



Customary land allocation, urbanization and land use planning in Ghana: Implications for food systems in the Wa Municipality



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ABSTRACT

Food insecurity remains persistent in the Global South due to constraints in food production capacities and intricate land tenure systems that stifle investment in agriculture. In the urbanized regions, uncontrolled urbanization and non-compliant land use systems have further worsened the potentials for urban food production. This research is based on a case study of the Wa Municipality in order to assess the influences of customary land allocation and peri-urbanization on land use planning and food systems in Ghana using explorative and narrative research approaches. The study identified that customary stakeholders responsible for allocating such lands in the Wa Municipality were indiscriminately converting large tracts of hitherto agricultural lands to urban land uses. Statutorily prepared land use plans are hardly enforced and the planning priorities are on residential and commercial land uses that command higher land values to the detriment of agricultural lands. Weak institutional linkages also characterize the mandated planning and land administration institutions, with a planning system that is reactive rather than proactive in addressing development control challenges across the country. There is the need for planning authorities to adopt participatory land use planning together with customary landholders and educating them on the essence of comprehensive land use planning approaches. Based on the findings, local governments need to partner landowners to identify and reserve high potential agricultural land for sustainable urban food production.

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1. Introduction

Shocks in the food prices in the last 5 years have re-awakened new paradigms in food research. The world continues to battle food insecurity due to persisting constraints with food production, distribution, storage, processing, consumption, and waste management. There is the need for efficient and effective systems that ensure access to affordable food. The food price hikes that began in 2007/2008 have further ignited concerns regarding food security. According to Tacoli et al. (2013), food security is the product of effective food systems. The food system refers to all the processes involved in putting food on the individual's table beginning with food production or farming, through distribution and acquisition until consumption (Cassidy and Patterson, 2008). Within this food

system, planners and planning interventions have the potential to stimulate significant changes in the quality of resources that go into food production particularly, land and labor. For an efficient food distribution system, urban planners have to create room for appropriate and effective transportation, storage and processing infrastructure. Effective food acquisition comes with ensuring easy accessibility to food outlets including market centers and supermarkets. Hence, the food system goes beyond farming; it requires proper land use and infrastructure planning. The effectiveness of the food system is vastly dependent on efficient spatial and infrastructure planning, in order to make spatial allocation for farms, storage and transportation networks. Therefore, the role of land use planning in designing spatial policies and plans is indispensable in facilitating the efficient functioning of food systems.

Although available policies for curbing food insecurity globally have focused mainly on food production, optimum productivity remains a mirage in developing countries. Slowing agricultural productivity has been criticised as one of the key factors responsible for the recent food crises (Tacoli et al., 2013). To improve food production in developing countries, productive spaces are essen-

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tial. Yet, in the current land use planning dispensation of Ghana, rapid-uncontrolled urbanization and unsustainable land use practices threaten local efforts toward increasing food productivity. In much of peri-urban Ghana, vast portions of viable agricultural land within the peri-urban fringes are indiscriminately converted into residential and other urban infrastructure. Typically, peri-urban areas remain unplanned and customary landowners in response to high demand for land are altering the few land use plans available in order to create non-existent 'sellable' spaces (Yeboah and Shaw, 2013). Even though these challenges are attributable to the general indiscipline in the land market, and institutional weaknesses in enforcing land use plans, the persistence of these trends, if left unchecked, have dire consequences on urban food supply. Uncontrolled urbanization has consumed agricultural lands the peri-urban interfaces and has dispossessed many farmers of their productive agricultural lands. In Ghana, customary landowners are converting agricultural lands into building plots. While some persistent farmers are relocating farther into the hinterlands, others have exited from farming as a livelihood, and are pursuing non-existent non-farm jobs in the cities and small towns. This unfortunate trend can be blamed on the customary tenure system, which puts landowners at the forefront of land delivery (Yeboah and Shaw, 2013; Eledi, 2013; Eledi and Kuusaana, 2014).

With this background, uncontrolled urbanization and inefficient land use planning systems have implications for food systems and food security. Urbanization in Ghana is dislocating smallholder farmers to farther villages where they are confronted with severe agricultural challenges like bad roads, lack of access to storage systems, difficulty to access technology and extension services. With these persistent challenges, peri-urban farmers are unable to meet their own food needs and that of the urban population. There is cause for worry; since food insecurity among the Ghanaian population is increasing, together urbanization and urban population growth. As of 2009, approximately 5% of the entire Ghanaian population were said to be food insecure (World Food Programme, 2009). Also, 34% of the food insecure population live in the Upper West region. In addition, it is estimated that 12% of the entire population do not have access to adequate, affordable, safe and nutritious food. We acknowledge there are other difficulties that may potentially stifle food production such as technology, water, post-harvest losses, marketing and poor distribution systems, however, we argue in this paper about the indiscriminate manner in which viable agricultural land in peri-urban Ghana, is replaced by 'concrete'. Locating farms closer to the city would invariably improve access to technology, markets and transportation. Even though according to Boamah (2013), customary land is efficiently allocated to competing users and uses, it is doubtful that the evolving social-political relations inherent in customary land institutions will improve equitable land delivery to disadvantaged urban peasants. In our view, if the status quo persists, then agricultural land will continue to be dissipated. According to Larbi (1996), approximately 2100 ha of agricultural land was converted into urban uses on an annual basis in Accra between 1990 and 1993. In Ghana, these trends are attributed to the existing customary tenure system, which allows landowners to virtually decide which uses they desire for their parcels, and hence dictate the composition of land use plans.

Already, the Ghana Ministry of Food and Agriculture (2007) declared that available agricultural land is declining due to population pressure and urbanization. A population census conducted in 1960 revealed that 23% of Ghana's population lived in urban areas (Ghana Statistical Service, 2005). Subsequent censuses in the years 1970 and 2000 revealed that, 29% and 44% respectively of the populations in these years lived in urban centers (Ghana Statistical Service, 2005). Today, more than half of the entire Ghanaian population live in urban centers. According to the 2010 Population and

Housing Census (PHC), 51% of the entire Ghanaian population is urbanized with an annual growth rate of 3.4% (Ghana Statistical Service, 2010). This rate of urbanization has serious implications on current and future land use systems and ultimately on agricultural production and rural land capture. Even though agriculture remains subsistent in Ghana, the total population engaged in agriculture has reduced considerably since the 1960s. In 1960, a total of 61% of the Ghanaian population were farmers (Ghana Statistical Service, 2005). This reduced marginally to 60% in 1984 and by the year 2000, it was 51% (Ghana Statistical Service, 2005). In 2008, the Ghana Living Standards Survey (GLSS) revealed that, a total of 56% of the working population between 2005 and 2006 were employed in agriculture (Ghana Statistical Service, 2008). These figures reinforce the relevance of agriculture as a source of livelihood in Ghana.

The Ghana Statistical Service (2005) also revealed that, agricultural production has not kept pace with the growth in population since the 1990s. According to the World Food Programme (2012:2), "large numbers of households are relying on the market to provide at least part of their food needs, with rates ranging from 69% in the Northern Region through to 96% in the Upper West Region." Amanor (2008) attributes this development to the fact that, the youth are migrating from farming areas into the urban centers, while the aging farmers are not energetic enough to increase agricultural production significantly. As demand on farmland for infrastructure in urban and peri-urban areas increases, many people are diversifying from agriculture to non-farm livelihoods. For younger people, this pressure on agricultural land use has led to migration to inner cities (see 'deagrarianisation' in Bryceson, 2002; Yaro, 2006; Hesselberg and Yaro, 2006). A rapidly urbanizing society also implies a diversification of employment, leading to fewer people working in agriculture while a majority work in other sectors (Cohen and Garrett, 2009). It is also acknowledged that urbanization can present a number of opportunities for affected farming communities in terms of improvement in social infrastructure and non-farm job opportunities. For example, it is often observed in Ghana that farmers living close to urban areas are able to engage in supplementary income generating activities to support their income from the farm, unlike their counterparts in the distant villages. Furthermore, Crowley (2012) highlighted farm employment as the key to reducing poverty and food insecurity. So long as agriculture remains the largest employer in sub-Saharan Africa, we emphasize the promotion of agriculture in all forms, especially keeping farmers closer to the cities as best as land use plans can make spatial provision for their production needs.

It is generally acknowledged that there is disconnect between planning theory and planning practice (Abukhater, 2009; Baffour Awuah et al., 2014). Baffour Awuah et al. (2014) have tried to fill in this gap and proposed capacity development of planners in order to address practical planning challenges within specific contexts. However, in the context of Ghana where majority of the land remains under customary tenure, traditional authorities play lead roles in the planning process. Though the government finances planning projects (Asiama, 2008), in the interest of the entire society (Rakodi, 2001), the land is owned under customary tenure. According to Yeboah and Obeng-Odoom (2010), planning is predominantly a spatial activity and the mode of land alienation, and the existing tenure systems have far-reaching implications for effective planning. It is also stated that whoever controls landholdings, controls the land market and determines the nature of urban planning (Gareth, 1991; Kivell, 1993; Yeboah and Obeng-Odoom, 2010; Asiama, 2008). Yeboah and Shaw (2013), also studied the relationship between customary land tenure and land use delivery in Ghana, and found that traditional authorities were preparing their own land use plans without the authorization of state agencies. They attributed the failure of the statutory agencies to human resource shortages, funding constraints and ineffective legal frame-

works for planning delivery. This has resulted in about 80% of all developments to proceed without authorization from designated planning authorities (Boamah et al., 2012). Previous studies by Boamah (2013) in the Wa Municipality delved into customary land markets with emphasis on land allocation for urban infrastructure, but this study neither tackled land allocation for agricultural land uses nor the impacts of customary land allocation on food systems. With these gaps in the recent literature on Ghana, this paper examines how customary land allocation and peri-urbanization in the Wa Municipality has impacted on land use planning and food production. The study is founded on the premise that rapid and uncontrolled urbanization is a major contributing factor to the increasing levels of urban food insecurity in Ghana through farmland losses.

The next section of the paper provides the linkages between land tenure and land management in Ghana so as to give a general overview of the contemporary tenure system and to posit contextually the discourse of urban planning within an informal land ownership system. The third section presents the methodology of the study and throws more light on the case study area. In the fourth section, the findings are presented together with appropriate discussions under the sub-headings: land ownership and land allocation in the Wa Municipality, planning legislations and land use planning in Ghana, preparation and implementation of planning schemes, urbanization and food systems, impacts of urbanization on peri-urban farmers, and land use planning and food systems. The last part of the paper is the conclusion and policy recommendations.

2. Land tenure and land management in Ghana

Different rights and interests accrue to land with a host of variations. Rights may be customary and private or public, temporary or perpetual, big or small as well as secure or otherwise (Kasanga, 1988). Over the years, there has been a diversification of the types of land ownership in Ghana ranging from state/public lands, vested lands, Stool/Skin lands, family/clan lands and individual or private lands. Land ownership in Ghana can be grouped into two broad categories—customary lands and public lands. The customary sector alone accounts for about 80% of all undeveloped lands in the country (Kasanga and Kotey, 2001). Customary land is regarded a communal property, and individuals belonging to a particular community enjoy inherent rights to access communal land for housing and agricultural production. Hence citizenship and social identity helps to define a person's access, use and ownership of a share of communal.

Customary lands in principle are either Stool/Skin lands or family lands. In the Upper East and Upper West regions however, there are the Tendaamba (first settlers) who are considered the owners of the land (Kasanga, 1988, 1996). Stool/Skin lands refer to lands that are owned and managed by the Stool or Skin in trust for the community. Thus, the occupant of the Stool/Skin, namely the Chief, holds the land in trust and manages it in the interest of the people. Family lands on the other hand, have their absolute interests vested in the whole family. As such, the entire family or clan enjoy the benefits accruing from the alienation of such land, but the management rests with the family head and elders. Ubink and Quan (2008) have however accused traditional authorities, especially chiefs of usurping community land as the principal beneficiaries, as though they were private properties. State lands refer to lands that have been compulsorily acquired by the state using its compulsory purchase powers (eminent domain) for public benefit or interest. When such lands are not used for the purpose for which they are intended, the original owners have the first right of re-acquisition (right of pre-emption). State lands may also include vested lands—lands are

lands that are managed by the state (i.e., government) on behalf of customary entities.

Different types of interests accompany land ownership in Ghana. Da Rocha and Lodoh (1999) grouped interests in land into allodial, usufructuary, leaseholds, tenancies and licences. The allodial interest constitutes the highest title over land (Kasanga, 2002). This interest is entrusted in stools/skins and family heads. The usufructuary interest (freehold interest) is one vested in sub-groups or individuals from a community (Ollennu, 1962). The holders of this type of interest are members of the particular community or family in which the allodial rights are vested. This type of ownership is the highest type of land ownership that an individual member of a family can hold (Da Rocha and Lodoh, 1999). Usufructs have the right to use, alienate, exclude and benefit from the land indefinitely. This type of title may be acquired through first cultivation, construction or through allotment from the allodial land trustee. It is passed down to succeeding generations through inheritance. The allodial trustees may also grant this type of interest to strangers. In many farming communities of Ghana, migrant farmers who served their landlords loyally as sharecroppers gained usufruct rights and citizenship. Usufruct rights are said to have emanated from the fact that subjects required land for production, hence compelling the allodial entities to disburse land to them for farming (Asante, 1965).

The leasehold is a modern day addition to the land tenure system in Ghana. It allows one to acquire land for a particular purpose over a specified timeframe. A valid lease must have a date of commencement and a date of expiration. The leasehold originates from the allodial title or the usufructuary interest and is backed by contractual agreements (Da Rocha and Lodoh, 1999:29). Leaseholds can be classified into customary or common-law leaseholds depending on whether they are derived from the customary or common law freehold. Indeed both lease forms co-exist in Ghana especially for agricultural land. Leases are documented and the deed registered at the Lands Commission. In Ghana, different timeframes accrue to the leased land for different land use types. For example, residential leases are granted for a maximum of ninety-nine (99) years for Ghanaians and 50 years for foreigners (see Article 266[1–5] of the Republican Constitution of Ghana [1992]). Commercial agricultural leases are granted for 50 years to foreigners (Administration of Lands Act (Amendment) Decree 1979 [AFRCD 61]). Table 1, gives the details of lease tenures for various land uses in Ghana. At the end of the lease period, the land reverts to the grantors according to the terms of the lease instrument. These terms may be re-negotiated and a new lease can be created. The lessee also pays annual rents on the land to the grantors over the lease term. As such, many allodial holders today have taken to land leasing as though it was an economic activity. In the absence of any prohibition within the lease agreement against alienation, the leaseholder is allowed to sub-let the land or assign it to a third party. The assigned land however is created within the terms and conditions of the original lease as may be specified in the instrument.

Licences and tenancies are another form of use rights in land. Unlike the usufructuary interests, licences and tenancies are bound by agreements regarding the terms of use of a parcel of land. An allodial or usufructuary rights holders may grant seasonal licences or tenancies to other land users. These forms of rights have evolved from the increasing scarcity and high values of land. Two basic forms of tenancies exist in the customary land tenure system in Ghana. These are the customary share tenancies and the cash tenancy agreements. The customary share tenancy system is an agreement between landlord and tenant and is used predominantly on agricultural land. Share tenancy agreements dictate payments for the use of land for cultivation of crops in terms of sharing the proceeds of the farmer at the end of the farming season. The first form of share tenancy involves the division of farm proceeds in a

Table 1
Land transfer restriction by land use, size and years.

Land to individuals	Lower size limit		Upper size limit		Upper year limit
	Km ²	Acres	Km ²	Acres	Years
Residential	–	–	–	–	99 ^a
Commercial Agriculture ^b	2.59	640.0	7.77	1,920.0	50
Poultry and cereals	2.59	640.0	7.77	1,920.0	10
Mining	5.80	1,433.2	155.40	38,400.0	60
Timber	103.4	25,550.6	621.60	153,600.0	30
Land grant ^c	12.95	3,200.0	25.90	6,400.0	–

Source: Kasanga (1996).

^a Non-Ghanaians are restricted to 50 year residential leases.

^b Ranching, mixed or permanent crops.

^c Body Corporated or unincorporated.

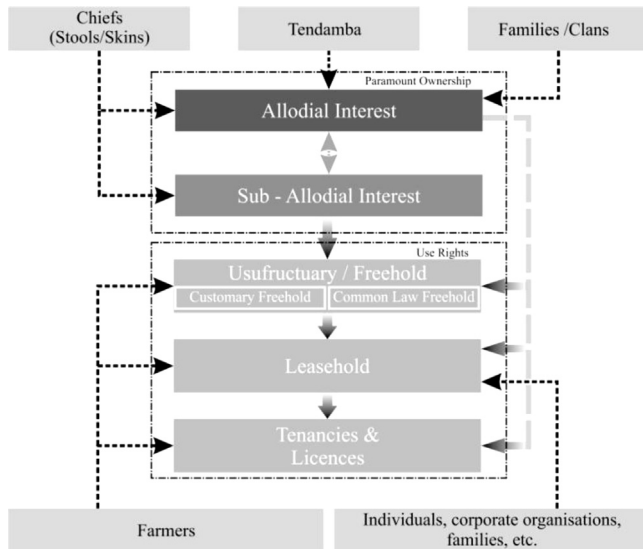


Fig. 1. Land tenure in Ghana.

Source: Authors own illustration, 2014.

ratio of 2:1 between the tenant and his landlord (known as *abusa* among the Akans of Ghana). With this form of tenancy, the farmer is required to give a third (1/3) of the proceeds to the landlord while keeping the other two (2/3). The second variation results in a division of the farm or farm produce into two equal parts (known as *abunu* among the Akans). Half of the produce goes to the landlord and the other half to the tenant. It is however, possible for the landlord and his tenant to decide what they are actually dividing. While in some cases the farm itself is what is divided, mostly *abunu* and *abusa* tenancies are limited to the harvest. Whatever the case may be, the agreed ratios are enforceable. In Ghana, settler/migrant farmers predominantly use customary share tenancies. Share tenancy agreements may also be passed down to successive generations of the parties. They may also be revised with increasing land value. The cash tenancy system, on the other hand arose as a result of commercial production of cocoa and oil palm in Ghana in the 1960s. Some cash crop farmers were willing to pay their landlords cash to occupy and cultivate such parcels of land instead of entering into share contracts. Fig. 1 illustrates the various types of land ownership as well as the stakeholders and their interrelationships.

3. Methodology and case study area profile

The study was conducted using the Wa Municipality (Upper West Region, Ghana) as a case study and adopted both explorative and descriptive narrative research approaches to address

the research questions. It was largely based on qualitative data collected through key stakeholder interviews at the Municipal level. The fieldwork was undertaken from June 2013 to August 2013. Separate interviews were conducted with both the Upper West regional and Wa Municipal planners, and the officers of the building inspectorate in Wa. The regional and municipal directors of the Ministry of Food and Agriculture were also interviewed. Some officials of the Public and Vested Land Management Division (PVMLD) and the Survey and Mapping Divisions (SMD) of the Lands Commission were also interviewed. We also interviewed 42 farmers in Kpong, Nakori, Sombo, Danko, Charia and Bamahu. These peri-urban communities are shown in Fig. 2. In the purposively selected study communities, we conducted 5 focus group discussions together with transect walks and field observations in studied peri-urban communities. In total, a number of 49 respondents were interviewed using interview guides to gather information. Some development plans (local plans) of the Wa Municipality were also studied as part of attempts to understand spatial expansion dynamics. Due to the inability to obtain up-to-date GIS data covering the Wa Municipality, the study largely depended on narratives and info-graphics to visualize qualitative data.

The Wa Municipality is the political capital of the Upper West Region of Ghana. It is located in the north-western part of the country. The Wa Municipality was established in 2004 under the Legislative Instrument (L.I) 1800 (Wa Municipal Assembly, 2012). It was created from the hitherto Wa district which is now divided into the Wa Municipality, Wa-West and Wa-East Districts. The Municipality has a landmass of approximately 234.74 km² (Wa Municipal Assembly, 2012). As of the year 2004, the population of the Wa Municipality was 98,675 people and with a density of 420 persons per km². It has since 2010 grown to be 107,214 people and the population density is 456 inhabitants per km². Although the then Wa district in the year 2000 had a 30% share of its population being urbanized, only the city of Wa was a designated urban locality at the time. As such the urban population being reported accrued only to Wa, the capital city. Subsequently, the 2010 population and housing census reported a Municipal population of 107,214 people with a total urbanized population of 71,051. This indicates that, 66% of the Municipality's total population is urbanized compared to the national urbanized share of 51% and the regional urbanized share of 16%. This also implies that the Wa Municipality alone accounts for a 62% share of the region's urbanized population in the year 2010. The Municipality also has an urban population growth rate of 4% as compared to the national urban growth rate of 3% (Wa Municipal, 2012; Ghana Statistical Service, 2005, 2012). The annual rate of population growth in the Wa Municipality was 4.0%, 3.7%, and 3.8% respectively between 1960 and 1970, 1970 and 1984, and 1984 and 2000 (Ghana Statistical Service, 2005). The main inhabitants of the Municipality are the Waala and the Dagaaba, and the majority of land uses are agriculture in the rural areas and residential in urban and peri-urban areas. Due to the inability of farmers in the

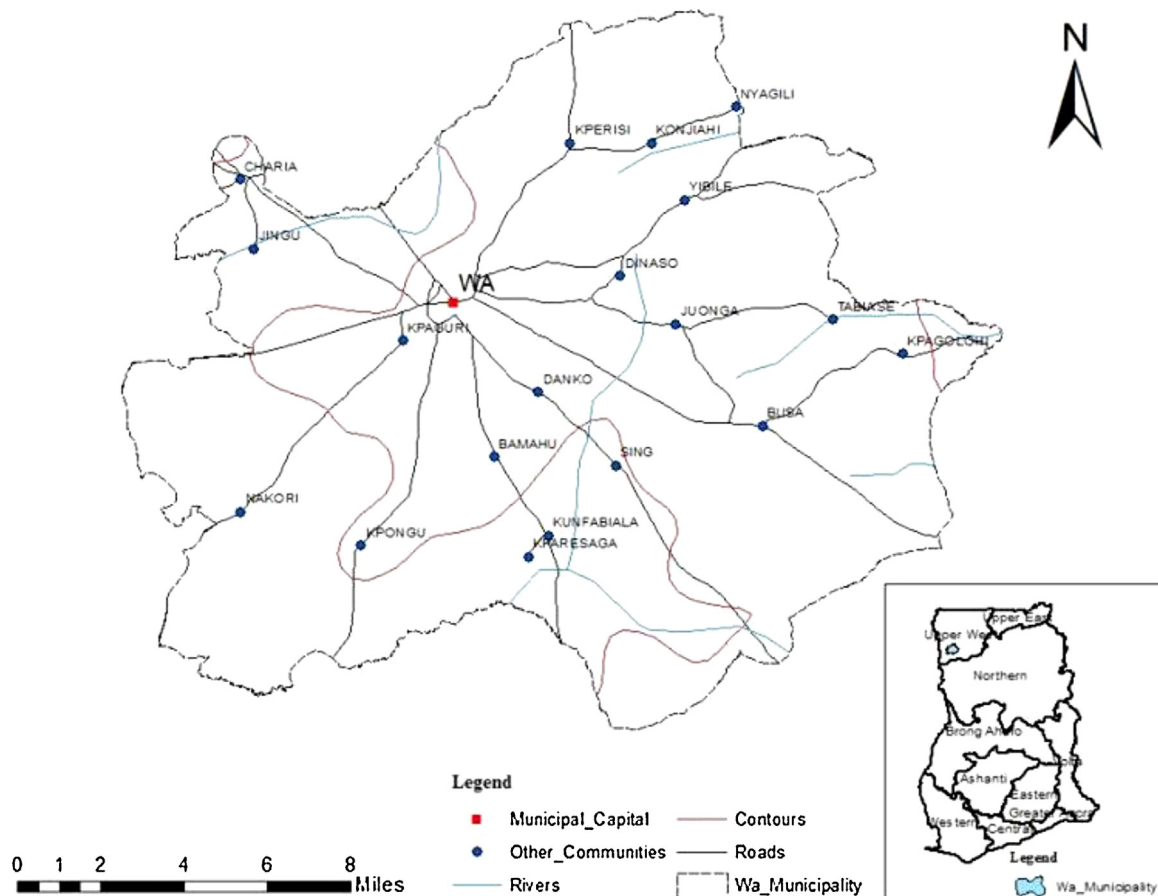


Fig. 2. Ghana showing the Wa Municipality and some Peri-Communities.

Source: Authors Own Map.

Municipality to adequately produce to satisfy its growing population, residents depend largely on staple food supplies from near by districts in the region and sometimes from neighboring Provinces in Burkina Faso especially for vegetables and meat. The Wa central market remains a major source of food supply for the largely non-agrarian population especially for grains and staples. Uncontrolled urban growth and indiscriminate flouting of development and building codes in many neighborhoods are major characteristic of the Wa Municipality (see Boamah et al., 2012). Fig. 2 shows the location of the Wa Municipality together with some of the peri-urban communities that are discussed into detail subsequently.

4. Findings and discussion

4.1. Land ownership and land allocation in the Wa Municipality

Customary land in the Wa Municipality is the property of the Tendaamba (Kasanga and Kotey, 2001). The Tendaamba possess the right of control and alienation of land and not the Chiefs. Chiefs in this area have limited authority over land except over their own family land. Chiefs are considered the traditional administrative authorities with the responsibility to maintain social balance in the community, advance development and promote peaceful co-existence, and not to manage land. This, by implication, reduces land management in the Wa Municipality to families. Members of the land owning families have the right to use the land indefinitely as family usufructs. All other members of the community, who are not indigenes, may acquire usufruct rights or leaseholds over parcels of land for the purpose of farming and/or residential.

Customary land among the Dagaaba and Waala ethnic groups, who occupy the study area, is reportedly not for sale but may be acquired by presenting customary protocol fees in the form of kola or 'kola money'¹ to the Tendaamba. In recent times, this 'kola money' is seen as an equivalent payment of all the future customary gratuities that are due to the landowner for the use of the land. Thus, Boamah (2013:111) maintains that 'drink money' is no longer a token payment, but a market value of the land, and determined by market forces. Landowners, however, maintain that land is not sold, but gifted.

From the study, we observed that due to the increasing land values in the Wa Municipality, customary land leases have gained a market price. According to Boamah (2013), the cost of land in the Wa Municipality varies depending on the date of purchase and the neighborhood. In his study, he reported the cost of a 0.23 ac (100 ft × 100 ft) building plot was GH¢ 3000² (US\$ 1519) in Wa Zongo and GH¢ 1200 in Boamah in 2010. The price of land in the Municipality has, however, escalated over the last 4 years. For instance, in Kabanye, land values (in domestic currency) increased

¹ Drink' or 'drink money' is a moral token offering in some parts of Ghana, traditionally paid to chiefs (stools) in the southern part of Ghana, in the form of cash or a bottle of schnapps, to start negotiations on the terms of the lease. However, as demand for land has grown, this 'drink' or 'drink money' is no longer just a pre-negotiation fee, instead, it is now requested by the chiefs in huge sums of cash. Customarily, though this cash is supposed to be used for the development of their local communities and for the 'maintenance of the stool', this is not always the case. It is common to hear a similar terminology as 'kola' or 'kola money' for the Northern, Upper West and Upper East regions of Ghana.

² As of June, 1st 2013, US\$ 1 was equivalent to GH¢ 1.975.

by 67% between 2008 and 2009, and by 25% between 2009 and the first quarter of 2010. Boamah (ibid) estimated the mean land values (in Ghana cedis) also increased by 61% between 2008 and 2010. In this study, it was found that building lands are obtained at prices ranging between GH¢1,000 (US\$ 506) and GH¢ 4000 (US\$ 2025) depending on the location (key informant interview, 2013). In the Wa Municipality, both settlers and indigenes can acquire land use rights from the customary land trustees through a market system. For agricultural land, one is granted vacant land that is not appropriated by or allocated to any other farmer in the community. In a number of cases, farmers reported that agricultural lands were received as gifts. Another method of land acquisition common among smallholder farmers in the study area is seasonal licenses. Seasonal licences are essential for farmers who wish to borrow another person's land for a season, and to renew it annually each farming season, if they so desire. Land borrowing is a popular practice for yam, maize or millet producers to allocate lands to their neighbors, for the production of legumes for a season or more as a strategy to improve soil fertility.

Generally, smallholder farmers are not able to vigorously engage in cash-based land transactions for a number of structural reasons. Firstly, sales and cash rentals of agricultural land are customarily frowned upon in the Wa Municipality (FGDs held in Kpong, 2013). Another reason is that, land values in peri-urban areas are typically high with huge capital requirements that lie beyond the reach of most farmers (FGDs held in Boamah, 2013). Due to high land values coupled with high demand in urban and peri-urban communities, most families and stools find it more expedient to lease their lands for urban uses rather than to retain them for agricultural purposes. Promising monetary gains drive these kinds of preferences and expediencies, which per se are not customarily or legally forbidden. However, they are undesirable because of the apparent implications on productive spaces. Once peri-urban farmers are rendered landless and without any meaningful alternative source of livelihood—they are further impoverished (Yeboah and Shaw, 2013:32). Farmers living in close proximity to the city, enjoy market and transportation advantages as compared to their counterparts in the hinterlands. Seasonal migration of farmers into urban centers, enable them to benefit from production technology and knowledge transfers, and remittances from migrants can alleviate poverty by reducing the burden on the source household (De Brauw et al., 2010).

4.2. Planning legislations and land use planning in Ghana

Land use planning though an age-old human settlement phenomenon (UN-Habitat, 2009), was formally introduced into Ghana through colonial planning systems in the nineteenth century (Baffour Awuah, 2013). The colonial government instituted land use planning and development controls through legislations, slum clearance, and the preparation of development plans and other critical infrastructure (Boamah et al., 2012; Baffour Awuah et al., 2014). Though the reasons for the adoption of planning are varied, it was believed that planning was adopted to enable resource exploitation (Nkrumah, 1970), and to provide improved neighborhoods for colonial settlement (Larbi, 1996). The land use planning approaches, adopted by colonial regimes replaced customary land tenure systems with western land tenure systems, which saw the commoditisation of land and securitisation through land titling. In some cases, colonial legislations were used to vest land ownership in colonial governments (Baffour Awuah et al., 2014:18). Much of the lands in Africa under customary ownerships were either classified as underutilized, idle or unoccupied. Though Sarbah (1968) largely disputed these claims in Ghana, colonial governments relied on these claims to acquire agricultural or mining lands for urban infrastructure. Some of these policies and land use planning priori-

ties, especially master plans have lived on even after independence with few modifications.

In Ghana, four main legislative instruments govern physical planning. These are the Town and Country Planning Ordinance (CAP 84 enacted in 1945), National Development Planning (Systems) Act, 1994 (Act 479), the Local Government Act, 1993 (ACT 462) and the National Building Regulations, 1996 (LI 1630). The CAP 84 is the primary legislation governing land use planning in Ghana. It is the main legislative instrument that directs the activities of the Town and Country Planning Department (TCPD) in settlement planning. The CAP 84, aimed at promoting and enforcing orderly development of land in towns and other areas, whether urban or rural, and to preserve and improve the amenities thereof and other matters (Konadu-Agyeman, 2001). This Ordinance mandates the Ministry of Local Government and Rural Development to be responsible for physical planning and development in the whole country, from the national, regional and district levels. It also has the powers to declare planning areas and prohibit building development in some areas. It further directs the establishment of a planning committee, to oversee land use planning issues with guidelines for the preparation and approval of planning schemes. The Ordinance, however, fails to acknowledge the limitations that may befall planning authorities, in executing plans within a land tenure regime that maintains ownership with customary authorities. Yet, planning authorities are supposed to conclude physical planning, by seeking the consent, concurrence and incorporating the preferences of the local people through consultative meetings.

However, the control of physical development has always been a matter of legal contradiction. For example, while the Local Government Act, 1993 (Act 462) empowers Metropolitan, Municipal and District Assemblies to demolish unauthorised physical developments, Section 9 of the National Building Regulations (LI 1630) gives a developer the power to proceed with development where approval for development is not given within three (3) months from the date of application. This provision creates practical difficulties with the exercise of development control functions by Metropolitan, Municipal and District Assemblies within their constraints. Again, while the National Development Planning (Systems) Act, 1994 (Act 479) elaborates the framework for decentralised planning in Ghana including physical/spatial planning, its provisions and plan preparation processes are at variance with the provisions in the Town and Country Planning Ordinance of 1945 (CAP 84). In addition, while Act 462 recognises Metropolitan, Municipal and District Assemblies as planning authorities within their respective areas of jurisdiction, there is no subsidiary legislation spelling out physical planning functions and standards. In the performance of planning functions, Metropolitan, Municipal and District Assemblies have had to rely on CAP 84, which is outmoded, and at variance with processes under Act 462 (c.f. WaterAid, 2009:20). Considering that most planning authorities across Ghana are already battling with persistent human resource, financial, and logistical challenges, the enumerated legislative conflicts may only result in uncontrollable urbanisation (see Boamah et al., 2012:138).

Following the Structural Adjustment Programme (SAP) in the 1980s, the promulgation of the Local Government Act, 1993 (Act 462) land use planning in Ghana was decentralized to local governments. Sections 10 and 12 of the Local Government Act (Act 462), cites the Metropolitan, Municipal and District Assemblies (MMDAs), as the planning authorities responsible for executing land use plans in their respective administrative areas. The MMDAs are also responsible for the issuance of building permits for development projects. Act 462 also grants the Metropolitan, Municipal and District Assemblies the authority to prohibit as well as terminate unauthorised developments as well as the right to prevent encroachment of community right of space. In 1996, the National Building Regulations (L.I. 1630) was enacted in Ghana to regulate

the erection, alteration or extension of building structures and execute works or install fittings in connection with any building. The National Building Regulations (LI 1630) outlines the requirements for a building permit application, and has its foundation from the Town and Country Planning Ordinance, 1945 (CAP 84). An approved building permit is valid over a period of five years after which period a new permit is required (see Regulation 7(3) LI 1630; [Town and Country Planning Department, 2010](#)). The regulations also make provision for the specification of building densities and prohibition of buildings in areas liable to flood, over/close to drains, water-courses and ditches. However, premising the LI 1630 on the CAP 84 made some components of the National Building Regulations irrelevant and out-dated ([Cassa Associati, 2012:16](#)). The safety and building quality administration procedures under the LI 1630 have also been described as very weak, slow and costly to implement. It is also believed that the National Building Regulation in line with global practices ought to be reviewed every 3 years and since it already has not seen any revision in 19 years, any revision must seek to address current and future environmental, technological and socio-economic challenges ([Cassa Associati, 2012:16](#)).

Our interviews with the Municipal planner, revealed that they are unable to approve all applications for building permits within the 3 month stipulated period under the law, due to logistics and human resource constraints (Qualitative interview, 2013). In our study, we found that the Upper West region of Ghana had only 4 physical planners—1 at the regional office, 1 at the Municipal office, 1 at the Lawra District Assembly (Lawra), and 1 at Sissala East District Assembly (Tumu). Besides human resource constraints, the Municipality also lacked logistics due to low level financing. The Municipal planner was particularly worried, that the Municipal Assembly was not committed to supporting local level land use planning. He attributed the situation to the fact that, the TCPD at the national level, functions under the Ministry of Lands and Natural Resources, but at the local level, it operates under the Ministry of Local Government and Rural Development. The planning laws fail to provide clear functions of the TCPD at both the national and local levels. For example, the planning laws have not clearly spelt out the responsibilities of the Town and Country Planning Department (TCPD) and the Assemblies in respect of planning execution. Under the current system, the TCPD is responsible for the preparation of land use plans, while the local government authority is responsible for the implementation of plans. [Boamah et al. \(2012\)](#) in their study of the Wa Municipality, found that political interferences and corruption were major constraints in applying section 52(1–4) of the Local Government Act 1993 (Act 462) to the letter.

4.3. Preparation and implementation of planning schemes

Land use planning in Ghana is based on discrete zoning, regulation and consensus, and the use of master plans ([Afrane, 1993; Lai, 2005; Njoh, 2009](#)). The study found out that the concept of land use planning in Ghana has its basis on a three-tier framework as illustrated in [Fig. 3](#). It begins with a spatial development planning framework at the national, regional and district levels. The spatial development framework outlines a strategic vision for the spatial development of the nation, and further down to particular regions and districts. It is designed to cover a 20-year planning period. On the second level is the structure plan. This defines land uses on a very broad perspective and includes the planning of main infrastructure networks as defined by the land use classifications. The structure plan also sets a basis for the preparation of local plans. Local plans are at the lowest level of the land use planning hierarchy. The local plan demarcates a planning area into specific zones, residential areas and further into plots and defined proposed uses. It also includes a proposed local road network as

well as social infrastructure such as schools, hospitals, playing grounds and sanitary areas. The local plan also sets the basis for the acquisition and issuance of a development or building permit. These basic three-tier conceptions of land use planning in Ghana are illustrated in [Figure 3](#). This three-tier planning system has semblance of the British colonial master planning approach and was introduced through colonial planning ordinances ([Njoh, 1999](#)).

According to the Town and Country Planning Department (TCPD, interview 2013) in Wa, the first step to preparing a planning scheme (i.e., a local plan) for an area, commences when landowners approach them to request a scheme for their family land. This is then followed by a sensitisation of the entire local community on the planning scheme preparation processes and to solicit inputs into the proposed scheme. The Survey and Mapping Division (SMD) of the Lands Commission then proceeds to survey the land and produce a base map (cadastre) of the area. Alternatively, the base map could be executed by any licenced private surveyor and approved by the SMD of the Lands Commission. Upon completion, the base map is submitted to the TCPD, which then prepares the local plan for the area within the boundaries of the base map. This function may also be out-sourced to private planning consultants. The approval of the local plan then paves the way for its implementation. At this point, individuals have the opportunity to acquire leased plots of land in the area. Upon acquisition, lessees have the right to develop the land at their convenience subject to conditions outlined in their respective lease agreements, and in accordance with designated land uses for that parcel. However,

“...the implementation of the plan is left to the customary landholders. It is their land and the final authority in terms of how they want their area to look rests with them. To them, an approved plan is only a proposal by the district and not definitive. You cannot force them to release their land to implement the plan and there is no guarantee that an area zoned for a particular use will indeed be used for the particular purpose” ([Yeboah and Obeng-Odoom, 2010](#)).

[Fig. 4](#) is used to visualize land use planning in the Wa Municipality, considering the stakeholders and processes involved. The implementation of an approved local plan begins with the Tendaamba, who are the owners of the land. A person interested in acquiring land in an area approaches the landowner (s), who then allocates him/her a parcel. In the urban and peri-urban areas, cash is paid for the parcel of land instead of 'kola'. According to the Tendaamba (interview 2013), the price of urban land is determined by a number of factors including the location, public interest and latent value for future developments. After concluding the transaction, the prospective tenant then engages a qualified surveyor to demarcate the parcel of land acquired and produce a site plan. The site plan is then used for the preparation and registration of a lease document. The landlords and the tenant then endorse the lease agreement either by signing or thump printing. Subsequently, the signed indenture is registered and plotted at the Public and Vested Land Management Division (PVLMD) of the Lands Commission. From this stage, alienated land rights are transferred from the lessor to the lessee for a period of 99 years for residential or 50 years for commercial purposes. Characteristically, these layouts prepared by local planners do not make spatial allocation for agricultural zones. The nature of these layouts differs among landlords, based on their respective preferences. These areas are hitherto agricultural lands, but converted to infrastructural uses. Landlords are more interested in increasing the number of plots for urban uses that command higher land values, than maintaining agricultural lands. Since landlords finance these services, they drive what uses should be included, and agriculture is always the least preferred.

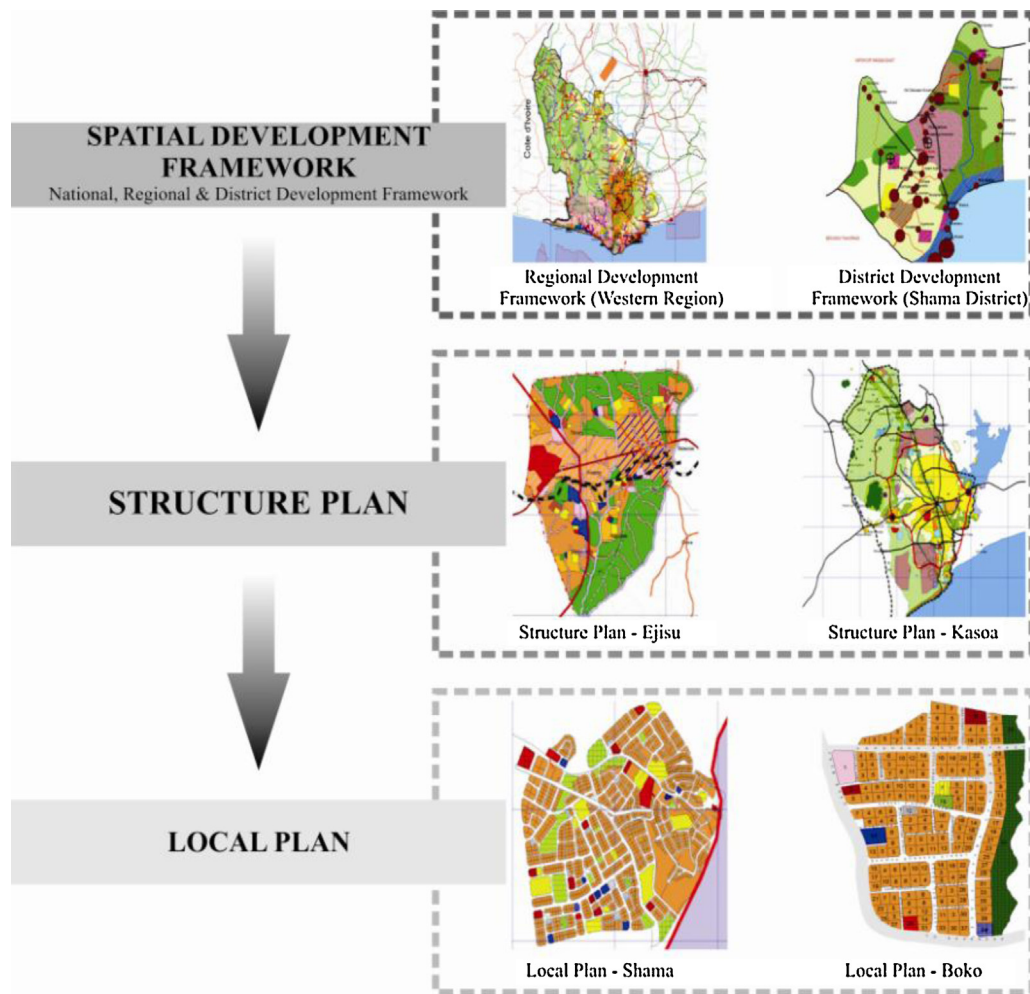


Fig. 3. Illustration of land use planning processes in Ghana—three-tier framework.

Source: Own illustrations with pictures from Owusu-Sekyere (2013).

According to Yeboah and Obeng-Odoom (2010:6), even when the planning authorities draw up these land use plans, there is no guarantee that the contents of the plan can be realized in practice, unless the landholders consent to these plans. This is because the district assemblies need the consent of the landowners to implement development plans (Larbi, 1996). With this kind of practice, urban planners have very little room to undertake comprehensive planning. Their functions have been reduced to merely dividing lands in to plots for housing. Following these findings, we proceeded in the next sub-section to discuss urban growth and its impact on food system in the context of the Wa Municipality.

4.4. Urbanization and the food system in the Wa Municipality

Indisputably, urbanization is driven by population growth. Much of the urbanization experienced in Ghana and in the Wa Municipality, has been as a result of a panic reaction of the local population to acquire private housing and urban infrastructure. Urbanization in the Wa Municipality generates mixed ideologies and expectations. In a region that is predominantly rural, the impression of the Wa Township growing into a city seems to be a ray of hope for many in the area. This is because; areas with a higher concentration of population have always tended to have a higher bargaining power in lobbying for their share of national development funds. Since rural areas are highly deprived of basic infrastructure and social amenities, urbanization presents better

opportunities for peri-urban communities as compared to distant villages. Undoubtedly, urbanization improves the interaction between urban and neighboring rural communities. Thus, farmers in such rural communities, by virtue of their proximity to the city tend to have better access to agricultural inputs. Majority of smallholder farmers in the Wa Municipality depend on rented mechanization services since few have traction animals in recent times. They therefore, depend on labor and tractor rental markets available in the city. Thus, farmers located in the peri-urban interface tend to have cheaper access to these services as comparison to their counterparts farther away. Officials at the Ministry of Food and Agriculture in charge of monitoring and evaluation also confirmed the difficulties associated with reaching farmers in the hinterlands with extension services due to bad roads and logistical constraints (Interview with an official of the Ministry of Food and Agriculture, 2013). Thus, the predisposition of accessing these modern technologies and information are better for farmers in the peri-urban regions as compared to those in the far off rural areas. However, major delimiting issues for farming in the peri-urban areas pertaining to high cost of land and labor remain.

Agricultural land is cheaper as you move farther away from Wa into the neighboring villages (Interview with Lands Commission, 2013). Food production therefore tends to be located on such farther lands. This notwithstanding, some forms of urban food production were still observed in the Wa Township. The analysis of the different levels of compactness of the Wa Municipality, in rela-

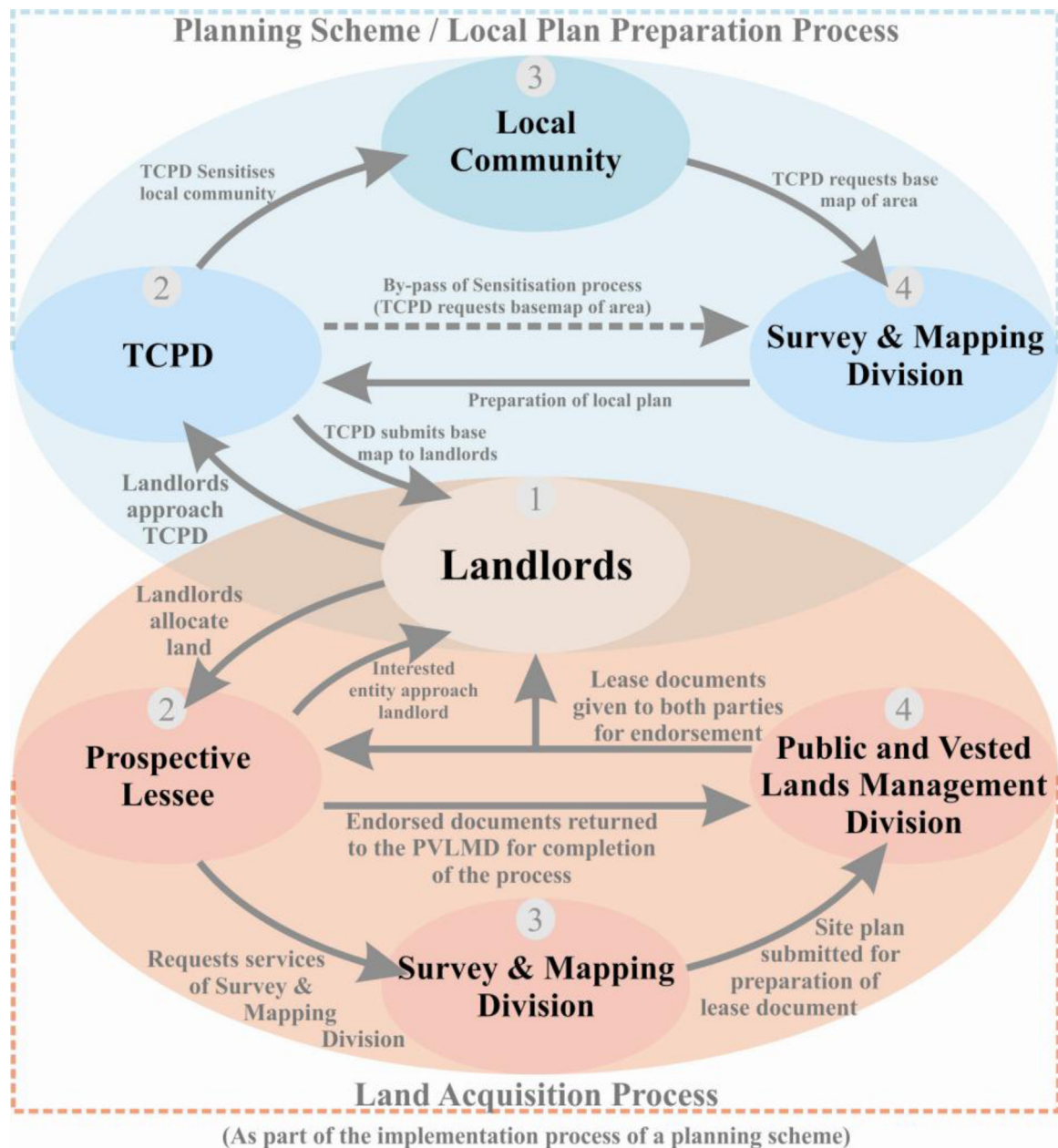


Fig. 4. Local plan preparation and land acquisition processes in the Wa Municipality.

Source: Own Illustration.

tion to the practice of urban agriculture reveals different phases of food production potentials within the city itself. Old neighborhoods with a high level of compactness like Limanyiri, Sokpeyiri, Zongo and Kabanye sections have virtually no form of food production taking place, while other similarly old neighborhoods with patches of undeveloped parcels of land like Kpaguri, Kambali, Chorkor and Mangu sections still tend to be put to production in the form of home gardening. We also observed that the neighborhoods of the government residential areas such as the Agric Junior Staff Quarters, Dobile Junior Staff Quarters and the Degu Residential Area, however, tend to present some room for urban food production in terms of land availability. The vacant portions of these residential neighborhoods have remained the same over several decades with larger plots for an appreciable level of production.

In the peri-urban interface, urban growth is driven by private physical developments. The level of compactness in these areas increases gradually over time, with most people develop-

ing their houses in piecemeal pattern (Fig. 5). In a previous study, Boamah (2010) revealed that individual households through piecemeal building process, which takes between 5 and 15 years, deliver over 90% of properties in Ghana. Hence, it is almost impossible for the Metropolitan, Municipal and District Assemblies (MMDAs) to enforce the provisions of Regulation 7 (3) of the National Building Regulations, 1996 (LI 1630), which limits the validity of a building permit to 5 years after its issue. Farmers in these areas therefore do not lose their entire farmlands suddenly. Farmland takeover by residential developers happens gradually, with infilling as individuals privately develop their separate parcels of land. The loss of production capacity therefore takes place gradually. Considering that a large number of households in the study region are employed in agriculture, it is apparent that the loss of farmlands in these communities invariably means a loss of livelihood for the people who depend solely on farming for their livelihoods.

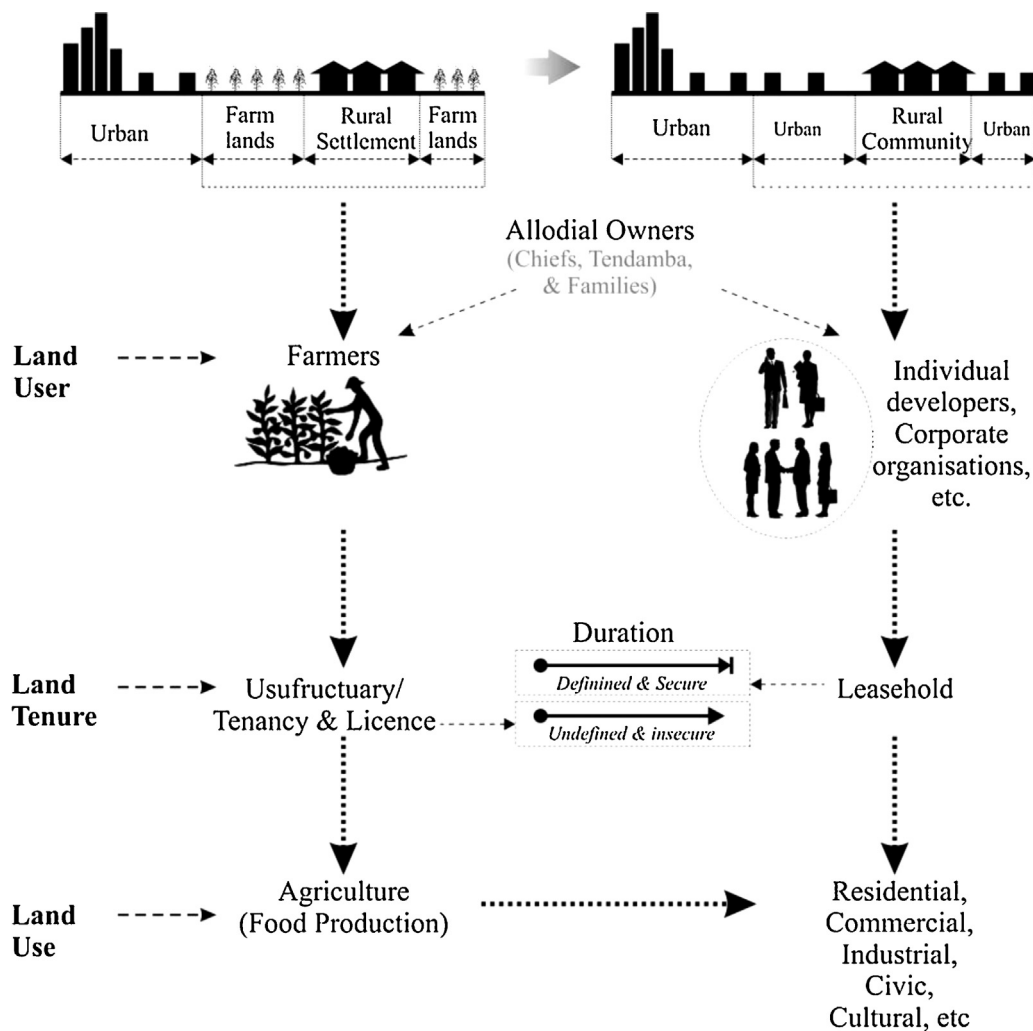


Fig. 5. Changing land use, users and land tenure with increasing urbanisation.

Source: Own Illustration.

4.5. Impacts of urbanization on peri-farmers in the Wa Municipality

Agriculture in Ghana is the major employer of the informal sector especially women. The sector alone employs 54% of the total population and 49% of the total female population self-employed in the same sector (GSS, 2005; Duncan, 2004; Heintz, 2005). Generally, the practice of compound farming has always been a cultural activity for many people in the Wa Municipality. This practice provides supplements to the family food basket and releases pressure on their purchased food budgets. At risk of losing their compound farmlands to uncontrolled urbanization, farmers in the urban areas have developed adaptive survival measures. During our study (June–August 2013), it was observed that urbanization might wipe out peri-urban compound farms, but not the rural settlements. Although peri-urban farms are typically small as compared to rural farms, they are generally larger than the size of an average residential plot as specified in the local plans. For example, it was revealed during that four (4) housing plots (approximately 0.25 ac/100 ft × 100 ft) make up an acre of land. Hence, an acre of land that was previously cultivated by one farmer can be allocated to four (4) different developers. The approach of these individuals to develop these plots on piecemeal basis means that the farm sizes gradually diminish, until the farmer eventually has to relocate altogether. In Wa, farmers who used to farm around the city have

moved 10–15 km farther into communities like Kpong, Nakori, Sombo, Siriyiri, Danko, Charia and Kunfabiala (interview with farmers, 2013). Other farmers reported they decided to acquire land in remote rural areas, totally devoid of any foreseeable urban characteristic in the near future. In these rural communities, they are able to acquire much larger tracts of land as compared to areas closer to the city. In other cases, farmers are compelled to relocate to farm huts every farming season, or shuttle between farm and home during the rainy season. These options however imply increases in transportation costs. By relocating their farms farther, farmers are also bound to lose the potential benefits that accrue to them due to proximity to the city. For example, farmers may also lose the benefits of auxiliary off-farm employment and ready markets.

4.6. Land tenure, land use planning and the food system in Ghana

The land tenure system in the study area plays a major role in the discussion of urbanization, land use and food systems. Urbanization comes along with increasing land values for hitherto rural lands. This implies a transformation of the nature of land market transactions in the urbanizing region, as well as the parties involved. As an area becomes urbanized, land tenure systems and practices pertaining to agricultural land uses are becoming practically insecure, and under siege by new urban dwellers. The infographic (Figure 5)

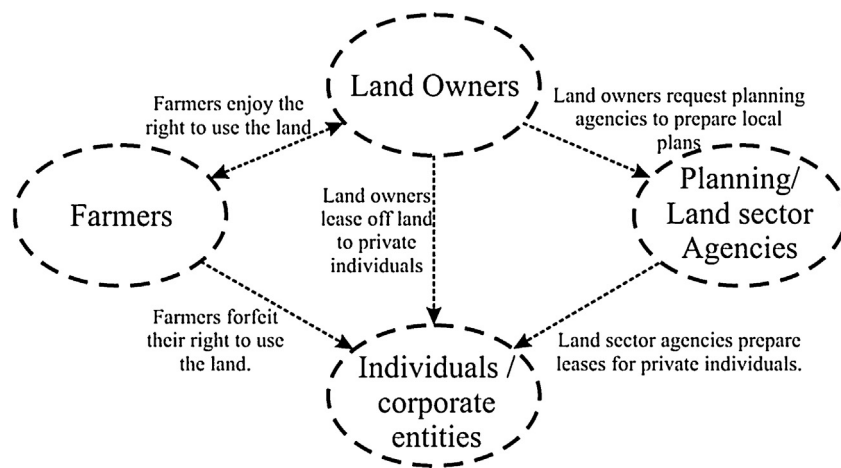


Fig. 6. Interrelationships between various actors in the changing tenure situations.

Source: Own illustration.

illustrates the relationship between land use, land users and tenure in the Wa Municipality. The relationships illustrated may well be applicable to most cities in Ghana. The nature of land use planning in Ghana has implications for the food systems. Perhaps the most prominent defect for food production is the fact that agriculture, as a form of land use is not provided for in the preparation of planning schemes (i.e. local plans of urban areas). Rural environments are allowed to grow and evolve on their own. Yet, when a rural area becomes part of the bigger city as a result of urban growth, planning schemes are prepared for such an area. These planning schemes make no consideration for the protection of viable agricultural lands, but rather convert agricultural land into other forms of land uses. Interviews with officials of the Survey and Mapping Division of the Lands Commission (interview, 2013) revealed that, the predominant land use prior to the preparation of the planning scheme is agriculture, and after the scheme is completed, land uses are dominated by residential facilities.

Land use planning in Ghana, has also turned out to be spear-headed by customary landowners instead of local government per the Local Government Act, 1993 (462). Instead of planning agencies being at the forefront of deciding which areas should be rezoned for urban use, and which areas should remain for agricultural purposes, the system in place rather puts landowners at the forefront of initiating planning processes and paying for it (interview with landowners in Sombo and Kpong in 2013). One universal problem with planning and planning interventions is the fact that planners do not have the capacity to implement the prepared planning schemes due to lack of manpower, and low level financing. Due to the low level financing, land markets tend to push the course of planning, with land owners paying for planning services. Indeed as is the saying, he who pays the piper, calls the tune. Our interview with some landowners (in 2013), revealed that instead of the state funding the cost of preparing urban land use plans; these plans are actually financed by landowners. Thus, landowners tend to dictate which land uses should dominate in a plan. The nature of development witnessed in the peri-urban interface of Wa suggests that, local/urban planning and implementation is driven more by speculation of increasing land prices. With these trends in the land market, land suitability analyses are virtually omitted in the planning process. Soil suitability analyses have not played any major role in the planning process. Hence, inner cities virtually have no corridors reserved for agricultural production, except wet valleys liable to flooding that are sometimes used for seasonal cultivation. Even such lands risk being allocated to desperate urban dwellers for housing, as is already the case in Accra and Kumasi.

Rising land values due to urbanization also dispossesses farmers who do not have the financial muscle to retain these lands for agriculture. It also turns out that landowners in the gradually urbanising areas are unwilling to lend land to farmers. In the peri-urban region, agricultural land *borrowing* has disappeared, and given way to leases. High value land uses underlay the enthusiasm for landowners to prepare local plans for their lands. According to Yeboah and Shaw (2013), customary landowners in their quest to meet growing demand for land for urban land uses, are driven by the market prices to alter existing land use plans and convert less economically rewarding land uses to more profitable ones. In our particular case study, agricultural lands are the most converted into residential, civil and commercial uses around the city. We also observed that there is absolutely no interaction between the farmer and the new owners of the land. In many instances, though the farmer may be aware that the land has been leased to other people, he is not consulted. Some farmers interviewed in Wa, complained of crop destruction in the farming season when new owners decide to begin development on their acquired parcels. The relationship of stakeholders under the current system is illustrated in the Fig. 6. The institutions that can protect farmers in this case are the planning agencies, yet they are not legally or customarily empowered to do so. Landowners on the other hand, have neglected farmers for lucrative cash options through urban land leasing. Since the land is leased out to individuals for non-farming purposes, the farmers in the local community are forced to move out of urban areas in search of new farmlands elsewhere.

5. Conclusion

Since food security is the product of effective food systems, identified challenges to agricultural land resources around cities due to uncontrolled urbanization, definitely have implications for food security. As indicated with some evidence from the Wa Municipality, increasingly, food production capacities are being shifted from peri-urban communities to the distant villages in the face of increasing urbanization. This also has implications for employment in the agricultural sector. Land ownership and land tenure systems in Ghana, however, tend to play a very crucial role in the dissipation of urban agricultural land. Speculation in land tends to drive land demarcation into building plots. We therefore recommend that government should fulfil their statutory obligations and finance urban land use planning, rather than relegating it to traditional land custodians. It is also recommended that a participatory land use planning approach be adopted, and traditional

leaders be encouraged to keep green zones in the urban fringes for agriculture and landscape. Where it is extremely difficult to reach a consensus with local landowners due to market demand, local governments through Public Private Partnerships can intervene by pre-financing these acquisitions, and conserve them for agricultural production or as natural green belts. Payments for the use and enjoyment of these services can subsequently be used to maintain such projects and make them financially sustainable. While it is almost impossible to modify the customary tenure systems in Ghana, it is possible for central government to influence the current system by reviewing planning policies and resourcing planning authorities to function more efficiently.

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References

- Abukhater, A.B., 2009. Rethinking planning theory and practice: a glimmer of light for prospects of integrated planning to combat complex urban realities. *Theor. Empir. Res. Urban Manage.* 2 (11), 64–79.
- Afrane, S.K., 1993. *The Integration of Housing and Economic Activities: a Case Study of Low Income Settlements in Kumasi, Ghana.* University of British Columbia, Canada, Unpublished PhD Thesis.
- Amanor, S.K., 2008. The changing face of customary land tenure. In: Ubink, J.M., Amanor, S.K. (Eds.), *Contesting Land and Custom in Ghana—State, Chief and the Citizen.* Leiden University Press, Leiden.
- Asante, S.K.B., 1965. Interests in land in the customary law of Ghana—a new appraisal. *Yale Law J.* Vol. 74 (5), 848–885 (accessed 03.07.14.) <http://www.jstor.org/stable/794709>
- Asiama, S.O., 2008. The concept of public land in Kumasi. *J. Ghana Inst. Surv.* 1, 44–50.
- Baffour Awuah, K.G., 2013. *A Quantitative Analysis of the Economic Incentives of Sub-saharan Africa Urban Land Use Planning Systems: Case of Accra, Ghana.* PhD Thesis University of Wolverhampton, UK.
- Baffour Awuah, K.G., Hammond, F.N., Lamond, J.E., Booth, C., 2014. Benefits of urban land use planning in Ghana. *Geoforum* 51, 37–46.
- Boamah, N.A., 2010. Housing affordability in Ghana: a focus on Kumasi and Tamale. *Ethiopian J. Environ. Studies Manage.* 3 (3), 1–11 <http://dx.doi.org/10.4314/ejesm.v3i3.63958>
- Boamah, N.A., Gyimah, C., Bediako, J.K.N., 2012. Challenges to the enforcement of development controls in the Wa Municipality. *Habitat Int.* 36, 136–142.
- Boamah, N.A., 2013. Urban land market in Ghana: a study of the Wa Municipality. *Urban Forum* 24, 105–118.
- Bryceson, D.F., 2002. The scramble in Africa: reorienting rural livelihoods. *World Dev.* 30 (5), 725–739.
- Cassa Associati, (2012). Integrating Climate Change and Disaster Risk Reduction in Physical Development—Review of Ghana Building Code. Available at: <https://www.undp-aap.org/sites/undp-aap.org/files/Ghana_Study_Integrating-CC-DRR-Physical-Dev-Review-Ghana-Building-Code_2012.pdf>. (accessed 21.07.14.).
- Cassidy, A. and Patterson, B. (2008). *The Planner's Guide to the Urban Food System.* Centre for Sustainable Cities, University of Southern California. January 2008.
- Cohen, M., Garrett, J., 2009. *The Food Price Crisis and Urban Food Insecurity.* IIED, London, UK.
- Crowley, E. (2012). Employment-Centred Agricultural and Rural Development: Key to Reducing Poverty and Achieving Food Security, presentation for the United Nations 2012 Annual Ministerial Review, Global Preparatory Meeting, April 3, 2012, New York.
- Da Rocha, B.J., Lodoh, C.H.K., 1999. *Ghana Land Law and Conveyancing, 2nd Edition.* DH & L Publishing Services, Accra.
- De Brauw, A., Moorman, L., Mueller, V., Woldehanna, T. (2010). Rural urban transformation report: Permanent migration and remittances in Ethiopia. Ethiopia Strategy Support Program 2 (ESSP2) Discussion Paper. Washington, D.C.: International Food Policy Research Institute.
- Duncan, B.A., 2004. *Women in Agriculture in Ghana, 2nd Edition.* Printridge, Osu-Accra.
- Eledi, J.A. (2013). Urbanization and Land Use Allocation Strategies: A concern for Food Systems in Ghana. Unpublished Master Thesis submitted to the Master of Infrastructure Planning Programme (MIP), University of Stuttgart, Germany.
- Eledi, J.E., Kuusaana, E.D., 2014. Uncontrolled Urbanisation in Ghana: A concern for food systems in the Wa Municipality. *J. Sustain. Dev. Studies* Vol. 6 (2), 260–293.
- Gareth, J., 1991. The Commercialisation of the Land Market? Land ownership patterns in the Mexican city of Puebla. *Third World Plan. Rev.* 13 (2), 129–153.
- Ghana Statistical Service (2005). Population Data Analysis Reports, Volume 2. Policy Implications of Population Trends Data. UNFPA funded Project (GHA/01/PO7). August 2005.
- Ghana Statistical Service (2008). Ghana Living Standards Survey. Report of the Fifth Round (GLSS 5). September 2008.
- Ghana Statistical Service (2012). 2010 Population & Housing Census Summary Report of Final Results. Sakoa Press Limited. Accra.
- Heintz, J., 2005. *Employment, Poverty, and Gender in Ghana.* Working Paper Series, Number 92, Political Economy Research Institute. University of Massachusetts Amherst.
- Hesselberg, J., Yaro, J.A., 2006. An assessment of the extent and causes of food insecurity in northern Ghana using a livelihood vulnerability framework. *GeoJournal* 67, 41–55 <http://dx.doi.org/10.1007/s10708-006-9007-2>
- Kasanga, R.K. (1988). Land Tenure and the Development Dialogue – The Myth Concerning Communal Land-holding in Ghana. Occasional Paper Series 19. Department of Land Economy, University of Cambridge – Granta Editions 2–3.
- Kasanga, R.K., 1996. *The Role of Chiefs and Tendamba in Land Administration in Northern Ghana.* RICS, London.
- Kasanga, R.K., Kotey, N.A., 2001. *Land Management in Ghana: Building on Tradition and Modernity.* International Institute for Environment and Development (IIED), London.
- Kasanga, R.K., 2002. *Land Tenure, Resource Access & Decentralization in Ghana.* In: Toulmin, C., Delville, P.L., Traore, S. (Eds.), *The Dynamics of Resource Tenure in West Africa.* IIED, London.
- Konadu-Agyeman, K., 2001. *The Political Economy of Housing and Urban Development in Africa: Ghana's Experience from Colonial Times To 1998.* Praeger Publishers, Westport.
- Kivell, P., 1993. *Land and the City; Patterns and processes of urban change.* Routledge, London & New York.
- Lai, W.L., 2005. Neo-institutional economics and planning theory. *Plan. Theory* 4 (1), 7–19.
- Larbi, W.O., 1996. Spatial planning and urban fragmentation in Accra. *Third World Plan. Rev.* 18 (2), 193–215.
- Ministry of Food and Agriculture (2007). Food and Agriculture Sector Development Policy (FASDEP II). August 2007. Republic of Ghana.
- Njoh, A.J., 2009. Urban planning as a tool of power and social control in colonial Africa. *Plan. Perspect.* 24 (3), 301–317.
- Njoh, A.J., 1999. The state, urban development policy and society in Cameroon. *Cities* 16, 111–122.
- Nkrumah, K., 1970. *Africa Must Unite.* International Publishers, New York.
- Ollennu, N.A., 1962. *Principles of Customary Land Law in Ghana.* Staples Printers Ltd., London.
- Owusu-Sekyere, C., 2013. *Land Use Planning and Management Information Systems (LUPMIS).* Town and Country Planning Department, Ghana.
- Rakodi, C., 2001. Forget planning, put politics first? Priorities for urban management in developing countries *The International Journal of Applied Earth Observation and Geoinformation (IJAG).* Vol. 3 (3), 209–223.
- Sarbah, J.M., 1968. *Fanti Customary Law.* Frank Cass and Co., Ltd., London.
- Tacoli, C., Bukhari, B., Fisher, S. (2013). Urban poverty, food security and climate change. Human Settlements Working Paper No. 37. Rural–Urban Interactions and Livelihood Strategies. International Institute for Environment and Development (IIED). March 2013, London.
- Town and Country Planning Department (2010). Development Permit Procedure. Published Friday 6 August 2010. Available at: http://www.tcpghana.gov.gh/index.php?option=com_content&view=article&id=89:development-permit-procedure&catid=33:public-services&Itemid=170 (accessed 02.07.14.).
- Ubink, J.M., Quan, J.F., 2008. 'How to combine tradition and modernity. Regulating customary land management in Ghana'. *Land Use Policy* 25, 198–213.
- UN-Habitat (2009) Planning sustainable cities: policy directions, global report on human settlements (Abridged Edition). London: Earthscan.
- Wa Municipal Assembly (2012). The Composite Budget of the Wa Municipal Assembly for the 2012 Fiscal Year, Wa Ghana. Available at www.mofeb.gov.gh. (accessed 10.08.13.).
- WaterAid (2009) A Study on land Tenure in Urban Areas Report. Available at: <http://www.wateraid.org/~media/Publications/land-tenure-ghana.pdf> (accessed 22.07.14.).
- World Food Programme (2009). Comprehensive Food Security and Vulnerability Analysis (CFSVA). Republic of Ghana. May 2009. United Nations World Food Programme. Rome, Italy.
- Word Food Programme (2012). Northern Ghana Food Security and Nutrition Monitoring System. Monthly Bulletin, July, 2012. Available: <<http://home.wfp.org/stellent/groups/public/documents/ena/wfp251143.pdf>>.
- Yaro, J.A., 2006. (2006). Is deagrarianisation real? A study of livelihood activities in rural northern Ghana. *Journal of Modern African Studies.* 44 1, 125–156.

Yeboah, E., Obeng-Odoom, F. (2010). We are not the only ones to blame': District Assemblies' perspectives on the state of planning in Ghana. *Commonwealth Journal of Local Governance*, Issue 7: November 2010. Available at: <<http://epress.lib.uts.edu.au/ojs/index.php/cjlg>>.

Yeboah, E., Shaw, D.P., 2013. Customary land tenure practices in Ghana: examining the relationship with land-use planning delivery. *Int. Dev. Plan. Rev.* 35 (1), 2013, <http://dx.doi.org/10.3828/idpr.2013.3>.