

THE EFFECT OF ACTIVITIES OF ILLEGAL MINING ON COCOA PRODUCTION AND ITS IMPACTS ON ECONOMIC DEVELOPMENT

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ABSTRACT

Mining in tropical countries contributes significantly to the global minerals supplies but unregulated mining activities in reserved forests is associated with destruction, loss of habitats and loss of biodiversity. In recent times, several reports both from the electronic and print media had indicated that, arable land meant for farming activities within the cocoa growing areas has been taken over by the activities of illegal mining popularly known as “galamsey”. The main purpose of this study is to investigate the effects of the activities of illegal mining on cocoa production, what are the reasons why cocoa farmers opt to offer their lands to the illegal miners, what are the economic implications and many other things including environmental issues.

Illegal gold mining in Ghana further exacerbates a volatile cocoa market. In 2014, experts predicted a global cocoa shortage by 2020. “Galamsey” is regarded as the biggest threat to cocoa production. According to the Ghana COCOBOD, the crop generates about \$2 billion in foreign exchange annually for the country. The economic reward of cocoa production is enormous and cannot be ignored.

Using a case study approach, the research work will use interviews, observations and documentary sources to obtain data for the study. The case study will be carried out at Upper Denkyira East in Central region, Ghana.

The study reveals that, about 65 farms have been totally destroyed and some 53 other farms are at risk of being destroyed by the activities of illegal miners. Moreover, as some farmers are willing to offer their lands to illegal miners, some do that in situations beyond their control.

Key words: Illegal mining, Galamsey, cocoa, economic development.

INTRODUCTION

Ghana, known for its 550 km long coastline and a land area of approximately 23,884,245 hectares, currently houses a population of 33,766,217, projected to grow annually at a rate of 2.15%. It consists of 261 districts spread across 16 administrative regions. The nation is richly blessed with abundant natural resources, particularly in agriculture and minerals. Agriculture, contributing nearly 60% to employment and 30% to GDP, serves as the cornerstone of the economy.

Mining, including quarrying, played a significant role in Ghana's GDP from 2006 to 2014, contributing approximately 7.2% annually and employing a substantial portion of the workforce (Gilbert and Albert, 2016). Despite its economic importance, small-scale illicit gold mining has inflicted adverse impacts on the environment, society, and the economy, affecting areas such as land, water, air quality, health, education, livelihoods, and agriculture. In this sector, there are over 1000 registered small-scale firms, along with thirteen large-scale mining corporations and sixteen mining operations.

While natural resources play a pivotal role in Ghana's industrial and economic growth, their finite nature underscores the need for sustainable alternatives, as they cannot be replenished in the long term.

COCOA PRODUCTION IN GHANA

Historically, Ghana's economy has been centered on cocoa production. The country achieved its status as the top cocoa exporter soon after gaining independence in 1957. However, factors such as declining prices, political unrest, and drought in the early 1980s led to a collapse in cocoa production. In 1983, devastating bushfires further devastated Ghana's cocoa-producing forests. The cocoa industry began to recover in the 1990s, with accelerated growth in the early 2000s due to increased use of chemical fertilizers and pesticides (Hicks et al., 2022).

Cocoa is a vital resource, providing not only food, income, and employment but also serving as a source of industrial raw materials to reduce poverty. Ghana is the world's second-largest cocoa producer, alongside Côte d'Ivoire, collectively contributing nearly 52% of the global total in 2016 (Boateng et al., 2014; Afele et al., 2021). Approximately 800,000 cocoa households produce 75% of Ghana's cocoa output (MaguireRajpaul et al., 2020). Notably, the seven regions—Ashanti, Bono Ahafo, Eastern, Volta, Western North, and Western Region—are the primary cocoa-producing regions in Ghana, according to the Ghana Cocoa Board's 2018 report.

ARTISANAL AND SMALL-SCALE MINING (ASM) IN GHANA

In contrast to large-scale mining, ASM in Ghana is primarily conducted in remote rural areas by a transient, often poorly educated population with limited alternative employment opportunities, as defined by the World Bank. ASM has emerged as a significant income source for rural residents, frequently supplementing or replacing agricultural incomes (Jonsson and Fold, 2011: 480; Hilson and Garforth, 2012). While ASM was initially illegal in Ghana until 1989, the Small-Scale Gold Mining Law of 1989 (PNDCL 218) legalized and regulated the sector, subsequently incorporated

into the Minerals and Mining Act of 2006 (Parliament of the Republic of Ghana, 2006). This formalization process enabled artisanal miners to apply for mining concessions of up to 25 acres in designated mining zones and acquire mining licenses.

Over the past two decades, tens of thousands of Chinese migrants have flocked to Ghana in pursuit of wealth through mining Ghana's abundant mineral deposits beneath lush forests. This influx of migrants has expanded mining activities on a national scale, transforming ASM into a larger, more disruptive sector, impacting water quality and forest ecosystems (Antwi, 2014; Boateng et al., 2014). Most of these Chinese migrants engage in illegal mining, and the gold they extract remains unaccounted for, bearing negative implications for Ghana's economy.

THE EFFECTS OF THE ACTIVITIES OF ILLEGAL MINING ON COCOA PRODUCTION

Since the implementation of the World Bank's Structural Adjustment Programme in Ghana in the mid-1980s, international mining companies have increasingly entered the country, bolstering mineral mining, which has contributed positively to the economy (Owusu-Ansah and Smardon, 2015). According to the Ghana Statistical Service (GSS) in 2018, the mining sector has significantly contributed to government revenues, including taxes, and GDP, with an average contribution of 6.63% from 2010 to 2017. Mining companies have also played a role in infrastructure development, supporting the construction of roads, clinics, and other social amenities in mining regions. Small-scale and artisanal mining provide opportunities for individuals and groups with limited resources, while illegal mining, often referred to as "galamsey," remains a significant income source for those lacking the necessary equipment (Boateng et al., 2014).

However, galamsey has become a critical issue in Ghana's mining regions, bearing multiple adverse environmental effects, including water and air pollution, deforestation, and land degradation. By damaging topsoil essential for cocoa cultivation, it hampers cocoa production, contributing to economic instability (Bach, 2014). The prevalence of illegal mines results in lost revenue for Ghana, as gold is smuggled out of the country (amounting to \$2.3 billion in 2016), and local land, including cocoa plantations, is acquired from farmers for mining purposes (Boafo et al., 2019; Snapir et al., 2017).

In several cocoa-producing regions of Ghana, such as the Upper Denkyira East District, galamsey activities have encroached on cocoa lands, with estimates suggesting between 1 and 20 hectares affected (Boateng et al., 2014). Additionally, Essabra-Mensah (2013) reported that between 1 and 2 million hectares of Ghanaian cocoa land had been invaded by illicit miners. Furthermore, the GDP contribution of cocoa has been on a declining trend over time, falling from 3.6% in 2011 to 1.8% in 2017, with rampant mining activities partly responsible for the reduction in cocoa production and its economic contribution.



METHODOLOGY

Study Site Description

The Upper Denkyira East Municipality is one of the twenty-two Administrative Districts within the Central Region. It was originally part of the larger Upper Denkyira District until 1988 when it was carved out. Subsequently, on February 29, 2008, the northwest section of the district became the Upper Denkyira West District, leading to the renaming of the remaining part as the Upper Denkyira East District. Later that same year, it was elevated to municipal district assembly status, becoming the Upper Denkyira East Municipal District. Situated in the northwest of the Central Region, its capital town is Dunkwa-On-Offin. Geographically, it lies between latitudes 5°, 30° and 6° north of the equator and longitudes 1° west and 2° west of the Greenwich Meridian. It shares its boundaries with Adansi South to the north and Assin District to the east, while to the west, it borders Twifo Hemang Lower Denkyira and Upper Denkyira West District to the northwest. The Upper Denkyira East Municipality encompasses a land area of 1,020 square kilometers, constituting approximately 10% of the Central Region's total land area.

This municipality is situated in the semi-equatorial zone, characterized by mean annual temperatures of around 29°C during the hottest months and approximately 24°C in the coolest months. The rainfall pattern comprises two distinct seasons, with the first rainy season occurring from May to June, peaking in June, and the second rainy season from September to mid-November. The principal dry season spans from late November to February.

The Upper Denkyira East Municipality falls within the semi-deciduous forest zone, featuring three layers akin to the rainforest. The trees here do not uniformly shed their leaves, and a variety of species coexist. Some trees in the lower and uppermost layers remain evergreen throughout the year, thanks to the prevailing moisture in the area. However, due to increased mining activities, particularly in the northern part of the Municipality, much of the original forest cover has been

lost, leaving behind mostly secondary forests. These forests still house valuable timber species such as Mahogany and Wawa.

Data Collection

In this research, secondary data was obtained for the analysis. Also, the researcher took some data based on observation and documentaries. Semi- structured interviews was conducted to collect information from both farmers and the illegal miners.

Result and Discussions

Galamsey Effects (Farms at Risk and Farms Destroyed)

Matured No. of Farms destroyed	Est. Area of Farms destroyed	No. of Farms at Risk	Est. Area of Farms at Risk	Total No. Farms	Total Area of Farms
65	95	53	117.15	118	212.15

Source: Cocoa Health and Extension Division Annual Report 2021/2022

From the table above, we realized that a total of 65 farms were destroyed with the estimated land area destroyed being 95 hectares. This has great impact on the cocoa beans production in the country and reduction in cocoa revenue generated. Moreover, there are about 53 number of farms being at risk to be for illegal mining activities with an estimated land area of 117.15 hectares. This shows that there more cocoa lands yet to be destroyed than those that have been destroyed. The danger of losing arable land for cocoa production must tacked with serious attention.

From the interview conducted on some cocoa farmers indicated that some of the farmers willingly sell out their lands to these illegal miners because of the juicy package they offer to the cocoa farmers. He said “this is our land and no one can use them for galamsey without our concern, it can happen elsewhere but not in Dunkwa”. However, some of the farmers indicates that, they give out their lands for galamsey when the cocoa farm is infected and they need to cut down all the cocoa trees and re-plant news ones. This will take time for them to generate income in order to be able to take care of their family members.

Conclusion and Recommendation for future Research

The mining of gold and the growing of cocoa are both important in the economic growth of the country. However, if the activities of illegal mining is not regulated, it will affect the production of cocoa. Appropriate measures must be taken to curb the loss of arable land reserved for cocoa production and much attention should also be given to cocoa farmers in order to demotivate the farmers who are willing to offer their farmlands for galamsey activities.

The research recommend that, in future, a research may be conducted on a comprehensive study to assess the long-term impact of illegal mining on cocoa production in various cocoa-producing regions of Ghana. Analyze the extent of land degradation, water pollution, and deforestation caused by galamsey and its direct correlation with declining cocoa yields and economic instability.

Moreover, investigate the effectiveness of existing mitigation strategies and identify innovative approaches to curbing illegal mining while promoting sustainable cocoa farming.

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