & Amoako, 2014: p.150). Sixth, reports of firefights with rival galamsey groups raise the specter of border security, illegal firearms sales, and procurement which all undermine the Ghana Government's efforts to oppose galamsey activities (Crawford, 2017). These conflicts, and the gargantuan destruction of the environment by illegal miners, compelled the GoG to deploy a joint security task force made up of police and military personnel in 2013 and 2017 to halt galamsey activities in the country.

The aforementioned information illustrates illegal gold mining's potential implications for Ghana's national security. A thorough study of illegal mining activities in Ghana is, therefore, key in identifying the national security threats associated with galamsey. It is against this backdrop that this study seeks to build on the evidence above and illuminate the nexus between illegal gold mining and the national security of Ghana. Illegal mining takes place in most parts of Ghana; however, this study is confined to galamsey activities within the Ashanti Region and Western Region of Ghana because the two regions are among the worst affected regions (Guenther, 2018: pp.7-11). The case study design with a qualitative methodology was used for this study. The aim of all qualitative research is to understand the phenomenon being explored (Creswell, 2007: p.3) which in this study is illegal gold mining. As posited by Patton (2002: p.55), the qualitative case study enables the researcher to conduct a holistic and in-depth description of the unit of analysis which can be a person, an event, a time period, a critical incident or a community. Creswell also asserts that, the case study research allows the researcher to study a case or cases over a period of time through comprehensive and in-depth data collection from multiple sources of information (Creswell, 2007: p.73). This assertion is supported by Robert Yin who defines a case study as an in-depth empirical investigation of a contemporary phenomenon within its real-world context (Yin, 2018: p.15).

From Patton, Creswell and Yin's claim, the qualitative case study enables a researcher to conduct an elaborate investigation with existing

empirical information in order to unearth vital concepts with regard to contemporary issues such as illegal mining. The choice of the qualitative case study approach for this study was, therefore, ideal because of the researcher's inability to conduct field studies in Ghana due to time constraints. Secondary data from multiple sources was, therefore, used for this study to avoid any biased judgement. Irrespective of the fact that using only secondary data does not provide firsthand information as primary data does to augment facts on a study, the secondary data for this study were critically examined to ensure that objectivity and transparency were maintained as posited by Crowe et al. (2011: p.7-8). The study will first define national security after which it will assess the historical overview of gold mining in Ghana as well as the causes of illegal mining in the country. It will further examine the national security threats of illegal mining in Ghana, and the government's intervention to curb the menace before recommending ways to safeguard the country.

Defining National Security

A good understanding of the concept of national security is important to appreciate the parameters of this study. Realism, also known as political realism, classical realism or *realpolitik* is recognized to be the traditional theory of security which has dominated security studies for a long time (Bossman, 2016: p.31-36). Realism is also a theory of international politics that can be associated with issues which threaten national security. Realists such as Thucydides, Niccolo Machiavelli and Hans Morgenthau assert that states are the dominant actors in the international environment (Bossman, 2016). To them, the international system is defined by anarchy due to the absence of a central authority (Waltz, 1979). Power is, therefore, essential for states to defend themselves against threats to their survival. Realists understand power in a variety of ways including military, economic, and diplomatic but ultimately emphasize the distribution of coercive material capacity as the determinant of international politics (Mearsheimer, 1995: pp.5-49).

Realists assume that states are rational actors (Mearsheimer, 1995). This means, given the goal of survival, states will act as best as they can to maximize their likelihood of survival. Realists also assume that

politics determines economics, and the economic strength of a country is important as long as it enhances military might and national interests (Bossman, 2016: p. 35). From the perspective of self-interest, states make many decisions based on how best to secure themselves. Realism is, however, criticized for labelling man as uncooperative and greedy without considering the cooperativeness in human nature (Solomon, 2001: pp. 45-47). Advocates of liberalism accuse classical realists for not recognizing the importance of non-state actors such as ethnic or tribal groups and organizations such as the European Union, the North Atlantic Treaty Organization and the United Nations which promote cooperation instead of conflict in the international environment (Bossman, 2016: pp.38-39).

Taking into consideration the activities of illegal gold miners in Ghana, realism as a security theory provides an understanding into the reason why states ensure national security with policies and laws that regulate economic activities such as mining. While the state perceives mining activities as a means of generating revenue for its economic security and survival, illegal miners also see mining as an economic venture for their survival. Although realism does not emphasize the role of non-state actors in national security matters, the central themes of power struggle and survival at the state level can be used to explain the reason why individuals and groups engage in illegal mining activities.

In “*National Security Imperatives and Challenges*”, Peleri avers that national security includes military protection as well as the physiological, mental, and emotional wellbeing of the people of a nation-state (Peleri, 2008: pp. 58-59). Peleri’s argument is supported by Donald Snow who asserts that national security includes the physical security of the state and the psychological safety of its people (Snow, 2017: pp.26-28). Snow addresses the psychological perspective of security as being safe from things like poverty that makes one feel insecure (Snow, 2017). Snow’s assertion is further espoused by Makinda (1998: p. 282) who defines national security as “the ability of a state to cater for the protection and defense of its citizenry”.

Considering Peleri and Snow’s assertion of a paradigm shift in the definition of national security from military security to include non-

military aspects of security, this study will emphasize the non-military elements of national security which include environmental, food and economic security (Osisanya, 2014). Hence, in this study, national security is defined as the ability of a state to protect its territory and the wellbeing of its nationals against psychological and physical threats. National security is, thus, a combination of efforts by the state to ensure that its citizens enjoy a good standard of living and social cohesion that discourage disaffection and armed conflicts.

Historical Overview of Gold Mining in Ghana

Gold mining is an important economic activity for the people and GoG that needs to be regulated to preserve the national security of the country. While some literature suggests that gold mining in Ghana dates to the Fourth Century (Gbireh et al., 2007), others trace the activity to the Sixth Century (Afriyie et al., 2016). It is, however, evident that during the colonial era, the British were compelled to name the territory Gold Coast due to the rich deposit of gold ore in the country. According to Dzibgodzi and Bansa cited by Afriyie et al. (2016: p. 497), most of Ghana's territory forms part of the mineral rich Birimian and Tarkwain geological formations. These geological formations are within the West African Craton which stabilized during the early Proterozoic Period some 2 billion years ago (Afriyie et al. 2016: p. 497). Large deposits of alluvial gold can, therefore, be found in the country along flood plains and riverbeds of several major rivers such as Pra, Birim, Offin and Ankobra.

Pre-independence Era

Between 1493 and 1600, Ghana accounted for 36 per cent of total gold production in the world (Tsikata, 1997). It is estimated that since 1943 when the first documentation of gold mining in the then Gold Coast was made till 1997, Ghana produced approximately 2,488 metric tons (8 million ounces) of gold (Amponsah-Tawiah and Dartey-Baah, 2011: p. 62). Throughout the colonial period until the early parts of 1960, gold mining in Ghana was an activity by native ASM groups

and private British mining companies who mined for their livelihood and the economic interest of Britain respectively (Gbireh et al. 2007). During this period, native Ghanaians preferred to engage in ASM under their own terms rather than to work for the mining companies of the colonial masters.

The attitude of the natives compelled the colonial administration to pass the 1932 Mercury Ordinance Act which criminalized the use of mercury in mining activities by the natives (Akabzaa and Darimani, 2001: p. 8). While native Ghanaians in the ASM sector suffered economically from the new law, European mining companies in the country benefitted from the abundant cheap labor which shifted from the ASM sector to the European owned mines. The 1932 Mercury Ordinance marked the beginning of criminalization of ASM activities in Ghana (Akabzaa and Darimani, 2001: p. 8). Criminalization of ASM was for the political and economic benefit of the British and not because of environmental pollution or any negative social effect associated with the activity. This explains the reason why attempts by post independent governments to use legal regimes to maintain the criminal status of galamsey activities have always been met with resistance by some communities and individuals (Afriyie et al. 2016: p. 499).

Post-independence Era

After Ghana's independence from British colonial rule in 1957, gold production continued to play a major role in the generation of revenue for the government. In 1986, the GoG formalized ASM activities for the first time in the country (Gbireh et al. 2007: p. 1). The government passed the Small-Scale Gold Mining Law (PNDC Law 218), the Mercury Law (PNDC Law 217), and the Precious Minerals Marketing Corporation Law (PNDC Law 219) to regularize and control ASM activities in the country (Minerals and Mining Policy of Ghana, 2014: p.10). The regularization of ASM activities in the country was an economic and a political strategy that generated revenue and created political support for the government (Akabzaa and Darimani, 2001: p.14).

Liberalization of the mining laws and the recognition of ASM as a legal activity also created employment in the mining sector. Between 1987 and 1995, the labor force in the gold mining sector increased from 15,069 to 22,500 (Akabzaa and Darimani, 2001: p.15). Economically, the combined effort of the ASM sector and the private large-scale mining companies resulted in an exponential growth in the country's gold production. Between 1987 and 1998, gold production increased from 328, 926 ounces to 2,481,635 ounces (Akabzaa and Darimani, 2001: p.15). The ASM sector contributed substantially to the total gold output of Ghana between 1990 and 1997. Revenue derived from ASM operations increased from US\$6,257,000 in 1990 to US\$33,094,000 in 1997 (Hilson, 2001:p. 7).

Illegal Gold Mining Activities in Ghana

Over the years, while the ASM sector has proven to be a good source of revenue for the government, it has also been associated with negative effects on the environment and society which threaten national security. The relatively high rate of unemployment in the country coupled with favorable gold prices on the international market from the late 1980s to early 2000s attracted numerous people in the rural areas to ASM. As of 1998, there were approximately 400 registered ASM companies and thousands of galamsey operators in the country (Hilson, 2001: p. 7). In the mid-1990s, the ASM sector generated a large number of unregistered (illegal) miners which drew the public's attention to the government's inability to regulate the sector. The public became conscious of the environmental degradation and various social vices associated with galamsey activities (Hilson, 2002). Agyapong (1998) asserts that in Tarkwa alone, there were over 6,000 illegal miners and 117 registered ASM as of 1998. As at the later parts of the 1990s, it was estimated that illegal mining alone caused the deforestation of approximately 15,000 hectares of land in Ghana, and also destroyed the topsoil of deforested lands with abandoned mining pits (Hilson, 2002: p.159; Guenther, 2018: p. 7). According to Boadi et al. (2016), there were about 300,000 to 500,000 illegal miners operating in the Ashanti, Eastern and Western Regions of Ghana as of 2016.

Causes of Illegal Gold Mining in Ghana

The large number of illegal gold miners in Ghana could be attributed to diverse political and socio-economic factors. In almost all the regions where illegal mining activities are conducted, a combination of the socio-economic causal factors exists (Boadi et al., 2016). The political cause of galamsey is the politicization of the activity by politicians (Abdulai, 2017). On the socio-economic front, Crawford and Loubere (2017, p. 120) identified corruption as a proximate cause of galamsey in Ghana. In addition to corruption, Afriyie et al. (2016: pp. 493-508) and Temurçin et al. (2016: p. 183) avow that poverty and unemployment are remote causes of galamsey in the country.

Politicization of Galamsey

Abdulai (2017) avers that the politicization of galamsey by the two major political parties in Ghana, the National Democratic Congress (NDC) and the New Patriotic Party (NPP) is a proximate cause of illegal mining in the country. Both the NDC and NPP are guilty of sympathizing with illegal miners for their votes when they are in opposition (Abdulai, 2017). As a result of the sympathy from the political parties, the galamsey operators exploit the parties with their votes during election years. According to Abdulai (2017), some corrupt members of parliament, ministers of state, chiefs, and assemblymen have been compromised by galamsey activities and that has made the illegal activity an albatross to deal with.

Corruption

Corruption within Ghana's public sector is a proximate cause of illegal mining activities in the country (Mantey et al. 2017: p.12). Some government officials who are elected or hired to enforce the laws and regulations prohibiting illegal mining activities have become corrupt and are involved in the same menace they are to fight against (Africa Investigates, 2011). As a result of corruption, artisanal and small-scale miners find it difficult to obtain mining licenses due to high cost and cumbersome procedures (Obara and Jenkins, 2006: p. 15). The miners are, therefore, compelled to operate illegally. In 2018 and 2019, Ghana

scored 41 per cent on the corruption perception index of Transparency International. The country's score was below the global average of 43 per cent and was, therefore, ranked 78 and 80 respectively out of 180 countries (Transparency International, 2020). This reflects a relatively high level of corruption within the public sector and confirms the reason why Crawford and Loubere (2017) maintain that corruption and poverty "feeds into" galamsey.

Poverty

Poverty is one of the remote factors that pushes people into galamsey activities. Tschakert and Singha (2007) avers that ASM is a poverty-driven activity. In Ghana, mining communities are generally located in remote areas where some of the people are either illiterate peasant farmers or traders with low incomes. About 38.2 per cent of the rural population in the country are poor as compared to 10.4 per cent of the people in the urban centers (Human Rights Council, 2018: p. 5). This makes illegal mining an attractive venture for most people in the rural communities to escape from poverty (Afriyie et al. 2016: pp. 493-508). In the Bekwai Municipality of the Ashanti Region for example, illegal mining is generally more lucrative than farming, and the poor and unemployed youth engage in it for income to pay school fees and improve their social status (Asamoah and Osei-Kojo, 2016: p. 9).

Unemployment

Aside from poverty, unemployment especially among the youth is another remote cause of illegal mining in Ghana (Temurçin et al. 2016: p. 184). Youth unemployment rates in Ghana have been on the ascendency for the past ten years. According to the World Bank, youth unemployment in the country increased from 11.2 per cent in 2010 to 13.7 per cent in 2018 representing a 2.5 per cent increment within the period (World Bank Data, 2019). The high level of unemployment in the country makes the youth susceptible to illegal activities including galamsey in order to earn a living. Considering the fact that galamsey activities are labor intensive, the youth are generally the major workforce in the menace. In Abooso in the Western Region of Ghana, the youth

engage in galamsey activities to avoid the social marginalization associated with being unemployed (Andrews, 2015: p. 5).

National Security Threats of Illegal Gold Mining to Ghana

Even though illegal mining provides employment for the poor and unemployed in Ghana, its devastating effects on the environment undermine national security. In Maria Constantinescu's "*Sustainable Exploitation of Natural Resources and National Security*", she established a link between the exploitation of natural resources, corruption, and conflicts which threaten national security (Maria Constantinescu, 2015). She opined that the environment serves as a source of livelihood for people in mining communities and thus its destruction poses a threat to national security (Maria Constantinescu, 2015). Similarly, Parthemore and Rogers (2010, p. 5) also assert that, in contemporary times, the security of nations will depend on the security of scarce natural resources such as potable water, minerals, and arable lands. Constantinescu and Parthemore's assertions clearly support the central thesis and highlight the environmental, food, water, physical, and economic security threats which are confronting Ghana as a result of galamsey activities.

Environmental Security

Environmental security "in an object sense aims to evaluate the level of threats to acquire and sustain ecosystem values in terms of ecosystem goods and services at multiple scales and, in a subject sense, represents the level of fear that such values will be attacked and possibly lost" (Zurlini and Müller, 2008: p. 1353). The environment is vital for the survival of Ghanaians and their economy. The environment provides food, water, shelter, medicine, clothing and employment, and the vegetation within the environment helps to provide oxygen which is essential for the population's survival. Unfortunately, the activities of illegal miners have resulted in the destruction of some forests and threatened the basic needs of survival for some communities within the country. The Offin Shelter Belt Forest Reserve, for example, has lost substantial portions of its vegetation due to galamsey activities

(Boadi et al., 2016). Between 1986 and 2002, and 2002 and 2016, approximately 552.24 and 4,029.21 hectares of mixed vegetation lands were respectively destroyed as a result of galamsey activities (Asamoah et al., 2017: p. 11). The illegal miners indiscriminately cut down the trees in the forests before they dig for gold. After retrieving the gold, they do not reclaim the mined areas or replant trees to restore the forest as required by law (Republic of Ghana, 2001: pp. 10-22). This eventually results in the destruction of farmlands and deforestation which are catalysts for climate change, erosion, famine, and drought (Temurçin et al. 2016: p. 178). Activities of illegal miners also destroy the ecosystem of endangered plants and animals which are essential for maintaining balance within the environment.

Food and Water Security

In addition to environmental security, the importance of food and water security for the people of Ghana cannot be overemphasized. During the 1996 World Food Summit, food security was said to “exist when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life” (Food and Agriculture Organization, 2006: p.1). In Ghana, farmlands in mining communities which hitherto were being used to grow food crops to feed the population have now become illegal mining fields. In 2014, the Ashanti Regional Minister bemoaned the destructive effects of illegal mining on farms and water bodies in the Antwuma Mponua District where the people had to depend on imported food stuffs and sachet water for their daily survival (Dapatem, 2014). According to Ocansey (2013), the destruction of arable lands by galamsey activities has the effect of reducing food production which will lead to an increase in the prices of foodstuffs and high cost of living.

In addition to the destroyed lands which affect crop production and food security, illegal mining is also a threat to Ghana’s water security. Water bodies such as the River Ankobra and Pra as well as River Offin which serve as sources of potable water for the people in the Western and Ashanti Regions respectively have been polluted with mercury

and cyanide from illegal mining activities (Arthur-Mensah, 2016). According to the United Nations, water security is “the capacity of a population to safeguard sustainable access to adequate quantities of acceptable quality water for sustaining livelihoods, human well-being, and socio-economic development, for ensuring protection water-borne pollution and water-related disaster, and for preserving ecosystems in a climate of peace and political stability” (United Nations-Water, 2013: p. 1). In 2017, the Ghana Water Company Limited warned that if nothing is done to stop the pollution of water bodies with mercury and cyanide by illegal miners, the country risked importing potable water in the near future (Abdulai, 2017).

Edem Srem maintained in his *“Trading Ghana’s Water for Gold”* documentary, that as farmlands and water bodies are destroyed by galamsey activities, there is a high risk of famine and drought in the near future (Srem, 2014). The accumulation of heavy metals in the soil is a threat to food produced from mining communities since the metals could contaminate food crops, and cause health problems such as cancer, liver and kidney diseases (CSIR, 2017: p. 3). When food and water which are necessary for the basic survival of every human being are in short supply, people are most likely to resort to conflicts in order to meet their needs with the available limited food and water. Such conflicts will be a threat to the physical security of the country.

Physical Security

The physical security of Ghana is under threat due to the proliferation of illegal small arms and light weapons (SALW) in the country. Between July and October 2017, a joint military and police task force against illegal mining activities in the country seized 30 assault rifles from illegal miners in the Ashanti, Eastern and Western regions (Graphic News 2017). Out of the 30 rifles only 2 were registered. The joint task force (JTF) also arrested 442 illegal miners including 377 Ghanaians, 61 Chinese, 2 Togolese, a Burkinabe and a Nigerian (Graphic News 2017). Chinese illegal miners have been specifically identified to be the major culprits operating with SALW in Ghana (Ohemeng, 2013). In December 2018, for example, 16 Chinese illegal miners were arrested

in the Krobo Forest in the Ashanti Region with 14 unregistered pump action guns and an M16 assault rifle. The influx of illegal firearms and foreigners in the country raises concerns about the porousness of the country's borders and the imminent physical security threat to the state. Temurçin et al. (2016: p.187) maintain that "gold is a political object that attracts political struggle and conflict in its exploration and extraction between local communities and the government". Hence, the proliferation of illegal firearms into the country could lead to armed robberies and armed violence which could compromise the country's economic security.

Economic Security

A physically secured environment creates conditions for economic security as it promotes the economic viability of a state with capital for national development (Ronis, 2011: p. viii). Revenue from gold production plays a significant role in the economy of Ghana. Gold contributed over 95 per cent of Ghana's mineral revenue in 2015 (Ghana Chamber of Mines, 2016). In 1990 and 1997, revenue derived from ASM operations increased from US \$6,257,000 to US \$33,094,000 respectively (Hilson, 2001: p. 7). In 2016, an estimated US \$2.3 billion worth of gold was smuggled out of Ghana through galamsey activities (Burrows and Bird 2017). This highlights government's loss of revenue in taxes from the smuggled gold. Additionally, illegal mining is destroying cocoa farms in the country. This is a worrying situation since cocoa is the main cash crop foreign exchange earner for Ghana. The destruction of cocoa farms will, therefore, reduce the production of cocoa beans in the country and further reduce government revenue from the cocoa sector (Farmerline, 2016). Revenue lost from galamsey activities will negatively affect the economic security of Ghana. Without revenue, the GoG cannot build the necessary infrastructure to create jobs, create wealth and get taxes to build the capacity of the military and other state security agencies in the country (Ronis, 2011: p. viii). Without economic security, Ghana's political and social stability will be in jeopardy (Ronis, 2011: p. ix). Hence, the GoG must step up its intervention efforts to halt galamsey activities and safeguard the country's national security.

Interventions to Curb Illegal Gold Mining in Ghana

Having identified galamsey as a national security threat, the GoG has, over the years, tried to curb galamsey activities in the country. In May 2013, the GoG inaugurated a JTF made up of the Military, Police, Immigration Service and Minerals Commission and charged them to halt illegal mining in the country (Botchwey et al., 2018: p. 5). The JTF made some gains with the arrest of many galamsey operators including expatriates from Niger, Togo, Italy, Mali, Germany, Russia and China (Alhassan, 2014: p. 48). About 4,592 Chinese illegal miners were arrested and deported to China (Botchwey et al., 2018). Several pieces of mining equipment including excavators were also confiscated by the JTF but that did not completely halt illegal mining activities in the country. There were still galamsey activities in parts of the Ashanti, Central, Eastern and Western Regions.

In July 2017, the GoG composed another joint police and military task force known as Operation Vanguard to combat illegal mining activities in the affected regions (Ghanaian Journal, 2017). As of May 2018, over 1,200 illegal miners including Chinese nationals had been arrested by Operation Vanguard personnel. About 111 firearms, 2,347 pieces of ammunitions and 6,000 mining equipment including excavators, water pumping machines and dredging machines popularly known as *changfa* machines had also been seized (Dotsey, 2018). Despite these achievements, galamsey activities are still prevalent in the Ashanti and Western Regions due to the slow nature of the legal prosecution system, the lack of political will to fight the menace and corruption by government officials, traditional rulers, and state security officials (Myjoyonline, 2017).

Actors, Functions, Relationships and Tensions in Illegal Gold Mining

Galamsey is conducted by a web of actors who make the activity a complex problem that threatens the national security of Ghana. An understanding of the functions, relationships and tensions among the actors is key to finding a realistic solution to the national security

threats associated with galamsey. Figure 2 depicts the various actors who are connected to illegal mining activities in Ghana.

Figure 2: Diagram of Actors Connected to Illegal Gold Mining in Ghana



Source: Created by author.

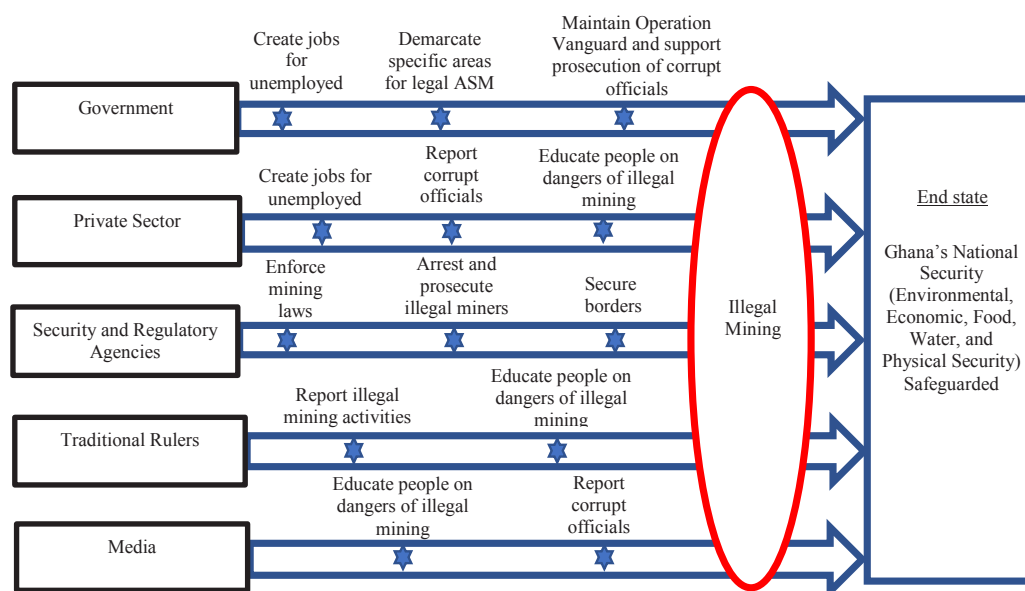
The information in figure 2 shows the various actors connected to illegal mining in Ghana. The GoG functions as the primary agent responsible for the country’s mineral resources (Minerals and Mining Policy of Ghana, 2014) and national security. Hence, the GoG is responsible for enacting, promulgating and enforcing laws against national security threats such as illegal mining. The government regulates mining activities through the combined effort of state agencies such as the Minerals Commission, Environmental Protection Agency and the state security and law enforcement agencies in order to generate revenue from the sector. The local population is another actor which directly or indirectly benefits economically from illegal mining activities or suffers from the social and environmental effects associated with the activity. The international community, foreign nationals, gold buyers, and

miners profit from the high prices of gold on the international market and may not be bothered about how the gold is obtained. High gold prices increase the demand for gold which promotes illegal mining. Additionally, politicians and traditional rulers are the local authorities who have the power to positively or negatively influence illegal mining activities in their areas of jurisdiction. The Forestry Commission, media and the Ghana Water Company Limited are agencies which are basically concerned about the environmental effects of illegal mining activities in the country. Unfortunately, corruption on the part of some government officials and local authorities is negatively influencing illegal mining activities and impeding efforts to combat the menace.

Recommendations

Having examined the causes, benefits and national security threats associated with illegal gold mining in Ghana, there is the need to highlight some measures to protect the country against galamsey. The complex nature of galamsey activities demands a comprehensive approach by government and its agencies, civil society, traditional rulers, and the media to tackle the menace as shown in figure 3.

Figure: Strategy to Combat Illegal Gold Mining Activities in Ghana



Source: Created by author.

Strategy to Halt Illegal Gold Mining in Ghana

Figure 3 illustrates a possible strategy to secure the national security of Ghana from threats posed by illegal mining activities. The government, civil society including the private sector, security and regulatory agencies, traditional rulers and the media should work simultaneously and collaboratively to stop illegal mining in Ghana. Firstly, the government in collaboration with the private sector and civil society should create alternative jobs for the illegal miners. For example, alternative jobs in agribusiness could be exploited by the government. The government should also demarcate specific areas for legal ASM. This will ensure that ASM is confined to areas where mining activities can be properly regulated by the appropriate regulatory agencies. The government should also maintain Operation Vanguard activities and ensure that corrupt officials involved in the illegal mining menace are prosecuted without fear or favor. Secondly, while the private sector and civil society supports the government to create alternative livelihood programs for the illegal miners, they should report corrupt officials and also partner with traditional rulers and the media to educate people about the dangers of illegal mining to national security. Thirdly, security and regulatory agencies should continue to use Operation Vanguard to enforce the country's mining laws, arrest illegal miners and secure the country's borders against the proliferation of SALW into the country. Finally, traditional rulers should be included in the government's early warning mechanism against galamsey. In this regard, the rulers should report illegal mining activities in their communities to the appropriate government agency for immediate remedial action.

Conclusion

There is a nexus between illegal gold mining and the national security of Ghana. Illegal gold mining serves as a source of livelihood for a substantial number of people who see the activity as a source of employment and an opportunity to escape from poverty. As long as unemployment and poverty rates in mining communities remain relatively high, people will resort to illegal mining to earn a living. Unemployment and poverty are thus the main causes of galamsey

in Ghana. In addition to unemployment and poverty, corruption by government officials and the support from politicians and traditional rulers for illegal mining contribute to the continuous practice of the activity which poses diverse threats to the national security of Ghana. The environment which provides the basic needs of life is being destroyed with impunity by the illegal miners who are destroying forests and farms, and polluting water bodies which serve as sources of potable water in parts of the country. This situation is worrisome since it could lead to food shortages and waterborne diseases in the near future. Ghana's environmental, food and water security are under threat because of illegal mining. Additionally, the country's economic and physical security are also affected by galamsey activities and has attracted the government's intervention.

Even though the GoG has deployed security personnel under Operation Vanguard to combat illegal mining activities in the country, corrupt practices by some government officials and traditional rulers are hindering the fight against galamsey. This situation calls for pragmatic measures by the government, private sector, local authorities, and other stakeholders to halt the galamsey menace. To this end, there is the need for the GoG to exercise the utmost political will in order to combat galamsey activities and safeguard the country from security threats associated with the menace. The government could partner with the private sector and civil society to provide alternative livelihood programs in galamsey communities. Such programs will provide jobs to the unemployed and alleviate poverty in those areas. The government could also consider the inclusion of traditional rulers in its early warning mechanism in the fight against illegal mining activities. A move in this direction will make traditional rulers equally responsible for the environmental and physical security of their communities, which in the long run will safeguard the national security of Ghana.

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