



# **SOCIO-ECONOMIC EFFECTS OF MINING RESETTLEMENTS IN GHANA: CASE STUDY OF THE WESTERN REGION**

Submitted in fulfilment of the requirements of the  
degree of Doctor of Philosophy in Public Administration in  
the faculty of Management Sciences at the  
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## **ABSTRACT**

This study aimed to determine the socioeconomic effects of mining resettlements in Ghana: a case study of the western region. The study drew its motivation from the fact that vulnerable people typically settle near mineral locations. Despite the enormous benefits that we derive from location to the final extraction of these minerals from the earth's crust, it has repercussions on the people displaced to enable the resource they are sitting on to be tapped for the benefit of humanity. The effects of the displacement of people to enable mining activities to progress could be either positive or negative, depending on how the entire process is managed. To achieve the main purpose or aim of the study, a qualitative research method was used to collect primary data. The sample size comprised 54 participants, who were chosen using quota sampling and purposive sampling. Data was collected using an interview guide and focus group discussions and qualitative data analysis was used to reflect on the study findings. Qualitative data were analysed using NVivo software through thematic analysis. The findings of the study showed a negative impact on people's income, with the exception of a few people who managed to secure employment as well as those who were able to invest their compensation money effectively. The findings on the employment status of the people revealed employment discrimination, unemployment, and loss of career, which have resulted in the stagnation of livelihoods. On the general livelihood of people, the findings showed that the community members were satisfied with their way of life and that their personal properties supported them. However, things changed drastically after the resettlement, as the findings showed inadequate compensation, loss of occupational activities, high cost of living, deplorable shelter, and bad health status. The findings also showed that the main morbidity issues confronting the three resettled mining communities (Nkroful, Teleku-Bokazo and Salman) were malaria, coughing, headaches and diarrhoea. The findings showed the following mitigation measures that were put in place: varieties of restricted farming, capacity empowerment programmes, provision of block housing, building of schools, and construction of clinics, all geared towards improving the livelihood of the people in the affected

communities. The study also made some recommendations including; following resettlement policies, allowing participation of the people in negotiations, providing adequate and sustainable compensation, standardizing evaluation methods, reduction of bureaucratic processes, adherence of eco-friendly practices and consciously providing employment opportunities.

## DECLARATION

This work has not been previously accepted in substance for any Doctoral Degree and is not being concurrently submitted in candidature for any other Doctoral Degree.

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This submission is the result of my independent work/investigation, except where otherwise stated. Other sources are acknowledged giving explicit references. A bibliography is appended.

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## LIST OF ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank
AGA	Anglo-Gold-Ashanti
AIDS	Acquired Immune Deficiency Syndrome
ALPs	Alternative Livelihood Programmes
APs	Affected Peoples
BCL	Bamangwato Concession Limited
CBPs	Capacity Building Programmes
CHRAJ	Commission for Human Rights and Administrative Justice
CRO	Community Relations Officer
CSR	Corporate Social Responsibility
DFID	Department for International Development
DIDPs	Development Induced Displacement Peoples
DIDR	Development Induced Displacement and Resettlement
FDI	Foreign Direct Investment
FGDs	Focus Group Discussions
GAG	Ghana Australian Goldfields
GHC	Ghana Cedis
GSS	Ghana Statistical Service
HIV	Human Immune Virus
IDI	In-Depth Interviews
IFC	International Finance Corporation
IL	Institutional Level
IRR	Impoverishment Risks and Reconstruction
LED	Local Economic Development
MID	Mining Induced Development
MIDR	Mining Induced Displacement and Resettlement
MLGRD	Ministry of Local Government and Rural Development

MMPG	Minerals and Mining Policies of Ghana
MNC	Multinational Companies
NDPS	National Decentralization Policy and Strategy
NED	National Economic Development
NGOs	Non-Governmental Organization
NTBS	Nkroful, Teleku-Bokazo and Salman
OICI	Opportunities Industrialization Centre International
PAF	Project Affected Families
PNDC	Provisional National Defense Council
PRA	Participatory Rural Appraisal
PS	Performance Standard
PSC	Psycho-Socio-Cultural
RAPs	Resettlement Action Plans
SDG	Strategic Development Goals
SL	Sustainable Livelihood
SLA	Sustainable Livelihood Approach
SRL	Sierra Rutile Limited
STD	Sexually Transmitted Disease
TGL	Teberebie Gold Limited
UNDP	United Nations Development Programme
WB	World Bank
WHO	World Health Organization

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# CHAPTER ONE

## GENERAL INTRODUCTION

### 1. 0 Introduction

The exploitation of resources such as mineral deposits has the potential to bring about significant changes, affecting the development trajectories of nations, communities, and individuals. However, this utilization can also have adverse consequences for the environment and ecosystems (Franks 2012). It is commonly known that there are finite amounts of natural resources and ecosystems that sustain human life. Making informed decisions about how to use these resources is therefore more crucial than ever in order to safeguard the needs of both current and future generations (Cobbinah & Amoakoh 2018; Avimelech *et al.* 2008; Gough 2015). However, decision-makers, particularly governments, often face the challenge of balancing economic growth with environmental protection. While the broader environmental perspective is crucial, its effects are often felt at the individual level, with communities experiencing displacement due to purported developmental activities within their environments.

Mares (2012) categorizes affected individuals into two groups: those who are physically displaced and those who are economically displaced. Despite receiving compensation, both resettled individuals and those economically displaced are susceptible to vulnerability. According to official data, the majority of the active labour force in local communities living in mining concession regions is employed in agriculture, which provides their primary means of subsistence. Furthermore, a 2010 survey from the Ghana Statistical Service (GSS) stated that 90% of people working in other industries likewise rely on agriculture as a supplementary source of income. Although land governance structures vary throughout regions, it is generally acknowledged that land is essential to growth (Ubink 2008; Toulmin *et al.*, 2002; Andersen *et al.* 2015). The "customary" and "statutory" systems are the two tenure systems that govern land administration in Ghana (Tsikata and Yaro 2014; Kidido *et al.* 2015). About 80% of the

land is controlled by customary land, which is overseen by chiefs, family leaders, and landlords. The other 20% is subject to state authority by forced purchase (Kasanga 2002).

In Ghana, land purchases by the government for purposes deemed to be in the public interest are permitted by law. This contains the State Lands Act of 1962 (Act 123) for the acquisition of public lands and the Mining and Minerals Act of 2006 (amended in 2010 and 2015) for mineral concessions. Ghana's Republican Constitution of 1992 permits forced land purchase for public purposes as long as just compensation is given, as stated in Article 20(a). A new Lands Act was proposed in 2016 in an effort to harmonize Ghana's existing land regulations. However, problems still exist, particularly regarding community sensitivity in forced land acquisition processes (Andrews 2018; Adonteng-Kissi 2017; Kidido *et al.* 2015; Larbi *et al.* 2004).

Thus researchers have determined that one of the primary causes of dispossession is land acquisition for mining operations (Kidido *et al.* 2015; Andrews 2018; Adonteng-Kissi 2017). Land with mineral deposits being seized and cultural heritage being lost are just two examples of the various ways that dispossession resulting from mining can occur (Bebbington *et al.* 2008). In Ghanaian mining towns, Adonteng-Kissi (2017) questions if land rights are adequate to safeguard the interests of local farmers, particularly in light of the favourable treatment accorded to major mining corporations. The fact that many farming households have lost their farmlands to mining operations puts their means of sustenance in danger, which results in food insecurity and poverty in the affected areas (Andrews 2018; Ayelazuno 2011; Andrews 2018; Adonteng-Kissi 2017). Despite the economic benefits derived from mining in Ghana, they often do not result in the development of capital assets or improvements in living standards for affected communities.

In the context of striving towards Agenda 2030, it becomes imperative to examine the state's involvement in land dispossession procedures. In Ghana, this dispossession typically initiates with state entities and their decentralized branches, utilizing

compulsory land acquisition measures. However, public offices and agencies in charge of making sure affected households receive appropriate compensation frequently fall short in their efficacy (Cobbinah and Amoakoh 2018). Ghana's progress towards reaching the Sustainable Development Goals (SDGs) is hampered by this shortcoming, which makes it harder for the affected households to manage and access land for their livelihoods.

Mares (2012) has drawn attention to the fact that several communities in Ghana that were resettled have either not received any compensation at all or only insufficient compensation in the form of cash compensation or replacement agricultural land. This discrepancy persists despite research indicating that compensation should encompass more than just resettlement, extending to interventions aimed at enhancing human well-being and facilitating the adaptation of affected local communities to their evolving surroundings (Antwi *et al.* 2017; Cobbinah and Amoakoh 2018).

These challenges highlight the mining resettlement sites in Ghana's Western region as the prime location for investigating the socioeconomic impact of mining resettlement, particularly focusing on aspects such as income, employment, livelihood, and health outcomes.

## **1. 1 Background for the study**

Globally, development-induced displacement and resettlement (DIDR) are prevalent phenomena impacting millions of individuals, resulting in the dislocation of entire communities and the loss of their homes and livelihoods (Robinson 2003). DIDR is the result of forced relocation brought about by large-scale development projects like mining and dam construction, which, if improperly managed, can have several negative societal repercussions (Robinson 2003). Communities are typically relocated as a result of these development initiatives, which permit developers to use the land for their projects (Stanley 2004). This DIDR process often results in the "resettlement impact," which is characterized as the loss of both tangible and intangible assets, such

as homes, social networks, productive land, cultural identity, and subsistence resources (Downing 2002).

Resettlement, when managed poorly, presents significant threats to societal sustainability and can worsen the poverty of already marginalized communities (Cernea 2000; Downing 2002). Cernea (2002: 20) contends that numerous poverty-alleviation development projects inadvertently exacerbate poverty by displacing significant populations without effectively reintegrating them, despite providing compensation for their lost assets. Thus, as emphasized by De Wet (2002) and other researchers, Development-Induced Displacement and Resettlement (DIDR) exemplifies what Midgley (1995) characterizes as skewed development, in which seemingly progress-oriented initiatives have unfavourable effects on the people affected by them. Mineral extraction is a crucial economic activity for numerous African nations, with the continent's export-focused mining and quarrying sector largely fueled by the demand for commodities from the most dominant economies globally (Dillon & Barrett, 2016; Breckenridge, 2012).

Ghana, as a country, is endowed with so many mineral resources. Among these minerals are gold, diamond, bauxite, iron ore, and recently the discovery of offshore oil (Cobbinah and Amoakoh 2018). The displacement of vulnerable communities as a result of land acquisition by governmental authorities, non-governmental organizations, huge landholding firms, foreign mining companies, and traditional leaders like chiefs is a topic of rising interest for academics (Ahmed *et al.*, 2018; Bukari and Kuusaana 2018; Bury 2005; Corson, 2011; Laudati 2010). These acquisitions directly affect the individuals whose land is taken for mining projects. For example, akin to many African nations, Ghana adopted economic liberalization and restructuring policies in the 1980s as part of its structural adjustment programmes, bringing in foreign direct investment (FDI) and quickly integrating its economy into international markets (Ahmed *et al.* 2018). One significant result of these reforms was that FDI activities in Ghana now prioritize the mining industry as their main industry. Research indicates that between 1992 and 2002, mining attracted around U\$ 2 billion in foreign

direct investment (FDI), making up more than 56% of total FDI inflows into the country (Awudi 2002). Subsequent estimates place the amount at roughly 70% of all FDI inflows (Barthel *et al.* 2008). As a result, mining has taken on dual roles in Ghana, uprooting indigenous people from their land while simultaneously offering a means of livelihood (Cuba *et al.* 2014). It is believed that non-state actors marginalize and uproot disadvantaged populations about land access through the government. According to Adomako-Kwakye (2022), mineral and mining law of 1986, which places all mineral rights under the jurisdiction of the Ghanaian government on behalf of its people, provide the government with authority. Mining practices, despite their positive aspects like creating job opportunities and implementing community development projects, can also result in significant adverse effects. These include the displacement of community members from their homes and lands, as well as challenges in accessing clean water. The concept of mining-induced displacement and resettlement (MIDR) is particularly relevant because this study deals with resettlement packages that may initially appear to be advantageous.

Nonetheless, a growing body of evidence indicates that MIDR, or mining-induced displacement and resettlement, disproportionately affects host communities. These communities usually experience adverse socioeconomic conditions and the environmental effects of mining, which are made worse by insufficient livelihood rehabilitation measures (Korah 2019; Adjei 2007; Aubynn 2016; Human Rights Watch, 2014; Madebwe & Mavusa, 2011). (Unions 2014; Madebwe & Mavusa, 2011; ActionAid 2008; Adjei 2007; Aubynn 2003). The global literature describes a variety of factors that contribute to the socioeconomic challenges associated with mining resettlement, such as income, export capacities, livelihood options, poverty levels, migration patterns, employment opportunities, and the need for community development, education and literacy, training and skill development, healthcare, water, land impact, asset impacts, security, gender, violence, impact on culture, child labour, social transformation, impact on tribal communities, and impact on agriculture (Adjei 2015; Cobbinah 2018; Widana 2019).

Several principles and guidelines have been formulated regarding mining resettlement issues to tackle the socioeconomic challenges mentioned above. Among the most prominent international standards and procedures for involuntary resettlement are:

- 1) The Asian Development Bank's (ADB) Handbook on Resettlement (1998),
- 2) The World Bank's (WB) Operational Policy (OP) 4.12 on Involuntary Resettlement (WB 2001),
- 3) The International Finance Corporation's (IFC) Handbook for Preparing a Resettlement Action Plan (IFC 2002),
- 4) The IFC's Performance Standards on Environmental and Social Sustainability, and
- 5) Performance Standard 5 on Land Acquisition and Involuntary Resettlement (IFC 2012).

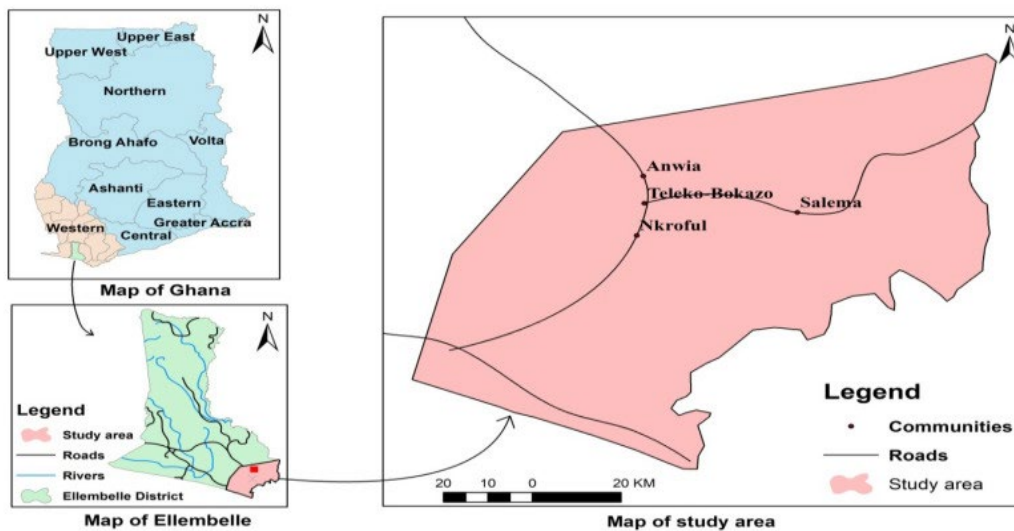
The above-mentioned international financial organizations have their own set of guidelines and requirements for involuntary migration. However, they often reference the World Bank's Operational Policy 4.12 (OP 4.12) as the guiding document for these policies. The mining firms' and the affected communities' attempts at mining resettlement would have been aided immensely by attending these wonderful worldwide conventions on resettlement. Human rights' norms, legal precepts, and international regulations are not followed in Ghana's licensing procedures for gold mining operations or the ensuing extraction and operating procedures. The development and execution of policies must be in line with and respectful of the economic, social, and cultural rights of mining communities (Reisenberger 2010). The UN's Universal Declaration of Human Rights has various parts that highlight Ghana's condition, illustrating how its people are denied fundamental rights.

According to Article 22 of the United Nations Charter of 1948, each individual, as a member of society, has the right to social security and is entitled to achieve the economic, social, and cultural rights essential for their dignity and the unhindered development of their character through national and international cooperation, as well as making use of the organization and resources of each state.

Article 17 states: Disregard for individual or collective land ownership in afflicted communities "(1) The right to own property belongs to everyone, whether they do it individually or collectively with others. (2) No one's property should be removed from them without justification. "Communities must have access to their property to comply with Article 25's standards, which address the risks of food insecurity, homelessness, increased disease, and unemployment." (1) Everyone is entitled to a standard of living that includes access to food, clothing, housing, and health care and guarantees their own and their family's health and well-being "cites United Nations Charter Article 25. (1948). Communities must have access to their property to comply with Article 25's standards, which address the risks of food insecurity, homelessness, increased disease, and unemployment. Citing the United Nations Charter Article 25 (1948), everyone is entitled to a standard of living that includes access to food, clothing, housing, and health care and guarantees their own and their family's health and well-being.

Human rights breaches about personal liberty and human dignity have been documented in instances of harassment and intimidation directed at certain mining enterprises. These incidents have caused discomfort and impeded community members' ability to express themselves freely. In Article 19, the United Nations (1948) acknowledged "the right to freedom of thought and expression". These and other infractions highlight the necessity of researching the socioeconomic consequences of resettlement to put policies in place that will lessen the impact of the relocation on impacted populations' earnings, jobs, quality of life, and morbidity.

## 1. 2 The study area



**Figure 1. 1** *Map of Ellembelle District showing study villages (2023)*

Ellembelle District is one of Western Ghana's fourteen Metropolitan, Municipal, and District Assemblies (MMDAs). It is located in the southern half of the area and has coordinates ranging from 4°40' N to 5°20' N and 2°05' W to 2°35' W. It covers 995.8 km<sup>2</sup> and accounts for 9.8 percent of the Western Region's total land area. The district, located in West Africa's semi-equatorial climate zone, has a population of approximately 86 501. The region's vegetation is a largely moist, semi-deciduous rainforest that transitions into secondary forest because of human activities like farming and logging. Geologically, the region is home to economically valuable minerals like kaolin, silica, gold and sandstone deposits. It is also distinguished by the Cambrian-type Birimian formation and the Tarkwaian Sandstone-Association of Quartzite and Phylites types.

The Ellembelle District is home to numerous rivers and streams, but the most well-known is the Ankobra River, which has several noteworthy tributaries, including the Nwini Rivers and Ahama. Ellembelle is recognized as a district rich in resources, having seen substantial extraction of crude oil and gold. Popular gold mining locations include

Anwia, Teleku-Bokazo, Nkroful, and Salman; small-scale mining has been active for approximately thirty years, while large-scale mining began in 2011. Although it has contributed to economic expansion, mining has had a negative environmental impact on the surrounding biodiversity. Figure 1.1 depicts the Ellembelle District map, which contains the research communities.

### **1. 2. 1 Justification for mining activities in the research areas**

Ghana is rich in minerals, with limestone, silica sand, kaolin, stone, and salt among its many resources. While smaller operators typically concentrate on industrial minerals like kaolin, limestone and silica sand, large-scale mining activities in Ghana primarily focus on the extraction of minerals like gold, diamond, bauxite and manganese. Major mining businesses in Ghana are primarily owned by foreigners or foreign investors; less than 15% of these companies' shares are jointly held by the government and private Ghanaian investors (Mensah *et al.* 2015: 81-95). Data from the Mine Department shows that sixteen gold mines, one bauxite mine, one diamond mine, and one manganese mine are operated by nineteen major mining enterprises in Ghana. Except for Prestea Gold Resources Limited and Ashanti Goldfields Company's Obuasi mine, all of Ghana's operational gold mines are surface-based. Major mining businesses in Ghana are primarily owned by foreigners or foreign investors; less than 15% of these companies' shares are jointly held by the government and private Ghanaian investors (Mensah *et al.* 2015: 81-95). Based on information from the Mine Department, nineteen major mining companies run sixteen gold mines, one bauxite mine, one diamond mine, and one manganese mine in Ghana. Except for the Obuasi mine operated by Ashanti Goldfields Company and Prestea Gold Resources Limited, all of Ghana's operational gold mines are surface-based.

The Ghanaian government's structural adjustment measures had a significant influence on the spike in gold mining activity that was seen, particularly in the Ellembelle district of the Western Region in Ghana. The large influx of resources and opportunities that resulted from this boom put global mining firms operating in places like Salman, Teleku-Bokazo, and Nkroful under control. This surge led to a significant

influx of resources and opportunities under the control of multinational mining companies operating in areas such as Salman, Teleku-Bokazo, and Nkroful. The current national environmental regulations, however, have not done a good enough job of protecting nearby communities from the detrimental effects of mining operations, which has led to an increase in poverty among those who live in mining areas, even despite the economic prosperity brought about by this upsurge.

One of the main sources of formal and informal employment opportunities in Ghana is the mining industry. According to estimates, as of 2018, the mining industry employed about 30,000 people in large-scale mining businesses, accounting for about 20% of all employment in the official sector (Twerefoo 2021). The formal sector's employment is further increased by companies that support the mining industry by providing auxiliary services. Examples of these enterprises include assay labs, equipment leasing and sales organizations, security agencies, and catering services. But even while the mining industry offers job opportunities, mining operations both directly and indirectly contribute to the high unemployment rates in the studied areas. Farmers are frequently forced to relocate due to the encroachment of large-scale surface mining operations over vast land holdings. However, these companies usually can't create enough jobs to compensate for all the people that mining takes out of agriculture.

### **1. 3 Statement of the problem**

In countries like Ghana and other developing nations, relocating households and communities affected by mining activities has become a common method of compensating them (Cernea 2008). However, contemporary mining resettlements present a growing number of social and economic difficulties, which contribute to the depletion of vital resources for subsistence that are crucial for the long-term survival of humanity. Because they understand that poverty is more than just a lack of resources, organizations like the United Nations Development Programme (UNDP), CARE International and the Department for International Development (DFID) have embraced the sustainable livelihoods (SL) paradigm as a means of addressing it

(Krantz 2001; Petersen 2010). Five basic resources that are essential for sustainable human development are outlined in Petersen's (2010) framework for sustainable lifestyles (SL). This framework is used as a foundation for developing policies meant to increase the asset base of communities facing poverty. Among these assets for a livelihood are:

1. Human capital: Refers to individuals who possess mental and physical well-being, education and the ability to seize opportunities.
2. Economic/financial capital: This is a symbol of the money needed to maintain a way of life. This money can be obtained through work, government assistance and credit products.
3. Physical and Infrastructural capital: Includes having access to facilities like housing, transportation, healthcare, education and other necessities like electricity and water.
4. Natural capital: Involves having access to additional pristine environmental resources and rich land.
5. Social and political capital: Consists of social networks, affiliations and connections that promote mutual respect and trust in communities.

In line with Sen's capacity approach and other perspectives, the SL framework suggests that deficiencies in one livelihood asset could lead to deficiencies in other assets, thereby exacerbating poverty. For example, not having enough money might make it difficult to get essential services, which can lead to stress in the home and worsen mental and/or physical health. As a result, people might find it difficult to make meaningful contributions to their social, economic, and environmental contexts, which would eventually make poverty in communities worse. This cycle of deprivation demonstrates how any deficiency in any of the five assets necessary for a livelihood can exacerbate poverty in local communities (Swanepoel & de Beer 2006; Petersen, 2010).

Despite the many studies showing the impoverished state of households and communities following resettlement (see Downing, 2002; Smyth *et al.*, 2015;

Terminski, 2012; Yang *et al.*, 2019), and even though mining-induced displacement and resettlement (MIDR) has received more attention recently (Adam *et al.* 2015; Barclay and Salam 2015; Owen & Kemp 2015, 2016; Smyth *et al.* 2015; Van der Ploeg and Vanclay 2018; Wilson 2019), millions of people worldwide continue to be displaced annually due to mining projects, with largely adverse outcomes for those compelled to relocate as well as those remaining in affected areas. While research on the socioeconomic effects of mining has been done both locally and abroad at the meso and micro levels (Adjei 2007), the focus has primarily been on environmental impact assessments, with limited exploration of the socio-economic repercussions of mining activities at the micro-level in terms of income, employment, livelihood, poverty levels, and morbidity (Aguilar-Støen & Hirsch 2017).

Despite the adoption of principles and guidelines by the World Bank and its financial partners to alleviate the negative consequences of mining-induced displacement (MID), as previously discussed as widely acknowledged international standards for involuntary resettlements, affected populations (APs) often find themselves facing increased impoverishment in areas such as income, employment, livelihood, and morbidity. As such, a detailed analysis of APs' experiences is considered essential to enhance our comprehension of these socioeconomic effects and enhance mitigation strategies. These insights will guide policy creation and facilitate the planning and implementation of Resettlement Action Plans (RAPs), which will help address challenges relating to income, employment, livelihood, and morbidity more efficiently.

#### **1. 4 Study aim**

The research aimed to ascertain the various socioeconomic effects of mining-induced resettlements, with a specific focus on the western region of Ghana.

#### **1. 4. 1 Research objectives**

The primary goal of the study was to evaluate the socioeconomic effects on impacted communities in Ghana of resettlements brought about by mining. The study's particular goals were as follows:

1. To investigate the impact on income levels of people in the resettled communities.
2. To examine the employment opportunities available as a result of the resettlement.
3. To discover the participants' livelihood status before and after the resettlement.
4. To highlight the morbidity issues people in the resettled communities face.
5. To assess measures put in place to mitigate these socioeconomic issues.

#### **1. 4. 2 Research questions**

An in-depth examination of the processes and outcomes of MIDR in relocated communities requires the answers to these study issues. Additionally, they offer guidance for developing policies intended to lessen the possible adverse socioeconomic effects resulting from MIDR.

1. How have the income levels of people in the resettled communities been affected?
2. Are employment opportunities available to resettled people?
3. How has the livelihood of the people been affected before and after the resettlement?
4. What morbidity issues confront people in resettled communities?
5. How are the authorities mitigating the socioeconomic issues confronting the resettlement communities?

## **1. 5 Justification for the Significance of the Study**

The bulk of research has focused on the wider effects of mining, with a special emphasis on occupational and environmental dangers, since the enactment of mining liberalization policies intended to attract international investment in the mineral sector. However, there has been a notable deficiency, if not a complete absence, of specific studies addressing the socioeconomic ramifications. Consequently, discussions regarding the effects of mining resettlement and associated socioeconomic issues have largely been speculative.

This study delves into how mining activities and the presence of mining operations in rural communities have influenced the socioeconomic dynamics of affected individuals. The scope of these socioeconomic effects extends beyond negative consequences to encompass the positive impacts of mining enterprises' operations and the mining business as a whole on the livelihoods of affected populations. The study involved conducting in-depth interviews and focused group discussions in three relocated communities: Salman, Teleku-Bokazo, and Nkroful.

These communities were chosen for this study because they are located in the catchment areas of two different mines. The resettlement efforts in Nkroful and Teleku-Bokazo are directly impacted by Adamus Gold Resources, whereas the Salman community is affected by the operations of Endeavour Mining Corporation. Study participants include household heads, community leaders like chiefs and clan leaders, market vendors, district assembly members, public and community relations officers from both mining companies, and others whose perspectives are included in the research on the socioeconomic effects experienced by mining resettlement communities.

Through an analysis of the favourable and unfavourable socioeconomic impacts of mining operations and the widespread mining operations in these communities, the study intends to generate a complete report that can adequately tackle concerns

related to mining resettlement in rural areas. It is anticipated that the study's conclusions will offer insightful information that will guide future investigations into mining resettlement and the effects it has on the communities impacted by such operations.

## **1. 6 Delimitations**

The study, specifically focused on analyzing the social and economic effects of mining resettlement communities in the western part of Ghana in order to expedite the research and guarantee its applicability. The researcher concentrated on gathering insights from key stakeholders, including household heads, community leaders, market vendors, and public and community relations officers from the mining corporations. This approach was chosen because resettlements involve multiple entities, and it was not feasible to collect data from all residents in the resettled communities. Instead, a sample size of 54 individuals, comprising 27 participants from each of the three resettled communities was chosen for the study, utilizing quota and purposive sampling methods.

With the purpose of defining the researchable population and the study factors, the research was conducted between 2022 and 2024. The study employed semi-structured interviews and focus groups as primary data collection approaches to augment the qualitative aspect of the investigation.

## **1. 7 Limitations**

One significant limitation of this study was its narrow scope. The socioeconomic challenges encountered by mining resettlement communities are multifaceted and constantly evolving, with new dimensions continually emerging. However, this research only addressed select issues deemed pertinent, namely income, employment, livelihood, and morbidity, while overlooking other equally significant socioeconomic concerns associated with involuntary resettlements.

Moreover, reluctance from certain key individuals to participate in the research posed another limitation. Some individuals expressed apprehension regarding divulging personal income details and discussing employment matters, fearing potential repercussions from mine operators, especially if they were currently employed by the mine. This hesitance impeded the collection of comprehensive data and insights.

Furthermore, time and financial constraints presented additional challenges. Conducting thorough investigations into the socioeconomic effects necessitated engaging with each selected individual to solicit their views on the topics under examination. However, time constraints prevented visits to all seven initially identified mining resettlements. Additionally, the researcher was bound by a three-year timeline for the entire research project, with fieldwork limited to a maximum of six months. The situation was made worse by financial constraints, which were especially problematic because many of the resettlement villages were located in remote areas of Ghana's west. Travelling to these communities and conducting research activities incurred significant expenses, which impeded the completion of this study.

## **1. 8 Research methodology**

### **1. 8. 1 Study of literature**

The majority of the data included in the study came from focus groups and in-depth interviews.

### **1. 8. 2 Data collection**

The research problem above was solved by applying a positivist approach. This decision was influenced by the following characteristics of a positivist paradigm, as in Creswell (2000: 5), cited in Abutabenjeh (2018: 10).

The approach allowed the researcher to:

- The freedom to choose a specific research design (philosophical worldview).
- Depend on the perspectives of the participants regarding the subject under investigation (social constructivist worldview).

- Address significant social issues and may involve participants as active partners in the research process (advocacy and participatory worldview).

Qualitative methodology was deemed more suitable for the researcher's work as it centred on the perspectives and insights of the participants regarding the situation under investigation (Abutabenjeh 2018: 10). The ability of qualitative data gathering to enable the researcher to characterize, elucidate, and comprehend the variables being studied also played a role in the decision. Abutabenjeh (2018) provided guidance on this choice by emphasizing the use of qualitative techniques, like interviews or open-ended questions, for data collection in positivist frameworks. Text and picture analysis, as well as theme and pattern interpretation, may be used to obtain comprehensive results from the collected data.

### **1. 8. 3 Target population**

As defined by McBurney (2009: 248), Creswell (2013), and Crossman (2020: 25), the target population encompasses the entirety of potential participants or respondents from whom the researcher has the option to select a sample. The three mining resettlement communities—Salman, Teleku-Bokazo, and Nkroful—in the Ellembelle district of Ghana's western region, each with at least sixty households, made up the study's target population. However, due to the impracticality of interviewing every member of this large population, a smaller sample of twenty-seven participants from each community who voluntarily agreed to participate and were accessible to the researcher was chosen.

### **1. 8. 4 Analysis of data**

The process of fine-tuning, converting, and altering gathered data so as to extract and utilize only relevant and essential information is known as data analysis in research (Sekaran 2011: 301; Abutabenjeh 2018: 65). The researcher used the following methods for data analysis in this study: grouping participant responses into themes and

performing a thorough thematic analysis using the NVivo software's "free node" function to determine the findings.

## **1. 9 Research unit**

The following is the arrangement of the thesis:

**Chapter One** of the thesis introduced the study's topic, offering background information on the mining industry in the study area. It outlines the rationale behind mining activities, presents a problem statement, delineates the study's objectives and research questions, justifies the significance of the study, and discusses its delimitations and limitations. The chapter concludes by summarizing its key points.

**Chapter Two** presented the literature connected to the overview of the study on the socioeconomic impact of mining resettlement in the western region of Ghana and previous research studies about the socioeconomic effects of mining resettlement.

**Chapter Three** focused on the theories and theoretical frameworks that serve as the foundation on which to anchor the socioeconomic impacts of mining issues.

**Chapter Four** delineated the philosophical underpinnings of the research and detailed the methodological approach, including the design type, data collection methods, target population, sampling techniques, and ethical considerations.

**Chapter Five** concentrated on analyzing the gathered data, coherently presenting the findings, and integrating participant perspectives. The results were extensively discussed and linked to the research questions posed in Chapter One and the reviewed literature.

**Chapter Six** examines the findings of the relevant literature and addresses the research questions outlined in Chapter One, emphasizing the socioeconomic impacts of mining resettlement.

**Chapter Seven**, the concluding chapter, presents a thorough overview of the entire research, providing a succinct analysis of the researcher's findings and assessing whether the research questions were sufficiently answered. Furthermore, this chapter discusses theoretical contributions, acknowledges study limitations, offers recommendations, and identifies potential avenues for future study.

## **1. 10 Conclusion**

This chapter aimed to introduce the study and give a background to the study variables: income, employment, livelihood and morbidity issues. The chapter also proposed possible associations between the study variables. The researcher justified the need to focus on the study's constructs: socioeconomic effects in areas of income, employment, general livelihood, and morbidity in the mining resettlement environment. The significance, research problems, and main objectives of the study were clearly stated. The chapter also discussed the delimitations and limitations of the research. It concluded by offering a concise overview of the methodology utilized and how the study was organized. Chapter Two provides an overview and definitions of the terms utilized in the study and introduces the study variables.

## CHAPTER TWO

### AN OVERVIEW OF MINING RESETTLEMENT

#### 2. 0 Introduction and chapter overview

This chapter provides a theoretical framework that highlights the theoretical and conceptual underpinnings of the research. The conceptual context of the study is found in the environmental literature, delving into discussions regarding the implementation of mining resettlements and elucidating their deficiencies, particularly in terms of lacking vital infrastructure for those subjected to involuntary resettlement. The chapter proceeds to define various key concepts of the study, including socioeconomic factors, mining effects, resettlement, income, employment, morbidity, poverty levels, livelihood, and impoverishment, all within the context of mining resettlement. It highlights the necessity for government officials and mining authorities to take action to improve the well-being of people in affected areas and underscores the goal of mining resettlements, which is to benefit the impacted individuals in communities.

#### 2. 1 Environmental Literature

Although the use of resources such as mineral reserves can bring about tremendous change and benefit countries, communities, and people, it can also have negative impacts on the environment and ecosystems (Franks 2012). There is an argument that the natural resources and ecosystems supporting society are finite. As such, it is imperative to make well-informed judgements about how best to harness these resources in order to meet the demands of present and future generations, as highlighted by Cobbinah and Amoakoh (2018), Avimelech *et al.* (2008), and Gough (2015). However, decision-makers, particularly governments, often face the challenge of prioritizing economic growth while balancing environmental preservation. While the environment looks at the bigger picture, it can be narrowed down to the people who live and are affected by these developmental activities purported to be carried out in the environment in the form of displacement.

Mares (2012) categorizes the impacted individuals into two groups: those who are physically displaced and those who are economically displaced. Physical displacement comes about when people in a particular area or community are to make way for a developmental project or mining activities to take place. Given that the land slated for the mine's establishment could have been under local stool ownership, the chief would receive notification regarding the mine's construction and the intended resettlement of the entire community (Reisenberger 2010: 80).

Economic displacement emerges when poor farmers, particularly those who have lost farming as a livelihood activity due to land claims by mining operations and inadequate compensations, struggle with the rising cost of living. This is exacerbated by high prices of basic goods due to competitive incomes from mining activities, leading to a scarcity of food as fewer farmers continue farming (Adjei 2007: 48). Many farmers have not received proper crop compensations, and where compensation is provided, it is often inadequate and disproportionate (Adjei 2007: 49). This, coupled with escalating unemployment levels, exacerbates the challenges faced by farmers in affected communities. Even after getting compensation, people who have been resettled or who have been economically displaced could still be vulnerable. Official figures indicate that, for local communities within mining concession regions, agriculture provides the majority of employment opportunities (around 67 percent of the labour force that is actively employed). Additionally, according to a 2010 Ghana Statistical Service (GSS) survey, 90% of people working in other sectors view agriculture as their secondary career.

On a global scale, land remains a critical aspect of development, although its administration varies across regions. According to researchers like Ubink (2008), Toulmin *et al.* (2002) and Andersen *et al.* (2015), there are two distinct tenure systems in Ghana that govern land administration: statutory and customary (Anderson *et al.* 2015). The State Land Act of 1962 and the Mining and Minerals Act of 2006, for example, outline how the state acquires the remaining 20 percent of land through compulsory acquisition, with chiefs, family heads and landlords overseeing the remaining 80 percent of land ownership, comprising customary lands (Kasanga 2002).

These laws give the government the authority to purchase land for mining operations and other uses related to the public interest.

As mentioned by Kidido *et al.* (2015), there are still issues with the forced land acquisition process's sensitivity to the community, which can result in eviction due to mining operations. However, as mentioned by Kidido *et al.* (2015), Andrews (2018) and Adonteng-Kissi (2017), concerns about the community's sensitivity to the process of forced land acquisition, which often results in eviction due to continuing mining operations, persist. Despite the economic benefits derived from mining, affected communities often do not experience improvements in their living standards or the development of capital assets.

The state's participation in land dispossession, which is usually started by decentralized departments and agencies through coercive property acquisition, must be considered in the efforts to achieve Agenda 2030. But frequently, these organizations neglect to make sure that the impacted households get the right kind of compensation, which makes it difficult for them to access and control land for their livelihood and impedes the achievement of the Sustainable Development Goals (SDGs) (Cobbinah and Amoakoh 2018).

It is said that certain Ghanaian resettled communities were not given any compensation packages, either in cash or in the form of new acreage (Mares 2012). Research indicates that compensation ought to go beyond resettlement and encompass initiatives that improve human welfare and facilitate impacted communities' ability to adjust to evolving surroundings (Antwi *et al.* 2017; Cobbinah and Amoakoh 2018). The mine resettlement site in Ghana's Western region serves as a focal point for investigating the socioeconomic effects of mining resettlement, with a focus on income, employment, livelihood, and morbidity, in light of these environmental challenges.

## **2. 2 Definition of terms**

This section includes subsections that explain the meanings of significant terms and topics used in this thesis. The terms defined include socioeconomic, employment,

livelihood, displacement, resettlement, mining, voluntary and involuntary resettlements, income, and morbidity.

### **2. 2. 1 Socio-economic**

Socioeconomics, sometimes known as social economics, is a branch of social science that explores the reciprocal relationship between economic activity and social processes, studying how economic actions affect and are influenced by social dynamics (Hellmich 2015). In essence, socioeconomics examines the overall impact of economic activity on the advancement, stability, or decline of modern societies, whether at a local, regional, or global level. It categorizes societies into three main components: social, cultural, and economic. Additionally, socioeconomics explores how social and economic factors interplay and influence each other within the economy (Hellmich 2015). Lifestyle features, as well as indications of financial stability and social position, are all considered socioeconomic determinants. These characteristics have a direct impact on social benefits and individuals' financial autonomy. Sociologists investigate variables such as health condition, income, environment, and education to better understand their impact on human behaviour and situations. These are considered lifestyle indicators and are believed to be closely related to patterns of substance use, dietary preferences, migration trends, disease prevalence, and mortality rates in human groups. (List of Socio-Economic Factors, synonym.com 2021)

Educational attainment significantly impacts economic status, as higher-paying positions typically necessitate advanced or specialized education. Moreover, education plays a crucial role in determining social standing and fosters trust among individuals who possess expertise in their respective fields of employment (List of Socio-Economic Factors (synonym.com 2021).

Net income directly influences the purchasing power of individuals or families, dictating what they can afford in terms of expenditures. It also has a significant impact on the neighbourhoods in which people live and the quality of life they have. Furthermore, income levels frequently dictate the viability of pursuing higher education. For those

residing closer to the poverty line, trade-offs between necessities, such as prioritizing food over medicine, may become necessary (List of Socio-Economic Factors (synonym.com 2021)).

Socioeconomic position can be easily determined by looking at one's health. Illness, whether brought on by heredity, mishaps, or way of life, can seriously hamper a person's development. A person's social circles may be restricted by illnesses that restrict their access to school and work options, movement, and social interaction (List of Socio-Economic Factors (synonym.com 2021)). The consequences of mining resettlement can have significant socio-economic impacts on affected populations if adequate measures are not implemented to mitigate them. Camilo (2019) claims that rural populations in Peru have been forced to relocate due to the growth of mining operations. While some businesses have complied with World Bank resettlement guidelines, many communities have been forced to disperse throughout rural and urban areas without regular assistance during the adjustment period due to the lack of productive lands in the Peruvian Andes, as well as the lack of legal mechanisms and supportive policies for affected individuals. As a result, earlier socioeconomic systems have deteriorated because they lacked the cultural capital needed to adjust to the changing environment. Development-related displacement is mostly associated with socioeconomic challenges resulting from the absence of significant reductions in essential resources that communities depend on.

Terminski (2012) noted that the main issue with displacement is not just the physical abandonment of current homes but also the loss of access to intangible resources like socioeconomic ties and vital material resources like land, pastures, woods, and clean water. Frequently, large corporations' benefit from extractive projects, with minimal advantages accruing to local communities. Profits generated from resource extraction often leave the region, failing to foster economic development locally. The escalating number of displaced individuals, also referred to as development-induced displacement peoples (DIDPs), continues to pose a significant challenge in this regard.

According to Owen and Kemp (2016) summary of the socioeconomic effects of mining, corporate social responsibility (CSR) programmes primarily provide social and economic benefits to the communities surrounding mining operations. Mining firms are perceived as funding community development initiatives, including environmental protection and infrastructural upgrades, in countries like Botswana and Zambia. Projects that support local economic growth under the umbrella of corporate social responsibility (CSR) include housing, education, healthcare, and infrastructure development. But how CSR is interpreted and applied varies depending on the situation (Essah and Andrews 2016).

### **2. 2. 2 Employment**

Resource extraction can have dual effects: on the one hand, it may create additional employment opportunities, enhance market accessibility for farmers, and boost fiscal transfers to regions where resources are extracted. However, on the other hand, mineral production can marginalize small-scale landholders through processes such as land expropriation, environmental harm, and changes in labour market dynamics.

The demand for highly qualified labour in the mining industry and technological improvements have reduced job options for people living in rural areas that are not economically developed. Concerns about mining-induced displacement intensify due to the issue of inadequate compensation for lost property. Additionally, environmental degradation resulting from mining activities has a significant impact on local inhabitants. Private sector interests often prioritize short-term profits over long-term local development efforts, further aggravating the issue of mining-induced displacement, particularly in developing nations.

Operational Policy 4.12, which was approved by the World Bank in 2011, provides specifics on the detrimental socioeconomic effects of development-induced displacement and resettlement (DIDR) (Terminski 2012). This policy states that if forced relocation occurs during development initiatives, there may be serious risks to the economy, society, and environment. These risks include the breakdown of efficient

systems, destitution brought on by the loss of assets or sources of income, moving to unfavourable places with increased competition for resources, deterioration of social networks and community institutions, dispersal of family units, and loss or degradation of traditional authority, cultural identity, and networks of mutual aid (Terminski 2012).

### **2. 2. 3 Livelihood**

A person's means of obtaining basic needs like food, water, shelter, and clothes is their livelihood, which is derived from the "life lode" (Madebwe *et al.* 2011; Dziro 2014; Chishanga 2014; Gukurume and Nhondo 2020). Livelihood encompasses a range of activities essential for daily life, conducted over an individual's lifespan, including securing water, food, medicine, shelter and clothing (Oxford Dictionary of English). It involves the capacity to consistently obtain these necessities to meet the basic needs of oneself and one's household, often conducted in a sustainable manner that upholds dignity (Dziro 2014). For example, the livelihood of a fisherman depends on the abundance and accessibility of fish.

In the social sciences, livelihood refers to more than just economic factors. It encompasses social and cultural aspects, indicating the level of control individuals, families, or social groups have over the income and resources they use or exchange to fulfil their needs. This more inclusive definition encompasses material resources like tools and land in addition to intangibles like social ties, legal rights, cultural knowledge, and information access (Blaikie *et al.* 2010).

In research by Lillywhite, Kemp and Sturman (2015), participants in the Mualadzi Province of Mozambique reported difficulties with water scarcity for everyday needs. Before resettlement, interviewees relied on the Revuboe River, even during dry seasons. However, in Mualadzi, they found the water supply inadequate. Additionally, many interviewees reported food insecurity, stating their families lacked sufficient food and experienced hunger. Attempts to cultivate the land in Mualadzi were often unsuccessful due to poor soil quality and water scarcity, leading to crop failure. Furthermore, inadequate support during the transition period exacerbated food

insecurity, with relocation occurring late in the planting season and insufficient livelihood restoration and food assistance provided.

### *2. 2. 3. 1 Sustainable livelihoods framework*

The following subsection summarizes the basic idea of sustainable livelihoods: A livelihood is the set of abilities, assets, rights, and resources (stocks, assets, and access) needed to maintain a way of life. A sustainable livelihood is one that can withstand stress and recover from setbacks, maintain or increase its capacities and resources, provide future generations with viable livelihood options, and, in the short and long terms, provide overall benefits to other livelihoods on a local and global scale. (Conway and Chambers, 1991: 6).

Development organizations such as the UNDP, DFID and CARE have embraced the sustainable livelihoods (SL) framework for poverty alleviation, realizing that impoverishment is more than just a lack of resources (Krantz 2001; Petersen 2010). This framework identifies five essential livelihood assets that are necessary for the sustainable development of humankind. It then uses this model to construct developmental strategies targeted at strengthening the underprivileged communities' foundation of livelihood assets (Petersen 2010). These means of subsistence consist of:

- i. Human capital: people who are healthy both physically and intellectually, educated, and able to take advantage of possibilities.
- ii. Economic/financial capital: the money needed to support oneself, obtained from jobs, government handouts, and credit loans.
- iii. Physical and infrastructural capital: access to fundamental infrastructure such as water and electricity, transportation, housing, education and healthcare facilities, and other amenities.
- iv. Natural capital: having access to contamination-free land and other environmental resources.
- v. Social and political capital consists of relationships that foster reciprocity and trust, support systems, and memberships (including cultural affiliations) (Petersen 2010).

The SL paradigm posits that a shortfall in one part of livelihood assets is likely to result in deficits in other areas, leading to increased deprivation. This notion is based on Sen's (2004) capacity approach and similar viewpoints (Petersen 2010). For instance, a lack of funds may make it more difficult to obtain essential infrastructure, which can lead to stress in the home and detrimental effects on mental or physical health. It can also make it more difficult for people to make meaningful contributions to their social, economic, and environmental environments, which can worsen poverty in the community. Consequently, communities could get caught in a vicious cycle of deprivation in which poverty gets worse when any of the five livelihood assets is insufficient (Swanepoel and de Beer 2006; Petersen 2010).

Adonteng-Kissi *et al.* (2016) suggest initiatives for the restoration of sustainable livelihoods as a way to mitigate some of the negative consequences of MIDR. These initiatives aim to fully address the losses incurred, recognizing that compensation should not be limited to a single lump sum payment but should encompass the overall impact on the lives of the displaced individuals and facilitate the reconstruction of their economic and social infrastructure (Vanclay 2017: 6). Martin and Rice (2019) emphasize the significance of encouraging the restoration of revenue-generating activities and propose substituting long-term benefits for monetary compensation in order to give landowners more stable sources of income.

Wilson (2019) makes the case that compensation for displaced families should take into account not only the value of the land but also the loss of trees, crops, culture, and other elements that are likely to be impacted by displacement. Wilson (2019) looks into the effects of mining displacement on indigenous communities in Sierra Leone, particularly in rutile mining areas. Rehabilitation initiatives should also provide displaced people with alternate sources of income. But not every Alternative Livelihood Programme (ALP) successfully reduces poverty for families impacted by the project. Adonteng-Kissi and Adonteng-Kissi (2018), for instance, note that ALPs in Prestea,

Ghana, failed to improve the welfare and economic development of families affected by the project, demonstrating the need to give the sustainability of ALPs first priority.

Wilson (2019) emphasizes the criticality of rebuilding impacted communities to protect the most vulnerable individuals. The erosion of community cohesion poses a significant concern, especially when displaced persons are resettled in unfamiliar areas far from their original communities, disrupting social bonds and cultural traditions (Nguyen *et al.* 2015). Moving from rural to urban regions, whether voluntarily or involuntary, can sever ties within the community and upend long-standing lifestyles (Bennett and McDowell, 2012; Nguyen *et al.* 2015). There may be especially dire repercussions for individuals who are displaced by force.

Tilt and Gerkey (2016) looked at the labour and financial flows within an agricultural community, highlighting the vital role that communities play in the lives of rural residents. Debasree (2015: 448) notes that displaced people in India typically originate from socioeconomically deprived families where survival depends on having access to natural resources and having strong community ties. However, relocation may lead to the dissolution of these social support networks when communities are unable to remain intact (Dastgir *et al.* 2018).

### **2. 3 Displacement**

Relocating people from their homes is only one aspect of displacement; another is taking productive land and other assets and putting them to another use (Guggenheim, 2019). In displacement scenarios, affected people (AP) are those individuals or communities that face the risk of losing various physical and non-physical assets due to the project, including residences, communities, fertile lands, natural resources like forests and fishing grounds, cultural landmarks, commercial properties, income sources, and social and cultural connections (ADB 1998a).

The concept of displacement extends beyond cultural backgrounds, economic statuses, migration histories, and geographical locations (Askland 2018: 231). It

involves a nuanced understanding of "place", which encompasses subjective, emotional and embodied experiences (Askland 2018: 232). Consequently, various subjective and/or objective conflicts may emerge, making the displacement process a pivotal aspect for communities affected by large-scale extractive operations.

Displacement, as the antithesis of place, refers to the circumstance in which individuals are compelled to depart from their customary residence (Cambridge Dictionary, "displacement"). According to Angelika Bammer, displacement is the act of removing someone from their own culture, either physically or by the imposition of a foreign culture, as a result of colonialism (Bammer 1994: 332).

In the paper "Theorizing and Conceptualizing Displacement" in the Vietnamese Context, Jansen (2018) goes into further detail about Bammer's terminology, classifying displacement into two main categories. The first category consists of emigrants who leave their home country either willingly or unwillingly as a result of domestic political and economic issues. Those who are physically uprooted from or inside their own region or culture due to the imposition of a foreign culture make up the second group (Jansen 2018: 2). Even though relocation may have financial benefits, it frequently causes serious psychological and physical problems for those who are impacted, such as assaults, alienation, assimilation anxieties, nostalgia, identity crises, and cross-cultural disputes.

Owen and Kemp (2016) point out that there is a wealth of research outside the purview of mining prospecting and exploration activities that shows the link between displaced people and related risks and consequences. They stress that there is a greater chance of negative effects, including trauma, when displaced people have little control over the events that led to their displacement (Owen and Kemp 2016: 1227). However, Cernea (2000) suggests that early risk assessment, resource allocation, and prompt assistance can significantly reduce harm to displaced people. Damages might be minimized if large-scale mining initiatives include planning for resettlement. Additionally, Cernea (2008) makes the case that certain displaced people might profit from socioeconomic

initiatives started by multinational corporations directly or from jobs and business opportunities brought about by these businesses' presence.

## **2. 4 Resettlement**

Mines are typically constructed in areas where mineral resources are concentrated, and if these resources are located beneath farmland, homes, or entire communities, it may necessitate the physical relocation of people, a process known as resettlement (Liman 2017). Ghana, with significant mineral deposits mainly situated in the southern region, has witnessed the establishment of numerous resettled mining communities, such as New Atuabo and Teberebie townships by Goldfields Limited, as well as Teleku-Bokazo, Nkroful, and Salman resettlements by Adamus Gold Resources.

However, one notable challenge with planned resettlement is the frequent underestimation of costs. In such cases, communities often end up bearing unforeseen costs that were not factored into the planning process (Wilson 2019). By neglecting to fully account for the cost of resettlement, the companies involved essentially shift the burden of impact mitigation and recovery onto the resettled communities, thereby increasing their vulnerability to impoverishment. With the government failing to address these gaps, families find themselves shouldering certain expenses to sustain their livelihoods and social networks (Wilson 2019). Moreover, resettlement can lead to significant disruptions in people's social networks and livelihood patterns due to involuntary displacement, resulting in a pervasive sense of unsettlement and isolation, as individuals lose their connection to their place and spirituality (Wilson 2019).

### **2. 4. 1 Voluntary resettlement**

Beyond mining prospecting and exploratory activities, Owen and Kemp (2016) point out that there is a wealth of literature demonstrating the link between displaced people and related hazards and damages. The possibility of negative effects, including trauma, is increased when displaced people have little influence over the events that led to their displacement and stress (Owen and Kemp 2016: 1227).

Cernea (2000) suggests, however, that early risk assessment, resource allocation, and prompt intervention can significantly reduce damages to displaced individuals. Reduced impacts are possible if large-scale mining projects include planning for resettlement. However, Cernea (2008) notes that certain displaced people might gain from job and business opportunities connected to the presence of multinational corporations or from socio-economic programmes started directly by multinational corporations. Voluntary displacement, or resettlement, refers to individuals who willingly depart from their accustomed environment or place of origin and choose to relocate to different settings (Gebre 2002).

Concerning mining explorations and subsequent acquisition of concessional rights for rigorous mining operations, the affected peoples (APs) are involuntarily displaced and resettled, as the case may be.

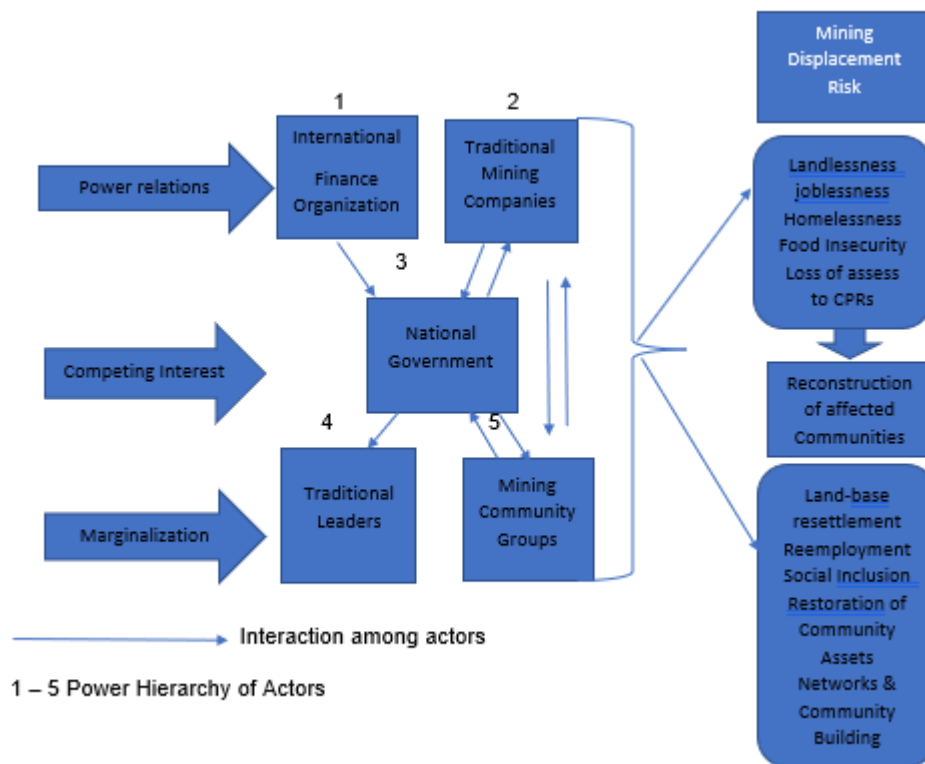
#### **2. 4. 2 Involuntary resettlement**

Involuntary resettlement refers to situations where a development project or new policy necessitates the acquisition of land owned or utilized by individuals or groups, whereas voluntary migration occurs when individuals independently choose to relocate to another area (Abdul Jaleel 2017). In contrast to voluntary movements, involuntary resettlement is primarily influenced by "push" factors rather than "pull" factors. Resettlement programmes often lack discernment, disrupting the social safety nets typical of many peasant societies globally, while local coping mechanisms struggle to mitigate the challenges posed by resettlement (Cernea 1993: 3). Involuntary resettlement typically leads to both tangible and intangible losses, as well as heightened political tensions, resulting in a feeling of being marginalized. This marginalization entails both physical removal from a specific area and social detachment from established networks (Cernea 2000: 12). In the course of displacement, affected individuals face the risk of losing various types of assets, including natural resources, infrastructure, human capital, and social connections

(Cernea 2000: 32). Conventional planning strategies often fall short of adequately addressing these risks, leading to increased poverty, loss of resources, and exploitation of the affected populace (Cernea 2000: 13).

### **2. 4. 3 Effects of Resettlement**

Mass Involuntary Displacement and Resettlement are frequently accompanied by the phenomenon known as the Resettlement Effect (MIDR). This effect includes the loss of both material and immaterial assets, such as communities, homes, land for habitation, income streams, means of subsistence, locations of cultural heritage, social networks, cultural identity, and support systems (ADB 1998). Significant social, economic, and environmental changes are brought about by the displacement caused by development projects; these changes are characterized by recurring patterns in the projects or industries that cause the displacement (ADB, 1998a, 1998b; Pandey *et al.* 1998a, 1998b; Mathur 2001; Cernea 1999b, 2000; Downing 1998; Scudder and Colson 1982; Scudder 1996). Due to this consequence, dangers related to the emergence of "new poverty" have been recognized. These risks are detailed in Michael M. Cernea's Impoverishment Risk and Reconstruction (IRR) model, which is shown in Figure 2. 1 below:



**Figure 2. 1: Theoretical framework: Political Ecology and Cernea's (1997) Impoverishment risk and reconstruction model.**

Source: Wilson S. A. (2019). Mining-induced displacement and resettlement. *Journal of Sustainable Mining* 18(2019) 67-76, [www.elsevier.com/locate/jsm](http://www.elsevier.com/locate/jsm)

## 2. 5 Political ecology

The political ecology framework (Figure 2. 1) provides a comprehensive understanding of the background related to the utilization of natural resources. It serves as a valuable tool for critically analyzing the influence of power dynamics, conflicting socio-political agendas, and interactions among mining stakeholders, particularly at local and national levels, on mass involuntary displacement and resettlement (MIDR) in the western region. The term "power dynamics" refers to how different mining actors can influence

decisions on MIDR and how they can control or obtain access to financial gains from resource exploitation. These dynamics also encompass authority and the capacity to enact changes (Long 2021). Politics is used to study power relationships between various stakeholders, such as governmental agencies, mining firms, and regional mining communities. It also looks at these relationships' interests and positions within the current power structures, as well as how these relationships affect MIDR as a whole (refer to Figure 2. 1).

Therefore, in order to investigate displacement brought on by mining activities, a political ecology method has been used (Nambiza 2007; Hermer 2016). For example, Nambiza (2007) pointed out that the social and economic destitution of the local community in Tanzania's Bulyanhulu mining town was caused by power struggles between players and their ties to international interests.

Moreover, academics looking into mining-related displacement have noted that a variety of impacted groups are usually excluded from conversations and decision-making regarding eviction and relocation procedures (Nambiza 2007; September 2010; Madebwe *et al.* 2011; Lillywhite 2015).

## **2. 6 Income**

The resettled communities predominantly comprise smallholder farmers, with agriculture serving as their primary source of income (Kitchen 2005). In these places, people's lives are usually centred on one source of income, mainly crop cultivation. When there are no feasible alternatives for earning a living, households are more susceptible to problems that could compromise their ability to feed themselves (Ellis, 2004). Research indicates that a significant portion of households in rural resettled communities experience low incomes (Adjei 2007). It's important to note that this low income may have been prevalent in their livelihoods even before the mining operations commenced. The situation may be exacerbated due to reduced yields on farmlands post-resettlement, with some farmers finding themselves on infertile land. Furthermore,

these displaced groups' financial problems are made worse by the dearth of adequate alternative sources of revenue.

## **2. 7 Mining**

The process of mining involves taking rich minerals or geological materials out of the earth. These materials are usually found in ore bodies, lodes, veins, seams, reefs, or placer deposits. Metals, coal, oil shale, gemstones, limestone, chalk, dimension stone, rock salt, potash, gravel, and clay are among the mineralized commodities of economic importance that miners can obtain from these deposits. Materials that are not viable for agricultural cultivation or production in a factory or laboratory can only be obtained through mining. Water, natural gas and petroleum are examples of non-renewable resources that must be extracted. The processes involved in modern mining include searching for ore bodies, assessing the viability of proposed mines, extracting the needed minerals, and clearing the area after mining operations. Mining operations typically generate adverse environmental impacts during and after activity, leading many nations to enact regulations to mitigate these effects. Ensuring work safety in mines has been a longstanding concern, and contemporary practices have significantly enhanced safety standards (Tsui 2021).

Mining activities release ore dust and gases that are harmful to both miners' health and the environment. Prolonged exposure to mining-generated dust can result in respiratory diseases and lung tissue scarring. Moreover, diesel-powered machinery, which emits carbon, contributes to air pollution in mining areas (Tsui 2021). Residues from mining processes can contaminate local water systems, elevating acidity levels and introducing heavy metals that harm wildlife and render water undrinkable. Certain mining methods require the drainage of underground water reservoirs, known as aquifers, leading to adverse effects such as spring depletion, river interruption, and ecosystem degradation. Pit mining, a prevalent technique, involves excavating land to access raw materials, causing land disruption, vegetation removal, and soil erosion.

Soil erosion can extend beyond mining sites, impacting soil quality in surrounding areas (Tsui 2021).

The varied impacts collectively result in significant damage to on-site habitats. Moreover, mining triggers secondary consequences such as water and air pollution as well as vegetation loss due to soil disturbance, which can extend the scope of habitat degradation beyond the immediate area. While efforts can be made to restore habitats once mining activities cease, certain impacts may persist. Even in rehabilitated sites, biodiversity is often lower compared to pre-mining conditions (Tsui 2021).

### **2. 7. 1 Consequences of mining operations**

The scale and consequences of displacement resulting from mining activities are significantly shaped by the subsequent factors:

Economic globalization: The increasing interconnection of economies enables mining operations in distant countries to be conducted more efficiently than in the past. Impoverished African countries lack the financial means to develop their mining sectors independently, thus rely on foreign investment, such as direct foreign investments. In these scenarios, minimal attention is given to potential resettlements that may occur. Oversight from authorities is often nominal or absent. Collaboration between foreign corporations and local entities is common, with minimal benefits reaching the local communities. Consequently, profits predominantly flow back to the investors' home countries rather than fostering local development. Instances of environmental degradation and economic rights violations often go unnoticed by Western public opinion (Terminski 2012).

The increasing demand for resources drives the expansion of existing mines or the establishment of new ones. This pattern has resulted in a notable increase in the area allocated for mining operations in recent decades, as notably observed in India, where coal mining areas have expanded nearly tenfold in the past half century. The transition from underground to open-cast mining necessitates more extensive land usage and results in the displacement of more people. Additionally, automation in extraction

processes reduces employment opportunities, contributing to migration from affected areas. Environmental impacts are often overlooked by corporations operating without external scrutiny, exacerbating conditions for nearby inhabitants (Terminski 2012).

Unethical conduct by private sector entities in the mining sector: Inadequate regulations create an environment where the private sector can engage in exploitative practices. Displaced individuals often receive insufficient compensation for their losses, and promised assistance programmes for finding alternative livelihoods are frequently unfulfilled. Local communities often lack the financial resources and legal avenues to adequately protect their rights and interests. Consequently, their resistance efforts are often ineffective in challenging unjust practices (Terminski 2012).

The limited engagement of local government authorities in responding to the needs of displaced persons: Resource extraction usually occurs in isolated, under-developed areas, making it difficult for local governments to monitor the effects these operations have on the environment and society (Terminski 2012). National governments may turn a blind eye to misconduct by extractive firms for fear of jeopardizing foreign investment. Mining ventures are often located in nations with fragile democratic structures and insufficient safeguards for human rights. The situation of mining expansion in India, which lead to land dispossession and the marginalization of indigenous communities, serves as a prime illustration of this challenge. (Terminski 2012).

Indigenous populations, deeply connected to their land, are particularly vulnerable to displacement's consequences. To them, land represents not just an economic and social nexus but also a cultural cornerstone. Relocation is often reluctantly accepted, as it signifies not only a loss of sovereignty but also social isolation and marginalization. The negative effects of modern mining on indigenous people include contaminated land and water, community dislocation or displacement, conflicts with the authorities, and forced migration from rural to urban regions (Guggenheim 2019).

Theodore Downing has noted that relocation has a number of negative effects on indigenous peoples, such as loss of land, health risks, lack of access to shared resources, homelessness, income loss, social disintegration, insecurity in food, degradation of rights, and spiritual instability (Downing *et al.* 2012). Similar challenges were highlighted by Walter Fernandes in his study on how investment projects affect tribal tribes in India (Mishra 2002). Economic development goals often conflict with the well-being of tribal communities, leaving vulnerable groups like women, the elderly, children, individuals with limited employment opportunities, rural communities relocated to urban areas, indigenous groups, landless settlers, and minority populations disproportionately affected (Cernea 2008).

The boom in mining activities can trigger structural changes in the labour market, leading individuals to shift from agricultural to service sector jobs. Consequently, female unemployment may rise, given that agriculture typically employs more women than the service sector (Kotsadam and Tolonen 2016). Additionally, when mineral extraction loses its profitability and the non-tradable sector contracts, residents frequently find it challenging to return to their previous farming activities.

## **2. 8 Development Induced Displacement and Resettlement (DIDR)**

Development-induced displacement and resettlement (DIDR) is one of the world's leading causes of displacement, ranking second only to natural disasters. Annually, an estimated fifteen million individuals are uprooted due to major developments such as dams, road construction, and resource extraction (Cernea, 2006). Large-scale development projects are estimated to have displaced at least 300 million people between 1988 and 2008, a span of 20 years (Cernea and Mathur 2008). This kind of displacement, when combined with natural disasters, dramatically increases the amount of internal displacement that occurs worldwide, highlighting the irreversible nature of many displacement events brought on by development. These events are only comparable to those brought on by large-scale industrial accidents that affect large regions, natural calamities, or climate change (Cernea and Mathur 2008).

Though less reversible and with fewer hazards involved than displacement brought on by disasters or conflicts, development-induced displacement shares similarities with other types of forced relocation, such as evacuations ordered by government decrees following natural disasters (Cernea and Mathur 2008). Usually restricted to national borders, large-scale infrastructure projects such as the Mangla Dam in Pakistan and the Kaptai Dam in Bangladesh have indirectly increased international movement (Cernea, 2008). Many examples demonstrate the coexistence of displacement brought about by long-term environmental changes and development activities. This is especially evident when building large dams like China's Three Gorges Dam, which necessitates displacing locals from the affected areas (Cernea 2008).

The aftermath of such development projects often manifests in environmental degradation, including land, air, and water pollution, posing health risks and economic hardships for affected communities. Consequently, forced migration becomes a repercussion of deteriorating living conditions, exacerbated by development initiatives (Cernea 2008). The fundamental causes of internal displacement worldwide are persistent disputes between various parties within national borders, as land becomes a contentious resource between governments, the commercial sector, and affected people (Cernea 2008). The value of land frequently outweighs the welfare of the occupants in extreme cases of development-induced displacement, illustrative of the significant effects of development projects on displaced populations (Cernea 2008). *Putting People First: Sociological Variables in Rural Development*, edited by M. M. Cernea, published in the mid-1980s, introduced the phrase "development-induced displacement and resettlement" (DIDR) to academic discourse (1985; 1991). The 1980s and 1990s saw a substantial change in the theoretical terrain surrounding this problem.

### **2. 8. 1 Theoretical approach to analyzing the consequences of DIDR (Elizabeth Colson-Thayer Scudder Four-State Model)**

Resettlement and forced displacement in Asia and Africa were thoroughly researched by renowned anthropologist Thayer Scudder, who found similarities between these

practices and voluntary settlement strategies (Cernea 1995: 97). There had been very little theoretical investigation of development-forced relocation and resettlement prior to the work of Colson and Scudder (DFDR). Colson and Scudder introduced a four-stage model in the early 1980s to explain and examine the resettlement and forced displacement processes. The model developed by Elizabeth Colson and Thayer Scudder in 1982, initially designing it to examine voluntary resettlement, but it later proved applicable in certain instances of involuntary resettlement as well (Cernea 2002). The approach outlines four phases—handing over or incorporation, potential development recruiting, transition and integration—that people in sociocultural systems go through when they are resettled. It underscores the typical behaviour expected from the majority of resettlers during these stages, focusing on the first and second generations of resettlers. Success in resettlement outcomes is often contingent upon completing these stages through the second generation (Scudder, 2019: 29).

The following four steps achieve successful resettlement:

Step 1: Prior to the actual evacuation, prepare for resettlement.

Stage 2: Adjusting to the first drop in living conditions after removal.

Step 3: Commence community-building and economic development initiatives that are essential to raising the standard of living for first-generation resettlers.

Step 4: Giving the second generation of resettlers and non-project authority entities access to a sustainable resettlement process (Scudder 2009: 30).

## **2. 9 Mining-Induced Displacement and Resettlement (MIDR)**

Academic literature has given the issue of MIDR a great deal of attention (Downing, 2003; Terminski 2012). Communities living in nearby areas are often forced to relocate when open-pit mines get larger. According to Downing's (2002) definition of MIDR, research on the topic shows that the mining industry's current state is not socially sustainable and presents serious issues related to displacement. Property must be acquired in order to access and extract the ore when lucrative ore deposits are found. This results in displacement impacts, which cause former residents to lose their homes,

productive land, assets that provide income, and personal resources, ultimately pushing them into poverty (Bennett and McDowell 2012).

The growth of open-pit mining and a lack of social support from the business sector and local government are the main causes of the social issue of mine-induced relocation. Many times, Local communities are often displaced as a result of mining operations alone. Approximately 60% of the world's mineral resources are found in areas where indigenous peoples live. Large-scale displacement is mostly caused by conflicts over territorial control, resource disputes, confrontations between local groups and authoritarian regimes, and ethnic separatism. According to some sources, mining may be the direct cause of more than 10% of all development-related displacement that occurs globally. There have been notable mining-related displacements in areas like Jharkhand, India (coal mining), Papua Island (open-pit gold and silver mining), Ghana (Tarkwa gold mines), and Mali (Syama and Sadiola gold mines). In Germany alone, lignite mining throughout the previous century forced between 30 000 and 100 000 people to relocate. Significant human displacement is also a result of the extraction and transportation of crude oil also leads to significant human displacement (Terminski 2012).

It is critical to understand that displacement brought on by development is not always the result of raw resource extraction. The kind of displacement brought about by open-pit mining growth is very different from that brought about by the transportation and extraction of crude oil. As a result, it is critical to distinguish between two different types of DIDR: (MIDR), which is brought on by the expansion of mines for minerals such as gold, silver, diamonds, or coal, and oil development-induced displacement (OIL-induced displacement and resettlement), which is related to crude oil extraction and transportation. The following list of notable variations can be found in these DIDR subcategories:

Oil-induced displacement: Despite its unique operational methods, oil extraction typically doesn't result in widespread displacement. However, in some African

countries like Nigeria and Sudan, displacement brought on by oil has gained significant attention. Large-scale petrochemical projects can result in displacement for a number of reasons: a) local communities living close to the pipelines are forced to relocate as a result of pipeline construction and operation; b) environmental pollution from oil extraction; and c) political disputes over territorial control over oil extraction and transportation areas (Moro 2009).

Mining-induced displacement: This subset involves internal displacement directly resulting from establishing or expanding mining operations (Downing 2002). The bank-wide review of projects involving involuntary resettlement states that 10.3% of development-induced displacement worldwide is attributable to mining. Mining-related forced relocation has been documented on every continent. The effects of mining-induced displacement are particularly vulnerable for indigenous people, just like for other causes of DIDR.

### **2. 9. 1 Employment and MIDR**

MIDR has been given a great deal of attention in the literature (Abuya 2013; Lange, 2011; Mensah and Okyere 2014; Owen and Kemp, 2014, 2015; Terminski 2012, 2013; Wilson, 2013). MIDR happens when rising commodity prices fuel the need for additional land, which pushes communities to relocate (Owen and Kemp, 2014). Using participatory rural appraisal (PRA) tools and techniques, Kitula's study examined the socio-economic effects of mining on local livelihoods in Tanzania. It found that the influx of foreign mining companies made it difficult for locals to secure land, primarily because of government policies that favour foreigners (Kitula 2006). Furthermore, there are documented cases where mining operations pledge resettlement compensation packages but fall short of fulfilling these commitments (Van Alstine and Afionis 2012).

Although the general consensus is that MIDR primarily causes negative effects on the communities that are relocated, Downing (2002) contends that the compensation from MIDR offers potential economic benefits, including the creation of jobs and the establishment of new businesses in the resettlement areas. These recently founded

companies, nevertheless, have not been investigated in great detail. In addition to identifying specific businesses supporting the displaced and relocated communities outside of the area's mining activities, this study intends to compare the current living standards of these groups to their pre-relocation lifestyles.

Solomon (2011) provides further details on how which mining might enhance welfare by generating jobs. The main source of revenue for Botswana was the Bamangwato Concessions Limited (BCL) mine, which resulted in a rise in employment prospects in secondary and tertiary industries. About 25 000 people in the area were employed in about 1 000 mining occupations. In the Appalachian region of the United States, Betz *et al.* (2014) conducted impact studies on coal mining and found that jobs in mining provided benefits to a temporary workforce. As miners had more money to spend on luxury and home items, more firms were starting and expanding as a result, which in turn encouraged entrepreneurship. According to Deller and Schreiber (2013), mining has increased work opportunities for rural populations by generating jobs in industries such as, but not limited to, mining.

These studies, however, do not go into great detail on the precise kinds of jobs that were generated or the successful entrepreneurial endeavours (Betz *et al.* 2014; Deller and Schreiber 2013; Solomon 2011). According to Amankwah and Anim-Sackey's (2003) research, mining helped to lessen poverty, encouraged local economic development, and stopped rural migration to urban areas. They also observed a significant shift from unskilled to semi-skilled and skilled workers. Although mining raised rural residents' incomes, the study didn't examine the effects of these greater earnings or the particular skills mine workers learned (Amankwah and Anim-Sackey, 2003).

Obeng-Odoom (2014a) observes that Nigeria is still one of the richest nations in Africa in terms of employment, despite the large disparity between the rich and the poor that is partially caused by unemployment. Despite the country producing a sizable amount of oil (around 2.46 million barrels per day), there are few work opportunities in the oil

business for the impoverished population. The study, however, did not look at specific unemployment rates or how they affect underprivileged areas, nor did it look at how wealthy communities profit directly from oil production.

Solomon (2011), Deller and Schreiber (2013), Amankwah and Anim-Sackey (2003), and others all concur that mining generates more job prospects on a micro level. Leshoro (2014) and Biyase and Bonga (2007) discovered, however, that mining companies sought to increase labour productivity and efficiency through technological advancements at a macro-level. The growing demand for diamonds in Botswana did not translate into a corresponding increase in employment as a result of technological advancements (Biyase and Bonga-Bonga 2007; Leshoro 2014). These results are at odds with actual data from Cornish (2012, 2013a) demonstrating that mining in Botswana's Jwaneng region raised villagers' quality of living and created jobs. It is expected that findings at the macro- and micro-levels will differ. This study investigates how efficiency and technology may impact employment in mining businesses, with a focus on micro-level effects.

The mining industry in Ghana attracts a lot of people, which leads to in-migration that negatively impacts other industries like agriculture. Nevertheless, even with this tendency, the mining industry only employs between 15 000 and 18 000 people, or less than 1% of Ghana's labour force. The mining industry's capital-intensiveness limits communities' access to employment prospects. Furthermore, because their experience is better suited for low-level, temporary jobs than for long-term employment, residents frequently lack the abilities required for managerial responsibilities. As a result, this condition results in job instability because transitory employment cannot provide a steady stream of revenue (Odoom and Obeng 2014a, 2014b).

### **2. 9. 2 Effects of mining-induced displacement and resettlement (MIDR)**

The expansion and intensification of mining operations, notably spearheaded by AngloGold Ashanti, have given rise to environmental and social challenges in the western region. These difficulties include problems with environmental deterioration,

negotiations and compensation when mines claim farmlands, and resettlement and relocation. Because of these socio-environmental problems, impacted communities have been more resistant on occasion and more frequently, which has led to conflicts between the communities and mining firms (Akabzaa and Darimani 2001). A population that is more conscious of the environment as a result of the disruption of livelihood sources, the frequency of resistance, and conflicts has given rise to local social movements in the area (Akabzaa and Darimani 2001). Nevertheless, because surface mining operations necessitate a large capital investment with comparatively low labour demands, their ability to create jobs is limited.

The social cohesion and cultural values of the local community have been adversely affected by the mining operations of Australian Goldfields Ltd. (GAG) and Wexford Goldfields Ltd. (WGL) in Ghana. Akabzaa and Darimani (2001) raised concerns regarding inadequate housing, young unemployment, family breakdown and higher school dropout rates. (Akabzaa and Darimani 2001). In Tarkwa, mining operations between 1990 and 1998 resulted in the relocation of 14 settlements, impacting a population of more than 30 000 people (ibid.). Certain communities relocated in pursuit of agricultural land, whereas others were shifted or resettled by the mining corporations.

The increasing number of young people migrating to metropolitan areas like Tarkwa in search of work prospects, exacerbates an already dire housing crisis largely stemming from the frequent displacement of rural households. Rents have increased to the extent that unemployed migrant youngsters are unable to afford accessible housing in towns. Mining firms' compensation and relocation policies have had a profound effect on families, upending long-standing family networks. Many resettled households have voiced grievances about the inadequate housing provided by mining companies, citing insufficient internal space and external areas for domestic activities (ibid.).

One adverse consequence of mining companies' operations in resettled rural communities is the heightened cost of living. Essential amenities such as food,

accommodation, healthcare, and water have become unattainable for rural households. This situation is exacerbated by the depletion of traditional livelihood sources due to mining operations, sparking or exacerbating social problems. According to Akabzaa and Darimani (2001), there are two main causes of the high cost of living in the locations they studied. First, there is an income gap that benefits mine workers. Ghanaian employees' pay is denominated in US dollars, but salaries for foreign employees are globally competitive. These wealthy individuals have a significant impact on how much goods and services cost. Second, by purchasing farms, the mining sector has eliminated a sizable percentage of the labour force from agriculture and other sources of revenue. As a result, there has been a decrease in food production, which has raised food costs. The intensified mining operations have resulted in reduced yields on agricultural fields and a shorter fallow time of 2-3 years, indicating that the environment in rurally relocated populations is fast degrading (Akabzaa and Darimani 2001).

The development of diseases brought on by pollutants and accidents at mining sites coexists with the detrimental effects of mining on the environment. Some pollutants, such as cyanide, have immediate effects, while others, like mercury, manifest symptoms over an extended period of time. In areas like Tarkwa, where GAG operates, gold extraction and processing have resulted in various environmentally related diseases and accidents. According to data reported by Akabzaa and Darimani (2001) from the District Medical Office in Tarkwa, the ten most common health problems in the area are accidents, acute conjunctivitis, upper respiratory infections, skin disorders, malaria, and diarrhoea.

The consequences in terms of morbidity are substantial. Morbidity, which denotes the condition of suffering from a disease or medical ailment, presents a significant health concern. Extensive research has been conducted on the health repercussions in mining communities (Cohen 2014; Eldoret and Chancery 2013; Wikle 2014). Relocation-related stress and trauma worsen the already precarious health situation of displaced people. Resettled populations often struggle to access safe drinking water

and proper sewage disposal, resulting in increased incidents of diarrhoea, dysentery, and epidemic infections. Infants, children, expecting mothers, and the elderly are disproportionately affected by these health impacts. In addition, as women look for reliable sources of income, sex employment, many concurrent partnerships, and covert sexual activity all rise in mining communities (Opoku-Ware 2014; Wikle 2014). Academics also concur that respiratory health issues like asthma and chronic bronchitis are mostly caused by mining (George 2013; Kambole 2003; Kitula 2006; Pettersson and Ingri 2001).

Communities in Ghana's Obuasi, Tarkwa, and Akwatia historically depended on small-scale farming. However, the loss of arable land and increased water contamination brought about by gold mining have rendered this way of life untenable. Consequently, poverty levels have risen, resulting in higher mortality rates, weakened immunity in children, and increased infant mortality rates due to inadequate nutrition (George 2013).

Affected persons' (APs) everyday lives are severely disrupted by the stress brought on by DIDR, endangering their ability to obtain the assets needed for a sustainable way of life (Xi and Hwang 2010; Tuval-Mashiach and Dekel 2012). While the majority of research on resettlement-related stress focuses on political, military, and natural disaster scenarios—all of which offer unique and potentially more extreme experiences—studies on stress brought on by DIDR and coping strategies point to detrimental impacts on mental health. There is evidence of high rates of anxiety, depression, and signs of post-traumatic stress disorder (Lev-Wiesel, 1998; Xi & Hwang, 2010; Tuval-Mashiach and Dekel 2012; Nuttman-Shwartz Dekel and Tuval-Mashiach 2011). Furthermore, cultural alienation and identity deprivation may result from the sociopsychological stress caused by DIDR (McDonald-Wilmsen and Webber 2011; Downing and Garcia-Downing 2009). The World Health Organization (2001: 1), cited in Petersen (2010), states that mental health, also known as psychological well-being, refers to a condition in which people recognize their own abilities, manage everyday stress, work effectively, give back to their communities, maintain their sense

of self-worth and efficacy, act and think appropriately, have a generally positive impact, and engage with others in a productive manner (Peterson 2010).

## **2. 10 The impact of mining-induced displacement and resettlement-induced poverty**

This review's use of the word "impoverishment" to describe the effects on APs of MIDR, a by-product of DIDR, has received a great deal of research. Scholarly discourse has long recognized that APs may encounter several dangers associated with impoverishment and that mitigation measures are frequently insufficient. To grasp the implications of these impoverishment risks for APs, it is imperative to elucidate the concept of impoverishment. In the context of MIDR studies, impoverishment is frequently synonymous with poverty. For the purpose of providing a complete understanding of impoverishment, this section examines several forms of poverty. In addition, poor planning, ignorance of the many effects of resettlement on displaced people, and inadequate compensation result in long-term poverty as well as short-term financial losses (Adonteng-Kissi 2017; Owen and Kemp 2015). Tilt and Gerkey (2016) discovered, for instance, that two decades after relocation, households in China were still living in poverty. According to Owen and Kemp (2015), impoverished residents usually purchase land in inexpensive areas, causing previously impoverished families become even poorer, thereby prolonging financial hardship for MIDR victims. Poverty has historically only been associated with a lack of financial resources. Many academics contend, however, that this definition falls short of capturing the range of human needs that go beyond mere material prosperity (Max-Neef *et al.* 1991; Swanepoel & de Beer 2006; Sen 2004). Sen (1999) argues that poverty should be understood as a form of deprivation of capabilities, in which factors such as age, disease and physical disability are just as important as income levels in determining an individual's capacities. Sen's concept is expanded upon by Max-Neef *et al.* (1991), who claim that poverty is defined as any unfulfilled basic human need and argue that poverty should be viewed from a variety of angles. They list the six basic human needs—subsistence, safety, comprehension, involvement, identity, and freedom—that must be

met (Max-Neef *et al.* 1991). Furthermore, as Swanepoel and de Beer (2006) make clear, poverty is a condition of not only not having enough money but also of being unhappy. Material deprivation, physical health problems, strained social relationships, insecurity, and helplessness are examples of ill-being; on the other hand, security, autonomy, freedom of choice, and social well-being are characteristics of well-being (Swanepoel and de Beer 2006; Petersen 2010). As a result, poverty or impoverishment includes a deficiency in the material, physical, social, cultural, and psychological aspects of meeting basic human requirements, in addition to a lack of financial resources.

## **2. 10. 1 Mitigating resettlement impoverishment**

The restoration of affected people's (AP's) livelihoods is mandated by the principles and rules governing displacement and involuntary resettlement (WB, 2001; IFC 2002). This idea is bolstered by the writings of Nambiza 2007; Madebwe *et al.*, 2011; Lillywhite *et al.* 2015; Kidido *et al.* 2015). Nonetheless, although livelihood restoration initiatives are expected to address the socioeconomic impacts of resettlement-induced impoverishment, this is often not the case. To mitigate social disintegration, a comprehensive, people-centred approach is necessary to facilitate purposeful community reconstruction (Cernea 1996). Displaced people must fairly and actively participate in the resettlement process, from learning about it to finishing the livelihood restoration programmes, in order to guarantee a lasting re-establishment (Cernea, 1996; Hota & Suar 2011; Downing & Garcia-Downing 2009). In order to reduce cultural conflict that results in psycho-socio-cultural (PSC) impoverishment, Downing and Garcia-Downing (2009) suggest seven measures to help with the shift:

1. Dispel myths that fail to mention or neglect PSC impoverishment.
2. Verify that there are laws and regulations in place to control funds and manage resettlement efforts.
3. Create a PSC goal to assist in the early formation of a new, enduring cultural routine upon resettlement.
4. Improve baseline studies to evaluate entitlements for APs by going beyond socioeconomic surveys to a thorough analysis of their sociocultural background.

5. Protect members of the community who are at risk, as DIDR may amplify already-existing disparities in the community and make resettlement more difficult for these people.
6. Empower APs with the tools they need to take control of their destiny and actively engage in resettlement through meaningful consultations.
7. Create PSC innovations, such as putting displaced families next to host families who can help them settle into their new community, to help APs avoid conflict and create new, meaningful cultural practices.

## **2. 10. 2 Other contributions to ways of mitigating resettlement impoverishment**

In addition to Downing's (2002) suggested seven steps, Hota and Suar (2011) contend that support and self-efficacy are essential for a successful livelihood restoration, in addition to highlighting the prudent use of financial compensation and meaningful participation of AP.

Hota and Suar (2011) stress that the degree of self-efficacy among APs is critical to the success of resettlement operations. "Self-efficacy" describes a person's willpower and self-assurance in their capacity to complete tasks (Hota & Suar 2011). An individual's self-efficacy is greatly influenced by their access to a variety of support systems, such as information, material resources, social networks and emotional reinforcement (Hota & Suar 2011). So, how APs respond to resettlement and whether they see it as helpful or harmful depends greatly on their levels of self-efficacy and their access to assistance.

Therefore, a comprehensive strategy combining economic sustainability with the improvement of socio-cultural well-being through empowerment and capacity building is essential to mitigating or alleviating the psycho-socio-cultural impoverishment of APs. If livelihood restoration is to be effective, it is imperative that the support networks and levels of self-efficacy among APs be taken into account.

In Wilson's (2019) study, respondents highlighted a number of steps to better their socioeconomic circumstances in Sierra Leone following mining-related displacement

and resettlement. With 71% of respondents citing the need to restore their homes, home reconstruction was found to be the most important step toward improving the lives of resettled populations. They indicated that they would like to be part of the process and that sturdy materials like concrete blocks, high-quality wood, and corrugated aluminium sheets be used. They also wanted each house to have a kitchen and latrine in addition to solar electricity.

A further important step towards bettering the lives of impacted communities is the shift from social and political exclusion to participation in the lost-property compensation programmes. In order to actively involve them in the negotiation process, 59% of interviewees emphasized the necessity of revising crop compensation. In order to protect their livelihoods, they advocated for a revision of prices to reflect current market values, and guaranteeing cash crop payments until mined-out areas are restored and replanted. While government agriculture authorities usually work with mining corporations to decide compensation for lost trees, including impacted people in the decision-making process may result in higher compensation.

Educational help and skills training were regarded as the third and fourth most critical strategies to enhance the respondents' socioeconomic conditions. They believed that education through learning resources and scholarships for postgraduate work would ultimately improve the socioeconomic circumstances of their communities in the long run. Furthermore, the participants expressed their support for mining firms to fund alternative livelihood programmes with financial grants and to sponsor skill training in local communities (Wilson 2019: 74).

## **2. 11 Conclusion**

MIDR has a significant impact on APs, with millions of people affected annually by DIDR. Such effects must be acknowledged. Extensive research on MIDR has revealed that APs often find themselves in a state of increased impoverishment compared to

their pre-resettlement condition. Recognizing this reality, various principles and guidelines centred on people's well-being have been developed to address the risks of impoverishment faced by APs and foster their development.

Nonetheless, neoliberal ideology—which places a premium on efficiency and sees social spending as a drain on resources—continues to affect how MIDR is approached. Despite the existence of policies aimed at prioritizing the welfare of affected communities and ensuring their sustainable development, APs often find themselves further impoverished. Often overlooked during relocation, the socioeconomic impact is a fundamental component of the human requirements necessary for maintaining livelihoods.

Therefore, it is imperative to comprehend the effects of MIDR on individuals, explore strategies for mitigating any adverse consequences, and promote the well-being of APs within the context of MIDR. This study adopts a perspective that views the socioeconomic issues arising from MIDR as significant stressors that disrupt the daily lives of APs and examines how these disruptions influence their adjustment to the new prescribed way of life.

## **CHAPTER THREE:**

### **THEORETICAL AND EMPIRICAL REVIEW**

#### **3. 0 Introduction**

Chapter Two gave an outline of some major principles pertinent to the investigation, such as socioeconomic factors, mining activities, resettlement processes, income generation, employment opportunities, livelihood sustainability, morbidity rates, and impoverishment, all within the context of mining resettlement. The chapter emphasizes the notion that mining resettlements are established to benefit the affected communities, underscoring the importance of actions by mining authorities and government officials aimed at enhancing the well-being of residents in these communities (Owen 2018: 4).

This chapter covers the theoretical options for the investigation, using two mining resettlement ideas, impoverishment risk and reconstruction model (IRR) and local economic development theories (LED), as the theoretical lens. These theories play a crucial role in studying issues related to resettlements, as their extractive nature necessitates the movement of people from one destination to another, thereby requiring a large tract of land for their operations.

#### **3. 1 Impoverishment risks and the reconstruction model (IRR)**

The impoverishment risks and reconstruction (IRR) model developed by Michael Cernea provides valuable insights into the hazards connected to involuntary resettlements and is a theory of great value in this regard. Cernea identified eight core dangers that affect people displaced due to development, including landlessness, unemployment, homelessness, marginalization, food insecurity, loss of access to common property resources, increased illness and mortality and community disarticulation are among the eight core dangers identified by Cernea as affecting people who are displaced due to development. While land loss is a notable risk factor

in MIDR, it accounts for just 10–20% of the risks of impoverishment associated with involuntary displacement. Additional displacement-related hazards have been found, which represent serious dangers to sustainability. If these dangers are not addressed or reduced, "new poverty" may arise, exacerbating the problems already faced by APs. This may cause the living conditions and dignity of the underprivileged to further deteriorate. Furthermore, MIDR has significant long-term effects that significantly restrict people's opportunities for sustainable growth on both a societal and personal level. Societies that have existed for centuries may crumble and become unstable due to the strains of forced relocation. On the other hand, well-thought-out actions that lessen but do not completely eradicate the impacts of MIDR enhance societal sustainability.

### **3. 2 Michael Cernea's impoverishment risks and reconstruction (IRR) Model: A Critical Review**

Over the past three decades, large-scale development projects and conflicts have resulted in forced or involuntary displacement. The IRR model has emerged as a core framework to comprehend this (Andinet 2017). The IRR model has been widely used in Africa to assess different development policies and tactics. This has helped to clarify the complexity underlying the region's efforts to reduce poverty. Despite its initial focus on the ethical implications of displacement, the IRR model has been widely accepted as a main instrument for measuring the repercussions of involuntary displacement, notably from development projects [Cernea 2005].

The IRR model, first conceptualized by Cernea (2005) breaks down the impoverishment process into eight interconnected risk dimensions. These dimensions include food insecurity, loss of access to common resources and services, joblessness, homelessness, marginalization, increased morbidity and mortality, and social disarticulation (Andinet 2017). The IRR model has four purposes, according to Cernea: research methodology, problem resolution and planning, diagnostic, and predictive (Cernea 2005). Nevertheless, criticisms of the approach have surfaced despite its extensive application.

Scholars have highlighted potential gaps in the model's coverage (Kassahun, 2001) by adding hazards such as migration, resilience, and the chance of losing schooling to Cernea's list (Mahapatra 1999; Scudder 1997; Feleke 1999; Cernea 2004). Kassahun (2001) also pointed out deficiencies in the model, including an imbalance in economic emphasis across different sectors affected by displacement and a historical bias towards losses in agricultural economies over extractive industries like coconut oil production. Additionally, concerns have been raised about the model's reliance on geographic distance in assessing displacement impacts, potentially overlooking the holistic nature of displacement (Gebre and Itaru 2005).

The World Bank's policy framework on involuntary resettlement, which covers a variety of features of an involuntary resettlement programme, is based on the IRR model. It also serves as the foundation for many other frameworks, such as the performance standard 5 (ps5) on involuntary land acquisition and resettlement of the international finance corporation (IFC). Although the IRR model is useful in this situation, Owen (2016: 24) highlights that the effectiveness of the developers' efforts to "reconstruct" the lives of the displaced during the resettlement phase has a substantial impact on the results of resettlement operations.

### **3. 2. 1 Merits and limitations of the model**

#### **3. 2. 2 Merits of the model**

- The model acknowledges that risk intensity varies with time and place and among different groups exposed to these risks.
- It is evident from the IRR model that these risks affect diverse categories of individuals in distinct ways.
- The model also acknowledges that the host population may face different risks compared to those encountered by resettled individuals, which could result in impoverishment.
- It helps us understand why many involuntary resettlement schemes have failed to prevent poverty. The utilization of the IRR model encourages mining project

planners to actively identify established poverty risks linked to involuntary resettlement from the outset.

- The model necessitates a thorough evaluation of the social context in which resettlement will occur, as well as consideration of hazards to persons affected by the project.
- Utilizing the IRR model can improve risk management effectiveness by identifying risks early in project preparation and mitigating displacement impacts through targeted actions to eliminate or reduce risks.

### **3. 2. 3 Limitations of the IRR Model**

- Not all of the eight risks outlined in the model will manifest in every instance of involuntary resettlement.
- Different displaced households may not experience each risk factor in the same manner.
- Insufficient consultation with affected communities is a notable deficiency of the IRR model, leading to a failure to identify resettlement risks in mining projects. Timely and transparent engagement processes are crucial to addressing this issue. Without access to adequate information, affected communities lack the means to mobilize and initiate the rebuilding process effectively.
- Similarly, without a detailed understanding of how communities can respond to displacement concerns, firms are unable to commit the necessary resources to responsibly manage these risks.

### **3. 3 Interconnection of potential risks**

The IRR model remains pertinent in this context as it highlights the fundamental risks associated with impoverishment resulting from displacement induced by mining activities and offers strategies to mitigate or eliminate these risks (Cernea 1997). Landlessness, unemployment, homelessness, marginalization, food insecurity, loss of access to shared property, elevated rates of illness and death, and disarticulation of the community are some of these concerns (i.e., the breakdown of community

cohesion). The model also describes how to reverse impoverishment by implementing steps that target these threats. Five of these poverty hazards are highlighted in this study, including landlessness, joblessness, homelessness, marginalization, and morbidity and mortality, along with the related reversal strategies applicable to the scenario under review.

### **3. 3. 1 Landlessness**

Examining the possibility of being landless is crucial to comprehending the idea of new poverty. Because MIDR uproots the essential components of commercial operations, livelihoods, and productive systems, it dramatically increases the likelihood of landlessness (Cernea 2000: 23f). This process, which is marked by the depletion of people's wealth (decapitalization) and their decline into poverty (pauperization), is caused by both the difficulties displaced people have in finding suitable alternative land and the actual loss of land to mining activities (Hilson 2007). These difficulties could result from local land prices that have risen due to increased demand or from people using the compensation they received for their land to meet urgent survival needs that have emerged during resettlement. Furthermore, decapitalization can occur when contamination from mining, flooding, or environmental deterioration impairs the land's ability to produce (Downing 2002: 9). Impoverishment resulting from landlessness due to MIDR can manifest in four distinct forms: 1) the initial loss of land to mining operations, 2) damage to the land's productive potential in the nearby non-appropriate area 3), subsequent losses in the productive value of the land on account of environmental problems, and 4) loss of land occurring because landless people are unable to gain access to alternative lands (Downing 2002: 9, as cited in Reisenberger, 2010).

- ***The initial loss of land to mining:*** The principal hazard associated with mining is land loss, which not only creates financial difficulties but also shatters economic ties. Multiple elements impact the reduction in financial stability faced by those who are displaced, most notably:

- loss of access to previously used resources that are essential to their way of life, such as water, farmland, and shared resources like rivers, pastures, and forests.
  - Insufficient recompense disregards the intangible costs brought about by relocation.
  - adverse effects of altering or modifying the prior economic paradigm, especially the forced transition from a land-based to a cash-based economy.
  - assessing the environmental and economic circumstances at the new home.
  -
1. ***Damages to the productive potential of the land in the nearby non-appropriate area:*** Land plays a crucial role in enabling relocated individuals to continue their previous economic activities in the new location. Development projects frequently cause a large reduction in the amount of land that is inhabited, in addition to forcing people to relocate physically. The loss or significant reduction of land particularly affects communities that rely on a land-based, hunting-gathering economy and have limited employment opportunities. This situation puts them at risk of facing long-term economic marginalization across generations. The unemployment stemming from land loss impacts both genders, leading to a decline in their economic well-being and contributing to issues such as alcoholism and mental health disorders (Terminski 2012).
  2. ***Subsequent losses in the productive value of the land on account of environmental problems:*** Land loss also significantly affects other security-related issues, such as food security. Relocating people to places that support their previous economic model and permit the continuation of traditional activities is therefore essential. Payments in cash for compensation may result in expenses for other uses, which could cause homelessness and subsequent landlessness. Another issue contributing to the decline in economic security

is the absence of compensation for displaced individuals. Many indigenous communities worldwide, lacking formal land rights, do not receive any compensation for displacement. Moreover, a common practice in numerous countries involves resettling populations into areas with much poorer living conditions than those they left behind, further exacerbating their economic plight. (Terminski 2012).

3. ***Loss of land occurs because landless people are unable to gain access to alternative lands:*** This situation becomes evident in regions where affected individuals prefer monetary compensation instead of receiving alternative land. For example, in Ghana, gold mining operations resulted in the displacement of nearly 30 000 people in the Tarkwa district between 1990 and 1998. (Akabzaa and Darimani 2001). According to Akabzaa and Darimani, the compensation process overlooked the residents' renter status. Consequently, a large number of women who were uprooted without receiving any compensation are presently residing in improvised wattle houses outside of Tarkwa. Several of them stated in the interviews that they could not afford the rent in towns. As a result, their primary means of subsistence are sales of firewood from the forest or various activities at galamsey (artisanal mining) locations (Akabzaa and Darimani 2001).

### **3. 3. 2 Joblessness**

MIDR is expected to occur mainly in rural areas, according to the prediction model described in the eight-dimensional probability model. People who are unfamiliar with the rural peasant and indigenous economies sometimes overlook the possible negative economic effects that extend beyond land ownership, such as the decline in wage employment opportunities, limited access to leasing arrangements, and diminished prospects for sharecropping. Disruption of local revenue sources frequently lead to ongoing unemployment or underemployment following displacement. Furthermore, it is common to overlook the economic prospects that arise from ongoing social production relations and local and regional economic cycles prior to displacement.

Evaluating whether mining improves the local situation requires looking at overall employment changes at all stages of displacement: hiring, transition, prospective development, handover, and inclusion (Cernea 2000: 24 and Scudder and Colson 2019, cited in Scudder 1996, 1997a, 1997b). Mining can increase employment if local hiring laws are in place, although this advantage is restricted to specific workers. It becomes harder for the sector to assert that it has significantly increased employment creation for unskilled local labourers as it increasingly adopts labour-intensive technologies that require more skilled people (Lasseby 2000). At the Freeport-operated Grasberg mine, for example, just about 100 of the 17 300 employees are from the surrounding mining region (Oxfam 2001). The idea that jobs in mining may make up for lost jobs in the community is problematic, particularly from a sustainability standpoint, if the mine's lifespan is shorter than the sustainable economy it disrupts. Studies by Pandey *et al.* (1998a, 1998b) and colleagues on employment before and after displacement provide more evidence that MIDR contributes to new poverty. According to their research, the percentage of unemployed women was roughly 56% prior to displacement and increased to 84% after displacement. Employment fell from 37% to 12% in the primary sector and from 6% to 0% in the secondary sector. As a result, women who were already underprivileged during the industrial process were treated even less favourably.

Twerefoo (2021) examined the effects of resettlement on the livelihoods of affected communities and the degree of adherence to government policies in her study, "Mining-induced displacement and resettlement policies and local people's livelihoods in Ghana," which was published in the *Development in Practice* journal. The results showed that, before relocation, sixteen out of twenty respondents, or eighty percent, had jobs in a variety of fields, including small-scale mining, farming, and petty trading. Only 11 respondents, accounting for 55% of the total, stated that they were working for pay after being resettled. These included car engineering, small-scale mining, and petty trading (owning food stands, chemical stores, and provision stores) (working as mechanics). The findings imply that, instead of rising, the probability of finding work

following relocation decreased, depriving some people of their ability to support themselves.

An additional noteworthy facet of unemployment concerns the pervasive joblessness witnessed in Teberebie, Ghana, along with grievances from the community about their dearth of employment prospects with Anglo-Gold Ashanti (AGA). The CHRAJ report also highlights AGA's role (Commission on Human Rights and Administrative Justice, 2008: 103). The community is becoming more and more irritated and indifferent as a result of this circumstance. Interviewees frequently voiced their dissatisfaction with the mining firm for employing people from outside the region rather than giving preference to those whose land had been purchased. Reisenberger's study (2010: 94) observed that the majority of the Ghanaians employed on a permanent basis at the mine were from larger mining towns or urban centres such as Takoradi, Kumasi, or Accra. The inhabitants of Teberebie were sceptical of the company's claim that the locals lacked the necessary abilities. "Men can't get work at the mine because our men don't know how to use the machines they are utilizing" said one interviewee (personal interview, June 8, 2009). Many locals said they would be willing to go through technical training in order to work at the mine permanently (Reisenberger 2010: 94).

### **3. 3. 3 In-house training residents**

The in-house training residents near the Iduapriem mine in Ghana have consistently expressed a desire for local training programmes, particularly among the youth seeking skills for employment in the mining industry. Adamtey research from 2018 revealed Teberebie's jobless youth's interest in learning a variety of technical skills, including computer proficiency, machine operation, electrical work, mechanics (vehicle, fridge, and fitting), and tie-dye techniques. Among them, technical proficiency was highly valued (Reisenberger 2010). There is a notable demand among locals for permanent employment opportunities at the mining site, with dissatisfaction over the current availability of mainly short-term casual labour positions or roles within external security companies. The allocation of these limited short-term positions within the community has caused additional tension and conflict, as they are distributed randomly using

pieces of paper marked with "yes" or "no" to determine job allocation. This method of job allocation exacerbates the already competitive job market in the community, leading to frustration, particularly among the youth. There is a widespread expectation, especially among the youth, for local leaders, including the chief, to address the pressing issue of unemployment more effectively (Reisenberger 2010: 95).

As a result of the land loss, the Teberebie community now depends on sources of income other than farming. With the loss of their main sources of income, this change has resulted in an abnormally high unemployment rate. Long-term employment prospects at the mining company are virtually nonexistent for the community. The sporadic job opportunities offered are short-lived and unsustainable, intensifying competition and social tension within the community. Permanent employment opportunities at the mining company are limited and increasingly challenging to attain, given the industry's shift towards less labour-intensive methods requiring skills that locals often lack. Alternative income avenues, such as galamsey mining, are pursued out of desperation but are neither environmentally sustainable nor safe for the miners. Petty trading offers only marginal income supplementation and cannot adequately support families. The pervasive lack of income has far-reaching implications, including food insecurity and limited educational opportunities for children. The competitive job market further exacerbates tensions and social fragmentation within the community.

### **3. 3. 4 Homelessness**

The third risk of relocation is homelessness, which is characterized as the "loss of house plots, residences, and shelter," and it carries on the maintenance of the new poor. While some people may become homeless temporarily, persistent homelessness can result from poorly handled displacements. When the losses surpass the structure itself, the idea of new poverty emerges. Homelessness, or the substitution of a building that its residents might not view as "home," frequently leads to a severe loss of cultural identity. This happens as a result of a disruption in the symbolic significance of a place for maintaining family unity and serving as a recalled site for support among neighbouring homes as well as within the household (Jena 2015; Downing 1996; [www.ted-downing.com](http://www.ted-downing.com); Aronsson 2002).

### *3. 3. 4. 1 Kanga and Madina housing*

According to a study by Wilson (2018) titled "Mining-induced displacement and resettlement: the case of rutile mining villages in Sierra Leone", 80% of participants thought that resettlement had only marginally favourable consequences for the relocated community. While acknowledging the positive impact of house construction, some noted smaller house sizes. Participants lambasted the communal infrastructure for being shoddily constructed, in contrast to higher-quality NGO-built structures, viewing it as a disservice to their community. Even with initiatives to reconstruct dwellings in an attempt to prevent homelessness, questions remain regarding the long-term viability of these constructions. Eighty percent said that the homes they had purchased in Madina in 1994 and Kanga in 1991 were now falling apart and had leaky roofs. Furthermore, a few homes fell through in less than five years, but nothing was done about it. Along a similar vein, Teberebie Goldfields's displacement of inhabitants from Teberebie, Ghana, in the early 1990s put the inhabitants at serious risk of homelessness (Brandt 1998).

### *3. 3. 4. 2 Teberebie housing*

Housing conditions in the Teberebie village were negatively impacted by mining-induced development and resettlement (MIDR) for almost twenty years after the population was resettled. Only 127 of the 148 planned homes—168 units total—were actually built, falling short of the agreed-upon number. Teberebie Gold Limited (TGL) contended in court that some people's speculative house purchases had an impact on their eligibility for resettlement housing. Consequently, renters and recent arrivals to the old village were excluded from resettlement houses.

Furthermore, not every home in the former Teberebie community was moved by the mining firm; others moved on their own initiative after receiving financial compensation. Many residents expressed dissatisfaction with the new resettlement houses, feeling that their housing standards had declined despite the upgrade from mud houses to brick structures. The new houses had fewer rooms and lacked kitchen and washing

facilities. Community dissatisfaction with the facilities provided during the resettlement process is evident in the CHARJ report. Families expanded the resettlement houses, expressing dissatisfaction with the number of rooms compared to their former homes. This limited number of rooms posed familial challenges, as parents and children often slept separately.

According to Reisenberger, it is common to observe Teberebie residents adding extensions to their resettlement houses to expand living space, typically using wood and mud. Although some locals would rather have brick additions, the majority could not afford them. Even though the mining corporation must get people's permission before any more building can begin on the concession, the community frequently ignores this procedure.

Agbesinyale (2003: 294f) observed that a number of the resettled settlements in the Wassa West District experienced comparable housing problems. The inhabitants' discontent originated from a lack of room in comparison to their prior communities, even if the new concrete buildings provided by mining corporations appeared to be of higher quality than their former mud- and thatch-roofed homes. The mining corporations provided more expensive homes, but they neglected to account for the size of families and the quantity of rooms in the older buildings. This resulted in a reduction of space, disturbed family dynamics, and increased societal conflict. Teberebie epitomizes this widespread phenomenon.

In conclusion, the resettlement and housing planning were poorly executed, with lingering dissatisfaction over the built structures. Residents of Teberebie have made an effort to remedy this by adding more buildings to their resettlement homes in order to create more room.

### **3. 4 The risk of marginalization**

Owen (2018: 7) claims that marginalization happens when relocated people lose economic clout, which lowers their social standing and self-assurance. It is possible that this process will lead to increased vulnerability and unfairness. Displaced people may be seen as strangers in their new communities and may not be granted the same opportunities and privileges that they were used to. Landowners may be forced to become tenant farmers if they are unable to acquire land outright due to inadequate compensation for lost land. Marginalization includes psychological aspects in addition to the obvious economic ones (Cernea 2000: 6). Cernea goes on to explain that social and psychological marginalization shows up as a decline in social standing, a decline in self-assurance and in society, a sense of unfairness, and increased susceptibility. Psychological marginalization is typically overlooked in resettlement planning, despite complaints of anxiety, low self-esteem, and long-term cultural and behavioral discrimination. Victimization of those who have been resettled often weakens their sense of self and diminishes their standing in the host or nearby community (Cernea 2000: 26). Marginalization can occur immediately or gradually over time as individuals struggle to adapt to new circumstances (Owen 2018: 7).

It is crucial to stress that marginalization and relative economic hardship can start even before there are physical displacements. For example, neglecting to invest services in impacted communities prior to project start-up can result in the partial but significant loss of cropland, rendering some small farmers economically unviable, and forcing high productivity farmers to shift to less productive soils, potentially marginalizing them. Another cause of marginalization is the disappearance of non-farm revenue streams (Owen 2018: 7).

#### **3. 4. 1 Sierra Leone rutile mining marginalisation**

Sigismund A. Wilson's (2019) study, "Mining-induced displacement and resettlement: The case of rutile mining communities in Sierra Leone" (2019: 67–78), revealed that the development of housing and related physical infrastructure projects had a negative

impact on the affected communities due to the social exclusion of community members. Eighty percent of the people Wilson (2019) interviewed said that locals were not actively involved in the construction process because company representatives insisted on adhering to strict requirements that were outside the scope of what local builders could do. As a result, neighbours could only witness Sierra Rutile Limited (SRL) employees using inferior building materials, like mud blocks, low-grade wood, extremely thin corrugated iron sheets, and other inferior building materials for homes. Wilson (2019) also disclosed that unsustainable infrastructure was a result of the company's conservative financial interests and a lack of government control over housing developments. Respondents pointed out that although SRL eventually built public buildings such as a courthouse, market, church, and elementary school, they were built with subpar materials such as fibre concrete roofs, hollow concrete bricks, and subpar wood, all of which were not sustainable. The health clinic is dilapidated, the market and mosque have deteriorated, and the primary school, church, and local courts have not yet undergone renovations, according to the responses. The corporation prioritized cost reduction and timely completion of community structures.

As their socioeconomic standing declines in comparison to their local locations, displaced people and entire communities are at risk of social exclusion. Research has indicated that this kind of marginalization is associated with a decline in self-worth, especially when those who are displaced are perceived as "outsiders" and "newcomers" in their new communities. This isolation is worsened by the economic crisis brought on by restricted access to property and a lack of viable alternatives for generating revenue. Additionally, in Teberebie, economic exclusion due to land disappearance through waste rock dumping is compounded by significant social and psychological exclusion (Reisenberger 2010: 105). Wekwete (2014) confirmed sentiments of unfairness and low self-esteem, suggesting that the way MIDR has been managed throughout time has had long-lasting effects on the social and mental health of those impacted and their communities. Reisenberger (2010: 104) reports that respondents felt the mining firm and government authorities had deceived them and that they felt a pervasive sense of injustice. In interviews, statements like "it was a

fraud" or "we have all been tricked" were frequently used. These statements often had to do with settlement payments but also expressed larger complaints. Many perceive significant injustice in the fact that the community bears the burden of mining activities while others profit. Reisenberger (2010: 104) also noted criticism from the Teberebie chief regarding the lack of consultation with local traditional leaders in decision-making processes when mining activities impact their community. He voiced his displeasure with the central government's exclusive decision-making in Accra without sufficient interaction with the impacted communities (Reisenberger 2010: 105).

### **3. 4. 2 Disruption of formal educational activities**

A frequently disregarded issue associated with MIDR is the disruption of routine social connections and education. According to Downing, children's access to education is commonly hampered by displacement and resettlement, either permanently or just momentarily during the transition year, causing a significant disturbance in school operations. Some youngsters never go back to school and instead enter the industry at an early age, according to research findings. The chaos of moving causes parents to lose sight of their kids' needs as they try to put their once productive and physical surroundings back together (Downing 2002: 11).

According to Reisenberger (2010: 111), the economic displacement resulting from waste rock dumping has also affected children's education in Teberebie. In Ghana, parents are responsible for providing school supplies such as writing materials, sandals, pencils, and school uniforms, even though public schooling is free of charge. It sometimes takes several months to gather the required money for parents in Teberebie to buy uniforms for their kids (Reisenberger 2010). One interviewee emphasized the connection between Teberebie's income inequality and how it affects kids' school attendance and academic performance. He emphasized the financial challenges faced by parents in providing essentials for their children's education, such as uniforms, shoes, bags, and books, due to unemployment and a lack of income. This situation adversely affects children's learning abilities and enrolment rates.

Reisenberger (2010: 112) discovered that for numerous parents who manage to afford their children some years of primary schooling, funding further education becomes increasingly problematic. Anglo-Gold Ashanti (AGA) provides scholarships for advanced education, which respondents valued, but they also criticized the challenge of pre-financing until reimbursement by the company. This obstacle prevents many students from accessing the scarce scholarships. There are several ways in which MIDR and mining operations have an indirect impact on kids' education. After losing their land, some parents find it difficult to regularly afford to bring their kids to school, often having to decide between paying for their education and their food. This circumstance has adverse effects on children's learning abilities and motivation (Reisenberger 2010).

### **3. 5 Other risks**

Analogous cases of growing poverty have been documented, such as the denial of public services, increased food insecurity, the degradation of common property rights, and social fragmentation, all of which are expounded upon below.

**3. 5. 1 Loss of access to public services:** For instance, the absence of educational facilities, healthcare services, law enforcement offices, and clean water sources; prejudice and marginalization experienced by the most vulnerable groups, such as women, children, tribal groups, and indigenous communities; also, the lack of proper social aid for individuals displaced to new residential locations (Downing 2002; Terminski 2012).

**3. 5. 2 Increased food insecurity:** There is a strong association between the loss of land and the unpredictability of the food supply, especially when there are no other sustainable means of generating revenue. The predicament of the Teberebie community serves as an example of how the loss of land has made food insecurity worse. Jean Ziegler, a former Special Rapporteur on the Right to Food, covered this issue in a report to the Human Rights Council on 29 February 2008. Ziegler noted that

because of the location of multiple waste rock dumps nearby, the residents of Teberebie have had restricted access to their fields, which they have farmed for generations, as well as to their main source of income and food (U.N. Human Rights Council 2008: 40).

As a result, a lot of communities now rely only on a cash economy to buy food, which means that residents must travel to neighbouring towns and villages to buy food from local farmers or at markets. This reliance is exacerbated by high prices, which are partially caused by a decline in food production in the impacted areas. It is also made worse by the income differences between the locals and those who work in the mining industry, whose wages are highly competitive internationally and are based on the US dollar (Akabzaa and Darimani 2001: 46).

The daily struggle for food has taken a toll on the mental well-being of the people as they transition from self-sufficiency to reliance on surrounding communities for sustenance. For the Teberebie community, the shift from being self-sustaining farmers to buyers at markets remains a difficult reality to accept (Akabzaa and Darimani 2001: 46). Since the construction of the waste rock dump, the Teberebie community's access to food crops has significantly decreased, leaving farmers with few options for a living and forcing them to rely more on the cash economy and the increased food prices in the Tarkwa region (Akabzaa and Darimani 2001).

**3. 5. 3 Loss of access to common property:** Common resources, including land, forests, and water bodies, are becoming much less available due to environmental deterioration from mining activities and MIDR (Cernea 2000: 29). In some instances, the affected communities have retained access to their established burial grounds, a practice influenced by beliefs regarding the connection between the deceased and the living, which may be challenging to articulate.

#### **(i) Access to Land**

The vast majority of resettled individuals in the community were primarily engaged in subsistence farming as their main occupation. Few farmers farmed for profit, but the majority used the money they made by selling some of their crops at neighbourhood markets to pay for other needs. According to a 2004 Community Development Plan, unemployment was identified as one of the key issues facing communities within the Iduapriem concession area in Ghana, particularly among the youth, with unemployment rates ranging from 70% to 90%, compared to the national average of 30% for individuals aged 15–24 (Adamtey 2018).

Following the loss of their farmland, which served as their primary source of income, residents sought alternative means of generating income, albeit with varying degrees of success, none of which adequately met their needs or were sustainable in the long term (Adamtey 2018). The large-scale mining activities in Teberebie have resulted in significant environmental degradation, leading to a decline in forests and farmland. Previously accessible resources such as firewood and food from the forest are now less abundant due to mining activities (Armstrong 2008: 29). Furthermore, compared to the people's prior settlements, the new resettlement location offered less land, and the community's land shortage was worsened by the growth of mining operations and the creation of waste rock dumps.

#### **(ii) Access to forests**

Deforestation has been significantly impacted by mineral exploration and mining activities, especially in regions like Tarkwa, Bogoso, Prestea, Damang, and Teberebie (Agbesinyale 2003: 176). In the Wassa West District, for instance, three significant forest reserves—the Bonsa Reserve, Ekumfi Reserve, and Neung Reserve—are threatened by both large- and small-scale mining operations as well as logging. The region's natural wildlife habitat has been disrupted by the massive land clearing for open-pit mining, which has also led to a reduction in biodiversity and the degradation of forest vegetation (Akabzaa 2000: 67).

Over time, human-induced land use changes have led to a significant reduction in primary forest cover, with closed canopy forests decreasing from 88% to 69% between 1986 and 2002, representing a 76.6% reduction over 16 years (Kusimi 2008: 255). Primarily, mining operations have been responsible for this change, turning primary forests into secondary forests. Traditional agricultural methods, the exploitation of fuel wood, the cutting of timber for export, and illicit logging operations are further causes of deforestation (Kusimi 2008).

Furthermore, urbanization has further exacerbated deforestation, with urban centres such as Tarkwa, Damang, and Bogoso in the Western region expanding rapidly. The mining sector impacted deforestation both directly and indirectly. Direct impacts include land consumption by open-pit mining operations, while indirect impacts result from the influx of migrants seeking employment opportunities in the mines, leading to urban growth and increased small-scale mining activities, or "galamsey," which also contributes to deforestation (Kusimi 2008: 250ff). Agbesinyale (2003: 173) observes a significant transformation in the natural and physical environment of districts like Tarkwa, Damang, and Bogoso over the past two decades, mostly ascribed to extensive surface mining operations. He observes that contemporary surface mining has significantly altered the region's surface landscape more than previous underground mining methods have.

### (iii) **Access to water**

Groundwater supplies have suffered as a result of the widespread surface mining activities throughout the Wassa West District. Some hand-dug wells, streams, and boreholes have lost production or yielded less as a result of dewatering procedures related to mining operations. Particularly during the dry season, open-pit mining, which involves excavating large areas of land, alters the direction of groundwater flow and exacerbates dewatering issues (Akabzaa 2000: 66). In Teberebie, the availability of water is insufficient. Due to mining operations, traditional water sources, including rivers and streams, have either dried up completely or become poisoned. The

neighborhood has been given wells and boreholes, but these are insufficient to make up for the loss of natural water supplies (Armstrong 2008).

### **3. 6 Social disarticulation**

Finding gold reserves sparked gold mining operations, which led to economic disruptions in addition to social unrest and societal instability—a dimension that has mostly gone unnoticed in earlier studies. The following subsections illustrate the societal disruption:

#### **3. 6. 1 Disruption of the family unit**

MIDR has changed familial dynamics and put a strain on men and women's conventional responsibilities inside families. Traditionally, men are viewed as the head of households and the primary breadwinners. Unfortunately, many men lose their land—which is their main source of income—due to intensive mining activities like waste rock dumping. Some men are forced to go in search of employment elsewhere, leaving their families to deal with financial difficulties. This migration trend predominantly involves men, leaving women to bear the responsibility of supporting themselves and their children. Women who previously engaged in farming are forced to pursue alternative income opportunities such as trading, artisanal mining (galamsey), or even resorting to prostitution (Armstrong 2008: 30). Armstrong notes a notable shift in family dynamics, with women assuming the role of primary providers in many households, effectively filling the void left by men.

Reisenberger's (2010: 123) study in Teberebie, in the western part of Ghana, found that men primarily received compensation for crops, with women often being excluded from the process or receiving only a small portion of the compensation from their husbands. Men, who were compensated, frequently abandoned their families, leaving their wives to take care of them and their children. As a result, the family broke down, and women had to shoulder a disproportionate amount of the support load. Many men

acknowledge that the primary responsibility for supporting the family now rests on women.

### **3. 6. 2 Dismantling of social organizations and mutual help mechanisms.**

It is important to recognize that the way the compensation was implemented contributed to tensions within the community. Certain farmers received payment through head-count methods, while others received payment through the acre system (Reisenberger 2010: 124). Conflict resulted from the disparate treatment of individuals. According to Reisenberger, Teberebie was pursuing individualization at the time. Although there is still kindness in the community, others claim it is not as prevalent as it once was. There was too much rivalry for scarce employment, land, and salaries. As a result, the researcher observed that during conversations, people frequently said things like "you cry your cry", "you have to battle for your own" and "it is about the survival of the fittest". In Teberebie, segregation in the community has not been the result of mining or relocation. "Mining always splits communities; you will never have the community to be of one garb," observes one interviewee, identifying a pattern.

### **3. 6. 3 Disruptions in the chieftaincy system**

The institution of chieftaincy holds significant importance within the social structure of communities, and chiefs are traditionally respected figures. However, when chiefs engage with mining companies, which may not always benefit the community, they risk losing the trust and respect of community members. Regarding the chief's interactions with the mining corporation, mistrust and distrust are common in the community.

As a result of this lack of transparency and communication, many community members lose faith in the chief's representation of their interests. They feel disconnected and unrepresented, leading to dissatisfaction and disengagement from communal activities. Some youth within the community, aged between 18 and 45 years in Ghana, may even boycott communal labour activities in protest against the chief's perceived lack of advocacy for their concerns.

These issues surrounding chieftaincy are not unique to Teberebie but are reflective of a broader trend. Reisenberger (2010) uncovered a pattern of divide-and-rule tactics employed by many mining companies, including AGA. Often, companies approach the chief first, offering contracts or benefits, which can compromise the chief's ability to advocate for the community's interests impartially. This strategy effectively divides the community, as the chosen chief and favoured individuals become aligned with the mining company's interests, undermining community cohesion and solidarity.

Chieftaincy disruptions within mining communities are not uncommon occurrences. Agbesinyale (2003: 293) discovered cases in the Wassa West District where village chiefs were taken from their positions by force, frequently as a result of disputes over the distribution of resources. Chiefs were sometimes accused of crimes without proper investigation, leading to tension and conflict within the community. This friction often manifests as a rift between the youth and traditional authorities, posing significant threats to communal and social stability.

In essence, the combination of relocation, ongoing land loss and mining activities has profoundly affected the social cohesion of the community under examination. The increasing competition for land, employment, and income has strained social networks, leading to their breakdown. The migration of some male members of the community due to economic hardships further destabilizes both families and the community as a whole. Additionally, the "divide and rule" tactics employed by mining companies have fragmented social structures, disrupting informal networks of mutual assistance such as communal labour performed by the youth. As reciprocity diminishes, individuals feel compelled to fend for themselves, exacerbating social disintegration and leaving the community more vulnerable.

### **3. 7 Local economic development (LED)**

The local economic development (LED) theory typically refers to modifications that impact a local economy's capacity to promote prosperity, create jobs, and encourage growth for its citizens (Bartik 1991; De Blasio & Nuzzo 2010). The purpose of this study is to use the LED concept and determine its applicability in the setting of a mining community. A modern definition of LED places an emphasis on resource expansion, wealth development, capacity building, local governance, and the use of local resources, according to Blakely and Bradshaw (2002). Activities that take place in cities, districts, and regions are referred to as local economies (Hildreth 2011), while people who live in the same geographic area are referred to as communities (McMillan & Chavis 1986).

LED provides local economies (particularly mining towns) and governmental and non-governmental groups with the chance to work together to improve local economic situations. Its goal is to increase sustainability and competitiveness (Wekwete 2014). It encompasses a number of areas, including finance, real estate development, infrastructure provision, company growth, and environmental planning (Leigh & Blakely 2013). These roles will provide the structure for investigating how mining communities experience LED-driven activities.

The information gathered will shed light on the degree of control that locals in mining areas believe they have over the effects of mining, as well as their capability to create money, grow, and make the most of current resources for sustainability. The natural resource curse idea holds that rich natural resources in developing nations can have unfavourable effects like increased productivity in non-mining industries, civil unrest and corruption. This happens when business owners put more money into the mining industry in order to increase earnings, making financial difficulties worse (Ross 2003; Ross M. L. 2004; 2014). Scholars contend that, at the intermediate level, a nation's institutional quality is a key factor in deciding whether it is blessed or cursed by its natural resources (Harvey 2014; Hillbom 2014; Mehlum *et al.* 2006).

In addition to these debates, some academics contend that increased involvement in the mining industry may lead to lower participation in other industries, such as manufacturing, resulting in inefficiencies in the country's economy as a whole (Corden 2012; Matsen & Torvik 2005; Takatsuka Zeng & Zhao 2014).

### **3. 7. 1 Institutional thickness**

The importance of "institutional thickness" in promoting economic development has been highlighted by certain researchers. The existence of several corporate and cultural institutions (such as financial, regulatory, or social agencies) and their interactions that help shape common values in a particular area or community are referred to as institutional thickness (Amin & Thrift 1995). It is thought that institutional thickness affects a community's ability to innovate and adjust to changing conditions (Harvey 2014; Leigh & Blakely 2013), especially when it comes to resource management and making sure that mining-related businesses follow sustainable practices. As a result, national institutional frameworks are very important in determining how mining activities affect communities since they provide a point of reference for different stakeholders to interact with one another.

LED theory provides the underlying basis for the micro-level analysis carried out in this study. This research focuses on the local level, where government entities conduct interventions and policies that have a significant impact on economic development, but many studies often investigate LED within the boundaries of National Economic Development (NED) (Leigh & Blakely 2013; Tello 2010). National policy frameworks have a tremendous impact on communities and shape their economic paths.

Academics, development professionals, and stakeholders around the world all agree that LED plays a critical role in improving people's quality of life overall, creating jobs, and reducing poverty. A comprehensive and integrated approach to addressing the diverse features of communities, such as their political, social, economic, and environmental aspects, is essential for effective local development (Rogerson 2009, as cited in Meyer 2014: 626).

Traditional macroeconomic policies have often fallen short of fostering conducive developmental environments at the local level. LED emerges as a viable alternative for addressing development challenges, offering a more tailored approach to local development (Meyer 2014: 626). This study looks at how LED operates in Ghana's local government system. The objective is to evaluate the potential of well-designed and skillfully executed LED policies to stimulate employment growth and improve the standard of living for locals. The study examines LED in relocated communities using qualitative research methods and makes recommendations for improving LED deployment.

### **3. 7. 2 LED in South Africa**

LED seeks to promote resilient and inclusive local economies in South Africa with the use of local resources, community needs and contributions to broad development objectives like economic growth and poverty alleviation. However, a major obstacle to addressing poverty and unemployment in South Africa is the absence of suitable and workable economic growth initiatives at the local municipality level (Sekhampu 2010, as cited in Meyer 2014: 626). It has been proposed that an organized planning process involving all local community stakeholders is necessary for the successful implementation of LED to overcome this obstacle. This procedure ought to be carried out progressively over time, involving various community segments and addressing all factors that affect the local standard of living, with a focus on helping those in need (Sekhampu, 2010).

### **3. 7. 3 LED in Ghana**

To accelerate socioeconomic development and improve population well-being, Ghana's Ministry of Local Government and Rural Development (MLGRD) has implemented a National Local Economic Development (LED) Policy and Action Plan (source: <https://ghanatoday.gov.gh/sector>). The policy also aims to promote equitable, sustainable, and balanced development by accelerating decentralization and local governance. In order to assist in the reform of constitutional and legislative provisions

impeding the growth of local democracy and political empowerment, a second document known as the National Decentralization Policy and Strategy (NDPS) was also introduced (source: <https://ghanatoday.gov.gh/sector>). Involving residents and state and non-state actors in decision-making and plan execution is a key component of both programmes, especially the LED, which emphasizes the value of strengthening local democracy and participation. They also seek to expand intergovernmental fiscal arrangements, strengthen financial management capabilities across all levels of government, produce respectable employment opportunities, raise incomes, and foster an environment that is conducive to sustainable business growth (source: <https://ghanatoday.gov.gh/sector>).

Consequently, Ghana's two policies are in a good position to guide the district-level development process in collaboration with other establishments focused on development, such as the commercial sector, non-state actors, development partners and civil society groups. The statement, "The country acknowledges that LED encourages wealth creation, boosts employment and incomes, and fosters equitable and sustained economic growth" as summed up by the Minister of Local Government and Rural Development underscores the significance of LED in Ghana's developmental agenda (source: <https://ghanatoday.gov.gh/sector>).

### **3. 7. 4 LED implementation**

The successful implementation of LED hinges on six critical factors, as outlined by Trousdale (2005), as referenced in Meyer (2014: 627). These factors include:

- Successful local leadership includes local companies, communities, and governments.
- The presence of a conducive economic environment provides equal access to opportunities for all stakeholders.
- Active involvement of local youth through dedicated youth development initiatives.
- The existence of job creation opportunities, particularly those that promote sustainable employment.

- Promotion of good governance practices within the local context.  
Sufficient capability and expertise are accessible to all sectors of the community economy. All things considered, the goal of these initiatives ought to be to reduce poverty and improve communal life.

### **3. 7. 5 Challenges of LED**

Numerous obstacles must be overcome for the LED process to be implemented by local government, as noted by Nel and Rogerson (2005), cited in Meyer (2014: 633). These challenges include:

1. The realization that policy formulation does not automatically translate into effective implementation.
2. The need for enhanced skill levels among stakeholders involved in LED initiatives.
3. Addressing shortages in staff and funding to adequately support LED projects.
4. Inadequate community involvement was evident in the LED programme conception and implementation.
5. Limited analysis of local economies, hindering the development of effective strategies.
6. The prevalence of unsustainable community projects.
7. Inadequate capacity and resource constraints.
8. Weaknesses in monitoring and evaluation mechanisms.

Identifying and addressing these challenges are crucial steps towards ensuring the success of LED initiatives in communities, particularly in achieving objectives such as poverty alleviation.

### **3. 7. 6 Benefits of LED**

LED is increasingly recognized as a critical endeavour involving residents, local businesses, and government entities. LED is considered a way to improve quality of life, alleviate poverty, address unemployment, and lessen inequality, especially in developing countries. Regarding research, policy development, planning procedures

and implementation techniques, LED is still in its infancy and is being refined using a variety of theories and methodologies (Meyer 2014). In contrast to traditional macroeconomic policies, which have often fallen short of fostering conducive developmental environments at the local level, LED offers a promising alternative, as noted by Rodrigues-Pose (2001). Rodrigues-Pose (2001) delineates several advantages of LED over traditional economic approaches:

- Empowerment and participation: LED empowers local communities and ensures their active involvement in shaping their economic future.
- Business engagement: LED promotes community collaborations by encouraging local businesses to participate in the development process.
- Locality-based development: LED emphasizes development strategies tailored to local needs and comparative advantages, contributing to the resilience of local economies.
- LED efforts have the capacity to create local job possibilities, which could lead to an improvement in the general standard of living in communities.

### **3. 8 An empirical review of the impact of mining on communities**

The literature examining mining effects demonstrates a spectrum of impacts, both adverse and beneficial, on local communities. Empirical studies within this field analyze various facets, including economic factors such as income and employment, the overall quality of life, health concerns and strategies aimed at addressing mining-induced displacement and resettlement (MIDR). Specifically, researchers investigate the impact on income levels, employment prospects, community livelihoods, health challenges, and efforts to alleviate the socioeconomic repercussions of displacement and resettlement.

#### **3. 8. 1 Changes in income levels**

Displacement and resettlement processes often result in the loss of individuals' regular sources of income. Physical displacement occurs when individuals lose their residences or assets due to land acquisition or use associated with a project,

compelling them to relocate (Owen 2018: 1). Conversely, economic displacement refers to the loss of resources or assets as a result of project-related land purchase or use, which lowers sources of income or other means of subsistence (Owen, 2018: 1). Twerefoo (2021) examined the effects of resettlement on the livelihood dynamics of the impacted community and the degree to which government policies were followed in a study titled "Mining-induced Displacement and Resettlement Policies on Local People's Livelihood in Ghana". Using surveys and in-depth interviews as the main means of gathering data, Twerefoo used a case study strategy to collect primary and secondary data. Twerefoo applied purposive sampling techniques to select key informants who possessed pertinent information to meet the research objectives. The findings revealed that 45% of respondents reported a significant improvement in their income levels post-resettlement. This improvement was attributed to employment opportunities provided by Anglo-Gold Limited (AGL) after resettlement. However, a considerable percentage of respondents experienced adverse effects on their income due to resettlement operations (Twerefoo 2021: 823).

In addition, Collado and Orozco's 2020 study, "From Displacement to Resettlement: How Current Policies Shape Eviction Narratives among Urban Poor in the Philippines," sought to investigate the experiences of poor people in urban areas who were relocated to resettlement areas. Two focus groups with 28 individuals from three different Philippine resettlement sites provided qualitative information for the study. The results revealed that the interruption of traditional sources of income had compromised their living conditions in their poor dwellings. For the many individuals who were impacted, displacement essentially meant losing their jobs and means of subsistence. They either terminated their employment or carried it out at a significant expense. The participants' narratives suggested that their eviction experiences diminished their typical economic capital. The greater distance between their relocation places and once-accessible employment options or small company endeavours resulted in the loss of financial resources. As a result, people had to decide whether to give up on these projects or run the danger of suffering more losses. The researchers observed that the financial strain of moving to these resettlement sites led to unsustainable practices, such as

selling their allotted houses and lots and taking out loans without reliable sources of income (Collado and Orozco 2020: 56–57).

### **3. 8. 2 Employment opportunities**

A critical concern for individuals displaced by development projects like mining is the prospect of securing employment after being uprooted from their primary sources of income. Wilson (2019: 67–76) drew from the literature on mining and resettlement, using the IRR model and political ecology. His main goal of his study, "Mining-induced displacement and resettlement: The case of rutile mining communities in Sierra Leone", published in the *Journal of Sustainable Mining*, was to find out whether mining-induced relocation improves the socioeconomic status of the impacted communities by giving displaced people work possibilities. Using semi-structured interviews, Wilson collected primary data for the study from sixty individuals in the Kanga and Madina communities located in the Bonthe District of Sierra Leone. The results showed that the impacted groups were largely economically marginalized and expressed concern about the dearth of work prospects in their newly relocated places. Eighty percent of those surveyed lost their means of subsistence as a result of displacement brought on by rutile mining. This was made worse by the disillusionment caused by the realization that Sierra Rutile Limited (SRL) would not provide long-term employment possibilities (Wilson 2019: 67–76).

Prior to, or during, the mine's creation, government officials and mining management often make claims regarding employment prospects. However, only a portion of these promises are fulfilled (Drechsel *et al.* 2019: 17). Very few residents of the surrounding villages possess the formal education required for employment due to the highly technical nature of mining activities (Drechsel and Groneweg 2017: 2). The village chief was the only full-time employee of the mining firm in the community, according to interviewers in one community. They added that a small number of locals occasionally had access to short-term mining employment (typically six to nine months). Some interviewees stated that business leaders frequently highlighted a lack of necessary skills for long-term employment in the mining industry (Wilson 2019: 72). The study's

findings showed that people in these relocated towns had high unemployment rates, suggesting that the goal of reducing unemployment—a risk factor for impoverishment—through reemployment had not been met in these resettled places. Numerous studies have also brought attention to the lack of work options for most individuals in resettled areas and job losses as a result of mining-related displacement (Lilywhite *et al.* 2015; Madebwe *et al.* 2011).

### **3. 8. 3 Livelihoods issues**

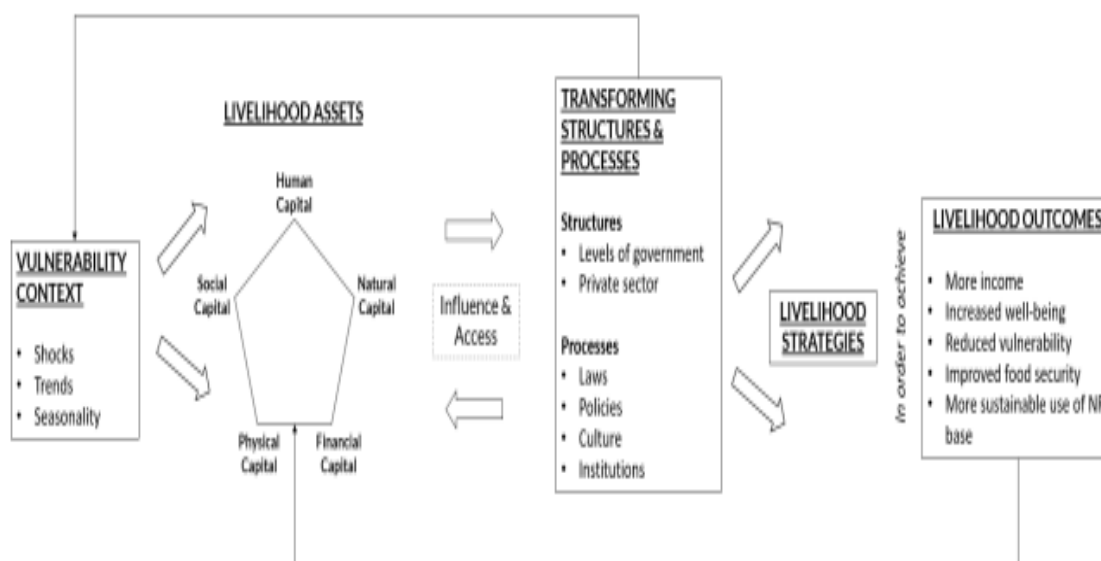
The key elements of life capacities, assets, and engagements required to maintain a means of subsistence are all included in the concept of livelihood (Scoones 1998, as cited in Owen 2018: ii). A livelihood is considered sustainable when it can endure shocks and strains and bounce back, preserving or enhancing resources and capabilities for the present and future while also guaranteeing the maintenance of the natural resource base (Owen 2018: 6). A livelihood system is the all-encompassing combination of actions that a household or community takes to ensure their survival (Owen 2018). This system includes participation in community-level politics, sociocultural events, and economic endeavours. Moreover, the livelihood system encompasses the entire division of labour among household members, encompassing agricultural pursuits, livestock supervision, non-agricultural businesses, off-farm work, and household and social duties.

### **3. 8. 4 The sustainable livelihoods approach (SLA)**

During the 1990s, various sustainable livelihood approaches (SLAs) emerged, highlighting the significance of situating livelihoods within a broader context to comprehend the interplay among households, assets, institutions, interventions, and outcomes. The SLA entails a theoretical framework comprising principles that inform livelihood analysis and subsequent interventions. The SLA gained notoriety after Chambers and Conway published their "Sustainable Rural Livelihoods: Practical Concepts for the 21st Century" article in 1992. The British Department for International Development was one of the organizations that endorsed the SLA (DFID). Owen (2018)

cited Chambers (1991) as highlighting the dynamic characteristics of poverty and development that the SLA addresses. The core concept is to coordinate programmes, policies, and institutions to support household outcomes related to sustainable livelihoods. The SLA is widely used to influence the design and planning components of programme and policy interventions in both urban and rural settings, while it has been implemented predominantly in international development contexts inside less developed nations.

The diagram depicts the sustainable livelihood framework as outlined in the work by Carney (1998).



**Figure 3. 1: Framework for sustainable livelihood**

*Source: adapted from Carney (1998)*

Impoverished individuals, families, and communities utilize the “asset pentagon” framework to sustain their means of living. A central premise is that people need a diverse array of assets to attain sustainable livelihoods, as no single type or category of asset alone can suffice to fulfil their livelihood needs. The framework explores the use and context of household assets through five key elements that must first be understood in isolation before being closely examined to find commonalities. These

components, as outlined by Owen (2018: 4), are enumerated below and incorporated in the subsequent subsection:

1. The vulnerability context encompasses external, uncontrollable elements that impact individuals' assets and opportunities for sustaining their livelihoods. The aforementioned factors comprise many categories of shocks, such as environmental and conflict-related ones, as well as trends, such as resource availability and technical improvements, and seasonal swings (e.g., fluctuations in prices, shifts in employment opportunities).
2. Assets are represented within the framework as a pentagon of capitals, comprising human, natural, financial, physical and social capital.
3. Livelihoods are significantly shaped by policies, institutions, and processes—also known as changing structures and processes.
4. Livelihood strategies encompass the available choices and actions undertaken to pursue livelihood objectives.
5. Greater incomes, improved well-being (such as higher self-esteem, physical security, and political empowerment), decreased vulnerability, increased food security, and improved environmental sustainability are examples of livelihood outcomes.

### **3. 8. 5 Applied livelihood model**

The livelihood framework has gained traction in development discourse due to the increasing number of studies on livelihoods that have adopted it, especially those that employ the sustainable livelihoods approach (Owen 2018). Consequently, various iterations of the sustainable livelihoods approach SLAs have emerged (Shankland, 2000; Owen 2018: 6). The Institute of Development Studies (*IDS*) Sustainable Livelihoods Programme (Scoones, 1998) introduced a version of this framework, which served as a major inspiration for many of these approaches. The UK Department for International Development (DFID) adopted this framework in 2000, albeit with minor changes. Although the livelihood model serves as a framework for examining the livelihood outcomes of rural households in rural communities, has been purposefully

modified. Diana Carney's livelihood model has to have some parts changed in order for it to be applicable and operational in light of the particular contextual evidence gathered from the research regions.

For suitability, the main elements and noteworthy characteristics of the original model (Carney's livelihood model) have been kept. The primary assets are recognized as the pool of capital assets available to households to navigate through precarious situations and adapt to changing structures and processes in order to achieve sustainable livelihoods. They are also referred to as livelihood resources elsewhere (Ellis, 2002; Owen 2018) and livelihood assets (Rakodi and Lloyd-Jones 2002). The modified livelihood model, which serves as the study's analytical framework, and the justification for its use are explained in the parts that follow.

### **3. 9 Definition of key concepts**

#### **3. 9. 1 Household**

A group of people who pool resources or share a common source of nutrition are usually referred to as a "household" (Robertson, 1994, as cited in Beall and Kanji 1999). It often encompasses close family members as well as broader kinship networks. While "household" and "family" share commonalities, they carry distinct connotations. Robertson (1984) and Owen (2018) offer a common definition of a household for developing countries: a household is defined as "individuals residing in the same residence and engaging in fundamental domestic and/or reproductive activities such as food preparation and consumption" (UNDP 1996).

The contribution of overseas household members' remittances to the household's income is a crucial factor to take into account. In a similar vein, support and payments from family members who live in cities in the form of cash, medicine, food, etc., are very important. Additionally, earnings derived from local economic activities and endeavours to expand potential job opportunities through networking and group affiliations are invaluable in enhancing livelihood sustainability. Based on these factors,

a household in this study is characterized by a collective purpose and is typically linked by blood and marital relationships.

### **3. 9. 2 Livelihood**

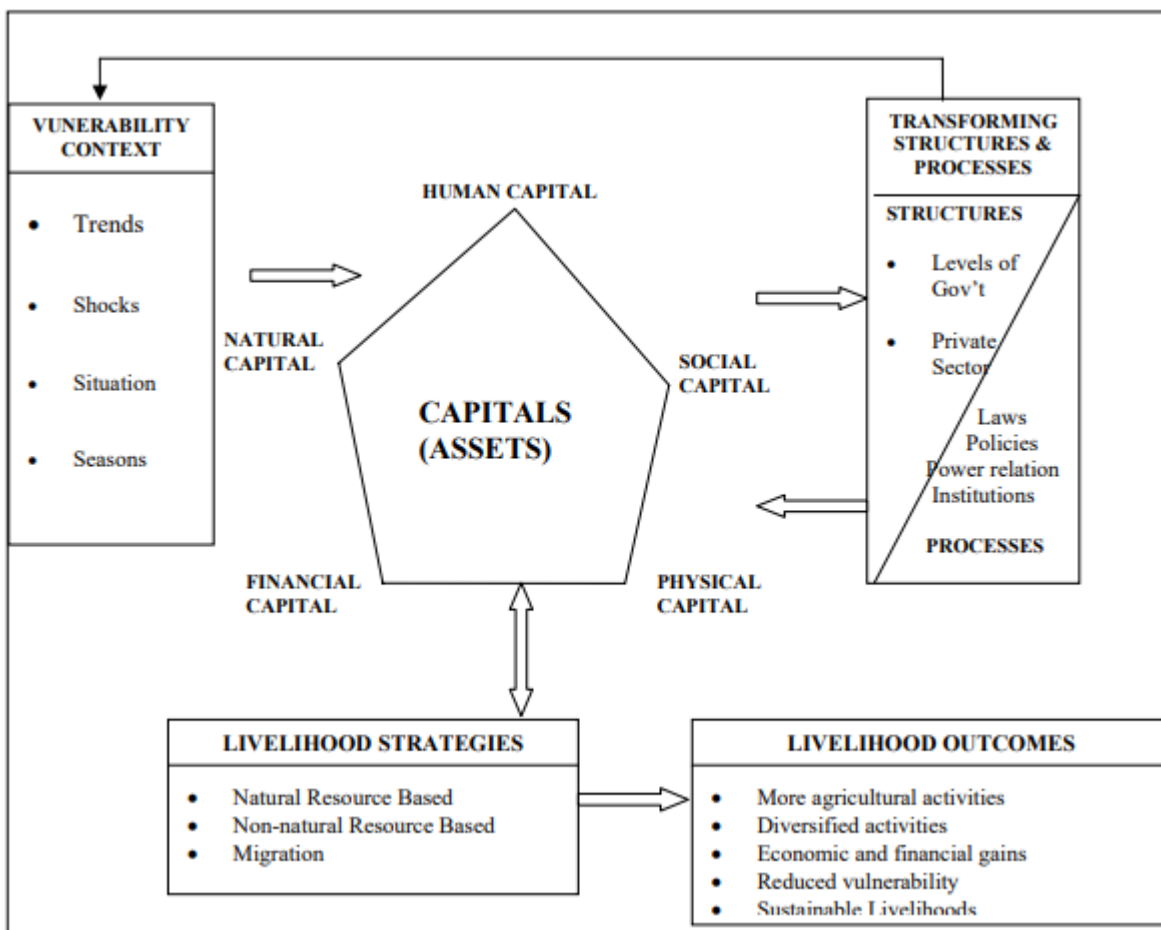
It is often acknowledged that understanding the notion of livelihood can be very helpful in understanding the needs, circumstances, and difficulties that low-income and poor households' experience. But in the past, several conceptualizations have been used to address challenges associated with poverty. First, as Bhattarai (2005) explains, Duque and Pastrana applied the idea of survival strategy to poverty issues, focusing on how people in difficult situations managed to survive. Similarly, in order to combat poverty, Lomnitz (1978) developed the idea of marginality, highlighting the role that social networks play in the survival of lower-class and marginalized populations (Bhattarai, 2005). According to Lomnitz, those living in poverty encounter difficulties on a daily basis because they lack social safety nets and savings, which makes them less advantaged in the labour market and constrained in their access to local economic prospects. Following Chambers' (1989) definition of rural poverty, the notion of livelihood, as presented by Chambers and Conway (1992), was then reduced to the idea of having enough money, food, and other resources to meet basic requirements. All it really meant was that you could get the resources you needed to support yourself. Therefore, the livelihood approach's conceptual and methodological underpinnings originate from research on rural poverty, as defined by Chambers (1989). According to Chambers, low-income households aim for sustainable lives by limiting vulnerability in the face of risks and uncertainties, leveraging both tangible and intangible assets (Bhattarai 2005).

Carney (1998), referenced by Owen (2018), proposed an updated definition of livelihood that includes the capacities, assets (including social and material resources), and activities required to maintain a standard of living. She outlined the assets of livelihood—both material and immaterial—that work together to improve the standard of living for households. Among these are social capital, human capital, financial capital, natural capital, and physical capital as some of the different types of capital.

- The networks and connections among people in a society are referred to as social capital. Belonging to official groups, associations, and organizations promotes trust and reciprocity, which in turn leads to the sharing of knowledge, information, skills, and resources, ultimately improving livelihood outcomes.
- Human capital is the collection of characteristics that allow people to effectively pursue a variety of livelihood strategies and achieve their livelihood goals. These qualities include labour competence, general health, knowledge, and abilities.
- All natural resources are referred to as the reservoir of resources available for livelihood sustenance at any given time. These resources include land, water bodies, forests, the atmosphere, biodiversity, and so on. Sometimes they exist in intangible forms.
- Natural capital is the reservoir of resources accessible for livelihood sustenance at any one time, which often includes natural resources like land, water bodies, forests, the atmosphere, biodiversity, and so on, many of which exist in intangible forms.
- Financial capital refers to the monetary resources that people or households use to meet their livelihood goals. Credit systems, remittances, business profits, and employee earnings are all common sources of financial capital.
- Physical capital refers to the essential infrastructure and productive assets that individuals or households use to modify their physical environments, such as new technologies, tools, and equipment (e.g., agricultural assets, irrigation systems, electricity), which aim to increase productivity and meet basic needs.

Organizations such as DFID have created a Sustainable Livelihood Approach, which takes into account financial assets and is primarily focused on efforts to reduce poverty in developing countries, in recognition of the importance of capital assets in livelihoods. The livelihood framework used in this study, depicted in the diagram below, was modified from Carney's (1998) livelihood framework.

### 3. 9. 3 The livelihood model (analytical framework of the study)



**Figure 3. 2: Conceptual framework of the study**

*Source: Self-generated by a researcher from Carney's livelihood framework (1998)*

The framework's major focus is on the resources that families or individuals employ to build their livelihoods. The vulnerability context—which includes the insecurity-causing factors that influence impoverished people and their possessions—affects these assets. Policies, organizations, interpersonal connections, and power structures all influence how easily one can access and use these resources. Different levels of well-being are used to characterize the tactics used by people and households to get specific results.

Access to resources or systems that facilitate the creation of other types of capital is made possible by five of the capital assets listed by Carney (1998). The capacity of the household to obtain the replication of capital assets is indicative of its access profile.

- There are many opportunities or possibilities to make use of the resources that are available; these are referred to as livelihood strategies. It involves a continuous process of decision-making that is modified in response to outside events. These strategies can range from reactive actions, such as selling livestock unexpectedly, to structural decisions that have the potential to fundamentally alter the nature of one's livelihood, such as migration.
- Depending on their interests and the chances that present themselves, household members work at different jobs or engage in different forms of livelihood, such as trade, working as manual labourers on farms or in formal jobs, or joining associations or organizations.
- Household members participate in a variety of livelihood activities, including trading, working as manual labourers on farms or in formal jobs, and joining organizations or community groups, depending on their preferences and the opportunities that are available (e.g., taxes, loan interest), investment (aimed at enhancing and sustaining livelihood assets), and consumption (covering expenses like food, housing, and clothing).
- Different local and external elements, including the physical environment, social and political climate, and the local economy, have varying effects on livelihoods. A livelihood's vulnerability and unpredictability are inherent due to these dynamic elements. The effects of these outside factors, however, differ for every household. Although some households are more resilient to these effects than others, some are more vulnerable. The nature of these external influences characterizes the vulnerability context, thereby impacting livelihood assets.

This study examined the effects of mining activities (designated as a process within the framework) on the standard of living of those who were resettled in mining towns in the western region, utilizing the framework previously indicated. In Ghana, mining operations have helped certain rural households' standard of living. Therefore, the

purpose of this study was to ascertain the degree to which mining has improved the livelihoods of communities that have been resettled, either directly or indirectly, or by providing opportunities for select individuals.

The study also looked at how mining negatively impacts the standard of living in communities that have been resettled. Additionally, it explored the livelihood strategies and coping mechanisms employed by affected communities to mitigate these challenges. The gathered data provided a crucial basis for examining the different aspects of how mining affects the resources, activities, and results of indigenous populations who have been resettled in mining areas.

### **3. 9. 4 Changes in the livelihoods**

In their article titled "Analysis of Livelihood Issues in Resettlement Mining Communities in Ghana", published in the Resource Policy Journal, volume 63, 2019, Kora *et al.* (2019) examine the interconnections among resettlement, local livelihoods, and sustainability. Within the framework of a dualistic land tenure regime, the study explores the difficulties experienced by livelihoods and the consequences for sustainable development coming from a relocation programme in Ghana that was prompted by mining. Through the use of household surveys, focus groups, and key informant interviews, the researchers demonstrate how the community's impacted members now live in unstable conditions as a result of the mining-induced relocation initiatives. Unexpected financial setbacks for the impacted areas included skyrocketing food prices, rising water and power costs, heightened susceptibility to different diseases, and farmland loss.

The cost of living in these places becomes a major worry because resettlement usually entails moving impacted inhabitants from rural to peri-urban contexts (Giovannetti, 2006), where the cost of products and services tends to be greater than in rural settlements (Arthur 2018). Findings from household surveys, according to Kora *et al.* (2019), show that roughly 49% of respondents switched from using fuelwood for cooking to gas or charcoal because they had trouble getting fuelwood. Even if their

standard of living has improved as a result of this change in energy consumption, respondents are worried about the substantial financial consequences in comparison to their prior reliance on fuelwood. In a similar vein, the respondents report that they now have to pay for water that they could previously get for free from wells and streams. These findings resonate with those of Yaro (2010), who documented residents' discontent with the cost of living in resettlement communities, with many expressing a desire to return to their former settlements.

The implications drawn from the aforementioned findings, consistent with earlier studies conducted by Andrews (2018) and Cobbinah and Amoakoh (2018), indicate that community members may initially harbour high expectations during the early negotiation stages preceding mining operations in their areas. But when actual efforts to restore the livelihoods of the affected population diverge greatly from expectations, these expectations frequently collapse considerably (Cobbinah and Amoakoh 2018). Effective coping strategy implementation is essential to reducing the ensuing tensions and uncertainty (Wanninayake 2021)

### **3. 10 Coping strategies**

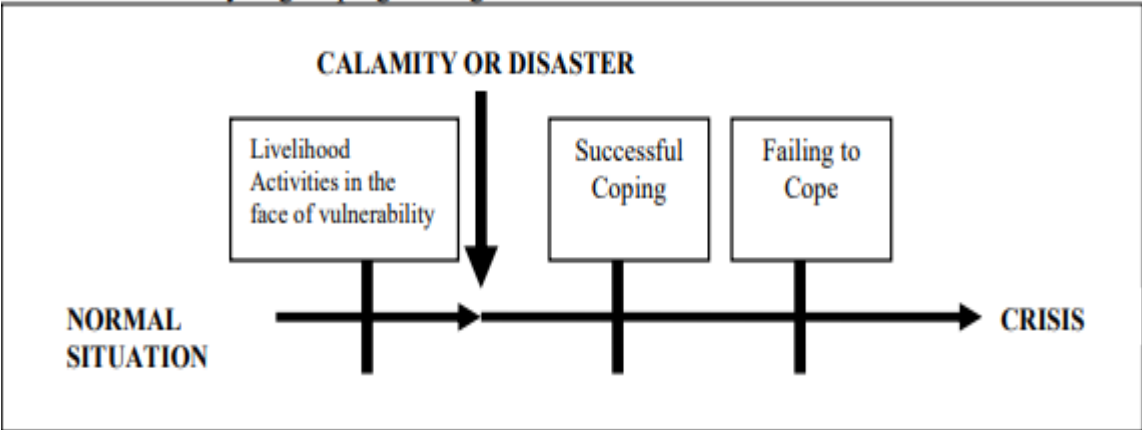
A household's livelihood is contingent upon its array of capabilities and assets. External factors, such as unforeseen changes, can disrupt households, leading to the depletion of assets and capabilities, thereby exposing them to heightened risks and uncertainties. Consequently, this risk often results in a decrease in income, accompanied by increased financial strain on household budgets, thereby reducing overall income levels (Bhattarai 2005). However, the experience of risk and uncertainty varies among households. Factors including occupation type, education levels, household size and composition, social standing, age, gender, and ethnic background all affect how much influence and danger there is.

Coping methods are largely relied upon by impoverished households to reduce stress, shocks and uncertainties about their livelihoods year-round. These tactics could entail

changing consumption habits, such as cutting back on meal quantity and quality or delaying entertainment expenditures. The phrase "coping techniques" is used by academics like Davis (1993, 1996), as referenced in Owen (2018) and Adams (1998), to characterize the temporary solutions that households implement during times of stress. In a similar vein, coping mechanisms are employed to mitigate the negative consequences of external events (Bhattarai 2005).

Protecting livelihoods against unforeseen abnormal conditions or calamities is the aim of coping techniques. To put it simply, it entails addressing such uncertainties and vulnerabilities in our lives by making use of capital assets and resources that are now available. Individuals and households differ in their capacity to manage amid a crisis. Even normally capable households may become vulnerable if a disaster's intensity and duration increase and the crisis lasts longer than expected. As a result, coping mechanisms might be thought of as existing on a continuum that intensifies with the severity of the crisis gets (Bhattarai 2005: 67). This continuum illustrates the degree of vulnerability of the household, depending on its capacity to manage the crisis.

Below is the model for analyzing coping strategies:



**Figure 3. 3: Model for analyzing the coping strategies of affected resettled communities**

*Source: Adapted from the Access Model (Wisner, Blaikie, Cannon & Davis 2004)*

### **3. 10. 1 Explanation of the coping strategies model**

The diagram depicted above illustrates households' efforts along a continuum, commencing with their engagement in livelihood activities and the implementation of strategies to mitigate vulnerabilities and potential risks in normal circumstances. This continuum includes coping strategies used in times of disaster and calamity. If households are unable to handle the situation, it becomes a crisis (Cekan 1994, as cited in Owen 2018).

To reduce the possibility of hazards and risks, households typically use varied tactics during normal times. These strategies may include looking for numerous sources of income, increasing production, investing in assets, and growing social ties and networks. However, when faced with an unexpected calamity, households pivot to responding to and addressing immediate needs, often discarding other strategies. Coping strategies thus begin with the utilization and mobilization of available resources and assets, including savings, proceeds from asset sales, and loans, to respond to the crisis.

When a household efficiently allocates enough resources to lessen and ameliorate adversities without jeopardizing the long-term goals of livelihood stability, successful coping takes place. In the same way, the pre-crisis phase can be quickly recovered from. Coping efforts fail when both short- and long-term assets and resources are depleted or sacrificed during a struggle for survival. For instance, productive assets may be sold, medical treatment postponed, or traditional festivals and ceremonies deferred. In such circumstances, households may resort to collecting wild foods and engaging in labour-intensive work on farms or in labour markets as their only means of sustenance. Consequently, post-disaster recovery for households becomes prolonged and sluggish, necessitating the reorganization of productive resources and social assets as well as substantial time investment in asset rebuilding and debt repayment.

If a household is unable to cope with a calamity, the direst outcome is a crisis. In this scenario, the household faces destitution and weakened labour capacity. It is suggested that households with solid social networks, people with important knowledge and skills, and people with strong bonding and bridging capital may recover quickly and get back to their previous social and economic status. Conversely, households lacking such capital assets may endure prolonged periods of hardship in their livelihoods. The project's goals include examining how households in resettled communities manage the risks to their livelihoods that mining operations and activities in the resettled areas under study present.

### **3. 11 Morbidity issues**

Typically, the relocation of communities and their proximity to mining activities expose resettled communities to location-specific health risks (Reisenberger, 2010: 114). Reisenberger (2010) describes a range of detrimental health impacts that respondents in Teberebie, Ghana, reported having as a result of mining activities and MIDR. According to a study by Agbesinyale (2003: 288f), which Reisenberger (2010: 115) cited, malaria, respiratory tract illnesses, diarrhoeal illnesses, skin conditions, urinary tract infections, gynaecological disorders, hypertension, STDs, injuries from mine or industrial accidents, and anaemia are among the most common diseases in MIDR areas.

#### **3. 11. 1 Sickness related to an unsafe water supply**

According to Reisenberger (2010: 115), Teberebie's borehole water had a silica concentration that was higher than the WHO's recommended limits. Respondents linked drinking water from wells and boreholes to headaches and persistent diarrhoea. It was determined that the most impacted demographic groups were children and the elderly.

### **3. 11. 2 Respiratory tract diseases**

The researcher also found that rock excavation through mine blasting leads to noise, vibration, and the generation of dust. Reisenberger discovered that dust levels were particularly elevated during the dry season, prompting heightened concern among residents about the effects of this "toxic dust". The study came to the conclusion that Teberebie locals blame the dust in the area for the respiratory illnesses they suffer. As a result, a lot of people reported experiencing headaches, chest pains, and coughing, which they associated with the spread of dust.

### **3. 11. 3 Vector-borne diseases**

Reisenberger found that many water sources were dammed or diverted during the mining operations in his research at the Teberebie resettlement site. As a result, the concession area developed a large number of stagnant water bodies, some of which were extremely close to the village and were referred to by locals as "mosquito headquarters". These still waterways have turned into mosquito breeding grounds for malaria (Reisenberger 2010: 116). Reisenberger came to the conclusion that although malaria is not a recent phenomenon in the area—rather, it is a tropical wet area perfect for the mass breeding of malaria vectors—the rise in cases is likely due to mining activities and the stagnant water bodies they produce, which provide mosquito breeding grounds (Reisenberger 2019: 117).

### **3. 11. 4 Sexually transmitted diseases**

There are even fewer opportunities for young women to earn income compared to young men in the community. Young women in Teberebie also turn to prostitution, or what the locals call "casual sex," because of unemployment, restricted farming opportunities, and a lack of opportunities. The researcher confirmed that prostitution was historically prevalent in Teberebie, but it has become much more common since the current mine was established. Reisenberger also found that HIV/AIDS was on the rise in Teberebie. Because of this, prostitution and "casual sex" have grown more common in Teberebie and are directly related to both mining-related activities and

MIDR. Poor people turn to prostitution as a source of income, especially farmers who have lost their land to mining operations.

### **3. 12 Mitigating measures in some resettled communities**

Mining companies, like other businesses, require a peaceful environment to conduct their operations effectively. These businesses frequently make infrastructure-related investments to ease tensions between locals whose property is being taken over for mining. The primary benefits of having a new mine in the vicinity typically include investments in infrastructure such as schools, health centres, roads, bridges, housing, community centres, and electrification. Drechsel *et al.* (2019: 22) investigated the perceived benefits of mining on nearby populations in their paper "The Mines Make Us Poor: Large-Scale Mining in Burkina Faso". The locals claim that the mine built a primary school and teacher housing, which was a big improvement because there had previously been no school in the area. Additionally, Drechsel *et al.* (2019) highlighted other infrastructure facilities provided by the mine for the communities, including health centres, maternity homes, and improved access to clean drinking water through the construction of wells and water reservoirs.

#### **3. 12. 1 Alternative livelihood programmes**

Government policies and regulations on compensation and resettlement aim to encourage the implementation of alternative livelihood programmes. According to Twerefo (2021), in her article "Mining-Induced Displacement and Resettlement Policies and Local People's Livelihood in Ghana," published in the *Development in Practice* journal, the findings revealed that Anglo-Gold Limited (AGL) had established programmes to provide alternative income-generating opportunities for individuals affected by mining operations in the Damang resettled communities. AGL provided farmers with seedlings, fertilizer and agricultural extension officers' assistance. As a result, in these communities, many affected farmers who received crop compensation from the mines either purchased additional land to continue farming or pursued alternate livelihoods. AGL's projects and community capacity-building programmes

helped farmers diversify their livelihoods beyond traditional crop cultivation. AGL's alternative livelihood projects also included educating affected farmers in livestock husbandry, palm oil and palm kernel oil extraction, and soap production.

### **3. 12. 2 Capacity building programme**

AngloGold Ashanti (AGA) and Golden Star Resources (GAG) have both worked to put alternative livelihood projects (ALPs) into action in Teberebie. In order to create ALPs for communities impacted by mining operations, AGA teamed up with opportunities industrialization centre international (OICI), an American non-governmental organization that has a reputation for working with mining firms. In order to strengthen capacity building and encourage economic activity, Teberebie launched the "Hand-in-Hand" programme at the beginning of 2005. This curriculum covered a wide range of training topics, including managing microcredit, food processing, animal husbandry, water and sanitation, personal hygiene, and teacher preparation for early childhood development centres (ECDs) (Temeg and Abew 2009: 224).

Reisenberger claims that although AGA started the ALPs to help the community, they unintentionally caused problems. For example, the Teberebie population which was accustomed to agro-farming methods, did not welcome the introduction of animal farming practices such as piggery. A report from the Commission on Human Rights and Administrative Justice (CHRAJ) (2008: 103) states that some Teberebie community members were given goats, sheep, and poultry, as well as training in animal rearing. Some received small loans to launch their firms.

### **3. 12. 3 Modern amenities**

According to Twerefoo (2021), the resettled community in New Damang, Ghana's western area, acquired upgraded amenities, such as contemporary concrete houses, in favour of the traditional mud and thatch huts. In addition, they received facilities like paved streets, power, a community centre with updated pit latrines, a health centre, a school, and poly-tanks for storing water.

### **3. 12. 4 Alternative livelihood programmes as a policy document**

As stated in the Mining Charter, all mining companies that do business in South Africa are essentially required to improve the socioeconomic circumstances of the surrounding people. The South African government developed a strong legislative framework to guarantee the efficacy of these initiatives (South African Mining Charter, 2018). This means that mining firms take deliberate steps to improve the social and economic infrastructure of nearby communities, paying particular emphasis to:

- Enhancing education in the nearby communities through the construction of schools.
  - Increasing healthcare services by creating hospitals and clinics.
  - Improving community members' skill levels to increase their work options in mines and promote economic involvement. .
  - Increasing safety procedures in their mines to ensure that families in mining towns do not encounter problems owing to the absence of breadwinners. .
  - Improving housing conditions in local communities by building decent housing facilities that respect the dignity of their occupants. .
- Improving local people' quality of life through improved water and sanitation infrastructure. (South African Mining Charter 2018: 24–26).

### **3. 13 Conclusion**

This chapter aims to explore the theoretical underpinnings utilized to support the research endeavour, seeking to comprehend the socioeconomic impacts of mining on resettlement communities. It begins with analyzing the two hypotheses selected for the research: LED theory and the IRR model. In this context, the chapter scrutinizes these theories, their associated challenges, and their relevance in addressing contemporary resettlement issues, particularly with the introduction of the IRR and LED models. The reasoning for this investigation is based on the notion that employing both theories (IRR and LED) in tandem will provide a thorough method for examining socioeconomic issues in communities that have been resettled as a consequence of mining operations.

After that, the chapter conducts an empirical review focusing on socioeconomic impacts, encompassing aspects such as income levels, employment opportunities, changes in livelihood patterns, health issues, and the implementation of mitigation strategies aimed at addressing challenges faced by individuals in resettled communities.

In the end, communities have benefited from better infrastructure and educational support services. But there were difficulties in the process of moving the impacted people into other firms, which required them to learn new skills (Twerefoo 2021). Policy reform has the potential to considerably boost the overall impact of mining resettlement activities on the economic development of the individuals affected. Therefore, the importance of the government's position as an enforcer and policymaker cannot be overstated in order to maximize the benefits for affected communities. In its capacity as trustee, the government must negotiate and set strict guidelines for mining firms. This entails making sure that assets like land or feasible non-farm livelihood alternatives are available to go along with the infrastructure that can be provided in the future (Twerefoo 2021). Affected parties shouldn't bear all of the blame since they might not have the required skills to properly advocate through negotiation for chances for livelihood improvement and sustainable forms of compensation.

# **CHAPTER FOUR**

## **RESEARCH METHODOLOGY**

### **4. 0 Introduction**

This chapter outlines the research methodology employed in the study, covering the philosophical research paradigms and the corresponding data collection and analysis techniques. It starts by exploring the philosophical underpinnings of the research, followed by an examination of the research approach and the methodologies employed for data collection. It also offers a succinct summary of the data analysis techniques applied in the investigation.

### **4. 1 Philosophical foundation of the research**

It has long been understood that knowledge creation is a philosophical endeavour that draws from a variety of perspectives. Creswell is a well-known person in this sector. Research designs are defined by Creswell (2000: 5), as mentioned by Abutabenjeh (2018: 9). These plans and procedures encompass a wide range of decisions, from broad assumptions to particular techniques for data collection and analysis. Three main study designs, including mixed methods, quantitative and qualitative are further outlined by Creswell (2008: 6). Philosophical worldviews, inquiry strategies, and research technique paradigms are the three interrelated components that Creswell (2014: 6) finds inside each of these designs—quantitative, qualitative, and mixed methods.



**Figure 4. 1: Creswell's framework for design**

*Source: Adapted from Abutabenjeh (2018)*

#### **4. 1. 1 Philosophical worldview**

Philosophical worldviews function as paradigms that shed light on the reasoning behind the choice of a specific research strategy made by researchers. According to Abutabenjeh (2018: 9), worldviews are defined by Creswell (2008: 3) as broad philosophical perspectives that researchers bring to their studies in relation to the world and the nature of research. As a result, the beliefs of researchers influence whether they choose to use a mixed method, qualitative, or quantitative approach in their studies. In his classification, Creswell distinguished four worldviews:

##### *4. 1. 1. 1 Postpositive worldview*

The initial postpositive worldview embodies the conventional research approach, often referred to as the scientific method. Adherents of post-positivism typically show a greater inclination towards quantitative research over qualitative methods. Post-

positivists adhere to a deterministic philosophy, anticipating cause-and-effect relationships akin to those observed in experimental studies.

#### *4. 1. 1. 2 The social constructivist viewpoint*

The social constructivist worldview, which is usually connected with qualitative research approaches, emphasizes the viewpoints of the study participants. Social constructivists prioritize understanding participants' life experiences and perspectives to acquire insight into the setting being investigated (Abutabenjeh 2018: 10). The examination of the socioeconomic effects of mining resettlements corresponds appropriately with the qualitative paradigm since it dives into the settlers' history in areas such as income, employment, livelihood problems, and health difficulties.

#### *4. 1. 1. 3 Advocacy and participatory worldview*

The advocacy and participatory views that are frequently linked to qualitative research approaches stress the active participation of participants in the research process, even though they can also work well with quantitative research. Scholars that embrace this perspective frequently examine noteworthy societal concerns and could motivate people to actively participate in the study project. These methods make research inquiries cognizant of political dynamics and agendas.

#### *4. 1. 1. 4 Pragmatist worldview*

Ultimately, the pragmatic perspective stems from actions, circumstances, and outcomes rather than pre-existing conditions. In this stance, researchers prioritize addressing research issues over specific methodologies, employing diverse approaches aligned with their objectives (Abutabenjeh 2018: 10). Pragmatists utilize mixed methods research, combining quantitative and qualitative assumptions as necessary for their studies.

#### **4. 1. 2 Philosophical worldviews applicable to research study**

The researcher's methodology is consistent with a social constructivist viewpoint because it is based on the viewpoints of the study participants. It incorporates individuals' life experiences and work backgrounds to gain insight into their circumstances (Abutabenjeh, 2018: 10). Consequently, the adoption of this paradigm stems from the researcher's aim to depict, elucidate, and interpret the socioeconomic factors impacting resettled communities in mining areas. This choice arises from the belief that socio-economic issues are subjectively constructed by individuals within a specific society or community, adhering to certain conventions. Therefore, the study is underpinned by the notion that the socio-economic reality regarding the effects on resettled mining communities is multifaceted, with various interpretations stemming from human cognition.

#### **4. 2 The strategies of inquiry**

The methodologies used in research designs—which include mixed-method, quantitative, and qualitative approaches—are referred to as inquiry strategies. Creswell (2008) addresses three main inquiry strategies. First, those who support the post-positivist worldview tend to favour quantitative methodologies, which are relevant to research that centre on quantitative data. Correlation studies, experiments, and quasi-experiments are some of these tactics. Second, qualitative procedures include a range of qualitative inquiry techniques, such as case studies, grounded theory studies, ethnographies, phenomenology, and narrative research. Lastly, using quantitative and qualitative methods simultaneously is a component of mixed methods tactics. When using mixed-method tactics, researchers gather both kinds of data simultaneously and combine them when interpreting the results.

#### **4. 3 Research methods**

Research methods encompass three key components: data collection, analysis, and interpretation, as outlined by Abutabenjeh (2018: 11). In order to obtain overall conclusions, researchers may choose to gather data using quantitative approaches,

such as closed-ended questions or numerical data, and then use statistical analysis and interpretation techniques. On the other hand, qualitative techniques like open-ended questions or interviews can be used to gather information, and then thematic and pattern interpretation, text and image analysis, or both, can be used to produce thorough findings. In addition, researchers may integrate different approaches to data collection, analysis, and interpretation.

Philosophical worldviews, inquiry strategies, and research methods collectively shape a research design that may lean towards being quantitative, qualitative, or mixed methods (Creswell 2008: 10). Furthermore, beyond these three factors, the selection of a specific design depends on the study's objectives, the researcher's background, and the intended audience. For instance, a qualitative research design is deemed more suitable when investigating the socioeconomic effects of mining resettlements through interviews aimed at uncovering current community dynamics.

It is imperative to emphasize that the paradigm orientation of the investigator has an impact on the final form and outcomes of a given investigation. According to Guba and Lincoln (1994), the paradigm of the investigation influences the fundamental assumptions that shape a researcher's viewpoint on the subject of study. As a result, the researcher's ontological, epistemological and methodological positions are determined by their orientation, which in turn is influenced by the paradigm.

#### **4. 4 Ontological research**

The word "ontology" describes a body of ideas about the essential qualities of existence (Saunders *et al.* 2016). In simpler terms, ontology delves into "the essence of reality and its attributes (objective or subjective)" (Marques 2017: 1–25). A researcher's perception and examination of research subjects are shaped by ontological assumptions. In terms of ontology, researchers may embrace subjective realities, whether singular or manifold, and accommodate diverse perspectives from respondents, leading to varied viewpoints and nuanced interpretations by the

researcher. Consequently, ontology influences one's comprehension of the reasons behind specific occurrences and their interconnectedness with other phenomena.

The study aimed to provide philosophical insight into the socioeconomic realities that affect people in a resettled community within mining districts. As a result, the study may be seen as adopting a subjective position. This is due to the researcher's belief that socioeconomic concerns are shaped subjectively by people living in a certain culture and are impacted by their personal circumstances at the time. Consequently, this study aligns with the notion that socioeconomic effects exist independently, with multiple interpretations arising from human cognition.

#### **4. 5 Research epistemology**

This idea revolves around having a sound understanding of social reality and how to explain it to other people (Burrell and Morgan 2017) 'Epistemology explores the nature of knowledge itself' as a subfield of philosophy (Jackson, 2013: 49–62). It establishes what to ignore and what information a researcher believes is important to comprehending a phenomenon. As a result, the study of epistemology "focuses on how you acquire information and discern between truth and falsity". The knowledge is defined by the framework, which also addresses the differences between supported ideas and beliefs and the knowledge's methodology, validity, and scope.

Constructionism, which holds that knowledge is best generated by the development of concrete, visible occurrences that can be communicated with others, is the epistemological method used in this study. Moir (2009) suggested that the understanding of all knowledge, meaning, and reality falls under constructionism, subject to human practices both within and outside of human-environment interactions, cultivated and communicated within a social context.

Thus, constructivism was integral to this study, as various participants constructed knowledge within specific contexts, focusing on the effects on resettled individuals

within a community. This aligns with the assumption that "the effects of mining resettlement are subject to multiple realities, where participants perceive reality differently based on individual perspectives" (Sekaran 2013: 461–468).

#### **4. 6 Ontology and epistemology**

While ontology delves into the comprehension of 'what exists,' epistemology seeks to understand 'what it means to know' (Easterby-Smith *et al.* 2002). Thus, paradigms are useful because they lead researchers to make decisions about the methodology that is best suited for a given research project because of their interrelated presumptions about ontology, epistemology, and human nature (Jacobs and Manzi 2000: 14). Hence, according to Gray (2019: 38), as cited in Denzin and Lincoln (2005a), the fundamental components of the pragmatic underpinnings of knowledge are ontology, epistemology, and methodology. Gray (2019: 38) also highlights that Easterby-Smith *et al.* (2002) emphasize the epistemological perspective for several reasons.

First of all, it can help elucidate questions pertaining to research design, which goes beyond the creation of research instruments. It includes the general framework of the study, the kinds of evidence collected, where they came from, and how they were interpreted. Secondly, an understanding of research philosophy enables researchers to discern which designs are suitable for achieving specific objectives and which are not. These fundamental components influence people's worldviews and how they understand social phenomena. The ongoing discussions concerning the existence of an objective reality and the formation and understanding of reality through mediated social processes make the implications of these foundations evident in the way that research is considered to uncover truths about reality (ontology) (Tronvoll *et al.* 2011).

##### **4. 6. 1 Ontology**

Knowledge generation concerns the existence and characteristics of the reality under investigation, which falls under ontology. This includes identifying whether the phenomenon under investigation is external or internal to human perception. If it is

external, it implies that it exists irrespective of human construction; if it is internal, its reality is affected by human-generated conceptions (Chua 1996). Ontologically, reality can be seen as either physically or socially produced (Chua 1986). As a social science phenomenon, the socioeconomic repercussions of resettlements are socially produced; hence, their existence is dependent on human-made reality. Analyzing the phenomena within the interpretations of the participants and researchers will their comprehension of them. Gray (2017: 38), referenced in Crotty (1998). As such, the investigation of the phenomena in this study was based on the meanings and interpretations that participants ascribed to their surroundings. It also depended on the researcher's judgements and conclusions about the meaning that were drawn from the way individuals interacted with their environment.

#### *4. 6. 1. 1 Ontological consideration in research*

In the context of business research, ontology is the study of existence, with an emphasis on the nature of reality (Blaikie 2010). It is a representation of a belief system that shapes a person's understanding of what is true (Wilson 2010). The relationship between our understanding of reality and ontology is profound. This study employed personal interviews and focus groups with impacted populations to establish the effects of moving from their original location to newly built constructed resettlements as a result of mining operations. The philosophical concept of ontology addressed questions about the nature of reality and guided decisions regarding data collection and analysis methods. It also entails deciding whether to interpret social entities as subjective or objective (Saunders *et al.* 2012). This feature was used in the three resettlement communities to categorize respondents' responses into objective or subjective groups.

Subjectivism, alternatively termed constructivism or interpretivism, asserts that social phenomena are shaped by the perceptions and actions of the individuals who are a part of the phenomena. Formally speaking, constructivism is an ontological position that maintains that social agents continuously shape social phenomena and their meanings (Bryman 2012). The constructivist perspective was also embraced in this study to explore the socioeconomic effects on the people residing in resettled

communities. These effects are not static; they evolve, and the affected individuals may hold varied perceptions, offering diverse interpretive responses to the issues addressed by the research objectives.

#### **4. 6. 2 Epistemology**

The nature of knowledge about the reality or phenomenon under investigation is the focus of epistemology, which also addresses the question of "what and how we can know about" what exists (Grix 2004a). The explanation above indicates that the study's ontological framework, which is socially produced, implies a subjective epistemology. According to Denzin *et al.* (2006), a social constructivist epistemological approach is deemed appropriate for this study because it allows for a critical examination of assumptions that may be overlooked or overburdened by other methodologies. This approach emphasizes the significance of subjects and the relationship between the subject and researcher in knowledge generation (Lincoln and Manzi 2000). Social constructivists contend that human interactions, life experiences, and their interpretations are fundamental to the basis of social facts and the understanding of the world thereof.

Constructivists hold the ontological position that realities are complex constructs in which the researcher and the studied subjects are connected, influencing and eventually becoming one (Lincoln and Guba 2000). As a result, it is believed that the researcher and participants converse with one another, helping to comprehend the phenomenon through interpretations of the many structures.

##### *4. 6. 2. 1 Epistemological consideration in the research work*

The field of epistemology in philosophy explores how knowledge is created, with specific emphasis on how knowledge is acquired and investigating the most trustworthy routes to truth (Clarke and Braun 2013). It essentially delineates the relationship between the researcher and reality, rooted in ontological assumptions, which are assertions or statements concerning the nature of reality and its constituents. These

presumptions answer questions about what is known, the nature of reality, its elements, and how they interact (Bryman 2004). Ontological assumptions may be objective, indicating that reality is fixed, quantifiable, and observable, or subjective, suggesting that reality is a construct influenced by an individual's cognition and cultural context (Bryman 2000).

#### *4. 6. 2. 2 Summary of ontology, and epistemology applications*

The goal of qualitative research methodology is to collect, examine, and analyze information regarding people's experiences and perspectives of their social environments (Murphy *et al.* 1998). Its main goal is to gain a thorough understanding of the behaviours, customs, and values of the study population. The aim is to reveal interpretations that might not normally surface in quantitative research (Bryman 2008). The breadth of people's narratives and the amount of data gathered without the requirement for replication are key components of qualitative research (Wilkinson, 2000). The ontological and epistemological tenets serve as the foundation for this approach. Epistemology studies how knowledge is created and what qualifies as legitimate evidence in qualitative research, while ontology investigates the nature of the supposed meanings or realities regarding the presence of an objective world (Kavanagh *et al.* 1994). The study design and the calibre of the data gathered have a major role in determining the validity of the evidence (Clarke and Braun 2013).

#### **4. 7 Research design**

A study design is a comprehensive and methodical structure that directs investigators as they gather, examine, and evaluate information about the phenomenon they are observing (Nachmias *et al.* 1996). Various methodologies for conducting research exist, and this study employed qualitative research methods. Many specialized techniques are available within the field of qualitative methodology, such as participant and observation, focus groups, life histories, structured and unstructured interviews, observation, and case studies, to name a few. This research uses a case study methodology in addition to qualitative techniques. Information on people, communities,

and the ecology pertinent to the topic of study was gathered using qualitative methodologies. The utilization of the case study approach facilitated an in-depth analysis and comprehension of the socioeconomic impacts of resettlement communities (Yin 2013).

Investigating the interpretations that people or groups give to a social issue or human dilemma is the focus of qualitative research (Creswell 2009: 69). The steps involved in conducting research are formulating questions and protocols, gathering data in participant settings, conducting an inductive analysis of the data, moving from particular observations to overarching themes, and evaluating the relevance of the data (Creswell 2009: 232).

The research has the following objectives as already mentioned in chapter one;

The study's particular goals were as follows:

1. To investigate the impact on income levels of people in the resettled communities.
2. To examine the employment opportunities available as a result of the resettlement.
3. To discover the participants' livelihood status before and after the resettlement.
4. To highlight the morbidity issues people in the resettled communities face.
5. To assess measures put in place to mitigate these socioeconomic issues.

These objectives are to be addressed by the following research questions;

1. How have the income levels of people in the resettled communities been affected?
2. Are employment opportunities available to resettled people?
3. How has the livelihood of the people been affected before and after the resettlement?
4. What morbidity issues confront people in resettled communities?

## 5. How are the authorities mitigating the socioeconomic issues confronting the resettlement communities?

### 4. 7. 1 Qualitative research approach

As a subfield of social science study, qualitative research concentrates on collecting and interpreting non-numerical data to help understand social processes within specific groups or situations (Crossman 2020). Although there have been many complaints regarding the quality of qualitative research, those who support this approach still believe that quality is the most important prerequisite. To ensure qualitative research meets quality standards, several elements have been proposed, including a worthy topic, rigorous methodology, sincerity, credibility, resonance, significant contribution, ethical considerations, and meaningful coherence (Tracy 2010). Furthermore, in certain situations, referential sufficiency, structural corroboration, and triangulation provide assurances for quality assurance (Eisner 1997). Since qualitative research examines social or human problems in natural settings, researchers are urged to carefully analyze whether the qualitative technique is appropriate for their topic and study objectives (Silverman 2008; Creswell 2003).

This study employed a qualitative method for a variety of reasons. First and foremost, the researcher set out to look into the socioeconomic effects of mining resettlements on impacted people in their natural surroundings (Adjei 2007). This is in line with the opinions of proponents of qualitative research, who favour flexible and social context-aware data gathering techniques over inflexible, distant, and inferential ones (Denzin and Lincoln 2005). The necessity for a nuanced understanding of complicated problems like money, work, livelihood and morbidity—which can only be elicited through direct talks with participants that allow them to freely express their experiences—also made a qualitative method preferable (Creswell 2007). In addition, the research entailed obtaining data from professionals and high-ranking government employees in the mining industry, resulting in a small sample size (N-size) deemed

appropriate for qualitative analysis. This made it necessary to use qualitative data gathering tools like focus groups and in-depth interviews, which allowed for a thorough examination of the topic because participants offered a variety of viewpoints (Crouch and McKenzie 2006). After the data was collected from multiple sources, it was triangulated utilizing qualitative techniques to guarantee thorough comprehension (Yin 2010).

Additionally, supporters of qualitative research see the limits of traditional quantitative approaches, which have historically dominated many social science disciplines until recent decades, as the reason for the field's continuous growth and expansion (Sandberg 2005). Qualitative research has also become more popular as a result of the realization that standard positivist claims of objective knowledge have substantial theoretical limitations that prevent a deeper understanding of organizational phenomena and human behaviour (Denzin and Lincoln 2003; Prasad and Prasad 2002).

#### *4. 7. 1. 1 Rationale for the qualitative method used*

In many different industries, a qualitative approach is an essential method for producing and gathering data and information. The goal of qualitative approaches is to analyze and understand phenomena and events through the prism of human experiences and social-environmental processes. These methods have their roots in life experiences and interactions. This method places a high priority on comprehending how people's behaviours change in the course of their daily lives and exploring the underlying reasons and connections. The goal of qualitative approaches is to investigate how individuals understand, relate to and interact with events and phenomena in their daily lives, as well as how they interpret and perceive them.

The study selected the qualitative technique to investigate the socioeconomic effects of mining resettlement directly from the viewpoints of those living in these resettled communities, who are directly impacted by the ensuing benefits or challenges. The qualitative technique was more suitable because of the subtle nature of these encounters and the requirement to record subjective opinions.

Conversational methods, focus group discussions, observations and interviews were some of the key methods used in the qualitative approach. It is noteworthy that this research is grounded in context and seeks to obtain distinctive perspectives from each home, focus group and key informants. The qualitative approach was thought to be the most appropriate because of the subjective character of these perspectives and the need to capture the variety of individual experiences.

#### **4. 7. 2 Quantitative methods**

Creswell (2012) proposed that in quantitative research, the researcher collects physical and hard data, which can, in turn, be statistically analyzed. Creswell (2012) also stated that such raw data from quantitative research can further be used to reveal and explain relationships among variables being studied. Punch (2014) believed that quantitative research is associated with the deductive reasoning approach of first formulating hypotheses, collecting and statistically analyzing data, testing the hypotheses, and then determining whether to accept or nullify the formulated hypotheses. Punch (2014) further stated that the nature of quantitative research can either be descriptive, establishing associations between variables, or it can be experimental, establishing the causality of the above associations. The main characteristics of quantitative research, as cited by Gray (2017), are:

- The collection of data is usually done through structured study instruments.
- The sample is usually large so that it can fairly represent the target population.
- The high reliability of quantitative research permits the replication of the study to be repeated in the same way as its previous completion.
- The research begins by establishing and clearly defining a research question or questions to guide how to address the objectives.
- The research is carefully planned, and methodologies are decided upon before the data is even gathered.
- Data is presented graphically in graphs, charts, and tables, making it easy to understand and interpret.

- Statistical analysis in the quantitative approach allows the researcher to examine associations and cause-and-effect relationships, meaning that results can be fairly generalized to other similar populations.

#### 4. 8 Differences between qualitative and quantitative research

**Table 4. 1: Differences between qualitative and quantitative research**

	Quantitative methods	Qualitative methods
Epistemological positions	Objectivist	Constructivist
Relationship between researcher and subject	Distant /outsider	Close/insider
Research focus	'Facts'	Meanings
Relationship between theory/concepts and research	Deduction/confirmation	Induction/emergent
Scope of findings	Nomothetic	Ideographic
The nature of data	Data based upon numbers	Data based upon text

*Source: Adapted from Gray (2017)*

##### 4. 8. 1 Epistemological position

Regarding the extent of the division between quantitative and qualitative research, it is the epistemological debates that are considered the most significant, as they view the two approaches as philosophically incompatible. Indeed, proponents of epistemological distinctiveness perceive these two approaches as belonging to separate paradigms. For instance, quantitative research is often associated with an objectivist standpoint, asserting that reality exists independently of the researcher—the truth is perceived as external and objective. In contrast, qualitative research is strongly associated with a constructivist paradigm, which believes that truth and meaning are built and interpreted by humans, implying a subjective and context-dependent view of reality.

#### **4. 8. 2 Relationship between researcher and subjects**

Another distinction lies in the contrasting approaches to the relationship between researchers and their subjects using quantitative and qualitative methods. Researchers often aim to maintain a certain degree of distance from the individuals being studied in quantitative research. This distance may manifest physically through data gathering methods that do not necessitate face-to-face interaction with respondents, or emotionally by distancing oneself from the topics under investigation, or a combination of both. For instance, in large-scale projects employing structured interviews, contact with respondents may be facilitated by hired interviewers rather than by the researchers themselves, a practice commonly observed in market research endeavours where the focus is on gathering data from large samples. In such cases, there is typically an emphasis on training interviewers to minimize the potential manipulation of responses.

On the other hand, direct engagement between the researcher and the study's subjects is often a feature of qualitative research, sometimes involving long-term interactions. In some cases, especially when using observational methods, the researcher might even incorporate themselves into the community or social group they are studying. Furthermore, qualitative researchers contend that quantitative methods frequently ignore the processes linking these variables and the developing sequence of events in which they are embedded, whereas quantitative research tends to view social reality as static and usually focuses on examining relationships between variables within a constrained timeframe. Conversely, qualitative researchers claim that their methodology—which is based on their greater personal immersion in these happenings as researchers—is more appropriate for looking at the linkages between events and activities.

#### **4. 8. 3 Research focus**

Following an objectivist philosophical standpoint, quantitative research focuses on gathering empirical data or 'facts' to establish 'truth claims'. Researchers aim to reduce the likelihood of bias influencing the collected data by maintaining a distance from the

subjects being studied. However, qualitative researchers argue that truth and meaning are not inherent in some external reality but rather are constructed through individuals' interactions with the world. Therefore, two individuals may construct divergent meanings for the same phenomenon. For instance, considering the concept of 'fair pay', it is reasonable to expect that a chief executive and a security guard would hold significantly different interpretations of the term.

#### **4. 8. 4 Relationship to theory**

The way that quantitative and qualitative approaches address the connection between theory and research is another important distinction between them. Qualitative studies typically begin with deductive reasoning, developing and testing a theory throughout the investigation. On the other hand, qualitative methods usually take an inductive approach, developing a theory from the facts and observations gathered throughout the study. Therefore, quantitative research aims to verify existing theories, whereas qualitative research aims to establish new theories. This distinction is oversimplified, though. In all forms of study, both induction and deduction are important, as Brennan (1992) emphasizes. For instance, a lot of surveys are more descriptive than theory-building, and some quantitative research concentrates on developing new hypotheses as opposed to validating preexisting ones. Furthermore, some qualitative research could get underway with a theoretical framework in mind. As a result, the distinction between quantitative and qualitative research is not as clear-cut as it is often made out to be (Bryman 1999).

#### **4. 8. 5 Scope of findings**

The two approaches' perceived differences in scope are another typical one. Qualitative research is seen as ideographic, whereas quantitative methods are frequently labeled as nomothetic. The goal of nomothetic research is to establish conclusions that are law-like and generalizable to various contexts and times. This often involves careful selection of representative samples and efforts to generalize findings to broader populations. Ideographic research, on the other hand, emphasizes

depth and intensity of findings over generalizability, concentrating on particular contexts and time periods. However, as cautioned by Bryman (1999), qualitative researchers may sometimes feel uneasy about this distinction, aiming to demonstrate how their findings can have broader applications beyond a specific case. In comparison, if quantitative research focuses on extremely narrow populations or does not use random samples, it may be difficult to draw general conclusions. Moreover, in both qualitative and quantitative research, the findings' stability over time is frequently disregarded.

#### **4. 8. 6 The nature of data**

Researchers that specialize in quantitative and qualitative methods are believed to acquire different kinds of data. The scientific process often associates quantitative investigations with rigorous and reliable numerical data. Conversely, qualitative research yields what is often described as "rich" or "deep" data, typically in textual form but occasionally supplemented by photographs, maps, or other visual media. It is worth noting that quantitative surveys may also gather qualitative comments, and in qualitative analysis, the frequency of words or phrases may be quantified through a frequency count, resulting in numerical data.

#### **4. 9 Mixed methods**

Johnson *et al.* (2007), referenced in Gray (2017), states that mixed methods research is becoming more widely recognized as an important research methodology. Mixed methods involve the collection or analysis of both quantitative and qualitative data for a single study. The data are prioritized, collected concurrently or sequentially, and merged at one or more points during the research process (Creswell *et al.* 2003: 212). Triangulation is the process of combining quantitative and qualitative approaches in a single study, according to Cooper and Schindler (2014: 219). However, Creswell (2009: 4) suggests that this combined approach should be termed a mixed methods approach since both methods are intermixed.

Klenke (2008) highlights the strength of this mixed approach in assisting researchers to test hypotheses more effectively. Walliman (2011) also concurs that data collected using both quantitative and qualitative approaches tends to be more reliable, given the enhanced power of mixed methodology. However, Creswell (2013) suggests using the mixed technique only when combining the two approaches to improve the study's understanding; in other cases, it might not be required. He points out that while reporting combines the outcomes, data gathering, and analysis are usually carried out independently since different data collection equipment has different capabilities.

On the other hand, Yin (2006) argues that there are various mixes or combinations of methods, and mixed methods research does not necessarily encompass qualitative approaches. However, a lot of research uses triangulation—combining multiple qualitative approaches or combining quantitative and qualitative approaches—to balance inbuilt biases and increase the validity of findings (Gray, 2017: 96, cited in Greene *et al.*, 1989). As a result, merging approaches preserve their autonomy and cohabitation while allowing one to make up for the shortcomings or limits of the other (Gray 2017: 101, cited in Flick 2009).

#### **4. 10 Case study research strategy**

Numerous methodologies and approaches are included in qualitative research, such as case studies, ethnographies, phenomenology, grounded theories, biographical, historical, participative, and therapeutic approaches (Crossman and Ashley, 2020; Yin, 2010; Creswell 2009; Creswell 2007; Denzin and Lincoln 1995). A case study was selected as the research strategy for this study. This type of design is especially useful in social science research since it provides a thorough understanding of phenomena in their natural settings (Yin 2009). “An empirical investigation that explores a current phenomenon in a real-life setting, with particular reference to instances where the boundaries between phenomenon and context are not clear” is how Yin describes the case study technique (Yin 2009).

Using a case study approach makes it possible to conduct a methodical analysis of real-world problems and issues, collect information from managers and employees of organizations, analyze and synthesize facts to create information, create workable alternative solutions, and provide written or verbal recommendations (Lethbridge 2005). Case studies are useful as a research method as well as a research strategy (Punch 2005; Yin 2009). The increasing confidence in the rigour of this approach as a research strategy has led to its acceptance in the field of organization and management studies (Yin 2009; Hartley 2004).

Furthermore, case studies are not restricted to a particular phenomenon; rather, they seek to maintain the entirety and integrity of the case, or cases being studied, combining information from a variety of sources, including people, particular groups, organizations, and occasionally communities, as well as using a variety of methodologies (Punch 2005). As a result, the case study functions as a thorough research strategy with a rational research design that incorporates particular methods of data collection and analysis (Yin 2003). It was judged suitable for this research since it enabled a thorough investigation of the effects of the relocation on people and communities in Nkroful, Teleku-Bokazo, and Salman overall.

#### **4. 11 Population/target population**

Within the specified area, the population is defined as all units of the phenomenon under study. It might, for example, indicate the total number of farmers affected by a particular activity. However, a chosen percentage of these units selected for analysis constitutes a sample of the population. In order to extrapolate the results to the full population, sampling involves the deliberate selection of a subset of the phenomenon's units (Jacobs 2010). As a result, the sample's unit of measurement needs to be representative of the population. The population under investigation is made up of seven mining towns that were resettled and are located in Ghana's western region. Table 4. 2 lists these communities.

**Table 4. 2: Mining Companies and Communities Relocated**

MINING COMPANIES	COMMUNITIES RELOCATED
AngloGold Ashanti Iduapriem Mine	Teberobie
Goldfields Ghana Ltd.	Old Aguayo
Adamus Gold Resources	Nkroful
Golden Star Bogoso Mine	Akyempim
Goldfields Aboso Mine	Damang
Adamus Gold Resources	Teleku-Bokazo
Adamus Gold Resources	Salman

*Source: Researcher's own compilation*

Table 4. 2 shows the major mining companies operating in the western region of Ghana. These are AngloGold Ashanti (*Iduapriem mine*), Goldfields Ghana Limited, Golden Star Bogoso Mine, Goldfields Aboso Mine, and Adamus Gold Resources. From Table 4. 2, seven (7) major communities have been relocated as a result of mining operations and were chosen as the study population. These are Teberobie Township, Old Atuabo, Nkroful, Akyempim, Damang, Teleku-Bokazo and Salman. The researcher's attempt to fulfil DUT's ethics criteria, including obtaining gatekeeper's approval, resulted in the inability to encompass all seven communities initially chosen as the study population. This made the researcher finally limit the study population to a target of three (3) communities where resettlements have taken place.

#### **4. 11. 1 Target population**

The focus of this study is on some key areas in the western region of Ghana where resettlement has taken place. The people residing in these areas have provided significant insights regarding resettlement issues. Residents of the three (3) main

mining communities in the region were selected as the study’s target population. These target populations were arrived at because the researcher was able to secure the much-needed gatekeeper’s approval, which was a condition to satisfy DUT’s ethics regime. They included **Nkroful**, **Teleku-Bokazo**, and **Salman** mining resettlement communities.

**Table 4. 3: Targeted Population**

<b>COMMUNITY</b>	<b>MINING CONCESSIONS</b>
Teleku-Bokazo	Endeavour Mining Corporation
Nkroful	Adamus Gold Resources
Salman	Adamus Gold Resources

*Source: Generated by the researcher*

The primary goal of this study was to examine the social unrest and economic fallout from extensive gold mining operations in Ghana's Western Region. Specifically, it examined the Salman, Nkroful, and Teleku-Bokazo communities situated within the Adamus and Endeavour mining concessions. The communities of Salman, Nkroful, and Teleku-Bokazo have experienced physical displacement and subsequent resettlement to their current locations due to mining operations. These regions represent recent mining-related resettlements in Ghana, capturing a diverse array of socioeconomic impacts frequently linked to mining operations.

Studying these communities is important because it can provide insight into more general patterns and problems that are common in places affected by mining. Salman, Nkroful, and Teleku-Bokazo’s societal effects mirror the challenges faced by numerous communities in Ghana and globally due to extensive gold mining operations. Thus, comprehending these communities' experiences can offer important new perspectives on the broader issue of mining-induced societal disruption and its effects. Secondly, to

adhere to the DUT ethics regime, the researcher managed to visit these mining resettlement areas. This provided the researcher with the chance to get an overview of the whole mining resettlements sector as the researcher had the opportunity to visit the seven mining communities, among them the Teleku-Bokazo, Nkroful, and Salman communities. The researcher's attempt to secure gatekeepers' permission from the mine authorities to be able to do the research in the places mentioned in Table 4. 2 proved futile. The researcher was able to get permission in places mentioned in Table 4. 3 (i.e., **Teleku-Bokazo, Nkroful, and Salman**) resettlement communities under the Adamus Gold Resources and Endeavour Mining Corporation, respectively, whose responsibilities have now completely been assigned to the Ellembele District Assembly. The researcher also made contact with the leaders of the communities in Teleku-Bokazo, Nkroful, and Salman, presented the research question to them, and crucially, requested permission to conduct the study.

**Table 4. 4: Sample from population**

<b>NAME OF RESETTLED COMMUNITY</b>	<b>TARGET PERSONS TO BE INTERVIEWED</b>	<b>NUMBER OF INTERVIEWEES</b>
<b>Salman</b>	<b>Institutional level</b>	
	Community relations officer	1
	Evaluation Board officer	1
	<b>Sub-total</b>	<b>2</b>
	<b>Household heads</b>	
	Tenants with various occupations	1
	Landowners with titles	1
	Landowners without titles	1

<b>NAME OF RESETTLED COMMUNITY</b>	<b>TARGET PERSONS TO BE INTERVIEWED</b>	<b>NUMBER OF INTERVIEWEES</b>
	Tenants directly involved in the resettlement process	1
	<b>Sub-total</b>	<b>4</b>
	<b>Opinion Leaders</b>	
	Chief	1
	Women in various capacities	1
	Sectional/Clan heads	1
	<b>Sub-total</b>	<b>3</b>
	<b>Focus Groups</b>	
	Market women	3
	Youth	3
	Aged (55-60 years)	3
	<b>Sub-total</b>	<b>9</b>
<b>Nkroful</b>	<b>Institutional level</b>	
	Community Relations Officer	1
	Evaluation Board Officer	1
	<b>Sub-total</b>	<b>2</b>
	<b>Household heads</b>	
	Tenants with various occupations	1
	Landowners with titles	1
	Landowners without titles	1

<b>NAME OF RESETTLED COMMUNITY</b>	<b>TARGET PERSONS TO BE INTERVIEWED</b>	<b>NUMBER OF INTERVIEWEES</b>
	Tenants directly involved in the resettlement process	1
	<b>Sub-total</b>	<b>4</b>
	<b>Opinion Leaders</b>	
	Chief	1
	Women in various capacities	1
	Sectional/Clan heads	1
	<b>Sub-total</b>	<b>3</b>
	<b>Focus Group</b>	
	Market Women	3
	Youth groups	3
	Aged (55-60 years)	3
	<b>Sub-total</b>	<b>9</b>
<b>Teleku-Bokazo</b>	<b>Institutional level</b>	
	Community Relations officer	1
	Evaluations Board officer	1
	<b>Sub-total</b>	<b>2</b>
	<b>Household heads</b>	
	Tenants with various occupations	1
	Landowners with titles	1
	Landowners without titles	1

<b>NAME OF RESETTLED COMMUNITY</b>	<b>TARGET PERSONS TO BE INTERVIEWED</b>	<b>NUMBER OF INTERVIEWEES</b>
	Tenants directly involved in the resettlement process	1
	<b>Sub-total</b>	<b>3</b>
	<b>Opinion Leaders</b>	
	Chief	1
	Women in various capacities	1
	Sectional/Clan heads	1
	<b>Sub-total</b>	<b>3</b>
	<b>Focus Group</b>	
	Market women	3
	Youth groups	3
	Aged (55-60 years)	3
	<b>Sub-total</b>	<b>9</b>
	<b>TOTAL NUMBER</b>	<b>54</b>

*Source: Generated by the researcher*

Sampling enables the researcher to reduce a large population to an appropriately smaller size (Bryman 2012). Bryman (2015: 27) identifies probability and non-probability sampling as the two primary methods employed by researchers in sampling. Probability sampling is typically utilized when researchers aim to achieve a representative overview of findings about a sampled population, particularly in large-scale research endeavours, albeit at considerable cost (Mitchel *et al.* 2005). Non-

probability sampling, on the other hand, is preferred when researchers focus on a particular group and do not necessarily plan to generalize findings to the whole population (Kariuki 2008). This approach is frequently used in qualitative research approaches like ethnography, case studies, and action research, as well as smaller-scale research initiatives, particularly where budgetary constraints are critical (Denzin and Lincoln 1994). The non-probability sampling technique was deemed appropriate for this study due to the time and financial constraints, as it aligned with the qualitative approach and the targeted nature of the research aims.

#### **4. 12 Sampling types**

##### **4. 12. 1 Non-probability sampling**

A non-probability sampling method, according to McBurney and White (2009: 249), is one in which the researcher chooses a sample for the study based on reasonable judgement. The probability of a subject or object being selected for a study cannot be calculated in non-probability sampling, which makes it impossible to be sure how well the sample has been represented. This, according to McBurney and White (2009), is the main shortfall of non-probability sampling. However, a final sample of three (3) resettled mining communities (Salman, Teleku-Bokazo, and Nkroful) out of a target population of seven (7) similar communities as in Table 4. 2 was considered a reasonable and fair representation by the researcher. Moreover, the sampled communities were not all from one area but from different locations in the Western Region. The advantage of non-probability sampling over probability sampling, as quoted by Creswell (2014), is the lower cost and effectiveness when collecting data.

##### **4. 12. 2 Judgement/Purposive sampling**

The chosen non-probability sampling method for this research is judgement or purposive sampling. Purposive sampling is the intentional selection of subjects or components that are thought to be most appropriate to be included in the sample; this is usually done in accordance with the subjects' attributes or relevance to the goals of the study (Cohen *et al.* 2011). This methodology enables the investigator to identify

participants who exhibit particular attributes or experiences that correspond with the research objectives, promoting a targeted and concentrated inquiry. It is the sampling procedure that uses expert opinion to select a sample from elements of the population, which is understood as judgement or purposive sampling (Godfred 2015). In this study, participants from several resettled mining towns were chosen using purposive sampling since it is the most notable non-probabilistic sampling technique to identify important individuals (Moriarty 2011). This strategy for sampling was utilized to find those who have been affected by the resettled issues and who, co-incidentally, knew what went into the resettlement process. Participants were selected based on their residency in the resettled communities.

Interviewees and focus group participants were selected via non-probability sampling. Purposive sampling, a kind of non-probability sampling, was specifically used to choose participants based on strategic insights obtained from visiting the study location and comprehending the major players involved in resettlement issues important to the study. The researcher was able to find appropriate subjects thanks to this technique. In addition to purposive sampling, snowball sampling was utilized, which involves identifying a small group of people who best represent a given set of traits and using them as informants to propose other people who might be similar to them (Somekh and Lewin 2005). Because this approach sought to bring together people with similar experiences—that is, those who live in communities impacted by mining resettlement activities—it was judged appropriate for the study. The researcher was able to identify participants more easily for focus groups and interviews because of this strategy.

The communities and participants were specifically chosen through a carefully selected purposive sampling method. This method targeted opinion leaders and household heads within the study communities. These participants were purposefully selected as they were directly impacted by the mining activities and had been actively involved in addressing the effects within their communities. Public and community relations officials were purposefully chosen for semi-structured interviews in order to obtain information about the socioeconomic effects on the resettled population and solutions

to these effects. Previous research has demonstrated that these key informant groups were carefully chosen based on their capacity to offer comprehensive and informed information about the particular issue being studied (Godfred 2015; Beck 2009).

During the fieldwork and data collection phases, purposeful sampling proved to be highly relevant and beneficial, as it allowed the researcher to find respondents who could provide precise and meaningful information relevant to the study. However, it is important to acknowledge that bias may have been introduced in the selection of leaders within the affected resettled communities. Nevertheless, this potential bias did not compromise the quality or reliability of the information gathered, and it did not impact the outcomes of the investigation.

#### **4. 13 Sampling strategy**

As established by Adler and Clark (2011: 100), sampling involves choosing research participants from a huge population. A sample is a subset of individuals or items selected from the population for a specific study. The samples need to encompass all of the characteristics of the population to apply the results from a sample to the entire population (Jacobs 2010). Sample size should therefore be based more on the fair judgement of the researcher as opposed to a statistical calculation (Wiid and Diggine, 2015: 2002). Additionally, both authors believed that while the sample size should be representative of the intended population, it shouldn't be so large as to be impractical, economically unmanageable, or practically unmanageable.

##### **4. 13. 1 Sampling strategy for interviews**

Table 4. 4 presented in sub-section 4. 11. 1 has been summarised to show the actual sampled population that was used in the study. Tables 4. 5 and 4. 6, respectively, demonstrate this.

**Table 4. 5: Targeted and number of interviewees per area**

The sample population to be interviewed	Number of interviewees involved
Institutional level	2
Household heads	4
Opinion leaders	3
<b>TOTAL</b>	9 (in each community)
<b>GRAND TOTAL (for the communities of Salman, Nkroful and Teleku-Bokazo)</b>	<b>i.e. 9 × 3 areas = 27</b>

*Source: Generated by the researcher*

To gather the data required for the study, a total of nine individuals from each area, as represented in Table 4. 5, were interviewed. These comprise the following: at the **institutional** level, **two (2)** persons were selected for the semi-structured interview questions, encompassing the community relations officer and the evaluation board officer. Again, from the **household** level, there were one (1) person from tenants with various occupations, one (1) renter who actively participated in the resettlement process, one (1) person from landowners with titles and one (1) person from land owners without titles, thus making it a total of **four (4)** persons from that category. During the interview, in the area of **opinion leaders**, one (1) chief was selected, one (1) from women in various capacities, and one (1) from sectional or clan heads, making it a total of **three (3)**. Thus, in all three selected communities, a **total of 27** participants were interviewed from all three selected communities.

#### 4. 13. 2 Sampling strategy for focus group

*Table 4. 6 Sampling under Focus Groups*

<b>COMMUNITIES</b>	<b>Market women</b>	<b>Adult (18-45)</b>	<b>Aged (55-60)</b>
Teleku-Bokazo	3	3	3
Nkroful	3	3	3
Salman	3	3	3
<b>TOTAL</b>	<b>9</b>	<b>9</b>	<b>9</b>
<b>GRAND TOTAL</b>			<b>i. e. 9 ×3 areas = 27</b>

*Source: Generated by the researcher*

A total of **nine (9)** people were contacted to participate in the **focus group**. They included three (3) market women, three (3) adults between the ages of 18 and 45 years old, and three (3) persons from the elderly group who were between 55 and 60 years old in each of the three (3) focus group discussions within a specific community. This comprised three (3) participants in each discussion, resulting in a collective count of nine (9) people, namely 3+3+3. These samples were selected through a convenient sampling technique. Extrapolating this total sample size of 9 persons to a community to cover all the three selected communities (**Salman, Nkroful, and Teleku-Bokazo**) gave (**9 × 3 = 27 persons**). Both the selected number of interviewees and the represented focus group discussions yielded a total sample population of 54 (**i.e., 27 + 27**) for the study. This figure (54) enabled us to include all relevant individuals for discussing the significant issues arising from their participation in the relocation process.

#### **4. 14 Interview guide**

An interview guide can be defined as a structured document outlining the topics to be addressed during an interview and serving as a framework for gathering specific information (Blumberg *et al.* 2011). In this study, the interview guide was utilized in line with the approach advocated by Brink (1996), as cited in Walliman (2005). According to this method, interviews involve the collection of data through responses obtained directly from subjects, either through face-to-face interactions, electronic communication, or telephone calls. These purposeful conversations were directed by the researcher between two or more people to obtain participants' information.

This technique was used to gather data from the community relations officer, the land evaluation officer (institutional level), as well as other subjects who found it difficult to answer questions in writing due to their busy schedules. Individual appointments for interviews were arranged over the phone with the subjects. This process was straightforward, as their direct line and cell phone numbers were publicly available. In addition, those who indicated interest in taking part in the study voluntarily supplied their cell phone numbers during the interview guide's pilot phase. As a result, the interviews were conducted in a highly formalized and structured manner, aligning with the approach outlined by Hammersley (1992), as depicted in Table 4. 5.

#### **4. 15 Interviews**

Saunders *et al.* (2009) assert that interviews are commonly conducted face-to-face but can also be carried out over the phone or through advanced technology like Skype. These interviews could happen in a neutral setting or at the interviewee's house. Interviewees must decide if they are comfortable hosting the researcher at their home and if they have a suitable space for private conversation without disrupting household members (Kothari 2004). Depending on the researcher's style, the interviewer—who need not be the researcher—can take a formal or casual approach, letting the interviewee freely explore particular subjects or provide answers to pre-formulated

questions. A semi-structured approach provides flexibility for participants to express themselves while ensuring key topics are addressed.

Greener (2008) adds that researchers may use a checklist or form to record interview responses, which can also take the form of an interview guide. However, taking notes during the interview may disrupt the flow of conversation, particularly in less structured interviews, and may hinder attention to non-verbal communication and retention of information. Therefore, researchers may find it beneficial to have an additional record of the interview, such as audio or video recordings, after obtaining permission from participants (Saunders *et al.* 2009).

#### **4. 16 Focus group discussions**

A focus group is a prearranged conversation with a chosen group of people, such as market women, youth, or the elderly, to elicit their perspectives on various subjects. The aim is to gather a diverse range of viewpoints and insights on specific topics and situations. Although similar to group interviews, focus groups differ in their emphasis on fostering interaction and discussion among participants. While group interviews involve interviewing several individuals simultaneously, focus groups are designed to encourage dialogue and exchange within the group. Focus groups use group dynamics to encourage conversation by providing a "safe" space for individuals to disclose themselves (Freeman 2006). Focus groups are a useful tool for gathering insights into participants' viewpoints in qualitative research since they fall somewhere between individual interviews and naturalistic observation (Seal, Bogart & Ehrhardt, 1998).

**Table 4. 7: Type of Interviews**

<b>Structure Level</b>	<b>Interview Type</b>
Highly structured	Market research interview
Semi-structured	Guided open interviews
Unstructured	Ethnography

#### **4. 17 Types of interviews**

The interviews for this study were conducted with individuals on specific matters outlined in the objectives to investigate their opinions, experiences, motivations, and/or beliefs. Qualitative methods, for example, interviews, did offer a more in-depth appreciation of social phenomena as opposed to that acquired through a method such as a questionnaire that is purely quantitative. Therefore, when not much is known regarding the phenomenon under study or when comprehensive insight from individual participants is needed, interviews are the most suitable method. Interviews are extremely useful when delicate subjects need to be explored, especially when participants are hesitant to bring up such subjects in a group context (Gill, Stewart, Treasure, and Chadwick 2008). Sekaran and Bougie (2011) state that the three interview forms used in this study—unstructured, structured, or semi-structured—will be listed in Table 4. 7.

**Table 4. 8: Interview Analysis**

	<b>COMMUNITIES</b>			
<b>SECTOR</b>	<b>SALMAN</b>	<b>NKROFUL</b>	<b>TELEKU-BOKAZO</b>	
Institutional level	2	2	2	
Household-level	4	4	4	
Opinion leaders	3	3	3	
Focus Group	9	9	9	
<b>TOTAL</b>	<b>18</b>	<b>18</b>	<b>18</b>	
<b>GRAND TOTAL =</b>	<b>54</b>			

#### **4. 17. 1 Unstructured interview**

An unstructured interview, as defined by Sekaran and Bougie (2011), is one in which the interviewer converses with the participant without following a prearranged format for questions. The unstructured interview serves the objective of introducing preliminary conversation topics so that the researcher can pinpoint variables that require more in-depth inquiry. This typically leads to the adoption of a structured interview format, enabling the interviewer to focus on specific areas of inquiry based on the preliminary discussion. The unstructured interview has as its main purpose the investigation and examination of several situational factors that may be fundamental to the general scope of the problem. Such a process can reveal that the identified issue is a sign of a deeper and more serious problem.

No preconceived ideas or theories are reflected by unstructured interviews, which are undertaken without much consideration, if any. An initial question such as "Can you tell me about your personal experience of how socioeconomic factors affect your family in your new resettlement?" may be all that is asked in this type of interview. The interview will then proceed, mostly depending on the first response. Unstructured interviews, which can linger on for several hours, are time-consuming, challenging to conduct and tough to manage because not much direction about what to discuss is given by pre-planned interview questions. Consequently, when in-depth information is needed, virtually no knowledge on the subject exists, or a different perspective is needed on a known issue, this style of interview is rarely used (Gill *et al.* 2008).

#### **4. 17. 2 Structured Interviews**

The structured interview is a technique used when the necessary information has already been determined (Sekaran and Bougie 2011). In this study, predetermined questions were posed to participants in both interviews and focus groups, conducted either in person or telephonically. Structured interviews essentially entail the verbal administration of a questionnaire, wherein questions from a predefined list are asked consistently with minimal variation and limited scope for follow-up questions, especially when responses require further clarification.

As a result, these interviews are fairly quick, simple to administer, and specifically useful where certain questions require clarity. Nonetheless, their nature only allows for some degree of response from participants, thus is of little use in probing questions requiring in-depth information. All participating individuals were presented with the questions in a standardized manner. Areas of concern identified during the unstructured phase were explored further to gather additional detailed information (Gill *et al.* 2005; Diccico-Bloom and Crabtree 2006).

#### **4. 17. 3 Semi-structured interviews**

Semi-structured interviews consist of a few core questions that help define topics to be studied and can be used to allow the interviewee or interviewer to stray in pursuit of further detail from a concept or response (Gill *et al.* 2008; Diccico-Bloom and Crabtree, 2006). We used this interview approach since it provided participants with some suggestions on what subjects to discuss. Compared to structured interviews, this approach is flexible, allowing for information elaboration, or the discovery of what participants considered important, which the researcher had not previously considered pertinent.

#### **4. 18 Interview types used in this study**

For both the focus group talks and the home interviews, the unstructured interview method (see Section 4. 16. 1) was selected. The researcher was able to fully address all pertinent issues that were in line with the study's goals thanks to this approach. In addition, structured interviews were utilized with community relations officers and land evaluation officers, as their roles were likely to provide readily available answers essential for meeting the research objectives. Moreover, semi-structured interviews were conducted, involving a set number of specific open-ended questions supplemented by probing queries. To enhance the effectiveness of various interview strategies, in-person interviews were conducted, enabling swift access to data.

#### **4. 19 Methodology for collecting data**

To ensure validity, data for this study was gathered from a variety of sources. These sources encompassed semi-structured interviews conducted with policymakers, specifically community relations officers representing the mine, and land evaluation officials from the Public Services Commission. Additionally, semi-structured interviews were conducted with household heads, including tenants from various occupations, landowners with or without titles, and tenants directly engaged in the resettlement process. Semi-structured interviews were conducted with opinion leaders, including chiefs, women in prominent roles, and heads of sectional or clan organizations. Key

informants who volunteered to participate in the study were also interviewed in a semi-structured manner. The semi-structured interview schedule was chosen due to its flexibility and ability to provide insights into topics and themes that may not have been included in the list of interview questions, the semi-structured interview schedule was chosen.

Primary data regarding the socioeconomic effects of mining resettlements was obtained using interviewing techniques. During semi-structured interviews and focus group discussions, the researcher asked open-ended questions of the participants. This method was selected because it enabled the people to tell their own stories about the socioeconomic effects that they encountered as a result of the resettlement. It provided both the researcher and the participants with the opportunity to unearth other socioeconomic effects that were not within the scope of the study. The researcher personally visited these selected mining resettlement areas with a recorder to record the interview session from the semi-structured interview guide prepared. Focus groups offer significant advantages due to their robust versatility in illuminating various topics or issues (Stewart *et al.* 2007: 40). Focus groups can be organized relatively swiftly and inexpensively, unlike large-scale surveys. Moreover, researchers can commence data analysis almost immediately after the conclusion of the focus group session. Focus groups also make it easier to understand responses, give you the chance to ask more pointed questions, and watch for non-verbal clues like smiles, frowns, and gestures (Stewart *et al.* 2007).

After being approached directly by the researcher, the participants in the focus group consented to participate in the study, making their identities easily identifiable. Under the researcher's supervision, specific questions were prepared taking cognizance of the research objectives in the areas of resettlement, employment opportunities, livelihood, and morbidity issues to generate discussions among the participants. The researcher allotted fifteen (15) minutes for each interview opportunity and twenty (20) minutes for each group discussion. These were completed in order to cover every participant, as indicated by Table 4. 4. Following the receipt of the replies, the author

categorized them into themes and used the NVivo software's "free node" tool to perform a thorough thematic analysis and provide the findings.

#### **4. 20 Data collection**

Schirch (2013:40) defines data as information gathered from primary and secondary sources that has not been changed or processed. According to Babbie (2020), the type of study, whether qualitative or quantitative, determines the procedures for data gathering. Ghauri and Gronhaug (2005) separated the data into two categories: the type of study, whether qualitative or quantitative, determines

primary and secondary. As new information is obtained from respondents during a study, primary data is defined by the authors as such; on the other hand, secondary data refers to previously collected information that was not gathered by the user. Secondary data refers to the information gathered via the literature review. Creswell (2009:15) classified data into quantitative, qualitative, or mixed methods, as shown in Table 4. 9.

**Table 4. 9: Qualitative, Quantitative, and Mixed data collection methods**

<b>Quantitative methods</b>	<b>Qualitative methods</b>	<b>Mixed methods</b>
predetermine	Emerging Methods	Both pre-determined and emerging methods
Instrument-based questions.	Open-ended questions	Both Open and closed-ended questions
Data on performance, attitudes, observations, and censuses	Data from interviews, observations, documents, and audio-visual recordings	Multiple types of data, drawing on all possibilities.
Statistical analysis.	Text and Image Analysis	Statistical and text analysis
Statistical Interpretation	Themes, Patterns Interpretation	Across database interpretation

*Source: Adapted from Creswell (2009:15)*

#### **4. 21 Data collection processes**

The semi-structured interview guide was used to collect information from all of the persons listed in Table 4. 4 with the goal of capturing all of the data needed to answer the study questions. Furthermore, the researcher conducted focus group talks utilizing a semi-structured interview guide to enable discourse with specific members, particularly those impacted by the resettlement process but not within the household category. This enabled an exploration of participants' opinions, perceptions, and

experiences regarding the socioeconomic effects of resettlements on various aspects such as income, employment, livelihood and health. Due to shared traits, participants were consciously placed into homogeneous groups (Denzin and Lincoln, 2005a; Ruff (2005). Participants for the focus group discussion were drawn from the three resettled communities under scrutiny (Salman, Nkroful, and Teleku-Bokazo), where daily life was influenced by their involuntary relocation. Key factors influencing the results of focus group discussions were taken into consideration in order to ensure productive meetings and produce pertinent data. These factors included group size, time allotted for each session, the nature and structure of questions, and the moderators' ability to control participants' expectations while extracting information (Ruff *et al.* 2005; Tang & Davis 1995). As shown in Table (4. 6), the size of each group was controlled so that participants fell into three (3) groups, for a maximum of nine (9) persons to participate in the focus group talks in each chosen community. From a methodological standpoint, focus group discussions mitigated the intrinsic individual bias that is frequently found in other data collection techniques by enabling the gathering of varied viewpoints through group discussions. The collective knowledge and experiences provided during talks allowed participants to confer with one another, which greatly aided in the building of meaning about resettlement issues pertaining to income, employment, livelihood and morbidity levels. Three (3) focus groups with market women, young people, and older people in the 55–60 age range were held in each of the three (3) chosen, resettled communities. This resulted in nine (9) participants per area, for a total of twenty-seven (27) people who participated in the nine (9) focus groups in each of the three (3) resettled communities. The sampling population intended for the in-depth interviews is summarized in Table 4. 5.

The research encompassed the entire population of the resettled mining communities in the western region of Ghana, with a particular emphasis on Salman, Nkroful, and Teleku-Bokazo. These three communities were selected as the focal points for the mining resettlement analysis. This focused method enabled the researcher was to compile a variety of viewpoints on the socioeconomic problems confronting the locals. A total of 54 people were chosen from these mining communities in Ghana's Western

Region. There were two steps to the sample process: selecting the mining communities and then selecting the participants.

Non-probability sampling procedures for both phases were used to choose the communities and the participants.

#### **4. 22 Data analysis**

##### **4. 22. 1 Data analysis of interviews conducted**

Du Plooy-Cilliers, Davis, and Bezuidenhout (2014: 288) emphasize that data analysis serves various purposes, such as describing facts, identifying patterns, formulating explanations, and testing hypotheses. During data analysis, raw data, which consists of unprocessed information, is structured and arranged to extract meaningful insights. In this research, qualitative data obtained from semi-structured interviews underwent a transcription process. Transcription involves converting sounds or images from recordings into text format. Once transcribed, the data was analyzed using NVivo software for thematic analysis. Thematic data analysis, according to Hlubi (2013: 57), is a qualitative technique in which the researcher finds recurrent themes in the data. As a result, the researcher used NVivo's 'free node' tool to perform a thorough thematic analysis on the responses, classifying them into themes. A comprehensive method for finding patterns or themes in data is called thematic analysis. Illustrative codes were used in this study to further categorize these themes. As a result, the analysis of socioeconomic impact areas like income, employment, means of subsistence, and morbidity issues produced findings.

##### **4. 22. 2 Data analysis of focus group discussions**

In focus groups, researchers convene carefully selected individuals to engage in discussions and provide feedback on a product or topic. Qualitative research necessitates analysis strategies, and often, transcribing recorded focus group discussions is the initial step to making sense of the information gathered (Hlubi 2013: 60). The focus group discussions were analyzed using NVivo software for thematic analysis. The researcher transcribed the focus group recordings, identifying major

themes by thoroughly reviewing the transcripts and selecting areas pertinent to the research objectives. Subsequently, the data was organized according to questions and themes, and interpretations were provided to contextualize the identified themes and ideas.

#### **4. 23 Limitations of the study**

This research's limited scope is one of its main drawbacks. Resettled mining communities have a wide range of socioeconomic problems and new ones always crop up. This study only addressed select pertinent issues, overlooking other equally significant socioeconomic challenges associated with involuntary resettlements. Furthermore, the unwillingness of certain people to take part in the study resulted in additional constraints. This reluctance stemmed from the sensitive nature of disclosing personal income and expressing opinions on employment, which could potentially impact their relationship with the mining company, particularly for those employed by the mine. Fear of reprisals from supervisors deterred their participation.

Additionally, time and financial constraints posed significant limitations. Contacting each selected individual to gather their views on the discussed issues was time-consuming, and the researcher could not visit all seven mining resettlements listed in Table 4. 2 due to time constraints. The research had to be completed within a three-year timeframe, with fieldwork limited to a maximum of six months. The resettled communities were widely distributed throughout Ghana's western area, outside of the capital of Takoradi, which posed a challenge in terms of finances. The study was further complicated by the significant financial commitments involved in visiting these villages and carrying out research.

#### **4. 24 Validity and reliability/trustworthiness**

##### **4. 24. 1 Validity**

The degree to which an instrument accurately measures what it is intended to measure is a standard definition of validity (Blumberg *et al.* 2005). It assesses the effectiveness

of the instrument in capturing the targeted notions. Validity guarantees that the findings are accurate and consistent with the goals of the study (Robson *et al.* 2011). Research instruments, including questionnaires, and other methods to precisely evaluate the topics under study are necessary to achieve validity (Pallant 2020). It covers the whole experiment and assesses if the outcomes adhere to the standards of the scientific research methodology.

Validity in qualitative research is understood in terms of reliability, usefulness, and trustworthiness (Zohrabi 2013). In contrast, consistency and repeatability of measurements are referred to as reliability, guaranteeing that consistent results with similar values are achieved (Blumberg *et al.* 2000). It evaluates the reliability, accuracy, reproducibility, and consistency of study findings (Chakrabarty 2013).

#### **4. 24. 2 Reliability**

Important components of this study are its validity and reliability. Wagner, Kawulich, and Gamer (2013: 81) assert that research conclusions are at risk from a lack of validity and dependability. Therefore, in order to verify the authenticity of the source data, the real resettlement-impacted parties were contacted in order to obtain the necessary information to support any potential study results. Furthermore, in ensuring the study's reliability and legibility, the research adopted a test-retest reliability measure where an instrument will first be piloted to ensure its relevance, accuracy and completeness, and it is free from error.

#### **4. 25 Confidentiality and anonymity**

In accordance with the DUT's ethical guidelines, data was safely saved in digital format with identifiable information deleted in order to protect confidentiality. It will be kept for two years following any publication arising from the study, or for five years following the study's conclusion if no publications are produced, on a password-protected computer. In this investigation, anonymity was maintained on several levels. First off, the District Assembly—the administrative body in charge of the resettlement

communities—permitted participants to enter. No project-related materials ever revealed the mine's name, and the firm was first made aware of its anonymity in a letter asking to be allowed entry into the village. In addition, no information that might reflect negatively on the mine was released, and the mine was released from any liability for any problems that might come up throughout the course of the investigation. Second, the names of the two consulting firms that assisted with the villages' relocation were also omitted from all records pertaining to the study project. Additionally, these businesses were released from all liability arising from the research procedure. Finally, the participants' privacy was safeguarded by the use of pseudonyms, and they were made fully aware of this. Additionally, participants had the option to request the exclusion of any information they submitted.

#### **4. 26 Ethical considerations**

All studies must be carried out in the way that the DUT ethics committee specifies. Participants' anonymity was protected during the data collection session, and data was only collected after consent had been obtained from the individual to guarantee voluntary participation. The participants were informed that the data collection would be utilized solely for scholarly reasons. The National Identification Card, sometimes referred to as the "Ghana Card," is a document that all citizens are issued to prove that the participants are older than eighteen (18) years old. The researcher used this card to make sure that no vulnerable individuals were interviewed (Northway 2015; Wiles 2012).

#### **4. 27 Conclusion**

The study's methodology was presented in this chapter. Its main purpose was to direct the investigation. The research approach used in this study to ascertain the socioeconomic impacts of mining resettlement was included in this chapter. Constructivism served as the study's compass. In the study, the ontological focus was on the nature of the reality of characteristics. Social and cultural factors were constructed by people in a particular society. The epistemological focus was on the

nature of knowledge, which was constructed to have socioeconomic effects on resettlement communities. To achieve this, the study employed qualitative data that was collected and analysed thematically. A descriptive approach was chosen, which influenced the choice of interview guides as a data collection device.

The study's target population was chosen from among family heads, participants in focus groups, opinion leaders, important community informants, and mine workers. Krejcie and Morgan's (1970) sample size table served as the basis for the selection of a sample size of 54. Purposive sampling and the non-probability sampling methods were applied to obtain a true representative sample of the population. Open-ended questions were utilized in the interview guide to provide participants with the freedom to express themselves and ask detailed inquiries on the study topic. The two interview guides (meant for institutional levels, household heads, and opinion leaders, on the other hand, and focus groups on the other) took an unstructured format. To ensure validity, the research adopted a test-retest reliability measure where the instrument was piloted to ensure its relevance. It assisted in realigning questions with the intended task. Once the data became text, it was analysed using thematic analysis. Hlubi (2013: 57) defines thematic data analysis as a qualitative data analysis technique wherein the investigator finds recurrent themes.

The data obtained from the cases was transcribed and coded using the NVivo software to identify and examine discernible patterns, trends, similarities and differences in the responses. These were interpreted by consciously making sense of the contextual use of language and information from textual sources of data, interviews and other fields of conversation. To enable the participants to fully participate in the study, some ethical considerations were made to dismiss fears of abuse. A gatekeeper's letter was sought, whereupon confidentiality and privacy were assured. Each participant consented to participation signing a consent form. To begin the study, the researcher also asked for permission from the community. The upcoming chapter will cover the data presentation and analysis of the findings, the findings as they relate to the socioeconomic impacts of mining resettlement, and the conclusions drawn from the results' interpretation.



## CHAPTER FIVE

### DATA PRESENTATION, ANALYSIS, INTERPRETATION, AND STATEMENT OF FINDINGS

#### 5. 0 Introduction

This chapter illustrates, examines, and interprets the collected data, highlighting the study's important conclusions, as previously mentioned in the section on research methods. The study aimed to determine the varied socioeconomic implications of mining-induced resettlements, with a particular emphasis on Ghana's western area. The qualitative findings from in-depth interviews and focus group discussions will be presented following the research objectives. The findings are arranged in accordance with the research topics of the study as follows:

- Investigate the impact on income levels of people in the resettled communities that have been affected.
- Examine the employment opportunities available as a result of the resettlement.
- To discover participants' livelihood status before and after the resettlement.
- To highlight the morbidity issues the people in the resettled communities face.
- Assess the measures put in place to mitigate these socioeconomic issues.

This study used a presentation format that involved analyzing qualitative data to produce findings consistent with the study's objectives. The main methods utilized to gather data included in-depth interviews (IDI), institutional-level interviews, focus group discussions (FGDs), and interactions with 54 carefully chosen participants. Participant data were examined and analyzed using the NVivo 12 version. This chapter presents the comprehensive data that was collected. The narratives that participants in semi-structured interviews and focus groups provided were analyzed to reveal themes that emerged from the display of the qualitative data in matrix tables. This data had no statistical significance assigned to it. The explanation of qualitative data from focus groups, institutional-level interviews, and in-depth interviews provides details derived

from the information supplied by the interview questions. The results are based on themes that emerged from the data and were addressed.

## **5. 1 Data analysis**

According to Bornmann (2020), data analysis is a collection of techniques and methods used to translate qualitative data in order to clarify, understand, or interpret the subjects and circumstances being studied. In this sense, qualitative data refers to words and observations with the goal of interpreting the data and transcribing it in a more meaningful way. Thematic analysis, as described by Creswell (2016: 64), was used in this study. Braun and Clarke's (2006) six-phase framework was applied to clarify the data analysis process. The following is a breakdown of these stages:

### **5. 1. 1 Familiarizing oneself with the data collected**

Data analysis, according to Bornmann (2020: 84), attempts to create a shared understanding of the data and familiarize oneself with its contents. It entails taking notes from recordings, and carefully examining and rereading the data. To make sure that the replies received in this study correctly matched the precise questions posed in the field and were in line with the goals of the investigation, the researcher reviewed and reread the material a great deal.

### **5. 1. 2. Generating initial codes**

This stage involves using coding to organize the material and condensing it into more manageable, meaningful units (Bornmann 2020: 84). The data for this study was imported using NVivo software. Every initial response was coded using different colors according to the research questions.

### **5. 1. 3 Generating initial themes**

During this phase, broader themes began to emerge; thus, an initial identification of themes was conducted. Themes are defined as significant patterns within the data that relate to the research questions (Maguire & Delahunt 2017: 6). In this phase, data

similar to the groupings established in phase two was identified, which led to the generation of initial themes.

#### **5. 1. 4 Review themes**

The concepts developed in phase three are examined and improved upon in this stage. Themes ought to be separate from one another and make sense. To improve the quality of themes, researchers should think about whether the themes make sense, are backed up by the data, and if the data contains any overarching themes or sub-themes (Maguire & Delahunt 2017). At this point, the researcher used highlights to find themes that were present throughout the full dataset. This study employed coding scripts to hone the themes.

#### **5. 1. 5 Defining and naming themes**

The objective of this stage is to "identify the essence of what each theme is about" (Braun & Clarke 2006: 98). Gaining knowledge of each theme's content and importance—as well as any possible sub-themes and their connections to the main theme—is the major goal. Themes in this study were named based on emergent patterns found in the data, following a thorough investigation.

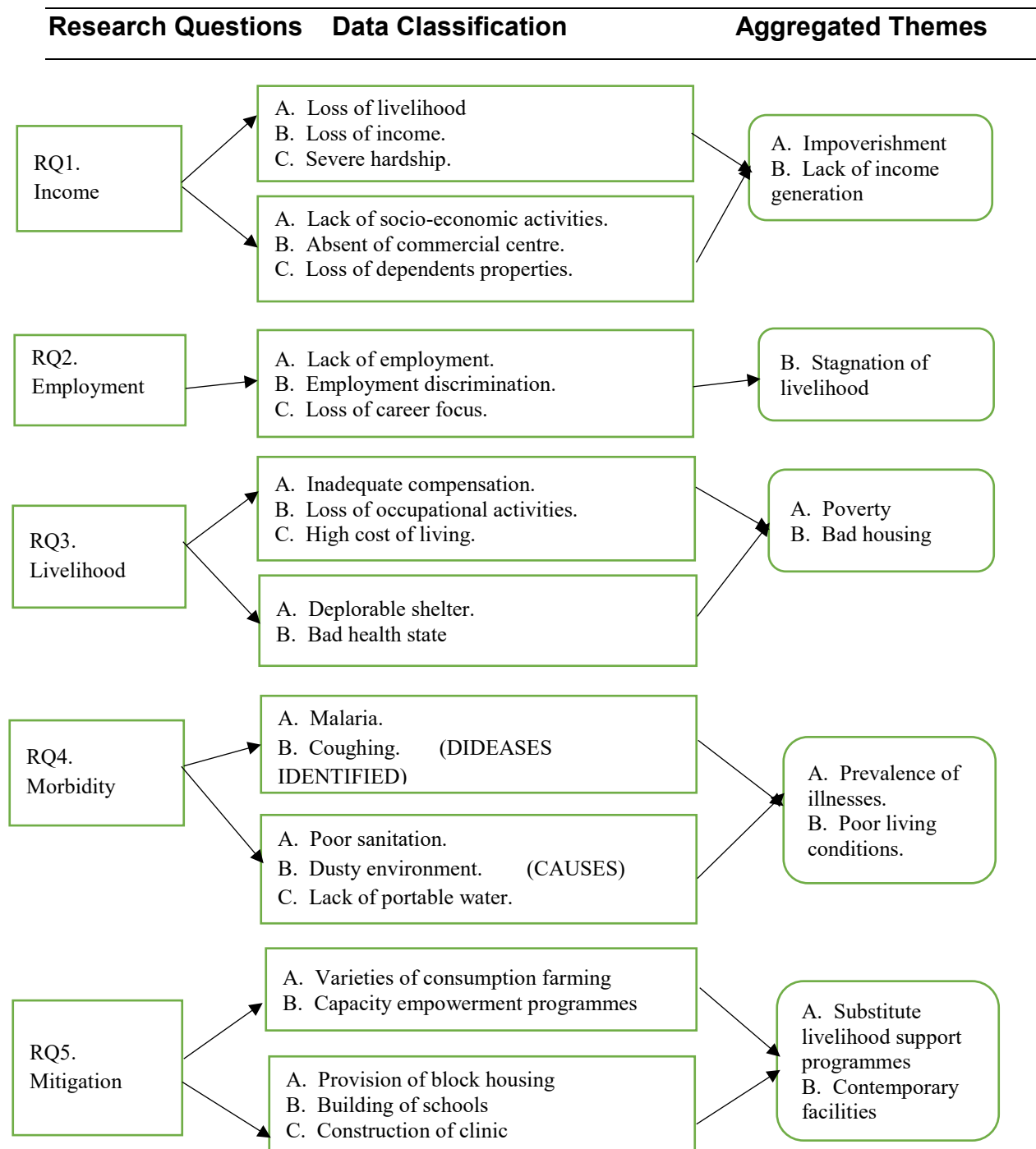
#### **5. 1. 6 Writing the report**

According to Braun and Clarke (2006), the last stage is analyzing the data once the themes have been examined, concluded and ready for the creation of the final report, which usually appears as a dissertation or journal article. In this study, the researcher examined the themes, exported them from the NVivo programme, and then assembled the study's conclusions into a report. The research interview guide contains 20 items. The findings were aligned with the research objectives and presented qualitatively. Figure 5. 1 below represents the outcome of the findings, measuring several themes, namely,

- Levels of income change
- Available employment opportunities

- Livelihood status
- Morbidity issues and
- Mitigation factors

### 5. 1. 7 Outcome of data



**Figure 5. 1: Data results**

Source: Generated by the researcher

## **5. 2 Summary of findings**

The study's conclusions for the five examined research issues are presented in this section. The primary goal of the study was to examining the implications of relocating three communities in Ghana's Western Region. In accordance with the study's requirements, responses were sought for the five research questions pertaining to livelihood, income, employment, morbidity and mitigation. Three primary methods were used to analyze the data collected from the field include focus group discussions (*FDGs*), institutional-level interviews (*ILs*) and in-depth interviews (*IDIs*). First, images representing the voices and facial expressions of participants (respondents) were categorized and coded according to shared characteristics. Second, further classification was applied to the example codes. The categories were then combined and streamlined into aggregated themes, which resulted in the primary findings for discussion.

As can be seen in Figure 5. 1 above, the study's results have been arranged according to the research questions. The presentation of the findings focused on the income levels and job status of the residents of the three communities affected by mining activity and resettled in the following sections. The other sections highlight findings concerning the livelihoods of the settlers, issues relating to morbidity and mitigations implemented by authorities to help the residents overcome challenges and recover from resettlement-related issues. The final part looked at the focus group discussions in line with the objectives outlined above to draw up the similarities and differences in the findings uncovered.

### **5. 3 OBJECTIVE 1: How have the income levels of the people in the resettled communities been affected?**

The goal was analyzed qualitatively to see how the income levels of residents of the western area of Ghana's resettlement villages have been impacted. This was important in determining whether their income has decreased or appreciated in their newly settled communities, as income levels will go a long way in determining how they can take

care of their families. To answer Objective 1, participants had to describe their income levels in their previous settlement and in their current abode. Thus, data relating to the income levels of the resettled residents in the three communities was analyzed. As presented in Figure 5. 1 above, the initial illustrative codes were classified into six categories: loss of livelihood, loss of income, severe hardship, lack of socio-economic activities, absence of commercial centres in some communities, and loss of dependent properties. Furthermore, the categories were aggregated into two main themes: impoverishment and lack of income generation. These are explained in the subsequent sections below.

### 5. 3. 1 Impoverishment

Participants from the three resettled communities shared thick perspectives underlying how the resettlement had inflicted untoward hardships on residents and impoverished the entire community at large. In particular, they explained various elements that capped their levels of impoverishment, such as forfeiture of livelihood, loss of income, and severe hardship. Most of them were not battling with severe hardships because they had various arrays of occupational opportunities that enabled them to generate income. **When a question was asked on where you were obtaining your income from prior to the resettlement?**

**Participants intimated that.**

*"I was farming cocoa and other cash crops at the old site, from which I gained a lot of money. Now I have lost everything, and nothing has come to me since the coming of the mining company. Fishing activities have come to a halt as the swamp is now being used as a tailings dam" (IDI: Nkroful).*

Similarly, a different participant echoed this assertion by stating:

*"The resettlement has brought a lot of hardships to us because before I could pay my children's school fees readily, unlike today, where I have to struggle to make ends meet. It is really difficult to survive here because we have to go to the old town at a cost before we can purchase basic food items for our homes" (IDI: Teleku-Bokazo).*

The people who had to move made their living from farming and finishing. The bulk of the participants primarily made their living from fishing, according to the data analysis. One person noted,

*“I was also doing some fishing in the marshy areas of our old community, which gave me a lot of money, but now there is no living creature in it due to contamination by cyanide” (IDI: Salman).*

Similarly, another interviewee in Nkroful had this to say:

*“I lost my big coconut plantation to the operations of the mine. I am now relying on my subsistence farming, which was not touched, to feed my family” (IDI: Nkroful).*

Contrary to the challenges faced by some of the people in the resettled communities, others also saw the coming of the mining companies as having improved their income-generating activities. To further explain this, **a question on how the coming in of the mines has improved your income status was asked.**

Participant had this to say,

*“I was selling provisions in my own house before the coming in of the mines. Now my sales have gone up due to an increase in the number of visitors searching for jobs in the mine” (IDI: Teleku-Bokazo).*

Focus group discussions were investigated using the same interview questions as the in-depth interviews mentioned above. The focus group discussions conducted in the three resettled communities (Salman, Nkroful, and Teleku-Bokazo) further affirmed from the in-depth interviews that they obtained their income from farming or farming-related activities. The people in the three communities affirmed that they had food crops to feed their families and cash crops, where most of their income came from. A few of the women who participated in the research also stated that they made money through trading, such as selling fish and foodstuffs and managing provision stores to serve the community members. Some further disclosed that their primary source of revenue was

from tapping palm wine, which allowed them to support their community and the neighbouring communities on a regular basis.

Participants in the focus groups said throughout the discussions that,

*“As women, we were doing petty trading to get money due to the crowded nature of the old town, but now we are widely dispersed, which does not promote our trading activities” (FGD: Salman).*

*“Our main source of income was from our cocoa farms, which have now been destroyed by the company” (FGD: Nkroful).*

*“I have been selling farm produce from our farm or sometimes purchasing it from other farmers to sell to community members” (FGD: Teleku-Bokazo).*

*“We have completely lost our sources of regular income from our farms, fish stock in the surrounding lagoons, and access to palm trees to be tapped as palm wine for sale to our people and the nearby communities around us”(FGD: Salman).*

In conclusion, the focus group and in-depth interviews both demonstrated that the loss of the people's primary source of income is the reason they are currently in a state of destitution. The opinions of the participants made it evident that they had lost their farms, fishing spots, small-scale trading opportunities, and other sources that they believed to be their primary sources of income.

### **5. 3. 2 Lack of income generation opportunities**

Lack of chances for generating revenue for the residents of the resettled settlements is one of the main factors contributing to destitution. Opportunities to generate income are morally justifiable within the framework of ethical values due to its instrumental role in fostering individual responsibility and ensuring proper upkeep. The absence of income-generation avenues not only impoverishes people but also becomes a problem

that affects a greater number of stakeholders. The absence of income-generating activities is the second theme that surfaced from the data in relation to the first study question. The perspectives of the participants indicated that their inability to generate income at the new site is explained by a scarcity of socio-economic activities, the absence of a commercial centre at Teleku-Bokazo, Salman, and the loss of dependents' properties. Evidence suggests that, unlike the old site, the resettled communities offer no socio-economic opportunities for residents to take advantage of. Additionally, residents' challenges at the new site relate not only to the absence of socio-economic activities and commercial centres but also to the loss of dependent properties such as farmlands, palm plantations, and cocoa farms. The focus discussions and the in-depth interviews both revealed something.

A participant remarked as follows:

*"I was doing petty trading in the old town and gaining enough money due to the crowded nature of the market. Now that there is no market centre in the new town, women who sell goods have lost their trading activities" (IDI: Nkroful).*

Further probing revealed that the market was still located in the old town. A participant revealed,

*"We have to always move to the old town by walking if we want to carry out any marketing activities, as we don't have a market in the new resettlement. The distance from the old to the new market made we carry a few marketing items to the market, which eventually affected our income" (IDI: Nkroful).*

With the lack of income generation activities, participants pointed out the sources from which they obtained their income, which are no longer due to mining activities.

A participant expressed a similar sentiment:

*"I can state with confidence that the Salman people's way of life was based on their land, where they engaged in activities like farming and hunting. My farm produce and fishing in the mangrove wetlands, which are now occupied by mines, were the only sources of food for my entire household" (IDI: Salman).*

Without missing words, the participants' illustration illuminated the loss of dependent properties by recalling how they lost what they solely depended on for survival and their income generation opportunities in the answer to following question;

**Q: What were the main commodities you depended upon for income before the mining activities began?**

**Respondents had these to say;**

*"... my heavily dependent cocoa farm is no more. I was relying on my farm produce and fishing in the mangrove swamp to generate money, which has now been taken over by the mines. We don't have anything now to depend on as a source of income. What I was given as compensation is now finished since it has been over 10 years now" (IDI: Teleku-Bokazo).*

The focus group talks echoed the thoughts expressed by the participants in the in-depth interviews. Participants stated that the presence of mining operations in their villages caused a lack of income-generating activities. A focus group discussion member quipped.

*"We had a large coconut farm bequeathed to us by our grandfather. This has been our main source of livelihood until the mining company came in and took over our land" (FGD: Nkroful).*

Another focus group discussion participant from Teleku-Bokazo also intimated,

*"I was doing a palm wine taping business from the raffia trees found in the mangrove swamp to supply the people of the town with money. Now the place is being used as a tailings dam, and thus forbidding us from getting access to the place" (FGD: Teleku-Bokazo).*

Similarly, another focus group discussion participant from the Salman community reiterated that:

*“In our house, the main income-generating source was from our rubber trees. Now all have been pulled down due to the mining activities” (FGD: Salman)*

The results of the focus group discussion and in-depth interviews showed that, prior to the arrival of the mining corporations, the residents of the three mining settlements had a reliable source of revenue-generating activities. They were generating their income from petty trading of farm produce, fishing and hunting. Others also mentioned their cocoa, rubber, and coconut farms, which clearly showed the participants were depending on their lands for survival before the mining activities commenced. However, with the establishment of these mines, their sources of income generation have diminished.

### **5. 3. 3 Current and past income**

In response to goal one, which inquired about the changes in participants' income levels, a significant number of participants in the focus groups and in-depth talks confirmed that their relocation and resettlement had a negative impact on their income levels. They explained that the regular nature with which they were earning their income from their fishing, farming, and marketing activities has eroded, and currently they earn very little or nothing at all as far as incomes are concerned. During the in-depth interviews in Nkroful, the question below was asked to solicit the views of the participants.

**Q: How do you compare your current income to that of the past?**

**A participant from the in-depth interview had this to say;**

*“What I used to have in terms of income was enough for me to take care of my family, but now, I am finding it difficult to cope with the reduction in income that I am experiencing” (IDI: Nkroful).*

*Similarly, another in-depth interview participant from the Salman community observed, “My past income sources were stable and good for me. But currently, my income sources are not as stable as what I used to have, and they have also reduced drastically” (IDI: Salman)*

*Despite these two in-depth interview participants indicating a worsening income level, another in-depth interview participant from Teleku-Bokazo shared a contrary view. To him, his income has been rather appreciated. His assertion is captured below:*

*“As for me, my income has gone up instead. This is because more people have come to the community because of the mines, and it has increased my sales in my provision store” (IDI: Teleku-Bokazo).*

The focus group participants' opinions were identical to those of the in-depth interview participants when the same question was asked of them. They described the challenges they were facing as a result of the significant drop in their revenue sources following the resettlement. One individual said the following:

*“We cannot give you off-hand what we were earning at the end of the year, but we can confidently say things were far better in terms of income at the old town than currently at the new town” (FGD: Salman).*

Another focus group discussion participant was quick to say,

*“Our income stream in the old town was much better than in the new town. We don't have anything now to rely on as our source of income” (FGD: Nkroful).*

Correspondingly, another participant in the FGD in Teleku-Bokazo reiterated,

*“We can't estimate what we were receiving when staying in the old town, but we can say things were better as compared with today” (FGD: Teleku-Bokazo).*

*In the same FGD, another participant remarked,*

*“I was able to pay my children's school fees more readily than today, where I have to struggle for us to make ends meet” (FGD: Teleku-Bokazo).*

Despite the aforementioned idea, very few people who had the chance to work for the mining corporations reported seeing an increase in their pay. Other participants in the focus groups expressed the following opinions, one of which was:

*“We have the opportunity to work with the mine as a cleaner, a security man, a carpenter, and a land reclamation worker. Our income now is far better than what we used to have before the coming in of the mining activities” (FGD: Salman).*

*Another participant remarked,*

*“I have the opportunity to work with the mines, and what I am receiving today is far better than what I used to get from my farms. The important thing is that it is constant, as I receive it at the end of every month” (FGD: Teleku-Bokazo)*

As can be seen from the above results, the opinions expressed by the participants in the focused groups and in-depth interviews revealed conflicting results; some were making significantly more money than they previously did, while others believed that the arrival of the mines and the chance to work with them would increase the local residents' income significantly. Thus, while some participants explained that though they were no longer getting money from their farms and the compensation received from their destroyed farms could not keep them up to date, others saw the mines as a blessing. These findings attest to what Owen (2018: 1) said: “displacement and resettlement especially tend to deprive the majority of people of their daily sources of income, while a few may benefit”. The results validate the study carried out by Twerefoo (2021: 823), which found that few participants reported a significant improvement in their income levels following resettlement. The researcher clarified that their career opportunities in the mine were the reason for their development. Our study suggested that a higher proportion of people experienced negative income effects as a result of the resettlement activities (Twerefoo 2021), which our finding appears to confirm. Due to project-related land acquisition or land usage, economic displacement is defined as the loss of assets or access to assets, which results in the loss of income streams or other means of subsistence (Owen 2018: 1).

In general, it was discovered that the communities' mining operations had resulted in a decline in the living standards of the locals by robbing them of their trading and fishing revenue streams. A comparative analysis of household financial conditions between

the past and present revealed a notable deterioration in farmers' financial circumstances as a result of their land being appropriated for mining activities. This finding also supports the notion that disruptions to traditional sources of income in their previous residences have negatively impacted living conditions (Collado, 2020: 56).

#### **5. 4 OBJECTIVE 2: The employment opportunities available as a result of the resettlement**

In fulfilment of research question two, field data on employment concerns for citizens in the three resettled communities was analyzed. A comprehensive examination of several probing questions about the employment opportunities available to residents of the new settlements. Three categories—employment discrimination, unemployment, and loss of career focus—were identified based on Figure 5. 1 above in the initial findings of the data. The developed categories were combined into one overarching theme, "stagnation of livelihood", which is presented in the section below.

##### **5. 4. 1 Stagnation of livelihood due to unemployment**

One of the key topics that came out of the field in relation to the second study question was stagnation of livelihood. Evidence from the data indicates that residents' livelihoods in the newly settled communities' have stagnated due to issues relating to unemployment at the new site, though few have had the opportunity to be employed. In particular, it shows that unlike the old site, where sources of revenue opportunities abound, the resettled communities offer few employment avenues for people to take advantage of. Participants in the in-depth interviews lamented when the question below was put before them;

**Q: What employment opportunities are available to you after the resettlement?**

*"... Currently, there are no jobs in the new town apart from the mines. Moving into this community has rendered me unemployed because there are no other*

*employment opportunities available for us. Every attempt to be employed by the mining company has yielded no results” (IDI: Nkroful).*

On the other hand, another household interviewed had a contrary view to the finding at Nkroful and had this to say:

*“Some people from the community are taken on board to work with the mines. Those who have acquired some skills needed by the company are given employment opportunities” (IDI: Teleku-Bokazo).*

Another participant asserted that, for one to be employed, he or she needs to have some skills. He elaborates on his view below:

*“Most of us lack the skill to work in mine. Surface mining requires some level of skills like excavator operators” (IDI: Salman).*

Closely related to the findings above on unemployment resulting from a lack of skills, the focus group discussions revealed similar sentiments. The focus group participants acknowledged the existence of employment opportunities, yet they prioritized the acquisition of skills to secure these opportunities. While mining may create employment opportunities for some individuals, the transition towards less labour-intensive methods and the demand for more skilled labour pose challenges for industries to argue that they provide employment opportunities for unskilled local labourers (Lassey 2000). During the discussions, the following sentiments were expressed: One FGD participant intimated,

*”The mining companies do not employ us (the indigenes) for the reason that we do not have the skills needed for their operations” (FGD: Teleku-Bokozo).*

The FGD participants at the Salman discussions also expressed similar sentiments, as captured below:

*“The company usually employs people who are welders, electricians, carpenters, and, more importantly, those who have worked in the mining*

*company before and have acquired some level of experience from their previous engagement” (FGD: Salman).*

Several of the focus group participants mentioned and acknowledged the effort they made to find work. The participants had this to say:

*“We have written several applications for employment, but all to no avail. Even skilled labourers among us are not employed. Excuses like: We don’t have the skill; is neither here nor there, as we believe there are so many things we can do that require no special training” (FGD: Nkroful).*

The findings in the focus group discussions above further buttress or reinforce the findings in the in-depth interviews on why there is stagnation in the livelihoods of the people. The literature by Drechsel *et al.* (2017: 10) and Wilson (2019: 72) confirms this. This lack of skills deprives people of the opportunity to work in the mines. This is due to the fact that a few participants mentioned that the company has trouble hiring them since they do not have the necessary abilities for long-term work in the mining sector. These have caused the livelihoods of many who resettled to stagnate.

Subsequent interviews with an institutional representative in charge of mining indicated that although employment possibilities are provided to the impacted populations, they are not able to take advantage of them because of age and skill gaps. The institutional-level interview participants had these to say when the question below was asked;

**Q: How do the resettled communities benefit from the employment opportunities?**

*“We do offer job opportunities to the people, but very few of the community members have the quality to take advantage of it” (IL2).*

*Another institutional interview participant made the following observation:*

*“Our inability to get people with the required skills from the resettled communities, makes us look elsewhere in our recruitment drive” (IL1).*

The results presented are consistent with the research of Drechsel *et al.* (2019: 17), which shows that highly technical abilities are largely needed for mining, and these skills are usually possessed by those with formal education. As a result, few residents of the nearby villages have the necessary degree of education (Drechsel and Groneweg 2017: 2). Wilson adds more credence to this idea by claiming that representatives of the industry frequently tell people that they do not have the abilities required for long-term employment in the mining corporation (Wilson, 2019: 72). Consequently, despite the aim of addressing unemployment and the risk of impoverishment through reemployment, this goal remains unattainable for the resettled communities.

Additionally, according to the participants, limited job openings are sometimes given to non-indigenes, an indication of employment discrimination. An in-depth interview participant explained:

*“Most of the actual work in the mines goes to the non-indigenes who have the requisite skills to work in the mines at the expense of the community members who lack these skills” (IDI Nkroful).*

It was also noted that there is sometimes a window of opportunity for the chiefs and opinion leaders to suggest certain members of the community for jobs with the mining firms. Using this method, in-depth interview participants disclosed the challenging procedure they must undergo prior to being granted this chance. The in-depth interview participants were asked the question below;

**Q: How easy is it to gain employment opportunity into the mine?**

**Here participants observed that;**

*“Few of the residents employed at the mining companies were recruited through the chiefs. Consequently, there is no prospect of employment for any individual who does not declare allegiance to the chief” (IDI: Teleku-Bokazo).*

Another participant confirmed the earlier striking illustration to the effect that the mining company prefers employing non-indigenous people as compared to the indigenes. He thus observes:

*“There was not readily available employment for us. One had to struggle sometimes with a chief before he could get the chance to work in the mines. The mines prefer to offer employment to people who don’t come from the community and are ready to pay money before” (IDI: Salman).*

The aforementioned results were also frequently emphasized in the focus group talks. Participants in the focus group discussion clarified that at one point, the human resource manager of the mining companies asked the opinion leaders—the chief, the assemblyman or woman, or some clan heads—to recruit a specific number of people from their respective communities to be employed. The participants explained that this opportunity was abused by the leadership as money was exchanged before one was taken on board, and that favouritism and discrimination also surfaced. With the opportunities offered to the community leaders to bring people on board for employment, the people were still grappling with the difficulties of getting employment. One participant in an Nkroful focus group session disclosed,

*“We, the indigenes, find it very difficult to get employment. Though our leaders are sometimes given a quota to bring people from the community to be employed, rather, outsiders who are ready to pay their way out are employed” (FGD: Nkroful).*

Participants in the Teleku-Bokazo community expressed a similar concern. A participant in the focus group discussion had this to say,

*“Sometimes, one has to pay some money to an elder who has been given the mandate to bring people from the community for employment. We, the indigenes, cannot pay, but the outsiders are ready to pay to secure the job” (FGD: Teleku-Bokazo).*

Furthermore, those who do not get information on the available slots for employment lagged behind. Participants affirmed,

*“Those who are closer to the chief, clan leader, or assemblyman or woman manage to get employment since the information on the quota given to the people for an engagement always passes through these leaders” (FGD: Salman).*

A lady in the *Teleku-Bokazo* community also opined that though there was a lack of employment opportunities, there was subtle gender discrimination. She averred,

*“Even our husbands are struggling to get employment in the mines, how much more are we, the women?” (FGD: Teleku-Bokazo).*

In support of this job offer from the mining companies, it was discovered that these businesses have their own hiring standards and that, on occasion, they permit community leaders (chiefs, clan chiefs, assemblymen, etc.) to help them with their hiring efforts. The interviewed community relations officers further explained and confirmed the means through which people are employed in the mines. On employment, one of the community relations officers averred,

*“We usually submit the criteria and the quality of the people we are ready to employ if they are available on notice boards in the communities” (IL1).*

Another community relations officer intimated,

*“The leaders in the communities are also allowed to bring on board people needed to work in areas that do not require technical skills to work in the mines, and the work involved in these areas is always very few” (IL2).*

The findings from the in-depth interactions and the focus group discussions revealed how difficult it was for the people to be employed due to a lack of employable skills. The people see it as discriminatory, as they are left behind while non-indigenes are offered job opportunities. This notion from the community members was debunked by the representative from the mines, who said that their recruitment drive is not

discriminatory but purely on merit. The conclusions support Wilson's findings from his study, "Mining-induced displacement and resettlement: the case of the rutile mining community in Sierra Leone", which stated that economic marginalization was common in the impacted communities and that the people's primary complaint was a lack of employment (Wilson 2019: 67). Assuming there are local hiring provisions as indicated the truth is that mining increases employment—for some. Wilson's findings indicate high unemployment rates among residents of relocated communities, such as Kanga and Madina. Consequently, efforts to address unemployment and the associated risk of impoverishment through reemployment were unsuccessful in these resettlement communities (Wilson 2018: 72). According to other research (Sturman 2015; Madebwe *et al.* 2011), most people living in resettled regions lack economic possibilities and have lost their jobs as a result of mining-related displacement.

#### **5. 4. 2 Loss of career focus**

In the same vein, the findings of the field research indicate how individuals have lost their career focus because of a lack of employment and workplace discrimination. In this sense, some of them relocated to cities in pursuit of better work prospects, while others, for lack of training, turned to illegal mining, or galamsey, as it is called in Ghanaian. The in-depth interview participants reiterate these when a question was asked that;

**Q: Do you have any employment apart from working in the mines?**

**The responses were that;**

*“Most of us are confused and have lost hope for the future. Some of the youths have travelled to urban areas because they find it difficult to get employment in their backyards. Currently, we have no alternative but to sneak into the mining concession to do illegal mining” (IDI: Nkroful).*

Similar sentiments were expressed in the other communities.

*“Our youth are leaving the community for urban areas in search of jobs to take care of themselves” (IDI: Teleku-Bokazo).*

*Another in-depth interview participant from the Salman community echoed a similar perspective.*

*“The pressure and the difficulties involved before one gets employment in the mine make most of our youth abandon the community and move to other areas in search of jobs” (IDI: Salman).*

The tendency to shift career focus due to the lack of employment in the mines was confirmed during the focus group deliberations. The teaming youth in the community have left for the urban centres to search for jobs as they can no longer continue to remain on their redundancy status. An FGD participant had this to say:

*“Apart from the mine, there is no readily available employment for the teaming youth of the area. Most of the youth have travelled out of the area as they find it very difficult to benefit from the quota system put before our leaders to get employment in their backyard” (FGD: Nkroful).*

Similarly, another FGD participant from Teleku-Bokazo reinforced this sentiment by remarking,

*“The youth gave out their houses for rent to the visiting mining workers to travel to the urban centres in search of jobs” (FGD: Teleku-Bokazo).*

Those who had the opportunity to be employed in the mines see themselves as fortunate. This was expressed by a participant in an FGD as follows:

*“I am fortunate to be employed by the company. Apart from the mines, there are no other employment opportunities here. The people in the community are leaving as they find it difficult to be employed by the company that has taken over their land” (FGD: Salman)*

In summary, a lack of career focus has come about due to the situation of unemployment. It has made some of the youth engage themselves in 'galamsey' activities and others forced to travel out of the communities.

### **5. 5 OBJECTIVE 3: To discover participants' livelihood status before and after the resettlement**

Skills, resources and activities necessary to support oneself constitute a livelihood (Scoones 1998, referenced in Owen 2018: ii). The goal of this study was to ascertain the impacted people's previous means of subsistence, both historically and presently. Accordingly, a livelihood system is the entirety of the various endeavours that a household or community engages in in order to make a living (Owen 2018). Participants were specifically asked to describe their sources of income both before and after the resettlement issue surfaced. In line with the purpose and demands of the thesis, it is important to state that participants did not share perspectives relating to income and employment. The study further assessed the livelihood of the participants before and after the resettlement in line with research question 3.

#### **5. 5. 1 Livelihoods before resettlement**

The residents of the three resettled towns were found to be leading decent lives, partially supported by their personal property, according to in-depth focus group discussions and interviews. The findings revealed that before the operations of the mine, the people had their farms, regular income sources, collective community resources, and lands. Participants described the nature of the lives prior to the arrival of the mines. They were living a comfortable lifestyle before the coming of the mines. Household participants during the in-depth interview had to answer the question below;

**Q: What was the nature of your livelihood before the resettlement?**

**The responses include the following,**

*“We used to have our family land, which we [could] lease out to other land developers to make cocoa farms for sharing” (IDI: Nkroful).*

Others also expressed the abundance of food in the old town, as captured in the voice below

*“We have our farms to cultivate both cash and food crops to take care of our families. We were not under any pressure as far as food security was concerned” (IDI: Teleku-Bokazo).*

A few others mentioned the impediment that was put in place to prevent them from accessing the community's joint resources when the question was asked **whether they have you lost any inheritance due to the resettlement?**

**The voices below embodied their responses:**

*“Collective resources like the availability of water and forest resources were not a problem for us at all. We have access to water throughout the year; the forest was there to allow the members of the community to access it at any time, making life very comfortable for the people in the community. There is now a drastic downward change in accessing all these facilities” (IDI: Salman).*

The results of the focused group discussions (FGDs) also showed that farming was a significant source of income for the community prior to the arrival of the mine. The people were growing both cash and food crops. An FGD participant from Salman had this to say,

*“Our large cocoa and coconut tree farms were bequeathed to us through our ancestors, and they have become the backbone to sustain the livelihood of the members of the family until the coming of the mining operations” (FGD: Salman).*

Another FGD participant from Teleku-Bokazo opined,

*“Farm produce used to be common here, as a lot of us were involved in farming activities. Now, it has to be supplemented by our neighbours in the nearby communities” (FGD: Teleku-Bokazo).*

Similarly, another FGD participant from Nkroful supported this assertion by saying,

*“We used to have our farms full of crops such as cassava, cocoyam, plantains, and pepper to take care of our families” (FGD: Nkroful).*

The focus group discussion revealed more details about the residents' way of life prior to the start of mining operations in these towns, including the women engaged in serious petty trading. The women sold items such as clothing, provisions such as rice, and food crop items like cassava, plantains, cocoyam, pepper and fish. to supplement the incomes of their families. An FGD participant had this to say:

*“Trading activities were good before the coming in of the mines. We have our constant farm produce to sell for cash, and also selling provisions to the people in the old community was lucrative due to the size of the population in the old town, and it helped us supplement the family income” (FGD: Salman).*

A similar sentiment was expressed by another FGD participant from Teleku-Bokazo.

*“We used to bring in second-hand clothing to sell to the people in our community. Now people have their sources of income cut off, and trading business does not flow as well as we would expect” (FGD: Teleku-Bokazo).*

Another FGD participant from Nkroful also intimated,

*“Trading farm produce with the other non-affected communities was very lucrative work for us, but now we have been cut off from the old town where we had more people to promote our businesses” (FGD: Nkroful).*

On the issue of having access to collective resources such as water in the communities, the findings confirmed those of the in-depth interviews. Before the mining activities, the people had a clean and constant supply of water in their various communities. There was at least one source of water around which the old communities settled. This ensured a constant supply of water to the communities, and this was seen as public property available to everyone in the community. The question put before the people to solicit answers was that,

**Q: Has the community really benefited from the collective goods in the resettlement area?**

A participant in the FG discussions from Nkroful had this to say:

*“We used to have easy access to water from the stream where our ancestors settled in the old town, but now we have to queue for borehole water” (FGD: Nkroful).*

About the same source of water supply, an FGD participant from Teleku-Bokazo opined,

*“The taste of water from the boreholes and wells is quite different from what we used to fetch from our streams, and most of us don’t want to use water from the boreholes and wells” (FGD: Teleku-Bokazo).*

Likewise, during an FGD in Salman, a participant observed a similar sentiment about the source of the water supply.

*“We used to have clean water sources for drinking, from the nearby streams, which we rely on for a constant supply of water even during the dry seasons. The sources of these streams are highly protected by the traditional authorities to ensure all-year-round supply” (FGD: Salman).*

In conclusion, comparable results were obtained from the focus groups and the in-depth interviews. These disclosures focused on how the communities were able to

sustain their families through farming, having an abundance of food, and having access to communal resources like water and thriving trade. Thus, the findings revealed the people had access to the aforementioned assets to turn their livelihood around before the mining operations. Before the arrival of the mines, the participants lived a very comfortable life with strong community bonds, allowing them to rely on each other for assistance when needed.

## **5. 5. 2 Livelihoods after Resettlement**

The data analysis and the illustrations provided by the participants established five categories: insufficient pay, cessation of work-related activities, excessive living expenses, substandard housing, and poor health. These classifications were further aggregated into two main themes: *poverty* and *poor housing*, forming the main findings presented as follows:

### *5. 5. 2. 1 Poverty*

Poverty was one of the critical confrontations bedeviling the inhabitants after they had been resettled. In-depth interviews and focused groups centred on uncovering the livelihood state of the people before and after they were moved to the new site were administered. This measure was to ascertain the actual state of the availability of livelihood opportunities, which enhances their living conditions in the new communities. The poverty sentiments were expressed in the areas of; loss of occupational activities, and inadequate compensation, as explained below:

#### *5. 5. 2. 1. 1 Loss of occupational activities*

The vast majority of participants in the focus groups and interviews revealed that they felt impoverished as a result of losing their jobs, which made it difficult for them to deal with life's realities. An interviewee from the Salman community narrates that:

*"I can say I have been completely denied my livelihood. I cannot think of anything worth leaving for my children apart from the houses given to us. My source of income was my palm wine business from the palm and raffia trees*

*found in the mangrove. I have lost all my occupational activities with the coming in of the mining operations, which is having a telling effect as far as my daily income is concerned” (IDI: Salman).*

Participants in the other two communities also voiced similar ideas. For example, in the Nkroful community, one of the in-depth interview participants stated,

*“My livelihood has been taken away from me. The things I used to rely on for a living are all gone” (IDI: Nkroful).*

Another participant from the Teleku-Bokazo community did not mince words when he echoed a similar perspective. His expression is indicated below:

*“We have to start over from scratch again, as what we have worked hard to obtain over the years is now gone due to the mining activities in our area” (IDI: Teleku-Bokazo)*

The views of the focused group discussions on the loss of occupational activities were that their deprivation of the land, which serves as the main possession of the people upon which all other things are derived to sustain life, undoubtedly served as the loss of their occupational activities. The participants in the findings expressed their loss of livelihood in terms of land in the following ways:. One participant from Teleku-Bokazo had this to say.

*“Our farms have been taken away from us. We no longer have land for farming. This has brought great hardship to us and our family” (FGD: Teleku-Bokazo).*

Similarly, another FGD participant from the Nkroful community remarked,

*“What we are facing now is horrible as compared to what we used to before the coming in of the mines. We don’t have lands to grow our cash crops again” (FGD: Nkroful).*

The voice of the participants from the Salman community on this issue was not left out, perspectives of the community were similar to those of the above two communities. A participant echoed,

*“Our entire livelihood was hovering around our farms, which we started during our youthful days. Proceeds from the farm were not all that satisfactory, but now things are worse than ever” (FGD: Salman)*

In conclusion, all of the participants in the concentrated group discussions and in-depth interviews agreed that the start of mining operations resulted in a loss of occupational activity. They talked about losing their land, their revenue sources, and other things that they depend on for their livelihood.

#### *5. 5. 2. 1. 2 Inadequate compensations*

In the same manner, some of the participants attributed their levels of poverty to inadequate compensation received from the mining companies. Given the quantum of livelihood or occupational avenues they have lost in the old town, the money given to them in place of that was woefully insufficient. To them, the combined effect of the absence of occupational activities and the scarcity of compensation rendered them severe hardships. With regards to the limited compensation received, an in-depth interview participant from Teleku-Bokazo and the other communities responded to the question below;

**Q: Have you received any compensation from the company on your lost land?**

**The responses were that,**

*“The compensations received from the mining companies are finished, and the people live in extreme poverty. My heavily dependent cocoa farm is no more; I received the compensation 10 years ago, and it is now finished” (IDI: Teleku-Bokazo).*

Those who affirmed receiving some level of compensation from the companies complained of a lack of transparency in the processes used to compensate them for their lost properties. Most of the people felt cheated and expressed their sentiments in varied ways. During the in-depth conversations with Nkroful, one of the participants said this:

*“We have **been** compensated alright for the lost property, but to us, the compensation given to us was not enough to take us through the number of years ahead of us” (IDI: **Nkroful**).*

Participants reiterated that they did not get good representation during the negotiations, hence receiving below what they expected. A participant had this to say:

*“Our chief died during the negotiations, and it affected us because we did not get a good deal of compensation from the company. The company paid little money, Ghc 1 200 equivalent 100 USD, for our cash crops that we have relied on all these years to make a living” (IDI: **Salman**).*

Others also accepted the fact that they did not put their compensated money into proper investments, and as the years went by, life became difficult for them. A participant’s voice was captured, saying,

*“I was compensated alright, but because I could not invest my money well, the economic conditions have eroded all the value of my money, and I do not have anything to leave on” (IDI: **Nkroful**)*

The focus discussions further validated the findings of the in-depth interviews, which showed that every participant who lost their land, farm, or other property, was compensated, but the process used to compensate them was not made clear to them. One of the voices captured during the focus group discussion is indicated below:

*“We were compensated alright, but the details were not given to us as we lost our chief, who was leading us during the negotiations” (FGD: **Salman**).*

*Another focus group discussion participant in a different community (Teleku-Bokazo) had this to say:*

*“To us, there was no transparency in the payment of compensation. The calculations were done by the experts who were brought in by the District Assembly and whom we did not have any extensive interactions with” (FGD: **Teleku-Bokazo**).*

Another focus group discussion participant from Nkroful opined,

*“What we received as compensation does not match the properties that we had lost due to the mining operations. We are deeply not satisfied” (FGD: Nkroful).*

An in-depth interview at the institutional level revealed that members of the community affected by the mining operations were duly compensated to make up their lost incomes following the policies of the Ghanaian government and the internationally laid-down procedures applicable in areas where mining operations are going on. The officers interviewed had the question below to answer.

**Q: How was the compensation procedures carried out in the affected communities?**

**The responses were captured as follows,**

*“We adequately evaluated all the farms that were destroyed due to the operation of the mines in all the affected communities, and appropriate compensations were paid to the affected people in the communities” (IL2).*

*“Evaluation teams were brought to all the communities where our operations are taking place to do proper evaluation on both lands and buildings, and adequate compensations in terms of cash and food crops planted were provided to the affected people in the communities” (IL1)*

These revelations by the IL indicated that at least the affected communities were not left alone but were compensated. Thus, findings from the institutional level were dialectical to what was being claimed by the members of the communities. The mines' community relations officers disclosed that all legal procedures were followed while compensating the impacted residents. One of the community relations officers captured this explanation.

*“No affected member was shortchanged in terms of the payment of compensation. Everything was captured on paper, and it was done following the laid-down rules and regulations” (IL1)*

Similarly, the representative from the Evaluation Board interviewed also confirmed to the community relations officer that proper evaluation exercises were conducted before the deserving people were paid their compensation. The representative from the Evaluations Board asserted,

*“Compensations were paid to the people after a proper evaluation of what they deserved was done by our outfit. We have not shortchanged anybody in any way” (IL2).*

In summary, while the results of the focused group discussions and in-depth interviews indicated that the communities' affected persons (APs) received compensation for their lost belongings, the amounts were considered insufficient. The affected people (APs) also complained of the lack of transparency in the processes leading to compensation. However, the institutional level's (IL) findings contradicted this, suggesting that all APs were adequately compensated through the transparent application of due processes.

#### *5. 5. 2. 2 Poor housing*

In addition to poverty, poor housing emerged as the second subject that elucidated participants' perspectives on livelihood. This point of view lends credence to the overall opinion of the participants, who stated that, despite the block housing that was assigned to them at the new location, they still preferred to live in their shelters in the old town. The poor housing was explained in terms of deplorable shelter, as expounded below.

##### *5. 5. 2. 2. 1 Deplorable shelter*

Participants continued to describe the misery of their current homes, complete with leaky roofing sheets, as more explanations were given in that direction. Most of them have been forced to remain up at night during the rainy season due to the terrible leaky roofing sheets. Participants claimed that the deplorable shelter contributed to their poor health since they were unable to afford to replace their worn-out iron sheets because

of a lack of employment. In this regard, the in-depth interview participants were asked the question below,

**Q: Have you benefited at all from the resettlement done by the mining companies?**

**Participants stated that:**

*“Despite being provided with blockhouses at the new site, all the roofing has deteriorated. The roofing sheets used for the newly constructed houses were of poor quality and in bad condition. Anytime it rains, we stay awake due to the leaking housing” (IDI: Salman).*

Another in-depth interview participant from the Teleku-Bokazo community also confirmed this sentiment about their deteriorating roofing sheets, which were causing a lot of problems for them, especially during the rainy seasons. A captured voice expressed this sentiment.

*“Another thing that worries us is the deterioration of all our roofing sheets. Our houses leak profusely anytime it rains. Just after occupying the houses for almost 10 years, all our roofing is seriously leaking” (IDI: Teleku-Bokazo)*

The results of the concentrated focus groups confirmed the insights gleaned from the one-on-one, in-depth interviews regarding the appalling shelters. The following opinions were recorded throughout the three communities' focus groups. One person from the Nkroful community hinted,

*“We cherish the block houses provided to replace our mud house structures, but the roofing sheets have deteriorated very fast” (FGD: Nkroful).*

A similar sentiment was expressed from the Teleku-Bokazu and Salman communities that:

*“The block housing structures are good for us, but the roofing sheets are inferior as they are now leaking” (FGD: Teleku-Bokazo).*

*“These days, we have the unpleasant situation of replacing most of our roofing sheets due to their fast deterioration as compared to the blocks” (FGD: Salman).*

Interactions with the institutional-level representative revealed that the whole resettlement structure was assigned to contractors to build, and there were no signs of the roofs leaking at the time the project was handed over to the beneficiaries. The institutional-level representative’s voice captured during the in-depth interview revealed the following:

*“We handed over good and strong accommodation structures to all our beneficiaries. However, the information reaching us shows that the roofing sheets have now deteriorated” (IL1).*

Participants in the focused groups and in-depth interviews, selected from the three communities, generally voiced the opinion that the residents’ housing conditions were not as favorable as one might assume. Every facility offered has to be replaced because it has deteriorated. After 10 years of living in these communities, the facilities have deteriorated and needed facelifts or replacements. However, the people claimed they didn’t have money to improve their deplorable shelters because most of them were not working.

### **5. 5. 3 High cost of living**

The results showed that, notwithstanding a sharp increase in the price of food staples, residents of the communities were complaining about the high cost of living. The situation stemmed from the displacement of town residents from their lands, with only a fraction resorting to food cultivation, leading to intermittent shortages for the populace. The elevated standard of living has been sustained by the increased demand and consequent high prices of food items, driven by the influx of people seeking employment opportunities in the region. This has put pressure on housing and, more especially, the sale of food. A Nkroful community member who participated in a detailed interview stated the following:

*“We don’t have much food in our community. We have to rely on other areas that were not affected by mining for our basic food supply, which involves costs” (IDI: Nkroful)*

Similarly, another in-depth interview participant from the Teleku-Bokazo community attested to the high prices of goods, saying:

*“We have lost our large farmlands. What we have been assigned to be used for farming is not large enough to produce enough food to feed the entire community and the visitors [are] now with us because of the mines. This situation has increased food prices” (IDI: Teleku-Bokazo).*

Alternatively, participants in Salman, the largest of the three communities, expressed happiness as the influx of people in the community helped them to get good prices for their farm produce. A voice captured from them revealed:

*“I am solely producing food crops after my land was taken away from me. The influx of people into the community and the miners are giving us good prices for our food crop production” (IDI: Salman)*

The lack of meaningful, long-term alternative sources of income and the uncertainty surrounding the food supply were major contributors to the high cost of living. Throughout the focus group discussions, participants were frequently overheard saying:

*“They took the land from us, and now food prices are very high in the community” (FGD: Nkroful).*

*“We can’t afford to eat three times a day due to the high prices of food in the community” (FGD: Teleku-Bokazo)*

*“I find it difficult to feed myself and my family. Things were on a silver platter compared with today’s food prices, which are on the higher side” (FGD: Salman)*

In conclusion, both the IDI and FGD participants confirmed that they were facing a high cost of living due to the loss of their primary source of livelihood, the land. Food production from parcels of land allocated to the APs was inadequate to take care of the community members, as was the influx of mining workers.

#### **5. 6 OBJECTIVE 4: Morbidity issues and their underlying causes**

The term “morbidity” describes the prevalence of a specific illness or condition in a particular population, referring to the number of people with it at any given time. (Cambridge Dictionary). Common examples of this include heart disease, respiratory disease, diabetes and obesity.

In accordance with the thesis's requirements and objectives, this research topic looked at participant perspectives on the morbidity issues that the three resettlement communities' members deal with. This study's primary goal was to critically assess and fully understand the perspectives of those questioned on health-related difficulties in the recently resettled community. The findings on the morbidity issues confronting the people of the three resettled communities revealed that they were being confronted with three main diseases, which were malaria, coughing and diarrhoea, as well as an unidentified strange disease suspected to be elephantiasis. The possible causes of these ailments were categorized. As seen in Figure 5. 1, evaluations of the various pictures led to the identification of six broad categories, which were further divided into two subcategories as the causes of the morbidity issues identified. A lack of facilities like potable water and sanitation and a dusty environment caused several morbidity-related problems, including epidemics of strange diseases, malaria infections, diarrhea, and coughing. The two sub-groupings (diseases and causes) were further examined, yielding two main themes—the prevalence of illness and poor living conditions. These categories are explained further below:

### 5. 6. 1 Prevalence of illness

The incidence of illness from participants' expressions was explained by the deplorable living conditions in the findings. According to the participants, frequent ailments such as malaria, coughs and outbreaks of unfamiliar diseases are the dominant types of morbidity issues confronting the communities after their resettlement. The findings showed that mosquitoes, which mostly carried malaria to the populations during the wet seasons, bred in the weedy surrounds, the clogged gutters, and the exposed prospecting dugouts. The in-depth interview participants from Nkroful and the other communities under studied were quizzed on the subject below,

**Q: Have you experienced any health-related issues as a result of the resettlement?**

**The following voices were captured;**

*“We are suffering from malaria since most of our gutters have now become breeding grounds for mosquitoes. The gutters are weedy with the choked outlets, especially during the rainy seasons, with issues with malaria becoming common” (IDI: Nkroful).*

In a similar vein, the participants named coughing brought on by the dusty roads as their primary illness affecting the neighbourhood. They said that because there were no asphalt roads in the new town, big trucks that travelled through it caused dense dust and polluted the environment as they moved to the mining sites. The community's residents eventually breathe in the thick dust, which causes severe coughs and also dirties their clothing. This is what a participant had to say:

*“The roads in the community are not tarred, and the dust brings pollution. This makes our people, especially children and the elderly, cough very often, and it also makes our clothing and homes dirty” (IDI: Teleku-Bokazo).*

A further examination of the data reveals that several members of the communities have a high prevalence of new diseases, for example, elephantiasis. The majority of the participants disclosed that after receiving the vaccination to cure the elephantiasis

disease, they were still concerned about the underlying causes of the illness. An in-depth interview participant disclosed,

*“There is an outbreak of elephantiasis in this community. Even though health professionals were brought in to vaccinate all the people in the community, we are all afraid because we do not understand how it came about” (IDI: Salman).*

The findings from the focus group discussions on morbidity issues identified malaria as one of the illnesses shown by the people in the resettled communities. They revealed that a higher proportion of the community's residents seek care at the clinic or hospital, primarily due to symptoms of malaria, coughing, and diarrhoea. Among some of the voices captured in the three communities during the focus group discussions are:

*“We have not experienced any strange diseases here apart from our usual diarrhoea and malaria” (FGD: Nkroful).*

*“Even though there may be some other diseases like coughing, what worries us most since we came here is malaria” (FGD: Teleku-Bokazo).*

*“With our exposure to uncovered mining pits, choked and weedy gutters, and dust in the community, we suffer from coughing and malaria the most” (FGD: Salman).*

All the household heads and opinion leaders interviewed, as well as the focused groups, confirmed the prevalence of malarial diseases as a result of leftover and uncovered dugouts by the mining companies that are close to the resettled communities. Furthermore, choked and weedy gutters serve as breeding grounds for mosquitoes, which are the main vector for the transmission of plasmodium parasites that, upon contact with humans, lead to malarial diseases.

Participants were concerned about chronic diarrhoea and headaches, which were connected to the consumption of water from the wells and boreholes. They quickly concluded that children and the elderly were especially affected. Apart from the findings

from Salman, which identified coughing and elephantiasis, where the feet of the affected person become swollen up, emerging as new diseases after the resettlement, the other two communities (Nkroful and Teleku-Bokazo) did not report any strange diseases emerging apart from malaria. The aforementioned data supports a study carried out twenty years ago in mining resettlement communities in Ghana's Wassa West District by Agbesinyale (2003: 288f), which found that malaria, respiratory (coughing) diseases, diarrhoeal diseases, skin diseases, headaches, and other illnesses are the most common ailments in the resettled communities.

### **5. 6. 2 Poor living conditions**

The participants have generally identified poor living conditions as one of the critical causes of morbidity issues in the newly resettled communities. Concerns about this effect from the data indicate that all the basic facilities, such as clean water, sanitation and toilets, which gave them respite to enhance their standard of living and to protect them from the aforementioned morbidity issues, were worn out and in a deplorable state. After 10 years of usage, the appalling state of the amenities at the new site raised obvious questions about whether the fault lies with the quality or maintenance culture. Specifically, participants mentioned a lack of potable water for consumption because their main taps that supplied the entire community had water with a yellowish colour. It is also important to indicate that issues relating to deplorable social amenities vary from one community to the next. For instance, a description of underlying poor living conditions was revealed when the communities responded to the question below;

**Q: How do you describe the overall health and environment situations of the people in the resettled communities?**

**Some of the voices captured were;**

*“There is no portable drinking water for the community. The two boreholes constructed by the mining company have some oil substances on the surface of the water when fetched and allowed to settle. The water turns yellowish after a few minutes of fetching, so we cannot use it domestically” (IDI: Salman).*

The results further corroborate the notion that their living conditions were compromised by the disruption of their regular sources of income in their pre-eviction home (Collado 2020: 56).

*“There is poor sanitation in the community because the gutters are all clogged and weedy. ... The District Assembly does not care about our development, which is why our gutters are weedy and choked” (IDI: Teleku-Bokazo).*

It was also discovered that the communities common toilets, built in muddy places, were inoperable due to flood waters after heavy rains, making the toilets difficult to use. In addition to this, the yellowish colour of the water obtained from the boreholes and poor sanitation were lamented by participants as their main difficulties. A participant explained:

*“Three newly constructed toilets for the entire community were no longer in use because they were sited in a muddy area, and when the place becomes flooded during the rainy season, it generates a very bad stench in the entire community” (IDI: Nkroful).*

Though, as part of the resettlement package, the communities were provided with toilet facilities, it became difficult to use the facilities during the rainy seasons. A participant in an in-depth interview stated the following:

*“There are no public toilet facilities on the new site. What was provided is no longer usable, resulting in rampant defecations around the community” (IDI: Salman).*

The above findings on poor living conditions, as revealed by the in-depth interview participants, were confirmed by the participants in the FGDs. Some of the voices captured during the focused group discussions on poor living conditions include the following:

*“Our environment is no longer clean; it has been polluted with dust and thick smoke from the blasting of rocks by the mining companies and this smoke and dusk [have] engulfed the atmosphere” (FGD: Nkroful)*

*“The community members usually do what pleases them as far as nature’s calls are concerned because the toilet facilities that were provided are no longer usable” (FGD: Teleku-Bokazo)*

*“We have serious environmental problems as most of our gutters in the community are choked and with toilet facilities, one cannot enter, especially during the rainy seasons” (FGD: Salman)*

Results from the institutional level affirmed that the resettled communities were initially equipped with toilet facilities, catering to those who previously had their own facilities in the former town. In addition, major ones were provided for use by the entire community. The mining company representative reported,

*“The toilet facilities were part of the packages on the resettlement structures. The people were relying on the district assembly for their maintenance, which is not forthcoming, hence the neglect of the facilities” (IL1).*

In summary, the findings from both IDI and FGDs on poor living conditions came from not having potable sources of water, unusable toilet facilities and, to some extent, environmental pollution due to dust from untarred roads and smoke from the mining areas.

#### **5. 7 OBJECTIVE 5: To assess measures put in place to mitigate the socioeconomic effects**

Data relating to research question five on mitigation measures for the three resettled communities was analyzed. In all, five categories—varieties of restricted peasant farming, capacity empowerment programmes, provision of block housing, building of schools, and construction of clinics—were established from participants’ narrations. The categories were further merged into two main themes: substitute livelihood support programmes and contemporary facilities, forming the product of the findings below.

### 5. 7. 1 Substitute livelihood-supported programmes

As part of the mitigation, a variety of supported livelihood programmes have been implemented by the authorities for the three resettled communities. According to the participants, even though such mitigation livelihood measures cannot be matched with what they have lost at the old sites, they were better than none. Some of these livelihood-supported programmes included restricted farming, where residents were allocated pieces of land for peasant farming solely for food consumption but not for commercial purposes. These were revealed when the question below was asked;

Q: What are the mitigation measures put in place to improve conditions at the resettlements?

One of the participants confessed that:

*“The company allocated some pieces of land to us, the affected members of the community, to continue with our farming activities strictly for food crop farming and not commercial farming” (IDI: Salman).*

The provision of pieces of land for food crop production for the communities was confirmed by the community relations officers in a voice captured as follows:

*“We have consciously given parcels of land to the members of the communities to be used solely for food production to reduce the pressure that lack of food can bring upon the communities” (IL1).*

Likewise, the authorities did not exclude women from the communities whose mining activities had adversely affected their livelihoods from the mitigating efforts. Women from the three tribes were reportedly brought to palm estates in order to extract palm oil, according to data evidence. What a participant in a detailed interview said.

*“Women who lost their income-generating activities to the mining activities in the old communities were introduced to the planting of palm trees to be used solely for palm oil when they matured” (IDI: Teleku-Bokazo).*

This was also confirmed by the representative of the mining company who availed himself to be interviewed, he indicated,

*“As part of our long-term sustainability plans, the company has embarked on the palm plantation project to provide jobs for the vulnerable, especially women” (IL1).*

Additionally, participants alluded to the fact that experts and facilitators were brought to the communities to train residents on various livelihood options, such as the rearing of snails, fish farming, piggery and poultry, among others. An interviewee narrates that:

*“As part of the livelihood empowerment programmes, experts were brought in to teach us how to do so many things to survive after losing our land to the mining companies. We were taught the rearing of snails, piggeries, poultry and mushrooms” (IDI: Nkroful).*

Similarly, other participants corroborated the earlier assertion on the livelihood empowerment programmes as follows:

*“We have also been introduced to some alternative livelihood programmes such as animal rearing, fish farming, snail rearing, mushroom growing, etc. to sustain members of the community who did not get a chance to work in the mines” (IDI: Salman).*

Another participant indicated that:

*“As part of the mitigation programme, the company assisted some community members to dig out fish ponds outside their operational areas and stock them with species of fingerlings like tilapia, catfish, and mudfish” (IDI: Nkroful).*

The personnel from the mining company also affirmed the above mitigation measures as captured on tape. The interview with the company’s representatives is captured below as follows:

*“We have embarked on the growing of palm trees with the women in the communities to produce palm oil. In addition to that, we have introduced the*

*rearing of animals and the construction of fish ponds, all geared towards improving the livelihood of the people in the affected communities” (IL1).*

The mitigation measures put in place by the companies as part of the substitute livelihood support programmes were also confirmed by the participants in the FGDs. Some of the voices heard during the discussions were as follows:

*“We have our jobs now as a result of the training we received. We can now make soap (both in solid and liquid forms) to sell to get income for our families” (FGD: Nkroful).*

The provisions of alternative livelihood programmes were also confirmed by the focus group discussions at Teleku-Bokazo and Salman, respectively. In Teleku-Bokazo one of the FGD participants had this to say:

*“We have been introduced to animal rearing, grass-cutter rearing, and mushroom growing in our community” (FGD: Teleku-Bokazo).*

*Similarly, one of the focus group discussion participants in Salman shared the same perspective by opining,*

*“We have been assisted by the mine to construct fish ponds in the community, and it is helping us to get some income for our households” (FGD: Salman).*

In summary, all the discussion participants (IDI, FGDs and IL1) confirmed that the companies have put in place substitute livelihood support programmes in the form of farming activities restricted to food production only, such as palm plantations for the oil to be used in soap making, rearing of animals and the construction of fish ponds. All these were meant to help the APs cope with their new status.

### **5. 7. 2 Contemporary facilities**

The mining companies' management implemented mitigating actions that extended beyond different forms of supported livelihood programmes; the resettled communities

have also witnessed a facelift in terms of modern facilities. According to the residents interviewed, the amenities at the new site were hitherto not available at the old site. Some of the modern facilities include block housing, schools, clinics, and alternative avenues to the market.

#### *5. 7. 2. 1 Block houses*

The results from the research regions demonstrated that the inhabitants valued the type of homes provided as a replacement for their pre-resettlement dwellings. They proudly showcase their block houses, confident that they are more durable than the mud houses that they used to have. For instance, participants claimed that even though most roofs leak, they have the advantage of living in buildings or houses made of blocks as opposed to their mud huts. These findings were shared by participants in all three communities. In the Teleku-Bokazu community, one in-depth interview participant had this to say:

*“Although almost all the building roofs have been leaking for ten years, our destroyed houses were replaced with block buildings. We can now boost concrete blockhouses instead of the mud houses in the old towns” (IDI: Teleku-Bokazo).*

Another in-depth interview participant in the Nkroful community expressed a similar sentiment, as captured below:

*“I have a three-bedroom block house to replace my old mud house, and I am very happy about that” (IDI: Nkroful).*

*This same sentiment was expressed in the Salman community. One of the in-depth interview participants remarked:*

*“Our new houses are very beautiful, and we are happy to occupy them. The only problem is the deteriorating roofing sheets” (IDI: Salman).*

The provision of block houses as a modern facility was also confirmed in the FGDs. Some of the voices captured were as follows:

*“Our houses are new and strong. We are happy to have them as replacements for our old houses” (FGD: Nkroful).*

*“There is a big improvement in our housing structures, as we now live in concrete block houses that can stand the test of time” (FGD: Teleku-Bokazo).*

*“The company has done well on giving us better concrete block houses, which we cherish so much” (FGD: Salman).*

The mine representatives confirmed the deterioration of roofing sheets by stating:

*“That it has been more than a decade now since the structures were put up and the deterioration has come about due to the prevalence of acid rain in the communities, and that plans are underway to replace the destroyed roofing sheets as part of their social corporate responsibilities” (IL1).*

In conclusion, the possession of concrete block houses was confirmed by both in-depth interviews and in the focused groups. They viewed it as more durable compared to their former mud houses, which have a short life span. The only problem found with the provision of block houses was the rapid-deteriorating nature of the roofing sheets on most of the houses, which require urgent replacement. The good news was that the representative from the mine had identified this problem, and plans were underway to assist the affected people in the communities.

#### *5. 7. 2. 2 Education*

Education was prioritized as a key component of the authorities' efforts to alleviate challenges within the three settled communities. According to the participants', schools were constructed in the communities to enable individuals of school-going age to easily access. Residents regarded this initiative as a relief, as it spared parents the burden of finding schools for their children.

Participants revealed the following:

*“The company provided us [with] school buildings for our children, and it has helped us as parents so much” (IDI: Nkroful).*

Participants from the Teleku-Bokazo and Salman areas also expressed their joy with the educational facilities offered to them:

*“We have modern school buildings to take care of our children’s education from the basic level to the junior high school level” (IDI: Teleku-Bokazo).*

*“The company has put up schools to save our children from travelling long distances to access education. ... This has helped parents many times and saved them money that would have otherwise been wasted in looking for schools in faraway towns for their wards” (IDI: Salman).*

All the FDG participants confirmed that school buildings are being constructed. Members conveyed gratitude for having high-quality school buildings in their local areas. One of the voices from the FGD reported:

*“We did not have proper school buildings in our former places of abode, but now the company has given us a magnificent building structure for school to take care of our children’s education “ (FGD: Salman).*

Representatives from the mining companies confirmed the construction of school buildings in the affected communities and a captured voice on it said:

*“Even though there were no proper school buildings in the affected communities, the company thought it wise as a way of improving the infrastructure of the affected communities to put up school buildings to prevent parents from taking their wards to far-away schools” (IL1).*

In conclusion, it was found that new school-building structures were put up in all three resettlement communities to promote the education of children in the affected and nearby communities. The towns' residents expressed gratitude to the mining firms for

the buildings that served as educational facilities for the kids in and around the communities.

### *5. 7. 2. 3 Health*

The results showed that health concerns led to the construction of clinics in each community as part of the mitigation measures. The clinics were primarily intended to act as a temporary fix for locals' urgent medical needs, with the option to refer patients to urban health posts in the event that this was not practical. A participant's narration was captured as:

*"We have been provided with a small clinic, which is being manned by one physician assistant and two nurses to cater for the sick. Illnesses are reported for treatment initially, and when they are deemed serious, they are referred to the main district hospital in a town called Ekwe in the Ellembelle District" (IDI: **Salman**).*

All the FGD participants in the communities confirmed having a health post in the form of clinics to take care of their ailments. A voice captured in one of the discussions said:

*"We now have a residence physician assistant and two residential nurses who take care of us in our recently built clinic, and we are grateful" (FGDs: **Salman**).*

The representative from the mines confirmed that the provision of health facilities like clinics was genuine.

*"We have established health posts (clinics) in the communities to help take care of the health needs of the people" (IL1).*

The findings concluded that clinics were built in all the resettled communities to take care of the people in the communities and their environs. The clinics were manned by physician assistants and nurses, who were usually assigned to work at the facility by the Ministry of Health.

#### 5. 7. 2. 4 Market

Similarly, it emerged from the data that temporary arrangements were made for residents to access a market in the nearby neighbourhood. A participant had this to say:

*“We do not have a market in our newly resettled community. Now the company has created a bridge across the mainstream so that we can cross to go to the market in the old town, which was not affected by the resettlement” (IDI: Nkroful).*

Apart from the Nkroful community, both the Teleku-Bokazo and Salman communities claim they don't have market facilities. This has compelled them to sell their farm produce in front of their houses. One of the participants stated this:

*“We don't have a place in the form of a market to sell our farm produce and also to buy other items needed in our homes” (IDI: Salman).*

On the findings that markets were not provided to the newly settled communities, the representative from the mine debunked that notion and indicated that the markets were provided, but because proper consultations were not made, the people saw it as being far away from them. The researcher confirmed that the market structures indeed exist albeit at a considerable distance from the communities. The mine representative also confirmed in his pronouncement.

*“We agree the market was sited a little bit far away from the community, but we intended that very soon the communities would develop to reach the place where the market was sited” (IL1).*

In conclusion, two different views merged on the availability of markets in the resettled communities. While the APs claimed they do not have any markets, representatives from the mines insisted that the markets actually exist but are far away from the communities.

## 5. 8 Summary of themes

**Table 5. 1: Graphical Data Findings**

<b>Research Questions (RQs)</b>	<b>Classifications</b>	<b>Themes</b>
RQ1. INCOME	<p>A1. Loss of livelihood.</p> <p>A2. Loss of income.</p> <p>A3. Severe hardship.</p> <p>A4. Lack of socio-economic activities.</p> <p>A5. Absent of commercial centre.</p> <p>A6. Loss dependents properties.</p>	<p>1. Impoverishment</p> <p>2. Lack of income generation</p>
RQ2. EMPLOYMENT	<p>B1. Lack of employment.</p> <p>B2. Employment discrimination.</p> <p>B3. Loss of career focus.</p>	<p>3. Stagnation of livelihood</p>
RQ3. LIVELIHOOD	<p>C1. Inadequate compensation.</p> <p>C2. Loss of occupational activities.</p> <p>C3. High cost of living.</p> <p>C4. Deplorable shelter.</p> <p>C5. Bad health state</p>	<p>4. Poverty</p> <p>5. Bad housing</p>
RQ4. MORBIDITY	<p>D1. Malaria.</p>	<p>6. Prevalence of illness</p>

	D2. Coughing. D3. Diarrhoea. D4. Poor sanitation. D5. Dusty environment. D6. Lack of portable water.	7. Poor living conditions
RQ5. MITIGATION	E1. Varieties of consumption farming. E2. Capacity empowerment programmes. E3. Provision of block housing. E4. Building of schools. E5. Construction of clinic.	8. Substitute livelihood support programmes  9. Contemporary facilities

**Source:** *Generated by the researcher*

### 5. 8. 1 Summary of Objective 1

The three resettled communities agreed unanimously on how the resettlement had inflicted hardship on the people and brought impoverishment to the entire community. They explained what has brought these hardships among them, such as the forfeiture of livelihood and loss of income. Twerefoo (2021: 824) said, “Displacement and resettlement especially tend to deprive people of their daily sources of income. Most of them were not enduring such hardships because they had various means of supporting themselves from various sources of income and various occupational opportunities available to them. They also agreed that severe hardship has come upon them now because of the lack of socioeconomic activities, the absence of commercial centres and dependents' properties which have been lost, which resulted in the loss of income generation.

The insights from the focus group further validated the findings from the in-depth interviews, demonstrating that the primary source of income for the women was their agricultural lands, where they cultivated both cash crops and food crops. The women derived their income from their trading activities to support their families. Others also mentioned alternative sources of income, such as palm wine tapping. Everyone agreed that their incomes had significantly increased since the resettlement confirming the results of the in-depth interviews. The aforementioned findings support the claims made by Kitchen (2005) and Adjei (2008) that the majority of the residents of the resettled communities were small-scale farmers who primarily depended on farm produce for their livelihood.

### **5. 8. 2 Summary of Objective 2**

Upon examining the job options accessible to those impacted by the relocated mining areas, three issues that plagued the individuals emerged: discrimination in the workplace, unemployment, and a shift in focus away from one's career. These three have been narrowed down to stagnation of livelihood. The residents' livelihoods had stagnated due to issues relating to employment at the new settlement. The affected people made it clear that there were few employment opportunities to take advantage of. They were quick to point out that the limited job openings were offered to non-indigenes who had the skills to work in the mine, which was an indication of employment discrimination. Drechsel attested that government representatives and management had made promises about job prospects prior to or during the installation of mine. Nevertheless, they were only partially realized (Drechsel *et al.* 2019: 17). It was also found that individuals' career focus has shifted because of a lack of employment and workforce discrimination and now they wanted to move to the towns and cities of Ghana where they believed they could get jobs to take care of their families back home. Others also engaged in illegal mining, or "galamsey", as it is known in Ghana.

Nevertheless, it was clarified further and revealed from the focus group talks that those individuals were given the chance to work in the mines if they possessed the talents

that the corporation required. In addition, the corporation awards a quota to the chief or the heads of the clan, with the age of the potential applicants as a determining criterion. The aforementioned results fully validate Terminski's hypothesis, which states that people living in rural areas that are still developing economically have less and less opportunities to find work in the mining industry due to technological advancements and the need for highly skilled labour (Terminski 2012).

Obeng and Odoom (2014a) further corroborated the high unemployment in the resettled areas, stating that "the mining industry is capital intensive and only a few jobs are available for the locals".

### **5. 8. 3 Summary of Objective 3**

The search for the people's livelihoods before and after the resettlement revealed five classifications from the participant's illustrations, including inadequate compensation, loss of occupational activities, high cost of living, deplorable shelter, and poor health status. In contrast, Owen (2018) and Twerefoo (2021) defined a livelihood system as "the total combination of activities undertaken by a household or community to ensure a living" in their research work. The combination of the categories listed above led to poverty. The vast majority of research participants described how their lack of professional activities had left them unable to confront life's realities, and as a result, they felt impoverished. Some also attributed their current state of poverty to the insufficient payments they got from the mining corporations. According to Kora *et al.* (2019), it was discovered that the mining-induced resettlement projects caused unstable living conditions for the impacted community members. The impacted communities experienced unforeseen financial hardship, including skyrocketing food prices, skyrocketing water and electricity bills, exposure to a variety of illnesses, and the loss of farmlands, which ultimately resulted in poverty status.

Another issue that participants complained about was bad housing. Participants complained about how leaky their roofing sheets were. The affected people claimed that this has contributed to their poor health status since they were unable to afford to

replace their worn-out corrugated iron sheets because of a lack of employment. However, the results of the focus groups showed that, prior to the arrival of the mines, the majority of the residents of the towns made their living through farming. Some women also confirmed practicing petty trading on farm produce and selling fish to support their families. Other individuals revealed their possession of land and community assets like water bodies and the forest before the resettlement. The findings showed the loss of all these community assets due to the acquisition of mining concessions in their catchment area. “Means of securing their necessities (food, water, shelter and clothing) of life” is how one defines one's livelihood (Madebwe *et al.* 2011; Dziro 2014; Chishanga 2014; Guggenheim 2019). After the resettlement, participants in the meetings disclosed that they were not receiving adequate water. The finding confirmed the study conducted in Mozambique in Mualadzi province by Lilywhite (2015), where participants explained that there was not enough water for their daily needs. Before resettlement, participants said they could rely on the various streams around them, even in the dry season. The findings also confirmed the fact that during displacement, the affected people risked losing capital in all its forms: natural capital, man-made business capital and social capital (Cernea 2000: 32).

#### **5. 8. 4 Summary of Objective 4**

Six broad categories of morbidity issues among the people in the resettled communities were identified. These categories were later narrowed down to two: lack of facilities like potable water and poor sanitation, and lack of toilet facilities. The absence of these amenities causes a variety of morbidity-related problems, including epidemics of strange diseases, malaria infections, and coughing due to the dusty nature of roads. All of the basic amenities, including clean water, sanitation facilities and functioning toilets, were in a dismal state, resulting in impoverished living conditions. Among the prevalent illnesses, morbidity issues such as malaria, coughing and outbreaks of unfamiliar diseases like elephantiasis were identified. The results validated the findings of a study by Agbesinyale (2003: 288f), which Reisenberger (2010: 115) cited. The study indicated that the most common diseases in the MIDR areas are malaria, RTIs,

diarrhoeal disorders, skin conditions, UTIs, gynaecological disorders, hypertension, STDs, anaemia, and injuries from mine or industrial accidents.

Furthermore, the focus group discussion concerning morbidity revealed that malaria, coughing, diarrhoea and headaches were the most prominent diseases affecting the people of the study areas. The Salman community discussions mentioned a strange disease in their community, which brought fear to the people. It was later diagnosed by medical experts as elephantiasis, causing the affected people to develop swollen feet. It was immediately brought under control by the treatment offered to the affected people by the medical experts brought in by the mining company. The previously listed morbidity problems were caused by clogged gutters, some exposed mining pits, dust from the mines' ongoing operations, and a shortage of drinkable water for the local communities. In his research, George (2013) established that a large number of youngsters in the impacted resettlement populations had lowered immunity levels, rendering them defenseless against common illnesses like malaria.

Similarly, the results of the data analysis also revealed occasional diarrhoea and headaches as morbidity issues in the population. They attribute these issues primarily to the poor quality of the water they were forced to consume, as well as the prevalence of open defecation in their surroundings. Once more, the focus group discussion and in-depth interview highlighted the fact that the individuals also have respiratory tract diseases, which cause them to cough. The coughing is usually experienced during the dry seasons when the dusty nature of town roads is combined with dust emanating from the mines, which eventually settles on the communities. The associated coughing is very rampant, especially among the children and the elderly in the communities.

### **5. 8. 5 Summary of Objective 5**

Deliberations on the mitigation measures put in place to reduce, if not eradicate, these socioeconomic effects showed ventures into restricted peasant farming, capacity empowerment programmes, the provision of block housing, the building of schools and palaces for the chiefs, and the construction of clinics. These were merged into two main

themes: suitable livelihood support programmes and contemporary facilities. These mitigation measures were in line with Drechsel *et al.* (2019), who, among other infrastructure facilities for the resettled mining communities in Burkina-Faso, also mentioned health centres, such as maternity homes, the provision of access to good drinking water by constructing wells and water reservoirs, and alternative livelihood programmes.

The focus group discussions on the mitigation measures implemented for the resettled communities by revealed economic gains, diversified employment, reduced morbidity issues, and increased agricultural activity complementing the in-depth interviews. These were realized from profitable investments made from the compensation received from their land and crop dispossession, the provision of alternative employment, the provision of alternative livelihood programmes leading to more agricultural activities, and the provision of clinic facilities to reduce morbidity issues in the affected communities. This result is consistent with Solomon's (2011) literature, which suggests that mining can lead to welfare gains like the development of jobs in the fields of alternative livelihood programmes. Resettled individuals can profit from resettlement, according to Cernea (2008), either through employment and the establishment of business opportunities connected with the company's presence or through socio-economic programmes directly produced by multinational corporations.

### **5. 9 Institutional level findings**

According to the survey, the introduction and operation of mining activities in the communities of Nkroful, Teleku-Bokazo, and Salman have contributed to the improvement of livelihoods for some individuals. The heads of the Community Relations Officers (CRO) of the Adamus and Endeavour mines confirmed this belief when questioned if they thought that mining and the activities of the mines had improved the lives of farmers. They gave examples, such as the start of the "Hand in Hand Programme" by the mining concession corporations. Building agricultural capacity, managing microcredit, starting microbusinesses, and supplying inputs for particular revenue-generating activities are all part of this program. They emphasized

that a direct advantage of agriculture training is improving livelihoods. Regarding livelihood assets, the Nkroful CRO mentioned that approximately 20 households from the old town community were resettled in the new town community, where additional amenities such as schools, electricity, and boreholes with pumps were provided. They also emphasized additional sources of income and advantages, such as health-related outreach initiatives like bringing HIV/AIDS peer educator programmes from the mines into the community. Furthermore, assistance was provided in various ways, including crop cultivation, animal husbandry, the supply of microcredit, and the creation of microenterprises.

The CRO at Adamus Gold Resources claims that the company's presence has enhanced the local road network and made it simpler for farmers to transport their products to market locations. In terms of their ability to survive, farmers have directly benefited from this, as the company has practically opened up the area. The assemblyman from the Salman community concurs, arguing that although many farmers were not actively working in agriculture, which resulted in a decrease in food output, road networks had made it possible for residents to obtain regular food supplies from other rural villages.

The CRO of Adamus also believes that, besides providing infrastructure and thereby boosting the livelihood assets of farmers, the road networks have contributed to an improvement in the financial situation of the people. Furthermore, the people's health has improved as a result of the clinics being established in the communities.

They contend that since those who made good use of their settlement money were able to gain from it, mining has not adversely affected the lives of everyone, especially farmers who lost land. On the other hand, individuals who mismanaged their compensation funds saw their living circumstances worsen rather than improving. The interview with land evaluation officer (IL2) confirmed that farmers who lost their land and other farm properties were compensated in accordance with Ghanaian laws without discrimination.

The land officer (IL1) acknowledged that their operations had a detrimental effect on farmers' livelihoods and incomes, but they asserted that measures, such as alternative livelihood projects in the mine's catchment communities, were in place to improve the condition of the community; they also acknowledged issues pertaining to resettlement culture, such as the problem of long commutes to farms, complaints regarding dust pollution, and damage to buildings and roofing sheets resulting from blasting of heavy rocks in the mine areas.

## **5. 10 Conclusion**

This chapter provides a data analysis based on the qualitative approach. The focus group discussions and the interviews yielded qualitative data. NVivo classified the study's focus groups and in-depth interviews into a basic category in order to extract different themes for further research. The study's findings confirmed theory through a number of resettlement effects that were socioeconomic in nature. These include impoverishment, lack of income generation, stagnation of livelihood, poverty, bad housing economic gains, diversified employment activities, reduced morbidity issues, and increased agricultural activities. The investigation also discovered that relatively few indigenous people had the chance to work in the mines and that those who had lost their land to make room for the mines' construction were discriminated against and did not receive priority treatment. The study also found that not only men but also women's status was affected by the socioeconomic effects identified by the findings. The authorities implemented various success factors to mitigate some of the socioeconomic impacts.

The authorities implemented various success factors to mitigate some of the effects that were socioeconomic. These include the installation of basic education structures, the supply of modern amenities like clinics to improve the health status of the populace, and replacement livelihood assistance programmes designed to lift the affected communities out of extreme poverty. The chapter that follows will thoroughly discuss

the results and a review of relevant research on the socioeconomic effects of mining resettlement towns in Ghana's west.

## CHAPTER SIX

### DISCUSSION OF FINDINGS

#### 6. 0 Introduction

The preceding chapter covered the findings statement, data presentation, analysis and interpretation. This chapter juxtaposes the research findings with the results from Chapter Five and the literature review conducted in Chapters Two and Three. The discussion focuses on the socioeconomic effects on mining resettlement communities in the precise areas of income, employment, livelihood, and morbidity issues, in addition to the mitigation measures put in place to alleviate some of the negative consequences found likely to emerge in mining resettlements.

#### 6. 1 Socioeconomic effects of income on people

The objective was to examine how the income levels of the people in the resettled communities have been affected, either negatively or positively. The qualitative findings demonstrated a severe impact on people's ability to make ends meet, except for a small number of individuals who successfully obtained work and wisely invested their compensation funds. The qualitative results showed that the establishment of mining resettlement negatively impacted the income of most of the community. Prior to the arrival of the mines, they had been receiving their regular income from their agricultural and fishing operations, where they raised food crops like cassava, cocoyam, plantains and yams as well as cash crops like cocoa, rubber, palm trees, and coconuts to make up a major percentage of their income.

The majority of the resettled individuals' income came from farmlands where both cash and food crops were grown, according to some evidence from the results of the focus groups and in-depth interviews. The women, on their part, also obtained their income from their trading activities, which mainly centered on their farm produce to assist their families. The findings show that before the mining operations, the people were earning a significantly higher and regular income than after the resettlements in their areas.

This is in line with the field study, which indicates that living conditions deteriorated due to the loss of their traditional source of income prior to eviction (Collado and Orozco 2020).

The findings extracted by engaging with participants revealed that the community has lost their main source of income—the land—as mining concessions have taken it away from them (Twerefoo 2021). The loss of land shows that the resettlement activities negatively affected a greater percentage of the communities' income (Twerefoo 2021). The findings revealed the impoverished state in which most of the communities found themselves. The forfeiture of livelihood, loss of income and severe hardships they experienced were evident on their faces. Until then, most people did not deal with this nature of economic hardship because they had various avenues to generate enough income to take care of their family's needs. The literature on mining resettlements commonly depicts a mixture of negative and positive impacts on the immediate communities. The results of this investigation support Owen's (2018) definition of economic displacement which is the loss of resources or access to resources as a result of land acquisition or use related to a project leading to the loss of income sources or means of subsistence. This aligns with the findings of Collado and Orozco (2020), who examined the experiences of urban poor people relocated to resettlements and found that disruptions to traditional sources of income in pre-eviction residences undermined living conditions.

Furthermore, the literature indicates that many individuals in these communities are peasant farmers who are reliant on farm produce as their primary source of income. Cernea (2016) observed in their study that livelihoods in such communities often revolve around farming as the sole income-generating activity. The absence of viable alternative income activities may render household heads less capable of addressing potential livelihood issues, potentially leaving them vulnerable to caring for their families. Consequently, resettlement communities are often associated with poverty. Nonetheless, mining resettlements may also bring about positive changes in the lives of some individuals in designated mining operation areas (Cernea 2016).

In summary, the findings also reflect the income status of the people after the resettlement. The findings revealed that a greater number of people who were directly affected by the displacement were experiencing a downturn in their income situations in their new environment. Mining operations have taken away their land, which is their primary source of revenue. According to the research, the people felt that the compensation they received for their lost land and other properties was insufficient, and they were unable to use the money to make wise investments that would eventually allow them to live comfortably. As a result, during the focus groups and in-depth interviews, the results showed how poor the majority of the residents were in the three towns. The various ways used to supplement the people's incomes were no longer available to them as those places are now marked as security zones by the mining companies.

## **6. 2 Employment opportunities**

Research objective 2 aimed to ascertain the employment opportunities available to the people as a result of their displacement. The findings revealed three categories of problems as far as employment is concerned. These were employment discrimination, unemployment, and loss of career focus, all of which culminated in a theme of stagnation of livelihood among the communities. This finding is in line with the body of research that shows that resettlement and displacement caused by mining are well-discussed issues (Andrew 2018; Cobbinah and Amoakoh 2018; Downing 2003; Terminski, 2012). Terminski confirmed that open-pit mining employs very few people, and its expansion usually results in the displacement of local residents (Terminski, 2012). According to research on resettlement and displacement caused by mining, as described by Downing (2002) and Wilson (2018), indicates that the mining sector as it currently operates is not socially viable and causes significant issues with employment and displacement.

### **6. 2. 1 Stagnation in livelihood**

The findings show a stagnation in the livelihood of the people, with the majority lacking the opportunity to work in the mines. Downing's (2002: 116) assertion "land is acquired to access that ore and to mine it when rich ore is found" supports the previous statement. This land acquisition displaces people who had lived there before, causing them to lose their homes, productive land, sources of income, jobs and personal resources, which inevitably results in poverty (Bennett and McDowell 2012; Wilson 2018: 72; Manduna 2023). The people interviewed revealed that employment was not readily available to them (the displaced people) in the communities, as one needs to pass through hurdles and have the requisite skills before being employed. The data provides both positive and negative perspectives on job chances. A positive aspect emerged when some people from the communities, considered to be indigenes with the requisite skills needed by the mining companies, secured employment in the mining companies (Twerefoo 2021). Mining also allows for the adaptation of alternative livelihood options, which is crucial given that the mining sector is unable to employ the majority of unemployed young people in affected regions (Drechsel *et al.* 2019: 17). However, one disadvantage that contributed to poverty in resettled populations was limited access to land-based resources. Participants said that there was very little farmland available in their new areas, particularly infertile grounds, which has had a negative impact on farming, which is their primary occupation. The loss of access to and usage of farmland (both quantity and quality) and other natural resources has had a significant impact on food security in resettled communities (Twerefoo 2021).

### **6. 2. 2 Employment discrimination**

According to the findings, the people also had to bear employment discrimination in the workplace. The people in the resettled communities see the non-indigenes being employed more in the mines than the indigenes from the communities. It was discovered that a large number of people that go to mining locations in search of work may already possess the necessary abilities before they arrive. With this, they may have the necessary skills needed by the mine, and hence they are readily employed

by the mine. The findings contradicted Deller and Schreiber's (2013) observation that "employment opportunities for rural communities also increased and mining created employment in sectors related to but not limited to mining" (Deller and Schreiber, 2013). However, with the exception of a few who were employed, the literature verifies the findings of the residents in the research area that it is difficult to get work in the mine. Wilson, in his study of the displacement of a community in the rutile mining area in Sierra Leone, confirmed that mining resettlement brings economic marginalization to the affected communities, and the area mostly involved the acquisition of jobs from the mining company (Wilson 2019: 97). The findings also revealed that opinion leaders, including chiefs and assembly members, were sometimes given the opportunity through the quota systems to bring people to be employed in the mines. The finding confirmed the study undertaken by Twerefoo (2021) that the opinion leaders were given the quota system to bring people from their communities for the leaders to support the activities of the mining companies (Twerefoo 2021).

### **6. 2. 3 Shift in career focus**

The communities' findings also highlighted the shift in career focus to urban centres, as young men in these areas struggled to secure employment. The problem of unemployment has resulted in some people in the resettled communities renting out their block houses to the miners and then moving to the urban centres where they believe they can get some jobs to take care of their families. Others who prefer to stay on engage themselves in illegal mining known as 'galamsey' inside the mining concession to take care of themselves. The findings align with the literature presented by Obeng and Odoom (2014), suggesting that the mining industry is capital-intensive, resulting in limited job opportunities for locals. Some household heads turn to small-scale trading in addition to farming on other properties they purchased after the mines claimed their farmlands as a way to make up for lost income. Additionally, ALPs and community capacity-building initiatives encourage participation in various activities beyond traditional crop farming. For example, as part of Endeavour Mining Corporation's ALP, impacted individuals received training in raising livestock and the production of palm oil and palm kernel oil, as well as soap-making techniques. The

results align with Twerefoo's (2021) investigation in the relocated settlements of Damang, wherein the majority of the impacted farmers who obtained crop compensations from the mine either procured additional land for farming or participated in alternate livelihood pursuits.

#### **6. 2. 4 Skills, quota system, and age**

The findings from the focus group discussions in objective two confirm what the in-depth interviews revealed. Employment opportunities were obtained or offered based on the person's skills, quota systems, and the ages of prospective applicants. The findings show that even though there were vacancies available, one had to show some skills in some specific areas needed by the mines before one was employed (Drechsel and Groneweg 2017: 2). This discovery validates previous research indicating that individuals in Ghanaian mining communities lack the necessary abilities to function in leadership roles (Odoom and Obeng 2014a). They are more likely to be employed in low-paying temporary jobs rather than the permanent ones that mining would offer because of their skill sets. This leads to job insecurity because their temporary labour does not produce a stable, sustainable income (Odoom and Obeng 2014a, 2014b). The research by Akabzaa and Darimani (2001) supports the conclusion that mines have a finite ability to create jobs. They clarified that although surface mining activities require comparatively less labour, they are capital-intensive.

The findings also brought forth the quota system of employment introduced into the communities, where some opinion leaders were empowered to assist in the company's recruitment drive for people from the affected communities. This means of recruitment into the mines came with problems such as discrimination, being in the good books of the opinion leader, or money passing through hands before the opportunity was offered to you. This confirms the findings of Wilson (2019) in his study of resettlement in Sierra Leone, that occasional mining jobs were opened to a few residents of the communities. The findings were also in line with Twerefoo (2021) that to secure a job in the mines, one has to pass through the hands of the opinion leaders from the affected communities, which also has its levels of complications, before one is given the nod

(Twerefoo 2021). The age of the potential employees also surfaced in the research, which showed that the resettlement's real victims had grown older than the corporations' preferred minimum hiring age for mine workers. According to Drechsel (2019), age restrictions are one of the reasons that limit the mines' ability to create jobs. This is a result of the capital-intensive nature of surface mining operations, which also have relatively modest labour requirements and assign more weight to the age of potential employees. The mines mainly prefer youth in the age category of 25–35 years to work with (Drechsel 2019: 2).

The results of the focus group discussions revealed that the blockade in the employment portfolio was in the areas of skills, quota systems and age. The results obtained from the in-depth interviews and focus group discussions pertaining to unemployment are consistent with the IRR model. This model posits that the loss of local income-generating resources is the primary cause of post-displacement unemployment or underemployment. According to the IRR model, there are few options for unskilled local workers to find employment since industries find it difficult to switch to less labour-intensive processes and hire a more skilled workforce.

In conclusion, the mining companies create a platform for employment based on skill, the quota system, and the age limit of the prospective applicants. These requirements were sometimes not found in the communities where the mines resided and officials from the mines had to look elsewhere for recruitment purposes. Therefore, in these resettled communities, the goal of re-employment as a means of overcoming unemployment—which poses a risk of impoverishment—was not achieved. The majority of people living in the relocated areas are losing their employment opportunities, according to additional studies (Drechsel 2019: 17; Madebwe *et al.* 2011; Lilywhite 2015).

### **6. 3 Socioeconomic effects on livelihood**

The aim was to examine the livelihood status of individuals both before and after resettlement. A livelihood system encompasses all the activities undertaken by a

household or community to sustain their livelihood (Owen 2018). An individual's livelihood refers to the means through which they secure life's necessities such as food, water, shelter, and clothing (Madebwe *et al.* 2011; Dziro 2014; Chishanga 2014; Gukurume and Nhondo 2020).

### **6. 3. 1 Livelihood before the resettlement**

The people in the communities were satisfied with their ways of life, as they were living all right with personal property supporting them in their livelihoods. Thus, they possessed their farms, which provided them with constant income sources from both cash crops and food crop production (Kora *et al.* 2019). Some also engaged in fishing in the mangrove swamp and water bodies around them. They also have access to collective community resources, such as water and forest resources, where they can easily lay hands on certain medicinal herbs to treat their ailments and then obtain firewood for their domestic use. To sum it up, the findings showed that before the coming of the mining activities, the people had their farms, regular income sources, access to community resources, and most of all, land possession. The finding of the livelihood before the coming in of the mining companies affirms the literature that, before the coming in of the mining operations, the people had their specific areas to depend on, such as land, water and forest, where their livelihoods mainly revolved (Debasree 2015; Cobbinah 2018). According to Dziro (2014), an individual's livelihood refers to their ability to obtain essentials like food, water, medicine, shelter, and clothing to meet both personal and household needs. Typically, sustainably conducted activities ensure dignity and recurring provision of essentials (Dziro 2014). Residents in the study areas reported having access to all of these essential elements of life.\*\*\*

### **6. 3. 2 Livelihood after the resettlement**

According to the findings after the resettlement, inadequate compensation, loss of occupational activities, high cost of living, deplorable shelter, and poor health status were among the problems the people in the resettled communities faced. The

previously described findings were additionally categorized into poor housing and poverty, which formed the primary findings reported under goal number three.

The community members' sense of poverty was found to be widespread due to the lack of work options, which made it difficult for people to support their livelihoods. Their stories effectively captured this feeling, as parents battled to pay for necessities like their children's school tuition and daily living expenditures. These observations resonate with Collado's (2020) study in the Philippines, where displacement led to job and livelihood loss, consequently plunging people into severe poverty (Collado 2020: 56).

Furthermore, the findings indicated that the community members attributed their impoverished state to inadequate compensation for the destruction of their livelihood assets. This aligns with the theory of development-induced displacement, which suggests that such displacements trigger various social, economic, and environmental changes, often leading to widespread impoverishment (Pandey *et al.* 1988a; 1988b; Cernea 1999, 2000; Mathur 2001). The results are further supported by Cernea's impoverishment risks and reconstruction (IRR) model, which indicates that these disruptions may lead to the emergence of new poverty (Cernea 1997).

Moreover, the research findings provide further evidence supporting Terminski's theory concerning the negative practices of private sector entities within the mining industry. These practices were identified as significant contributors to adverse outcomes experienced by the local communities affected by mining operations (Terminski 2012). According to Terminski's theory:

- Multiple crucial aspects of the detrimental actions are carried out by the private sector in the mining sector:
- Insufficient regulations incentivize the private sector to partake in unfair practices.
- People who are displaced rarely get enough money back for the properties they lost.

- Companies often neglect to carry out programmes that they have committed to, which are meant to assist and encourage the search for other work options.
- Local communities' attempts to oppose these practices frequently result in failure.
- There are insufficient financial resources and opportunities available to communities to effectively safeguard and defend their rights and interests in court (Terminski 2012).

The most detrimental effects of contemporary mining operations, according to Cernea (2000), include water and land pollution, community disruption or displacement, confrontations between the populace and government forces, and the forced migration of rural to urban populations. These findings provide additional support for Terminski's theory.

However, findings from the institutional level revealed that the affected people (AP) in the communities were duly compensated after proper evaluations were conducted on their properties that fell within the mining concessions by experts such as the Ghana Evaluation Board. The district evaluation officer contacted also affirmed what the representatives from the mines revealed: that due processes were followed to compensate for the loss of properties as the law requires. However, the people complained that their compensations were woefully inadequate. The literature cited by Adjei supports this conclusion. Despite the fact that farmlands were obtained as mining concessions, many impacted individuals did not get crop compensation (Adjei 2007: 48). According to the Ghana Chamber of Mines (2016), in situations where compensation was given, it was frequently insufficient and did not match the worth of the land that was stolen.

The findings on the livelihood of the people after the resettlement also revealed a deplorable shelter due to the completely deteriorating nature of the corrugated roofing sheets that were used for the housing project (Nguyen *et al.* 2015; Wilson 2019). Participants overwhelmingly agreed that the majority of household members in the

communities—a collection of people who share resources or "eat from the same pot"—have poor health as a result of their poor living conditions (Robertson 1984, cited in Beal and Kanji 1999). This assertion contradicts the literature's perspective, which asserts that economic development-driven relocation typically poses less risk for affected individuals compared to displacement resulting from natural disasters or armed conflicts (Cernea and Mathur 2008).

The findings from the three communities also showed a high cost of living attributed to the prices of food items in the communities. This has come about due to pressure from the influx of people to the mining areas and others seeking employment. The findings confirm what Akabzaa and Darimani (2001) found in mining resettlement some years ago. There are two main reasons why living expenses in mining-resettled towns are so expensive. First, there were pay differences that favoured mine employees over public sector workers. Ghanaian employees were paid salaries that were tied to the US currency. Second, the internationally competitive salaries that expatriate staff received exacerbated income disparities in the study areas. The cost of products and services, such as housing, food, and other amenities, has been influenced by these affluent classes (Akabzaa and Darimani 2001). The results are consistent with the complaints made by locals about the high expense of living in resettlement communities, as reported by Cobbinah and Amoakoh (2018) and Andrews (2018). The vulnerability context, which Owen articulated, and which includes external, uncontrolled elements influencing people's assets and livelihood possibilities, provides theoretical justification for this finding. Therefore, the factors contributing to individuals' high cost of living were beyond their control (Owen 2018: 4).

Furthermore, it was discovered from the focus group talks that the inhabitants had land for farming, streams and other sources of water, and they were involved in small-scale trading in their official areas of residence prior to the arrival of the mining operations. The impoverishment risks and reconstruction (IRR) model developed by Michael Cernea confirms that, prior to the model's implementation, the impacted population possessed all necessary resources to establish and maintain their means of subsistence (Andinet 2017). However, the situation completely changed after the

resettlement. The interviewed participants indicated the dispossession of their land, the loss of their water bodies, and the deprivation of their main sources of income. The results validated the resettlement theory, also known as the "effect of resettlement", which includes the loss of both tangible and intangible assets, including communities, homes, productive land, sources and assets of income, subsistence resources, cultural sites, social structures, networks and ties, cultural identity, and mechanisms for mutual aid (ADB, 1999). This issue is further described by Cernea's concept as the possibility of creating "new poverty" (Cernea 1997). The results are corroborated by Bennett and McDowell (2012), who claim that the acquisition of land for mining operations has the effect of displacing residents, resulting in the loss of homes, productive land, assets that generate income, and personal resources, ultimately resulting in poverty (Bennett and McDowell 2012). In a similar vein, Chazireni and Chigonda (2018) and Mavhura (2020) describe situations in which impoverished households were forced to leave their houses when a dam flooded their properties before they could be relocated.

In literature, the implications of the findings are clear. Studies conducted by Andrews (2018) and Cobbinah and Amoakoh (2018) revealed that community members had higher expectations during the early stages of negotiations. This made it possible for mining activities to operate in such places, but as soon as the situation changed and the impacted population's means of subsistence could no longer be restored, these hopes vanished (Cobbinah and Amoakoh 2018).

Based on the research questions, the study's major findings, as presented in Chapter Five show that according to the IRR hypothesis, relocation has led to difficulty for the people, culminating in a state of impoverishment throughout the entire community. The main socioeconomic effects on income include either a loss of income or a reduction in income. The finding also revealed a loss of the people's dependable properties, which provide a regular income to sustain their families. It was also revealed that, as far as income to sustain themselves was concerned, their living circumstances were better before the resettlement. According to the findings, what worries people is the irregular nature of what they are now relying on as their sources of income.

## **6. 4 Morbidity issues**

The literature attests to the fact that the resettled communities are at risk for location-related diseases due to their new location and proximity to mining activities (Reisenberger 2010: 14). The findings from the study areas show that the main morbidity issues confronting them as of the time the study was being conducted were malaria, coughing, diarrhoea, and elephantiasis. The populace blamed the aforementioned ailments and illnesses on the absence of infrastructure, such as drinkable water, adequate sanitation and toilet facilities.

### **6. 4. 1 Diarrhoea disease**

Diarrhoea is one of the rampant diseases that usually affect people in communities, according to the findings from morbidity issues. The people in the three communities attributed their predicaments to the yellowish substances that appeared on the surface of the water from the wells and boreholes when fetched and allowed to stand for some time. The finding confirms Reisenberger's (2010) research findings in a different town in the Western region called Teberebie that borehole water was found to have contained a concentration of silica traces higher than the allowed World Health Organization (WHO) levels that was responsible for their chronic diarrhoea and headaches (Reisenberger, 2010: 115). As part of the evidence to confirm the people's assertion about their new sources of water, the researcher observed that when peeled plantains were placed in the water from the wells and boreholes, they turned bluish. Hence, the people in the communities were skeptical of the use of the water given to them as an alternative to their lost water sources. They resorted to other alternative and non-conventional means of getting water, hence the effect of rampant diarrhoea across the communities in the study area. The community members, despite all these years that the resettlements have come into existence, are still abstaining from the use of water from the wells and boreholes specifically constructed for them. In their research on the effects of artisanal small-scale mining on sustainable livelihoods, Baa

and Ennumh (2017) also verified that certain communal water sources, like streams and rivers, have been contaminated. In the Tarkwa Municipality, this has led to a number of public health risks, diarrhoea being one of them.

#### **6. 4. 2 Respiratory tract disease**

The findings also revealed coughing, a respiratory tract disease, as another morbidity issue. The people believed it had come about as a result of toxic dust from the mine due to blasting and higher dust levels from the mine and the untarred roads, especially during the dry seasons. The results are consistent with Ofori's (2023) study, which found that a coal mine generates a lot of dust that, if inhaled, can cause coughing and black lung disease in both miners and nearby residents. This is consistent with what Reisenberger (2010) found during his mining resettlement research in Teberebie, where a large number of individuals reported experiencing headaches, chest pains and coughing due to dust from the mining operations (Reisenberger 2010). They restated the claim that diseases including skin irritation and TB are more common as a result of dust pollution (Baa-Ennumh 2017).

#### **6. 4. 3 Vector-borne disease**

Malaria was discovered to be another morbidity problem that the residents of the study region had to deal with. This resulted from abandoned holes or dugouts left by mining firms during their exploration efforts in the area, as well as clogged and overgrown gutters in the neighbourhoods that no one was cleaning. The conclusion that many water bodies were diverted or dammed during the mining processes is supported by the literature and by an empirical study done at a mining resettlement community in Teberebie near Tarkwa by Reisenberger (2010) as well as by Twerefoo (2021) in her most recent work at the Damang resettlement community. As a result, the concession had a large number of stagnant water bodies, some of which were located rather close to the community and served as mosquito breeding grounds (Reisenberger, 2010: 116). Because the western region of Ghana is part of Ghana's tropical wet region,

which is perfect for the mass spawning of malaria vectors like mosquitoes, malaria has long existed there. Nonetheless, the people connected mining-related activities, such as the abandonment of stagnant water bodies in open mining pits, to the rise in malaria incidence (Cernea 2000: 217). The Salman people also mentioned elephantiasis in their narratives, which was quickly contained when medical professionals were invited into the community to treat the afflicted individuals and sanitize the entire area.

## **6. 5 Mitigation measures in place**

Findings for research objective five across all the resettled communities under study showed that indeed, there were mitigation measures put in place to help alleviate the hardship and poverty in which the resettled communities found themselves. The implementation of mitigating measures, as confirmed by the impacted individuals, included limited farming practices, capacity-building initiatives, block housing provision, school and clinic construction, and block housing programmes. The two primary themes that emerged from the categories of findings in this case were modern facilities and programmes that provide alternative livelihood support. The literature reveals that the principles and recommendations pertaining to displacement and involuntary relocation necessitate the restoration of livelihoods for APs (WB 2001; IFC 2002). This is consistent with the research conducted by Madebwe *et al.* (2011); Sturman (2015); Kidido *et al.* (2015); Wilson (2019). The literature also confirms the necessity of putting some programmes in place to provide alternative means of income generation for the affected people (APs) in the communities (Twerefoo 2021). The mitigation measures put in place were aimed at resuscitating the livelihood of the people, which includes substitute livelihood programmes, providing contemporary facilities, economic gains, diversified employment activities and reduced morbidity, as discussed below:

### **6. 5. 1 Substitute livelihood programmes**

The substitute livelihood programmes found as mitigating measures include restricted farming, where lands were issued to the affected farmers to grow only food crops for the sustenance of households and communities, which affirms what Twerefoo (2021)

revealed in her study of mining resettlement at Damang, also in Ghana. Her study posits that parcels of land demarcated by the mining company were given to the people for the cultivation of food crops. The results of the study on alternative livelihoods also revealed that women in the areas affected by the mining operations were given special consideration and targeted for the development of plantations that would yield palm oil. This result supports the local economic development (LED) theory's tenets, which are described in the 2018 South African Mining Charter and encourages mining corporations to enhance the socioeconomic conditions in the areas surrounding their operations. The Ghanaian government has responded to the adverse effects of mining resettlements by enacting various policies that are designed to promote and protect the welfare of the populace. Important among these policies are the Minerals and Mining Policies of Ghana (2014), the Minerals and Mining (Compensation and Resettlement) Regulation of 2012 (LI 2175), and the Minerals and Mining Act of 2006 (Act 703) (Twerefoo, 2021). The measures listed to raise people's standard of living include:

- Employment generation
- Procurement of locally produced goods and services
- Development of local infrastructure
- Rural transformation and community participation
- Recognizing landowners' rights and interests (Aubynn 2016).

To maintain the livelihoods of the impacted individuals in the communities, it was found that experts and facilitators were brought into the communities to train residents in various livelihood options like snail farming, piggery, sheep, goats, rabbit farming, and grass cutter farming. In contrast, research indicates that a livelihood is considered sustainable if it can endure shocks and strains, preserve or increase capacities and assets over time, and not deplete the base of natural resources (Scoones 1998; Owen 2018: 6). Therefore, many individuals interviewed from the communities regarded the interventions and mitigation measures mentioned above as temporary. As no one asset type or category is sufficient to meet people's demands for a sustainable lifestyle, the theory of sustainable livelihood outcomes on assets holds that people

need a combination of several asset kinds to attain sustainable livelihood outcomes (Owen 2018).

### **6. 5. 2 Contemporary facilities**

The findings also reveal the provision of modern block houses, which the community members highly appreciate and consider more durable than their previous mud houses. According to Regulation 6 of the Ghana Mineral and Mining Regulation, the holder of a mining lease is required to relocate residents who are displaced due to the holder's operations to suitable alternative land. In order to enhance the impacted people's livelihoods and living conditions, the resettlement process should take into account their sociocultural values and economic well-being (Ghana Mineral and Mining Act, 2006). This result is in line with research by Wilson (2019) in Sierra Leone, where improving the homes of displaced communities was determined to be the main goal of home restoration (Wilson 2019). Almost all the households interviewed and the focus group discussions, as well as information from key informants, stated that members complained about the deterioration of their roofing sheets, which they were finding difficult to replace because they didn't have money to do so. Some of them had used bamboo sticks to replace their destroyed roofing sheets. The bamboo could only be used as an intervention for a very short period, thus signaling that proper materials were not used for the construction of their houses. The results are in opposition to research from Sierra Leone that Wilson (2019) highlighted, where it was determined that building new homes was the main strategy for enhancing the quality of life for communities that had been resettled. The impacted people also stated that they preferred strong materials such as corrugated aluminum sheets, premium lumber, and concrete blocks (Wilson 2019).

Furthermore, the study revealed that schools were constructed in the three resettled communities to cater to school-age children. This finding aligns with the literature suggesting that educational support and skill training can enhance the socio-economic conditions of resettled individuals by providing alternative livelihood opportunities (Wilson 2019; Owen 2018). The provision of educational resources and scholarships

for further studies is believed to have long-term benefits for the socio-economic conditions of the affected communities (Wilson 2019: 74).

Clinics were constructed in Teleku-Bokazo and Salman, but not in Nkroful, where only part of the old town was resettled, and the location of the old clinic was still intact. The establishment of clinics in the resettled communities was perceived by residents as crucial infrastructure, as it provided them with accessible healthcare services for treating minor ailments (Adonteng 2018; Wilson 2019). Staff of the clinics, with support from the mines, embark on community sensitization programmes and the prevention of diseases, such as malaria, typhoid fever, diarrhoea and HIV/AIDS to reduce their widespread in the communities (Widana 2019).

The findings on the provision of markets in the communities revealed two contrary issues. While the participants were agitating about not having any market in the resettled communities, representatives from the mines argued otherwise. In other words, the mines provided markets to the communities, but they were located far away from the communities. There was no consensus on the site of the markets, hence they had become 'white elephants' to the communities of Teleku-Bokazo and Salman. For the Nkroful community, a bridge had been constructed to enable the resettled community members to patronize the old market. Contrary to this, the people would have preferred to have a new market closer to them. The results provide credence to the theory that different groups affected by displacement did not actively participate in the planning and decision-making stages of the eviction and resettlement procedures (Nambiza 2007; Madebwe *et al.* 2011; Lilywhite 2015; Tsui 2021). Further focus group findings and key informant insights also revealed further mitigation strategies. These include economic advantages, a wider range of employment opportunities, decreased morbidity concerns, and heightened agricultural endeavours. These aspects are elaborated on below.

### **6. 5. 3 Economic gains**

The economic gains were evident as affected farmers who utilized their land or crop compensation funds to venture into other livelihood activities experienced subsequent

economic benefits. This aligns with existing literature suggesting that substituting monetary compensations with long-term benefits may offer landowners more sustainable income sources (Martin & Rice 2019).

Moreover, the findings on mitigation measures revealed that training programmes were provided to enhance the capacity of individuals to participate in alternative livelihood initiatives. Participants who completed these programmes received microcredit as initial capital or seed funding for the specific activities they were trained in, such as tailoring or animal rearing. This result is in line with the Ghana Minerals and Mining Act, which stipulates that residents who choose to be resettled after being displaced by proposed mining operations must settle on suitable alternative land to ensure their economic well-being and compliance with applicable town planning laws (Ghana Minerals and Mining Act, 2006).

#### **6. 5. 4 Diversified employment activities**

The findings regarding mitigation measures also highlighted a variety of employment opportunities for certain individuals within the communities. Some were able to secure land elsewhere and engage in petty trading using the compensation they received. Some community members also received instruction in animal farming, and to support their livelihoods, women were trained in the extraction of palm oil and palm kernel oil as well as soap-making. This result is consistent with Cernea's (2021) livelihood model, which highlights the relationship between a household's access to capital assets and its options for subsistence. According to their choices and the opportunities that are available, the model advises household members to participate in a variety of livelihood activities, such as trading, manual labour on farms, or formal employment inside organizations or groups. Furthermore, as part of the localization strategy, these actions align with the provisions delineated in Ghana's Minerals and Mining Act of 2006, which places a strong emphasis on hiring and training Ghanaian workers.

The findings also underscore the implementation of coping strategies to sustain livelihoods, which is consistent with the theory of coping strategies commonly employed

by individuals affected by involuntary displacement (Adams 1998). According to Adams (1998), coping strategies are temporary actions taken by households during times of crisis to lessen the negative effects of outside developments. These solutions use capital assets and available resources to reduce the negative effects of unanticipated events or disasters on livelihoods. Despite their temporary nature, coping mechanisms can exacerbate deteriorating situations (Bhattarai 2005).

### **6. 5. 5 Reduced morbidity**

The findings also showed an attempt to reduce morbidity issues in the communities by establishing clinics manned by health professionals assigned to the communities, occasional watering of the dusty roads to prevent dust from settling in the communities, and supplying them with drinking water from boreholes, although the people are still skeptical about the oily substance that settles on the water surface after a bucket of water is allowed to stand for some time. The construction of two or three communal toilets for the entire community aimed to enhance sanitation standards in a community where previously the people were accustomed to decent accommodation and their own toilet facilities.

These findings confirm the theory of ALP as a policy document in South Africa, also known as the Mining Charter in South Africa 2018 (Morolo 2023). The obligation of mining firms to improve the social and economic infrastructure of local communities is emphasized in the charter, with a specific focus on six important areas:

- Education: Building schools to improve education in surrounding communities.
- Healthcare: Constructing hospitals and health clinics to enhance healthcare delivery.
- Housing: Improving housing facilities to provide decent living conditions that uphold the dignity of community members.
- Water and Sanitation: Enhancing water and sanitation infrastructure to improve the quality of life for residents (Morolo 2023).

In a similar vein, Minerals and Mining Policy of Ghana (MMPG) emphasizes the value of sustainable livelihood initiatives to improve the financial standing of mining-affected communities. According to the policy, compensation payments alone are not sufficient to address the long-term needs of displaced people resulting from mining activity. Therefore, as part of their environmental management plans, mining firms must provide displaced people with sustainable livelihood opportunities. These options must demonstrate equal or greater benefits compared to the livelihoods previously enjoyed by affected communities (Aubynn 2016). Government institutions are tasked with actively supporting community engagement in ventures aimed at creating sustainable livelihoods for rural mining communities.

According to Ghana's Minerals and Mining Policy (2018:50), in situations where the resettlement of a community is necessary as part of mine development, it is imperative to acquire alternative lands. This ensures that the affected people can continue their farming and other activities in their new location. However, despite being provided with these facilities (housing and toilets) as mitigation measures, the communities under study are currently concerned about the absence of a maintenance culture. The toilet facilities provided for them have not been managed well. The District Assembly, responsible for maintaining the facilities, is no longer doing the needful, and residents are unwilling to pay for the use of the facilities, despite the money accrued for managing the facilities. The reason was that there was a firm commitment from the companies to resource the assembly to take care of the facilities on behalf of the people. The people now find it difficult to use the facilities in their current state, resulting in open defecation in the study communities, which is a recipe for disease outbreaks.

## **6. 6 Institutional level**

It was revealed in the findings that the mining companies have started 'Hand-in-Hand' programmes for the communities in the mining resettlement areas. The "hand-in-hand" programmes encompass activities such as enhancing the skills of community members in agriculture, managing microcredit, establishing enterprises, supporting micro-

enterprises, and providing inputs for chosen income-generating endeavours. These strategies to alleviate poverty worked depending on the commitment of the affected persons. This is supported by literature. According to Owen (2016), although the IRR model provides significant insights, the effectiveness of resettlement results is heavily dependent on developers' willingness and skill to reconstruct the livelihoods of displaced individuals during the resettlement process. Among the initiatives aimed at supporting livelihoods in resettled communities were opportunities for alternative income and improved compensation mechanisms, as elaborated below:

### **6. 6. 1 Alternative income**

Additionally, it was found that the businesses had supported the communities by way of a variety of other revenue-generating endeavours, including crop farming, animal husbandry, microcredit and the creation of microenterprises. Not all individuals perceived the arrival of the mines as entirely negative, contrary to concerns about the destruction of forest lands, pollution of water bodies, respiratory illnesses, disruption of traditional governance systems, unemployment, and loss of farmlands (Cernea, 2016; Collado and Orozco 2020). Some community members reported positive outcomes, including the adoption of sustainable resource management practices, training in livelihood programmes, development of socio-economic infrastructure, increased access to credit and employment opportunities, as observed by Twerefoo (2021) in her study where some displaced individuals found employment post-resettlement. These individuals' occupations ranged from petty trading to mechanics and food vending. In addition, the road network has improved as a result of the presence of mining enterprises, especially in Salman and Teleku-Bokazo, according to the Community Relations Officer (CRO) of Adamus Mines. This infrastructure enhancement has facilitated easier transportation of agricultural produce to market centres, providing affected individuals with alternative income opportunities.

## 6. 6. 2 Compensation

Regarding compensation, it was noted that while beneficiaries commonly expressed dissatisfaction with the inadequacy of compensation packages, some community members engaged in speculative activities to ensure compensation. These activities included hastily planting crops and trees or constructing structures on portions of mining concessions for compensation purposes (Ghana Chamber of Mines 2016).

On the subject of compensation, community relations officers unanimously affirmed that proper procedures were followed to determine the compensation amounts for individuals who lost property to mining concessions (Mandishekwa and Mutenheri 2020, 2021). However, affected individuals held different perspectives, expressing that adequate negotiations were not conducted before compensation was paid. Concerns were also expressed regarding the lack of transparency in the compensation fund allocation (Manduna, 2023). The compensation process was entirely new to the people of Nkroful, Teleku-Bokazo, and Salman, as they lacked prior experience.

During a one-on-one conversation with a Salman resident, it was noted that many felt overburdened and complained about the lack of transparency in the assessment procedure for their crops. This was revealed when this question was put before him.

**Q: How was the compensation exercises carried out?**

He answered:

*“They cheated us. They capitalized on us. We, the indigenous, hadn’t seen a mine before. We knew nothing about evaluation”* (personal interview, 24 February 2023).

The entire evaluation process and lack of transparency resulted in frustration among the community members. They reported repeated instances of "computer mistakes" that allegedly reduced their compensation amounts. Some individuals signed documents without clear compensation figures or without fully understanding the implications of their signatures. Overall, the process was deemed semi-transparent and challenging to

reconstruct during the research. These results support previous research by the Ghana Chamber of Mines, which indicated that host communities may believe that mining companies exploit them by not providing enough compensation for the disruption of their crops and structures, based on a perceived lack of transparency (Ghana Chamber of Mines 2016).

All recipients did not receive compensation at once; rather, it happened in stages. Originally, the ultimate compensation amount was calculated using a head-count system in which each crop was counted separately. All crops received compensation and different crops were given different values. But after two or three rounds of compensation, the arrangement changed to a system known to the locals as the "acreage system". The locals considered this modification to be detrimental because crops were no longer counted separately. Rather, estimates per acre were employed, with a primary emphasis on the field's principal crop. Many community members continued to favour the headcount approach in spite of multiple meetings to address these concerns, which resulted in miscommunications between the communities and the companies.

Compensation payments were predominantly made to men, with most women being excluded from the process, as revealed in the focus group discussions. Few women were aware of the compensation amounts received by their husbands. The compensation amounts reported by the affected individuals interviewed ranged from 15 000 to 21 000 GHS (Ghana Cedis), equivalent to approximately USD 3 750 to 5 250 at an exchange rate of 1 = 4. 00 as of July 2013. However, all interviewees expressed dissatisfaction with these amounts, feeling they did not adequately represent their losses. With statements like "The compensation I received was inadequate" or "The compensation was meagre," almost all of the interviewees expressed feelings of being taken advantage of. These findings are consistent with the body of research showing that a lack of negotiation skills causes many impacted individuals in resettlement programmes to fall short of their income expectations (Askland 2018).

### *6. 6. 2. 1 Value of compensation*

Due to the limited compensation they received, most participants were unable to make strategic investments and instead used the funds to cover immediate household needs like food and essential items. These findings echo those of Reisenberger's (2010) study, "Gold Rush in Ghana: The Case of Teberebie", which found that affected individuals primarily allocated their compensation towards necessities such as food and school supplies. Notably, none of the respondents were able to use their compensation to purchase replacement land because the sums were not enough for that. Similarly, research conducted by the Ghana Chamber of Mines corroborated these findings, indicating that 64 percent of compensation recipients acknowledged not using their funds effectively, with only 30 percent believing they had utilized the money well and four (4) percent were uncertain. Furthermore, approximately 84 percent of respondents expressed dissatisfaction with the compensation packages, feeling that the losses incurred in terms of assets, buildings and land, or livelihoods were not sufficiently addressed, while the remaining 16 percent deemed the compensation sufficient (Ghana Chamber of Mines 2016).

Company officials also acknowledged the continued existence of negative impacts within the communities due to their operations, recognizing that not all residents could be satisfied. These issues were linked to the resettlement process, which resulted in longer distances to farms, as well as complaints about dust pollution, roof sheet deterioration, and building cracks due to the mining activities' blasting of heavy rocks in the surrounding areas.

## **6. 7 Conclusion**

This chapter carefully analyzed and discussed the results found in Chapter Five, in relation to the pertinent theories, literature and conceptual framework presented in Chapter Two. The theoretical and practical ramifications drawn from the literature on mining resettlements were also covered in depth in this conversation. The study's main goal was to evaluate the socioeconomic effects of mining resettlement, with a focus on

income, employment, livelihood, morbidity, and the steps taken to mitigate some of the difficulties that impacted communities had to deal with.

As previously mentioned, the impoverishment risks and reconstruction (IRR) model affects the socioeconomic effects of mining resettlements. It was contended, however, that not every community experiences each of the model's elements at the same time, including marginalization, food insecurity, homelessness, unemployment, and elevated morbidity. Instead, depending on how the experienced dangers are addressed and resolved, communities could experience the model's features in a positive or negative way. However, the process of extracting minerals from any given location is almost always accompanied by negative consequences for the local populace, including harm to the environment, disruption of livelihoods, health issues for indigenous people, and general socioeconomic well-being. Furthermore, alongside the socioeconomic impacts, the psychological ramifications of involuntary migration on affected individuals cannot be easily quantified.

The final chapter sets out the summary of the thesis, with suggestions for further studies and practice, as well as personal reflection and the conclusion.

## **CHAPTER SEVEN**

### **SUMMARY OF FINDINGS, IMPLICATIONS OF EFFECTS, AND RECOMMENDATION FOR FURTHER RESEARCH**

#### **7. 0 Introduction**

The previous chapter offered a comparative analysis of the research findings vis-à-vis those gleaned from the literature review. In contrast, this chapter centres on summarizing the study, evaluating its outcomes, reflecting on the research process, delineating its potential and realized contributions, as well as acknowledging its limitations and providing recommendations, culminating in a conclusion.

#### **7. 1 Overall conclusion of the study**

The primary goal of the study was to examine the socioeconomic effects of mining resettlement in Ghana's western region and determine how these effects appear in four (4) important areas: income, employment, livelihood, and morbidity. It also sought to identify the mitigating measures implemented to address the socioeconomic effects of resettlement. Two primary lines of reasoning served as the study's motivation. First, most residents in resettled villages lead lives that are regressive. Instead of realizing an upward increment in their standard of living, the opposite occurs. The members of the resettled communities are left to their own devices in terms of survival, when the actual operations of the mine take off, while the mining companies tantalizing promises that convinced the people in the areas of operation to accept the proposals on resettlement are completely abandoned. Secondly, the challenges facing resettled mining communities are enormous (Cernea, 2016) and basic amenities provided and handed over to the community by mine companies are not properly taken care of in terms of proper management for the benefit of the entire community. This makes some of these valuable assets belonging to the community deteriorate at a faster rate, thus leaving the entire resettled society in a worse state than it was before. People are preconditioned by a system of social and economic impacts that form are part of society

and communities. These effects are considered a barrier to people living in resettled mining villages.

It is apparent that people in the resettled communities persistently find difficulties in the areas of income, employment, livelihoods and morbidity issues. It is no surprise that the youth in these communities often clash with mining companies or resort to illegal mining within concessions as a means of survival when faced with hardship (Abuya 2013).

Furthermore, the management and leadership of some of these mining companies leave most of these resettled communities to their fate without putting in place any intensive level of maintenance for some reasons best known to them. This causes most of the infrastructural facilities put in place to deteriorate in the shortest possible time. For example, in the Salman community, every household interviewed revealed that their brand-new roofing sheets, used for their cherished newly constructed block houses, have all rusted within 10 years of their construction, and now they are facing the problem of leakages, especially when it rains. Socioeconomic factors seem to be the primary factors influencing the animosity between the mining firms and the young people in several of these relocated towns. The prominent of these socioeconomic issues among the young men was lack of employment (Adonteng 2017; Wilson 2019 and Twerefoo (2021). It is exceedingly difficult for the residents of these relocated places to escape the shadow of poverty and begin their much-anticipated new lives (Adam 2015).

The second argument posited many resettlement studies mainly focused on compensation for the psychological effects and development projects proposed by mining companies to pave the way for their operations (Anderson 2015). Hence, it was imperative to conduct research that delves into other domains, particularly socioeconomic issues, where some of these effects have dire consequences on the well-being of individuals. In addition, the study sought to examine the following

research topics in accordance with the reasons outlined here: How have the income levels of people in the resettled communities been affected?

- Are employment opportunities available for resettled people?
- How has the people's way of life changed, both before and after the relocation?
- What morbidity issues confront people in the resettled communities?
- How are the authorities mitigating the socioeconomic issues confronting the resettled communities?

The review of the literature was presented from two perspectives; the first part of the literature looked at the overview of mining resettlement (Chapter Two). The researcher provided a global trend of how resettlement activities were carried out in many areas of the world where minerals meant for development had been discovered, and it had become necessary to move the indigenes to a newly reconstructed place for a smooth take-off of such mining operations. The reviewed literature discussed the effects of resettlement and sustainable livelihood issues, which became paramount in almost all the resettled communities. In addition to this, the researcher examined resettlement in general, voluntary and involuntary resettlements, the effects of resettlement, and the political ecology of resettlements. This revealed a significant number of effects on income, employment, livelihood and morbidity issues that confront the people living in that area.

Furthermore, the literature also focused on the consequences of mining operations on their immediate environment. Well-meaning intentions accompany development-induced displacement and resettlement (DIDR) for the residents of impacted communities. But the problem with these programmes' execution is that it breeds discontent, which pushes the impacted population more into poverty.

The researcher also investigated the impact of MIDR on specific areas of their lives, such as their income, employment opportunities, livelihood and morbidity issues that confront them in their newly occupied abode. Finally, in this chapter, the researcher

delved deeper into some of the mitigating measures put in place to reverse the untoward situations that people find themselves in now.

Chapter Three covered the study's theoretical foundations, including the least economic development (LED) theory and the impoverishment risk and reconstruction (IRR) model, as a collection of presumptions, ideas, expectations and beliefs. The IRR and LED theories also direct the pursuit of understanding the significance of resettlement and how individuals view its totality. These theories examine the conditions surrounding the corporation's efforts to resettle individuals in a particular community, as well as the participation of those impacted in order to reach a mutual understanding. Above all, the relevance of applying these theories is to expose the risks and challenges experienced by people in a resettled community and their day-to-day living and coping in their new environment. The researcher used the theories to distinguish the interconnection of potential risks in landlessness, joblessness and homelessness. This made it easier to raise awareness and understand the dangers of marginalization, which include the disruption of official schooling, denial of access to public services, a rise in food insecurity, and denial of access to shared resources like land, wood, and water. The literature study provides a full explanation of the issues surrounding social disarticulation, including the breakdown of social groups, the disruption of families, the breakdown of mutual aid networks, and the disruption of the chieftaincy system.

The theory also highlighted the comparison of the LED theory in some areas, such as Sierra Leone and South Africa (Wilson 2019: 67), to identify the implementation, challenges, and benefits of the theory of LED and how it can be applied in newly resettled communities.

The researcher also examined empirical studies to examine how shifts in income levels, the availability of jobs, problems with livelihood and morbidity affected people's ability to relocate. A critical examination was also done empirically on the sustainable livelihood approach (SLA) and how it can be replicated in the newly resettled mining

communities at Salman, Nkroful, and Teleku-Bokazo. The livelihood model, which forms part of the study's analytical framework, provided the basis for the evidence and highlighted the use of the livelihood model, adjustments to livelihood, and coping techniques. The empirical aspect also looked into the morbidity challenges of some resettled communities. Thus, pay much attention to areas such as sickness related to unsafe water supply, respiratory tract diseases, vector-borne diseases, and sexually transmitted diseases. In conclusion, the study was enriched by the inclusion of various mitigation measures implemented in certain resettled communities. These measures included alternative livelihood programmes (ALPs), capacity-building programmes (CBPs), and the provision of modern amenities to support the lives of those affected in resettled communities. Finally, the chapter synthesized the theories to delineate the elements of a conceptual framework proposed by the study.

The methodology utilized in this research, as outlined in Chapter Four, was grounded in a philosophical foundation encompassing a range of philosophical perspectives. These perspectives included philosophical worldviews, post-positivist worldviews, social constructivism worldviews, advocacy and participatory worldviews and pragmatist worldviews. Adopting these worldviews requires taking into account the fact that each consists of three interrelated components: research methodology paradigms, inquiry strategies and philosophical worldviews (Creswell 2014: 6). These philosophical worldviews serve as frameworks that elucidate why researchers opt for specific research designs (Creswell 2008: 3, cited in Abutabenjeh 2018: 9). When choosing between qualitative, quantitative, or mixed methods approaches for their research projects, researchers base their decisions on these ideologies. The social constructivist worldview is often connected with qualitative research methodologies, whereas the positivist worldview frequently prefers quantitative research. It emphasizes understanding participants' perspectives on the phenomena under study, drawing on their life experiences and perceptions to fully comprehend the contextual background. Consequently, the investigation into the socioeconomic impacts of mining resettlement is purposefully situated within the social constructivist worldview.

The explanation of the ontological character of social reality is the main goal of adopting this worldview. Consequently, adopting this paradigm depends on the researcher's goal to characterize, elucidate and evaluate the socioeconomic elements of communities impacted by mining resettlement. The study's ontological goal was to get a sense of the real impact of socioeconomic factors on populations that had purposefully resettled in Ghanaian mining sites. As such, it would be reasonable to interpret the study's description as presuming a subjective technique.

The researcher used the study's epistemological framework, constructionism to interpret social and economic impacts as subjective constructs made by members of a given group or culture in order to conform to certain customs. This framework views knowledge and meaning as constructed rather than discovered, particularly regarding the impact of socioeconomic factors on individuals residing in mining resettlement communities in Ghana.

This study adopted a qualitative method research approach, which involved conducting interviews to solicit the views of people in a chosen area on certain situations in which they find themselves. Ultimately, this means conducting research using a solitary technique that exclusively employs a qualitative approach known for its prowess in gathering detailed data from the attitudes, experiences, actions, and sentiments of individuals in a community that has been resettled through semi-structured interviews and focus groups.

The study's target audience includes opinion leaders, household heads and participants chosen for focus groups in the mining resettlements of Salman, Nkroful, and Teleku-Bokozo. It also includes the relevant mining institutions. The study's sample included nine (9) in-depth interviews in each community, for a total of twenty-seven (27) direct interviews, and nine (9) focus groups in each community, for a total of twenty-seven (27) focus group discussions. The target population for the study consisted of approximately sixty units of households. The total sample size of fifty-four (54) was separated into a well-defined group using quota sampling, while the selection

of participants employed purposive sampling based on their willingness to participate in accordance with DUT ethics standards. Thematic coding of the transcripts obtained from the interviews and discussions was conducted using NVivo version 12 to analyze the qualitative data obtained.

The study's findings, proportionate to previous studies and the theoretical framework in Chapter Three indicate from the qualitative results that bulk incomes from cash crops have eluded them as they now rely on subsistence farming to grow food crops to sustain themselves. The result, however, makes it clear that a few people who managed to seek land elsewhere to continue their farming operations as usual are succeeding in terms of income acquisition activities. The qualitative results also show how those who are making it quickly adopted a particular coping strategy method to lessen their burden (Owen 2018). Poor households frequently utilize coping mechanisms to minimize and escape the stress and shocks of uncertain livelihoods throughout the year. They also change their consumption habits, such as spending less on food (Davis 1963; 1966, cited in Owen 2018).

The socioeconomic effects in the area of employment opportunities available to the resettled people also revealed three main problems, including employment discrimination, unemployment, and loss of career focus. The literature on mine-induced displacement and resettlement, as defined by Downing (2002), provides evidence that the mining industry is not socially viable and causes significant issues with employment and displacement. These findings are consistent with that literature. The findings show that job prospects in the mines for the majority of the people living in the resettlement villages are few. Age concerns and a lack of the required skills and talents are two acceptable explanations for this deprivation.

Evidence from this study suggests that the people had reliable sources of income, had access to the community's resources, and appeared to have delighted in their entire way of life prior to the onset of mining operations in the region.

The findings after the resettlement are contrary to the livelihoods before the mining operations. The participants claimed to have received inadequate compensation, lost occupational activities, faced a high cost of living, resided in deplorable shelters, and had poor health status. Most of the individuals who were interviewed and participated in the focus group discussions stated that they were currently in a bad situation citing their inability to pursue their professional activities, which made it harder for them to live in the communities.

The findings on livelihood after resettlements also revealed that the people claimed they were inadequately compensated for the destruction of their farmlands and properties. The mines disputed this claim and asserted that due process was followed to compensate all the affected people in their concessional areas.

The study's data also indicates that the high cost of food in the areas contributes to a high cost of living. It was explained that this effect is being experienced as a result of a high influx of people into the area to work and others in search of work from the mining companies. An empirical study established that two things are to blame for the circumstances that the residents of these towns found themselves in.

The first is the pay difference between mine employees and those classified as expatriates, who benefit from internationally competitive pay scales. This also exerts much pressure on the local economic development, which in turn drives up the food prices in the area, leading to a very high standard of living in the affected places. It has been proven adequately that before the coming of the mines, the people possessed their land for farming and the easy access to community properties, such as water and forests cushioned their livelihoods.

The data analysis results indicated that residents in the three resettled communities experienced comparable health problems attributed to diseases associated with their new location. The findings showed that malaria, coughing and diarrhoea were the primary morbidity issues in the studied areas, with mention of elephantiasis in a

particular community (Salman). The people in the region described malaria as a long-standing issue due to its location in the western region of Ghana, which is an ideal environment for the mass breeding of mosquitoes. They explained that this situation was aggravated by a pit containing stagnant water left uncovered by mining companies, coupled with the people's practice of not attending to weedy and choked gutters in their vicinities. The empirical studies done in Teberebie, also in the same western region of Ghana, tagged one of such uncovered pits with stagnant water as “the headquarters of mosquitoes”.

In addition, diarrhoea is one of the morbidity issues prevailing across the three communities. People have been complaining about the quality of water obtained from the wells and boreholes constructed by the mines for the affected communities, which they use as a replacement for the loss of access to their water bodies. Some are using the water, but others are still not sure of the quality of the water from the wells and borehole sources at their disposal.

The people in the three towns recognized the frequent coughing as another morbidity problem. Salman, Nkroful and Teleku-Bokazo communities are very close to the concessions of both Adamus and Endeavour mining operations. Large amounts of dust are frequently discovered hanging in the air, ready to settle in the towns after blasting. The roads in the three communities are not tarred, so the dust emanating from the movement of vehicles in and out of the communities cannot be overemphasized. These have resulted in rampant coughing, chest pains, and reports of headaches in the area under study.

Anywhere resettlement occurs due to involuntary displacement, it inevitably encounters problems. Given this, theories support the fact that mining-induced displacement and resettlement (MIDR) must always find means to mitigate these problems to either eliminate them or minimize the effect. The findings confirmed that the mining companies have implemented mitigation measures to alleviate the challenges faced by the affected communities, including the provision of varieties of restricted farming,

capacity empowerment programmes, the provision of block housing, the building of schools and the construction of clinics.

## **7. 2 Reflections**

This section presents the researcher's personal observations and reflections on the study in accordance with the goals of the research as stated in Section 1. 3. 1.

### **7. 2. 1 Reflections of the study**

This subsection delves into the insights gleaned from the research questions, shedding light on the reflections derived from them.

#### *7. 2. 1. 1 Socioeconomic effects of income on resettles*

The results from both the targeted area in-depth interview and the focus group discussions (FGD) show that the effect on income was seen from two perspectives. Semi-structured interviews and focus groups were used to collect data on the socioeconomic effects of income for resettlement. First, before the coming of the mines, the people in the affected communities were getting regular incomes from the activities they had on their lands, such as farming and all the other supporting activities like fishing and petty trading. To sum it up, in the area of income, people had various means that enabled them to generate income to take care of their daily lives. It was revealed during the analysis and the ultimate findings that most of the people in the displaced communities were farmers, who mainly depended on farming activities for their income.

#### *7. 2. 1. 2 Socioeconomic effects on employment*

The study further reflects that employment opportunities were a key factor in softening the hearts of the people to allow mining operations to take place in the areas. The findings brought up employment discrimination, unemployment, and a loss of career focus. This resulted in what is referred to as stagnation of livelihood among the members of the communities.

### *7. 2. 1. 3 Socioeconomic effects on livelihood*

The aim of examining the livelihood systems within the communities in this research was to understand how people sustained their livelihoods both before and after the resettlement process.

#### *7. 2. 1. 3. 1 Livelihood before the resettlement*

The research results gleaned from in-depth interviews provide insight into the community's way of life prior to the onset of mining operations. Participants centered their lifestyles on agriculture, including the production of both food and cash crops. They also had access to a variety of neighbourhood resources, such as wooded areas and water supplies. These results were further supported by focus group talks, demonstrating the community's reliance on intangible resources like networks, social structures, cultural locations, and systems of mutual support.

#### *7. 2. 1. 3. 2 Livelihood after the resettlement*

Findings following the resettlements revealed that the people in the three communities cherished their new upgraded housing status bequeathed to them after departing from their mud houses. Despite this positive aspect of the housing issue, many concerns overshadowed the favourable aspects. These include inadequate compensation, loss of occupational activities, high cost of living, deplorable shelter after some years of establishment of the housing projects, and poor health status.

#### *7. 2. 1. 4 Socioeconomic effects on morbidity*

The findings on the issues of morbidity captured a few areas that the participants in the communities see as prevalent in their area of resettlement. These include malaria, coughing, diarrhoea, and elephantiasis in the case of the Salman community. The statistics, gathered through semi-structured interviews, shed light on the socioeconomic impacts of sickness on the resettled populations. Since the three communities all lie in the tropical zone of Ghana, some of the morbidity issues the three communities were facing were similar and considered the general morbidity issues

covered in the areas under study. The issue of malaria was number one on the list, as the tropical region supports the breeding of the vector of the disease coupled with human creations like choked gutters and a weedy environment, as well as uncovered open pits filled with stagnant water.

### **7. 3 Mitigation measures**

The researcher made an effort to investigate some of the mitigation strategies implemented by businesses to lessen the suffering of the local populace. The analysis also shows that the mining corporations implemented mitigating measures, including a variety of restricted farming, capacity empowerment programmes, the provision of block housing, and the construction of schools and clinics. In addition to the aforementioned, the focus group discussions revealed the following mitigation strategies put in place for the residents of the towns: increasing economic gains, diversifying employment opportunities, lowering morbidity problems and increasing agricultural activity.

### **7. 4 Institutional level**

These are the outcomes of the semi-structured interviews used in the collection of data from the Community Relations Officers and the personnel from the Evaluation Board on what they have installed for the resettled communities. The results showed what are known as "hand-in-hand" programmes, which involve microenterprise development, agriculture capacity training, microcredit administration, and input supply for revenue-generating activities. It also showed the mining companies' involvement in community sensitization programmes on health issues such as HIV/AIDS, malaria, and diarrhoea, among others. According to the officials, they have also paid all manner of compensation to the affected people in the communities. The findings revealed that problems still exist in the communities despite the efforts of the mines to help restore normalcy.

## **7. 5 Personal reflection**

Engaging in the research process has instilled in the researcher a critical approach to evaluating data pertaining to both voluntary and involuntary migration. Through this process, the researcher has gained insight into the complexities surrounding the establishment of peaceful coexistence among neighbouring communities affected by mining activities, thereby comprehending the challenges inherent in fostering harmony amidst differing interests and perspectives. The researcher now labours to determine the socioeconomic issues prevailing in all the communities resettled by mining companies. The researcher's exploration of socioeconomic issues has provided a holistic understanding, enabled a critical diagnosis of resettlement challenges and offered insights grounded in real-world experiences rather than theoretical constructs. This newfound awareness encompasses the intricate interactions among individuals affected by mining-induced development in specific regions. Equipped with this knowledge, the researcher is better prepared and oriented to utilize a variety of research instruments effectively, ensuring that research endeavours yield desired outcomes.

This research has given the author a deep appreciation for the difficulties faced by those who were forcibly relocated and their attempts to adapt to new environments and the initiatives taken by mining firms to promote goodwill among surrounding populations. This experience has empowered the researcher to become a fervent advocate capable of articulating resettlement issues with greater clarity. In the context of resettlement, it is evident that large-scale resettlements often occur without the heads of households possessing the necessary documentation that entitles them to anything beyond the plot of land on which their new dwellings are situated. It becomes difficult to use it as collateral security due to a lack of proper documentation. Above all, the circumstances in which involuntary resettled people are exposed become a benefit when the people are properly sensitized on how to put their money to proper use and are continuously empowered, appreciated as the actual land owners, and supported by the mines.

## **7. 6 Contribution of the study**

An overview of the study and the researcher's viewpoints was given in the part before this one. The study's contributions are further discussed in this part, which includes both theoretical and practical consequences.

### **7. 6. 1 Theoretical contribution**

As highlighted in existing literature, mining resettlements, involuntary displacement and subsequent resettlement possess their own set of challenges (Cernea 2016). Analyzing the socioeconomic ramifications of mining resettlement serves to ascertain the effectiveness of solutions and aid proposed in existing literature in addressing the socioeconomic issues encountered by those subjected to forced relocation. This is also crucial in identifying any undisclosed barriers within the scope of the guidance provided by the literature that hinder affected individuals from fully realizing the benefits of the resettlement agenda. The study adds to the body of knowledge about mining-induced displacement and resettlement in Ghana. Therefore, the study aims to contribute to the current body understanding of resettlement issues, which typically surface when a specific group of afflicted individuals resettle in a developing area.

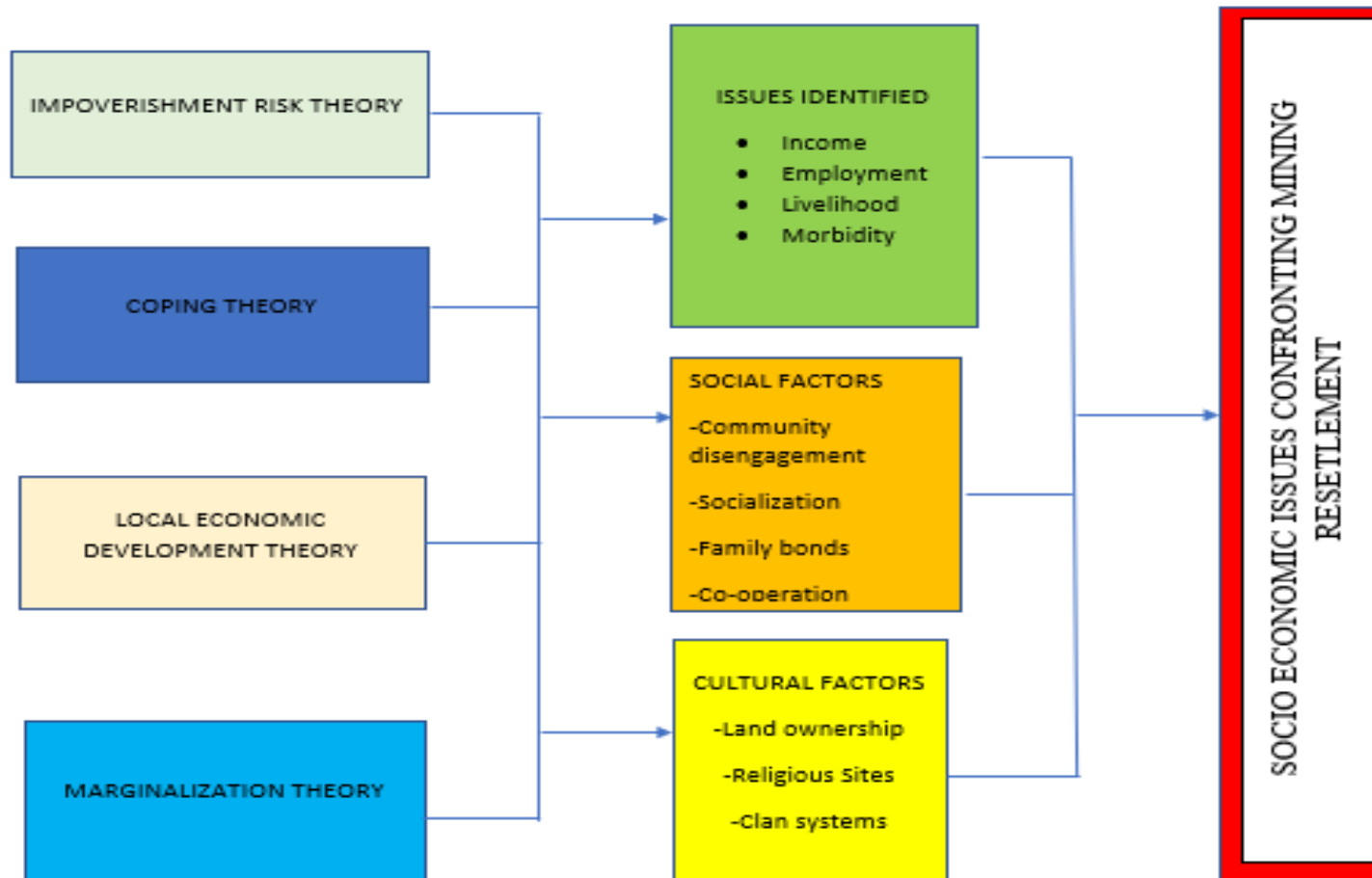
When considering the dearth of research on socioeconomic difficulties related to resettlement in Ghana and throughout Africa, the study's findings add significantly to our understanding. Therefore, the findings of this study contribute to and enrich the existing literature, providing further insights into resettlement challenges, particularly in the context of a developing nation like Ghana.

Moreover, relocation usually takes place in settings where different local and external elements, such as the physical surroundings, social and political situations, and local market dynamics, have distinct effects on livelihoods (Carney 1998). Since this study is within the purview of the state and mining companies, it will thus contribute towards promoting quality and sustainable resettlement for the affected communities.

Furthermore, the study identifies many opportunities to improve resettlement areas in Ghana enabling the people to reap the benefits of their land's mineral wealth. Moreover, as the initial presumed sustainable materials begin to deteriorate as time goes by, there is a need for those in charge of the entire resettlement programme to revisit the communities to ascertain the level of deterioration in the community structures and offer the needed assistance to the communities affected. The high speed of deterioration of facilities bequeathed to people in a resettled community highlights the necessity of not abandoning such communities' years after the resettlement has taken place.

The study also offers a conceptual framework (Figure 7. 1) that might be used as a reference model for upcoming studies on the socioeconomic situation of displaced people and how it influences their means of subsistence, employment, manner of life, and health.

As depicted in (Figure 7.1) below, mining resettlement communities are confronted with many issues among which could be income, employment, livelihood and morbidity. Others can be viewed from social perspective such as community disengagement, socialization problems, breaking up of family bonds and co-operation. Resettlement also brings to the fore cultural factors such as land ownership issues, destruction of religious sites and breaking up of clan systems especially in Africa. It is the researcher's view future researchers should draw the attention of policymakers and government to the issues of resettlement which include social and cultural problems that affect resettled communities in order to address them accordingly. Among the suggested theories which can be adopted to ameliorate the situations in mining resettlement communities are; Impoverishment Risks Reconstruction, Copying, Local Economic Development and Marginalization theories.



*Figure 7. 1: Model of socioeconomic effects affecting resettled mining communities.*

*Source: Construct by Researcher*

### **7. 6. 2 Practical contributions**

We live in a world dominated by power played by those at the helm of affairs as custodians of the sovereignty of a country. Since this study is greatly influenced by the power play between the state and the mining companies, it will thus contribute to the formulation of policies on resettlement. This in and of itself reflects the requirement of more work that is needed to remedy the prevailing socioeconomic issues in resettled communities.

The study was somewhat spurred by Cernea's (2016) investigation into whether new kinds of poverty might emerge while attempting to mitigate or combat pre-existing poverty, which has concerned a number of planners, government officials, scholars and development advocates regarding resettlements. Moreover, the study aims to furnish policymakers with insights into the obstacles encountered by individuals in resettled communities, aiming to offer sustainable and effective solutions to address these challenges. It endeavours to achieve this by providing policymakers with recommendations on how to continue supporting affected individuals within resettled communities. In Ghana, the authorities of district assemblies can significantly contribute by spearheading local economic development (LED) initiatives in the region. Thus, by formulating or modifying policies to support the affected people and propel them towards a meaningful life, we can orient people to understand their new way of life and to make the most of their predicaments.

Contrary to previous beliefs the research suggests that acquiring multiskilling is essential enabling individuals to utilize available resources effectively for a meaningful post-resettlement life. Consequently, there is a need to engage resettled individuals, public officials, and development advocates in crafting an integrative and inclusive approach to enhance development policy and strategy. This approach is crucial for addressing the challenges and hardships faced by segments of society and devising measures to rectify, amend and prevent them (Cernea 2005).

In order to address the socioeconomic repercussions that have an impact on the livelihood of the residents of the villages that the firms themselves have resettled, the research also produced a need for and recommendation for revisiting resettled areas. In the end, the study provides a framework to identify the concerns confronting the people in the resettled areas and suggests additional measures to mitigate the socioeconomic problems associated with mining resettlement in Ghana and other nations facing comparable challenges.

## **7. 7 Evaluation of the study**

This section attempts to evaluate the study, with a focus on research evaluation utilizing obtained data to verify dependability. The evaluation criteria for findings include credibility, transferability, reliability, and confirmability (Jackson 2013: 49–62). Credibility, for example, necessitates that the researcher to explicitly tie the research findings to the current environment in order to justify their accuracy. This concept ensures that the researcher correctly represents the lived experiences of participants rather than making personal assumptions. It also necessitates that the researcher and participants refrain from making preliminary judgments while collecting data. Prior to data collection, the researcher had no preconceived beliefs regarding the socioeconomic challenges impacting relocated communities in Ghana and faithfully documented the narratives of participants during interviews.

### **7. 7. 1 Transferability**

The concept of transferability refers to the ability to apply findings from one environment to another, to the extent that research conclusions can be used or generalized to multiple settings or situations. The principle of transferability relies on providing a comprehensive account of the inquiry's context and content, offering sufficient details to enable others to develop alternatives (Shenton 2004). To ensure transferability, the researcher

gathered data from various cases across resettled communities in the western region of Ghana.

### **7. 7. 2 Dependability**

To ensure dependability, rigorous examination procedures must be used to meet the standard of rigor, which includes analyzing both the process and the results of the investigation (Shenton 2004: 63–67). Furthermore, dependability is dependent on giving full methodological descriptions that permit study replication while maintaining consistency in both the research process and the results. The major goal of dependability is to reduce the influence of the researcher's qualities and preferences, ensuring that the results accurately reflect the informants' experiences and thoughts (Shenton 2004: 63–75). To ensure dependability, the researcher painstakingly defined the research technique and strictly followed it throughout the investigation.

### **7. 7. 3 Confirmability**

The final factor critical to guaranteeing confirmability and trustworthiness is the methods used to collect primary data, such as reflective journaling, audit trails, diagrams, and other investigative procedures (Lincoln and Guba 1985; Shenton 2004). To increase the study's credibility, the researcher thoroughly documented both raw and analyzed data, allowing for verification of fieldwork procedures. Furthermore, the researcher incorporated verbatim transcripts of qualitative data during the analysis phase, seeking to maintain the legitimacy of the findings.

## **7. 8 Limitations of the study**

Although the study's conclusions provide insight into the socioeconomic effects of mining resettlement in Ghana, it is crucial to remember that these conclusions cannot be applied universally because of restrictions on the study's sample size and geographic scope. The Nkroful, Teleku-Bokazo, and Salman communities in western Ghana were the specific cases that were the focus of the study. As such, extrapolating the results to different resettlement scenarios could prove difficult. It is imperative to acknowledge

that the opinions offered by this study are those of the resettled community members residing in the Ellembelle District of Ghana's Western Region. It is possible that not all resettlement communities in Ghana have the same experiences and perspectives represented in these findings.

## **7. 9 Recommendations**

Policy recommendations for policymakers and resettlement advocacy groups:

### **Resettlement Policies**

- Comprehensive and proper implementation of displacement plans is imperative. The business sector should bear the adequate costs of executing these plans, ensuring they are not carried out hastily or chaotically. Adherence to World Bank directives on involuntary resettlement is essential for effective implementation.

### **Participation in negotiations**

- Resettled individuals ought to have the authority to negotiate with administrative mining entities for the terms of their resettlement. Even if their position in these discussions is asymmetrical, allowing them to fully participate can result in conclusions that are agreeable to both of them.

### **Adequate and sustainable compensations**

- Individuals with ancestral ownership over damaged lands should be compensated for their land, or other lands should be made available to them as an option. The practice of compensating only for the portions of farmland impacted by mining expansion, rather than the entire land, should be discontinued. This is because the remaining land becomes unusable for farming alongside mining activities.

### **Standardize evaluation methods**

- Mining companies standardize and eliminate arbitrariness from their valuation methods for crop compensations.

### **Reduction of bureaucratic processes**

- Given that arbitrary compensation techniques frequently cause friction and confrontations between impacted farmers and mining

officials, government control is crucial to ensuring fairness and justice. Mining corporations should also simplify the bureaucratic processes involved in paying compensation. In the absence of a more equitable compensation structure, mining must permit impacted farmers to bargain for a fair price for their farmlands.

### **Rights of the people be made known**

- It is important to inform displaced people of their rights, as stated in the World Bank's guidelines on forced relocation. Additionally, displaced individuals should be informed about the potential economic and social risks associated with their situation. It is also essential to anticipate negative environmental impacts. Mines and local authorities could engage people in professional education programmes aimed at mitigating the risks associated with displacement.

### **Adherence with eco-friendly practices**

- Eco-friendly practices should be given priority in resource extraction, in accordance with the principles of sustainable development. It is imperative that the mining industry adhere to corporate social responsibility guidelines, particularly in light of the continuous presence of surrounding populations.

### **Development of local communities**

- Financial compensation should be directed towards the development of local communities. Encouraging entrepreneurship and providing opportunities for individuals to start their businesses can help prevent emigration. Programmes for microcredit can also be quite helpful in promoting entrepreneurial activities.

### **Entrepreneurial skills development**

- Apart from monetary recompense, assistance ought to be extended for supplementary sources of income, including raising cattle, manufacturing soap, extracting palm oil and palm kernel oil, and engaging in small-scale commerce, in addition to farming. The resilience of rural households depends on this diversification of rural enterprises.

- The introduction of alternative livelihood programmes and support efforts is one of the main ways to lessen the negative effects of mining on rural livelihoods and help impacted farmers deal with the livelihood crisis brought on by mining.

### **Frequent education of community members**

- Preventing and managing widespread diseases requires educating the community on the effects that mining operations have on the environment and human health. Mining companies, government agencies, and NGOs should collaborate to address the high incidence of diseases in affected communities. Continuous education on pollution and blasting activities and their effects on the residents is essential to minimize health hazards.
- Mining companies possess knowledge about their concessions and expansion plans, so they should delineate boundaries and provide communities with information about which lands are designated for mining activities and the schedule for expansion. This transparency is expected to alleviate fears among farmers about working on existing lands and encourage those who have refrained from farming due to such concerns to resume their livelihood activities.

### **Access to company buses**

- Transportation costs have grown as a result of cities and farms being farther apart due to access route alterations caused by mining operations. The communities should set up bus transit services to address this. To guarantee that these services are accessible and affordable for community members, mining corporations should support and subsidize them, even though they could be run privately.

### **Employment opportunities**

- Providing employment opportunities is another essential way to help rural households achieve sustainable livelihoods. Given that farming might not be as desirable as it once was, mining corporations ought to think about providing temporary jobs to impacted rural households. In the event that these households are deemed incapable of finding work in the mining industry, on-the-job training may be offered to them

in anticipation of their future career prospects. To further strengthen household livelihoods, mining employment prospects should be extended to farmer's wives. In order to guarantee continued benefits for impacted rural households, mining companies should continue to give contract jobs to the community and convert them into regular roles. This will lessen livelihood vulnerability, increase financial resources, and allow rural households to diversify their sources of income.

Moreover, it is imperative to ensure that the offspring of impacted farmers have access to work prospects upon graduation in order to sustain household subsistence. With this strategy, the future generation will be able to support farmers when farming loses profitability.

### **7. 9. 1 Recommendations for future research**

The restrictions mentioned in Section 7. 8 above serve as the foundation for the study recommendations. The study suggests using larger population samples to support the conclusions drawn from this investigation. Additionally, the study suggests using an experimental design and a research tool like a questionnaire to introduce quantitative and qualitative data, respectively. It is also advised that future studies examine resettlements in various Ghanaian regions in order to make clear distinctions between similarities and variances.

### **7. 10 Conclusion**

Based on the study findings, the ensuing inference is reached: a social and economic nature of problems exists in well-established mining resettlements in Ghana. Although serious efforts are being made by the mining companies to reduce or eliminate these socioeconomic effects, they persist among the people. The continued vulnerability of individuals persists due to the inability to reinvest compensation from lost assets and the absence of diverse sustainable activities to support them. To some degree, the culture, social norms, and values of the resettled populations make it challenging for the

impacted individuals to implement the suggested coping mechanisms. This has reinforced the thinking of those with negative attitudes towards resettlement that once it is done, the authorities should wash their hands completely from it, and as a consequence, people avail themselves of illegal mining operations on legitimately acquired mining concessions.

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## **APPENDICES**

### **APPENDIX 1: Articles and Book chapter published prior to enrolling into the PhD**

#### **(a) Peer Reviewed Journal Publications.**

1. Nguah, J. A. & Asare S. S. (2015). Assessment of the impact of Training and Development on Employee Performance and Productivity. *Africa Development and Resources Research Institute Journal, Ghana: Vol. 25, No. 3(3)*. Pp. 51-68. (ISSN: 2343-6662, 31 December 2015).

2. Nguah, J. A. (2015). An analysis of medium-term plans on the activities of District Assemblies in Ghana: a case of Tarkwa Nsuaem Municipal Assembly. *Africa Development and Resources Research Institute Journal, Ghana: Vol. 25, No. 2(3)*. Pp. 1-21, (ISSN: 2343-6662, 30 November 2015).

3. Nguah, J. A. & Owusu-Acquah, E. (2016). Management of small-Scale Businesses in Ghana. A case study of selected businesses in Takoradi. *Africa Development and Resources Research Institute Journal, Ghana: Vol. 25, No. 4(3)*. Pp. 47-59, (ISSN: 2343-6662, 29 February 2016).

4. Owusu-Acquah, E. & Nguah, J. A. (2016). Investigating the challenges confronting small scale businesses in assessing financial resources in Ghana. A case study of 150 selected small-scale businesses in Takoradi Metropolis. *ADRRRI Journal of Arts and Social Sciences, Ghana: Vol. 14. No. 4(2)*, Pp. 16-34, (ISSN2343-6891, 30 September 2016).

5. Nguah, J. A. & Mensah, K. (2016). The Emerging Oil Industry in Ghana: Socioeconomic impact on the people of the fishing communities in western region. *International Journal of Petroleum and Gas Exploration Management*. Vol. 25, No. 1, Pp. 1-25, March 2016. published by European Centre for Research Training and Development UK ([www. eajournals. org](http://www.eajournals.org))

#### **(b) Unpublished articles**

1. The perceptions of Wassa West Community about 'Galamsey' operators.

2. The Decentralization Policy in Ghana: Achievement, Problems and the way forward.

(c) Chapter in Book Edited

1. Yawson, Nguah, Amofa (2016). Fundamental of Management, (4<sup>th</sup> Edition). abundance Grace Printing Press UCC - Cape Coast. (ISBN: 978-9988-2-2896-9).

## APPENDICES



### APPENDIX A: LETTER OF INFORMATION

**Title of the Research Study:** Socioeconomic effects of mining Resettlements in Ghana. Case study Western Region of Ghana.

**Principal Investigator/s/researcher:** (James Nguah Acheampong, PhD Public Management)

**Supervisor/s:** Prof Nirmala Dorasamy

#### **Brief Introduction and Purpose of the Study:**

Mining Induced-Displacement and Resettlement (MIDR) has come to stay with human beings as we keep on extracting mineral resources from the earth crust. Displacement comes with its own socioeconomic issues. Given the above, this study aims to find out the various socioeconomic effects that mining induced-displacement and resettlement has brought to the people who have been resettled.

#### **Greeting:**

Good Day and how are you?

#### **Introduce yourself to the participant:**

I am James Nguah Acheampong, lecturer at Takoradi Technical University and currently a student at Durban University of Technology doing research for my post graduate Doctorate degree in Management Sciences.

**Invitation to the potential participant:**

I would like to invite you formally to participate in the research that I am conducting in your area. All the information needed for the study will come from your community and your willingness to take part in the study will go a long way to make the work very successful. Thank you.

**What is Research:**

Research can be defined as a methodical investigation or inquiry aimed at generating novel knowledge that can be applied broadly. Essentially, research involves either developing new knowledge or utilizing existing knowledge in innovative ways to produce fresh concepts, methodologies, and insights.

**Outline of the Procedures:**

I am conducting research on the topic, socioeconomic effects of mining resettlements in Ghana. Case study western region. The aim of the research is to ascertain the various socioeconomic effects of mining induced resettlement, with specific focus on the western region of Ghana. The objectives are to investigate how the income levels of people in the resettled communities have been affected as a result of resettlement – to find out the employment opportunities available as a result of the resettlement. – to discover the participants' livelihood status before and after the resettlement – to highlight morbidity issues that have taken place as a result of resettlement and finally to assess measures put in place to mitigate these socioeconomic issues.

I am to come to your home to conduct an interview and also to hear you about what you have to say on the above objectives. I am to use a recorder machine to record our conversation in which everything to be discussed will be kept confidentially and will be used for the purpose of study only. You are required to speak to me for not more than thirty minutes. My expectation is that a hundred and fifty participants will take part in the study.

**Responsibilities of Participant:**

Upon receipt of the permit from the gatekeepers from the various mining companies, individual's sampled community members and officials will be contacted to seek their consent in writing to partake in the study. Thereafter, interview dates will be scheduled in consultation with each participant.

**Risks or Discomforts to the Participant:**

Participants will not be required to engage in any actions or provide statements that could potentially cause discomfort, compromise their integrity, lower their self-esteem, or lead to feelings of embarrassment or regret. Additionally, it is not anticipated that the participants' contributions to the study will result in any adverse reactions.

**Benefits:**

The benefits of the research include the following.

- Assist in the design and implementation of Resettlement Action Plan (RAPs) that would better consider socioeconomic issues face by involuntary movements.
- It will help mining companies to understand problems which emerge after a resettlement and how to mitigate them.

**Reason/s why the Participant May Be Withdrawn from the Study:**

Participation in the study is optional, and individuals are free to withdraw at any point for personal reasons, such as time constraints for interviews.

Withdrawal from the study will not result in any negative consequences for the participants.

**Remuneration:**

Participants will not receive any form of payment or compensation for their involvement in the research.

**Costs of the Study:**

The participants are not expected to cover any cost towards the study.

**Confidentiality:**

The data collection process will not involve access to confidential personal data. Participants will be assured of anonymity and confidentiality of their responses. The interview recordings, which do not contain the name of the participant, will be stored for a period of four years, and will, thereafter, be disposed accordingly.

**Results:**

The results from this study will be presented in a research report, which will be available at Durban University of Technology. If you wish, you will be provided with a summary of the research findings. New developments emerging during the course of the study could be shared with the participants using their community centres as a meeting point.

**Research-related Injury:**

There is no anticipated injury to the participants as the participants will not perform or do any physical acts that may warrant an injury in the course of the performance.

**Storage of all electronic and hard copies including tape recordings:**

The interview recordings which do not contain the name of the participant, will be stored for a period of four years, and will, thereafter, be disposed accordingly.

**Persons to Contact in the Event of Any Problems or Queries:**

Please contact my supervisor on e-mail: [nirmala@dut.ac.za](mailto:nirmala@dut.ac.za) (Tel: +27722678704), the researcher at 0244169942 or the Institutional Research Ethics administrator on 031 373 2900. Complaints can be reported to the DVC: TIP, Prof F. Otieno on 031 373 2382 or [dvctip@dut.ac.za](mailto:dvctip@dut.ac.za).



## APPENDIX B: LETTER OF CONSENT

**Full Title of the Study:** Socioeconomic effects of mining resettlements in Ghana. Case study Western Region of Ghana.

**Name of Researcher:** James Nguah Acheampong

### **Statement of Agreement to Participate in the Research Study:**

- I hereby confirm that I have been informed by the researcher, James Nguah Acheampong, about the nature, conduct, benefits and risks of this study - Research Ethics Clearance Number: 202/22,
- I have also received, read and understood the above written information (Participant Letter of Information) regarding the study.
- I am aware that the results of the study, including personal details regarding my sex, age, date of birth, initials and diagnosis will be anonymously processed into a study report.
- In view of the requirements of research, I agree that the data collected during this study can be processed in a computerised system by the researcher.
- I may, at any stage, without prejudice, withdraw my consent and participation in the study.
- I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study.

- I understand that significant new findings developed during the course of this research which may relate to my participation will be made available to me.

Mrs Augustina Ama Tabua Kwofie 30/01/2021

**Full Name of Participant                      Date    Signature/Right Thumbprint**

I, James Nguah Acheampong herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

James Nguah Acheampong                      28/01/2022

**Full Name of Researcher                      Date                      Signature**

\_\_\_\_\_

**Full Name of Witness (if applicable)                      Date                      Signature**

\_\_\_\_\_

**Full Name of Legal Guardian (if applicable)    Date                      Signature**

\_\_\_\_\_



## APPENDIX C: INTERVIEW SCHEDULE

**Date:** \_\_\_\_\_ **Location:** \_\_\_\_\_

### Demographics

**Age:**

**Relation to HH:**

**Gender:**

**Employment status:**

### Questions:

1. Can you please tell me how the resettlement process happened and how it turned out for you?
  - You can start around the time of being informed of the resettlement and talk about all the events and experiences associated with the resettlement that were important for you and how it all developed up until now.
  - Please take all the time you need, I will only listen, and I won't interrupt.
2. Tell me about how you used to interact with other community members before the resettlement. (Example)
3. Tell me about how you interact with other community members now. (Example)
4. Describe your way of life/how you went about doing things before the resettlement.
5. Describe your way of life/how you go about doing things now.
6. What was your total yearly income before the resettlement?
7. What is your estimated yearly income after the resettlement?
8. Would you say that you are better-off after the resettlement, or would you prefer to go back to your old way of life? Why? Give me an example...
9. Were you gainfully employed before the resettlement? (Example)

10. What employment opportunities are available to you after the resettlement?
11. Describe the struggles you experience now. (Example)
12. Describe any positive changes that have come about as a result of the resettlement. How have you benefitted from being resettled? (Example)
13. What was your livelihood based on before the resettlement?
14. Is your livelihood assured in your new resettlement area?
15. How did you first respond to being informed of the resettlement?
16. How do you feel about the resettlement now?
17. Do you feel you have changed as an individual as a result of the resettlement, if yes, explain how you have changed.
18. Consider the impact the resettlement has had on your family.
19. Do you have any health-related issues as a result of the resettlement?
20. If you could change anything that happened during the resettlement process, what would you change and how?

**NB:** Need to use probes such as, “can you tell me about a specific time when...”, and “is there a particular incident you can remember when...” to follow-up on questions where participants do not produce narratives, but only provide minimal answers.



**APPENDIX D: SEMI-STRUCTURED INTERVIEW GUIDE**

SOCIOECONOMIC EFFECTS OF MINING RESETTLEMENTS IN GHANA.  
 CASE STUDY WESTERN REGION.

Strictly Confidential

Group Number.....

Number of Participants .....

Focus Group Form

The effects of Mining Resettlements in Ghana. Case Study Western  
 Region

PART A: Demographic Information

The personal information is required for statistical analysis of data of respondents. All your responses will be treated with paramount confidence it deserves. The researcher appreciates your participation in providing this important information.

A1:

AGE	30 years or less	30 - 39	40 - 49	50 - 59	60 years or more
TICK HERE→					

A2: GENDER: MALE [ ]

FEMALE [ ]

A3: OCCUPATION

SECTION A: IDENTIFICATION OF PARTICULARS

Q1. Community: 1.  Bokazo                      2.  Salman                      3.   
] Nkroful

If Bokazo, Salman or Nkroful, please tick [  ]

SECTION B: DISCUSSION

**Resettlement Questions**

1. Can you please tell me how the resettlement process happened and how it turned out for you?

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2. Tell me about how you interact with other community members before the resettlement (example)

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3. Tell me about how you interact with other community members now (example)

**Income sources Questions**

1. What was your main source of income prior to the resettlement exercise?

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2. What is your source of income after the resettlement exercise?

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3. Has your income been affected either positively or negatively after the resettlement?

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**Employment opportunities available Questions**

1. Has the mine led to the displacement of local people?

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2. Do you readily have an alternative source of employment after the resettlement?

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3. Do you have any employment apart from working in the mine?

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**Livelihood issues Questions**

1. Do you own a land before the resettlement took place?

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2. Has your land been taken away from you because of the mining activities?

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3. Have you received compensation on the lost land?

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4. Have you lost any inheritance due to the resettlement?

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5. Have the communities really benefited from the resettlement i. e. from the old to the new site?

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**Morbidity Questions**

1. Have you experience any location-related diseases?

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2. What are the main sources of water available to the community after the resettlement?

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3. How safe is the water supply to the new communities?

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4. How are the overall health situation of the people affected by the activities of the mine?

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5. What are the mitigation measures put in place to improve conditions at the resettlement?

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End of Interview

**THANK YOU FOR YOUR TIME AND PARTICIPATION**



## **APPENDIX E: ETHICS CLEARANCE LETTER**

+27 31 373 5154/5130

Fax: +27 31 373 5130

Email: [fulufhelon@dut.ac.za](mailto:fulufhelon@dut.ac.za)

[www.dut.ac.za](http://www.dut.ac.za)

14th September 2021

Student number: 22173858

Dear Mr. JNA Acheampong

DOCTOR OF PHILOSOPHY IN MANAGEMENT SCIENCES: PUBLIC  
ADMINISTRATION

This serves to confirm the approval of your research proposal by the Faculty  
Research

Committee, at its meeting on 7th September 2021, as follows:

1. Research proposal and provisional dissertation title: Socio Economic  
Effects of Mining Resettlements in Ghana: Case Study of The Western  
Region.

Supervisor: Prof N Dorasamy

Co-supervisor: Dr. A Kumasey

Please note that any proposed changes in the thesis/dissertation title require  
the approval of your supervisor/s, the Faculty Research Committee, as well  
as ratification thereof by the Higher Degrees Committee.

2. Research budget to the amount of: R10 000. 00(Masters) / R15  
000(DPHIL)

Please note that this funding is not a scholarship or bursary and is therefore not paid directly to you but is controlled by the Faculty. Any proposed changes to the use of this funding allocation requires the approval of your supervisor and the Dean. Please note that funding will be reimbursed to you after the provision of receipts.

The Institutional Research Committee has stipulated that:

(a) This University retains the ownership of any Intellectual Property (patent, design, etc.) registered in respect of the results of your Masters/Doctors Degree in Technology studies as a result of the award and the provisions of the above Act.

(b) Should you find any of the terms above not acceptable then you are given the option to decline the Research budget award to your project in writing. May we remind you that in terms of Rule G25 (2) (b), if you fail to obtain the Masters/Doctors degree within the maximum time period allowed after first registering for the qualification,

The Senate may refuse to renew your registration or may impose any conditions it deems fit.

You may apply to the Faculty Research Committee for an extension.

Please note that you are required to convert your registration from the informal to the formal course and re-register each year.

Please note that the following must be adhered to:

Registration:

1. Ensure registration has taken place (the onus is on the student and the supervisor to ensure registration takes places at the beginning of each year whilst the student is currently engaged with his/her Master's or PhD qualification)
2. Ensure that application for Conferment of Status has been made in the event of your undergraduate qualification being different to this application. Your attention is drawn to the fact that Conferment of Status is required for registration.
3. Ensure that your supervisor has submitted your proposal to the Faculty Research

Officer (**FRO**) for IREC clearance (institutional research ethics committee). This is in the case of Ethics level 2 and level 3 IREC (in the case of a study dealing with vulnerable populations). See guideline attached. It is the researcher's responsibility to check the Ethics requirements and submit to the relevant bodies irrespective of the reviewer's recommendation.

Dissertation submission for examination:

1. Ensure that you submit the intention to submit form (PG 5), signed by the HOD and Supervisor
2. Ensure that the signed checklist is submitted with the PG 5
3. Once your dissertation is submitted to the supervisor for examination purposes, communication from here on will only be with you supervisor and not with the faculty.
4. Your supervisor **MUST** nominate the examiners three months prior to submission of the dissertation/thesis for examination.
5. On submission for examination, please note that a PDF signed copy must be submitted to your supervisor along with the completed and signed PG 7 form, FMS Checklist and signed Turn it in report.
6. Feedback will be provided to your supervisor regarding the examination result after the result is ratified by the Higher Degrees Committee (HDC).
7. In the event of a resubmission the reports will be submitted to the supervisor who will communicate with you for revision. Once revision has taken place your supervisor will Submit to the FRO for resubmission to the examiners.
8. In the case where there is a discrepancy in examiners results, an Arbiter will be nominated via the HOD and supervisor and tabled at FRC and ratified at HDC.

On completion of this process, the Arbiters report will be tabled at FRC and ratified at HDC.

9. Results of the Arbitration process will be communicated to your supervisor  
Graduation requirements:

1. Ensure that you submit a completed signed PG10 form
2. One hard bound dissertation/thesis with a pdf version to be sent upon HDC ratification

3. Response to post graduate examination form

4. Completion of study form (*IREC* form)

Should you experience any problems relating to your research, your supervisor must be informed of the matter as soon as possible. If the difficulties persist, you should then approach your Head of Department and thereafter the Faculty Research Coordinator.

Please refer to the 2020 General Rule Book and the Postgraduate Students' Guide 2020

concerning the rules relating to postgraduate studies, which include inter alia acceptable minimum and maximum timeframes, submission of thesis/dissertations, etc. Please do not hesitate to contact this office for any assistance. We wish you success in your studies.

Kind regards,

---

Dr Melanie Lourens obo the FRC Chair/Executive Dean: Professor  
Netswera  
Faculty of Management Sciences.



**Institutional Research Ethics Committee**  
Research and Postgraduate Support Directorate  
2<sup>nd</sup> floor, Berwyn Court  
Gate 1, Steve Biko Campus  
Durban University of Technology  
P O Box 1334, Durban, South Africa, 4001  
Tel: 031 373 2375  
Email: [lavishad@dut.ac.za](mailto:lavishad@dut.ac.za)  
[http://www.dut.ac.za/research/institutional\\_research\\_ethics](http://www.dut.ac.za/research/institutional_research_ethics)  
[www.dut.ac.za](http://www.dut.ac.za)

5 January 2023

Mr J N Acheampong  
Department of Public Management  
Durban University of Technology  
Faculty of Management Science

Dear Mr Acheampong

**SOCIOECONOMIC EFFECTS OF MINING RESETTLEMENTS IN GHANA. CASE STUDY OF THE WESTERN REGION**  
**Ethical Clearance number IREC 202/22**

The DUT-Institutional Research Ethics Committee acknowledges receipt of your gatekeeper permission letter.

Please note that FULL APPROVAL is granted to your research proposal. You may proceed with data collection.

Any adverse events [serious or minor] which occur in connection with this study and/or which may alter its ethical consideration must be reported to the DUT-IREC according to the DUT-IREC Standard Operating Procedures (SOP's).

Please note that any deviations from the approved proposal require the approval of the DUT-IREC as outlined in the DUT-IREC SOP's.

Yours Sincerely

\_\_\_\_\_  
Prof J K Adam  
Chairperson: DUT-IREC



## **APPENDIX F: PERMISSION TO CONDUCT RESEARCH AT NTBS**

Takoradi Technical University  
Department of Secretaryship and Management Studies  
Post Office Box 256  
TAKORADI  
Ghana

The District Chief Executive Officer  
Ellembelle District Assembly  
NKROFUL  
Western region  
Ghana

28<sup>th</sup> November 2022

Dear Sir,

### **REQUEST FOR PERMISSION TO CONDUCT RESEARCH**

Mr James Acheampong Nguah, a lecturer at the Department of Secretaryship and Management Studies, Takoradi Technical University is currently undertaking his PhD programme with the Durban University of Technology and will need your assistance and permission.

He is writing on the topic: “*Socioeconomic effects of mining resettlements in Ghana. Case study of the Western Region*”. He would like to use your newly resettled communities at Nkroful, Teleku-Bokazo and Salman as the case study if permission will be granted to him.

I would be very grateful if you could assist him by giving him a '*permission letter*' to have access to the Assembly's Resettlement Communities to enable him carry on with his research work with the Durban University of Technology in South Africa.

His contact details are.

\*NAME: James Acheampong Nguah

\*Telephone: 0244169942

\*E-MAIL: [22173858@dut4life. ac. za/jacheampong2020@gmail. com](mailto:22173858@dut4life.ac.za/jacheampong2020@gmail.com)

Counting on your usual assistance.

Yours faithfully

Marian Stephanie Davis (Mrs)

(HEAD OF DEPARTMENT)



APPENDIX

G: GATEKEEPER'S LETTER

## ELLEMBELLE DISTRICT ASSEMBLY

*In case of reply, the Ref. number and date of this letter should be quoted.*



P. O. Box 34  
NKROFUL  
WESTERN REGION  
GHANA  
GPS: WE-0002-5335

Email Address: ellembelledistrict@gmail.com

Website : eda.gov.gh

Fax: 0577710081/0577710084

REPUBLIC OF GHANA

Our Ref. No.: EDA.03/20/04/01

Date: 16<sup>TH</sup> DECEMBER, 2022

Your Ref. No: .....

### RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH

We wish to acknowledge receipt of your letter dated 28<sup>th</sup> November, 2022 on the above stated subject matter.

2. The Ellembele District Assembly has taken note of your request and has granted you permission to have access to the said resettlement communities for the purpose of your research.
3. You are to note that the approval is only limited to the subject matter of your research and not for any other purpose.
4. We count on your cooperation
5. Thank you.

**HON. KWASI BONZOH**  
**DISTRICT CHIEF EXECUTIVE**

**THE HEAD**  
**DEPARTMENT OF SECRETARYSHIP**  
**AND MANAGEMENT STUDIES**  
**TAKORADI TECHNICAL UNIVERSITY**  
**TAKORADI**

Cc:

1. The Assembly Member, Teleku-Bokazo
2. The Assembly Members, Nkroful
3. The Assembly Members, Salman
4. Mr. James Acheampong Nguah, TTU



## APPENDIX H: TURNITIN REPORT

### SOCIO-ECONOMIC EFFECTS OF MINING RESETTLEMENTS IN GHANA: CASE STUDY OF THE WESTERN REGION

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