

Urban Growth and Livelihood Transformations on the Fringes of African Cities:

A Case Study of Changing Livelihoods in Peri-Urban Accra

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Abstract

In recent times, a growing body of research has drawn attention to the changing interface and interdependence between urban and rural spaces in Africa. This includes studies on physical, environmental, socio-demographic, economic and other transformations in the peri-urban zone. However, little is known about how residents of peri-urban communities adapt their livelihoods to these transformations. Using the case study approach, and by applying the *sustainable livelihood framework* as an analytical tool, we have explored the livelihood strategies adopted by the residents of four communities in peri-urban Accra in response to the city's physical expansion. We find that urban growth has differential effects on peri-urban livelihoods, thereby creating winners and losers. Some residents, by reason of their possession of, or control over, various forms of livelihood assets, are able to utilize opportunities offered by urban growth to devise livelihood strategies to enhance their wellbeing. Those who suffer adverse effects are mainly resource-poor farm households who, apart from not having the wherewithal to take advantage of opportunities created by urban growth, lose their farm-based livelihoods as a result of the conversion of land from agricultural to non-agricultural uses. We therefore recommend that local government authorities should incorporate peri-urban livelihood issues into their planning activities.

Keywords: urban growth, peri-urbanization, peri-urban Accra, livelihood, livelihood transformation

1. Introduction

Most of the world's urban growth occurs in the developing world, particularly Africa and Asia where the urban population is expected to double between 2000 and 2030 (UNFPA, 2007). Although Africa is the least urbanized region in the world, it has the fastest rate of urbanization. According to the United Nations' Department of Economic and Social Affairs (2014), the share of Africa's population living in urban areas increased from 14.5% in 1950 to 38.3% in 2010 with the annual growth rate of its urban population currently averaging 3.6%, compared to Asia's 2.5%. This fast rate of urbanization has various effects on peri-urban zones that surround the continent's cities.

The *peri-urban zone* is a transitional belt between the city and the countryside—a zone undergoing various kinds of transformations, where urban and rural features exist side by side (see Aberra & King, 2005; Cavaillès, Peeters, Sèkeris, & Thisse, 2004; Simon, McGregor, & Nsiah-Gyabaah, 2004). The term *peri-urbanization* refers to the process through which peri-urban areas physically and/or functionally get incorporated into the urban system (Webster & Muller, 2002; Webster, Cai, Muller, & Luo, 2003; Heikkila, 2003; Graham, Gurian, Corella-Barud, & Avitia, 2004). It involves various transformations on the edges of large cities, such as transformation of existing rural settlements into urban settlements without necessarily displacing the rural residents (UNFPA, 2007) and changes in the structure of the peri-urban local economy, including changes in both sectorial composition of economic activities and labour force (Webster & Muller, 2002). It also involves changes in demography, social structure, land use, land use management and architecture in the peri-urban zone (Simon et al., 2004), as well as increased demand for land in peri-urban communities where indigenous and long-term settlers have depended on agriculture for centuries (see Oduro & Doan, 2012).

In recent times, a small but growing body of research has drawn attention to “the changing interface between urban and rural spaces and the increasing interdependence between these two realms” (Lynch, 2005, p. 1).

Included in this body of research are studies on physical, environmental, socio-demographic, economic and other transformations in peri-urban areas resulting from urban growth (e.g. Aberra & King 2005; Cavailhès & Wavresky 2003; Gough & Yankson, 2006; Lanjouw, Quizon, & Sparrow, 2001; Rakodi, 1999). However, little is known about strategies adopted by peri-urban residents to adapt their livelihoods to these transformations. That is, what coping strategies do peri-urban residents adopt to make a living as they lose their farms to urban development? The purpose of this paper is to help fill this gap by examining the effects of urban growth on livelihoods in indigenous communities located on the fringes of Accra and how residents of these communities adapt their livelihood strategies to cope with the change. This is achieved by using the case study approach. One innovative contribution of the paper is the adaptation of the *sustainable livelihood framework* as an analytical tool. The framework, which has gained currency in recent times, was borne out of the need for development workers and researchers to gain a comprehensive understanding of the livelihood assets and strategies of the poor so as to devise effective poverty reduction interventions (Rakodi, 2002). Our adaptation of the framework involves the introduction of *urban growth* as a transformative external force that alters the livelihood assets, strategies and outcomes of the inhabitants of peri-urban communities.

2. Conceptualising Livelihood Transformation in the Peri-Urban Zone

2.1 Livelihood

A livelihood consists of “the capabilities, assets ... and activities required for a means of living” (Carney, 1998 cited in de Haan & Zoomers, 2003, p.352). It is a function of resources available to and utilized by an individual or household (Chambers & Conway, 1991). To operationalize the concept, several organizations have developed various versions of what has become known as the sustainable livelihood framework—e.g. the Sustainable Livelihoods Research Programme of the Institute for Development Studies (IDS), University of Sussex; the Department for International Development (DFID); UNDP; IFAD; and CARE International (see Krantz, 2001; Rakodi, 2002; Benson & Twigg, 2007).

Although there are some differences in the details of the various versions of the sustainable livelihood framework, they share several broad similarities. The DFID’s framework, which is perhaps the most representative, is adopted in this paper. The framework has four main components: livelihood assets; external environment; livelihood strategies; and livelihood outcomes.

2.1.1 Livelihood Assets

These are the resources that individuals and households draw upon to build livelihoods. There are five types of livelihood assets (or capital): (i) natural capital; (ii) physical capital; (iii) financial capital; (iv) human capital; and (v) social/political capital (Rakodi, 2002).

Natural capital refers to natural resources such as land, forestry, water and mineral resources that can be consumed directly, sold or converted to consumable or merchantable products. It can be a private good (e.g. private land) or a common pool resource (e.g. the fish stock in the sea) (Meikle, Ramasut & Walker, 2001; Scoones, 1998).

Physical capital includes man-made, tangible assets that directly or indirectly contribute to livelihoods, including infrastructure such as roads, electricity, water and markets, as well as private assets like buildings, machinery and equipment (Meikle et al., 2001; Rakodi, 2002).

Financial capital refers to all financial resources and services used by individuals and households to pursue various livelihood options. Examples include personal savings, loans from relatives, friends or moneylenders, as well as credit and financial services received from formal financial institutions (Rakodi, 2002; Scoones, 1998).

Human capital refers to both the quantity and quality of labour available to households to undertake productive and reproductive tasks. For example, an individual may utilize his human capital by participating in waged employment or undertaking a business venture. Education, vocational and managerial skills as well as health status determine the quality of human capital while the total labour time available for productive activities determines the quantity of human capital (Meikle et al., 2001; Rakodi, 2002; Scoones, 1998).

Social capital refers to “the rules, norms, obligations, reciprocity and trust embedded in social relations, social structures, and society’s institutional arrangements” that help individuals and households to devise livelihood strategies (Narayan, 1997 cited in Rakodi, 2002, p. 10).

2.1.2 Livelihood Strategies

Livelihood strategies are the actions taken by individuals and households to improve upon or maintain their current well-being, or to cope with impoverishment, using a stock of livelihood assets at their disposal. For

example, a household may choose to produce its own food because it has access to land or some household members may participate in waged employment because they possess some employable skills (Rakodi, 2002; Scoones, 1998).

2.1.3 Livelihood Outcomes

These are the direct effects of the livelihood strategies of individuals and households on their socio-economic wellbeing. Examples include: increased income; reduced vulnerability; improved food security; and increased ability to meet other basic needs. Some livelihood outcomes can also be converted back to livelihood assets. For example, a household may choose to reinvest its income in productive assets (such as land and equipment) in order to generate more income and accumulate more assets (DFID, 1999).

2.1.4 External Environment

The kinds and quality of livelihood strategies open to people also depend on their ability to take advantage of opportunities and ward off threats presented by the external environment. One element of the external environment in the livelihood framework is vulnerability context. **Vulnerability** here refers to the insecurity of an individual’s, household’s or community’s well-being as a result of environmental changes (Moser, 1998). These environmental changes include trends such as population growth, urban expansion and resource depletion; they are continuous, cumulative and predictable events that directly or indirectly affect livelihood assets and strategies (see Chambers & Conway, 1991).

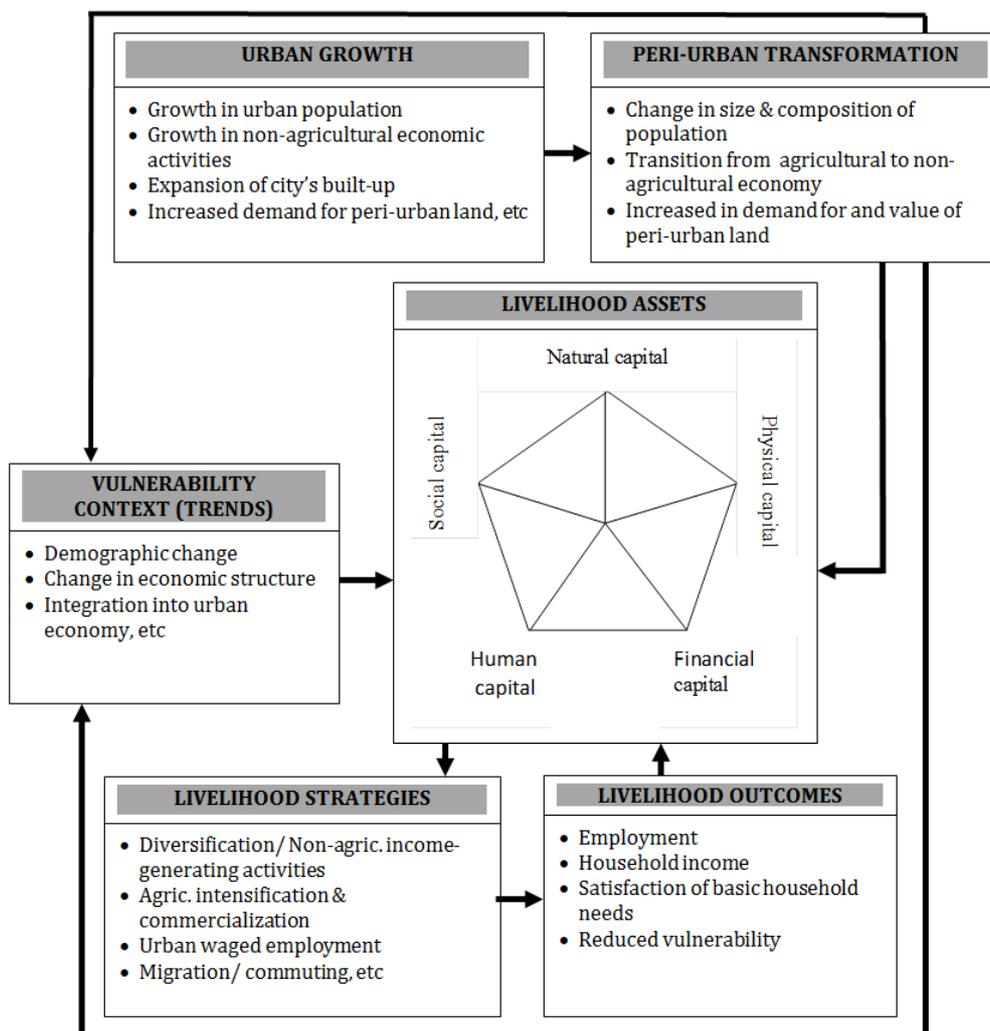


Figure 1. A Conceptual Framework for Analysing the Effects of Urban Growth on Peri-Urban Livelihoods
 Source: Author’s construct, based on DFID’s Sustainable Livelihood Framework.

2.2 A Conceptual Framework for Analysing Livelihood Change

We have adapted the DFID livelihood framework by incorporating the transformative effects of urban growth on livelihood assets, strategies and outcomes. Urban growth involves an increase in a city's population and the spillover of both excess population and the built-up area into the peri-urban zone, as well as the integration of the peri-urban economy into the urban economy—including a shift from agriculture to non-agricultural activities (see **Figure 1**). These transformations alter the nature and amount of livelihood assets in peri-urban communities, including a rise in the array of viable uses of land, an increase in the categories and number of land-related actors and, consequently, a rise in the value of land and related natural resources (natural capital).

Peri-urban transformation may also lead to an increase in physical capital if expansion of the city is accompanied by improvements in infrastructure provision. Also, because of the agglomeration economies it creates, urban growth may lead to a rise in the levels of household income and, coupled with increased access to institutional credits normally available in urban areas, increase access to financial capital. We further postulate that urban growth increases social and political capital through increased access to urban-based institutions and networks that expose peri-urban residents to various livelihood opportunities—e.g. opportunities to join and benefit from civil society organizations like trade associations, faith-based organizations and political organizations.

We argue that households respond to changes in the quality and quantity of livelihood assets available to them by adopting new livelihood strategies or adapting old ones in ways that allow them to take advantage of new opportunities and/or mitigate the effects urban expansion. For example, they may shift from subsistence to intensive or commercial agriculture, invest in non-agricultural income-generating activities, find non-farm waged employment or diversify their income sources (Armah et al, 2010).

Changes in livelihood strategies may lead to improved or worsened livelihood outcomes, in terms of employment, income, ability to meet household needs (e.g. food, shelter and health care) and vulnerability or resilience to the external environment. Since endowment in livelihood assets varies across households, peri-urban households would experience differential livelihood outcomes. In other words, those who are able to adopt more rewarding livelihood strategies experience improved quality of life, while the reverse holds true for those who lack the capabilities (assets) required to adjust appropriately to urban growth.

3. Description of Study Area

3.1 The Greater Accra Metropolitan Area and Peri-Urban Accra

Accra, or Accra Metropolis, is the nucleus of the Greater Accra Metropolitan Area (GAMA), which comprises Tema Metropolis and ten (10) municipalities (see **Figure 2**). Before the capital of the then Gold Coast was moved from Cape Coast to Accra in 1877, the entire Greater Accra Region within which the city is located was predominantly rural, consisting of fishing and farming settlements (Parker, 2000). However, by 1891, Accra had become an urban centre with a population of 19,999, which declined to 18,574 in 1911 before rising again to 38,049 in 1921 and 61,558 in 1931 (Parker, 2000; Ahuno, 1992 cited in Apt, 2000). By 1960, Accra was a full-fledged city with a population of 377,446 (Twum-Baah, 2000), which represented almost a quarter of the country's urban population. During the period 1960-2010, the population of Accra more than quintupled from 377,446 to 2,076,546.

Before the recent re-demarcation of districts, the official boundaries of Accra covered only 300 sq. km, or 7.4% of Greater Accra Region's total land area (Twum-Baah, 2000), which limited its capacity to contain the rapidly growing urban population and economic activities, resulting in massive spillover into peri-urban settlements in the surrounding municipalities. Census data show that almost half of GAMA's population growth between 1960 and 2010 occurred outside the official boundaries of Accra (see Table 1). Table 1 also shows that Accra's share of GAMA's overall population growth was as much as 70% during the 1960-1970 inter-censal period before declining to 40% during the 2000-2010 inter-censal period. Rapid population growth on the fringes of Accra has led to a corresponding increase in demand for land to build homes, infrastructure and employment centres to serve the swelling urban population. This has in turn led to the engulfment of several peri-urban communities that surround the city, leading to rapid changes in the physical and socio-economic characteristics of those communities (Kassanga, Cochrane, King & Roth 1996; Yankson, Kofie & Moller-Jensen 2004).

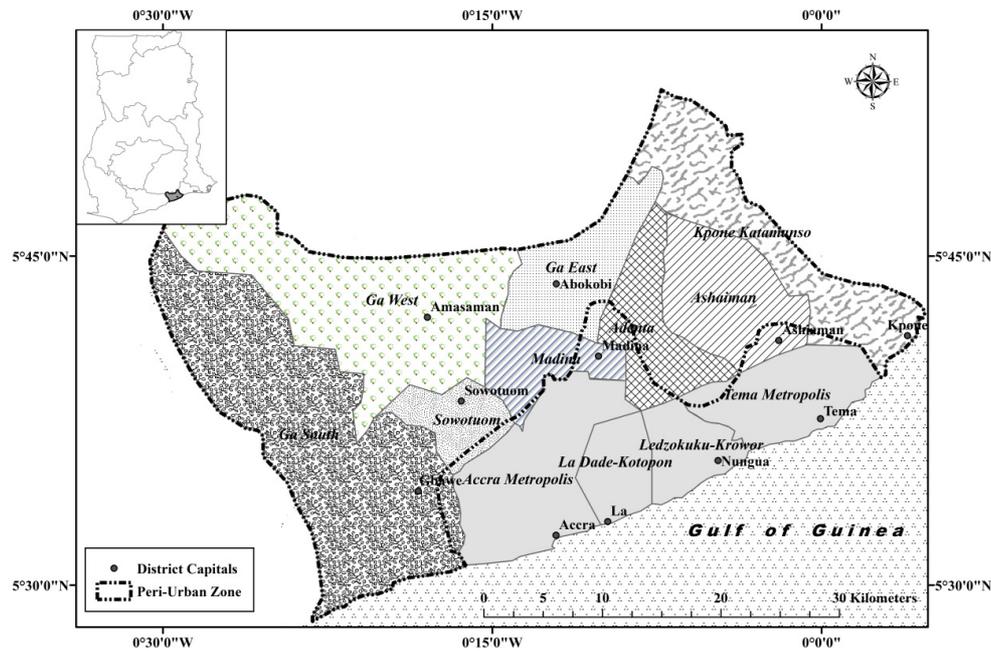


Figure 2. Composition of the Greater Accra Metropolitan Area (GAMA) and Peri-Urban Accra

Table 1. Distribution of population Growth in GAMA

	1960-70	1970-84	1984-00	2000-2010	1960-2010
Total Growth (Absolute)	429,688	660,431	1,220,550	1,040,618	3,351,287
Accra's Share of Growth (%)	70.1	46.7	55.0	40.1	50.7
Share of Growth Occurring Outside Accra (%)	29.9	53.3	45.0	59.9	49.3

Source: Based on census data from 1960 to 2010.

For the purpose of this paper, the term “peri-urban Accra” is defined to encompass the portion of the GAMA that falls outside Accra and Tema Metropolises, Ledzokuku-Krowor and La Dade-Kotopon Municipalities, as well as Ashaiman, Madina and Adenta townships (see Figure 2). The zone consists of fairly large towns like Gbawe, Kwabenya, Dome, Ofankor and Amasaman, as well as a large number of small farming villages. Until recently, the entire zone was rural in character with farming being a major occupation. However, the zone is now functionally linked to Accra and the settlements within it are at various stages of urban transformation. This delineation is based on the premise that the peri-urban zone is a transitional zone consisting of both rural settlements where farming is predominant and townships from where a substantial proportion of residents commute to the city (see Cavailhès et al.; Aberra & King, 2005).

3.2 The Study Communities

The paper focused on a detailed analysis of changes in livelihood assets and livelihood strategies in four peri-urban communities—Kwashiekuma, Medie, Bortianor and Ofankor—which were selected based on their proximity to Accra (see Figure 3). This is because relative location of peri-urban communities has an influence on the extent and intensity of the impact of urban growth on such communities (see Linard, Tatem & Gilbert, 2013). The four communities represent varying locations relative to Accra and varying characteristics with regard to peri-urbanization. Moreover, since peri-urban communities form a continuum of ‘urbanness’ (see Simon et al., 2004), the selection of the four communities was done to reflect this.

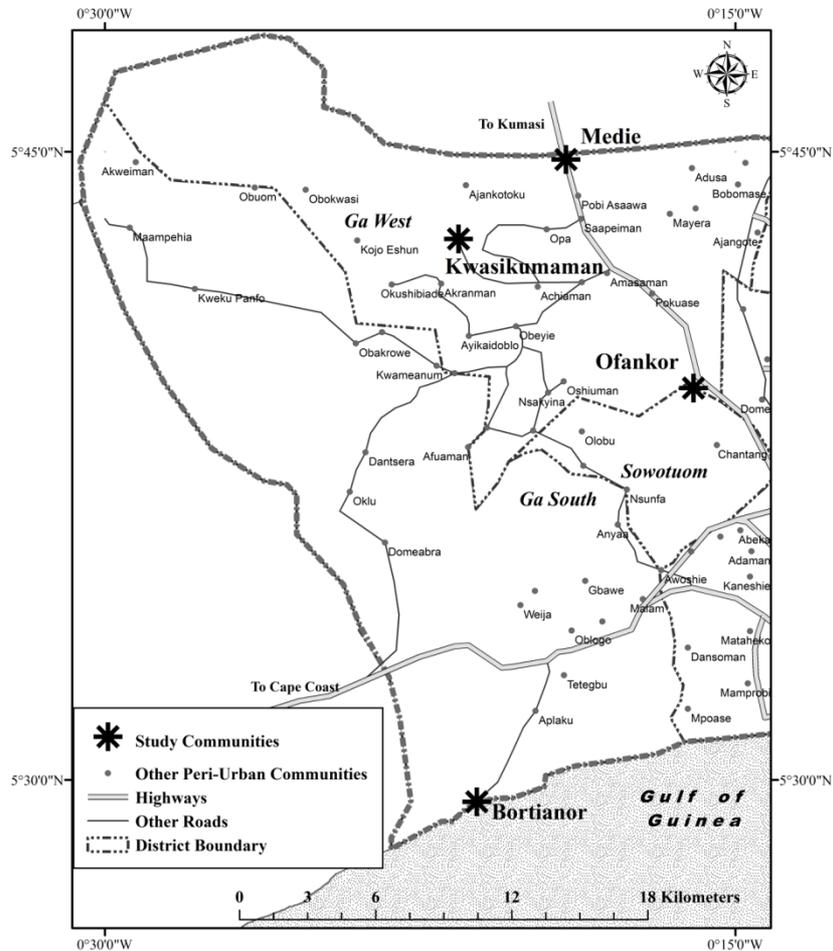


Figure 3. A Section of GAMA showing the Study Communities

Among the four communities selected, Kwashiekuma is the farthest from Accra. It is located in the Ga West Municipality and is connected to the Accra-Kumasi highway by an 8.2-km unpaved road with the total road distance between it and the city's CBD being over 30 km. Crop farming, which has been the main occupation of its inhabitants for over a century, has recently declined as a result of the loss of farmlands to sand mining activities and land acquisition by speculators. Ofankor, which is located in the Ga West Municipality and along the Accra-Kumasi highway is only 15.1 km from the city's CBD. It is the most urbanized and proximate to Accra among the four settlements, and is almost completely engulfed by the city's contiguously built-up area. Rapid population growth and urbanization in Ofankor began in the 1980s when the central government compulsorily acquired a portion of the community's land and residents of Accra began relocating there (Kassanga et al., 1996). The main economic activity is retailing.

Medie and Bortianor fall between the two extremes. Medie is also located in the Ga West Municipality. Although the settlement is about 28.3 km from Accra's CBD, this distance is offset by its location on the Accra-Kumasi highway. The growth of Accra has caused the local economy of the town to change from agricultural-based to non-agricultural-based. Currently, the main economic activities are trading and industrial activities such as processing and packaging of mineral water and fruit juice; manufacture of pharmaceutical and plastic products, footwear, nails and roofing sheets; saw milling; and moulding of building blocks and other concrete products. Bortianor is a coastal town in the Ga South Municipality, located on the western edge of the Densu Delta wetlands. In terms of straight-line distance, it is fairly close to Accra. However, it is located 5.9 km off the Accra-Takoradi highway and connected to the highway by a minor road in poor conditions. The total road distance between it and Accra's CBD is about 22 km. Since its founding more than hundred years ago, it has been a fishing-cum-farming village producing fish, fresh vegetables and other annual crops for sale in Accra. However, these activities have been declining in significance over the last 20 years, due to the depletion of fish stock and the loss of farmlands to urban development.

As Table 2 shows, Medie, Bortianor and Ofankor have experienced rapid population growth in recent times while Kwashiekuma has experienced a decline. Kwashiekuma's decline is attributed to migration of some of its inhabitants (especially the youth) to Accra as a result of the loss of farmlands.

Table 2. Population growth and composition of study communities

Community	1984	2000	2010 (Estimate)	% Change (1984-2010)
Kwashiekuma	566	403	445	-21.4
Medie	260	3,146	6,026	2,217.7
Bortianor	3,298	5,446	10,432	216.3
Ofankor	1,650	16,177	26,671	1,516.4

Source: Based on 1984, 2000 and 2010 population censuses.

4. Methodology

We used the case study approach, which is defined as “an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident” (Yin, 2003, p. 13). The approach, which emphasises context and detail in analysing relationships between various elements, conditions or phenomena (Soy, 1997), is most appropriate when the researcher seeks to answer “how” or “why” questions (Yin, 2003) or test a theoretical model in a real-world situation (Shuttleworth, 2008). While statistical methods are typically used to establish relationships in a survey research, in a case study research relationships can be established by narratives based on the lived experiences of the subjects involved—although case study research does not necessarily preclude the use of statistical analyses (Yin, 2003). The four study communities—Kwashiekuma, Medie, Bortianor and Ofankor—represent the main cases as well as the *units of analysis* (see Miles & Huberman, 1994). Each case consists of subjects of interest, which include residents and other actors who are in one way or another linked to peri-urban livelihoods. These subjects of interest were treated as *informants* or case *participants*. As pointed out earlier, the four cases represented four different ‘types’ of location while the case participants represented varying perspectives.

Data gathering and analysis were designed to address the following two (2) basic questions:

- i) How has the growth of Accra affected livelihood assets available to residents in the four selected communities?
- ii) How have residents responded to changes in livelihood assets in terms of their livelihood strategies?

Data collection methods included: review of documents; key informant interviews; focus group discussions; a household survey; and direct observation. Documents reviewed included district development plans, legislations, census reports and reports on other peri-urban studies. These documents provided useful insights about the historical, physical, economic and social characteristics of peri-urban Accra and the study communities, as well as the impacts of Accra's growth on the peri-urban zone. They were obtained from different departments of the relevant Municipal Assemblies and the Ghana Statistical Services. Using customized semi-structured interview guides, key informant interviews were conducted with municipal officials (i.e. planning officers, agricultural extension officers, community development workers and town and country planning officers), community leaders, farmers and other participants. The focus group discussions targeted groups of community leaders, youths, sand miners and stone quarriers while the household survey focused on randomly-selected household heads as respondents. Checklists were used to guide the focus group discussions while the household survey involved the use of a structured questionnaire. Non-random purposive sampling techniques were used to select participants of the key informant interviews and the focus group discussions (see **Table 3**). People, livelihood-related events and features were observed and recorded as pictures and field notes.

Table 3. Number of Respondents by Category and Community

Categories of Respondents	Kwashiekuma	Medie	Bortianor	Ofankor	Total
<u>Key Informant Interviews:</u>					
1. Municipal officials	4	4	5	4	17
2. Individual community leaders	2	2	2	2	8
3. Crop farmers	4	3	3	1	10
4. Poultry farmers	-	-	-	1	1
5. Fishermen	-	-	3	-	3
6. Business owners	3	6	5	5	19
<u>Household Survey:</u>					
7. Households (heads)	30	35	35	40	140
<u>Focus group discussions:</u>					
8. Sand miners (group)	1	-	-	-	1
9. Community leaders (groups)	1	2	1	1	5
10. Youth (group)	1	-	-	-	1
11. Stone quarriers (groups)	-	-	-	2	2

5. Results and Discussions

5.1 Transformation of Livelihood Assets

Changes in the stock and quality of natural capital and physical capital (in the form of housing construction) are found to be the most important transformations as far as livelihood assets are concerned. Interviews and discussions with the various respondents point to the fact that, in the past, land in the study communities was used mainly for the cultivation of food crops while the sea and other water bodies were used for fishing. However, during the last three decades, all the four communities have experienced increased demand for land for residential, industrial and commercial developments, as a result of the growth of Accra, leading to the loss of farmlands. This is how one elderly woman at Medie explained it:

When I joined my husband here [from Northern Ghana] in 1977, there was a lot of land.... and most of us were farmers. We used to produce corn and other crops to sell in Accra and feed ourselves. At least what to eat was not a problem at all. However, things have changed drastically within the last 20 years primarily because most of the farmlands have been taken away especially by housing developers.

Another change is land degradation. In Kwashiekuma and its environs, sand mining has led to the degradation of arable lands, which have now become unsuitable for crop farming (see **Plate 1**). Besides the loss of soil fertility, sand mining has also resulted in the creation of several ponds that breed disease-causing organisms, including mosquitoes that carry the malaria parasite. Local government officials and community respondents suspect that the presence of these ponds have contributed to the prevalence of *buruli ulcer* in Kwashiekuma and its environs.



Plate 1. A portion of an excavated farmland at the outskirts of Kwashiekuma

Source: Taken by authors during field visit.

At the outskirts of Ofankor, stone quarrying has led to the levelling of the Pokuase-Ofankor hill, the creation of craters and the destruction of a nature (forest) reserve (see **Plate 2**). In Bortianor and its environs, sudden population growth has led to the disposal of waste into the sea and beaches as well as widespread, and encroachment of developers on the Densu Delta wetlands and the nearby Tuba irrigated farmlands.



Plate 2. A stone quarry near Ofankor

With the exception of Kwashiekuma, there have been massive changes in housing stock and quality in and around the study communities. In the indigenous part of each community is found a mixture of dilapidated old mud houses and renovated or rebuilt houses. Surrounding these are recently built houses ranging in quality from shacks erected by squatters to expensive mansions built by individual homeowners as well as gated communities built by commercial real estate developers (e.g. ACP Estates at Pokuase near Ofankor). Thus, as far as housing quality is concerned, peri-urban Accra has become a mosaic of formality and informality (see **Plate 3**).



Plate 3. Housing contrast in Bortianor

Top: An old indigenous compound, Bottom: A newly-built modern house.

This is in contrast to other studies that suggest that the peri-urban zone is characterized by informal settlements inhabited by low-income migrants. For example, Westen (1995 cited in Rakodi 1999) found that, around the city of Bamako, Mali, informal settlements start with a few migrant families who build sub-standard self-constructed houses near existing peri-urban villages, often with customary rights granted by village chiefs, and are subsequently joined by other in-migrants; over time there is uncontrollable proliferation of informal settlements.

The problem of losing farmlands and wetlands to urban growth is aggravated by the absence of effective development control and neglect of peri-urban livelihood issues in municipal planning. Municipal development plans focus mainly on infrastructure provision with no concrete strategies to protect peri-urban livelihoods. Land-use plans are either non-existent or not adequately enforced, or make little provision for the protection of natural resources, particularly farmlands.

5.2 Changing Livelihood Strategies

Urban growth during the last 30 years has resulted in changes in livelihood strategies, with the shift from agriculture to non-agricultural economic activities being the most evident. In all the four communities, focus group discussions with community leaders revealed that farming was the predominant occupation about three decades ago. However, the household survey revealed that it is only in Kwashiekuma that agriculture still maintains its dominance, where it employs a little over 49% of the labour force (see **Table 4**). (Agriculture includes crop and animal farming, fishing and hunting.) As **Table 4** shows, the shift has been towards trading (wholesale and retail), service, and manufacturing and construction.

Table 4. Occupational Distribution of Labour Force in Study Communities

Community	Agriculture	Mining & Quarrying	Manufacturing & Construction	Trading	Service
Bortianor	25.2	1.1	10	37.3	26.4
Kwashiekuma	49.4	8.6	0.1	23.6	18.3
Medie	5.1	2	31.2	38.7	23
Ofankor	1.2	3	16.1	44.7	35
All	8.0	2.5	16.5	41.9	31.1

Source: Household survey.

The shift from agriculture to non-agricultural economic activities in peri-urban Accra is also evident in census data. For example, in 2000, the proportion of the economically active population aged 15 years and older in the then Ga District (where the study communities are located) who had agriculture as their occupation was 19.3% but this declined to less than 5% in 2010 (see **Table 5**). Table 5 shows that the shift has mainly been towards the service and commerce sectors. The service sector includes a wide range of activities, such as hotel and restaurant operations; transport and storage; education, health and social services; administrative and support service activities; real estate activities; information and communication services; and financial and insurance services.

Table 5. Economically Active Population (15 years and older) by Type of Industry in the Ga Municipalities in 2000 and 2010

Industry	2000	2010
Agriculture	19.3	4.6
Mining & Quarrying	2.3	0.6
Manufacturing & Construction	31.1	22.2
Wholesale & Retail Trade	33.2	32.4
Service	14.1	40.2
All Sectors	100.0	100.0

Source: Ghana Statistical Service (2005; 2013).

Concealed behind the statistics on shifts from agriculture to non-agricultural activities are various livelihood opportunities and constraints created by urban growth. In response to these opportunities and constraints, some residents have adapted their livelihood strategies as discussed below.

5.2.1 Changing Utilization of Natural Capital

An increase in the range of uses, and demand for, land and other natural resources resulting from urban growth has been an opportunity for a section of the peri-urban population to devise new livelihood strategies. Chiefs and heads of land-owning families, who are mainly men and have control over land, capitalize on the ever-increasing demand for land to make money by leasing out plots of land to developers and speculators. Some migrants, women, children from poor households and other residents who have no control over land eke a living from sand mining and stone quarrying to feed the burgeoning construction industry (see **Plate 4**).



Plate 4. Stone Quarrying at Ofankor (involving school-going age children, nursing mothers and other poor residents)

Another natural resource that has contributed to the transformation of the local economy of Medie is the presence of abundant, high-quality underground water. This has attracted to the community companies that produce mineral water, including *Voltic Ghana Ltd*, the largest mineral water producer in the country. In addition, the beaches at Bortianor and its environs have attracted tourists and holiday makers to the area, leading to the springing up of hotels, guest houses and beach resorts in and around these communities. The Bortianor-Kokrobite enclave is described by municipal officials as having the largest concentration of hotels, guest houses, resorts and related facilities in the Ga South Municipality and being an important source of employment for residents. Bojo Beach Resort, located in Bortianor, is one of such facilities (see Plate 5).



Plate 5. Sections of Bojo Beach Resort at Bortianor

While some residents and non-residents have benefitted from land lease and natural resource extraction, others have been economically displaced and impoverished as a result of urban growth. They include peasant farmers, many of whom are women, who have either lost their farmlands altogether or experienced a drastic diminishing of farm sizes. These are people who do not have tenure security or lack the means to acquire arable lands elsewhere. The plight of these people is similar to poor farmers in the peri-urban areas of Kumasi who have lost their lands without compensation from local chiefs who control land transactions (see Aberra & King, 2005).

5.2.2 Adaptation of Peri-Urban Agriculture

Despite rapid land conversion, some peri-urban farmers manage to have access to farmlands with which they are able to take advantage of the city's ready market for fresh farm produce. They cultivate mainly vegetables, maize and cassava. Most of them have adapted to diminishing farm sizes by practising agricultural intensification or diversifying their livelihoods. Agricultural intensification, which is adopted by both farmers who still have access to arable land and those who cultivate on undeveloped residential plots (including backyards), is characterized by continuous cropping, intensive use of agro-chemicals and lack of appropriate soil management and cropping methods (see **Plate 6**). These usually lead to the depletion of soil fertility and the contamination of crops (especially vegetables), soils, and underground and surface water bodies (see Killebrew & Wolff, 2010; Raut, Sitaula & Bajracharya, 2010).



Plate 6. A Field Under Continuous Cropping at Kwashiekuma

Livelihood diversification is an adaptation strategy in which peri-urban residents engage in multiple occupations, often with small-scale farming being one of them (see Box 1).

Box 1. Livelihood Diversification, a Common Livelihood Strategy in Medie

A resident of Medie, who belongs to a land-owning family, has adopted the livelihood diversification strategy. He has been a farmer from his teenage years, making use of portions of the family's lands in the name of his father, who is an elder in the family. He cultivates corn, cassava, okra and other vegetables for sale to residents of Medie as well as traders from Accra where there is ready market for fresh farm produce. However, because most of the family lands have been leased to developers, he can no longer farm close to Medie or cultivate as much land as he used to. He currently farms on other lands belonging to the family but much more distant from Medie. As a result of the decline in farming, he now works as sand and stone 'agent' in addition to crop cultivation. He uses his contacts and influence as a native to help contractors to get access to land for quarrying and developers to get sand and stone chippings to buy. He also earns income in the form of rents received from tenants who live in his house. Until he got divorced recently, his wife used to work with him on the farm and as a trader. His 25-year-old son, who is a senior secondary school (SSS) graduate, lives with him and works as a taxi driver.

Another adaptation strategy is the shift towards livestock production, which does not require as much land as crop farming. Poultry farming is particularly popular in this respect (see Box 2).

Box 2. Poultry Farming as a Livelihood Adaptation Strategy at Ofankor

A male resident of Ofankor and his wife are among those who have taken to poultry farming as an adaptation strategy. As a child, he used to work on the farm with his parents. However, the family's vast farmlands have all been sold to developers. In 2006, when he and his wife, who is a school teacher, wanted to do something to supplement their income, they settled on poultry farming. Utilizing the undeveloped portion of his father's residential property, they started with 200 birds. After a few trials, they gained the necessary experience in poultry management and began to make decent profit. At the time of the field visit, they had about 2,000 birds and were producing over 1,000 eggs per day. The couple had plans to expand the business further by relocating to a larger parcel of land they had acquired.

5.2.3 Establishment of Small-Scale Industrial and Commercial Businesses

The spillover effect of urban growth has led to a general increase in the demand for goods and services in peri-urban Accra. Accordingly, a section of residents have taken advantage of the growing market by establishing various economic ventures, sparking the springing up of businesses of various kinds and sizes. Businesses identified in this study include retail, personal services (e.g. hairdressing, barbering and dressmaking), electronic and auto repairs, artisanal services (e.g. plumbing, electric wiring and installations and painting) and industrial activities (e.g. food processing, saw milling, metal fabrication and manufacture of cement blocks). In Ofankor, Medie and Bortianor, these activities have become important livelihood strategies for both indigenous and long-term residents, as well as recent migrants (see **Table 6**). Petty trading and personal services like hairdressing and dressmaking are particularly important livelihood strategies for women, who usually do not participate in the lucrative land-leasing business, even if they belong to a land-owning family.

Table 6. Businesses at Ofankor Registered by the Ga West Municipal Assembly as at 2009

Business category	Number	Percent
Retail stores	901	38.1
Hairdressing salons & Dressmaking shops	580	24.6
Artisan workshops	388	16.4
Drinking bars and traditional restaurants (chop bars)	261	11.0
Saw mills	152	6.4
Telecommunication & internet cafes	37	1.6
Health clinics/maternity homes (private)	12	0.5
Private schools	12	0.5
Fuel stations	11	0.5
Hotels & guest houses	8	0.3
Total	2,362	100.0

Source: Revenue Unit of the Ga West Municipal Assembly, Amasaman, Accra.

One important issue that came up during the field interviews was that most peri-urban residents are aware of agglomeration economies that result from urbanization. Business owners and people with specialized skills welcome urban growth because it represents an expansion of their market base, while others see it as an opportunity to either go into business or secure waged employment from business owners. Thus, ironically, while lamenting about the loss of farmlands, over 51% of indigenous household heads and 65% of long-term settler household heads welcomed urban growth as an opportunity for them to secure alternative livelihoods.

Another observation made in the study communities, especially in Ofankor and Bortianor, is that many residential structures also double as business premises. They include sections of houses that have been converted to stores as well as kiosks and tables erected in front of houses for petty trading (see Plate 7).



Plate 7. Retail Stores attached to a House at Bortianor

Source: Taken by author during field visit.

5.2.4 Out-Migration

Almost all respondents at Kwashiekuma complained about acute unemployment in the community, which they attributed to two factors. The first is the fact that a significant amount of farmlands have been leased to sand contractors, speculators and residential developers without the creation of alternative sources of employment. Secondly, commuting to Accra to work is not feasible for most residents of Kwashiekuma because of its remoteness and poor accessibility. Consequently, one common coping strategy to deal with unemployment is the mass migration of the young and relatively educated segments of the population to the city (see Box 3), a livelihood strategy which is often adopted by the rural poor (see Scoones, 1998). This explains the decline in the village's population as mentioned earlier. The hope of many households is that their young ones who have migrated to the city will make enough money to send remittances to their kith and kin remaining in the village, especially their aging parents.

Box 3. Should I Migrate or Stay, the Story of a Resident of Kwashiekuma

One of the residents of Kwashiekuma and his wife have owned and operated a corn mill in addition to their farming occupation for over 24 years. From these activities, they have been able to educate their children, the eldest of whom is now a school teacher in Accra. Unfortunately, their livelihoods have been adversely affected in recent times. First, it has become increasingly difficult to get access to land for farming as a result of the loss of farmlands to miners and land buyers. Secondly, patronage of the corn-milling business has declined and they attribute this to the decline in population experienced by the village and decline in incomes. In response to this, the wife has taken to petty trading—buying food stuffs from Nsawam and selling them at Amasaman, the capital of the Ga West Municipality. Despite this adjustment, their income level and standard of living keep deteriorating. As a result, he is contemplating either migrating to Accra or going to take care of his small cocoa farm in the Central Region. The only thing that is holding him back is that he believes the village will soon be opened up and become fully integrated into Accra to create economic opportunities for the residents.

5.3 Recommendations

In view of the findings made in this paper, we recommend that issues of livelihood should be mainstreamed in the policy making and planning processes of the Municipal Assemblies, including farmland preservation (see Alterman, 1997; Nolon & Solloway, 1997). There should be conscious efforts to demarcate fertile farmlands and protect them from urban development. Possible strategies that can be explored include government acquisition, exclusive zoning, land banking, purchasing land development rights from property owners and favourable tax treatment for private lands reserved for agriculture. The success of these strategies will hinge on effective development control by the municipal authorities.

In addition, there is the need for the Assemblies to adopt strategies aimed at supporting peri-urban residents to be less dependent on land. This will include supporting crop farmers to adopt environmentally friendly cropping and soil management methods that will make agricultural intensification, which does not require extensive land as is the case with traditional farming, more productive and sustainable. Similar support should also be extended to livestock farmers. There should also be special programmes to empower the youth in indigenous peri-urban communities to find alternative, non-farm employment. This should include the formulation of local economic development strategies that aim at supporting the youth to acquire vocational skills that will enable them to find employment in non-agricultural activities, as well as attracting businesses to these communities.

There should also be a policy to compensate indigenous farmers who lose their livelihoods as a result of land use conversion. For this purpose, the Assemblies should be legally empowered to collect a one-time compensation tax from developers, speculators and others who acquire land for non-agricultural purposes. The Assemblies should also be empowered to ensure that traditional rulers (chiefs and family heads) set aside a fraction of proceeds earned from land leases for community development.

6. Conclusion

The study has shown that, while some peri-urban individuals and households benefit from urban growth by taking advantage of various livelihood opportunities created by the phenomenon, others are adversely impacted through the loss of livelihoods. In other words, urban growth creates both winners and losers. The *winners* are

residents who by reason of their possession of, or control over, various types of livelihood assets have been able to utilize opportunities offered by urban growth to devise new livelihood strategies to enhance their wellbeing. Prominent among them include chiefs and heads of land-owning families who capitalize on the ever-increasing demand for land by allocating plots of land to developers, speculators and people involved in sand and stone quarrying; speculators who make profit by acquiring land in remote peri-urban communities and later re-selling their leasehold titles at higher prices; and people who engage in stone quarrying and sand mining to feed the booming construction industry. Others include entrepreneurs who take advantage of the opening up of peri-urban areas by investing in various commercial and industrial ventures; and urban residents who take advantage of the relatively easy access to and cheaper prices of residential plots in peri-urban communities to build their own houses while working in the city.

Those who suffer adverse effects (*losers*) are mainly resource-poor indigenes and long-term settlers who, apart from not having the wherewithal to take advantage of opportunities created by urban growth, lose their farm-based livelihoods as a result of tenure insecurity associated with the customary land tenure system. Besides lacking tenure security, they also lack the financial capital needed to acquire new lands or invest in alternative sources of livelihoods.

The study findings point to the need for a re-orientation of urban policy making and planning in Ghana's metropolitan areas to incorporate peri-urban livelihood issues. In addition, the study has demonstrated how the sustainable livelihood framework can be adapted to analyse the transformative effects of urban growth on peri-urban livelihoods. We believe that this approach can be replicated elsewhere in Africa.

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