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From the seat of a traditional Kingdom to a Garden city: the sociospatial politics of managing green areas in Kumasi, Ghana

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ABSTRACT

Established in 1817, Kumasi, Ghana's second largest city was accorded the accolade 'Garden city of West Africa' in the 1940s due to its beautiful green areas. Over its 200 years of existence, the city's development and morphology has been greatly shaped by its strong cultural, traditional and socio-political antecedents, rooted in its establishment as an important fortress of the Ashanti Kingdom. Today, Kumasi has lost its 'Garden city' accolade owing to poor management of these 'green areas'. This paper argues that the challenges of managing open spaces in Kumasi can be explained by the city's strong historical foundations and socio-political conflicts between indigenous/customary land ownership and state urban planning regime. Situated within the city's historical and socio-political contexts, the study draws on multiple qualitative methods including: document review, institutional consultations, key informant interviews, and field observations, to gather evidences. The paper reveals, that central to the problem of managing open spaces in Kumasi are the city's strong customary land ownership structures and socio-political history of conflicts between its traditional set-up and state officialdom. These conflicts are continuously being shaped by a complex state institutional framework, customary and communal land ownership structure.

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Garden city; open spaces; urban planning; customary ownership; Kumasi

1. Introduction

Planning for and managing open spaces in many cities in the developing world, presents a major missing link in the urban planning and design process (Arku, Yeboah, & Nyantakyi-Frimpong, 2016). For example in a study of the cities of Accra and Tema in Ghana, Arku et al. (2016, p. 1505), revealed that there is 'only one recognizable and somewhat functioning public park... and that for a city-region with about 3.6 million residents, this is both worrying and unacceptable in every respect.' This is the case in a number of cities in Africa (Adjei Mensah, 2014a; Arku, 2009; McConnachie, Shackleton, & McGregor, 2008; Officha, Onwuemesi, & Akanwa, 2012) where rapid urban expansion and land use changes are taking place without very little recourse to planning regulations. For example, McConnachie et al. (2008) found out that several towns and cities in the Republic of South Africa have less than 10% of their total lands occupied by green spaces; while Adjei Mensah (2014a, p. 1) reports a worse situation in Lagos which has less than 3% of green spaces due to rapid urbanization. The result of these uncontrolled urban expansion and land use changes has been the encroachment of open spaces and other ecologically sensitive areas and conflicting uses leading to unsustainable urban growth (Adjei Mensah, 2013).



This situation raises questions about how city authorities, formal urban planning and citizens of African cities have treated the importance and use of open spaces, nature reserves and urban parks in particular and green infrastructure in general.

This study conceptualizes urban green spaces broadly to include: natural green areas, nature reserves, urban parks, and green infrastructure found in cities and towns based on the definitions of Wilson (2008), Shan (2009), Officha et al. (2012) and Adjei Mensah (2014a, 2014c). For instance, Wilson (2008) explains urban green spaces to include urban landscaped area with vegetation and other natural resources; and presents types such as communal green areas, private gardens, institutional land, local parks, district and regional parks, river corridors, wetlands, floodplains, and coastal zones. In many African cities, all these could be areas planned, reserved, or ignored in the city's physical development process which may serve as centers of beauty, recreational parks; preservation of cultural and historic values; or provide protection for ecologically sensitive natural resources (Officha et al., 2012).

Adjei Mensah (2014a, p. 2) has discussed urban green space extensively in Ghana and describes it as the 'vegetative part of the urban environment specifically the soft lands.' He also defined urban open spaces as 'all aspects of green spaces in addition to those hard land surfaces made purposely for human usage.' When these vegetative areas are consciously reserved, planned and/or provided, they are referred to by Oduro-Ofori, Braimah, and Agyeman (2014, p. 110) as 'green infrastructure'. These areas have been seen as key in planning for the beauty of urban areas and the comfort of their residents (Arku, 2009; Arku et al., 2016; Makufwe, 2014; Oduro-Ofori et al., 2014; Quagraine, 2011). Despite the numerous benefits that these spaces offer to support the development of cities and the well-being of urban dwellers, recent studies have shown that most of these spaces are fast disappearing in Ghanaian cities (Adjei Mensah, 2016; Cobbinah & Darkwah, 2016). For the purpose of this study, these terminologies are used inter-changeably to represent all vegetative areas, flood plains, wetlands, and public parks - reserved, used, encroached, or ignored.

The debate on planning for and sustaining open spaces and nature reserves in urban Ghana has not received too much attention in research. The few that exists have raised concerns about inadequate open and green spaces in Ghanaian cities (Arku et al., 2016); rapid encroachments and depletion of green areas due to uncontrolled urbanization (Addo-Fordwuor, 2014; Adjei Mensah, 2014b); outright destruction or poor management of green and open spaces (Adjei Mensah, 2014c; Oduro-Ofori et al., 2014). Beyond these concerns in the existing literature are the following questions: (1) What explains the socio-spatial politics surrounding the creation and use of open spaces? (2) How are these urban open spaces used by urban citizens? And (3) How has the existing socio-spatial politics of managing open spaces shaped their current usage? Using Kumasi, Ghana's second largest city, this paper aims at providing answers to these question. Specifically, the study aims at exploring how the city's socio-political history and customary structures have shaped processes involved in the acquisition and use of open spaces; institutional arrangements for the management of open spaces; nature and causes of encroachments on open spaces; and how these shape current management practices.

Established 200 years ago (1817-2017), Kumasi has intriguing historical and socio-political narratives (Amoako & Korboe, 2011; Korboe, 2001). As early as 1817, Kumasi was reported to be a 'laid out town' (Ablorh, 1972, p. 22) with well-defined spaces and functional areas. Tipple (1987) is cited by Korboe (2001, p. 41) as describing the then Kumasi 'as a town on a rocky hill with clean, straight and wide streets, and professionally constructed accommodations.' Similarly, Quagraine (2011, p. 212) suggested that Kumasi, at its inception, benefited from beautiful natural landscape, various green areas and urban trees which made it an 'excellent example of an ecological city in Africa.' Kumasi therefore earned the accolade 'the Garden city of West Africa' after its 1945 master plan was effected (Korboe, 2001) due to the preservation of its natural landscape within the said plan. Over the years the beauty and esthetic attractions of the city has waned significantly.



2. Kumasi and the Garden city concept: exploring the historical contexts and missing links

Adjei Mensah (2014c) has asked whether Kumasi is still a Garden city. Beyond the rapid urbanization, rural—urban migration and population growth; and poor urban governance arguments (Adjei Mensah, 2014a, 2014b; Oduro-Ofori et al., 2014), we argue that Kumasi's changing natural landscape including the depletion of its open spaces can be explained by its historical development, strong traditional functions and socio-political conflicts between its *traditional set-up* and *state officialdom* at various stages of the city's growth.

Since its establishment, Kumasi, both as the seat of the historical Asante Kingdom and current capital of Ashanti Region of Ghana, has undergone several political, cultural, physical and demographic changes. As the capital of the Asante state, Kumasi was placed strategically at the crossroads of the trans-Saharan trade routes which contributed significantly to the wealth of the town (Korboe, 2001, p. 41). It acted as a trading hub for gold, weapons, slaves as well as farm implements (Amoako & Korboe, 2011). Again, the prominence of Kumasi stemmed from the rich culture of the Asante kingdom which was an embodiment of several elements including cultural artefacts, regalia, and other symbolic and sacred spaces of traditional importance.

Central to the early growth of Kumasi was a well-developed socio-political structure with the office of the *Asantehene*¹ commanding absolute power and loyalty. Hence Kumasi grew in prominence under a strong traditional political structure until 1824 when the first socio-political conflict between the British colonialist and the indigenous Asantes was recorded. The Asantes defeated the British and succeeded in creating fear among the foreigner-population. In 1874, the Asantes were eventually defeated by an invasion of Kumasi, by the British (Korboe, 2001); and by 1896, all reprisals had been quelled by razing the town (Tipple, 1987). These defeats marked the beginning of several socio-political conflicts between the *British Colonialists* and indigenous political authority leading to key spatial changes in the emerging town. Thus Kumasi's landscape changed radically after its defeat in 1896 (Quagraine, 2011, p. 214). According to Korboe (2001, pp. 42–43) the most significant spatial manifestations of the defeat were the building of a fort and a thorough plundering of Kumasi's sacred sites, ritual grounds, and other protected areas. This marked the first attempt by officialdom to redefine the nature and usefulness of Kumasi's reserved areas resulting from the socio-political conflicts of the time. The spatial changes started by the British in Kumasi were followed by several other structural changes.

For instance, having captured the land and governance of Kumasi, the British introduced other physical infrastructure (Ablorh, 1972) in the first two decades of the twentieth Century. Prominent among these were the railway line, significant streets such as the Bantama Main Street and important buildings such as Basel Mission Church, the United Trading Company (UTC), Bank of West Africa, schools and the Army barracks between 1903 and 1920. All these developments appear to have reduced the prominence of traditional and sacred spaces most of which could be seen as open and reserved areas by the indigenous political authority (Ablorh, 1972). These differences in town building approaches between the *Asante traditional set-up* and *the British*, became the first point of spatial conflict that shaped the morphology of the emerging town – and this is central in understanding the changing landscape of Kumasi.

Sites reserved for various spiritual, cultural, and ritual purposes were deemed unimportant and razed by the British Colonial Government. Following this, the city was rebuilt with a more culturally familiar landscape to its new masters (Quagraine, 2011, p. 214). Thus the British introduced urban planning concepts that met their needs and not that of the indigenous people (Schmidt, 2005; Wilks, 1975). The views of Schmidt (2005) and Wilks (1975) confirm the social, political and spatial conflicts that explain Kumasi's morphology. The introduction of urban planning at the time was not only to shape the morphology of the city, but to establish the powers and control of the British colonial administration and to quell all resistance from the indigenous people who were not in support of spatial changes introduced by the former.

Interestingly, in 1920, the British restored land ownership to the Golden Stool² – Asante Kingdom. Most of the land was given back to the chiefs who quickly rebuilt the central area into their initially planned functional areas, restoring their sacred sites (Korboe, 2001; Quagraine, 2011). With all lands restored under their original tenure system, the natives once more assumed their role as the custodians of the land (Korboe, 2001). The quick act of rebuilding the central area by the Asante chiefs showed that although things had changed in their territory, the original plan and mind-set they had for the empire was still rooted deeply in their thought (Ablorh, 1972). It also showed their eagerness to acclaim power, authority and influence over the town, which was fast growing into an emerging city. The only lands left under the British Crown were 'within one square mile of the fort and the land 100ft on either sides of long distant roads' (Korboe, 2001, p. 44). This created what appears to be shared spatial authorities between the British and the Asante Traditional set-up. Spatially, this brought about a dual planning system – a regime which has persisted to date. Though this represents the structure of land management and administration in Ghana, Kumasi's situation presents a stronger historical foundation and socio-political relationships between the Ashanti Kingdom and the British Colonial Administration (Korboe, 2001).

As a result, Kumasi's current morphology can be understood from this dual socio-political power sharing rooted in the city's historical development and engagements between colonial administration and the traditional leadership. This view also challenges the notion that the city was and has always been planned according to the whims of the British colonial administration and/or successive governments (Schmidt, 2005). The customary and traditional leadership setup provided a strong socio-political presence that challenged the urban planning regime introduced by the colonial administration, and has done so throughout the city's two centuries of existence.

Another frame within which the socio-political conflict between the state officialdom and Asante traditional set-up can be seen is when, in 1945 Kumasi's master plan, designed by Maxwell Frye and Jane Drew, was presented by the British colonial administration. This plan was to follow the Garden city model which was popular at that time and allocated substantial part of the city's land area to green spaces. The Garden city model provided for a central area surrounded by a wide green belt. There were proposed parks which interspersed the physical landscape of the city. There were five planned urban parks during the colonial period which included 'Kejetia' Park (Adehyeman gardens), Suntreso Park (at the premises of Department of Parks and Gardens), park at 'Amakom' (now Kumasi Children's Park), Fante Newtown Park, and Kumasi Zoological Gardens (Kumasi Zoo) (Adjei Mensah, 2014b, 2014c; Quagraine, 2011, p. 218).

By 1957, the city looked so attractive and beaming with so much greenery as envisaged in the 1945 plan. It became a center of tourism and cultural eminence as the cultural center assumed national importance (Amoako & Korboe, 2011). This marked the beginning of officially assigned public open spaces. However, it is doubtful whether these spatial arrangements were accepted by the traditional system, which played no recorded role in the preparation of the plan. For instance, Schmidt (2005) argued that the creation of the green belt was rather to separate the European settlers from the indigenous people who were believed to be the source of infectious mosquito borne diseases such as malaria and yellow fever; while providing playing fields akin to English lifestyle.

At the dawn of Ghana's independence, the new government sought to consolidate the socio-political authority of the British colonial regime, by entrenching its planning powers. Hence, the new government quelled any dissent to its powers by driving influential Asantes into exile, arresting, and detaining others (Korboe, 2001). Again, attempts were made to nationalize all the lands of the Asante Kingdom but the strength of the traditional system prevented this move from achieving more than a meager success. Not much was achieved in that direction, except the continuous implementation of the 1945 plan under successive regimes. Another state-led planning effort to restore Kumasi's so called Garden city status was the 1963-1988 Planning Scheme. This scheme added to the greenery of the city when it allotted about 40% (20,000 hectares) of the city's land reserve to open spaces and agricultural development (Adarkwa & Owusu-Akyaw, 2001). Again, very little consultations were conducted

between the state and the traditional system. Thus the implementation of the plan was situated within a dichotomous relationship between state planning institutions and Kumasi's traditional set-up. This frame of socio-political conflict also explains the unclear management of green areas between state and customary institutions.

In 1988, Kumasi attained a Metropolitan status under Ghana's decentralization system under PNDCL 208. Within the new decentralized system of planning, Kumasi was to be planned with the full participation of local elected representatives and decentralized state institutions (Adarkwa & Owusu-Akyaw, 2001). In 1992, the PNDCL 208 gave way to an Act under the 1992 constitution, when Ghana started the current democratic dispensation – *the Local Government Act, 1993, Act 462.* This was in place, with some modifications, till 2016. Since 2016, the Local Government Act, 1993, Act 462 has been replaced with a new Local Government Act, 2016, Act 936. The new Local Government Act is aimed at expanding the powers of local government authorities and addressing emerging issues at the grassroots. To further consolidate urban planning under the decentralized system a current law has been promulgated, the Land Use and Spatial Planning Act, 2016, Act 925.

However, in reference to Kumasi, the decentralized system and legal regimes leave very little space for the participation of the once powerful traditional structures – which have been in existence for the last two centuries. These institutional and legal arrangements set the stage for another dichotomous relationship in the city's spatial governance. For instance besides the Kumasi Metropolitan Assembly and its decentralized departments and the Lands Commission and its land agencies, there is the *Otumfuor's Lands Secretariat* running parallel to the state institutions. This has implications for the management of open spaces and other green areas which are usually lands created by the state but owned by the powerful customary leadership.

The foregoing discussions situate Kumasi's evolution, land use planning, management of preserved and open areas within socio-political conflicts and dichotomous relationships between *state official-dom* and the city's time tested *customary structures*. As can be seen from the historical development and political geography of Kumasi discussed above, the city's establishment, morphology, and governance have greatly been shaped by the kind of socio-spatial and political relationships that have existed between the traditional governance structures and official state institutions, since the colonial administration. These relationships form the conceptual frame within which we explore the management of open spaces and green areas in Kumasi. Situated within the changing faces of land ownership and governance of Kumasi, our conceptual framework is hinged on the dual and/or dichotomous relationships between state planning and governance institutions and the traditional system of land ownership, administration, and management. While planning and land-use falls under state officialdom, land ownership falls under Kumasi's traditional authorities. Our central aim is to use these dichotomous institutional arrangements to explain the preservation and management of open spaces and other green areas.

3. Study context, design, and methods

We adopted the case study approach with the primary case being the Kumasi city (Figure 1). The case study approach was adopted to allow for an in-depth and multi-faceted exploration of the complex socio-political interactions among institutions and citizens in the use and management of open spaces, green areas and community parks. In adopting Kumasi, we considered the *original land area of the metropolis* (Figures 2 and 3), being fully aware that a local government area (Asokore Mampong Municipal Area) has been created out of it, while five others have been proposed due to the city's rapid population growth. With an annual population growth rate of 5.4%, the city is the fastest growing city in Ghana and has a population of 2,035,064 (Ghana Statistical Service, 2012).

Kumasi was purposively selected due to its historical reference as the 'Garden city of West Africa' and checkered socio-political history of land ownership, spatial planning and management of cultural spaces. Within Kumasi, selected open spaces, green areas, and nature reserves were studied as cases in

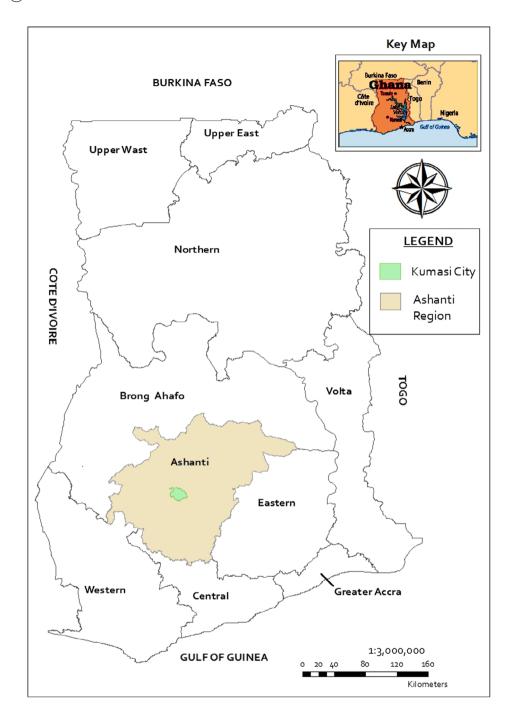


Figure 1. Location of Kumasi in Ghana's context. Source: Drawn by authors, September, 2017.

the primary case (Figure 2). An earlier study by Owusu-Ansah (2015) identified 20 community parks and public open spaces. Apart from these parks, there are other minor wetlands and stream buffers, many of which have been encroached. Based on their current uses, locations and the level of control by customary owners, 15 community parks, public open spaces and nature reserves were selected and studied, based on the distribution of their types as discussed under the introductory sections of

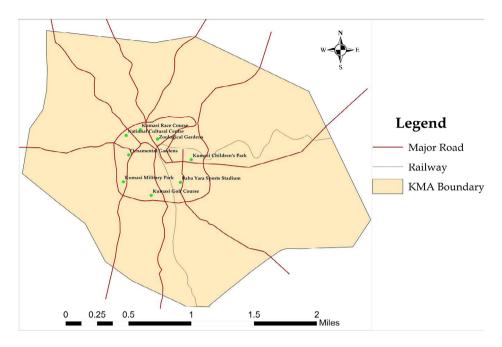


Figure 2. Selected recreational public open spaces in Kumasi. Source: Adopted and modified from a Map obtained from the Town and Country Planning Department of the Kumasi Metropolitan Assembly, January, 2017.

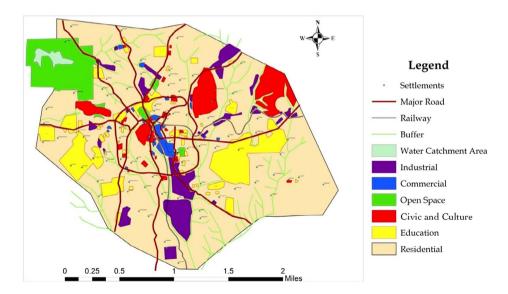


Figure 3. Land use distribution map of Kumasi. Source: Adopted and modified from a Map obtained from the Town and Country Planning Department of the Kumasi Metropolitan Assembly, January, 2017.

this paper. Table 1 presents the list of open spaces, community parks and nature reserves selected and studied, while Figure 2 shows the locations of selected open spaces visited during the field survey. The selection was to have an in-depth understanding of the social and political conflicts surrounding the management of the open spaces.



Table 1. Locations and current functioning of selected green areas, open spaces, and community parks.

Green area/open space/community park	Location/suburb	Proposed use	Current uses and dominant functioning
Kumasi Golf course Kumasi race course	Nhyiaeso Kejetia	Recreational public open space Recreational public open space	In operation and largely protected from encroachments No more in use. Heavily encroached by commercial activities
Adehyeman Gardens	Kejetia	Recreational public open space	In operation but large portions have been encroached by commercial activities
Offianienial Garden Center Asanteman Children's Park	Adum Amakom	necreational public open space Recreational public open space	Encloached by commercial uses and murity with dumping of commercial waste Presence of deteriorated library unit, museum/art gallery, and playing facilities for children. Lost green landscape, largely unused, and notorious for drug use and prostitution
Suntreso Community Park	Suntreso	Community park	Totally encroached with residential uses
Abbey's Park	Ashanti New Town	Community park	Abandoned to lose all its facilities
Jackson's Park	Asem	Public open space	Named Jubilee park. Turned into a durbar/parade grounds
Manhyia Community Park	Manhyia	Community open space	Used as durbar and/or funeral grounds
Dunkirk Community Park	Fante New Town	Community open space	Encroached upon for commercial activities
Aboabo Nature Reserve	Aboabo	Nature reserve/green vegetation	Encroached by wooden structures, unauthorized buildings; and business activities. The
Atonsu Nature Reserve	Atonsu	Nature reserve/green vegetation	Redesigned for Commercial and residential uses. Heavily encroached by Illegal developments I lise in flood horner sone
Subin Nature Reserve	Subin	Nature reserve/green vegetation	Heavily encroached by farming, fish smoking and selling of flower and plants seedlings. There are also commercial uses
Kaasi Nature Reserve	Kaasi	Nature reserve/green vegetation	Encroached for saw-milling and charcoal burning. Open defecation along dying stream
Adwinase-Kwadaso Nature Reserve	Adwinase-Kwadaso	Nature reserve/green vegetation	Shady trees and other species along the stream. Observed encroachments by residential and commercial uses
Sources: Field work consultations with officials of TCPD and Parks and Gardens March 2016	of TCPD and Parks and G	ardens March 2016	

Sources: Field work, consultations with officials of TCPD and Parks and Gardens, March, 2016.

The selection of open spaces studied was in consultation with key urban state institutions such as the Kumasi Metropolitan Assembly (KMA); Town and Country Planning Department (TCPD); Department of Parks and Gardens; Environmental Protection Agency (EPA) and Lands Commission. For each of these open spaces and/or parks, an in-depth investigations about their management and current uses were conducted. The strength of case study approaches is in their ability to draw from multiple sources of evidence to show relationships between elements and processes in a single or multiple cases (Gillham, 2000, pp. 1-2). In line with this, a complex mix of qualitative methods was used, including: institutional consultations, document reviews, informal interaction, and interviews of some users of the selected open spaces, transect walks, and observations. Users of open spaces were selected through accidental sampling based on their availability during the time of our visits. These users were engaged on informal bases in order to get as detailed information as possible without getting them apprehensive about their use of unapproved spaces.

4. Locations and changing functions of green areas and open spaces

Earlier works by Adjei Mensah (2014a, 2014b, 2014c) showed significant reduction of green vegetation open spaces and neighborhood parks from 41,158.08 hectares, forming 74.1% of the total land of Kumasi in 1980 to 22,513 hectares in 2007 - a period of about 30 years. In 2013, this figure was projected to even reduce further to 4180 hectares, making just 16.4% to total land area (Oduro-Ofori et al., 2014). Hence, Kumasi has lost over 60% of its original green areas, open spaces and community parks since 1980 (Figure 3). Figure 3 shows the current broad land use and land cover distribution of the city of Kumasi with almost no major open spaces except the reserved area around the Barekese Dam, water reservoir and treatment area shown on the north eastern corner of the map. The Dam, which was constructed in 1971 on the Offin River provides 80% of the total public pipe borne water supplied to the Kumasi metropolis and its environs (Domfeh, Anyemedu, Anornu, Adjei, & Odai, 2015). The reservoir was also designed to produce hydroelectric power for the city, but that appears to have been abandoned. Again, even with such an important function of the Barekese reserved area, Domfeh et al. (2015) reported on land cover degradation in the catchment area which has the propensity to alter the hydrologic cycle and hence runoff into the reservoir.

The decreases in green vegetation have not only affected the city's water resources, but also its nature reserves, fringe agricultural lands, public open spaces, and community parks. Fifteen green areas, open spaces, and community parks were selected and visited to observe their current condition and functions (Table 1). These were the most active open spaces selected from a total of 22 under the management of Kumasi's Park and Gardens Department. Table 1 shows the varied physical locations of the selected green areas and open spaces and current uses. Many of these open spaces and green areas have been encroached and their proposed uses changed to uses adapted by the needs of residents in the adjoining areas. These land use and land cover changes and depletion of green areas have been earlier attributed to rapid urbanization and demand for residential and commercial land uses (Adjei Mensah, 2014a, 2014b, 2014c; Oduro-Ofori et al., 2014; Quagraine, 2011).

There are virtually no traces of any of the colonial landscape reservations. The much talked about Garden city of West Africa has lost all its green belts and their functional purposes without any trace of the city's historical legacy of esthetic beauty (Adarkwa, 2011). Based on their initially planned functions, the visited parks been categorized into three namely (Table 1): recreational public open spaces; community parks and protected nature reserves. In Kumasi, recreational public open spaces are large areas in excess of 20 acres proposed to be used for various outdoor activities and to be accessed by all citizens of the city and beyond. Examples of these include: the Golf Park at Nhyiaeso, Race Course at Bantama and the Jubilee Park at Asem and the recently built Rattray Park. Community parks, by their designations and functions are supposed to provide recreational and communal spaces for the neighborhoods in which they are located. Examples of those selected for the study include: Asanteman Children's Park at Amakom, Suntreso Park, Abbey's Park at Ash Town, Manhyia Community Park, and Dunkirk Park at Fante New Town (Table 1). Nature reserves are restricted urban green vegetation

zones, prevented from physical development due to their ecological and natural importance. These include wetlands, botanical gardens, and forests protecting important water bodies. The major nature reserves in the selected areas of the study include Aboabo, Atonsu, Subin, Adwinase-Kwadaso, and Kaasi. From Table 1, apart from the Kumasi Golf course, which has been protected from encroachments, all the public open spaces, community parks and nature reserves visited have had significant changes in their proposed functions as at the time of their establishment. Their physical state, natural, and infrastructural endowment as well as sizes have also been significantly reduced. The observed changes in functions of open spaces can be conceptualized and discussed under three main views encroachments, change of use, and abandonment.

Firstly, the changing functions of green areas in Kumasi can be seen through encroachments by other urban land uses. These were found on all the three categories of open spaces and green areas. Predominant uses observed on the selected open spaces include small-medium scale commercial and industrial activities, refuse dumps and waste disposal, and vehicular parking facilities. Examples of these are found on the Kumasi race course and Adehyeman gardens at Kejetia as well as the Ornamental garden at Adum. These encroaching activities appear to be filling land use gaps in and around the study areas. For instance, the Kumasi race course currently serves as recipient of spill over economic activities from the Kejetia transport terminal and other parts of Kumasi's central business district. Similar examples of encroachments were also observed around the Kaasi and Subin nature reserves. This situation presents spatial conflicts between commercial uses and the management of the initially proposed public open space and green vegetation. Interviews with officials of the Department of Parks and Gardens and regional office of the Environmental Protection Agency (EPA) revealed that these state institutions are helpless and overwhelmed by the rates of encroachments and the support of the various traditional authorities behind such encroachments. In an interview with an official of the Department of Parks and Gardens, he stated that:

Before their acquisition, all open spaces were customarily owned by the Asante traditional structures. As a result, the traditional authorities still exercise their right of ownership over some of them. Over time, portions of these open spaces have been given out to private developers ... There are also cases where as a result, of long periods of neglect lead to encroachments by commercial and other land-uses.

The above view was earlier observed by Quagraine (2011, p. 219) who stated that Kumasi's 'forests, green belts, parks, and other shady trees' are experiencing deterioration without any official control. The observed encroachments and statement made by the official quoted above attributes the encroachment on open spaces to the power of the traditional set-up to give out land on one hand, and the inability of state institutions to acquire proper documentations for open spaces and to collaborate with traditional authorities in managing them on the other. This was confirmed by a chief who indicated that:

In many cases it is difficult tracing the documents of lands compulsorily acquired by the state as open spaces and community parks. Without proper documentation and fully paid compensation to chiefs, it is difficult to prevent encroachments on such lands. Again, many of the open-spaces were not consciously developed and managed as planned ... this makes encroachments possible.

The second view of the changing functions of open spaces can be explained as *change of use* of green areas and parks. Responding to rapid urbanization, changing spatial needs, and land use requirements, parts of some open spaces and green areas have been redesigned or re-allocated to other uses such as residential and commercial. For instance, sections of the Atonsu Nature Reserve which was originally protected from physical development have been redesigned and allocated to residential and commercial uses. Again, the Jackson and Manhyia community parks, which used to be green areas, with various species of trees, have been changed in functions and are currently being used as durbar and funeral grounds (Table 1). The Jackson Park was rehabilitated a decade ago and re-christened as the Jubilee Park; while the Manhyia Park has lost substantial proportions of its green coverage. These changes in use have resulted from the changing spatial needs and activities of citizens in the city. Again, interviews with officers of the Town and Country Planning Department (TCPD) indicated that their office receives applications for re-zoning of sections of unused open spaces from prospective developers. Many of these developers seek the consent and support of traditional authorities who are the original owners

of the land in question. With pressure from these prospective developers and traditional authorities, city authorities are helpless and always give in to the request for change of use. This also explains the second level of socio-political conflicts between traditional and city structures on the management of open spaces and green vegetation in Kumasi. Similar findings were made earlier by Asare (2013) and Adjei Mensah (2014b, 2014c) pointing to changes in the uses of open spaces initiated by the Kumasi Metropolitan Assembly (KMA) and its decentralized departments such as the Town and Country Planning Department (TCPD).

Situated in the third view is lack of use of existing open spaces and green areas. Except the Rattray Park, which was built about two years ago and which was not included in this study, all existing open spaces in Kumasi have been either abandoned or not properly managed and hence are hardly used by residents of the city. For most of these open spaces, the existing facilities are in deplorable conditions, with their green vegetation cover and trees depleted. A typical example of this is the Asanteman Children's Park, located at Amakom on 5.6 acres of land (Table 1). The park was designed to provide recreational and educational needs of children in the city. As a result, the park was provided with a library block, a museum, an art gallery, an Amphitheatre, workshop pavilion, playing field for children, and sanitary facilities. However, all the facilities have been ran-down from lack of use and poor maintenance. The area hardly receives any visitors and has been known to currently accommodate criminals and drug users. Even though the perceived activities of criminals at the park was refuted by the resident official interviewed, the park is in its lowest ebb. In an interview with an official of the Department of Parks and Gardens in Kumasi, the lack of use of the Asanteman Children's Park was attributed to the following reasons: design flaws which make its entrance not very visible, poor maintenance and untidy environment, security concerns and reduced functional relevance. These views also raise the issue of gaps between the designs and facilities available at the various open spaces and the recreational needs of current residents of Kumasi. It appears the open spaces and facilities available depart from the recreational needs of current residents of the city.

The foregoing narrative suggests that open spaces in Kumasi have seen three main functional changes. They have been encroached, re-designed and allocated to other uses; or they have largely been abandoned and unused. These raise questions to the dynamics and politics surrounding their management. We submit that the current changing functions of open spaces and green areas have been shaped by social and political conflicts between state and city institutions and customary owners of the land. In between these two key actors are prospective developers and encroachers who manipulate and take advantage of the conflicts to make use of these spaces to satisfy their immediate land use needs. That is what we refer to as *adapting open spaces* to their current spatial and land use needs. As a result, the current land use activities and functioning of open spaces and green areas reflect the dominant spatial and land use needs of residents in the affected areas. These include: funeral grounds, petty trading activities, prayer grounds and other unapproved religious activities, activities of thugs, informal industrial activities, garages for out-of-use cars, unauthorized car parks among others. The rest include grounds for wedding receptions and other outdoor activities. There are also open spaces re-zoned for residential uses, based on increasing demand for housing. Hence the changes in land use activities and encroachments on open spaces reflect the changing demands for different land uses, co-evolving with urban growth.

5. Ownership and management of open spaces and green areas in Kumasi

From our study, three key factors shape the politics of and dynamics in the management of open spaces and green areas in Kumasi. These are the complex state institutional framework, customary and communal ownership structure, and conflicts in management between city and customary institutions. The interactions among these factors point to a weakened state and city institutional framework facing increasingly powerful customary and communal structures that manipulate the former. In this section we present and discuss these three key socio-spatial and political issues surrounding the management of open spaces, nature reserves, and green vegetation in Kumasi.

On paper, open spaces and green areas in Kumasi are managed by mandated state and city institutions. At the apex of these institutions is the Kumasi Metropolitan Assembly (KMA) which is mandated by law to be in charge of the planning and management of the city. Also directly involved are other urban planning and land management institutions such as the Town and Country Planning Department (TCPD), Department of Parks and Gardens (DPG), Environmental Protection Agency (EPA) (Table 2). Other institutional stakeholders in the management of open spaces include the Office of the Administrator of Stool lands, Forest Commission (FC), and the Lands Commission with its subsidiary institutions namely: the Survey and Mapping Division (SMD), the Land Registration Division (LRD), the Land Valuation Division (LVD), and the Public and Vested Land Division (PVLD) (Addo-Fordwuor, 2014; Makufwe, 2014).

At the management level, the sheer number of institutions and their inability to collaborate and design a common focus present a complex institutional framework with a lot of duplications and conflicts in the management of green areas and open spaces. For instance, the Estate Department of the KMA is responsible for the management and maintenance of public open and recreational spaces in the city while the Department of Parks and Garden (DPG) is responsible for environmental landscape development and management of urban green and open spaces. Again, the EPA is also supposed to work together with the Kumasi Metropolitan Assembly (KMA) to manage and protect green/open spaces (Addo-Fordwuor, 2014). Consultations with the officials of these institutions revealed that they hardly collaborate except through their representation on the Statutory Planning Committee. Earlier works by Adjei Mensah (2014b, 2014c), Addo-Fordwuor (2014) and Oduro-Ofori et al. (2014) also confirmed the weak cooperation and collaboration among these institutions. This situation has and continues to present a major challenge for the conservation and management of open spaces and nature reserves. Effective management of open spaces in Kumasi requires the collaboration of all city and state institutions or the establishment of an umbrella institution which will bring these fragmented state institutions together. The KMA appears to have failed in that direction.

In terms of the ownership of open spaces and green areas, even though all open spaces and green areas in Kumasi are managed by state and city institutions, they were originally owned by customary institutions before their acquisition and preservation (Ablorh, 1972; Amoako & Korboe, 2011; Korboe, 2001; Quagraine, 2011). As was discussed earlier under Section 2, these customary institutions wield enormous powers derived from their historical role and dominance in the establishment of Kumasi as the traditional capital of the Asante State. This conceptual frame is further explained by the acrimonious relationship that existed between the Ashanti Kingdom and the Colonial Administration which heralded urban planning and the creation of open spaces and green belts in the 1940s. As result, the ownership and management of open spaces have come under huge compromises between city authorities and customary institutions. This raises the question as to who has absolute control over open spaces in Kumasi. A study by Addo-Fordwuor (2014) revealed that open spaces which should have been controlled and managed by state institutions are actually controlled by traditional and customary institutions. As a result, some customary institutions are able to lease parts of open spaces and reserved areas to private developers and request for rezoning of such spaces for residential or commercial uses.

Though illegal, Makufwe (2014) has suggested that many customary institutions and chiefs in Kumasi see their institutions as the rightful owners of nature reserves, wetlands, school lands, sanitary areas, green spaces, and railway reservation located within their communities. This is explained by the existing domination of customary ownership of the city's land resources traceable to its strong historical origins discussed under Section 2. Power and authority over land and nature reserves exercised by customary institutions in Kumasi is well grounded and almost impossible to usurp, even after over 70 years of state-led urban planning. Customary institutions still hold about 80% of Kumasi's lands in trust for their citizens (Hammond, 2011). Hence access to and use of land, including open spaces, is still controlled or managed in practice by chiefs and caretaker chiefs.

As the seat of the traditional Kingdom, Kumasi and its lands has been administered by the Asantehene for the past 200 years since 1817 to date (Amoako & Korboe, 2011; Korboe, 2001). Thus absolute ownership of Kumasi lands is vested in the Golden Stool on behalf of the people of Kumasi

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Institutions/actors	Roles
Kumasi Metropolitan Assembly (KMA)	 Designing management plans for green spaces in the Metropolis Control haphazard land development and provision of basic social infrastructure to avoid encroachment of open areas Undertake, finance and manage greening projects and programmes for open spaces Assess building proposals, approve and issue building permit
Town and Country Planning Department (TCPD)	 TCPD Formulate policies to guide and direct spatial growth and physical development of the city Manage development and zone areas into open places and other land uses Protect areas conserved as open spaces Issue development and building permit to land developers Set building codes and planning standards
Lands Commission (LC)	 Manage public lands vested in the president and the commission including open spaces Facilitate the acquisition of open spaces on behalf of the government and the KMA Register deeds and instrument that affect land throughout the city and protect open spaces from encroachment
Department of Parks and Gardens (DPG)	 Responsible for environmental landscape development and management of urban green and open spaces Develop and beautify the landscape of new areas zoned as open spaces Protect and maintain existing green areas Maintain and service green spaces facilities
Environmental Protection Agency (EPA)	 Manage and protect green spaces and the environment at large Educate the public on the importance of open spaces and other environmental issues Co-ordinates the activities of organization that are involved in environmental management Formulation environmental policies and regulations and set Environmental Protection Laws and By-laws
Forest Commission (FC)	 Creates, protects and manages the forests and protected open areas in the city It is also mandated to prepare and implement integrated forest and wildlife management plans for the city
Friends of Rivers and Water Bodies	 Advocacy for environmental protection and preservation of water bodies Public education on the need to protect natural resources and the environment

Sources: Compiled from Field study, January, 2016 and Makufwe (2014).

(Hammond, 2011). These lands are managed by the Golden Stool and the divisional/sub - stools as 'caretakers.' As elsewhere in this country the ownership of these kinds of lands, referred to as stool lands, is guaranteed by Article 267 of the 1992 Constitution. In Kumasi, these stool lands come under the direct management of the Asantehene's Land Secretariat. This Customary land institution is the most powerful and at the apex of all customary land management institutions in the Ashanti region.

The Asantehene's land administration system, like many other customary land institutions, predates the current legal, institutional and regulatory framework for land management in urban Ghana. As a result, the current Asantehene's Land Secretariat is recognized by the state's land laws and runs alongside the state's land administration and urban planning institutions. The secretariat was established to manage land under all the 55 caretaker chiefs in the Traditional Council in Kumasi. The caretaker chiefs have sub-chiefs who assist in the management of Land at the local level. The secretariat was established with the aims of processing land title, generating funds for Asantehene, keeping and maintaining accurate and up-to-date records of land dealings, promoting the use of Alternative Dispute Resolution (ADR) and providing information on land owning communities in the city. The secretariat has Liaison Officer (Head of the Secretariat), Assistant Liaison Officer, Quantity Surveyor, Town Planning Officer, Clerks, and Messengers.

The presence of the both indigenous land management and state planning institutions presents huge socio-political and management conflicts over open spaces and urban greenery. Such conflicts in ownership and management have had devastating effects on the management of open spaces in Kumasi (Korboe, 2001; Makufwe, 2014). The evidence of these conflicts have reflected in the encroachments on open spaces and rezoning of open spaces for residential, commercial and industrial uses as discussed under Section 4.

6. Contributions and conclusion

Kumasi's public open spaces and green areas have become easy target for encroachment and occupation by residential, commercial, and other informal and unapproved activities (Adjei Mensah, 2014b, 2014c; Oduro-Ofori et al., 2014). The socio-spatial implications of these encroachments on open spaces include the rapidly changing uses and functions of open space and nature reserves in the city. These functional changes appear to have co-evolved with the land use needs within the catchments of affected open spaces. These adapted spaces reflect the emerging, existing and changing land use demands of the city's residents. The use of open spaces as adapted spaces raises management concerns which have persisted for decades. This paper attempted to provide the historical, socio-spatial, and political explanations to the existing debates on poor management, rapid encroachments, and depletion of green areas in Kumasi (Adjei Mensah, 2014a, 2014b, 2014c; Addo-Fordwuor, 2014; Oduro-Ofori et al., 2014). Consequently, the paper presents a strong case for understanding the historical antecedents and political-economic circumstances that have shaped the establishment, growth, and morphology of Kumasi over the past two hundred years of its existence, as a basis for explaining the socio-political conflicts that influences the management of open spaces in Kumasi. To this end, this paper argues that fundamental to the difficulties in managing open spaces in Kumasi, are the politics of urban land ownership, inability of state/city authorities to officially acquire land for that purpose, domination of customary authorities over the use of urban land, competing need for space around existing open spaces and the changing land use functions in the city.

The study points to conflicting needs among Kumasi's residents, traditional set-up and officialdom when it comes to the creation, usage, and management of open spaces and nature reserves. It appears the whole idea of conserving and preserving public open spaces has been an imposition by state institutions with little or no consultations with the customary and indigenous owners of the land; and residents of the city. This was adequately shown in the historical development and socio-political relationships between the city's traditional structures and state institutions since the early 1900s. This relationship has continued to shape the city's morphology and the powers for managing open spaces (Adjei Mensah, 2015, pp. 222, 223).

The foregoing requires a re-examination of the current institutional framework and socio-political process for the creation and management of open spaces and nature reserves in Kumasi. This calls for a greater collaboration and cooperation between state/city planning institutions and the customary leadership of Kumasi. A clearly defined and shared roles among relevant stakeholders and institutions will be an important entry point. In the medium to long term, relevant amendments in the legal and regulatory frameworks for local governance that ensures greater participation of indigenous/customary institutions may be needed to ensure sustained management of open spaces and nature reserves.

Notes

- 1. The King of the Asante State/Kingdom. The occupant of this revered position carries the title Otumfour and is seen as the owner of all the lands and other natural resources in the Asante state.
- 2. The symbol of authority of the Asantehene the King of the Asante Kingdom.

Disclosure statement

No potential conflict of interest was reported by the authors.

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