

INVESTIGATING THE INFLUENCE OF OIL-INDUCED URBANIZATION ON THE GROWTH OF INFORMAL SETTLEMENTS AND LAND ADMINISTRATION-THE CASE OF SEKONDI-TAKORADI

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ABSTRACT

Resource boom has been identified in recent years as a driver of urbanization. Sekondi-Takoradi Metropolis in the Western Region of Ghana has experienced oil-induced urbanization due to the prospects of job and business opportunities associated with the oil discovery, thereby attracting large numbers of migrants both within and outside the region. Even though the presence of oil provides opportunities for economic and social growth, other facets are impacted adversely, including the land and housing sector. This study sought after how the high land and rental values associated with an oil city contributed to the growth of informal settlements, i.e., settlements that do not adhere to building codes, settlements with no tenure security, and settlements with low infrastructure levels. The study also addressed the mode of land acquisition post-oil discovery and assessed the possibility of the oil find influencing existing land tenure systems. Land Administration Institutions were also studied to identify the challenges they have faced post-oil discovery as one of the most significant effects of the oil discovery is the increase in demand for land for housing, industrial and commercial purposes, resulting in increased demand for Land Administration Functions and Services.

The study used a qualitative and quantitative approach with primary data collected from key informants of various land administration institutions in the Metropolis and questionnaires administered to land occupants to better appreciate the dynamics in the Metropolis after the oil discovery. This was complemented with a visual interpretation of aerial images of two selected neighbourhoods identified as sprawl areas in the metropolis to understand better the effect of oil discovery on these periphery towns.

The study revealed the sprawl of both formal and informal settlements after the oil discovery in both study sites. The level of informality in the selected sites identified as the sprawl areas in the metropolis was minimal. This was due to the relatively low land and property values in these sites compared to values in prime areas in the metropolis. The study also captured the mode of land acquisition and revealed that oil find had minimal impact on land tenure systems in the Metropolis. Land Administration Institutions were found to have encountered various challenges in executing their functions post-oil discovery. Therefore, it was essential to note that Land Administration Institutions encounter various challenges and increased pressure on their line of duty when there is the sudden discovery of resources or a sudden infrastructural project in a city, increasing the city's land demand.

Hence, it is recommended that Land Administration Institutions are equipped to meet the demand associated with the change in the city's status when there is a significant venture like an oil find or significant infrastructural projects. The various institutions are also recommended to strengthen collaboration between them to ensure and control the growth of further informal settlements, especially in the face of a resource boom.

Key words: *Resource Boom, Oil-discovery, Informal Settlements, Land Administration, Land Development, Land Tenure Systems, Land Administration Institutions*

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LIST OF ABBREVIATIONS

CCTV	Closed Circuit Television
CORS	Continuous Observation Reference Station
CSAU	Client Service Access Unit
EKMA	Effia-Kwesimintim Metropolitan Assembly
GPHA	Ghana Ports and Harbour Authority
GPS	Global Positioning System
GUMPP	Ghana Urban Management Pilot Project
ITRF	International Terrestrial Reference Frame
KI	Key Informants
KII	Key Informant Interviews
L.A	Land Administration
LAP	Land Administration Project
LI	Legislative Instrument
LRD	Land Registration Division
LUP	Land Use Planning
LVD	Land Valuation Division
MLGRD	Ministry of Local Government and Rural Development
MTDF	Medium Term Development Framework
NLP	National Land Policy
OASL	Office of Administrator of Stool Lands
PVLMMD	Public and Vested Lands Management Division
SDF	Spatial Development Framework
SMD	Survey and Mapping Division
STMA	Sekondi-Takoradi Metropolitan Assembly
TCPD	Town and Country Planning Division
UCC	University of Cape Coast
UNECE	United Nations Economic Commission for Europe
UN-HABITAT	United Nations Human Settlement Programme

1. INTRODUCTION

According to UN-Habitat (2008, p.2), “the world’s rural population has essentially reached its peak, but the global urban population is projected to double by 2030”. The doubling of urban population leading to urbanization can be accounted towards many drivers, including natural population growth, urban growth strategies, and infrastructure availability, leading to rural-urban and urban-urban migration (Awumbila, 2017). Another driver of urbanization worthy of consideration is the phenomenon of “resource boom.” Resource boom is a term used to describe the discovery, extraction, and commercializing of a natural resource, including oil, gold, and bauxite.

Resource boom has been noted as an essential facilitator for growth and development (Sachs & Warner, 1999). An example is the accelerated urbanization rate in cities where oil resources have been discovered, often termed Oil-Induced Urbanization (Obeng-Odoom, 2009; Wei, 2016). Oil -Induced Urbanization tends to have various effects and affects various facets of the city where the discovery has been made. The numerous effects include demand for housing exceeding supply, high land values, and rental prices, as characteristics of many resource boomtowns leading to the marginalized groups unable to afford high housing prices settling in settlements they may deem affordable, thereby leading to the growth of informal settlements (Akbar, Rolfe, & Kabir, 2013; Ennis, Tofa, & Finlayson, 2014). Loss of arable lands to human settlement due to an increase in populations also emerge as part of the environmental consequences of oil-induced urbanization. The oil-urbanization nexus appears to be rapidly boosting economies in developing countries, but this is also complemented with a myriad of challenges, including physical developmental concerns.

1.1 Background and Justification

Globally, countries that experience a natural resource boom tend to have their urbanization rate increase tremendously. Relevant examples are evident in China, Norway, Nigeria, Angola, and Ghana (Andersson, Håkansson, & Thorsen, 2019; Farrell, 2018; Gollin, Jedwab, & Vollrath, 2016; Obeng-Odoom, 2009). In China, the abundance of natural resources impacted its urbanization rate, increasing from 20% in 1980 to 45% in 2010 (Liu, 2014). After oil discovery, Angola’s urbanization rate increased from 15% in the 1960’s to 60% as of 2010 (Gollin et al., 2016). The urbanization growth rates, as mentioned earlier, are attributed to the influx of people into the resource town for both formal and informal job opportunities associated with oil commercialization. As a result, several challenges such as an increase in air pollution from the increment in the vehicular populace, pressure on land for various uses, changes in land-use patterns, and the rise in demand for accommodation are encountered, thereby affecting negatively urban-rural environments (Eduful & Hooper, 2015; Fiave, 2017; Obeng-Odoom, 2009).

Following the migration of people into the oil cities to benefit from the opportunities usually created by the oil industry, the urban population increases, comes with a high accommodation demand. This allows individuals with the purchasing power to afford high asking prices to access decent housing (Eduful & Hooper, 2019). Subsequently, land and housing prices tend to shoot above the roof beyond the reach of the ordinary people on the street who were already living in or have moved into the oil cities with the hope of benefitting from the oil business. Hence, most of such individuals end up moving into temporary or non-permanent structures like kiosks and containers to live close to the oil fields to partake in

exploring avenues created by the oil industry (Obeng-Odoom, 2009). This leads to the springing up of informal dwelling places within and around the oil cities where they can afford to rent or own accommodation.

Consequently, as these informal settlements spring up, development control issues, such as building without development permits, building without appropriate land documentation, unsanitary conditions, and uncontrolled land use, also come forth, thus inhibiting smooth land administration systems. Therefore, the impact of the oil-urbanization nexus ends not on the emergence of informal settlements but also on land administration functions in countries to a large degree. This can be attributed to the various tenure types arising from land transfers that may further fragment land rights. Specifically, oil-induced urbanization's influence on informal settlements' growth is strongly linked to land administration bottlenecks in towns in oil-producing countries, of which Ghana is not an exception.

Like any other oil-producing country in Africa, Ghana had its fair share of oil-driven urbanization when the country discovered oil in commercial quantities in 2007. The oil city of Sekondi-Takoradi, the closest city to the oil fields where the operationalization of the oil companies and related activities take place, has subsequently seen the migration of people from rural and urban Ghana, and even from other neighboring countries like Cote D'Ivoire, Nigeria, Benin and Togo for the various opportunities associated with the oil resource boom. Therefore, this has led to a tremendous increase in the population of Sekondi-Takoradi from 396,166 in 2000 to 559,548 in 2010 (Eduful & Hooper, 2015). This number has increased to 936,000 as at 2019, and it is projected to increase to 1,349,000 by the year 2030 (Macro Trends, 2020). The increase in population is characterized by increased demand for accommodation, gentrification, uncontrolled land uses, land-use changes, and land grabbing. These developmental challenges create problems for Land Administration Institutions in discharging their duties of ensuring efficient and effective land use and development. This has precipitated physical planning development and land tenure issues, creating new Land Administration challenges in managing these arising matters.

Sekondi-Takoradi has undergone spatial and social transformations over the last decade attributed to the oil-find (Nguyen, 2019). Since the commencement and commercialization of oil resources in the Sekondi-Takoradi Metropolis, many studies have been done to unearth the impact this resource has on various aspects and sectors of the city in research articles, journals, and theses, thereby contributing to the literature. However, in an attempt to understand the development of informal settlements, little is known about the growth of informal settlements due to oil-induced urbanization; therefore, this study seeks to shed more light on this respect and its effects on Land Administration Functions.

The oil-find in the Metropolis, characterized by high demand for land and uncontrolled developments, affects the Land Administration (LA) Institutions due to the multiple land sales, uncontrolled development, and unauthorized siting of structures. Thus the capacities of these institutions become inadequate to control all the rampant occurrences, whereas inadequate attention to land activities could result in the growth of unauthorized structures (Adjei, 2010). Therefore, it is prudent to give attention to LA institutions in the event of a resource boom to control informal settlements' growth appropriately. *Figure 1-1* below shows the proximity of some of the oil platforms to the city.



Figure 1-1: Photo of Oil Platform located Offshore in Sekondi-Takoradi

Source: (Nguyen, 2019).

1.2 Problem Statement

Resources in any form are viewed as attractive points for human habitation as they create many livable opportunities. The emergence of most African countries as oil-producing regions has led to many socio-economic benefits, on the other hand, urban development problems, including the springing up of informal settlements, also surface in and out of such cities (Obeng-Odoom, 2009).

The influx of diverse people, including wealthy, middle class, skilled and unskilled labour in search of direct and indirect opportunities arising from oil commercialization, leads to increased population affecting accommodation demand (Eduful & Hooper, 2019). The presence of wealthy oil workers has also brought about the development of high and luxurious real estate to meet their needs, all at very high prices (ibid). Such additional developments in the housing sector fail to recognize the needs of low-income and informal workers. Therefore, low-income people are left with no option but to move into temporal structures and housing units in informal settlement areas where values are at a lower range. Leading to a significant problem in many resource boomtowns as informal settlements may enlarge or spring up.

In Australia, the resource boomtown of Gladstone faced housing shortages and higher prices of properties leading to people who cannot afford to live in substandard dwelling units (Akbar, Rolfe, & Kabir, 2013). While many studies have been done to assess the effect of resource boom on different sectors of the economy, including agricultural and industrial sectors, the impact of resource boom and its impact on informal settlements' growth has been largely disregarded (Bryceson & MacKinnon, 2012). These informal settlements consequentially create challenges for land administration processes in oil-boom towns, including Sekondi-Takoradi.

In this light, this study aims to investigate how oil-induced urbanization influences the growth of informal settlements and its effects on Land Administration functions post-oil discovery.

1.3 Research Objectives

The overall research objective is to investigate how oil-induced urbanization has influenced the growth of informal settlements in the Sekondi-Takoradi Metropolis and LA functions have been affected post-oil discovery

1.4 Research Sub-Objectives

The following sub-objectives would be addressed to achieve the core research objective.

1. To analyze the growth of informal settlements post-oil discovery.
2. To know the mode of land acquisition post-oil discovery.
3. To identify and understand arising land tenure types and rights in the Sekondi-Takoradi Metropolis post-oil discovery.
4. To ascertain the challenges of land administration institutions post-oil discovery.

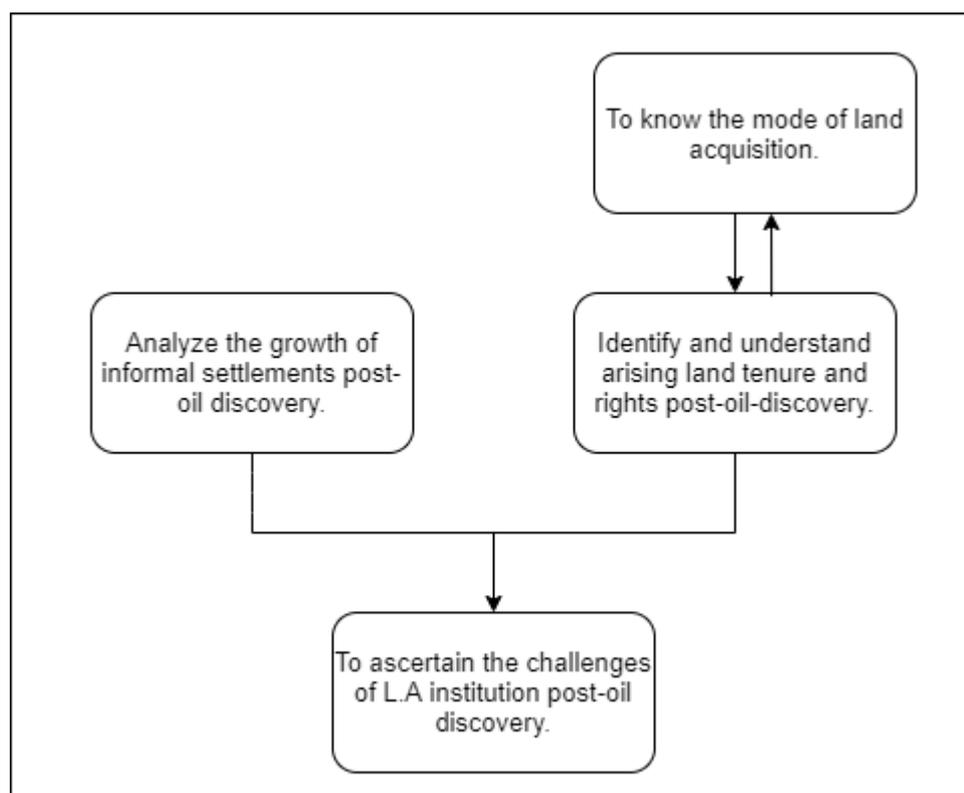


Figure 1-2: Flow of Research Objectives

1.5 Research Questions.

The following research questions would be addressed to answer the research sub-objectives.

1. **To analyze the growth of informal settlements in Sekondi-Takoradi post-oil discovery.**
 - a) How has oil-find influenced the growth of formal and informal settlements?
 - b) What is the migration history of inhabitants?
2. **To know the mode of land acquisition in post-oil discovery.**
 - a) Who are the main actors involved in land acquisition?
 - b) What is the process of land acquisition?
3. **To identify and understand arising land tenure types and rights in Sekondi-Takoradi Metropolis post-oil discovery.**
 - a) What are the various tenure types and rights that are arising?
 - b) What is the perception of tenure security by inhabitants of study sites?
4. **To ascertain the challenges facing land administration institutions post-oil discovery.**
 - a) What are the challenges facing Land Administration Institutions post-oil discovery?
 - b) How have the Land Administration institutions reformed to accommodate challenges post-oil discovery?

1.6 Thesis Structure

The thesis would be structured into six (6) chapters.

Chapter 1 sets the scene with the background and justification for the research problem, problem statement, research objectives and questions. Chapter 2 presents a review of existing literature on the study's underlying concepts, their specific meaning in the context of Ghana, and a conceptual framework that simplifies the concepts discussed. Chapter 3 consists of the research design and methods, a brief description of the study area, and the data collection techniques. Chapter 4 presents the results from the analysis of the data collected. Chapter 5 features a discussion on the key findings from the results. Chapter 6, the last chapter, includes a conclusion and feasible recommendations in summarizing the study. The thesis structure is illustrated in *Figure 1-3* below.

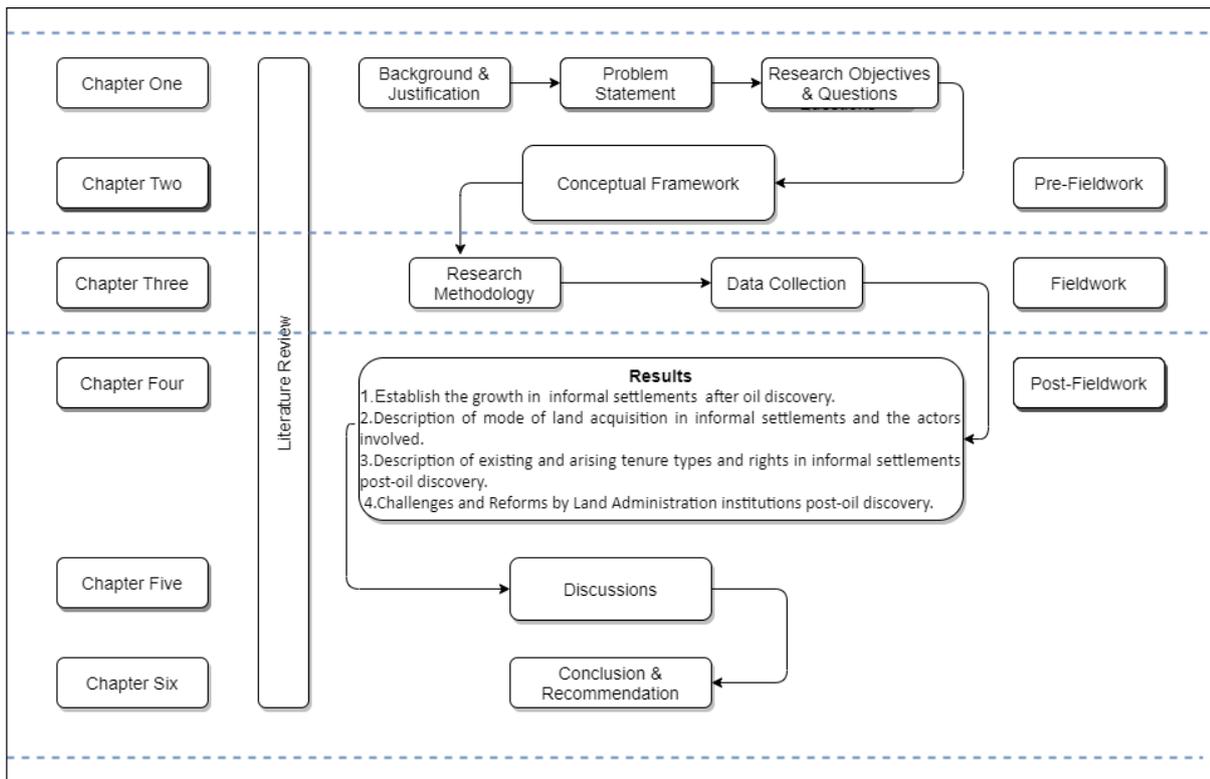


Figure 1-3: Thesis Structure

2. LITERATURE REVIEW

2.1 Introduction

This section highlights the main concepts underlying this research to understand the perspectives of existing literature.

2.2 Resource Boom and Urbanization

Resource boom has been identified as one of the leading drivers of urbanization (Bury, 2007; Godfrey, 1992; Jedwab, 2011). There is a highly significant correlation between resource boom and urbanization in Sub Sahara Africa, as shown in the research result of Ebeke & Etoundi (2017). Their research hypothesis test illustrated that the increase in natural resources fuels the rapid influx of people into cities, thereby contributing to degraded living conditions and informal sectors' growth. Gold boom towns like Tanzania and Australia saw the migration of people into its gold mining settlements, including artisanal miners, entrepreneurs, and private sector workers seeking to enhance their economic well-being, thereby impacting housing issues (Akbar, Rolfe, & Kabir, 2013; Bryceson, Jønsson, & Shand, 2020; Ennis, Tofa, & Finlayson, 2014). Oil-Induced Urbanization has similar characteristics, just like urbanizations induced by other resources rather than oil.

Oil-driven urbanization is evidenced in countries like Norway, where the oil-rich city of Stavanger experienced the highest population growth between the period 1970-2017 (Andersson et al., 2019). In the Middle East, the Gulf States, known for being the richest in oil resources, are also not left out of this phenomenon. Oil exploration in the Kingdom of Bahrain has contributed to the rapid population growth with a 50% increase from the '70s to the '90s and has subsequently increased from 660,000 in 2001 to more than 1 million people by 2008 (Wiedmann, 2010). The swell in Nigeria's urban population in the post-colonial period is also attributed to the oil boom, which resulted in the creation of new urban centers (Farrell, 2018).

2.3 Land Administration

Land Administration is defined as the process of determining, recording, and disseminating information about the ownership, value, and use of land when implementing land management policies (UNECE, 1996). The core of Land Administration functions rallies around four primary functions, including Land Tenure, Land Value, Land Use, and Land Development. Land Administration functions involve the adjudication of rights, survey and description of the land, and maintaining up-to-date, relevant information about land with an overall goal of providing tenure security and implementing land policies (Zevenbergen, 2009). The three main entities underlying the functions of land administration are; the subject, which can be individuals or groups, interest referring to the bundle of rights of relationship people have concerning land and the object, which refers to the parcel of land (Henssen, 1995; Zevenbergen, 2009)

2.3.1 Land Administration Institutions in Ghana

In Ghana, The National Land Policy (N.L.P.) of 1999 is the country's underlying framework for land administration activities. This framework standardizes the Land Administration practices in the country to serve as a guideline for land activities, ensuring the effective and efficient use and management of land (Bugri, 2018; Ministry of Lands and Forestry, 1999). The Land Use and Spatial Planning Authority (LUSPA), formally known as the Town and Country Planning Division (T.C.P.D), is responsible

for the Land Use and Development functions of Land Administration, including land use control, preparation, and development plans (Arko-Adjei, 2011).

A Land Administration Project (L.A.P.) was developed under the N.L.P. implementation, which saw the reform of institutions in Land Administration service delivery, amongst others (Arko-Adjei, 2011). The reform saw the merging of four land agencies into a single entity known as the Lands Commission. This unit comprises of the Public Vested Lands Management Division (P.V.L.M.D), The Lands Registration Division (L.R.D.), The Survey and Mapping Division (S.M.D.), and the Lands Valuation Division (L.V.D). These divisions are responsible for the registration of tenure as well as the valuation functions of Land Administration. Some of these functions include the registration of title to land and other interest, regulating the survey and demarcation of land, managing state acquired lands and vested lands, and valuation of an interest in land or land-related interest (Lands Commission, 2019). The selected institutions are further elaborated on below.

a. Land Use and Spatial Planning Authority

The Land Use and Spatial Planning Authority, formally known as the Town and Country Planning Division (T.C.P.D), is also responsible for the Land Use and Development functions of Land Administration, including land use control and preparation of development plans (Arko-Adjei, 2011). The Land Use and Spatial Planning Act 2016, Act 925 was passed by the parliament of the Republic of Ghana in 2016 to revise and consolidate laws on land use and spatial planning through a decentralized planning system while providing for sustainable development (Land Use and Spatial Planning Act 2016, Act 925, 2016). The Act further mandates the various sub-metros to prepare and implement spatial development frameworks for the municipalities. This is spearheaded by the physical planning department of each sub metro, which oversees the management and development of the various sub-metros in the Sekondi-Takoradi Metropolis.

b. Public and Vested Lands Management Division (PVLMD)

As part of the four divisions of the Lands Commission, the PVLMD is responsible for facilitating the acquisition of land for government, managing state acquired and vested lands in conformity with approved plans. It is mandated by the Lands Commission Act 2008, Act 767, Administration of Lands 1962, Act 123, and the State Lands Act 1962, Act 125. In the Sekondi-Takoradi, the activities of the PVLMD have been merged with that of the Lands Registry Division, who are responsible for the registration of title, registration of deeds, and other instruments affecting land and other interests and instruments affecting land (Lands Commission ACT 2008, 2008).

c. Lands Valuation Division (LVD)

The Lands Valuation Division (LVD) is mandated by the Lands Commission Act 2008, Act 767, to be responsible for the assessment of compensation payable upon acquisition by the government, determining the values of property rents whether purchased or sold by or to the government, valuation of interest in land for administrative purposes, among others (Lands Commission ACT 2008, 2008).

d. Survey and Mapping Division (SMD)

The Survey and Mapping Division, another division under the Lands Commission, is mandated by the Survey Act 127 (1962) and the Lands Commission Act, Act 767 to supervise, regulate and control the survey and demarcation of land use and land registration purposes, as well as coordinating, regulating and supervising all activities and operations relating the survey of land (Lands Commission ACT 2008, 2008).

e. Office of Administrator of Stool Lands (OASL)

The 1992 constitution of the Republic of Ghana mandated the OASL as an additional agency involved in land administration in the country to see to the collection and disbursement of stool land revenue and coordinate with other agencies in the preparation of policy framework for the activities of stool lands. Their activities are regulated by the Office of Administrator of Stool Lands Act 1994 (Act 481).

2.4 Land Tenure and Land Rights

Land Tenure describes the way land is owned or held by individuals and groups and the set of relationships concerning land that has been defined legally or customarily by a group of people (UN-HABITAT, 2008). Payne & Durand-Lasserve (2012) consider it essential to recognize the cultural, political, and local dynamics that influence the land tenure types and systems existing in a particular locality. Payne (1997) has defined land rights as the recognized interest in land or property bestowed in an individual or group and may exist parallel with ownership. Some of these rights may include the right to use, the right to develop, and the right to transfer.

2.4.1 Land Tenure in Ghana

The National Land Policy of Ghana recognizes two main tenure systems: Customary tenure system and Statutory tenure system (Ministry of Lands and Forestry, 1999). The Customary tenure system includes ownership by family or individuals, communal ownership, and stool/skin lands regulated by Customary practices. Statutory tenure systems include land ownership by state or government and stool/skin lands vested in the government. These are regulated by enacted legislation. The state lands are mainly acquired from the stool/skin through compulsory acquisition in the public's interest (Karikari, 2006; Ministry of Lands and Forestry, 1999).

2.4.2 Land Tenure Security

Land Tenure Security has been defined as the degree of confidence or the certainty that land users will not be deprived of the rights they enjoy over land (Kiddle, 2010; Payne & Durand-Lasserve, 2012; van Gelder, 2010). Their individual rights are accepted, recognized, and protected from forced evictions or specific challenges (UN-HABITAT, 2008). The importance of securing the land rights of people cannot be overemphasized. It has been established that securing land rights is fundamental in reducing poverty, facilitating the provision of urban services, enabling land markets, thereby underpinning economic development (Kiddle, 2010; Payne, 1997; van Gelder, 2010). Renowned Peruvian economist Hernando De Soto highlighted the importance of securing land rights as making people more secure, thus generating wealth from their secured properties (De Soto, 2000). This has encouraged the debate on the importance of securing the tenure of informal settlement dwellers. van Gelder (2010, p.452) highlighted tenure security in a tripartite view: the dweller's perception, the legal status of tenure, and de facto conditions.

2.5 Land Use Planning and Development

The growth of the world's cities has been asserted to be supplemented by institutes with applicable regulations to ensure the efficient use and management of land with the institution of Urban Land Use Planning (LUP). LUP are mostly government interventions to curb the externalities associated with urban development processes (Baffour Awuah, Hammond, Lamond, & Booth, 2014). UNECE (1996, p.51) describes LUP as physical planning and defines it as "the process of allocating resources, particularly land, to achieve maximum efficiency whilst respecting the nature of the environment and the welfare of the community." Williamson, Enemark, Rajabifard, & Wallace (2009) also defined Land Use as the planning and control of the use of land and natural resources.

Land development on the other hand refers to the processes of implementing land use plans and development proposals for the building of new urban neighborhoods and infrastructure whilst managing the change of urban communities through the approval of planning permissions and land use permits (Williamson et al., 2010).

Land Use Planning is therefore closely linked to land development in supporting the achievement of sustainable development. With the rapid development complimenting the increase in urbanization rate, land use and development issues are also affected. Thus, this research would like to shed light on how the oil-find has affected land use and development aspects of Land Administration. The statutory framework guarding land use and development in Ghana is the CAP 84 (1945)

The absence of organized and controlled development leads to health and cost implications, environmental degradation, and the growth of informal settlements (Baffour Awuah et al., 2014; Tasantab, 2016). Hence most countries put in place appropriate mechanisms including building permits, construction permits, land use permits, and sub-division permits to ensure the control and enforcement of development controls.

2.6 Informal Settlements

U.N. Habitat (2007) defined Informal Settlements as areas characterized by lack of sanitation and water, overcrowding, and non-durable housing structures. Another characteristic of informal settlements, as mentioned by UN-Habitat, is the subject of tenure security. Many studies have shown that informal settlements' dwellers are mainly not tenure secured (Obeng-Odoom, 2009; Owen, Dovey & Wiryo Raharjo, 2013; Payne, 1997; Toulmin, 2008). Therefore, studies have recommended recognizing de jure and de facto tenure types to secure the tenure of inhabitants of poor urban areas and protect them from eviction (Kiddle, 2010; van Gelder, 2010). Debroy (2013) also described informal settlements as unapproved settlements characterized by overcrowding, poor quality housing, and insecure tenure. The causes of informal settlements in the research were attributed to natural disasters and the weakness in socio-economic policy implementation. In a social analysis of the causes of informal settlements in urban land governance, Alemie et al. (2015) attributed the origins of informal settlements to the low price of land and less bureaucratic processes in the informal land markets as well as the shortage of housing and increase in rental prices. Informal settlements for the purpose of this study are described as settlements with a low infrastructure level, which do not adhere to building codes and have informal or no tenure security (Alemie et al., 2015).

2.6.1 Mode of Land Acquisition in Informal Settlements

Due to the unconventional dealings of informal settlement, their mode of land acquisition also tends to differ. Rakodi & Leduka (2004) highlighted land acquisition mode in six informal settlements in Africa, including inheritance and plot sharing. The terms of payment also were seen to differ. They were characterized by flexible payment methods, including payment in installment and token payment rather than the land's market price. Bizimana, Mugiraneza, Twarabamenye, & Mukeshimana (2012), cited informal purchase, gift, and inheritance as the various ways people acquire land in Kigali's informal settlements, Rwanda.

2.6.2 Tenure Security in Informal Settlements

Security of tenure for the urban poor is now a global concern. Most developed countries have well-established the meaning of tenure security; on the other hand, there is a level of uncertainty in the meaning of tenure security in most developing countries (Simbizi, Bennett, & Zevenbergen, 2014). Informal Settlements are mostly characterized by a wide range of informal tenure rather than the tenure

provisions in the law. This thereby creates a challenge for the Land Administration authorities responsible for Land Tenure management since the tenure types, spatial units, and existing rights are inconsistent with the provisions of the formal Land Administration System (Lamba, 2005). Lamba (2005) described informal tenure as the situation where individuals or groups occupy land without the landowner's permission, hence de facto tenure, or the actual occupation of land. This complements the assertion by Bizimana et al. (2012) and Edésio Fernandes (2011) that secure tenure can exist based on the recognition and acceptance by community institutions rather than formal recognition by state authorities as is in the case of many informal settlements.

2.7 Regularization of Informal Tenure

The existing inconsistent land tenure forms in informal urban settlements have raised concerns about the regularization of existing informal tenure in informal settlements. Kiddle (2010) suggested the regularization and legalization of land tenure as the best approach to improving land tenure security in informal settlements. De Soto's *Mystery of Capital* has influenced the introduction of informal tenure regularization policies in Latin America and elsewhere (Fernandes, 2002). In Latin America, regularization of informal tenure was in two approaches; legalizing tenure through titling to trigger development in the case of Peru and the upgrading of services while legalizing tenure as in the case of Brazil (Fernandes, 2011).

United Nations (2015) described the regularization of informal tenure as the legalization of informal settlements in a report to identify the challenges and opportunities of informal settlements in South-Eastern Europe. The report highlighted the regularization efforts put in place to regularize informal tenure in South-Eastern Europe. One of the case study countries, Albania, legalized most of its informal settlements to mitigate criticism and stimulate economic growth. In the formalization project, the government allowed citizens to declare their informal homes to be legalized and recognized.

In Montenegro, the situation was different as the regularization project failed due to the process's expensive nature. Citizens were made to pay legalization penalties, forced to pay the market price of the land they occupy in situations where they are not the owner, among other charges. Thus, the report recommended the tax on penalties to be reduced and legalization fees made affordable to ensure informal dwellers can regularize their interest in land (United Nations, 2015). This clearly highlighted the difference in the efficiency and effectiveness of different countries in dealing with the regularization /legalization of informal settlements. Countries were recommended to equip their institutional stakeholders and adopt flexible and pro-growth policies in regularizing informal settlements.

In Africa, Rwanda's Land Tenure Regulation (LTR) program was initiated to reform their land tenure system, which was fragmented, with only a minority having formal titles. The program saw the issuance of leasehold certificates in a participatory demarcation and adjudication program, which has been recognized internationally as highly successful (Santos et al., 2014). On the other hand, the land readjustment project in Angola was part of reform projects intended to regularize informal dwellers' tenure and consequently reduce land conflicts in the city of Huambo (Cain, Beat, & Festo, 2013). Cain et al. (2013) highlighted the increase in land market values and the integration of informal settlements into socially diverse neighborhoods as part of the various benefits of this project.

Therefore, the different tenure regularization procedures indicate that regularization procedures differ from country to country and are based on the available resources and the nature of informal tenure that exists in country-specific places.

2.8 Conceptual Framework

The conceptual framework in *Figure 2-1* illustrates the underlying concepts and primary focus of this study. The study emanates from the concept of resource boom and its numerous effects with rapid urbanization as the focus. Rapid Urbanization resulting from the oil find, i.e., Oil-Induced Urbanization is characterized by the demand for housing, thereby increasing growth in settlements. The effect of the relationship between settlement growth and land tenure affects Land Administration Institutions in their core mandate of ensuring the prudent use of land. Therefore, the study focuses on this relationship, its effect on the growth of settlements, land tenure, and the challenges it generates for selected Land Administration Institutions in Sekondi-Takoradi.

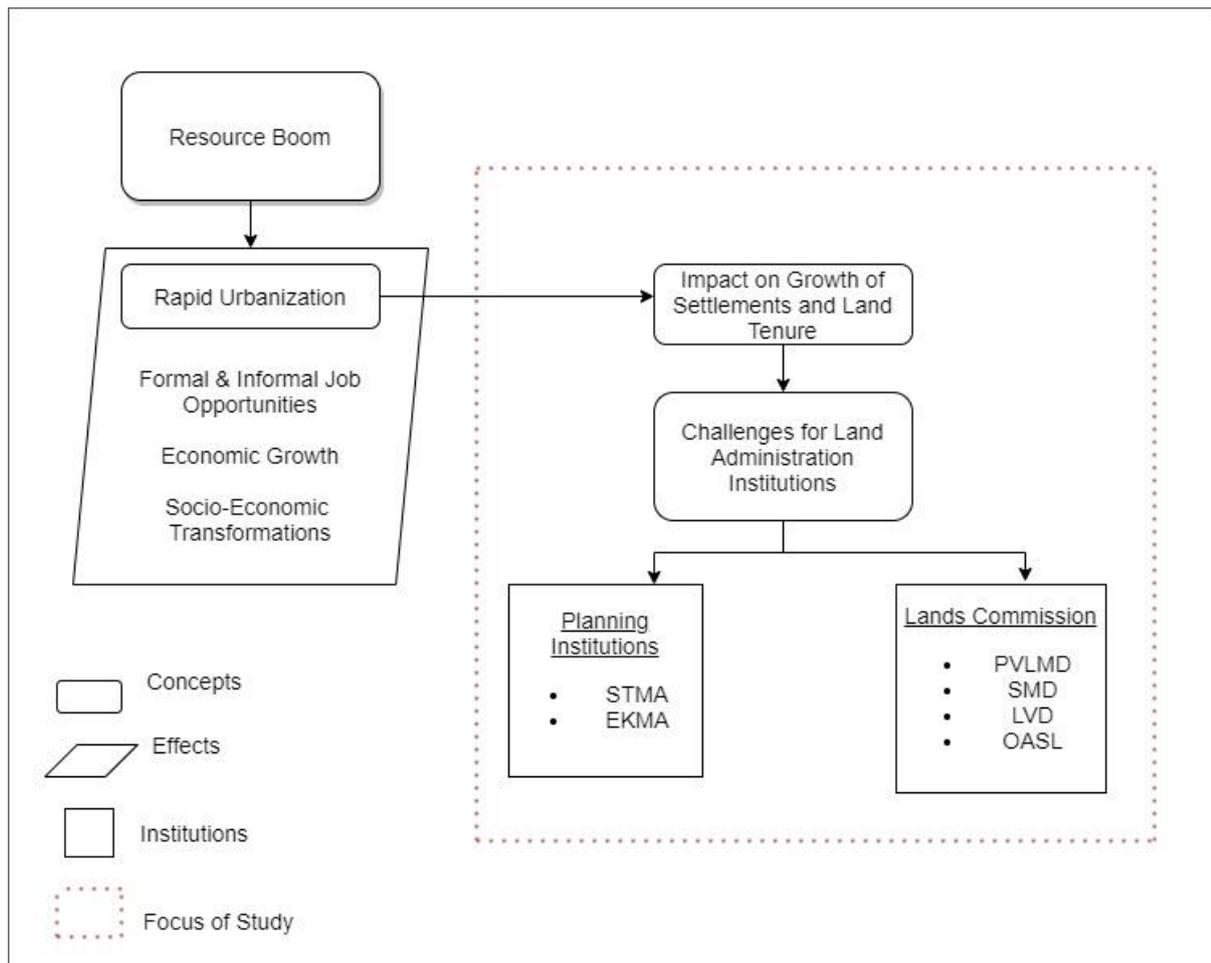


Figure 2-1: Conceptual Framework

3. RESEARCH DESIGN AND RESEARCH METHODS

3.1 Introduction

This chapter describes the methodology used in addressing the research questions. It highlights the research design, overview, and justification of the two study areas selected, methods used in data collection, limitations, and ethical considerations during the data collection.

3.2 Research Design

This research adopted a case study approach in its design. Bryman (2012) describes a case study research approach as selecting a single community, family, or organization as a case for investigation and exploration. Yin (2009) describes the case study research approach as having the revelatory power to explain a phenomenon. Therefore, a case study approach was adopted for this study to empirically explore the casual effect of oil-induced urbanization on developments in Sekondi-Takoradi over the years. This approach further allowed an understanding of the activities related to the oil boom within the metropolis on the growth of settlements, transformations in the city after the oil find and how those affects land administration processes.

The study combined qualitative, quantitative, and spatial data collection to achieve its objectives. These approaches complement each other to ensure comprehensiveness and completeness in attaining and operationalizing research objectives (Bryman, 2012).

3.3 Study Area

Sekondi-Takoradi, in Ghana's Western Region (see *Figure 3-1*), is the case study area for this research. The twin city, which is also a harbour city, gained its new fancy tag as Ghana's oil city after discovering oil in the year 2007 (Obeng-Odoom, 2009). Sekondi-Takoradi is located in the south-eastern part of the Western Region of Ghana and serves as the regional administrative capital. The city is bordered by Shama District and Ahanta West District to its east and west, respectively. Mpohor Wassa East District is its northern neighbor while bordered to the south by the waters of the Gulf of Guinea.

Sekondi-Takoradi is the fourth largest city of Ghana, covering a total land surface area of 49.78km² (STMA, 2011). The current population of Sekondi-Takoradi is 946,000 and is projected to increase to approximately 1.3 million people by the year 2030 (MacroTrends, 2020). Nguyen (2019) describes Sekondi-Takoradi as "a base for transnational oil and gas companies involved in the exploitation and production of natural oil resources" (p.4). There are currently fifteen (15) oil field blocks in exploration with expected new blocks and proposed blocks awaiting licensing (Nguyen, 2019). The operationalization of these oilfields is handled onshore by small and large oil companies located in the metropolis, including Tullow Ghana, Kosmos Energy, Baker Hughes, and Schlumberger (Eduful & Hooper, 2015).

In addition to creating wealth among a substantial number of people, the emergence of the oil industry in Sekondi-Takoradi also has a significant impact on its urban development patterns (Yankson, Gough, Esson, & Amankwaa, 2017). Therefore, there is a need to understand how urban development dynamism in Sekondi-Takoradi contributes to informal settlements' growth and its resultant effects on LA Processes.

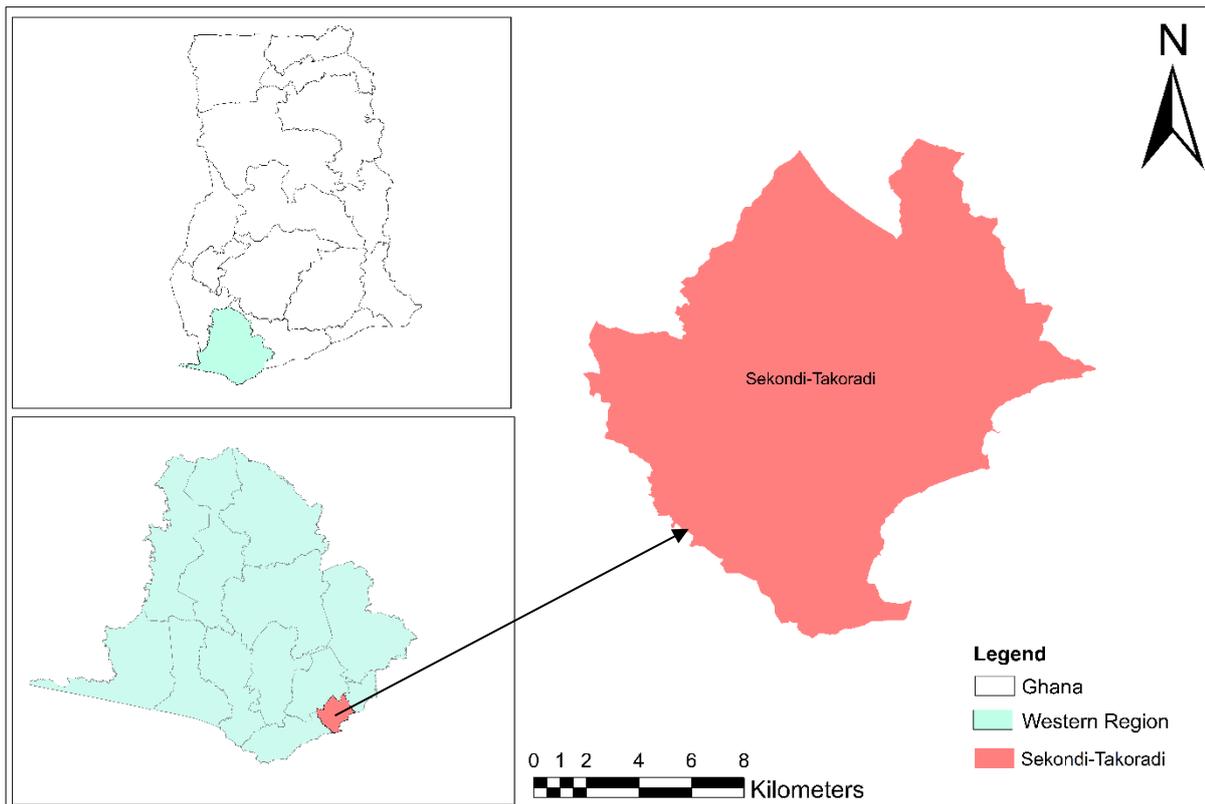


Figure 3-1: Map showing the location of Sekondi-Takoradi

3.3.1 Selection of Neighbourhoods in the Case Study Area

Two neighbourhoods were selected within the case study area of Sekondi-Takoradi for the purpose of this study, namely Assakae and Kojokrom. These two neighbourhoods were identified during the semi-structured interviews with four Key Informants (KI). They were identified as part of the towns housing people due to the push out from the Central Business District and its related areas and major residential neighbourhoods because of the extreme increase in their land and property values. Therefore, they are appropriate in providing relevant information on the subject matter and the local dynamism resulting from the region's oil find. The areas also fall within zones identified as the Urban Sprawl in the Ghana Urban Management Pilot Project (GUMPP) for Sekondi-Takoradi (see *Figure 3-2*). The GUMPP project is an initiative by the government of Ghana to promote a city-wide approach to urban development and support planning layout in infrastructural development plans in urban sprawl areas (MLGRD, 2017). Thus, these two areas were selected as areas where questionnaires were administered to get primary data from land occupants.

Sekondi-Takoradi Metropolitan Assembly (STMA) before the year 2018 had four sub-metros, namely Takoradi sub-metro, Sekondi sub-metro, Essikado Ketan Submetro, and Effia Kwesimintim sub metro. In 2018, a legislative instrument (L.I 2349) created the Effia Kwesimintim Municipal Assembly (EKMA). Currently, STMA has three sub-metros, i.e., Takoradi Submetro, Sekondi sub-metro, and Essikado Ketan sub-metro. Kojokrom study area falls under Essikado Ketan sub-metro of STMA, whilst Assakae falls under the neighbouring Effia Kwesimintim Metropolitan Assembly (see *Figure 3-3*).

The criteria for identifying the informal settlements in the selected sites, as discussed in the literature review, are settlements that do not adhere to building codes, settlements without tenure security, and settlements with low infrastructure levels.

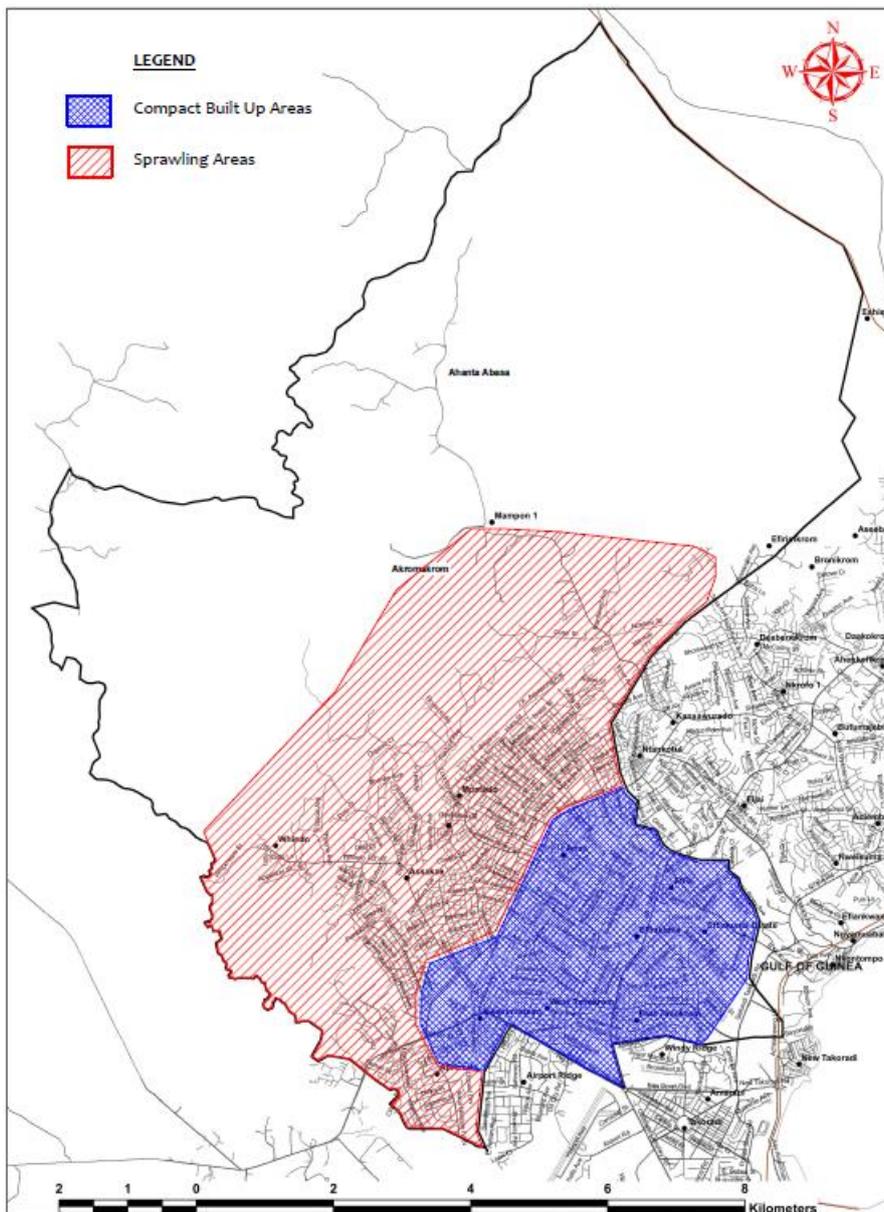


Figure 3-2: Map showing areas of urban sprawl in Sekondi-Takoradi
Source: (MLGRD, 2017)

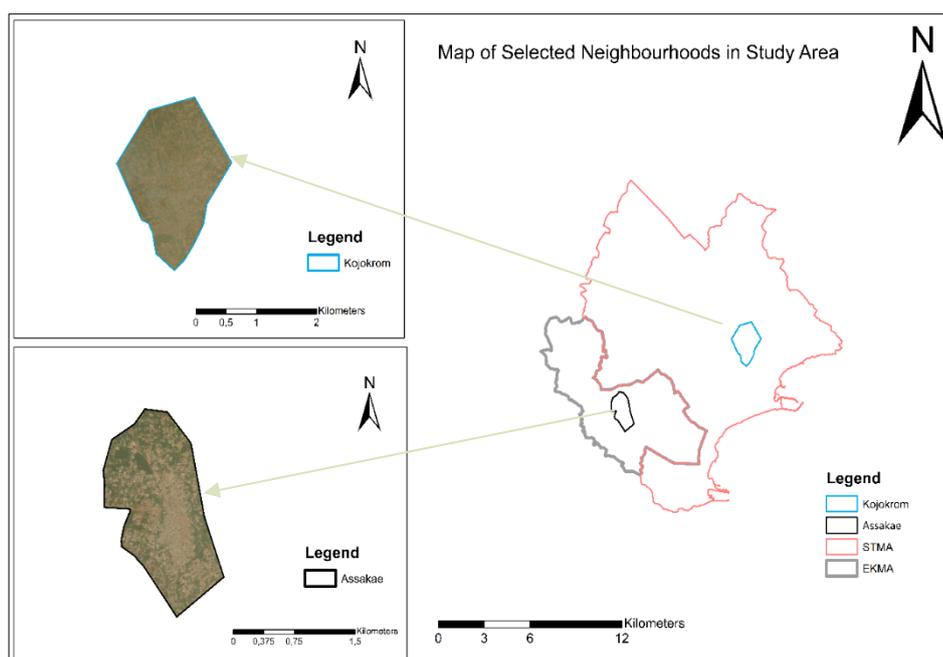


Figure 3-3: Map of selected neighbourhoods in the study area

3.4 Pre-Fieldwork Phase

The pre fieldwork phase consisted of identifying the research problem, formulating research objectives and sub-objectives to address the research problem with the help of relevant articles and reports. This also helped the formulation of the Key Informant Interviews (KII) guiding questions and questionnaires. During the pre-field stage, arrangements were made to identify officials who will be the respondents for interviews. Interview sessions were scheduled based on the availability of the research KI and the agreed convenient time. The interview guides (see **Appendix 3**) were also sent to the respondents before the scheduled date to give sufficient time to read, understand, and familiarize themselves with the interview question to prepare adequately before the scheduled interview session.

On the other hand, two research assistants were recruited to help in the data collection by questionnaire. The first field assistant is an alumnus of ITC; thus, he knew and understood the quality and importance of the data required for this research. The second field assistant was a university graduate from the University of Cape Coast (UCC). Both assistants had prior experience in data collection. Three (3) scheduled meetings were conducted with field assistants to introduce the research objectives and the required data vital for the analysis. This was to ensure they had a common understanding of the research objectives. They were also trained on using the data collection tool used for the questionnaire i.e., the Kobo Toolbox. Pilot testing was done on the 15th of February 2021, after which necessary adjustments were made.

3.4.1 Sampling Strategy

Purposive sampling technique was adopted to select senior officers from the Regional LC, Planning Unit of the Sekondi-Takoradi Metropolitan Assembly (STMA), and Effia-Kwesimintim Municipal Assembly (EKMA) due to their expert knowledge in the field of inquiry. In addition, senior officials from each of the divisions of the Regional Lands Commission, Physical Planning Units of the STMA, and EKMA were interviewed.

Yamane (1967)'s renowned formula for calculating sample size was adopted to calculate the sample size for the research using a confidence level of 92% with a margin of error of 8%. With an estimated population of 946,000, an estimated sample of one hundred and fifty-six (156) questionnaires were administered to landowners and land occupants for data collection. This number was then divided equally for the two selected neighborhoods in the case study area. The random sampling technique was adopted in administering the questionnaires to give landowners and land occupants equal chances of being selected.

3.5 Fieldwork Stage

The fieldwork stage involved the collection of both primary and secondary data. The fieldwork started on the 16th of February 2021. Four ke were scheduled for the first set of interview sessions between the 16th of February 2021, and the 22nd of February 2021.

The description and objectives of the research were explained again to the respondents before each interview session. The first sets of KII helped in identifying neighborhoods for the administering of questionnaires. The field assistants started the questionnaire administration from the 24th of February 2021 to the 9th of March 2021 for a period of six days each in the two chosen areas, including some weekends after familiarization upon entry of the communities. The second set of KII was held on the 10th and 22nd March 2021.

3.5.1 Key Informant Interviews

Primary Data was gathered through semi-structured interviews with key informants. Semi-Structured Interviews incorporate interview guides consisting of specific topics to guide the interview between the researcher and respondents while giving room for the respondent to discuss the in-depth subject matter as follow-up questions would afford exhaustive discussion (Bryman, 2012). Semi-structured interviews were conducted to gain insight into the transformation process of the informal settlements post-oil discovery, land acquisition process, and challenges LA institutions have faced post-oil discovery and the reforms if any.

The respondents for these interviews were Key Informants comprising of senior officials at the Regional Lands Commission, and Regional Land Use and Spatial Planning Authority (LUSPA) at the Sekondi-Takoradi Metropolitan Assembly (STMA) and the Effia-Kwesimintim Metropolitan Assembly (EKMA). The interviews were carried out online via an online communication platform known as Zoom due to the inability to visit the study area as a result of the outbreak of the Corona Virus, a global pandemic. According to Kumar (1989), Key Informant Interviews involve interviewing a selection of a group of individuals likely to provide rich information and insights on a particular subject. Thus, respondents provided detailed information from semi-structured interviews to help achieve the research's objectives. The details of the respondents are highlighted in *Table 3-1* below.

Table 3-1: List of Respondents for Interviews

Key Informant	Organization	Position
Key Informant 1	Planning Unit-STMA	Head of Physical Planning
Key Informant 2	Planning Unit-EKMA	Physical Planning Officer
Key Informant 3	Public and Vested Lands Management Division (PVLMD)	Land Administration Officer
Key Informant 4	Lands Valuation Division (LVD)	Assistant Land Administration Officer
Key Informant 5	Survey and Mapping Division (SMD)	Assistant Geomatic Engineer
Key Informant 6	Office of Administrator of Stool Lands (OASL)	Deputy Regional Stool Lands Officer

3.5.2 Questionnaires

Questionnaires were also used as a means of collecting primary data from the field of study. The questionnaires were used to collect data about the influence of oil discovery on inhabitants' migration history, actors involved in land acquisition, arising tenure types, and tenure security perception by land occupants (see **Appendix 4** and **Appendix 5**). The questionnaires included both open-ended and close-ended questions. The close-ended questions used categorization to ensure the subjectiveness of responses, while the open-ended questions gave respondents a chance to give detailed responses.

The questionnaires were designed on an open-source data collection tool known as the Kobo Toolbox. The Kobo Toolbox was beneficial and effective because data collected was submitted immediately after collection and captured geographical location helpful to understand the physical distribution of respondents. This helped to monitor and make the necessary corrections and guidance to the field assistants to ensure the accurate source of the data. In total, one hundred and fifty-six (156) questionnaires were administered. This number was divided equally among the two selected areas in the case study area. Thus, seventy-eight (78) questionnaires each were administered in Assakae and Kojokrom. *Figure 3-5* illustrates the random distribution of field points where questionnaires were collected.



Figure 3-4: Data Collection by Field Assistants

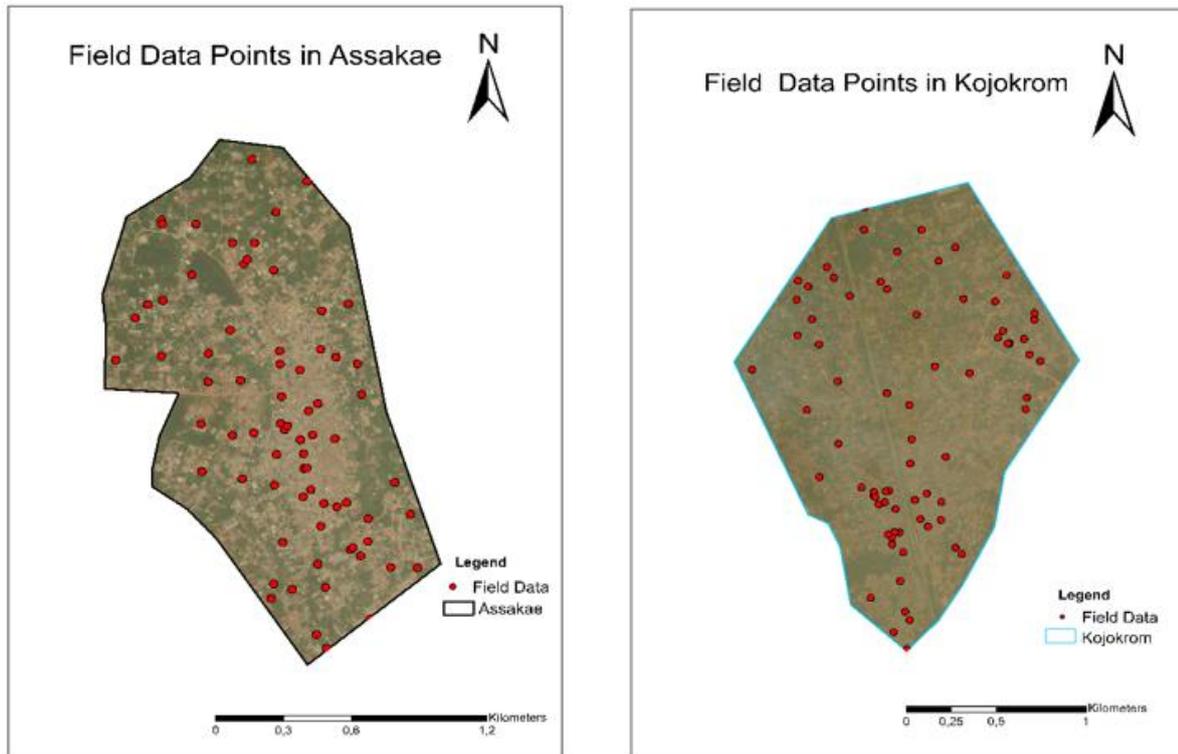


Figure 3-5: Field Points of Data Collection in study sites

3.5.3 Secondary Data

The secondary data used for the study included aerial images, settlement boundaries of the study sites from the LUSPA, and relevant documents from the LA Institutions. The 2007 and 2019 aerial images were acquired from google earth for visual interpretation to complement data from the KII. The 2007 image gave the spatial view of the study sites just around the time the oil was discovered and was compared to the 2019 image to appreciate the spatial growth of the study sites.

3.6 Post Field Work

Post fieldwork phase involved processing, analysing, and interpreting data collected to answer the research questions. After the KII, the interview recordings were transcribed manually in Microsoft Word. The manual transcription also gave the first impression of the data collected. Qualitative content analysis was used in analysing the data after it was imported into Atlas t.i software. The data was grouped according to the various participants, and themes were generated from the texts through the open coding method (see **Appendix 6**). The analysis was used to analyse the growth of informal settlement post-oil discovery from the KI's perspective, the general impact of the oil find in the metropolis, the arising tenure post-oil discovery, and the challenges.

The responses from the questionnaires were also exported and analysed through descriptive statistics by describing the frequency of data distribution from a statistical analysis and graphical representations with the aid of graphs and tables. This helped in understating the migration history of inhabitants and the actors and mode of land acquisition.

3.7 Ethical Considerations and Limitations of the Research

3.7.1 Ethical Considerations

Ethical issues were highly considered in data collection for the study to uphold the research's integrity. Ethical considerations involve adhering to the code of conduct in research practice to collect data, seek consent, and maintain confidentiality in conducting research (Kumar, 2011). In view of this, an introductory letter from the University was presented to all respondents of the study before data collection. In addition, field assistants presented to the elders of the communities the introductory letter upon entry before data collection commenced. The respondent's consent was also sought to ensure that interviews were conducted under no coercion and with the respondents' approval and acceptance. The study's objectives and significance were also explained to respondents to ensure they understand the researcher's intentions and objectives. Respondents were assured of the anonymity by which data collected will be treated and for solely academic purposes. The permission of KI was also requested before the interviews were recorded. Relevant literature and documents used in the research will be acknowledged accordingly.

3.7.2 Limitations of the Study

Given the recent global pandemic of the Covid-19 virus, the researcher could not physically visit the study area for data collection. The researcher's physical presence at the study area would have enabled familiarizing the study area and making some visual data collection and personal observations. Nonetheless, the caliber of the field assistants ensured the data quality was not compromised, even though being there would have been preferable.

Some technical challenges were encountered during the interviews via zoom but were managed appropriately. An additional challenge was the schedule of the KI's. Due to their busy schedules, some were only available later after work, which was sometimes midnight here, but the researcher made sure to comply since it was the only convenient time available for the respondents, and rescheduling would have prolonged the time for the data collection.

3.8 Concluding Remarks

This chapter highlighted the research design and methods adopted for the research. In all, six (6) officials were interviewed as key informants whilst one hundred and fifty-six (156) questionnaires were administered, with seventy-eight (78) being administered in each of the selected neighborhoods.

Appendix 1 and **Appendix 2** show the research matrix and operationalization of variables, respectively, as used in this study.

4. RESULTS

This chapter presents the findings from the semi-structured interviews, questionnaires, and visual analysis of aerial images. The findings are based on the research objective and sub-objectives. Characteristics of respondents are introduced first to set as the foundation for subsequent results. This is followed by some identified impacts of the oil find in the Metropolis. Results on research sub-objectives are presented subsequently on the growth of settlements post-oil discovery, mode of land acquisition, land tenure and rights, and the challenges being faced by selected institutions.

Characteristics of Respondents by Gender, Age and Level of Education

The gender, age, education, and occupation of respondents of the questionnaire in Assakae (Study Area A) and Kojokrom (Study Area B) are presented in this section.

Table 4-1: Demographic Information of Respondents in Assakae

STUDY AREA A: ASSAKAE			
Gender		Frequency	Percentage
	Male	53	68%
	Female	25	32%
	Total	78	100%
Age			
	18-25	4	5%
	26-35	14	18%
	36-45	22	28%
	46-55	29	37%
	56-65	6	8%
	Above 65	3	4%
Total	78	100%	
Level of Education			
	No Formal Education	13	17%
	Primary Education	13	17%
	Secondary Education	17	21%
	Tertiary Education	35	45%
Total	78	100%	

Source: (Fieldwork Data, 2021)

In Study Area A, Assakae, the respondents to the questionnaire were mainly men (68%). Over 65% of the respondents' ages are between 36 and 55 years. The literacy level is split between those with tertiary education (about 45%) and secondary education qualification or lower (55%).

The educational level of respondents might affect their knowledge of tenure security and their perception of tenure security and the importance of adhering to building codes that would be explored further in subsequent paragraphs.

Table 4-2: Demographic Information of Respondents in Kojokrom

STUDY AREA B: KOJOKROM			
Gender		Frequency	Percentage
	Male	47	60%
	Female	31	40%
	Total	78	100%
Age			
	18-25	2	3%
	26-35	17	22%
	36-45	24	30%
	46-55	28	36%
	56-65	5	6%
	Above 65	2	3%
	Total	78	100%
Level of Education			
	No Formal Education	11	14%
	Primary Education	20	26%
	Secondary Education	12	15%
	Tertiary Education	35	45%
	Total	78	100%

Source: (Fieldwork Data, 2021)

Like Assakae, most respondents in Kojokrom were male (60%), with most respondents aged between 26-55 years. The literacy level, on the other hand, is comparatively lower than in Assakae. The majority of respondents had tertiary education, just like in Assakae. However, this was followed by people who had primary education (26%).

Characteristics of Respondents by Occupation

The occupation of respondents was classified into four, namely: Self Employed, Private Sector Employees, Public Sector Employees, and Pensioners. In Assakae, respondents who were self-employed were found to be hairstylists, traders, drivers, and artisans and represented 13% of the total respondents. Private Sector Employees representing 35% of the total number of respondents employees worked as geologists, drill supervisors, and drivers in various oil companies. Whilst others were bankers, insurance brokers, and a pastor. Public Sector employees ranged from teachers, nurses, health workers, and a police officer and represented 48% of the respondents. Three of the respondents were pensioners and included a retired lawyer and a retired security officer representing 4% of the total respondents (see *Figure 4-1*).

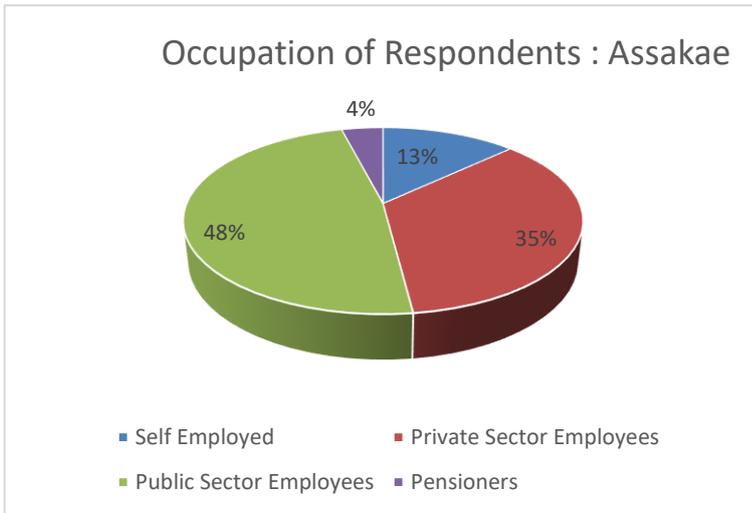


Figure 4-1: Occupation of Respondents in Assakae

In Kojokrom, respondents who were self-employed represented 42%. Most of them were traders, plumbers, and mechanics. Private Sector Employees (43%) included engineers in both the oil industry and other industries and real estate developers. The Public sector employees were nine (9) in number. They represented 12% and were nurses, teachers, and a military officer. Two of the respondents were pensioners, a retired nurse, and a retired company driver. They represented 3% of the total respondents (see Figure 4-2).

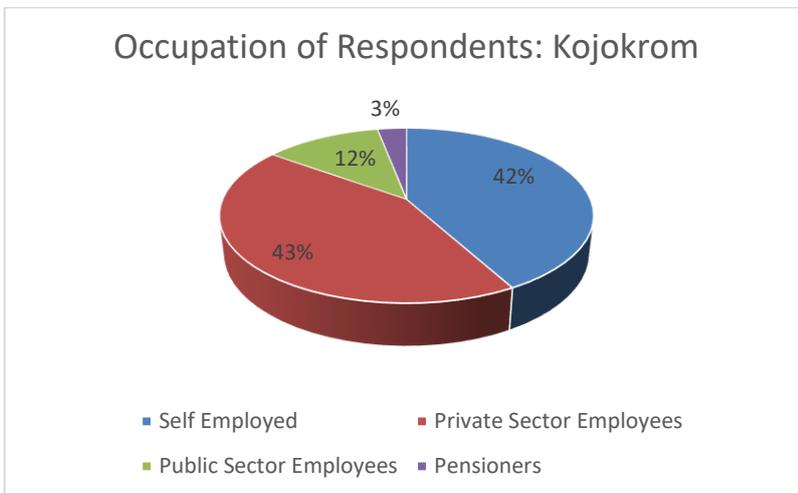


Figure 4-2: Occupation of Respondents in Kojokrom

In both study areas, most respondents were of prime working age, thus working in all job sectors, including the oil sector. The educational levels of respondents were similar, with Assakae having a higher level of educational qualification than Kojokrom, with a marginal difference, which is expected to influence their knowledge of tenure security. While most respondents in Assakae are working in the public sector, in Kojokrom, most of them were private-sector workers. Kojokrom also has more self-employed respondents than Assakae. However, both study areas did not have unemployed respondents.

Impacts of Oil-Find in Sekondi-Takoradi.

As evident in many resource-boom towns, the oil find in Sekondi-Takoradi has impacted various dimensions of the city, ranging from infrastructural developments and settlement growth. Respondents from the KII were asked to help identify some of these impacts and are presented as follows.

a. Impact on Land Use Changes

i. Agricultural Land Use to Residential

There has been the transformation of farming communities like Whindo, Assakae, Mpatado, and Adientem into residential areas after the oil discovery. The growth of the city due to the influx of people has resorted to the city expanding to farming communities. Like residential properties, industrial activities have also expanded into the previously farming communities, serving a dormitory town for commercial and residential activities. Key Informant 1 mentioned as follows: *“About four farming communities, to be precise Whindo, Assakae, Mpatado and Adientem have all been transformed into residential areas after the oil discovery. Because now the direction of growth is towards that are All these have had impacts on agricultural lands, and now most agricultural lands are being converted into other land uses.”- Key Informant 1*

ii. Industrial Land Uses to Commercial Land Use

There have additionally been changes in industrial land uses to commercial use. This was evident at the present location of the Takoradi Shopping Mall. There was a need to construct a shopping mall to serve as a hub for the foreigners coming into the city to trade in the oil industries as well as local dwellers. This project saw the relocation of artisans who used to occupy the place for light industrial activities. This has resulted in artisans being scattered all over the town instead of them being located in one place. This was because the relocation site was not enough to accommodate all artisans. Key Informant 1 stated, *“Now where we have the Takoradi shopping mall, we had to relocate all artisans who use to occupy the site to a new site in order to develop a mall for the city. Especially for the foreigners who come in to trade in the oil industries. Some of these artisans are now scattered all over the place. We could not find enough space to relocate all of them. Some of them too were not willing to move, so by the time they agree to move, the place was full already”- Key Informant 1*

iii. Residential Land Uses to Commercial Use

There was also the change of residential land use to commercial land use in Anaji, one of the leading residential areas in the city. The land was used to construct a commercial mall known as the Anaji Choice Mart. *“In Anaji, there is a residential area that also has been converted into a commercial property as a Mall named as the Anaji Choice Mart.”- Key Informant 2*



Figure 4-3: Commercial Properties
 Source: Gbbase.com (a. Takoradi Mall-left, b. Anaji Choice Mart-right)

b. Impact on Infrastructural Developments

The oil-find impacted infrastructural developments as it generated the demand for specific categories of infrastructure developments to meet the need of the increasing population in the Metropolis. There has been the construction of a solid and liquid waste treatment site at Assakae on a 200-acre plot of land, as revealed from the KII. The Austrian Government sponsored the Liquid Waste treatment site project, whilst the Hungarian Government is funding the Solid Waste Treatment Project. The project is scheduled to be completed in the next three (3) years. As an ancillary benefit of the waste disposal site, there is also the construction of an 11 km road to the Waste Treatment Site, which is also believed to further open up the town.

As part of the one district one factory project by the government of Ghana, there is also a proposed construction of a pharmaceutical industry in Whindo, one of the dormitory towns, in partnership with a pharmaceutical company in the region. Since the project goes beyond the Whindo river, there will be the construction of a bridge to allow for easy access to the site. As a result of all these projects, real estate developers are also taking advantage of the industries coming up. It is believed that these projects will bring more people into the town, thus increase in demand for housing.

The Takoradi Port of the Ghana Ports and Harbor Authority (GPHA), one of the two main Harbor Ports in the country, was expanded to three times its size. This was to ensure it has an oil jetty that can support the oil industry. There has also been the expansion and upgrading work at the Effia-Nkwanta Teaching Hospital, which is the biggest hospital in the Metropolis to a Regional purpose. The railway and road sectors were also revamped to make transportation easy, and ease vehicular traffic associated with rapid urbanization due to the oil find.

In summary, there has been significant transformations in the city of Takoradi after the oil find. As the fourth largest city in the country, the transformations in Sekondi-Takoradi were inevitable however the discovery of oil in the city made it a strategic place, attracting further developments to complement the city's new role as an oil city.

4.1 The growth of Settlements in Sekondi-Takoradi Post-Oil Discovery

This section presents the results of a visual interpretation of the study sites using aerial images from two different years and responses from the KII. This is to appreciate the growth of settlements in the study sites after the oil discovery. Growth of both formal and informal settlements are presented.

4.1.1 The Influence of oil-find on the growth of settlements in Sekondi-Takoradi

The oil find impacted on the growth of settlements in the study sites. The aerial images show how settlements have sprawled up over the years. It reveals two types of settlements in both study areas. There is the old town where the towns developed from and the new town which is the developing parts of the town. Thus, we have Assakae Old Town, Assakae New Town, Kojokrom Old Town, and Kojokrom New Town (see *Figure 4-4* & *Figure 4-5*). A comparison of two aerial images of Assakae 2007 and 2019 shows the tremendous growth of the study sites after the oil discovery (see *Figure 4-6*). The old town portrays informal settlements, whereas the new town depicts more formal settlements.

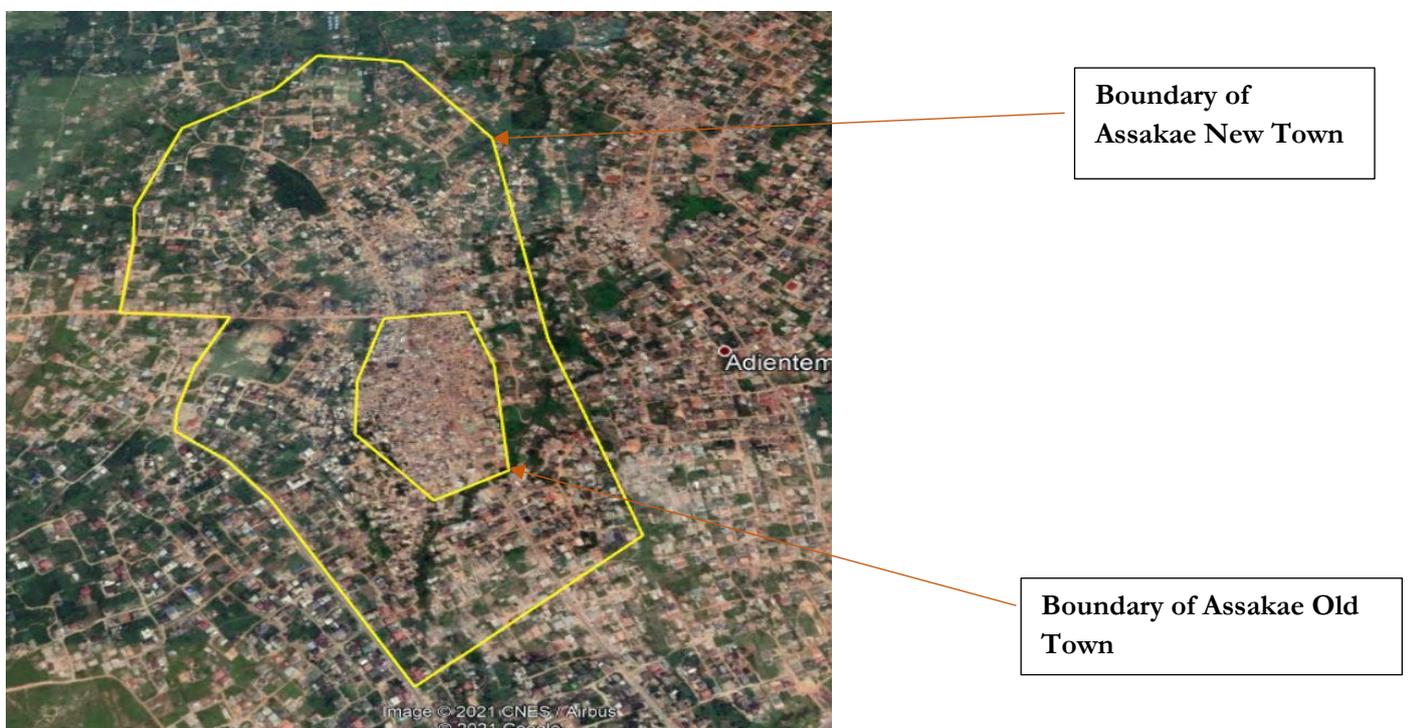


Figure 4-4: Aerial Image of Assakae depicting the old and new towns

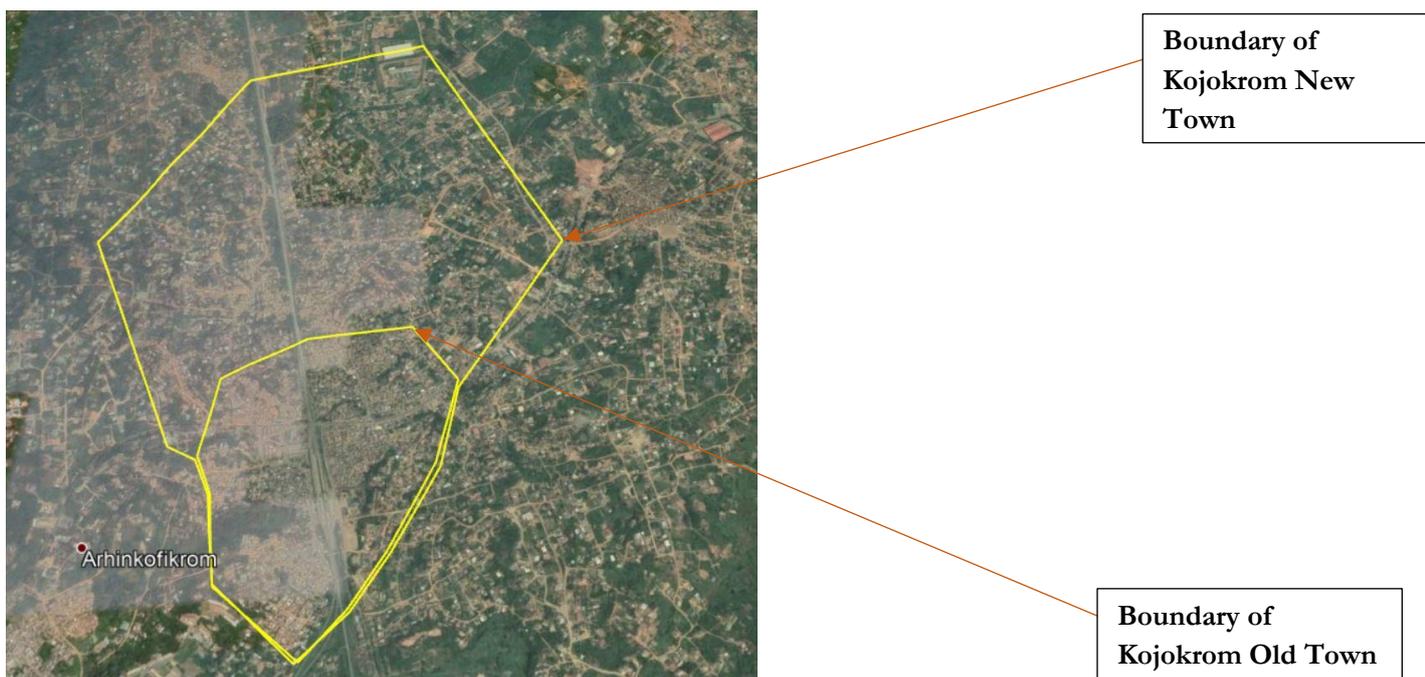


Figure 4-5: Aerial image of Kojokrom depicting the old and new towns

a. Influence of Oil Find on Informal Settlements

Informal settlements in this study refer to “settlements which does not adhere to building codes, settlements with low infrastructure level and settlements with no tenure security.” Data collected from the field showed that Assakae Old Town and Kojokrom Old town have these characteristics and can be referred to as Informal Settlements. Key Informant 1 also defined informal settlements as *“We have informal areas, poor drainage system. It’s a major challenge in Asaakae. And the buildings too are sub-standards some are not even made of concrete. There are sandcrete and the likes. They also have poor sanitation conditions.”* Key Informant 2 also said, *“In my opinion, professionally, it is informal because it does not have the basic infrastructure to support them, and I think that’s all.”*

These comments compliment the adapted definition of informal settlements. These old towns are where most of the indigenes reside. The old town has characteristics of old buildings, substandard structures, and not adhering to building codes. This is because the town existed even before a planning scheme was done for the area. Key Informant 2 added, *“As I said earlier, some of these informal settlements have been there even before the establishment of STMA. And here in Ghana too, according to our local government Act, if a settlement is not more than 5000, you cannot go there to plan for them, so people were just doing their own thing. They keep expanding. They do not have their lands documented, no building plans, or any document covering their property, they are just there. Some have lived as long as 50-60 years but without documentation on the lands they occupy”*.

A 2007 and 2019 aerial images of Assakae showed how the town transformed from an old town and expanding into a new town (see Figure 4-6). The image shows how compact and dense the old town has become over the years while expanding into the new town.

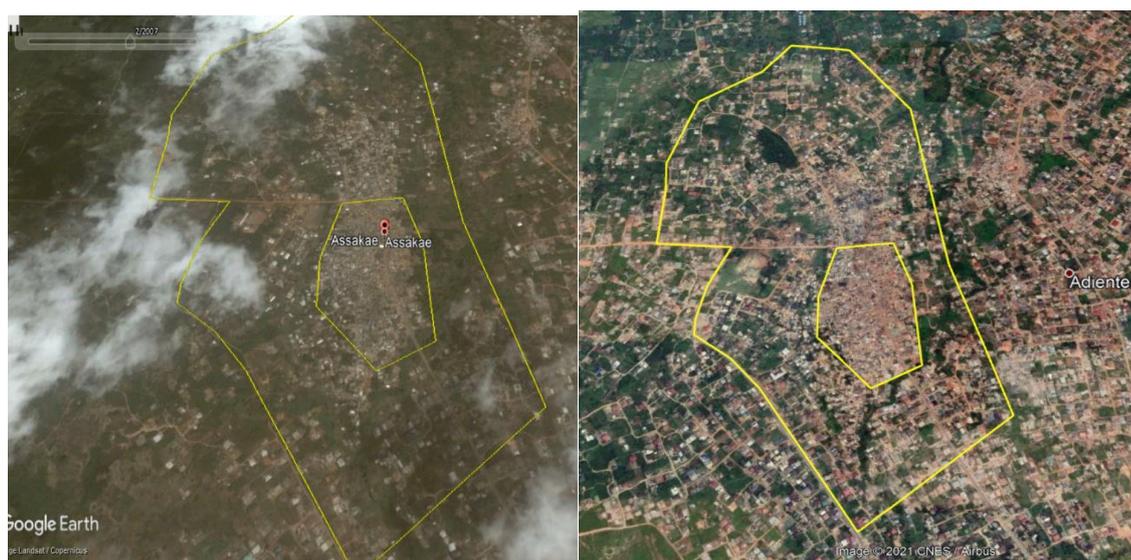


Figure 4-6: An aerial image of Assakae in 2007 (left) and 2019 (right)

b. Influence of Oil-Find on Formal Settlements.

The study also revealed the growth of formal settlements in both study sites. In contrast to the definition of informal settlements, formal settlements, therefore, refers to settlements that adhere to building codes, have tenure security, and have a good level of infrastructure. This was characteristic of the new towns of both areas, Assakae New Town, and Kojokrom New Town, where most migrants from both within and outside regions live. The aerial images also illustrate how these formal areas appear, i.e., they are more formal and well planned, with laid down roads evident from the images. Even though the new towns can be classified as more formal than the old towns, these areas have some properties that have not been registered, and thus, without the required security of tenure and some even without building permits. Most of the people who live here are migrants who came in from different areas and regions. Because Assakae and Kojokrom are far from prime areas in Takoradi, their rent and land values were relatively affordable compared to land and properties in prime Takoradi. Due to this, settlers were able to afford land to build, while others were able to rent decent housing as they would not have afforded in prime areas. This also explains why the New Towns' informality is minimal compared to that of the old towns.

4.1.2 Migration History of Inhabitants

Results show that people have lived in the study area for five (5) to more than fifteen (15) years, thus they have lived there long enough to provide relevant information for the study. Respondents were asked to indicate where they migrated from, and responses were categorized into three (3), Indigenes, Intra-regional Migrants, and Inter-Regional Migrants. Indigenes refer to the category of people born in the community. Intra-Regional Migrants refers to people who migrated from within the same region, i.e., the Western Region of Ghana, while Inter-Regional Migrants refer to the category of people who migrated into the study area from other towns in different regions in the country.

In Assakae, 24% of respondents were indigenes, whilst 49% of the respondents were intra-regional migrants (see Figure 4-7). According to respondents, they have migrated from various towns in the Western region, including Takoradi, Daboase, Agona Swedru, and Shama. Some of these are smaller towns in the region, thus migrants resorted to greater opportunities in Assakae. In addition, 27% of the respondents in Assakae were inter-regional migrants. They had migrated into Assakae from outside the region including, Accra, Ho, Oda, and Kumasi. Besides, results have shown a significant difference in

percentage between people who migrated from within the Western Region and those who came from outside the region.

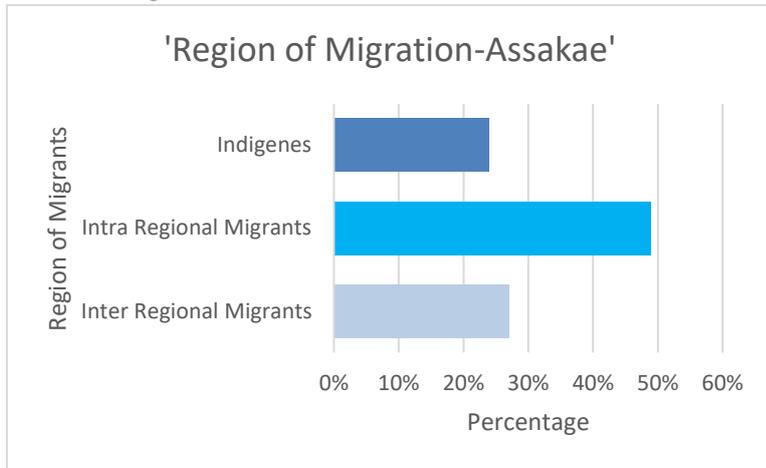


Figure 4-7: Region of Migration of Respondents in Assakae

Figure 4-8 reveals that majority of people living in Kojokrom are indigenes and intra-regional migrants. According to the respondents, the intra-regional migrants moved from areas like Axim, Tarkwa, Anaji and Mpinstsin, while the inter-regional migrants had migrated from Dansoman, Kade, Tema, and Cape Coast.

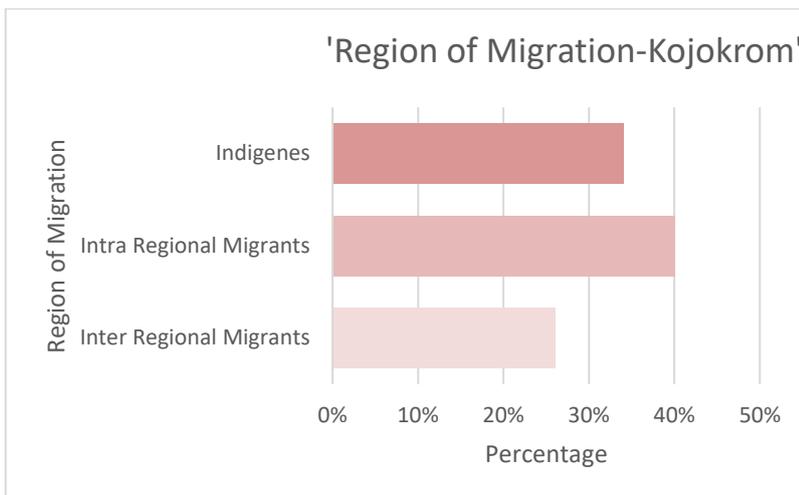


Figure 4-8: Region of Migration of Respondents in Kojokrom

In summary, most of the residents were intra-regional migrants in both Assakae and Kojokrom. This implies that a lot more people from within the Western Region, in and around Takoradi, moved into the study areas for different reasons ranging from the search for greener pastures, low rental values, and to partake in the various opportunities the exploration of oil generates. The presence of natural resources in a region gives it an advantage over regions with no such resources. This motivates inter-regional migration to allow various citizens to benefit from the resource in a particular region.

a. Impact of Oil-Find on Migration

Respondents were also asked if the oil find had any influence on their decision to move into both areas. In Assakae, 68% of the respondents affirmed that the oil-find in Takoradi influenced their decision to stay in Assakae, while in Kojokrom, 81% attested to the same. These include those who are benefiting directly from the oil find by way of working in the oil industries. Their reasons for migrating into both towns were categorized as follows:

i. Job and Business Opportunities

This refers to respondents who affirmed the oil find influencing their reason to migrate to Assakae. Their decision was because of various job and business opportunities. While some had already secured jobs in the oil industries, others were migrated, hoping to find better job prospects and open up their businesses. One of them stated, *“I am working in the oil sector; I moved here after getting a contract.”* One respondent who had moved from Cape Coast stated, *“People moved into Takoradi, resulting in more buildings coming up, and this will require a surveyor to develop the indenture, so I moved here.”*

Apart from formal jobs, other respondents sought to engage in various trade and services like masonry, construction, etc. They believe the influx of people would be an excellent avenue for their various business activities. One person stated, *“The oil made the community develop and good for business. As a driver, I moved there because I knew I would get more clients”*. Another also mentioned, *“I work with an estate company, and we are developing in Assakae. We came because people were moving in due to the oil, so we build and sell or rent out”*.

ii. Affordable Land and Rental Values

Another reason influencing the decisions to migrate was the affordable land and rental values compared to other areas in the metropolis. People who live in areas like Anaji and other prime residential areas had to migrate to these towns after their landlords highly increased their rental values. Others also attested to the affordable land values in Assakae and Kojokrom being their reason to move there rather than to rent as one respondent mentioned, *“I got a job in the oil sector as a security personnel. The land price in New Takoradi compared to Assakae is expensive. So, we moved here”*. In Kojokrom, one respondent said, *“high rental price means I have to move back to Kojokrom old town.”* While land values in prime areas in Takoradi like Beach Road and Anaji were going for between Ghc 125,000.00 – Ghc 500,000.00 per plot, land values in Assakae ranged from Ghc 25,000.00 – Ghc 45,000.00 per plot. In Kojokrom, land values ranged from Ghc 20,000.00-30,000.00 per plot. A single bedroom in Beach Road and Anaji goes for between Ghc 350.00- Ghc 550.00. In Assakae, the same is being rented between Ghc 250.00 – Ghc 400.00 whilst in Kojokrom its relatively cheaper Ghc 150.00 – Ghc 300.00. The substantial difference in these values contributed to migrants' decision to move into the study sites.

iii. Family Ties

The responses from both areas also revealed people had migrated to the town due to the family ties in the area. Some married women mentioned they had to move there to join their husbands, some working in the oil industry. One lady also said, *“My husband works in the oil sector, so we moved here.”* Another also mentioned, *“My husband relocated here because he got a job, so I got a transfer here.”* The responses also showed respondents who moved back to family houses due to the high cost of rent where they previously lived. *“Oil discovery made the house too expensive, so I made an extension to our family house.”* Another person from Kojokrom mentioned, *“I got a transfer from work to Kojokrom to be able to be close to my family.”*

iv. Community and Public Service

There were also respondents whose decision to migrate was not influenced by the oil find in both areas. This was due to the nature of their job, which is service to the public and the community. Even though they migrated, it was solely because of their job, which had nothing to do with the oil find. Some of these respondents were Nurses, Police Officer, and Pastor. The nature of their job is not related to the oil find. However, the influx and presence of many residents require their services in a way or the other.

v. Indigenes

The remaining respondents were indigenes of the town; thus, they were born there. Even though the oil find didn't influence their stay in Assakae, some of them admitted that the presence of the oil had helped improve their business with the influx of people in Assakae. For example, a telecommunication agent said, *"I was born here already, but the oil made me get more clients/work."* One trader mentioned, *"Oil made people come to Assakae, increasing people who will buy things."* Thus, indigenes also benefited from the presence of the oil-find.

4.1.3 Summary of Results for Sub-Objective 1

In summary, the presence of the oil-find in Sekondi-Takoradi has an effect on its periphery towns, including Assakae and Kojokrom. Additionally, the findings substantiate the impact of the oil-find on the growth of formal and informal settlements in the study sites due to the migration of people from both within the region and outside the region to partake in the oil find benefits, even if not directly. Therefore, the presence of inter-regional and intra-regional migrants and indigenes and returnee indigenes has collectively contributed to the growth of both formal and informal settlements in both study sites.

4.2 Mode of Land Acquisition in Sekond-Takoradi

This section presents the findings on the mode of land acquisition in the study sites. Respondents were asked to identify the actors involved in land acquisition and the processes of acquisition. The various actors identified are presented, followed by the mode and process of acquisition.

4.2.1 Actors Involved in Land Acquisition

Respondents indicated four main actors in land acquisition in both study sites.

a. The Stool

The stool is part of the customary landholding system in Ghana. Holding the highest form of interest in land recognized by customary laws as allodial interest, they transfer other lesser interests to interested persons. Stools hold and manage land on behalf of their community and are represented by the heads of the stool, normally chiefs or elders. Responses revealed that about 13% of respondents acquired their land through the stool. The respondents who acquired their lands from the stool were through purchase and gift in both areas. In Kojokrom, one respondent said, *"my grandfather bought a large land from the chief and divided among his children, and I got a section from my mother."* A respondent who was gifted the land by the Assakae stool said, *"After surveying and demarcating a large section of the land for them, I was given this plot as payment."*

b. The Family

The family can be a subset of the stool. Groups of royal families make up the stool fraternity. The family holds a customary freehold interest in land. They can also transfer a sublease interest to land buyers. The family head oversees all transactions regarding land. Respondents purchased their land parcels from the family heads. A category of people also inherited the parcels from their immediate families, who are part of the family. Some of them said, *"I Inherited land from our father."* Another also mentioned, *"I inherited from my late husband after he passed away."* Some made extensions to family houses, while others put up structures on the family lands. One said as follows, *"My family owns the land for a long time, so I decided to make a container on a section to live."* In Kojokrom, one said, *"I built a small place on family land. The rent I was to pay was more expensive than the place I put up. Hence I took this option"*. In Assakae, two respondents received land as a gift from a family after rendering service to them. One of them mentioned, *"I drilled a borehole for a clients house and got a land as payment from the family"*. Other respondents had mounted wooden structures and containers also on portions of their family lands.

c. Individuals

Private Individuals also have the right to own land in Ghana. They get access to land by being part of the land-owning family. Others purchase land for speculative purposes from stools, families, or other lesser interest holders. They usually possess leaseholds or subleases interest and can sublet part of their interests or assign their remaining interest to other land purchasers. Responses further revealed that people also bought their land from private individuals who usually have leasehold interests in land, depending on how they got access.

There was also a category of respondents who live in rented apartments. People who live in rented properties do not go through the land acquisition process because their landlords (mostly private individuals) already do that before building the property. They only are entitled to pay the rent due their landlords and get an agreement to live on the property. They hold tenancy interest in the land for a period of time.

d. Real Estate Companies

Real estate Companies are also actors in the land market. They purchase vast land from land-owning groups, mostly family heads or stool heads, for their businesses. They develop the land and lease it out to others. Some developers sell part of their land as serviced plots. Unlike Assakae, some respondents in Kojokrom got access to their property through real estate companies.

There were also minor participants in the land acquisition process. These are surveyors, friends, and family members. Others are friends who act as middlemen and or witnesses between the purchaser and the family or stool heads.

4.2.2 Process of Land Acquisition

Table 4 shows five main ways through which people get access to land in both Assakae and Kojokrom. It also shows that most people access land through tenancy/rental in Assakae, while in Kojokrom, most respondents acquired land through purchase. A few of the respondents' access land through gift or inheritance in both areas. In addition, results reveal a close similarity in access to land through adverse possession in both study sites (see *Table 4-3*).

The process by which respondents acquired their parcels of land differs by mode of acquisition. The process of land acquisition by Gift, Inheritance, and Adverse Possession was relatively straightforward in both study areas. However, those who acquired their land by purchase had to go through a number of steps before getting access to it.

Table 4-3: Mode of Land Acquisition

Means	Assakae	Kojokrom
	Percentage (%)	Percentage (%)
Gift	6	3
Inheritance	7	5
Adverse Possession	14	12
Custodian	-	4
Tenancy/Renting	47	33
Purchase	26	43
Total	100	100

Source: (Fieldwork Data, 2021)

a. Gift

People who acquired their land by means of gift got it immediately after their services were rendered. There was no laid-down process for them to go through because it was already agreed beforehand that the land would be used as a means of payment. Respondents who were gifted the land by their families also narrated that the process was relatively straightforward. The land was divided, and each member was asked to choose their desired plot, after which the indenture was given to them for registration. The elders of the stool were the other parties involved in these transactions to act as witnesses.

b. Inheritance

Another mode of land acquisition is Inheritance. People inherit the land which previously belonged to an immediate family member after they had died. People in this category also asserted that the land was handed over to them after a family meeting. Mostly the deceased landowner leaves behind a will that mentions who takes over their properties, including land. These proceedings are typically done after a stipulated time after the deceased death, a family meeting is held, and properties are apportioned accordingly. In other cases, there might be no will, but the deceased might have mentioned to the family members whilst alive regarding who he/she wants to inherit his/her property. Thus, families agree to that after the person has passed. However, respondents did not mention whether the land was bequeathed to them by means of a will or not.

People who had moved back to portions of their family lands narrated that they held a meeting with their family heads to allow them to move to a section of the family land. Most times, they put up structures or extensions to existing family land. This process is generally without any form of payment or commitment. Some family members act as witnesses as part of such arrangements.

c. Adverse Possession

Responses also show that there was a category of respondents in adverse possession of land. Their grandparents settled some years earlier on a parcel of land and handed it over to them thus, they are also owners of that land, even though they had no registered title to the land. Therefore, they are mandated by law to register the land in their name due to the long number of years they have occupied it without any challenge.

d. Custodianship

There was a minor category of persons in possession of land as caretakers in Kojokrom. They are known in local dialect as *"hwe so ma me"* meaning take care of it for me. These are employed by house owners who live outside the country or region to live in their property. Some of the properties are already completed, while others are undergoing construction. So, these caretakers live in the house while construction is ongoing to ensure the project is successfully done and keep an eye on the building materials. Those in already completed properties live in it to ensure the maintenance of the house. One such person recounted, *"my boss bought the land. He is building and asked me to take care of the land. He will give me advance notice before moving in"*. These categories of persons make no payment to occupy the land/property neither do they have any form of document on it. However, one respondent indicated that his landowner gave him a copy of the title to the land to keep for security reasons.

e. Renting/Tenancy

The category of respondents who live in rented properties only had to agree with the payment terms of renting with the property owner who has already acquired his land. After that, the contract of agreement is signed, and they get to live in their portion of the house.

f. Purchase

Regarding land acquisition by purchase, after identifying a desired plot of land, the purchaser visits the landowners, whether stool, family or individual, to express interest. After that, negotiation on the selling price of the land and payment terms are agreed. The purchaser then conducts an official search at the Land Commission to verify ownership of the selling party to ensure the legitimacy of transactions. After the search is conducted, the purchaser goes back to the selling party, who gives them an indenture prepared by either themselves or an external party and signed. They receive the indenture after the agreement is done. After receiving the indenture, others did not register with the indenture, while others proceeded to register further with the Lands Commission after receiving the indenture. The indenture is enough proof of ownership for some individuals, while the lengthy procedure hinders others in land registration.

These processes are summarized in the activity diagram below (*Figure 4-9*). This construct is based on the cumulative description of processes described by respondents in both study areas.

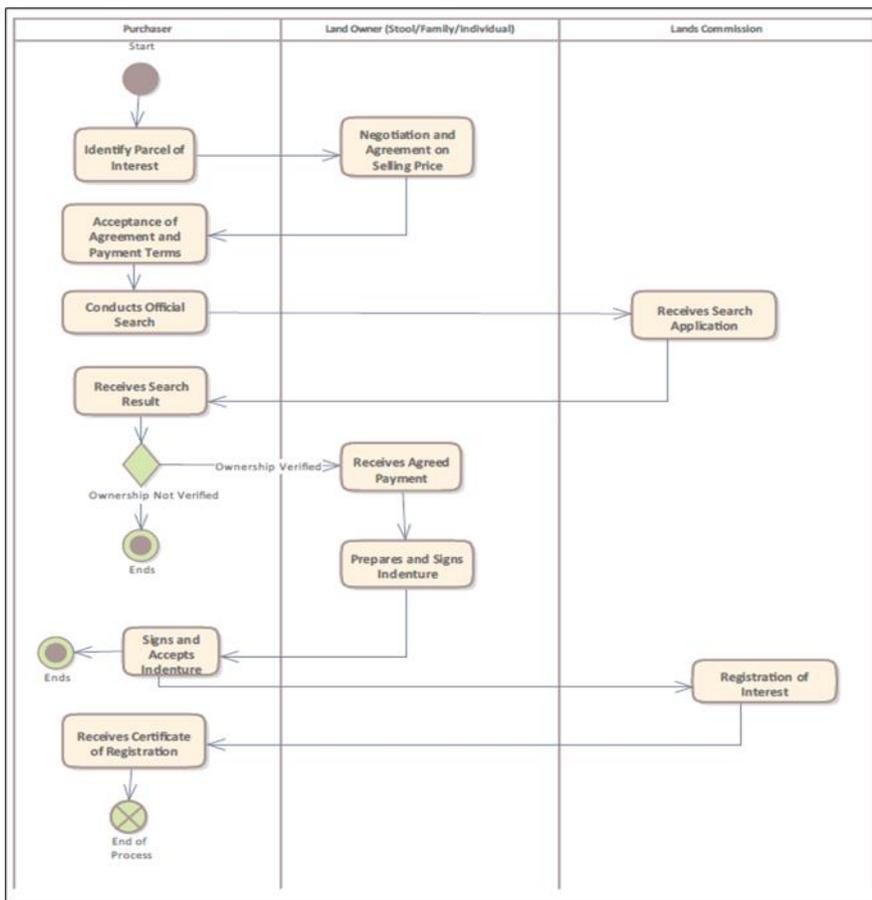


Figure 4-9: A summary of the process of land acquisition by purchase in study sites

4.2.3 Summary of Results for Sub-Objective 2

The results showed in both study sites that the land acquisition process is mainly through purchase, gift, inheritance, and adverse possession, with the majority of respondents acquiring land through purchase and rental leases.

Major actors in customary ownership facilitate the land acquisition process, including the family, stool, and private individuals. The presence of minor actors involved in land transactions like agents, surveyors, elders, and family members ensures a good land allocation process. The study also found that most respondents in Assakae rented properties rather than purchasing land. In Kojokrom, most people acquired their land through purchase.

4.3 Arising Land Tenure and Land Rights

Customary Land Tenure arrangements are the more dominant form of land tenure system in Ghana, giving the duality of the tenure system recognized in the country. The ownership of land by the stool, family, or individuals is under the customary land tenure system. The other form of tenure system recognized in the country is the statutory land tenure system. This is ownership of land by the state as well as stool lands vested in the government. The two land tenure systems comprise various interests and rights vested therein where holders of such tenure systems enjoy. The Land Title Registration Act 1986 recognizes four main types of interests in land. The Allodial Interest, Customary Freehold Interests, Leasehold Interests, and the Customary tenancy or lesser interests inland.

4.3.1 Land Tenure and Rights Post-Oil Discovery

The Interview with Key Informant 3 revealed that even though the oil-find impacted significantly on land values, the land tenure and rights remained the same or were not significantly impacted. People coming into the city buy and acquire the already existing interests in land, thus leases, subleases, and assignments. However, he indicated that there were slight reforms in terms of rental tenure. Residential apartments landowners previously were strictly renting out their properties for a period of two years only. However, after the oil find, they became more flexible and could rent out properties for a short lease from three to six months. He narrated, *“The people coming in had the basic tenure, i.e., leaseholds, etc. The only thing I could speak to would be rentals. Previously the landowner would give two years to a prospective tenant for rentals in residential apartments. What normally happens was that the landowners would rent out a property for at least two years, but what I would say changed a bit is that when the oil find dawned on us, some of them rather begun renting out their property for 6months or one year instead of the normal two years. That’s what changed a bit in respect to tenure but not regarding land ownership”*- Key Informant 3.

The existing rights also identified include the right to sell, improve or develop, the right to occupy or sell, and the right to transfer. One or more of these rights applies to owners based on the nature of the tenure they hold. However, it was also revealed that some of the respondents, as caretakers of people’s land, had the right only to use or occupy the land.

Table 4-4 illustrates the findings above. It presents the various mode of land acquisition as identified in the study area, the specific actors involved, and the bundle of rights therein.

Table 4-4: Mode of Land Acquisition, Actors and Rights

Mode of Acquisition	Actors				Rights					Consideration
	Family	Stool	Individual	Real Estate Companies	To sell	Occupy/ Use	Develop/ Improve	Inherit	Rent	
Purchase	•	•	•	•	•	•	•	•	•	Monetary Payments
Gift		•			•	•	•	•	•	Service Provided
Inheritance	•	•				•	•	•	•	--
Adverse Possession/Squatter	•		•			•	•	•	•	--
Custodian			•			•				--
Rent/Tenancy			•			•				Monetary Payment

4.3.2 Perception of Tenure Security

An essential component of effective land administration is land tenure security. Respondents expressed their understanding of tenure security as *'preserving, protecting, securing interest in land to prevent encroachment, and having peace of mind using their property.'* Responses gathered revealed that respondents were secured of tenure because they were:

- Confident in the land documents (indenture/title) in their possession.
- Confident in the number of years they stayed on land.
- Confident in community knowledge of their ownership.
- Confident in contract with the landlord in the situation of people with rental/tenancy agreement.

Most respondents were not worried about losing their interest in land (Table 4-5). Their confidence was based on the reasons mentioned above. In addition, the majority of respondents also expressed that it would be difficult to be evicted from the land. Most respondents who expressed that it would be easy to be evicted were persons living in rental properties who expressed the possibility of their landlord renting the property at higher rates to oil workers. A few of the respondents have had threats of eviction. One of such said that someone came claiming to have ownership of the same parcel, which the Lands Commission disputed after checks.

Table 4-5: Measure of Tenure Security

	Assakae	Kojokrom
Secured Interest	%	%
	Yes	49
	No	51
Worried about losing right/interest		
	Very Worried	13
	Not Worried	79
	I do not know	8
Difficult to Evict		
	Very Difficult	75
	Very Easy	12
	I do not know	13
Threats of Eviction		
	Yes	13
	No	87

Source: (Fieldwork Data, 2021)

4.3.3 Summary of Results for Sub-Objective 3

The results from data collected indicated that there had not been any new form of tenure arising as people moved in accordance with the existing tenure types. However, tenancy terms have been revised. The perception of tenure security was higher in Assakae than in Kojokrom. Respondents were not worried about losing their interest due to confidence in their documents, confidence in the number of years they stayed on land, and community knowledge of their ownership.

4.4 Resource Boom and Land Administration Institutions

This section introduces the impact of the oil find on the selected institutions. The challenges encountered and measures put in place are presented afterwards. The selected land administration institutions are mandated by various Acts of the country to ensure the judicious use of land and land management. The various roles of these institutions are impacted by the various development activities associated with oil-induced urbanization. Therefore the impact and challenges encountered after the oil find are presented in the next section.

4.4.1 Impact of Oil Find on Land Administration Institutions

The relationship between oil-induced urbanization and land administration has been established throughout this research. In this section, the impact of the oil find on selected LA Institutions in the metropolis are presented, in addition to the identified challenges the selected institutions have faced post-oil discovery.

a. Land Use and Spatial Planning Authority (LUSPA)

i. Reconnaissance and Security

The assembly often undertakes physical inspection and monitoring of the Metropolis. Information gathered revealed that the discovery of oil motivated the Assembly to develop effective and innovative mechanisms that enhance planning processes. In recent years, drones have helped undertake this task to gather a proper aerial view of the transformations that may have occurred in the area. The physical monitoring and inspection processes would have been time-consuming to appreciate the quantum of developments happening around the Metropolis. Security has also been improving, and various steps have been made to ensure the reduction and control of crime. This includes a proposed installation of closed-circuit televisions (CCTV) cameras at all road intersections in the Metropolis to control crime rate. This will ensure greater surveillance and reduce the burden on security personnel.

ii. Innovation and Initiatives

The physical planners from the LUSPA who were interviewed identified and acknowledged the impact the oil-find has on their day-to-day duty as planners. Beforehand, the planning unit in the Metropolis only developed a Medium-Term Development Framework (MTDF) under the National Development Planning Commission Act (Act 480) and the Local Government Act (Act 462) as the basis for the Sekondi-Takoradi Metropolis, which was without any spatial dimension. However, after the oil discovery, it became prudent to have Spatial Development Framework (SDF) for the Metropolis to benefit its new status as an oil city. This made the metropolis the first city to have an SDF, which expresses the spatial aspect of the MTDF. Thus, this can be said to be a positive influence of the oil find since there was no such plan until after the oil find. Key informant 2 emphasized: *“Yes, I think the oil find made us come out with a Regional Spatial Development Framework. We used to make development plans, but they didn’t have any spatial dimension. We put up a spatial plan in 2013 to put them together (spatial and development plans). We are the first city in Ghana to have that. So, the oil find pushed a lot of resources into planning. We had to work with a lot of stakeholders from different agencies to come out with a plan. The oil was a contributing factor, and without the oil, we were not thinking of a Spatial Development Framework”*- Key Informant 2. The SDF is a comprehensive spatial vision designed to ensure coordinated future land use patterns to accelerate development. There was a need to understand the spatial dynamics of the city in terms of the impact of the oil industry on urban development in the Metropolis. The SDF comprised various thematic maps on Transportation Networks, Land Use, Health Facilities, etc. (see *Figure 4-10*) to serve as a basis for implementing the development strategy and facilitate pro-poor urban planning and efficient resource allocation (STMA, 2011).

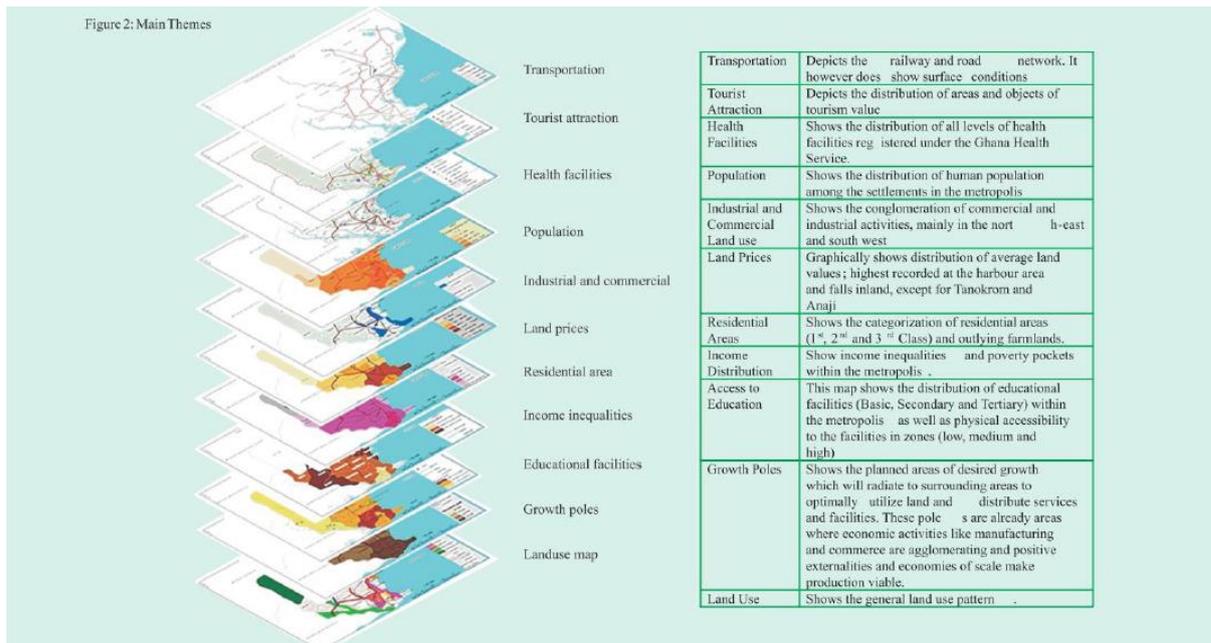


Figure 4-10: Thematic Maps in the SDF
Source: (STMA, 2011)

iii. Increase in Revenue

The discovery of oil contributed to an increase in the number of applications for building and development permits for various land-use activities. As a result, the Assembly recorded a considerable number of applications from investors and individuals who sought to benefit from the economic boom. Key Informant 1 also asserted the sprawl up of business resulted in an increase in tax avenues for the assembly thereby, contributing to an increase in the Assembly's revenue.

b. Public and Vested Lands Management Division (PVLMD)

i. Sanity in the Land Market

The impact of the oil discovery on the PVLMD and LRD has been significant because there has been a high demand for land, resulting from the growing population and demand for land for residential and industrial use.

Firstly, the associated disputes with land ownership and boundary determination as a challenge require the PVLMD services that come together with other relevant sectors like the SMD to decide on the real property owners through searches and surveys. This Key Informant 3 reiterated brings some form of sanity into the property market. Because during the hearing of the dispute, the correct boundaries and real owners are determined to ensure peace and order. Therefore, resolving these various disputes brings sanity into the system where everyone knows their correct boundary. *"So the example I have just given is a positive influence because it sanitizes the Land Market. Hitherto people were fighting over land concerning disputes over boundaries. All these litigations go to the court, the court gives judgment and verdict thus bringing sanity to the system. Now Land A and Land B, which were being disputed over by two families and because the court has ruled now we know the real owners of the lands and where each other's boundary ends."* - Key Informant 3

ii. Awareness of Importance of Land Registration

Similarly, with stool lands, the division has seen an increase in their declaration of their boundaries. Prior to this, the stools refused to declare their parcels' extent due to the high cost involved. However, the influx of multinational companies and individuals' interest in purchasing land encourages the stools to declare and register their lands. This is because most companies and individuals strictly required the document on the land before the purchase is made. So, the stools were encouraged to statutorily declare their parcels to have documents on their parcels so they can sell them out to prospective buyers. Key Informant 3 describes statutory declaration as *"It's like registering an allodial interest, so the families come to the lands commission bearing the plans of a large tract of land, and they come to register their interest via statutory declaration. So, they are declaring that this family owns this particular tract of land they got through conquest in the 1900s or the 1800s from their forefathers after a fight and defeated their opponents and the history of the land, so they are declaring. During the statutory declaration at the Lands Commission, they have to do a publication for 21 days three consecutive times and in any national newspaper, preferably the Daily Graphic. So, it represents the fact that they are announcing to the world that the land is theirs, so if anybody has anything to say about it, they come forward. So, if nobody comes, the Lands Commission finally goes ahead to register in their name, and then it becomes theirs, and they can sell because they have documented evidence."* - Key Informant 3.

Because the stool or individual with unregistered parcels would not want to lose out to the booming land market, they try to do what is right by duly registering their interest in land to be able to transfer the interest to a prospective buyer when the opportunity to sell comes. Preceding the oil find, only the elite and a few socialites understood the importance of registering their property. However, sensitization made people more aware of the importance of having their properties registered. Due to the competition for land and awareness of land buyers of the importance of buying a bonafide property, it motivated landowners to register their properties to secure their interest and attract decent buyers.

iii. Increase in Revenue

A resultant effect of the awareness of the importance of land registration is the increase in revenue for the division. The more people become aware of the importance of securing their interests, they register their properties, and the more revenue generated for the division. People were acquiring vast lands in anticipation of purchase by various companies. They register the properties to secure their interest and be able to sell to high-profile institutions that would only want to deal with registered lands. They would want to secure their interest before they commit other funds into any proposed project. Thus there is now a hike in land registration than before.

c. Lands Valuation Division (LVD)

The increase in demand for landed property in the long run dramatically affects land and property values. Therefore, the LVD was impacted after the oil find because an increase in property values also meant an increase in values of stamp duty, increase in valuation listings for property revenue. All of this comes down to an increase in the revenue for the Division.

The valuation rates for valuation assessment were also increased to reflect the new values of land depending on the services and basic facilities therein. On the other hand, the division also saw an increase in the frequency of compensation assessment. This is because there were many private land acquisitions around the location of the oil enclave in Atuabo and its surrounding towns where most of the oil companies, including the Ghana National Gas Company Limited (Ghana Gas), are located. Therefore, the division had to come in to do the valuation assessment of the compensation payable to landowners and farmers expropriated. These services were also rendered across the region whenever proposed projects would include the compulsory acquisition of private lands.

d. Survey and Mapping Division (SMD)**i. Increase in Applications and Revenue**

The SMD is responsible for preparing the Cadastral Plan, a prerequisite for land registration per the Survey (Supervision and Approval of Plans) Regulations, 1988 (L.I. 1444), which mandates every registered land document to attach a Cadastral Plan. The increase in land registration proportionally led to an increase in application for Cadastral Plans from the SMD. This led to the booming of survey activities. Key Informant 5 acknowledged as follows: *“Within the last decade, after the oil discovery, we realized that there was a mad rush for land in the Western Region and survey activities started booming because people recognized that before you regularize your document, you need to register it. As a result, survey activities became more in the region, and many people became conscious of documentation”*. The Cadastral Plan is a surveyed plan delineating the boundaries of a parcel of land and approved by the Director of Survey. The majority of landowners who needed their parcels for various uses became more aware of the need to register, leading to an increase in registration, consequently increasing the application for Cadastral Plans. He established the increase in survey works as follows: *“On a scale of 1-10, I will say that after the oil find if we were at 2 or 3, we have moved up to 9. There was a high demand for survey works. And also, if the regional director was signing about 10-20 files a day, he now signs about 100-200 files a day because, within a week, we receive chunks and chunks of files.”*- Key Informant 5

A resultant effect of the increase in survey works is the increase in revenue for the division. The division saw an increase in revenue from four hundred to five hundred thousand Ghana cedis (Ghc 400,000-Ghc 500,000) per year before the oil discovery to over one million Ghana cedis in revenue after the oil find. *“Well, the positive thing we can say is that the more work comes, the more revenue we get for the division and the more revenue we get for the commission as a whole. I can mention figures like in 2018 we had 1.3 million Ghana cedis, in 2019 we had 1.4 million Ghana cedis. And even last year, we had around 1.4 -1.5 million Ghana cedis regardless of the covid. Meanwhile, before the oil find, we were around Ghc 400,000- Ghc 500,000, but now we are doing millions, so these are the positive things.”*- Key Informant 5

ii. Improvement in Surveying Techniques

After the oil find, there was a need for more sophisticated instruments to meet the increase in demand for Cadastral Plan application. The analog instruments being used, like the theodolite and tape measure, became very inadequate for the load of work the division received. Thus it became prudent for the division to acquire more sophisticated instruments like the Global Positioning System (GPS), which was faster and more accurate to use in boundary demarcations. The use of these instruments ensured a faster turnout of survey works to be carried out. Thus they were able to carry out extensive survey work in a relatively short time. Some oil companies also assisted the SMD in establishing a Continuous Observation Reference Station (CORS) to enable surveyors to differentially correct static GPS measurements according to the International Terrestrial Reference Frame (ITRF). These stations were set up in Takoradi, Tarkwa, and some cities in the southern part of the country.

e. Office of the Administrator of Stool Lands (OASL)**i. Increase in Revenue and Developmental Projects**

The OASL, just like the other divisions of the Lands Commission, also recorded an increase in their revenue due to the various activities happening in the land market as a result of the oil find. This also helped in mobilizing revenue for stool land activities. There were many stool land acquisitions on a large scale for various projects, speculative buying acquisition of land. Thus the stool land authorities had more resources at their disposal to carry out developmental projects for their communities. According to Key Informant 6, the stool lands revenue increased from two to three million (Ghc 2,000,000-Ghc 3,000,000) Ghana cedis to about ten million Ghana cedis (Ghc 10,000,000) per year.

4.4.2 Challenges facing Land Administration Institutions Post-Oil Discovery

a. Land Use and Spatial Planning Authority

As the main body for controlling and ensuring the efficient and appropriate use of land and planning, the Assemblies encountered some challenges after the oil find in the Metropolis.

i. Land Use Changes

The demand for land by individuals and industrial oil companies coming into the metropolis for various uses like office space, warehouse, accommodation for staff led to some changes in the land use plan of the Assemblies. There were various land-use changes occurring in the metropolis, including change of agricultural land use to residential, residential to commercial and unconventional mix uses of land creating challenges for the Assemblies. Agricultural land use was the greatest sufferer in all these happenings. They were easy to convert into other land uses, affecting food security and increasing food prices. The farmlands along the Ahanta Enclave have all been sold and farmers priced out due to the fast conversion of their agricultural lands for other purposes.

Because everyone wanted to benefit in a way or the other, people began building without seeking the proper approval. Thus, it was difficult to ensure the proposed land use is adhered to entirely as the various land-use conflicts impede the successful implementation of proposed plans.

ii. Uncontrolled Development

Similarly, the rush for land and the prospect of the oil find motivated people to put up houses for various reasons. People in a rush to develop didn't take the time to obtain a permit to ensure their developments conform to existing plans, leading to an uncontrolled manner of development.

The assemblies also encountered unapproved extensions being made by landlords and family members. To benefit more, landlords sought to extend their properties further to access more people looking for houses. Thus they, in a rush, made extensions to their property without any extension approvals or according to any well-designed plans. Other landlords were building on the small space on their parcel of land without approval.

Uncontrolled developments also led to the encroachment on rights-of-way. This created problems for the assembly because many access areas were blocked by people, putting up unapproved structures. Thus, it became a problem to find appropriate locations or spots to place waste collection bins affecting the waste disposals in the metropolis. Furthermore, uncontrolled development also led to poor drainage systems affecting the collection and treatment of waste, thus creating the need for a better convenient waste disposal site. This situation became a great challenge for the assemblies to control and monitor all the rampant developments happening. There was also the uprise of containers and wooden structures. These people asserted they were putting them up on their family lands therefore, they had the right to do so. However, these activities increased the structures in the city which tended to deface the phase value of the metropolis.

There was also a mass acquisition of land in areas the assembly was yet to prepare layout schemes. This is due to the eagerness of the chiefs/stool to sell land to various investors. Therefore they sell large tracts of land to these real estate companies who have come in to develop.

iii. Limitations in Technical Competence

The staff strength and the technical competence of the Assemblies were inadequate to meet the rising planning needs in the metropolis. For instance, the STMA has only two planners, one physical planner and one development planner, which is inadequate to meet the soaring needs of planning in the metropolis. Even though without the oil find, a city like Sekondi-Takoradi in its capacity requires more technical staff

in planning. The presence of activities associated with the oil-find escalates the need for more technical staff in Planning Institutions. The rising needs of planning in the metropolis require an upgrade in administrative and technical staff to match the growing developments in the metropolis. There is also the incompetence of staff in assessing huge projects like the assessment of oil jetties and other oil-related projects. The current staff does not have enough knowledge or competence concerning such projects. Thus, such projects require high advanced degree staff with competence in the supervision of such projects.

iv. Poor Access

Concerning informal settlements in the metropolis, the LUSPA finds it challenging to identify parcel owners during property rate collection due to the clustered nature of physical development in such areas. In situations where the assemblies want to have developmental projects for settlers, access becomes a problem. For example, it was mentioned that the assembly wanted to provide a borehole for one community but could not find a suitable location for that project due to lack of access of space, thus providing adequate water for such areas was a great challenge. The clustered nature of such areas also makes monitoring crime rates, delinquencies, and social vices difficult.

In situations of fire outbreaks, access for the fire service departments becomes very difficult. Such fires spread out very easily due to the construction materials used, mostly wooden leading to multiple losses of many lives and properties.

b. Public and Vested Lands Management Division

i. Artificial Price Hike of Land Values

The absence of price ceilings or price control caused arbitrary artificial pricing of land. People demand twice the actual market value of their property due to an increase in demand and rush for land in the metropolis. This saw landlords increasing land values artificially. For example, a plot of land valued at Ghc 30,000 was being sold for double its value at Ghc 60,000. At the same time, others were selling Ghc10,000 value of land at Ghc 40,000. Because people could still afford the outrageous land values, it became very rampant in the metropolis. The selling agent of the land also decides to put some amount on the already hiked value of the land; therefore, the market values of land became outrageously expensive. However, this price value remained the same even after the oil-related activities in the metropolis have been on the low presently, land values are still very much high. This became a challenge for land registration officers because land values in certain areas were not befitting enough due to their location and the lack of amenities in those areas. Key Informant 3 gave an example as follows: *“So looking at Lands in Takoradi now, I can say as a lands officer that some of the prices that certain lands in specific locations go for now do not deserve their asking values. A classic example is Beach Road, and prices hiked so much at the moment I have for sale a particular house in Beach Road for one client of mine. The house is going for 400,000 dollars, but looking at the land's exact location and the road that leads to the place is untarred, the drainage system in the area doesn't even warrant that value. But unfortunately, because of the fact that prices have hiked, the thing has stayed, and it has not gone down. So, I have been marketing this property for a year, and everybody who comes into contact regarding that property is like how much does such a house cost in a better location in Accra like Cantonments or East Legon. It doesn't even go for that much but this is going for that much in Takoradi, so it doesn't really make sense”*. Therefore this brings about abnormalities in the land market.

ii. Inadequate Staff and Logistics

There is increase in workload resulting from the increase in land registration applications, however, the staff composition of the division remained the same, thus a mismatch for the volumes of work to be done and an increase in the turnaround time. The division also lacked logistics in their line of duty; thus, staff have to use their own resources sometimes to execute their duties. For example, staff sometimes have to use their own vehicles due to the unavailability of vehicles for the division, thus costing them monetarily.

iii. Unauthorized Infilling of Land

Another challenge facing the division is the unauthorized infilling of land. This is where large tracts of plots of land are subdivided by landowners and sold to prospective buyers without informing the appropriate authorities. Therefore the land scheme on the ground becomes different from the land scheme prepared by the authorities. This makes identifying plots very difficult during site inspection for registration because they are unable to identify the plots on their scheme on the ground. This distorts the work of the division. In addition, road access on the schemes cannot be identified because people have demarcated them as part of their plots and sold them out or developed on them.

iv. Encroachment

The encroachment of people on both state and private land has become a challenge for the PVLMD. The increase in land values and rental properties also became a challenge for many people who cannot afford such, so they look for cheaper alternatives by encroaching on peoples' land. This is difficult for the division when they visit the site to inspect for registration as part of the land registration process but find people on the land who are not the owners of that plot or at some portion of the land. Most of the time, this is at the blindside of the landowner. Inquiries sometimes also reveal that those portions of the land were sold to the occupiers due to their ignorance by persons claiming to be owners but not the landowners. This makes the duty of the PLVMD very difficult because they must come in to sort the problem of rightful ownership out, which Key Informant 3 stated is not an easy task. This involves various meetings and consultations and sometimes requires the services of a legal team to handle cases of a certain magnitude. Their lives are also threatened as they are sometimes chased away with machetes and cutlasses by the squatters on the land, thus obstructing their duty. He said that sometimes they have to visit the site as undercover people to avoid being harmed by the occupiers on the land. Thus, the process of sanitizing the land market becomes cumbersome.

v. Fraudulent Activities

Several fraudulent activities also accompanied the increased demand for land and property in the metropolis. People who are even without land want to benefit from the boom purchase. There was also the case of the caretakers known as "*hwe so ma me*" liaising with land officers to fraudulently register their owner's property in their (caretakers') names. These land officers work together with them and prepare documents in their name knowing very well the land does not belong to them. After getting documents to the land, they sell to prospective buyers to make money for their personal gains. This leaves the original landowner landless when they return because checks at the Commission reveal the caretakers as the property owners. Some land officers, including some high-rank officials, were also seen selling parcels of land at security and buffer zones to certain companies for their personal gains, knowing very well the consequences. Some of these culprits were apprehended and charged accordingly.

c. Lands Valuation Division

i. Delay in Compensation Payment

In assessing compensation payable to expropriated landowners, another challenge the division faced is the delay in payment. Compensation is assessed based on the size of land, the number of claimants, and the land cover. Thus, a small piece of land requires a shorter time in compensation assessment than a large tract of land would require. However, after the compensation is assessed, the acquiring party be it private companies or the government, takes a long time to pay the amount payable. Sometimes this can take as long as years before payment is made. The first problem associated with this is the depreciation of the value of the compensation payable because even if it takes years to execute payment, it is the original value assessed earlier that is paid, not considering the appreciation of the values. Also, the landowners tend to blame the Land Administration officers, not understanding it is not in their place to execute the payment

of compensation. Thus, the delays affect the work of the division. For example, key Informant 4 indicated a valuation assessment of compensation payable that was carried out in 2012 was paid in the year 2020 after eight (8) years. While another assessment which was done in January 2019, was paid in November 2020 after twenty-two months. The long wait period for landowners causes a lot of agitation. Some of the delays in payments are also the fault of the landowners not having enough documents to prove their ownership of the plots in question, while others have overlapping boundaries.

ii. Fraudulent Activities

The division also was faced with fraudulent activities in terms of the sale of land. There was the sale of government land to a private individual by unauthorized individuals on the blindsight of buyers.

d. Survey and Mapping Division

i. Overlapping boundaries and Encroachment

This challenge is concerning indigenes in old towns. These towns existed mainly before a scheme was created for the area. Thus, the moment surveyors enter to capture details for a plan, they encounter many overlapping boundaries in the delineation process. Thus, the scheme prepared for such areas is very difficult to implement because plans do not tally what is existing on the ground. They are also faced with encroachments on land they set out to survey. Some of these settlers get violent thus, surveyors sometimes require the presence of police or security personnel to enable them to carry out their work.

e. Office of Administrator of Stool Lands

i. Disputes

The rush for land in the land market has brought about many disputes, especially among the stools and the families. Members of the stools challenge the enstooled chiefs because they believe they are the sole beneficiary of the boom and economic activities associated with the land sale. The head of the stool and family are seen to be a more lucrative opportunity. Thus, everyone in the family wants to be the one in that position. Families and the stool are breaking away from the stool fraternity to be the sole managers of their land, thus stool lands are being converted into family lands. This is an alarming threat to the OASL because if more families break away from the stool, the OASL ceases to exist because their jurisdiction is only over stool lands. The moment they become family lands on converted stool lands, they are no more under the control of OASL. Thus, an impending disaster since the stool and the OASL will gradually become administrative heads with no control regarding customary land administration. The breakaway of families from the stool leaves the stool heads as only ceremonial heads with nothing to govern. This creates a vacuum since the chiefs are the custodians of the culture of the people; thus, ripping them of their power becomes a significant challenge.

Other forms of disputes were boundary disputes between a stool and another stool, stools, and individuals and families and families' individuals and individuals creating numerous conflicts in stool lands administration.

ii. Multiple Sale of Land and Sale of Large Tracts of Land

The challenges of multiple land sales have been a significant problem in Ghana's land market. The presence of the oil find in Sekondi- Takoradi has also exasperated this problem. This is so because when family heads realize there are no more lands to be sold, they resell the land previously sold. This is common when family heads are changed. The new family head realizing there is no new land to sell, resells what has been sold by his predecessors.

In addition, due to the desires of the stool heads for quick money, they tend to be swayed away by real estate developers and other investors who come in with juicy prices and offers in exchange for large tracts

of land for their proposed projects. They sell these lands without considering the future generations of the stool just because of their monetary gains.

iii. Discontent with Stool Revenue

Another challenge is regarding the revenue the OASL pays to the stools. The stools deem them to be inadequate and feel cheated by the OASL. The OASL receives 10% of the stool land revenue accrued to cover administrative expenses. The remaining revenue is disbursed as follows: 25% goes to the stool to maintain the stool activities and status. 20% goes to the traditional authority or overlords, whilst 55% goes to the District Assembly within the area of authority of the stool. The stool deems the 25% they receive as inadequate, thus always creating a brawl with the OASL.

4.4.3 Reforms and Measures by Land Administration Institutions

a. Land Use and Spatial Planning Authority

i. Revamp in Monitoring

The LUSPA has put in measures to help curb some of the challenges they have been faced with. Firstly, the assembly has revamped its monitoring units in the metropolis. To ensure compliance with existing schemes, monitoring and inspections were intensified to ensure more inspections are done to control developments. The assembly has put in more access roads to ease congestion in the metropolis. The assembly also put in a street naming project in the entire metropolis. This is to help in the easy identification of properties in the area.

ii. Redevelopment of Selected Informal Towns

The assembly is also partnering with investors to redevelop some selected informal towns. The KII revealed that partner investors from Russia, had come to survey some of the indigenous towns whose living conditions were below standards. They hope to redevelop the whole area, demolish the dilapidated buildings and structures and build high-rise structures. Due to the capital-intensive nature of such projects, it is expected to commence within the next couple of years.

b. Public and Vested Lands Management Division

The establishment of the Client Service Access Unit (CSAU) as part of the Land Administration Project (LAP) saw the shortening of some of the processes in Land registration applications, thus reducing the turnaround time. It is a one-stop shop for clients where most application processes were computerized. This project was implemented around the time of the oil boom thus, it became beneficial. Thus application process, which was previously taken three months, can now be done in one month or even less. Furthermore, the PVLMD, in association with the planning authorities, step into revised layouts of large tracts of land by subdividing it into smaller lands, rightfully having a new layout for areas with such infilling problems.

c. Lands Valuation Division

The division's workload was more than the staff could handle, thus other professional staff from other regions were brought in to help the division ease off the workload. The long time in compensation payment by acquiring companies saw the establishment of a regulation that ensures that all acquiring companies set up an escrow account where some amount will be set aside to ensure money is readily available right after assessing the compensation to also ensure prompt payment after valuation assessment.

d. Survey and Mapping Division

In conjunction with the LUSPA, the SMD adopted a strategy where a drone will be flown over the informal areas to demarcate access roads for the communities. This is to solve the problem of accessibility. This project commenced with a sensitization program to ensure the residents understood the importance of having proper access roads. The project was also initiated in conjunction with traditional leaders and customary institutions.

e. Office of Administrator of Stool Lands.**i. Intensified Advocacy**

The OASL intensified its advocacy role through public events and created platforms to dialogue with the various heads of stools and traditional councils. This is to make them understand the actual happenings on the ground, and the need to sanitize the customary land market, and also the importance of not selling out the stool lands to investors.

ii. Parcel Right Demarcation

The OASL also pushed as part of the LAP for the government to assist communities that did not have the capacity to register the land by demarcating and surveying their land for free. This project was piloted in Enchi District, where over 6,000 demarcations were done and site plans prepared for free. The OASL also worked in conjunction with NGOs like Land Map to carry out survey works for a low cost. However, this project was halted at a point.

4.4.4 Summary of Results for Sub-objective 4

The above section presented the challenges the selected LA institutions have encountered post-oil discovery and the measures put in place therein. Results show the positive impact the oil-find has had on LA institutions regarding innovation, improved security, and sanity in the land market. However, the various institutions encountered several challenges ranging from uncontrolled development, limitations of technical incompetence, and encroachment. As a result, several measures have been put in place to mitigate these problems, including intensifying monitoring developments, intensified advocacy, and parcel right demarcation in selected areas.

5. DISCUSSION

This chapter presents a discussion of the results presented in chapter four. Discussions are presented according to the research sub-objectives.

5.1 Growth of Settlements Post-Oil Discovery

Literature has identified a significant effect of resource boom as the influx of people into the resource boom town (Andersson et al., 2019; Heinrich, 2011; Karl, 2007). This has been evident in Sekondi-Takoradi as this study identified intra-regional and inter-regional migrants in the study sites due to the discovery of oil. The inter-regional and intra-regional migrants attributed their reasons for migration to benefit from the oil find opportunities. Even though the responses from both areas were similar in terms of their reasons for migration, the influence of oil-find for the people of Kojokrom was more than that of Assakae. This is attributed to low rental and land values of properties in Kojokrom compared to Assakae, indicated in section 4.1.2.

Due to the delay of the 2020 population census, a current comparison of population growth rates between Sekondi-Takoradi and other non-oil cities was not possible. However, data gathered from (Ghana Statistical Service, 2017) indicated that whilst non-oil cities like Wa, Cape Coast, Koforidua, and Sunyani saw an increase of 5%,3%,7.5%, and 6.9%, respectively, Sekondi-Takoradi saw a 13% increase in its population between the period of 2010 and 2013. This is attributed to the oil-find since the boom was around the same period.

In addition, the visual interpretation in section 4.1.1 also showed the growth of the study sites post-oil discovery. The images illustrated the growth in both old and new towns. The compactness of the old town can be attributed to the returnee migrants who come back to their family houses due to the high rental values in places they lived in earlier. Others came back to the family house to partake in various booming business activities in Assakae. Some had to do extensions to the existing family buildings, while others put up small structures on a portion of family land. Thus, it can be said that the growth of informal settlements in these areas was mainly contributed by the indigenes and the returnee indigenes as well.

This study also established that the migrants contributed to the growth of settlements and housing needs confirming Eduful & Hooper's (2019) assertion that the resource boom creates a relationship between migration and urban housing. For example, Ennis et al. (2014) discussed the impact of the influx of people and investors in Australia's city of Darwin as affecting housing stress leading to a shortage of affordable housing, homelessness, and illegal approaches to housing. Similarly, Akbar et al. (2013) also discussed that the non-mining labor force in Australia could not find decent housing. In comparison, although the increase in demand for housing led to the sprawl of formal and informal settlements, the housing stress and informality in Assakae and Kojokrom were minimal. In addition, migrants could afford decent housing regardless of whether they work in the oil industry or not in both study sites. However, the situation might be different in other sites in Sekondi-Takoradi.

The informalities identified are discussed below.

a. Settlement which does not adhere to building codes

The result in section 4.1.1 similarly indicated that the settlements in the old town of the study sites existed before the building schemes were made for the area. Thus, most of such properties were put up without any development or building permit. The building permit was used to measure land-use control as Enemark & McLaren (2008) described it as the final check-in planning control system, which helps ensure

consistency of development with prepared planning schemes. The old towns also had some houses with additional extensions done without the appropriate approval. However, they were some settlements in the new towns that also did not have a building permit. Even though there was a planning scheme for the area by the time of development, these were relatively minimal.

It is worthy to note that, as a requisite for a building permit, a registered proof of ownership to land is required by the assembly. This ensures and verifies ownership before approval of development to commence to ensure approved development is on the rightful owner's land. Thus, it was realized that most people who had acquired building permits for their property also had already registered their land. This was very much evident in the New Towns of the study sites. Their decision was motivated by not wanting to pay penalties associated with a fine from the assembly when inspecting their developments. Landowners who did not apply for a permit before building also blamed the long bureaucracies in the permit application, whilst others did not see the need to apply for a permit due to the size of their plots. Tasantab (2016) also attributed low building permit acquisition to failure to provide needed documents and litigation on land as part of the reasons for not having the building permit approved on time. However, it was not evident in the results. However, some respondents managed to get a building permit without having registered documents. This reveals an institutional bottleneck that needs to be controlled to curb the irregularities associated with urban development processes, as Baffour Awuah et al. (2014) identified.

b. Settlements with no security of tenure

The results revealed that most respondents in old towns did not have registered documents for their property. Whilst the majority of respondents in the new town settlements had registered their interest. The number was higher in Assakae than in Kojokrom, which can also be attributed to the higher level of literacy in Assakae than in Kojokrom. Therefore, we can establish a relationship between the literacy level of settlers and their knowledge on the importance of securing their interest. The perception of tenure security is further discussed in section 5.3.

c. Settlements with low infrastructure level

The settlements in the old towns have very low infrastructure levels, which impliedly falls into this category of informal settlements as shown in result section 4.1.1. This aligns with studies by Abbott (2002) and Alemie et al. (2015) that informal settlements are characterized by low or no infrastructural levels such as poor roads and inadequate access to services and amenities, as well as low-quality housing.

However, some dilapidated housing structures have been bought by investors who will renovate and redevelop for other purposes. The government has also put measures to increase the infrastructural level and provide essential services to the old towns.

In summary, the informality in the old towns consists of low infrastructural levels and unapproved extensions. Whilst in the new towns, the informality can be attributed to building without building permits and not registering land documents. Therefore, even though the informalities identified were minimal, measures must be put in place to avoid the perpetuation of such.

5.2 Mode of Land Acquisition

The modes of land acquisition identified by this study include inheritance, gift, purchase within the study sites. This aligns with the modes of land acquisitions found by Bizimana et al. (2012) and Rakodi and Leduka (2004), who identified the mode of land acquisition to include inheritance and gift. They also identified informal purchase and plot sharing as other modes of land acquisition, which did not exist in the two study sites. However, the results showed other modes of land acquisition as adverse possession and

rental, which are also common ways of accessing land in other parts of the world. There were more conventional dealings in the mode of land acquisition post-oil discovery in both study sites. While in Assakae, most respondents acquired land through rental followed by purchase, in Kojokrom, it was the majority acquiring land through purchase followed closely by rental. This can be attributed to the low land and rental values in study sites compared to prime areas, as emphasized in the results section. The ability of migrants to access land also confirms Chigbu's (2020) assertion that access to land in Ghana's land market is solely based on ones' purchasing ability rather than gender, ethnic group, or social status.

In addition, the informality in terms of squatters and unauthorized containers were minimal in both study sites because the average settler could afford to rent even if not able to buy. It is worthy to note the returnee indigenes did not purchase or rent but returned to settle on portions or extensions of their family property. However, none of the respondents acquired their land through the state who is also a significant player in land acquisition in Ghana (Arko-Adjei, 2011; Kasanga & Kotey, 2001). Land purchase and rental of property are thus the most predominant ways of acquiring land, followed by land acquisition by gift, inheritance, adverse possession, and custodianship, which are gradually becoming unpopular.

5.3 Arising Land Tenure and Land Rights

Post-oil discovery in Sekondi-Takoradi, there has been an influx of people for various residential and business opportunities, which is expected to impact land tenure and rights. However, the results of this study indicated that the oil-find in Sekondi-Takoradi did not influence the land tenure types. The land tenure arrangements remained the same after the oil find. This is in contrast with the findings of Bury (2005) that the resource boom of gold and its mining operations in Peru significantly caused a change in the land tenure patterns, land value, and land use. The mining operations saw the changes in land tenure institutions from communally owned to private ownership land tenure. The neoliberal agenda in Latin America in the 1990s saw transnational corporations becoming a powerful force in land management and land tenure patterns (Bridge, 2002; Bury, 2005). This was driven by the land law reforms, which recognize only private landholdings and not communal land ownership (Bury, 2005; Cronkleton & Larson, 2015), leading to the re-parceling of communal land to private land before purchase by transnational mining companies (Bury, 2005). However, even though the oil companies are players in the land market, they are not highly influential in changing land tenure patterns, unlike the transnational corporations in Peru. This can be attributed to the recognition of both individual and communal ownership of land by both statutory and customary systems in Ghana.

Additionally, the oil-find in Sekondi-Takoradi caused an increase in land values, as mentioned earlier. This is in line with the findings of Bury (2005) that the mining operations in Peru affected land values. However, the presence of expatriates brought out variation in rental tenancies by permitting their preferred short-term stay rather than the conventional two years tenancy agreements. Some of them come for a short period on contract basis. Thus, they would rather have a short-term letting than build or rent for a full term of two years. Thus, residential owners need to review the conventional two years for letting out a property to cater to the needs of the temporal residents.

The perception of respondents of tenure security was relatively high as they possessed confidence in various elements. Tenure security has been considered the certainty and confidence that land users will not be deprived of their rights over land (Payne & Durand-Lasserve, 2012; van Gelder, 2010). Respondents expressed their confidence in indenture and title. The registered title is the ultimate proof of the legitimacy of land ownership thus, holders of registered documents are assured of their tenure security. Holders of indenture received after purchase also expressed their confidence in the document since it bears the signature of the selling party and witnesses of both parties. It exudes some level of confidence when

owners have that. However, neither the title nor indenture guarantees absolute control and use over land, as the state can still expropriate them. The state is constitutionally mandated to compulsorily acquire private lands they may deem fit for developmental projects for the country's benefit without the willing consent of landowners (Adu-Gyamfi, 2012; Toulmin, 2009). Nonetheless, holders of title are at an advantage of receiving compensation payments which is a key feature of compulsory acquisition.

Advocates of perceived tenure security (Kiddle, 2010; Payne, 1997; Payne & Durand-Lasserve, 2012) have argued about the importance of recognition of other forms of tenure security other than the possession of formal documents because tenure security can be achieved through different means. Therefore, respondents' confidence in the number of years they have stayed on land and community ownership of their land illustrates a high perception of tenure security. It would be prudent for residents to go a step further to formalize their interest, giving them the benefit of generating more wealth and getting access to credit, as asserted by De Soto (2000). However, this is also subject to clients' affordability and the system's capacity to handle numerous application requests at once and on time.

5.4 Resource Boom and Land Administration Institutions

This study revealed the significant impact the oil-find has had on the selected LA Institutions in the study area. The increasing demand for land raises the expectations on the mandate of these institutions.

Even though literature mentions the role of institutions in resource boom towns, Brunnschweiler (2008) contended that they receive limited attention in the face of the resource boom, which is found to be true. This is especially true in the context of public institutions, as Bulte, Damania, & Deacon (2005) concluded that private institutions matter the most in the context of resource boomtowns. This was evident in the limited literature on the direct effect of the resource boom on Land Administration Institutions, thus hindering the comparison of results from this study.

Nevertheless, the results also showed the impact oil find had on the various land administration functions of land use, land development, land tenure, and land value. Some of the initiatives as a result of the oil find strengthened the land administration system. For instance, the establishment of the CORS and the use of advanced survey instruments indicated in section 4.4.1 contribute to improving cadastral surveying. Subedi (2016) indicated the importance of sophisticated survey tools and instruments and well-defined cadastral survey as contributors to an efficient land administration system. By ensuring and guaranteeing the geometrical consistency of survey activities as well as providing efficiency gains.

Results also showed how the presence of the oil find had sanitized the land market to some extent. As a result, people have become more aware of the importance of registering their property and buying a property with appropriate documentation, reducing the frequency of fraudulent activities in the land market.

Due to the limited literature on the direct effect of resource boom on Land Administration, the researcher is limited in comparing results findings to establish the commonalities and differences in challenges and impact of resource boom on Land Administration Institutions. However, it is essential to note that land market and land administration are faced with challenges when there is a sudden planned national infrastructural project and advancement as identified in Ejisu or resource discovery as in the case of Sekondi-Takoradi, which makes a city more relevant due to perceived economic opportunities associated therein. In Ejisu, a dormitory town housing the pushout population of Kumasi in the Ashanti region of Ghana, a rush and increase in land values was experienced attributed to the heightened infrastructure development by the government in the municipality, the siting of an inland port and an industrial free zone area, thereby attracting more economic and development activities (Ayitio, 2019). This was

characterized by indiscipline in the land market and land institutions and called for revamping the customary and statutory institutional management of land.

Therefore, in general, an increase in land registration workload, giving the same amount of technical and human staff tends to affect the speed and rate at which requests are processed when the systems are complex and not efficiently digitalized (Chimhamiwa, Molen, Mutanga, & Rugege, 2009; Zakout, Wehrmann, & Törhönen, 2006). This ends up creating a backlog of applications to be processed, breeding corruption at the detriment of poor and vulnerable landowners unable to pay their way through registration. Therefore, measures should be put in place to increase the capacity of LA institutions when secondary cities experience sudden infrastructural development or project and resource discovery to cater to the workload increase therein.

6. CONCLUSION AND RECOMMENDATION

6.1 Introduction

This chapter presents the researcher's conclusion on research sub-objectives and recommendations for the institutions and further studies.

6.2 Conclusion

This study aimed to investigate how oil-induced urbanization in Sekondi-Takoradi, has contributed to the growth of formal and informal settlements and the effect the oil-find had on Land Administration Institutions. From the analysis of the data, the following conclusions were made.

6.2.1 Growth of Settlement Post-oil Discovery

The study revealed through the responses by respondents and officials from the planning units of STMA¹ and EKMA² how the selected study sites have grown after the oil find, just like many resource boomtowns. Assakae and Kojokrom, the two selected sites, are part of the periphery towns, including Whindo and Nkansawrewdo, housing the pushouts from prime areas in Sekondi-Takoradi. The expansion due to the influx of people into the area contributed to the sprawl of formal and informal settlements as land and rentals values increased in prime Sekondi-Takoradi.

The old towns of the sites, where the indigenes live, saw expansion due to the returnee indigenes. They came back to their family houses and made extensions mostly without approvals because of the high rental values where they lived previously and also to take part in the opportunities the towns now have. The old towns exhibited more informality because the towns existed before a scheme was done for the sites and had poor infrastructure.

Inter and Intra migrants who also came into these sites could afford decent land and rent properties to house them. As a result, most people were able to find land and build. However, the new migrants could comply with the prepared schemes after moving into these areas, contributing to more formality. However, there was the issue of tenure security and adhering to building codes in both areas as some of them did not have the appropriate documentation.

The results also showed that prospects of the oil find influenced migrants' decision to move. Work and business opportunities, family ties, affordable land, and rental values are some of the reasons motivated migrants to move to the study sites. The study also revealed that knowledge of permit acquisition was high, whilst the knowledge on the acquisition of extension and alteration permits was poor. Thus, most people who engaged in such did not apply for the appropriate extension permits.

6.2.2 Mode of Land Acquisition

The study also revealed that the unconventional dealings in the land acquisition were minimal or not significant. Most migrants acquired their property through conventional means from the stool, family, and individuals. Their social-cultural status or gender did not hinder them from accessing land. The major actors contributed to the conventional mode of land acquisition. Even though there were some fraudulent activities, most respondents acquired their property through the appropriate means.

¹ STMA-Sekondi-Takoradi Metropolitan Assembly

² EKMA-Effia-Kwesimintim Metropolitan Assembly

6.2.3 Arising Land Tenure and Rights Post-oil Discovery

The study also revealed, there have not been any new tenure forms after the oil discovery. Unlike in Peru, where the tenure types and patterns were changed because of the dealings of transnational corporations (Bury, 2005), the companies in Sekondi-Takoradi did not influence the land tenure types. This is attributed to the flexible customary and statutory rules regulating land tenure in the country. In addition, the study revealed the revision in rental tenancy agreement from the conventional two years to short-term leases. This was to cater for the needs of expatriates in the Metropolis. However, local residents also benefitted from this arrangement as it is more flexible than the conventional two-year agreement.

The study also revealed a high perception of tenure security based on either document possessed or perceived tenure security. As much as perceived tenure security has been acknowledged over the years, it would be prudent for residents to proceed further to register their interests to benefit from the importance of having registered documents to land.

6.2.4 Resource Boom and Land administration Institutions

Land use activities in the Sekondi-Takoradi Metropolis after the oil find increased, therefore increasing the mandate of the Land Administration Institutions. Therefore, the oil-find had both positive and negative impacts on Land Administration Institutions. The positive impacts helped the institutions in their activities, whereas the negatives were hindrances to their activities. However, some measures have been put in place to help mitigate such effects.

6.3 Recommendations

The study explored the dynamism associated with oil-find in the Sekondi-Takoradi Metropolis concentration on the sprawl of settlements and effects on Land Administration Institutions in their dealings of ensuring efficient and effective use of land. In addition, the study serves as a prompt to institutional heads and relevant ministries to acknowledge the significant effect of the oil find on another vital sector of the country: urbanization, developments, and land administration.

It is recommended that Land Administration Institutions revamp to meet the increasing needs after the oil find. Enforcement of building codes is also recommended to be enforced vigorously and revamp monitoring to avoid the sprawl of informalities in other sites in the metropolis. Training sessions should be held for planners to be abreast with the current demands of the metropolis as an oil city. The process for permit approval should be fast-tracked to encourage developers to build because inadequate planning systems have the tendencies to contribute to informalities in urban areas.

The assemblies should encourage more partnerships with investors to redevelop the informal areas to improve their quality of life. There should also be periodic dialogue and sensitization for both the stools and family owning lands to consider future generations in their land sale, rather than selling it to investors. It is also recommended that the Lands Commission and the LUSPA strengthen the relationship amongst them to ensure that people who apply for the permit have duly registered documents, not creating room for non-compliance. Thus, coordination between the two agencies will ensure compliance and reduce bottlenecks, reducing the number of developments without the appropriate permits.

Prior studies have also recommended ensuring and strengthening efficient and effective land administration systems and institutional capacity (Agyeman-Yeboah, 2015; Cobbinah, Asibey, & Gyedu-Pensang, 2020; Kasanga, 2001; Tasantab, 2016; Yalley & Ofori-Darko, 2012). However, problems identified tend to persist, attributed to the non-implementation of recommendations and the top-to-bottom approach and political influence in decision-making in the country's land governance. The political

influence of leaders of Land Administration who are responsible for policy implementation seem to form a hindrance in the consistent implementation of effective land strategies. The institutional heads are politically appointed, and new heads are appointed after every government's tenure is changed, apparently influencing the continuity of proposed implementation. However, further studies can be conducted to confirm this assertion and further institute ways of solving these persistent issues.

It is also recommended that similar studies are performed in other periphery towns in Sekondi-Takoradi that served as the pushout sites after the oil find to ascertain the level of informalities that has occurred post-oil discovery and also identify new tenure arrangements, if any, after the oil discovery.

Further studies can be conducted in other non-resource towns like Koforidua and Tamale to ascertain whether their challenges facing the Land Administration Institutions are similar or different to that of the resource boom town of Sekondi-Takoradi. This will help establish the challenges exclusive to Land Administration Institutions in resource boomtowns.

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APPENDIX

Appendix 1 : Research Matrix

Research Objectives	Sub	Research Questions	Indicators (What do you want to measure)	Data Sources	Data Collection	Data Analysis	Anticipated Results
1. To analyze the growth of informal settlements post-oil discovery	a.	How has the oil-find influenced the growth of formal and informal settlements?	Growth of formal and informal settlements Spatial Changes	LUSPA (STMA/EKMA) Google Earth	Key Informant Interviews Aerial Image (2007,2019)	Content Analysis Visual Interpretation	Informal Growth before and after oil discovery.
	b.	What is the migration history of inhabitants?	Migration History of Inhabitants	Land Occupants	Questionnaire	Statistical analysis (Descriptive)	To establish the reason for migration as oil-influenced or not.
2. To know the mode of land acquisition post-oil discovery.	a.	Who are the main actors involved in land acquisition?	Actors in Land Acquisition in selected settlements	Land Occupants	Questionnaire	Statistical Analysis (Descriptive)	The actors involved in land acquisition in informal settlements.
	b.	What is the process of land acquisition?	Mode of Land Acquisition in selected settlements	Land Occupants	Questionnaire	Statistical Analysis (Descriptive) Content Analysis	The land acquisition process in study sites post-oil discovery.

3.To identify and understand arising land tenure types and rights post-oil discovery.	a. What are the various tenure types and rights that are arising post-oil discovery	Existing and Arising Land Tenure and Rights	PVLMD/LRD	Key Informant Interviews	Content Analysis	Arising Land tenure types and rights post-oil discovery
	b. What is the perception of tenure security by inhabitants of study sites?	Perception of Tenure Security	Land Occupants	Questionnaire	Statistical Analysis (Descriptive)	The level of perception of tenure security by land occupants in selected sites.
4.To ascertain challenges facing Land Administration institutions post-oil discovery	a. What are the challenges Land Administration Institutions have faced post-oil discovery?	Challenges faced in Land Administration procedures as a result of resource boom	LUSPA (STMA/EKMA) PVLMD/LRD LVD SMD OASL	Key Informant Interviews	Content Analysis	The challenges Land Administrators have faced as a result of oil discovery.
	b. How have Land Administration Institutions reformed to accommodate challenges post-oil discovery.	Challenges and Measure by Institutions	LUSPA (STMA/EKMA) PVLMD/LRD LVD SMD OASL	Key Informant Interviews	Content Analysis	Challenges and Measures

Appendix 2: Operationalization of Variables

Research Objectives	Sub	Research Questions	Concept	Indicators (What to measure)	Variables (Deriving Measurement)	Interview Questions
1. To analyze the growth of informal settlements post-oil discovery	a.	How has the oil-find influenced the growth of formal and informal settlements?	The sprawl of formal and informal Settlements	Spatial Changes	Changes that have occurred post-oil discovery	i. How has the oil find influenced the transformation of settlements Sekondi-Takoradi? ii. Would you attribute the oil-find as influencing the growth of informal settlements?
	b.	What is the migration history of inhabitants?		Migration History of Inhabitants	Establish the influence of oil find in the decision to migrate to Sekondi-Takoradi.	i. How long have you lived here? ii. Where did you reside before moving here? iii. Did the oil-find influence your moving to Sekondi-Takoradi?
2. To know the mode of land acquisition post-oil discovery.	a.	Who are the main actors involved in land acquisition?	Mode of Land Acquisition	Actors in Land Acquisition in study sites	List of actors in land acquisition process	i. Who did you purchase the land from? ii. What was the payment terms and plans? iii. Were there any other persons involves in the transaction?
	b.	What is the process of land acquisition?		Process of Land Acquisition In informal settlements	Access to land in informal settlements	i. How did you get access to this parcel? ii. What steps did you go through to acquire the land? iii. Do you receive a document to reflect the transaction?

3.To identify and understand arising land tenure systems post-oil discovery.	a. What are the various tenure types that are arising as a result of oil find?	Land Tenure Systems	Arising Land Tenure and Rights post-oil discovery	Arising tenure and rights being practiced if any	i. What kind of rights do you have on this land? ii. What kind of restrictions and responsibilities do you have? iii. What are the regular tenure types people have? iv.What are the new arising tenure systems in these areas post-oil discovery?
	b. What is the perception of tenure security by dwellers?		Perception of Tenure Security	Level of Tenure Security Awareness	i. Do you know what tenure security means? ii. Have you had threats of evictions? By whom? iii.Do you have any fears of being evicted from this land?

4.To ascertain Land Administration challenges post-oil discovery.	a. What are the challenges Land Administration Institutions have faced post-oil discovery?	Challenges & Measures by Land Administration Institutions	Challenges faced in Land Administration procedures as a result of resource boom	Challenges post-oil discovery	i. How did the oil-find influence your line of work? ii. What are some of the challenges faced after the oil discovery? iii.What positive changes came with the oil discovery?
	b. How have Land Administration Institutions reformed to accommodate challenges post-oil discovery.		Reform measures to accommodate identified challenges		Measures

Appendix 3: Interview Guide for Key Informants

Interview Guide for Semi-Structured Interviews with Key Informants

Introduction:

My name is Eunice Adom, an MSc student at the Faculty of ITC, University of Twente, Netherlands. I am currently conducting a research on the topic *“Investigating the Influence of Oil-Induced Urbanization on the growth of Informal Settlements and Land Administration in Sekondi-Takoradi.”* This study aims to understand how the oil discovery and its operations thereof have influenced the growth of informal settlements and how this, in turn, affects Land Administration Institutions, including your Organization. Information gathered would be solely used for academic purposes and treated with confidentiality. I would also like to ask for your consent to record this interview for further analysis.

Thank you for your cooperation.

Introductory Questions

- a. How long have you worked at your organization?
- b. What is your current position?
- c. What does your role entail?

A. Officials at Land Use and Spatial Planning Authority (LUSPA)-Sekondi-Takoradi Metropolitan Assembly (STMA) & Effia Kwesimintim Metropolitan Assembly (EKMA).

Growth of Informal Settlements

1. How have settlements transformed in the last decade in the metropolis?
2. How has the oil discovery contributed to the transformations, in your opinion?
3. Which areas would you say have seen tremendous growth in their developments since the oil discovery?
4. What are some of the transformations that have been identified?
5. What are some of the characteristics/categories of these transformations?
6. Would you categorize some of the transformations as resulting in informal settlements?
7. What makes these settlements informal, in your opinion?
8. What is the correlation between the oil discovery and the emergence or growth/expansion of these informal settlements identified?
9. Which other factors would you say influence the growth of these informal settlements, in your opinion?
10. How has the oil discovery influenced land use and development in the metropolis?
11. How has the growth of settlements influenced land-use planning after the oil discovery?
12. How did the oil discovery influence the implementation of land-use plan of the metropolis?

13. To what extent has the oil discovery changed the existing land use plan of the metropolis?
14. Please can you furnish me with some aerial images, land use plans, development plans, photos, or any relevant document in relation to the changes, transformations, and informal settlements?

Challenges/Reforms (LUSPA-STMA/EKMA)

15. How did the oil discovery influence your line of work?
16. What positive influences did the oil-find have on your line of work?
17. What are some of the challenges you faced in your line of duty post-oil discovery?
18. What are some of the challenges you face in your line of work in relation to informal settlements?
19. What are the proposed measures being put in place to solve these challenges mentioned?
20. What are the proposed measures/plans or adjustments the office has made to contain or control or manage the growth of informal settlements?
21. What has been implemented out of the proposed measures?

B. PUBLIC AND VESTED LANDS MANAGEMENT DIVISION (PVLMD) & LAND REGISTRATION DIVISION (LRD)

Land Tenure

1. In your opinion, what can you say about the land market in Sekondi-Takoradi in the last decade?
2. What are the existing land tenure types and rights in Sekondi-Takoradi?
3. Do you think the oil discovery has influenced the nature of land tenure system/rights in the city? If yes, which new trends have emerged?
4. Do you think the new trends have influenced the growth of the city in any way? Can you explain further if your answer is, yes?
5. How do you think the oil discovery has impacted land registration in the area?
6. Which areas would you say saw an increase in land registration?
7. Which of the land tenure types is mostly registered?

Challenges/Reforms

8. Do you think your work has been influenced by the oil find and how?
9. What are some of the positive influences the oil discovery had on your line of duty as well the work of your institution?
10. What challenges have you encountered in your line of duty as a result of the oil discovery?
11. What are some of the challenges you face in your line of work in relation to informal settlements?
12. Can you share with me proposed measures which were put in place to address these challenges?
13. Does your office have any proposed plans to manage the increase in land registration as a result of the oil discovery?

14. What are these measures being put in place to recognize any arising tenures in informal settlements and how are they being implemented in the municipality?
15. What has been implemented out of the proposed measures?

C. Lands Valuation Division-LVD)

Specific Questions

1. In your opinion, what can you say about the land values and valuation in Sekondi-Takoradi?
2. How have land values in the metropolis changed in the last decade?
3. Do you think the oil find affected pricing of land within the Sekondi -Takoradi Metropolis and its environs? If yes, in which way? If no, what is then the cause?
4. Did the oil find also affect valuation rates in the metropolis?
5. How did the oil find influence compensation payments? (rates and frequency)?
6. Which areas would you say saw the greatest increase in their land values over the last decade?

Challenges/Reforms

7. What are some of the challenges hampering the work of your division?
8. Do you think your work has been influenced by the oil find and how?
9. What are some of the positive influences the oil find had on your line of duty as well the work of your institution?
10. What are the negative challenges or influence the oil find had on your line of work?
11. What are some of the challenges you face in your line of work in relation to informal settlements?
12. What were some of the measures put in place to mitigate these challenges?
13. Can you share with me measure also being put in place to reform your department in relation to informal settlements?
14. What has been implemented out of the proposed measures?

D. Officials at Regional LANDS COMMISSION-Survey and Mapping Division (SMD).

Specific Questions

1. How have the activities of the SMD changed over the last decade?
2. How did the oil find affect the dealings of the SMD?
3. What are some of the dynamics that the oil discovery brought to the nature of your work?
4. Which areas would you say saw a lot of your work being required and needed?
5. How did the oil find influence the frequency of land demarcation and land divisions?
6. What is the situation of survey and mapping in informal settlements?
- 7.

Challenges/Reforms

8. What are some of the challenges hampering the work of your institution?
9. What are some of the positive influences the oil find had on your line of duty as well the work of your institution?
10. What are the negative challenges or influence the oil find had on your line of work?
11. What are the challenges you face in your line of work in relation to informal settlements?
11. Can you share with me proposed measures which were put in place to address these challenges?
12. Can you share with me measures also being put in place to reform land administration institutions to recognize any arising tenure emerging in the Municipality?
14. What are these measures being put in place to recognize any arising tenures in informal settlements and how are they being implemented in the Municipality?

E. Semi- Structured Interviews for Officials at Regional LANDS COMMISSION-Office of Administrator of Stool Lands (OASL)

Specific Questions

1. How have the transactions of OASL changed in the last decade?
2. How did the oil find affect the functions of OASL?
3. What are some of the dynamics that the oil find brought to stool land transactions?
4. What is the situation of informal settlements in relation to stool lands?
5. What are some of the positive influences the oil find had on your line of duty as well the work of your institution?
6. What are the negative challenges or influence the oil find had on your line of work?
7. Can you share with me proposed measures which were put in place to address these challenges?
8. Can you share with me measure also being put in place to reform your department in relation to informal settlements?
9. What have been implemented out of the proposed measures?

Appendix 4: Questionnaire for Land Occupants

Questionnaires

Introduction

My name isI am collecting this data on behalf of Eunice Adom, an MSc Student of the University of Twente, Netherlands. She is conducting a research on the topic: “*Investigating the influence of oil-induced Urbanization on the growth of Informal Settlements in Sekondi-Takoradi.*” Information gathered would be solely used for academic purposes and treated with confidentiality.

Respondents Details

1. Gender: Male/Female
2. Age.....
3. Level of education:
 - a) Primary Education
 - b) Secondary Education
 - c) Tertiary Education
 - d) No formal Education
4. Occupation.....
5. Ethnicity.....

A. MIGRATION HISTORY

1. How long have you lived in Sekondi-Takoradi?
 - a. Less than 5 years
 - b. 5-10 years
 - c. 10-15 years
 - d. More than 15 years.
2. Where were you residing before moving to Sekondi-Takoradi?
.....
3. Which factors influenced your decision to move to Sekondi-Takoradi?
4. Did the oil find also influence your decision to move there?
 - a. Yes
 - b. NoIf yes, may I know why and how?

B. MODE OF LAND ACQUISITION

5. How did you get acquire this land?
 - a. Purchase
 - b. Inheritance
 - c. Gift
 - d. Adverse Possession
 - e. Other, please specify.....
6. From whom did you acquire your plot of land?

- a. The Stool
- b. A family
- c. An Individual
- d. The government
- e. Other, Please Specify.....

7. What were the payment terms and how was the payment done?

8. Were there any other people involved in the transaction?

- a. Yes
- b. No

Please specify if 'Yes'

9. What steps did you go through to acquire this land?

Please outline

10. Have you registered the land you acquired?

- a. Yes
- b. No

Give reasons for your answer.....

11. Did you apply for a building permit?

- a. Yes
- b. No

Give reasons for your answer....

12. Which documents did you receive as part of the transaction?

Please outline

C. LAND TENURE

13. Which of these tenure types applies to you?

- a. squatter owner
- b. squatter tenant
- c. tenant
- d. unauthorized subdivision
- e. purchased land
- f. Other. Please specify

14. What kind of rights do you have on this land? (choose more than one)

- a. Sell
- b. Improve/develop
- c. Inherit
- d. Occupy/Use
- e. Transfer/Rent
- f. Other. Please specify

D. PERCEPTION OF LAND TENURE SECURITY

15. Have you secured your interest on the land?

- a. Yes
- b. No

Please give reasons for your choice

16. What do you understand by land tenure security?

17. How worried are you that you could lose your right to this property?

- a. Very Worried
- b. Not Worried
- c. I don't know

Please give reasons for your answer

18. How difficult will it be for someone to evict you from this land?

- a. Very Difficult
- b. Not Worried
- c. I don't know

Please give reasons for your answer

21. Have you had threats of evictions?

- a. Yes
- b. No

If yes, by whom? And what was their reason?

23. What are some of the effects of the oil discovery in this community? Choose more than one

- a. Increase in population
- b. Increase of standard of living
- c. Increase in built up area
- d. Increase in land and rental values
- e. Other....

Thank you very much for your time and cooperation.

Appendix 5: Interface of KoboToolbox

Name	Shared by	Created	Last Modified	Submissions
INVESTIGATING THE INFLUENCE OF OIL-INDUCED URBANIZATION ON THE GROWTH OF INFORMAL SETTLEMENTS-THE CASE OF SEKONDI-TAKORADI(KOJOKROM) Questionnaire for data collection in Sekondi-Takoradi(KOJOKROM)		February 23, 2021	February 23, 2021	78
INVESTIGATING THE INFLUENCE OF OIL-INDUCED URBANIZATION ON THE GROWTH OF INFORMAL SETTLEMENTS-THE CASE OF SEKONDI-TAKORADI (ASSAKAE) Questionnaire for data collection in Sekondi-Takoradi		February 11, 2021	Today at 5:49 PM	78

Validation status	start	end	Gender	Age	Level of Educ...	Occupation	Record your I
–	March 8, 2021...	March 8, 2021...	Male	46-55	Tertiary Educ...	Subsea engin...	4.977528 -1.7
–	March 8, 2021...	March 8, 2021...	Female	46-55	No formal Ed...	trader	4.966417 -1.7
–	March 8, 2021...	March 8, 2021...	Female	46-55	Primary Educ...	Trader	4.969915 -1.7
–	March 8, 2021...	March 8, 2021...	Male	46-55	Secondary Ed...	Security officer	4.975541 -1.7
–	March 8, 2021...	March 8, 2021...	Male	36-45	Primary Educ...	Plumber	4.976417 -1.7
–	March 8, 2021...	March 8, 2021...	Male	46-55	Tertiary Educ...	Military officer	4.979568 -1.7
–	March 8, 2021...	March 8, 2021...	Male	36-45	Primary Educ...	Driver	4.977467 -1.7
–	March 8, 2021...	March 8, 2021...	Male	36-45	Primary Educ...	mechanic	4.978513 -1.7
–	March 8, 2021...	March 8, 2021...	Male	46-55	Secondary Ed...	Driver	4.967887 -1.7
–	March 8, 2021...	March 8, 2021...	Male	36-45	Tertiary Educ...	Banker	4.971784 -1.7
–	March 8, 2021...	March 8, 2021...	Female	26-35	Secondary Ed...	receptionist	4.966652 -1.7
–	March 8, 2021...	March 8, 2021...	Female	46-55	Tertiary Educ...	Teacher	4.977387 -1.7

INVESTIGATING THE INFLUENCE OF OIL-INDUCED URBANIZATION ON THE GROWTH OF INFORMAL SETTLEMENTS-THE CASE OF SEKONDI-TAKORADI (ASSAKAE)

Introduction My name isI am collecting this data on behalf of Eunice Adom, an Msc Student of the University of Twente, Netherlands. She is conducting a research on the topic: "Investigating the influence of oil-Induced Urbanization on the growth of Informal Settlements in Sekondi-Takoradi."Information gathered would be solely used for academic purposes and treated with confidentiality.Thank you for your cooperation.

RESPONDENTS DETAILS

Gender



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| Terms

A. MIGRATION HISTORY

1. How long have you lived in Sekondi-Takoradi?

- a. less than 5 years
- b. 5-10 years
- c. 10-15 years
- d. More than 15 years

2. Where were you residing before moving to Sekondi-Takoradi?

3. Which factors influenced your decision to move to Sekondi-Takoradi?

4. Did the oil-discovery also influence your decision to move here?



5. If yes, may I know why and how?

B. MODE OF LAND ACQUISITION

6. How did you acquire this land?

- a. Purchase
- b. Inheritance
- c. Gift
- d. Adverse Possession
- e. Other

Please Specify, if "Other".

7. From whom did you acquire your parcel of land?

- a. The Stool
- b. A family

Appendix 6: Themes and Groups Generated Using Atlas.T.I

Explore Code Manager Code Group Manager D 1: Transcript_EKMA D 2: Transcript_STMA D 3: Transcript_PVLMD D 4: Transc

Search Search Code Groups Search Codes

Challenges_LUSPA (4)
 Land Use Changes (2-0)
 Limitations in Technical Competence (2-0)
 Poor Access (3-0)
 Uncontrolled Development (13-0)
 Challenges_LVD (2)
 Delay in compensation payment (6-0)
 Fraudulent Activities (2-0)
 Challenges_OASL (4)
 Discontent with Stool Revenue (1-0)
 Disputes (10-0)
 Multiple sale of land (5-0)
 Sale of Large Tracts of Land (3-0)
 Challenges_PVLMD (5)
 Artificial Price Hikes (6-0)
 Encroachment (6-0)
 Fraudulent Activities_PVLMD (2-0)
 Inadequate Staff and Logistics (3-0)
 Unauthorized Infilling of Land (2-0)
 Impact on Land Use Changes (3)
 Agricultural Land Use to Residential (4-0)
 Industrial Land Use to Commercial Land Use (1-0)
 Residential Land Uses to Commercial (1-0)
 Impact_LUSPA (6)
 Impact on Infrastructural Development (8-0)
 Increase in Revenue (1-0)
 Innovation and Initiatives (3-0)
 Land use and development (7-0)
 Reconnaissance (2-0)
 Security (1-0)

Code Groups

Challenges (3)
 Challenge... (4)
 Challenge... (2)
 Challenge... (4)
 Challenge... (5)
 Impact o... (3)
 Impact_L... (6)
 Impact_L... (2)
 Impact... (1)
 Impact_P... (3)
 Impact_S... (3)
 Informal... (5)
 Land Ten... (5)
 Measures (9)
 Measure... (2)
 Measure... (2)
 Measure... (1)
 Oil influe... (4)
 Positive I... (4)
 Role (5)
 Transfor... (3)

Name	Grounded	Density	Groups
Agricultural Land Use to Residential	4	0	[Impact on Land Use Changes]
Artificial Price Hikes	6	0	[Challenges_PVLMD]
Authorized Infilling	2	0	[Measures_PVLMD]
Awareness of Importance of Land Registra...	6	0	[Impact_PVLMD]
Challenge_InformalSettlements	10	0	[Challenges] [Informal Settlements]
Challenges_SMD	6	0	[Challenges]
Challenges_STMA	2	0	[Challenges]
characteristics of informal settlement	14	0	[Informal Settlements]
Delay in compensation payment	6	0	[Challenges_LVD]
Discontent with Stool Revenue	1	0	[Challenges_OASL]
Disputes	10	0	[Challenges_OASL]
Encroachment	6	0	[Challenges_PVLMD]
Fraudulent Activities	2	0	[Challenges_LVD]
Fraudulent Activities_PVLMD	2	0	[Challenges_PVLMD]
Growth of informal settlements	19	0	[Informal Settlements]
Growth of settlement	6	0	
Impact on Infrastructural Development	8	0	[Impact_LUSPA]
Impact_LVD	5	0	[Positive Impacts of Oil Find]
Impact_OASL	7	0	[Positive Impacts of Oil Find]
Impact_PVLMD	4	0	[Positive Impacts of Oil Find]
Impact_SMD	17	0	[Positive Impacts of Oil Find]
Improvement in Survey Techniques	5	0	[Impact_SMD]
Inadequate Staff and Logistics	3	0	[Challenges_PVLMD]

Comment:

Explore Code Manager Code Group Manager D 1: Transcript_EKMA D 2: Transcript_STMA D 3: Transcript_PVLMD D 4: Transc

Search Search Code Groups Search Codes

Increase in Valuation Rates_LVD (3-0)
 Impact_OASL (1)
 Increase In Revenue and Development Projects (4-0)
 Impact_PVLMD (3)
 Awareness of Importance of Land Registration (6-0)
 Sanity in Land Market (1-0)
 Statutory Declaration (2-0)
 Impact_SMD (3)
 Improvement in Survey Techniques (5-0)
 Increase in Application_SMD (3-0)
 Increase in Revenue_SMD (2-0)
 Informal Settlements (5)
 Challenge_InformalSettlements (10-0)
 characteristics of informal settlement (14-0)
 Growth of informal settlements (19-0)
 Tenure in informal settlements (3-0)
 tenure regularisation (3-0)
 Land Tenure (5)
 Land Tenure (2-0)
 Land Tenure Registration (1-0)
 Land Tenure_Oil influenced (2-0)
 Tenure in informal settlements (3-0)
 tenure regularisation (3-0)
 Measures (9)
 Measures_LUSPA (2)
 Redevelopment of Selected Informal Towns (5-0)
 Revamp_Monitoring (2-0)
 Measures_OASL (2)
 Intensified Advocacy (4-0)
 Parcel Right Demarcation (2-0)
 Measures_PVLMD (1)

Code Groups

Challenges (3)
 Challenge... (4)
 Challenge... (2)
 Challenge... (4)
 Challenge... (5)
 Impact o... (3)
 Impact_L... (6)
 Impact_L... (2)
 Impact... (1)
 Impact_P... (3)
 Impact_S... (3)
 Informal... (5)
 Land Ten... (5)
 Measures (9)
 Measure... (2)
 Measure... (2)
 Measure... (1)
 Oil influe... (4)
 Positive I... (4)
 Role (5)
 Transfor... (3)

Name	Grounded	Density	Groups
Land Tenure Registration	1	0	[Land Tenure]
Land Tenure_Oil influenced	2	0	[Land Tenure]
Land use and development	7	0	[Impact_LUSPA]
Land Use Changes	2	0	[Challenges_LUSPA]
Limitations in Technical Competence	2	0	[Challenges_LUSPA]
Measures_EKMA	2	0	[Measures]
Measures_Informalsett	7	0	[Measures]
measures_lvd	2	0	[Measures]
Measures_OASL	4	0	[Measures]
Measures_PVLMD	3	0	[Measures]
Measures_SMD	5	0	[Measures]
Measures_STMA	3	0	[Measures]
Multiple sale of land	5	0	[Challenges_OASL]
Oil_Influenced	11	0	[Oil influenced Transformations] [Tr
Other factors not oil influence	3	0	[Oil influenced Transformations] [Tr
Parcel Right Demarcation	2	0	[Measures_OASL]
Poor Access	3	0	[Challenges_LUSPA]
Proposed_measures_EKMA	1	0	[Measures]
Proposed_measures_STMA	5	0	[Measures]
Reconnaissance	2	0	[Impact_LUSPA]
Redevelopment of Selected Informal Towns	5	0	[Measures_LUSPA]
Residential Land Uses to Commercial	1	0	[Impact on Land Use Changes]
Revamp_Monitoring	2	0	[Measures_LUSPA]

Comment: