

**SUSTAINING URBAN GREEN SPACES IN AFRICA: A CASE STUDY OF KUMASI
METROPOLIS, GHANA**

by

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ABSTRACT

Urban green spaces are useful natural assets that support the development of cities in diverse ways. However, statistics show that these spaces are under severe threat with the situation in Africa been critical. This study sought to assess the governance of urban green spaces and develop sustainable strategies to address problems affecting the development of urban green spaces in the context of Africa. The case study design was used and Kumasi Metropolis (Ghana) was selected as the study area. Different qualitative research techniques were employed whilst representatives of green spaces organisations and the local people constituted the study population. The study revealed that there is poor state of urban green spaces in Kumasi with factors such as urbanisation, poor enforcement of development controls, conflicting land ownership rights on green spaces, and lack of priority to green spaces being among the major causes for that. This problem was further exacerbated by complexity in the governance of green spaces, poor regulation of power among stakeholders, lack of community participation, and lack of consensus in decisions on green spaces. Sustainable strategies recommended to address the situation include controlling encroachment of green spaces, prioritising green spaces and building stronger collaborative governance for green spaces.

DEDICATION

To my wife Augustina Anoom, and children Clifford, Christabel, Caroline and Carolina.

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LIST OF ABBREVIATIONS

AMA	Accra Metropolitan Assembly
CABE	Commission for Architecture and the Built Environment
CBD	Central Business District
CDF	Comprehensive Development Framework
CGR	Collaborative Governance Regime
DPG	Department of Parks and Gardens
DUR	Department of Urban Roads
EPA	Environmental Protection Agency
FAO	Food and Agricultural Organisation
FGD	Focus Group Discussion
FSD	Forest Service Division
GDP	Gross Domestic Product
GPRS	Ghana Poverty Reduction Strategy
IDI	In-depth Interview
IMF	International Monetary Fund
ISODEC	Integrated Social Development Centre
KMA	Kumasi Metropolitan Assembly
KNUST	Kwame Nkrumah University of Science and Technology
MCE	Municipal Chief Executive
MCI	Millennium City Initiative
MGDs	Millennium Development Goals
MMDA	Metropolitan, Municipal and District Assemblies

NDPC	National Development Planning Commission
NGO	Non-Governmental Organisation
OECD	Organisation for Economic Co-operation and Development
PHO	Private Horticultural Organisations
RCC	Regional Coordinating Council
RNR	Renewable Natural Resource
RNRSS	Renewable Natural Resource Sector Strategy
SADP	Savannah Accelerated Development Programme
SMDAs	Sectoral Ministries, Departments and Agencies
TCPD	Town and Country Planning Department
TOD	Transit-Oriented Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organisation
WD	Works Department
WHO	World Health Organisation
WLD	Wildlife Division

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Preserving natural environment such as green spaces in the physical landscape of urban areas has been identified to enhance the health and well-being of urban dwellers (Wolch et al., 2014; Cohen et al., 2008). Frederick Law Olmsted, a renowned landscape architect, classified trees as “the lungs of a city”, an expression which shows how trees and other green spaces are valuable to the development of cities (Jennings et al., 2012). Similarly, Ebenezer Howard, the originator of the garden city model, emphasized the incorporation of green spaces such as parks and gardens into the landmass of cities as vital in town planning due to health and recreational benefits attached to these spaces (Howard, 1902).

Apart from these ideas expressed by well-known urban planners on the need to preserve urban green spaces in city designs, several scholars have also advocated for the integration of green spaces into urban physical landscape due to the huge benefits (environmental, economic and social) these spaces provide to support the growth of urban areas (see for example Wolch et al., 2014; Ernstson, 2012; Baycan-Levent & Nijkamp, 2009; Cohen et al., 2008; Fam et al., 2008). Among these benefits are improving urban air quality, addressing mental and psychological disorders, preserving biodiversity, promoting ecotourism, providing employment opportunities, beautifying architectural designs of cities and supporting social interaction and cohesion. These urban green spaces basically refer to all public and private open spaces in urban areas, mostly covered by vegetation and are directly or indirectly available for use (URGE Team, 2004). Examples include public parks, gardens, playing fields, outdoor sports areas, urban trees, allotments, forests, and woodlands.

Despite the numerous benefits that urban green spaces offer to cities, statistics show that these spaces are on the decline in several cities across the world. For example in Europe, a study on changes in land-use in 25 European cities found between 7.3 and 41 percent of green spaces lost to different land-uses (European Environment Agency, 2002). Similarly, in USA, a study on land-use change in 274 metropolitan areas revealed about 1.4 million hectares of green spaces converted to different land developments (McDonald et al., 2010). The situation in developing countries is even more critical as studies show that most urban green spaces in these areas have excessively been destroyed to make way for different human activities. For instance, studies in different African cities (Mpofu, 2013; Oduwaye, 2013; Fuwape & Onyekwelu, 2011; Makworo & Mireri, 2011; MaConnachie et al., 2008) found massive depletion of urban green spaces with the resultant effect being very low coverage of green spaces in the landmass of many African cities (in many instances they cover less than 10 percent of the total land area). Other studies focusing of developing countries produced similar results with urban green spaces found to be depleting at an alarming rate (Yusof, 2012; Gomes & Moretto, 2011).

These rapid deteriorations of green spaces taken place in urban areas serve as a great worry. This is because the problem is bound to get worse in the years ahead since intensive human activities and infrastructural developments which often destroy these spaces are much concentrated in urban areas. In 2008, the world for the first time achieved unprecedented milestone with more than 50 per cent of the world's population living in urban areas (Fuller & Gaston, 2009). At the moment, substantial portions of the landmass of various continents of the world are classified as urban (Figure1.1), causing many urban green spaces to be destroyed in order to contain the high human population and its associated intensive human activities in urban areas.

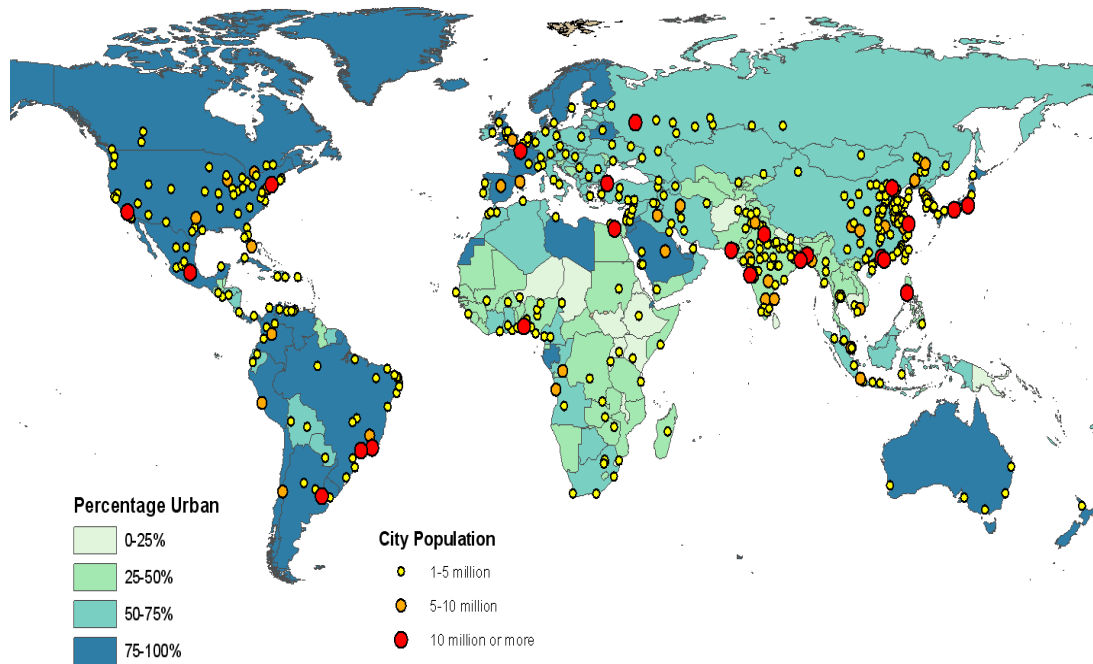


Figure 1.1: A map showing the distribution of the world’s urban population

Source: United Nations (2012)

Future projections on global urbanisation for the next three decades anticipate a rapid rise of urbanisation and its related problems on the natural environment with Africa and Asia expected to be greatly hit by this problem (United Nations, 2012; 2011). This development further put urban green spaces under severe threat as much of these spaces will negatively be affected in future. This problem and its effects on urban green spaces raise questions about the kind of governance arrangements available for such spaces since the overall governance of urban areas are supposed to cover matters of the natural environment of which green spaces are part. Both the World Bank (2007) and OECD (cited in Gisselquist, 2012) conceptualised governance of an area to cover the execution of authorities by selected individuals or a group of people to control various natural and/or man-made resources to enhance human welfare. Such governance is supposed to be responsive by responding to the needs of the people, and effective and efficient to provide quality services. It is also expected to be participatory to

involve diverse ideas and contributions of many stakeholders to effectively manage the available resources in an area. In addition to this, different modes and theories of urban governance such as the clientelistic, corporatist, and managerial modes of governance and also the urban governance and urban regime theories all provide approaches that can be utilised to effectively manage urban areas and their resources (Kjaer, 2009; DiGaetano & Strom, 2003; Pierre, 1999). All these governance arrangements are supposed to take care of urban green spaces but still the management of these spaces remains a problem in many urban areas.

The depleting nature of urban green spaces also lies at the heart of the concept of sustainable development, which since 1970s has remained on top of the agenda of many international discussions to find appropriate strategies to manage the world resources to benefit both the present and future generations (Hall, 2006). The three pillars of sustainable development especially the environment pillar, which focuses on conservation of the natural environment, and the social pillar which concentrates on improving quality of life through social elements, such as equity and governance all concern themselves to the depletion of green spaces and its related management problems. Various action plans of sustainable development provided by the United Nations, such as “Agenda 21” and the “future we want”, which emerged from the 1992 and 2012 conferences on sustainable development respectively, stressed the preservation of the natural environment (such as green spaces) since many social and economic developments depend on the natural environment. Furthermore, the conceptual framing of urban sustainability by Rydin (2010) and Chiesura (2004) all made provisions for green spaces due to the relevance of these spaces in providing ecological, economic and social supports to urban areas.

All these connections between urban green spaces, governance, and sustainability make the depletion of urban green spaces a prime concern for the governance and sustainability of urban areas. This inter linkages therefore makes it important to address the destruction of urban green spaces through the lens of governance and sustainability. Such approach will help to question the relevant governance frameworks and sustainable measures to successfully manage urban green spaces to satisfy the needs of both present and future generations.

1.2 Statement of problem

Over the past two decades various problems such as poverty, outbreak of diseases, climate change, sanitation problems, environmental degradation and deforestation affecting developing countries and Africa in particular have been major topics of discussions in the world. However, studies show that the exigencies in addressing poverty, health and sanitation problems and providing basic human needs constitute the priorities of many developing countries (Bolnick et al., 2006; Marcotullio, 2001). This has therefore caused limited attention to the management of many environmental resources such as green spaces and hence created many knowledge gaps in the literature on urban green spaces in Africa.

First among these gaps is the dearth of literature on urban green spaces in Africa. Many studies on urban green spaces are concentrated in Europe, North America and Asia compared to Africa due to much priority given to green spaces in the development agenda of those regions. This has made easy access to literature on Africa's green spaces a problem. Secondly, studies on urban green spaces in general have failed to address the sustainability of these spaces. Instead, works that focus on themes such as accessibility, benefits, contributions and usage of these spaces remain dominant in the literature on green spaces. In Africa, a study

by Ibironke (2013) came close in addressing this gap but it concentrated on only urban public parks and also failed to give comprehensive account on sustainable practices that can be adopted to preserve urban green spaces.

Furthermore, although statistics show that urban green spaces are rapidly deteriorating in Africa but there is little emphasis on the factors causing these problems. This has created a knowledge gap on the major factors behind the current state of urban green spaces in Africa. Lastly, studies on urban green spaces in Africa have also not touched much on the governance arrangements surrounding these spaces and the participation of various stakeholders, especially the local people, in the management of urban green spaces. This has made it difficult for much attention to be focused on the inefficiencies affecting the governance of urban green spaces for necessary actions to be undertaken to address the situation. It is therefore to bridge these knowledge gaps that this study was undertaken.

1.3 Aim and objectives of the study

The broad aim of this research is to assess the governance of urban green spaces and develop sustainable strategies to address problems affecting the development of urban green spaces in the context of Africa. The specific objectives are to:

- Explore the factors behind the current state of urban green spaces in the context of Africa.
- Assess the organisational arrangements surrounding the management of urban green spaces.
- Evaluate the participation of the local people in the management of urban green spaces.
- Recommend strategies to enhance the sustainability of urban green spaces.

The objectives of the study are guided by the following research questions.

- ❖ To what extent does the destruction of urban green spaces contribute to hampering the sustainable development of urban areas?
- ❖ How do inefficient organisational arrangements lead to a weak management of urban green spaces?
- ❖ To what extent are the local people involved in the management of urban green spaces?
- ❖ How can the challenges facing urban green spaces be addressed to enhance the sustainable development strategies of urban areas?

1.4 Methods

This study aligned itself to the interpretive or constructive research paradigm, which believes that the world or reality is a social construct interpreted by people. This research paradigm is qualitative in nature and geared towards having much understanding of social problems and phenomena. This is against the quantification of reality as a means to obtain objective results which is held by the quantitative paradigm (Maxwell, 2006; Creswell, 2003; Neuman, 2003). In line with the objectives and the broad research questions of the study, which concentrate on gaining in-depth understanding of the governance of urban green spaces and informing available policies on such spaces, the interpretive research paradigm was adopted. Human beings being at the centre of affairs controlling many activities and processes on the governance of green spaces also made the interpretive research paradigm appropriate to get much information from different people to have better understanding of the governing arrangements surrounding these spaces.

Under the interpretive research paradigm, the case study research strategy was used (Yin, 2003) and Kumasi Metropolis in Ghana was selected as the study area. The rationale for selecting Kumasi was that it is one particular city in Africa that served the purpose of the study. It represents all the issues facing urban green spaces in Africa, such as rapid depletion of green spaces and unsustainable nature of these spaces which forms the thrust of the current study. Kumasi as a city was built on the garden city model, which supports the incorporation of many green spaces into cities physical landscape. The 1945 city plan for Kumasi, the Kumasi Planning Scheme between 1963 and 1988, and other planning schemes that underlie the physical development of Kumasi dedicated substantial part of the city's landmass to green spaces (Quagraine, 2011; Moro, 2009; KMA, 2006). In 1960's, the city gained the accolade "the Garden city of West Africa" mainly because of the presence of many well planned green spaces interspersing with physical land developments in the city (Quagraine, 2011). However, recently, several concerns have been raised about poor management of urban green spaces in Kumasi (Asare, 2013; Oduro-Ofori & Braimah, 2013; Taylor 2010) resulting in severe depletion of such spaces in the city (as shown in Figure 1.2).



Figure 1.2: The condition of some green spaces in Kumasi

Source: Fieldwork (2013)

This made it appropriate for the study to concentrate on Kumasi to assess the governance arrangements available on urban green spaces and hence develop necessary sustainable measures to address the situation, which other developing countries (especially African countries) can take lessons from. In consultation with the Department of Parks and Gardens in Kumasi, five neighbourhoods (Patasi, Danyame, Ahodwo, Nhyiaso, Amakom) were selected as specific cases for the study. In addition to this, the green spaces in the central business district (CBD) of Kumasi were also used as another case.

As enshrined in the philosophy of case study research strategy that using different sources of data help to have better understanding of contemporary phenomenon and real life event (Yin, 2003), different sources of data were utilised in the study. These sources were interviews (in-depth interviews and focus group discussions), personal observation, archival records, and documentary data. The interviews were undertaken using semi-structured interview guide. Moreover, because human beings are the centre of case studies and qualitative studies in general, four broad groups of people constituted the study population. These were residents of Kumasi; city authorities; opinion leaders; and officials of some miscellaneous bodies associated with town planning and green space management. The primary data obtained from the study population were complemented with data from secondary materials such as books, journals, reports, and conference papers that focused on the topic under study.

1.5 Structure of the thesis

Taking into account the overall focus of the study, four broad issues stand out clearly. These are urban green spaces; governance especially in urban areas, sustainable development, and the context of Africa and Ghana where the study area is located. Much credence was

therefore given to these issues to structure the whole study to make it well organised. Overall, the study was organised in nine (9) chapters. The content of each of the nine chapters are explained below.

Chapter One sets the stage for the study by introducing the reasons underlying the conduct of the study. It covers the background to the study, aims and objectives as well as the research questions. It also provides brief description of the methods used and an outline of the structure of the entire thesis. Chapter Two serves as the first literature review chapter and discusses concepts and theories on green spaces and sustainable urban planning. It gives broader overview about green spaces in urban planning. It addresses issues such as the nature and definitions of urban green spaces, typologies of green spaces, international standards on green spaces, contributions of green spaces to urban development, and theories on planning around green spaces such as the garden city model, green planning models and green urbanism. The chapter ends by tracing the connections between green spaces and sustainable urban development.

Theories and concepts on governance of urban green spaces form the central theme for Chapter Three which is the second literature review chapter of the study. The chapter starts by tracing the linkages between the concept of governance and sustainable development through social sustainability. Other key topics discussed under this chapter include the concept of urban governance, theories on urban governance, collaborative governance theory, the concept of policy transfer to justify the use of different ideas in the study and conceptual framework for the study.

Chapter Four which is the third literature review chapter situates the study in the context of Africa and Ghana where the study area is located. It reviews literature on issues such as the nature and conditions of urban green spaces in Africa; challenges facing the

growth of urban green spaces in Africa; regulatory and institutional framework for town planning in Ghana; and sustainable development strategies of Ghana. Chapter Five provides a methodological framework for the study. It explains the various methods that the study used. It gives broad discussion and justification for qualitative research approach and case study strategy that the study adopted. The chapter also highlights the ethical considerations and analytical framework that guided the study.

Chapter Six represents the first empirical chapter of the study and assesses the condition and performance of green spaces in Kumasi. It is structured on three broad themes: the state of green spaces in Kumasi, factors affecting the development of green spaces, and contribution of green spaces to the sustainability of Kumasi as a city. Chapter Seven which is the second empirical chapter evaluates the governance for green spaces in the study area. It is built around the collaborative governance theory and discusses issues such as power relations, institutional design, consensus building and community participation in the management of green space in Kumasi.

Chapter Eight being the third empirical chapter covers sustainable practices to preserve and manage urban green spaces in the study area. Dwelling on the findings of the empirical chapters (Chapters 6 and 7), this chapter provides measures to address various problems (physical, socio-economic, political) that affect the development of urban green spaces in Kumasi. Chapter Nine concludes the whole study which focuses on sustaining urban green spaces in Africa, a case study of Kumasi Metropolis in Ghana. It provides a summary of the whole study, highlights major findings and conclusions of the study, contributions and limitations of the study, and areas for future research.

CHAPTER TWO

GREEN SPACES AND SUSTAINABLE URBAN PLANNING

2.1 Introduction

Conserving green spaces within the physical landscape of cities has a universal appeal that cuts across political and cultural divides of the world. This is because green spaces have been identified to play a significant role in the health, liveability and overall sustainability of cities (Haq, 2011; Baycan-Levent & Nijkamp, 2009; Chiesura, 2004; Jim, 2004). This chapter presents the concept of green spaces and its linkages with sustainable urban planning. The objective of this chapter is to give a broader understanding of green spaces in urban planning practice and highlight their relevance in the sustainable planning of cities. The chapter starts by discussing the nature and typology of urban green spaces and the overall contributions of urban green spaces to urban development. Evaluation of different urban development models is treated next to shed light on the relevance of green spaces in the theoretical underpinnings of urban planning. The chapter ends by narrowing the discussion to green spaces and sustainable development, tracing the linkages between the two concepts and highlighting ways that provision of green spaces can be used to help support sustainable development. By the end of the chapter one will have a broader overview of urban green spaces, and as such have comprehensive conceptualisation of urban green spaces and their associated relationships with sustainable development and sustainability of cities in both developed and developing countries. The discussion in this chapter informs the study's empirical analyses on the sustainability of urban green spaces. It also provides useful information on sustainable practices for urban green spaces, through which emphasis can be given to address the knowledge gap of limited attention on sustainable strategies to conserve urban green spaces.

2.2 Nature and definition of urban green spaces¹

The term “green space” is a recent term and its origin can be traced from the urban nature conservation movement and the European thinking about green space planning which started in the UK (Swanwick et al., 2003; Dunnett et al., 2002: 22). The meaning of green space is often confused with other terminologies in urban planning especially open space and public open space. In most cases these terms are used loosely or interchangeably. For clarity between these terms and better understanding of the meaning of green spaces in the urban planning practice, some authors have come up with the following definitions in both developed and developing countries.

In the developed countries, Fratini & Marone (2011) use the term urban green spaces to cover all areas that are naturally or artificially covered with vegetation. Fam et al. (2008) defines urban green spaces as all vegetated spaces including trees, shrubs, and grasses. Similarly, Dunnett et al. (2002: 23) described urban green spaces as lands that are made up mainly of unsealed, permeable, “soft” surfaces such as soil, grass, shrubs, forests, parks, gardens, wetlands and trees which are privately or publicly accessible or managed. In the views of Jim and Chen (2003), urban green spaces consist of outdoor places which have some amount of vegetation and can mainly be found in semi-natural areas. Kit Campbell Associates (2001) opined that urban green spaces consist of any vegetated land or structure, water or geological feature which can be found in urban areas. According to Baycan-Levent et al. (2002), urban green spaces are public or private urban areas, primarily covered by vegetation which are directly or indirectly available to users. In the context of developing countries, Cilliers (2013) dwelling on the works of Tzoulas et al. (2007) and Sandstrom (2002) used the term urban green spaces to refer to entire urban green infrastructure which covers a network

¹ Some aspects of this sub-section have been published in a peer-reviewed journal by the author of this thesis (Mensah, 2014a)

of all natural, semi-natural and artificial ecological systems found at all spatial scales within, around and between urban areas. In broader terms, Yusof (2012) defined urban green spaces as any area or land within an urban area covered with vegetation or water.

Irrespective of the minor differences that exist in the various definitions on green spaces, it can be deduced that in both developed and developing world there is some common agreement on the meaning of urban green spaces. In both contexts the criteria for defining green spaces centred predominantly on the availability of green vegetation which makes urban green spaces to broadly cover all urban spaces or lands that to some extent have some form of vegetation either natural or artificial and are available for human usage. This view makes it quite explicit that the term urban green spaces is not limited to parks and gardens but refers to a much wider set of land cover types that have vegetation on them such as forests, woodlands, urban trees, allotments and many more.

To get much insight on the meaning of urban green spaces, Swanwick et al. (2003) came up with the following description. According to them, urban areas are made up of the built environment and external environment between buildings. The external environment consists of two main entities, “green space” and “grey space” (Figure 2.1). The green space is a useful land that consists predominantly of unsealed, permeable, ‘soft’ surfaces such as soil, grass, shrubs and trees (Swanwick et al., 2003) and they may either be linear (green vegetation along routes), semi-natural (woodland), functional (allotments) and amenity (parks and gardens) in nature.

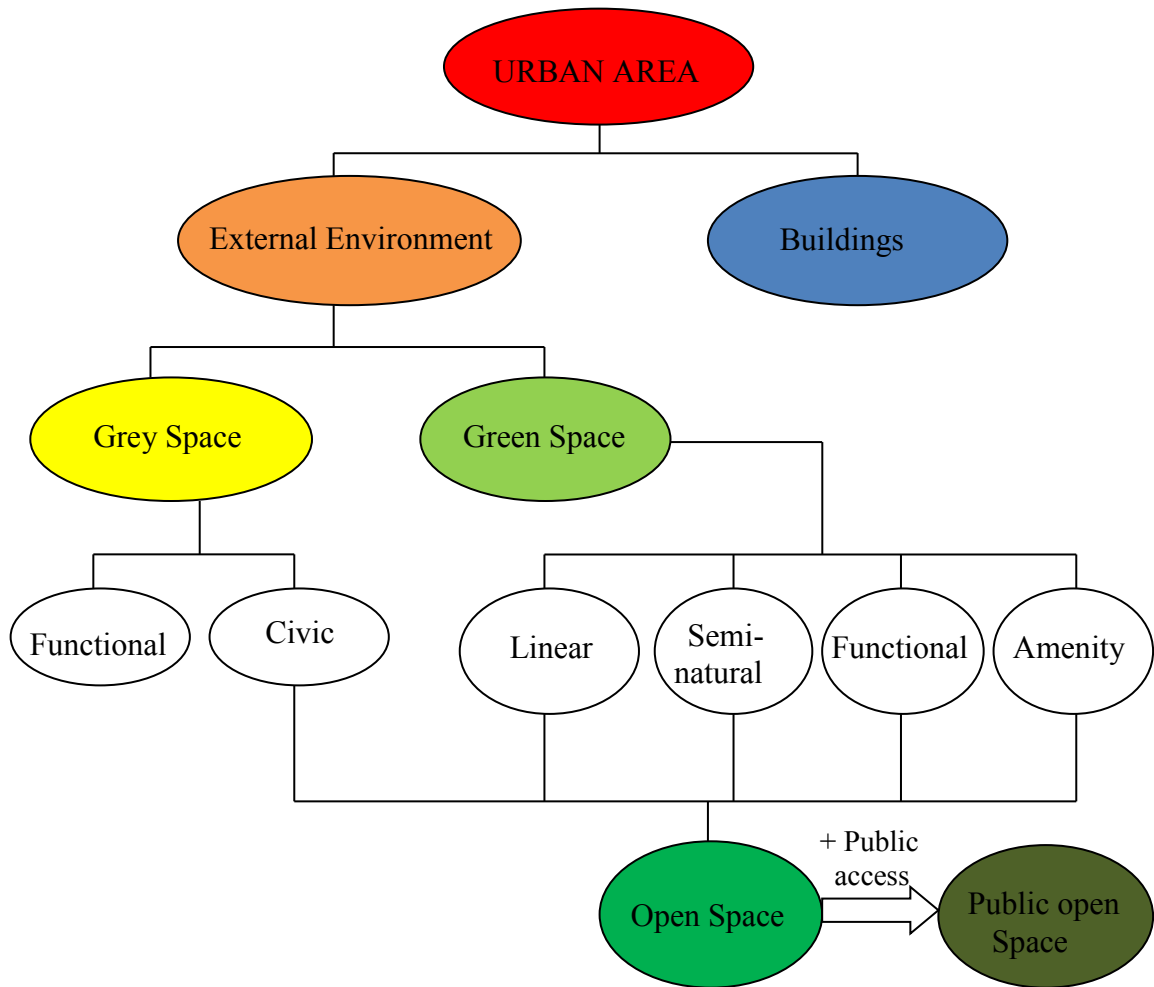


Figure 2.1: Description of green spaces in urban landscape

Source: Swanwick et al. (2003)

The second component of the external environment which is ‘grey space’ is simply land that to a greater extent sealed, impermeable and has ‘hard’ surfaces such as concrete, paving or tarmac. The grey spaces are of two types, functional grey spaces (which provide a specific purpose such as roads, pavements, car parks and many others) and civic grey spaces (publicly accessible areas planned basically for public enjoyment, including town squares, plazas and esplanades). In view of this classification, Swanwick et al. (2003) classified urban open spaces as a combination of green spaces and civic grey spaces (Figure 2.1) and defined it as

that part of urban areas that contributes to its amenity, either visually by contributing positively to the urban landscape, or by virtue of public access. All open spaces that the general public have access to are referred to as public open spaces.

In short, urban green spaces can be said to be a subset of urban open spaces. Whilst urban green spaces are limited to only the vegetative part of the urban environment specifically the soft lands, urban open spaces on the other hand encompass all aspects of green spaces in addition to those hard land surfaces of urban areas (grey spaces) made purposely for human enjoyment. **Putting the various ideas together, the term urban green spaces is used in the context of this study to cover all natural and semi-natural spaces in urban areas that are primarily covered by vegetation, either publicly or privately owned and are easily available for human usage.**

2.2.1 Typology of urban green spaces

The typology of urban green spaces is simply a systematic way of classifying or grouping urban green spaces into specific categories under which all the various forms of green spaces can be found. Many variables such as size, value (function), nature of green spaces, facilities and ownership are often used to classify urban green spaces. In view of this, different forms of classification have been given to urban green spaces. A study by Bonsignore (2003) came across 26 different specific types of urban green spaces in USA. Herzele and Wiedemann (2003) using size as a basis classified urban green spaces into 6 main types (residential green, neighbourhood green, quarter green, city green, district green and urban forest). Laying emphasis on the values or functions of urban green spaces, Baycan-Levent et al. (2004) classified urban green spaces into sixteen distinct types under five main values (ecological, social, economic, planning, and multi-functional values). Furthermore, Azadi et al. (2011) using the nature of green spaces as a yardstick categorised urban green

spaces into 8 broad types (general urban green space, brownfield redevelopment, greenway, neighbourhood gardens, green belt, urban forest, city park and national urban park). Focusing on developing countries, Indra (2008) grouped the green spaces in Yogyakarta (Indonesia) into two broad types (linear, and non-linear spaces) to cover different forms of green spaces such as town parks, sports fields and recreational parks. A study on some African cities also identified seven different forms of green spaces; semi-private spaces (e.g. residential spaces), public green areas (e.g. parks), tree plantations, trees planted for environmental protection, rangeland and forest close to urban areas, nature reserves, and designated parks (Mensah, 2014a; Fuwape & Onyekwelu, 2011).

Furthermore, using a combination of variables such as available facilities, the size and nature of green spaces as criteria, the Institute for Leisure and Amenity Management categorised green spaces into four hierarchical types (Swanwick et al., 2003):

- *Principal/City/Metropolitan Park*: It covers more than 8.0 hectares of land, with a town/city wide catchment, a varied physical resources and a wide range of facilities.
- *District Park*: Its land coverage is up to 8.0 hectares and has a catchment area ranging from 1500 to 2000 metres. It has a mixture of landscape features and a variety of facilities such as sports fields/playing fields and play areas.
- *Neighbourhood Park*: Its size is up to 4.0 hectares and provides services to a catchment area of between 1000 to 1500 metres with availability of both landscape features and a variety of facilities.
- *Local Park*: It stretches up to 1.2 hectares and serves a catchment area of between 500 and 1000 metres. It is usually made up of a play area, informal green area and landscape features but lacks other facilities.

Building on divergent views expressed on the classifications of urban green spaces and relying on variables such as ownership, nature and functions of green spaces, Dunnett et al. (2002) developed a comprehensive classification of urban green spaces. Their taxonomy broadly categorised urban green spaces into four distinctive types: amenity, functional, semi-natural, and linear green spaces (Table 2.1).

Table 2.1: A typology of urban green spaces

Main types of urban green spaces			
All urban green Spaces	Amenity green Space	Recreational green Space	Parks and gardens
			Informal recreational areas
			Outdoor sports areas
			Play areas
		Incidental green space	Housing green space
			Other incidental green space
			Private green space
	Functional green space	Productive green space	Remnant farmlands
			City farms
			Allotments
		Burial grounds	Cemeteries
			Churchyards
		Institutional grounds	School grounds (including school farms and growing areas)
	Other institutional grounds		
	Semi-natural green space	Wetlands	Open/running water
			Marsh fens
		Woodlands	Deciduous woodland
			Coniferous woodland
			Mixed woodland
		Other habitats	Moor/heath
Grassland			
Disturbed ground			
Linear green space	River and canal banks, Transport corridors (road, rail, cycle ways and walking routes)		
	Other linear feature (cliff)		

Source: Dunnett et al. (2002)

The various ideas expressed on the typologies or classifications of urban green spaces show that urban green spaces are broad in scope and nature with some differences existing between the typologies. Hence using one typology without careful attention may create problems such as limiting the classification to only public managed green spaces (such as parks), eliminating some vital forms of green spaces and overlapping of some green spaces which will make the classification inconsistent and not exhaustive. Taking the various typologies into consideration, Dunnett et al.'s (2002) typology of urban green spaces (Table 2.1) is adopted for this study. This is due to its broad nature and embraces all the different forms of urban green spaces irrespective of their size (small or large), ownership (public or private), location (developed and developing countries) and the different functions they serve. Its broad nature makes it robust to cater for cultural differences on the classification of green spaces as different forms of green spaces highlighted in both developed and developing countries are captured under it. The way it is structured also helps to cover all kinds of green spaces and avoid the risk of eliminating some useful urban green spaces.

2.2.2 Standards and coverage of green spaces in cities worldwide

To enhance the provision of green spaces, different quantitative standards on green spaces have emerged. Internationally, the minimum green space standard that has been recommended by the World Health Organisation (WHO) and the Food and Agricultural Organisation (FAO) is 9m² green space per city dweller (Kuchelmeister, 1998). Wang (2009) and Sukopp et al. (1995) have observed that the general green space standard that many developed countries tend to adopt is 20 m² park area per capita. The European Environmental Agency recommends that urban residents should have access to urban green spaces (e.g.

urban parks) within a walking distance of 15 minutes which is approximately 900 metres (Barbosa et al., 2007).

In the UK, English Nature (EN), a UK government agency recommends a provision of 2 hectares accessible green space per 1,000 population, and that no person should live more than 300 metres from the nearest green space, which is about 5 minutes walking distance (Schipperijn et al., 2010; Wray et al., 2005; Handley et al., 2003). The national standard for the provision of green spaces in the USA ranges between 6.25–10.5 acres per 1,000 residents (National Parks and Recreation Association, 2000). The Copenhagen (Denmark) city authorities have adopted a green space standard of providing green spaces within 400 metres for at least 90 percent of residents (Schipperijn et al., 2010).

Similar quantitative standards on green spaces exist in many developing countries. The Bangkok Metropolitan Administration in Thailand has a standard of 10m² green space per capita to enhance the provision of green spaces in Bangkok (Faser, 2002). Although in Africa such quantitative standards have not widely been adopted into the town planning system, in some African countries some provisions have been made. For example, in Cote D'Ivoire, real estate companies are mandated to reserve 5 percent of areas under development for green spaces (Djibri, et al., 2012). The Nairobi city (Kenya) has a recommended standard that new housing estates must have an average of 3,588 people per hectare of neighbourhood open space (Makworo & Mireri, 2011). In Lagos (Nigeria), a planning standard of reserving 8-10 percent of the land area in a residential setting for green spaces is observed (Abegunde, 2011).

Based on these quantitative standards, different studies have quantified the total coverage of green spaces in several cities of the world. For example, a study by Fuller & Gaston (2009) on 380 European cities showed that the proportion of land area covered by

green spaces varies significantly among European cities. It was found out that green space land coverage in European cities ranges from 1.9 per cent in Reggio di Calabria (Italy) to 46 per cent in Ferrol (Spain) (Fuller & Gaston, 2009). The study further revealed that availability of urban green spaces per capita varied from 3 - 4 m² per person in Cádiz, Fuenlabrada, and Almeria (Spain), to more than 300m² per person in Liège (Belgium), Oulu (Finland) and Valenciennes (France). According to Carmona et al. (2004), the average green space in Japan is 8.5 m² per person, and that of Tokyo is 6.1m² per person, compared to 26.9m² per person green space in London. The African Green City Index showed a wide variation of the coverage of green spaces in some African cities (Lange & McNamara, 2011). Cities such as Cape Town (South Africa), Maputo (Mozambique), and Dar es Salaam (Tanzania) had high scores on the coverage of green spaces which were 289.5m², 114.9m², and 64.1m² per capita respectively. However, the coverage of green spaces in cities such as Alexandria (Egypt), Luanda (Angola) and Cairo (Egypt) was below 1m² per city dweller, indicating a very low coverage of urban green spaces. Table 2.2 shows further the coverage of urban green spaces in some regions of the world.

Table 2.2: Estimates of urban green spaces in different regions of the world

Region/Country/ City	Estimated coverage of urban green space
USA	Average green space cover is about 27%, about 32m ² /inhabitant
Hong Kong	Average green space cover is about 1.81%, about 3m ² /inhabitant
Singapore	Average green space cover is about 17.8%, about 7.5m ² per capita
South America	Buenos Aires (Argentina) 1.9m ² green space per city dweller, Curitiba (Brazil) 52m ² green space per city dweller, Santiago (Chile) 10m ² green space per city dweller (Vazques, 2011)
India/Delhi	Average tree and forest cover is about 20% of geographical area and about 21m ² /inhabitant (FSI 2009, as per population data 2001).
Europe	Rotterdam (Holland) 28.3m ² green space per capita, Madrid (Spain) 14m ² green space per capita, Paris (France) 11.5m ² green space per capita (Vazques, 2011)
Africa	Lagos (Nigeria) less than 3% of the land area covered by green spaces; Tunis (Tunisia) 14.5m ² per capita green space

Source: Vazques (2011); Singh et al. (2010)

Although the quantitative standards serve as a benchmark to guide the provision of green spaces and hence inform subsequent planning decisions, their scientific basis remains questionable. Pauleit et al. (2003) criticised such quantitative standards for being narrow and for over-emphasising the required green space per capita and desirable distance to green spaces, while remaining silent on the quality of green space that is also vital. The Centre for Urban & Regional Ecology (2002) also stresses that quantitative standards are too rigid, and focus on accessibility to green spaces but do not adapt to changing needs, and also ignore the quality of green spaces. These issues make it difficult to solely rely on quantitative standards

to assess the overall state of green spaces in a given city because such assessments will be narrow, and not reflect the overall condition of the green spaces. In developing countries, due to the extensive nature of the poor conditions of urban green spaces, using only quantitative standards as a means to conserve these spaces will not be enough to address all the problems affecting the depletion of urban green spaces which take different forms and demand wider solutions.

As a result of this problem, various variables which take into consideration both the quantitative and qualitative nature of green spaces have been suggested as appropriate criteria to assess the overall state of green spaces in cities. Williams and Green (2001) propose that an ideal urban green space should have the following qualities: cleanliness, safety, accessibility and quietness. A study by Dunnet et al. (2002: 66) showed various characteristics that an ideal urban green space should have. These characteristics included availability of recreational facilities (e.g. sports facilities), good access, comfort (e.g. toilet, seats and shelter), natural elements (wildlife, vegetation etc.), presence of staff and inclusiveness. Gobster and Westphal (2004) pointed out cleanliness, naturalness, aesthetics, safety, access and appropriateness of development as among the characteristics that an urban green space in good condition should possess. Community involvement in planning, user satisfaction, equitable access and safety have also been observed to be some of the key features of a good-condition urban green space (Harnik, 2004). The Green Flag Award, which is a pristine award given to parks and other green spaces that are in good condition and well managed in UK, has the following as its criteria: cleanliness, maintenance, facilities, care of historical heritage, environmentally sensitivity management, community participation, good management plan, conservation and attractiveness (UGS Task Force, 2002:62). Plymouth's Green Space Strategy highlighted the following as themes to assess the quality of green spaces: accessibility, welcoming,

community involvement, marketing, attractiveness, safe and secure, management and maintenance, conversation and heritage, sustainability, and design (Plymouth City Council, 2009). A glance through some of the literature on green spaces that focused on the developing world reveals accessibility, community participation, security and availability of facilities to be among the major features of an ideal green space.

The wide range of features or themes expressed in relation to assessing the state of green spaces shows that determining the overall state of green spaces entails a lot and can be cumbersome. This suggests that when performing such tasks in a given city, caution must be taken to select a collection of variables or themes that broadly look at green spaces from different perspectives to make the assessment much more comprehensive. Moreover, the selected themes must be well defined to avoid any ambiguities, and also operationalised to suit the geographical context in which they are used to make the assessment reliable for future studies.

Looking at both developed and developing countries, some common issues have been found to affect the depletion of urban green spaces. The 2012 Global Garden Report stressed emphatically that urbanisation is a major issue causing destruction to many urban green spaces in both developed and developing regions of the world. Different studies in various regions of the world (Europe, Asia, North and South America, and Africa) have linked the depletion of substantial portions of urban green spaces to rapid urbanisation (Gomes & Moretto 2011; Honu et al, 2009; McDonald et al., 2010; Fuller & Gaston, 2009). Rapid urbanisation has caused the conversion of large tracts of green space lands into other land uses to satisfy the growing population. Other major factors highlighted in the literature causing destruction of urban green spaces include poor maintenance, financial constraints and lack of community participation in urban greening projects (Muhumuza & Balkwill, 2013; Carmona

et al., 2004). In most developing countries, the decline of urban green spaces is more worrying, and this is bound to intensify in future as these regions are projected to be greatly hit by massive urbanisation and its associated environmental problems in the next three decades (United Nations, 2012). This problem calls for much attention to be made to protect urban green spaces in developing countries so that the benefits attached to these spaces can easily be tapped. This is one of the research gaps that the study intends to fill. At this point, the study takes a closer look at the numerous contributions that urban green spaces offer to the overall growth of cities, to justify the need to preserve these spaces in the urban physical landscape.

2.3 Contributions of green spaces to urban development

Many studies have provided evidence of pragmatic contributions that urban green spaces offer to support the development of cities (Konijnendijk et al., 2013; Ernstson, 2012; Fam et al., 2008; Harnik, 2004). These contributions cover different dimensions of urban development be it social, economic and environmental. An extensive review of these contributions is provided here to give the current study a more theoretical background on the relevance of green spaces in sustainable urban planning. This is done to demonstrate the usefulness of urban green spaces in the sustainability of cities and also to give a fair idea about how the loss of these spaces can hinder that sustainable development: this is the main focus of one of the research questions of the study. Due to the rich experience and well-documented nature of the benefits of urban green spaces in the developed world, this section focuses more on how these benefits in developed regions can also provide lessons for developing countries.

2.3.1 Social contributions of green spaces

Leisure and recreation have strongly been highlighted in the literature as major social contributions of green spaces to urban development in both developed and developing countries. Haq (2011), drawing on his findings from the UK, Finland and Mexico, classifies green spaces as a major resource for leisure and many outdoor recreational activities in urban areas. Observations in China by Xi-Zhang (2009) and Jim and Chen (2006) revealed that many urban residents use green spaces for recreational activities such as relaxing, playing with children, walking pets, exploring and observing wildlife. Manlun (2003) has found that urban green spaces such as parks and gardens serve as meeting places where the majority of middle and low income people in both developed and developing countries go and spend their time in order to relax. He also indicated that most people in developing countries often organise themselves in urban parks and gardens, with some playing games, going walking and others observing the natural environment.

Aside from recreation, studies show that urban green spaces play a significant role in the development of children. Frequent contact with urban green spaces has been found to offer children the opportunity to experience close contact with nature, which helps to enhance their knowledge about nature, develop a sense of stewardship for the environment, and in the long run, appreciate and love nature (Lowman, 2006). The Association for Childhood Education International has found that children playing in parks and other green spaces easily develop their muscle strength, co-ordination, language, cognitive thinking and reasoning abilities (Isenberg & Quisenberry, 2002). It has further been observed that children's interaction with the natural environment, especially urban green spaces, help them to have a good opportunity to enhance their analytical and strategic thinking and improve their cognitive development (Cornell et al., 2001).

Emphasis has also been given to the contribution of green spaces to improving the health condition of urban dwellers. These contributions stem from close contact with green spaces, improving mental health and psychological well-being (Ernstson, 2012; Barton & Pretty, 2010; Maas et al., 2009), and alleviating stress (Woo et al., 2009), as well as correcting mental disorders in children such as Attention Deficit Hyperactivity Disorder (Louv, 2005; Taylor et al., 2001). The use of urban green spaces for physical activities such as walking, jogging, playing football and other sporting activities has been found to help address the problem of obesity and prevent diseases such as cardiovascular disease, musculoskeletal diseases, stroke and cancer (CJC Consulting, 2005). Studies on the elderly in northern England, Tokyo and some megacities in the world have revealed that the usage of parks by the elderly for physical activities helps to keep them fit, relieves them of some chronic diseases associated with old age and enhances their lifespan in general (Milligan et al., 2004; Takano et al., 2003).

In the area of education, Sorensen et al. (1997) have found that green spaces such as botanical gardens, natural trails and zoos help in informing locals and tourists about different forms of flora and fauna, and offer opportunities for individuals and families to learn about the environment and natural processes. Conner (2005) stressed that different forms of urban green spaces used for research activities in universities and scientific and industrial research organisations help researchers to examine a wide range of biophysical, economic and cultural issues related to the urban natural environment. Fam et al. (2008) gave a classic example of the educational benefits of green spaces by citing the Museum of Economic Botany in Adelaide Botanical Gardens (Australia) used for several researches relating to the natural environment.

A close connection has also been made between access to green spaces and enhancement of social interaction, inclusion and cohesion. A study by Cohen et al. (2008) in Los Angeles concluded that there is a positive association between neighbourhood parks and the ability of residents to interact positively. In addition to this, some people such as the disabled, aged and the young are often excluded from some social events in their society. Urban green spaces such as community parks and gardens provide a platform where different categories of people, including the excluded, come together to have fun with other people (Fan et al., 2011). This helps to promote social inclusion and cohesion. Moreover, Kim and Kaplan (2004) indicated that green spaces and other natural features play an important role in attaching and connecting people to the area in which they live and their local community at large.

National heritage and culture is another area that the contribution of urban green spaces is felt. According to the Urban Green Space Taskforce [UGS Taskforce] (2002), some urban green spaces provide avenues to host many national and cultural ceremonies such as local festivals, civic celebrations and other cultural events. In addition to this, urban green spaces sometimes contain historic and cultural artefacts such as burial grounds, monuments, fountains and exotic pavilions which help to preserve culture and national heritage (BOP Consulting, 2012; UGS Taskforce, 2002).

In a nut shell, green spaces offer a range of social contributions such as leisure and recreation, improved health condition, support for children's development, enhanced social interaction and preservation of national heritage, all of which support the development of urban areas in both developed and developing countries.

2.3.2 Environmental contributions of green spaces

Climate change and its associated problems, which remain at the forefront of world discussions, have been found to be mitigated by the availability of many green spaces. Green spaces have been observed to contribute positively in regulating the local urban climate (Konijnendijk et al., 2013; Fam et al., 2008; Kottmeier et al., 2007). The presence of many hard surfaces in urban areas, such as asphalt, pavements and other concrete surfaces, tend to easily absorb solar radiation but release it back into the atmosphere slowly, causing urban areas to heat up very fast, leading to urban heat islands. Studies in both developed and developing countries have shown that conserving many urban green spaces helps to increase both the reflection of solar radiation from the land surface and evapotranspiration, which cool down urban temperatures and consequently modify the climate in these areas (Konijnendijk et al., 2013; Fam et al., 2008). Similar findings from studies by McPherson and Muchnick (2005), and Alexandri and Jones (2008) revealed that urban green spaces help to mitigate urban high temperatures, lower the effect of urban heat islands and further enhance the comfort of urban dwellers. Observations by Kottmeier et al. (2007) and Gomez et al. (2004) indicated that urban green spaces act as coolers and regulators of the air and temperature exchange which helps to improve the urban climate.

Improving urban air quality is another environmental contribution of urban green spaces that is well acknowledged (Konijnendijk et al., 2013; Getter & Rowe, 2006; Nowak et al., 2006). A study focusing on Ottawa and Singapore, where most of the buildings have green vegetation on their roofs, showed considerable reduction of sulphur dioxide and nitrous oxide in those areas (Getter & Rowe, 2006). The availability of many urban trees has been observed to enhance urban air quality by helping to remove some pollutants such as carbon monoxide, nitrogen oxide and sulphur dioxide from the atmosphere (Nowak et al., 2006). This

shows that the presence of many urban trees (green spaces) helps to intercept the movement of some pollutants and consequently minimise the rate of urban air pollution.

Furthermore, the protection of biodiversity (plants and animals) by urban green spaces is well highlighted in the literature on the conservation of the natural environment. Many studies on the urban environment have shown that different forms of urban green spaces contain significant amount of biodiversity (Alvey, 2006; Bonnes et al. 2004; Cornelis & Hemy, 2004; Godefroid & Koedam, 2003; Jim & Liu, 2001). Cornelis and Hemy (2004), in a survey of 15 parks in urban areas of Flanders (Belgium), concluded that those parks contain about 30 per cent, 50 per cent and 60 per cent of wild plants, birds and amphibians respectively. A study undertaken in the UK revealed that golf courses have a high volume of tree species and wide diversity of birds (Tanner & Gange, 2005). Related to this contribution is the control of some urban environmental problems by green spaces such as soil erosion. Studies have shown that the presence of different forms of urban green spaces, such as urban trees, forests, golf courses, parks and gardens, help to stabilise urban soils, minimise the effects of agents of erosion (wind and water) and ultimately protect urban lands from destructive erosion (Zhou & Shangguan, 2007; De Baets et al., 2006).

From an architectural point of view, urban green spaces help to beautify urban design and the overall urban landscape. Manlun (2003) points out that green vegetation helps to enrich the urban architecture and beautify the landscape through its different forms and styles. Apart from the beauty that green spaces add to urban architecture, they also help to enhance urban aesthetic quality, which makes urban areas more uniform and well diverse (Manlun, 2003). According to Baycan-Levent and Nijkamp (2009), when designing towns and cities, green spaces are very important because they help to enhance their identity which can improve the cities' attractiveness as places to live, work, invest in and as tourist destinations.

Taking the various environmental contributions of green spaces into account, it can be deduced that these contributions help to address various urban environmental problems affecting both developed and developing countries. Hence, much attention to green spaces in a particular city (either developed or developing) will inevitably help to bring some environmental problems under control.

2.3.3 Economic contributions of green spaces

Economically, since urban greening projects are often labour-intensive and require high maintenance works, they provide both temporary jobs (soil preparation, planting etc.) as well as more permanent jobs (maintenance, management etc.) for many people both in developed and developing countries (1997). In developing countries, such job opportunities are very important as they help to reduce the high rate of unemployment confronting many countries. In Africa, a study by Djibril et al. (2012) found hundreds of people employed in different capacities to work on green spaces under the department in charge of managing urban green spaces in Abidjan (Cote D'Ivoire). Furthermore, different activities on urban green spaces are estimated to generate employment opportunities for about 80,000 people in Australia (Aldous, 2005). A study by Blue Sky Green Space (2011) revealed that there are over 50,000 people who are directly employed within public parks and gardens in the UK, and many others employed in industries associated with green spaces such as manufacturers of park-based equipment and products.

Increasing property values serve as another important economic contribution of green spaces to urban development (Lutzenhiser & Netusil, 2001). The findings from a study in towns such as Emmen, Appeldoorn and Leiden in the Netherlands revealed that houses sited near parks have higher property values than those far away from natural parks (Luttik, 2000). These high property values were found to increase government revenue and thus help support

different government projects. For example, in Ontario (Canada), a statistical analysis of data of two neighbourhoods showed that the property values of houses around green spaces have increased substantially, and this helped the government to increased property tax revenue of about 8 per cent (Crompton, 1999). In Philadelphia (USA), the story was similar. The overall tax revenue that the government got as a result of increase in property value of houses close to green spaces was more than \$18 million (The Trust for Public Land, 2008).

Urban green spaces have also been observed to influence the location decisions of businesses. In other words, green spaces attract businesses to locate around them for high customer patronage and for health reasons. It has been established that well-planned and maintained green spaces improve an area's image and attract businesses, customers, employees and different services, which create a good business environment and boost investment (Saraev, 2012; Land Use Consultants, 2004; DoE & The Association of Town Centre Management, 1997). High tourism value has also been associated with green spaces; as Saraev (2012) and Aiello et al. (2010) noted the creation of green spaces such as community forests, botanical gardens and zoos as well as the greening of community centres attract tourists whose spending on goods and services (such as hotels, restaurants, transport, clothing and food) generate investments to support local economies and businesses in both developed and developing countries. The overall economic contributions of green spaces therefore take different forms and bring different economic prospects that developed and developing cities in the world can make good use of to support the development of their cities.

In summarising the contributions of green spaces to urban development, it can be said that urban green spaces are useful natural resources that contribute positively in diverse ways to enhance the development and sustainability of urban areas. Their contributions are broadly

reflected in the social, economic and environmental dimensions of urban areas, these are summarised in Figure 2.2. Although most of these contributions are highly evident in the developed world, since the conservation of the urban natural environment such as green spaces is now encouraged by many international bodies and national governments across the world, these contributions now also provide good lessons for the developing world. In Africa for example, the contributions of urban green spaces can help to address several environmental and health problems affecting the region.

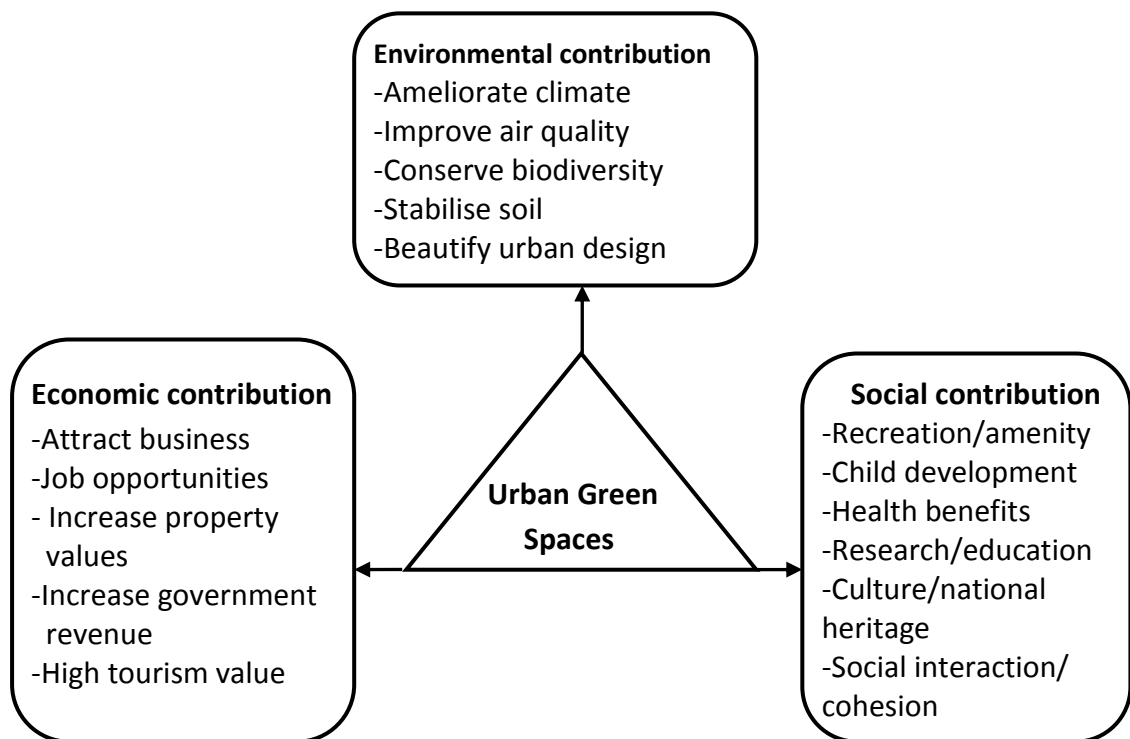


Figure 2.2: Contribution of green spaces to urban development in both developed and developing countries

Source: Authors construct (2014)

Apart from the practical contributions that green spaces provide to support urban development in different ways, the relevance of green spaces in urban development is also reflected in different urban development models or theories. Many of these models have

provision for green spaces embedded in their theoretical frameworks. In order to have a solid background on the conceptualisation of green spaces in the urban development, the next section discusses these models in detail to highlight the importance they attach to green spaces.

2.4 Urban development models/theories on green spaces

Different urban development models or theories that give attention to the provision and preservation of green spaces can broadly be categorised under two themes: *planning around green spaces* (garden city, green planning models, and green urbanism) and *efficient land-use or land preservation* (compact city, smart growth and new urbanism). This derives from the principles that underlie these models/theories. A discussion of these models/theories is provided here to give strong theoretical support for the incorporation of green spaces into cities' physical landscapes, and also to trace the connection between urban green spaces and sustainable urban development, which has received less attention in the literature on urban green spaces. Each of the broad models/theories provides distinctive approaches or ways to consider how green spaces can be integrated into urban development. This informs the study's empirical analysis of various approaches that can be pursued to enhance the sustainability of urban green spaces.

Although these models/theories concentrate very much on developed countries, their importance in guiding efficient use of land, preserving the natural environment and encouraging sustainable urban land form, as well as their incorporation in the planning agenda of many developing countries, have also made them influence the development of many developing cities. A typical example is Kumasi, once the garden city of West Africa.

2.4.1 Theories on planning around green spaces

The various theories discussed in this section are the garden city model, green planning models and green urbanism. They strongly emphasise the need to preserve green spaces and the varied contributions offered by such preserved spaces to the development of cities, this is vital to the theoretical framework of the current study. They also provide the study different ideas through which green spaces can be incorporated into a city's physical landscape. This is important to the sustainability of such spaces in urban areas, which is the broad aim of the study.

2.4.1.1 The garden city model ²

The garden city model is among the key landmark urban utopian models, such as Charles Fourier's fantasy villages (called "phalansteries"), Ernest Callebach's novel "Ecotopia" and Le Corbusier's idea of "La ville verte" (the green city) which stressed the need to preserve the natural environment (Stahle, 2010; Baycan-Levent & Nijkamp, 2009). It was introduced by Ebenezer Howard (1850-1929) to solve social and health problems (such as overcrowding and pollution) that were brought about by the industrial revolution at the end of the 18th Century. He elaborated on this model in his book entitled "Tomorrow: A Peaceful Path to Real Reform" which was first published in 1898 and later revised in 1902 under the title "Garden Cities of Tomorrow" (Hall, 2002). In theorising the garden city model, Howard (1902) noted that to address the unhealthy lifestyles in cities, towns and the country (village) must be married (integrated), and that out of this union would spring a third alternative (garden city) which would provide a new hope and life. Howard remarked as follows:

² Some aspects of this sub-section have been published in a peer-reviewed journal by the author of this thesis (Mensah, 2014b)

There are in reality not only, as is so constantly assumed, two alternatives – town life and country life – but a third alternative in which all the advantages of the most energetic and active town life, with all the beauty and delight of the country, may be secured in perfect combination; the Town-Country which are seen to be free from the disadvantages of either (Howard, 1902: 8-10).

According to the garden city model, both cities and the countryside have unique qualities that attract people to them. For the countryside, the beauty of nature, fresh air, sunshine and the fruits of the earth are the magnets pulling people to the land whilst cities on the other hand attract people as a result of opportunities such as employment, hopes of advancement, social enrichment, higher wages and cultural activities (Clark, 2003). The proposed third magnet (garden city) combines the “energetic and active town life with all the beauty and delight of the countryside” without the negatives of either town or countryside (Howard, 1902: 15-17). In principle, the garden city model was to bridge the gap separating society from the natural environment (Sandstrom, 2009). It was to be a hybrid of the advantages of city and countryside, and was conceptualised as embracing three magnets (Figure 2.3).

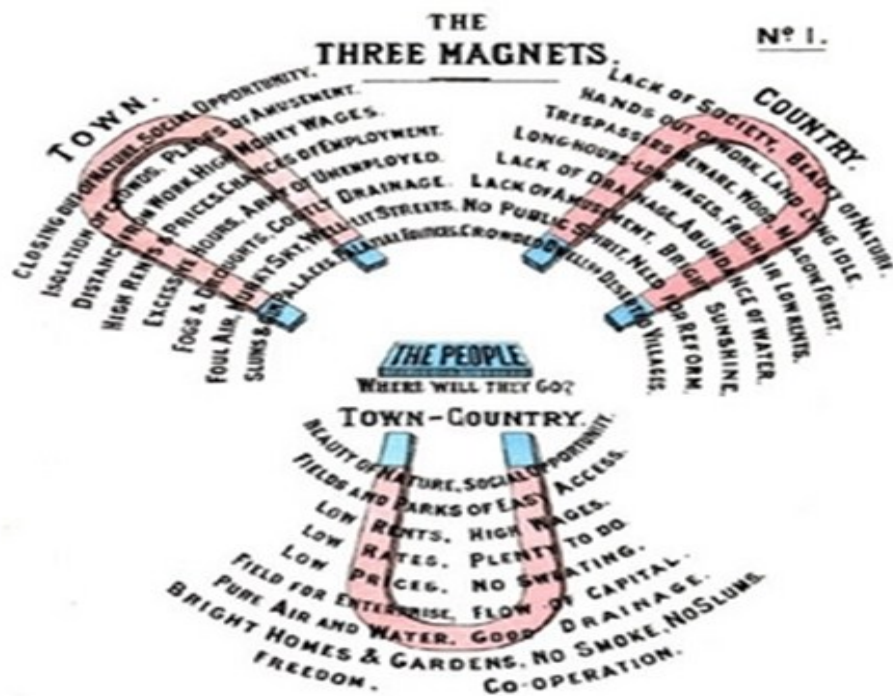


Figure 2.3: Ebenezer Howard’s three magnets

Source: Howard (1902)

Concerning the structure of the garden city, it was supposed to be built on 6000 acres of undeveloped agricultural land with the city occupying 1000 acres near the centre of the whole landmass and the remaining 5000 acres serving as green belt. It was to accommodate an estimated population of about 32,000 people (Clark, 2003; Ward, 1992).

Green spaces featured prominently in this model as they occupied more than half of the city’s landmass. They were also positioned at vantage points to enable city dwellers to enjoy the natural environment. For example, Howard (1902) allocated the centre of the garden city to the creation of a public garden (Figure 2.4). After the public garden, which was surrounded by large public buildings, there was also a large space dedicated to a public park designed to provide a recreational avenue for city dwellers. In addition to this, the various road networks contained in the garden city were lined with trees and the housing blocks had ample spaces for gardens so as to integrate the roads and homes into the natural setting of the

garden city. A Grand Avenue, a conspicuous feature of the garden city model, further provided spaces for a series of parks. According to the Town and Country Planning Association (2014), green spaces in the garden city model offered the opportunity to enhance human development through frequent contact with the natural environment. Such enhancement would be gained through homes designed to stand amid gardens in order to promote healthy living, and through the availability of enough shared parks and gardens for social interaction, sports and leisure activities.

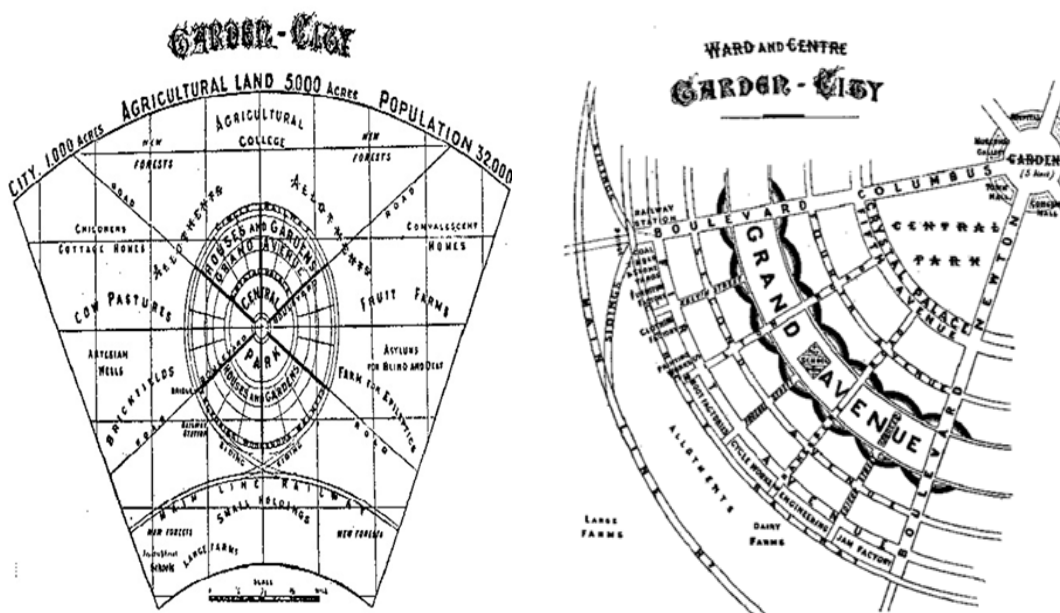


Figure 2.4: The garden city land structure

Source: Ebenezer Howard (1902)

Letchworth and Welwyn were the first and second cities in Great Britain to which the garden city model was successfully applied. Subsequently, through colonisation, trade and adoption of the town planning policies of UK by other countries, the model spread to other parts of the world (Abegubde et al., 2009; Okpala, 2009). In developing countries, the garden city model has been implemented in several cities, such as Pinelands (South Africa), Kumasi (Ghana) and Putrajaya (Malaysia). Notwithstanding the huge impact that the garden city model made

in preserving the urban natural environment, Bookchin (1974) opined that it does not give proper consideration to social conflicts in productive relationships, issues of income and social intercourse with nature (pp. 116-124). Similarly, Aalen (1992) lamented that Howard's conviction that social change could materialise from a new physical environment seems impossible. However, the model has gained much recognition in urban planning and is often referred to on matters pertaining to new towns and green space development.

2.4.1.2 Green planning models

After the garden city model had set the stage for incorporating green spaces into the urban landscape, some other greening planning models emerged. These models were intended to supplement the ideologies of the garden city model, and also enhance the management of the natural vegetation in urban areas. These models were the greenbelt, green heart, green finger, greenway/wedge and green roof. They demonstrate different ways through which urban vegetation could be designed and preserved.

The idea of the greenbelt emerged from the garden city model as a protective mechanism to check the outward growth of urban areas. It was popular from the beginning of the 20th Century and used predominantly in the UK. Greenbelts are created at the outskirts of cities in a form of a ring to prevent urban sprawl (Figure 2.5). Their main functions include prevention of urban sprawl into the countryside or periphery, serving as physical boundaries that separate one city from the other and safeguarding land in the periphery for recreation, agriculture and forestry (Amati, 2008; Prior & Raemaekers, 2007). Both Letchworth and Welwyn garden cities (England), which are recognised as the earliest garden cities in the world, had greenbelts around them (Hall, 2002). Other notable examples of greenbelts include the Ottawa greenbelt (Canada), Seoul greenbelt (South Korea) and Sao Paulo city greenbelt

(Brazil). Critics of this model argue that the rapid urban sprawl taking place in the world as a result of the high rate of urbanisation has rendered the greenbelt model an ineffective and inappropriate way to preserve many green spaces in urban areas (Prior & Raemaekers, 2007; Zonneveld, 2007).

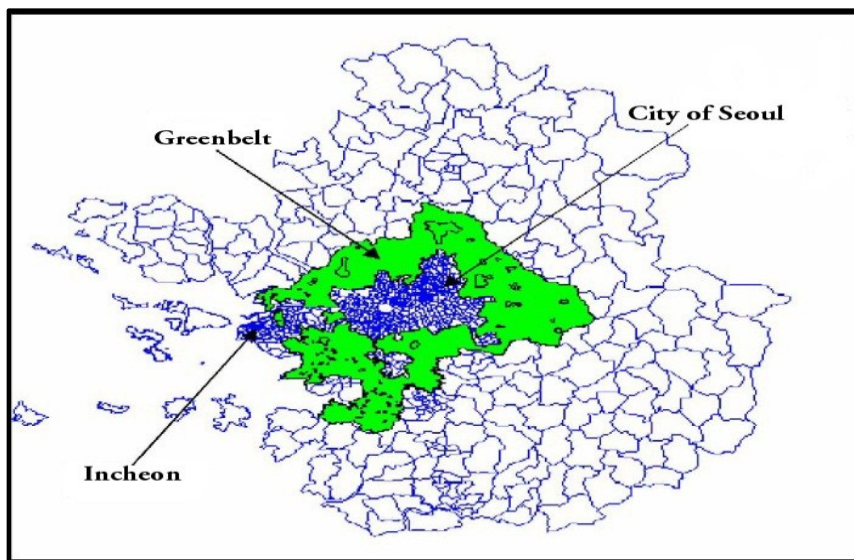


Figure 2.5: An example of greenbelt in Seoul

Source: Bengston & Youn (2006)

Unlike the greenbelt planning model, where emphasis is placed on the creation of green spaces at the periphery of cities, the green heart model focuses on creating many green spaces at the centre of a city, with many built up areas surrounding such spaces. The main aim of the green heart model is to control the fusion of urban areas and address the problem of congestion at the centre of a city (Xi-Zhang, 2009; Lorzing, 2004). A clear example of the green heart model can be found in Randstad (Netherlands), where cities such as Amsterdam, Rotterdam, Utrecht, Leiden and Den Haag form an urban ring encompassing a large land area at the centre occupied by green spaces (Figure 2.6).

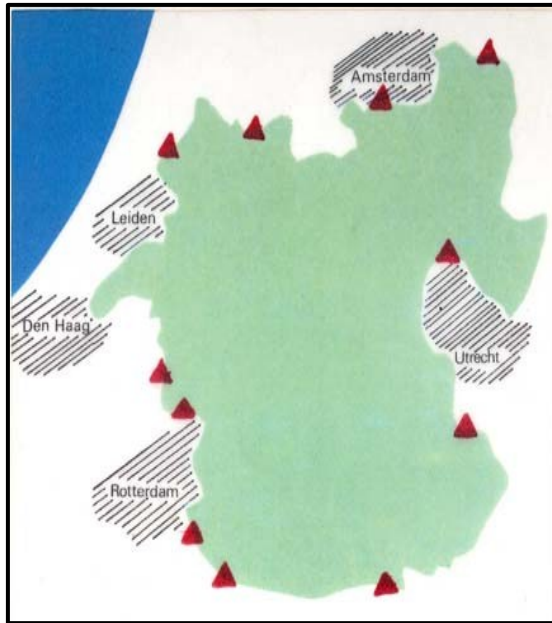


Figure 2.6: Green heart of Randstadt

Source: Harrison & Harrison (1994)



Figure 2.7: Green finger plan of Copenhagen

Source: Vejre (2008)

The green finger model denotes a radial form of green spaces or green vegetation that goes from the centre of a city outwards (Turner, 2006; Taylor et al., 1995). It is often shaped like human fingers, and its function is to help bring green vegetation into the core of urban areas and its adjoining areas to enable urban dwellers have easy access to green spaces. The 1947 five-finger plan of Copenhagen serves as a key example of the green finger model (Figure 2.7). The critics of this model stress that it cannot be implemented independently to achieve satisfactory results unless it is initiated in conjunction with other quantitative models (Maruani & Amit-Cohen, 2007).

The Greenways model is a recent urban greening management model. It is sometimes called green wedges. It was in the 20th Century that its usage became popular in urban planning circles (Fabos & Ryan, 2006; Walmsley, 2006). It is basically a green space created along linear features such as roads, railways, rivers and ridges (Figure 2.8). It helps to preserve green spaces along these linear features, and brings much green vegetation into

urban areas. A typical example is the Fish Creek greenways in Calgary (Canada). The total length of the Fish Creek greenways is about 13 kilometres with an average width of 0.8 kilometres (Taylor et al., 1995).

Currently, green roof is another approach that is being adopted to enhance the greening of some cities, such as Toronto (Banting et al., 2005). The green roof model covers the creation of green vegetation on the roofs of buildings (Figure 2.9). Its benefits include minimising urban air pollution, serving as habitat for wildlife and beautifying the urban landscape. Although it is an innovation to integrate green spaces in urban areas, the high cost associated with installation of green roofs on buildings (Getter & Rowe, 2006) makes its application not as widespread as the other green planning models. Table 2.3 summarises the key thoughts of the different green planning models and where they have been applied.



Figure 2.8: Greenways of New York

Source: Lutz (2008)



Figure 2.9: Image of green roof in Toronto

Source: Silver (2009)

Table 2.3: Green planning models and where they have been applied

Green planning models	Key thoughts	Example
Garden city model	Integrate countryside's key features of open space and natural vegetation into urban developments to promote healthy environment	Garden cities of Letchworth and Welwyn
Greenbelt	Created around cities to prevent urban sprawl, and serves as physical boundary separating two cities	Ottawa green belt, Seoul green belt, London green belt
Green heart	Developed at the centre of cities to check urban growth and fusion of urban areas	Green heart of Randstadt
Green fingers	Radial in nature, going from the centre of cities outwards. Brings green vegetation to the core of urban areas to enhance access to these spaces	Five finger plan of Copenhagen
Green ways/wedges	Developed along linear features such as roads, railways etc. Protects natural vegetation along linear features	Fish Creek greenway in Calgary Greenways of New York
Green roofs	Created on the roofs of urban buildings to enhance the urban greenery and reduce pollution	Green roof policy of Toronto

Source: Authors construct (2014)

2.4.1.3 Green urbanism

Green urbanism guides policies and projects which aim to develop new urban areas with the ambition of protecting the natural urban environment. It is a key concept that supports the creation and maintenance of urban green spaces as part of the urban landscape. Walls (2008) defines green urbanism as a practice of creating communities that are beneficial to human beings and the natural environment as a whole. In breaking the concept down, he stresses that the term “green” signifies a good or sound environment whilst “urbanism” is the art or practice of developing new urban areas. According to Karlenzig (2007), green urbanism as a concept started gradually in the late 1980s in some cities in the USA, but gained much

attention in the 1990s when many cities around the world started adopting some of its principles. Green urbanism involves applying green building principles, processes and technologies at the neighbourhood scale; linking buildings, infrastructure and natural systems (Walls, 2008).

The major goals that underline green urbanism include: creating cities to facilitate and encourage more sustainable and healthful lifestyles; developing cities to be green and function in ways equivalent to nature; and designing cities that strive to live within their ecological limits. In achieving these goals, conserving the urban natural vegetation, and to a greater extent, green spaces is paramount. As a result of this, more urban green spaces, such as urban trees, parks, gardens, forests and green roofs are recommended to be integrated into the urban landscape to mitigate the effects of urban heat island and other environmental problems (Lehmann, 2010 a, b; Beatly, 2000). Green urbanism therefore supports the incorporation of green spaces into a city's physical landscape as a means to conserve the urban natural environment.

2.4.2 Theories on efficient urban land-use or land preservation

Among the theories that this section gives credence to are the compact city theory, smart growth and new urbanism. These theories give comprehensive approaches to guide efficient use of urban lands and are useful for the preservation of urban green spaces.

2.4.2.1 Compact city theory

The compact city theory is built around the concepts of efficient land-use and urban containment (Westerink et al., 2013). Burton (2000) describes a compact city as having a relatively high-density population, mixed-use of land, an efficient public transport system and dimensions that encourage walking and cycling. Williams (1999) broadly identifies the goals

of compact cities to include the following: urban containment and efficiency of land-use, viability of public transport; low car dependency; low climate change emissions; public health benefits of non-motorised travel; protection of the countryside; land for agriculture; ecological diversity and densification of urban neighbourhoods.

This theory has widely been accepted to support the sustainable development of cities due to the numerous social, economic and environmental benefits it offers to cities (European Commission, 2011; United Nations, 1993). Kotharkar (2012) indicates that compact cities facilitate sustainable use of land by efficiently utilising it, conserving the natural environment and minimising pollution (environmental sustainability) as well as promoting social sustainability, as compactness enhances social cohesion and cultural development, and supporting economic viability since the per capita cost of infrastructure provision is less. It is also viewed to provide diverse services through mixed land-uses, revitalise old urban areas, reduce urban carbon emissions, protect the countryside from undue destructions and support local businesses by helping businesses to locate in close proximity to a greater number of people (Lin & Yang, 2006; Arbury, 2005; Williams et al., 2000; Jenks et al., 1996). Within the framework of compact cities, conservation of green spaces such as forests and parks is highly recognised. The concentration of urban development within a defined location helps to preserve most of the green vegetation at the outskirts of urban areas. Kotharkar (2012) and Nabielek (2012) emphasise this by indicating that compact cities reduce land usage, thereby providing much space for green vegetation in the countryside, agricultural land, natural areas and recreational centres. This allows the provision of green spaces to be factored into the broad framework of compact cities. Hence, integration of green spaces such as parks and gardens into a city's physical landscape provides easy access to recreational opportunities and

encourages physical activities such as walking and cycling, which are key elements of compact cities (Jim, 2013; 2004).

The proponents of compact cities are against urban sprawl, which is believed to cause unsustainable urban developments and much destruction to the urban natural environment (green spaces). Urban sprawl is characterised by low density, leapfrog, strip or ribbon and isolated urban development, which causes outward expansion of cities resulting in unplanned, uncontrolled, haphazard and uncoordinated urban form (Brody, 2013; Nelson, 1995). Its consequences on the natural environment stem from excessive destruction of the natural landscape, including green spaces, due to its outward expansion, severe pollution levels because of high reliance on automobiles for transportation, and socio-economic segregation due to exclusionary housing markets (Garcia & Riera, 2003; Guiliano & Narayan, 2003; Carruthers & Ulfarsson, 2002: 315). The vast usage of land that takes place under urban sprawl subjects different urban green spaces such as farmlands, forests, wetlands and parks to significant destruction as a result of different land-uses needed to accommodate the growing population (Wilson & Chakraborty, 2013; Dumas et al., 2008; Robinson et al., 2005). Although the compact city concept theory provides wide range of economic, social and environment benefits to support the development of urban areas, however, its application should be checked since critics of this theory indicate that there is lack of consensus on the meaning of compact cities and no well-defined indicators to measure it (Burton, 2002).

2.4.2.2 Smart growth and new urbanism

Smart growth emerged in the 1990s when several large institutional actors in urban development in the USA began to promote an alternative growth paradigm to their existing sprawl developments (Goetz, 2005). The USA Environmental Protection Agency (2002) described smart growth as a kind of urban growth that has the following features: combined

different land-uses; compact building design; diverse housing opportunities in a compact form; walkable communities with a variety of transportation options; reliance on participatory planning; and predictable decision processes to preserve and strengthen existing settlements and promote a strong sense of place. Alternatively, Litman (2012a) views smart growth as a set of development principles and planning practices that result in more efficient land-use and transport patterns.

To have a clear understanding about what smart growth entails, a study by Ye et al. (2005), reflecting on works undertaken by Smart Growth Network (SGN), Smart Growth America (SMA), Sierra Club (SC) and the American Planning Association (APA), found that smart growth covers six main elements or dimensions. These elements are planning, transportation, housing, community development, economic development and natural resource preservation (Table 2.4)

Table 2.4: The main elements of smart growth

<p>Planning</p> <ul style="list-style-type: none"> -Comprehensive planning - Mixed land uses - Increased densities - Street connectivity -Alternative/innovative water infrastructure and system - Public facility planning 	<p>Transportation</p> <ul style="list-style-type: none"> - Pedestrianisation - Facility for cycling - Public transit promotion - System integration and nodal networks 	<p>Economic development</p> <ul style="list-style-type: none"> - Neighbourhood business - Downtown revitalisation - Infill development
<p>Housing</p> <ul style="list-style-type: none"> - Multi-family housing - Smaller lots - Manufactured homes - Housing for special needs and diverse households 	<p>Community development</p> <ul style="list-style-type: none"> - Popular participation -Recognising/promoting the unique features of each community 	<p>Natural resource preservation</p> <ul style="list-style-type: none"> - Farmland preservation - Subdivision conservation - Easement conservation - Transferable development rights - Purchase of development rights - Historical preservation -Ecological land preservation

Source: Ye, et al. (2005)

The relevance of green spaces lies in the preservation of natural resources which is one of the six main elements of smart growth. Smart growth supports the restoration, conservation and integration of green spaces and other nature and cultural features into the city landscape by removing development pressure on these lands through the infill and densification of existing communities. Strategies used to preserve green spaces in smart growth development include strict regulations on land-use preservation, incorporation of landscaping principles into private and public property, and usage of market based mechanisms such as transfer of development rights, donated conservation easements and purchase of development rights (Ye et al., 2005; Smart Growth BC, n.d.). These all contribute to enhancing the liveability of cities. Urban development guided by smart growth principles provides diverse benefits that support the sustainability of urban areas and development of green spaces. These benefits include reduction of air and water pollution, brownfields clean-up and reuse, preservation of natural lands (green spaces), improved accessibility and house options and greatly increased energy conservation (Geller, 2003; Burchell, et al., 2005, 2002; Litman, 2012a).

Closely related to smart growth theory is new urbanism. Its main goals are to minimise the dependence on the usage of automobiles (cars), and to create liveable and walkable neighbourhoods with a densely packed array of housing, jobs and commercial sites (Briney, 2009). New urbanism blends a whole range of spatial patterns that are not only good urban design, but also fit well with many other vital planning goals including growth management, environmental protection and urban revitalisation (Ellis, 2002). This blend makes preservation of green spaces one of its main principles as a means to conserve the natural environment to maintain the ecological balance between nature and physical development, and also to support different physical activities such as recreation and walking. Like smart growth, new urbanism

focuses on developing compact land forms in cities, towns and villages to promote mixed land-use, a transit-friendly environment and a diverse range of housing. However, it differs from smart growth by focusing more on the physical land form with the view that changes in physical land form are preconditions for urban economic, social and ecological changes (Knaap & Talen, 2005). One key example of a new urbanist town is Seaside in Florida (USA) (Briney, 2009).

In summary, these urban development models/theories discussed above offer different approaches and strategies to enhance the development of urban areas and conservation of green spaces in a city's physical landscape. They therefore provide broad strategies for green space conservation that can be relied upon to address the depletion of urban green spaces which is a major focus of this study. Emphasis given to green spaces in these urban development models/theories, and the pragmatic contributions that these spaces offer to the growth of urban areas, make them a key element in the literature of urban sustainability. The discussions on green spaces point out the fact that these spaces provide economic, social and environmental benefits to satisfy the needs of people, and also conserve a large stock of the natural environment for future generations. These benefits form the thrust of the concept of sustainable development and hence make it imperative at this point to narrow the discussion to focus on green spaces and sustainable development and trace the linkages between the two concepts more clearly.

2.5 Green spaces and sustainable urban development

The connection between green spaces and sustainable development hinges greatly on the environmental pillar of sustainable development, which deals particularly with the conservation of the natural environment of which green spaces are key components. The

interconnected nature of the three pillars of sustainable development (environment, social and economic pillars) makes the outcome of such linkages reflect in the social and economic pillars as well. The concepts of environmental sustainability and environmental justice clearly depict these linkages and are discussed below. In the context of the developing world, and particularly Africa, this discussion is needed to show the strong relationships that exist between urban green spaces and sustainable urban development, and the various ideas that can be utilised to preserve urban green spaces from rapid depletion which is a problem in the region. This informs the study's research question that focuses on how urban green spaces can be preserved to enhance sustainable urban development in the context of Africa.

2.5.1 Environmental sustainability and green spaces

Environmental sustainability as captured in the broad concept of sustainable development is associated with preservation of the natural environment. Sutton (2004) defines it as the ability to maintain elements (such as biodiversity, climate and air) valued in the physical environment (natural and biological environments). Based on an input and output perspective, Goodland (2002, 1995) classifies environmental sustainability as the maintenance of natural capital, and conceptualises as encompassed by the input and output rules stated below.

- *Output rule:*

Waste emissions from a project or action being considered should be kept within the assimilative capacity of the local environment without unacceptable degradation of its future waste absorptive capacity or other important services.

- *input rule:*
 1. Renewable resources (e.g. forest, fish): harvest rates of renewable resources inputs must be kept within regenerative capacities of the natural system that generates them.
 2. Non-renewables: depletion rates of non-renewable resource inputs should be set below the historical rate at which renewable substitutes were developed by human invention and investment according to the Serafian quasi-sustainability rule. An easily calculable portion of the proceeds from liquidating non-renewables should be allocated to the attainment of sustainable substitutes (Goodland, 1995:10).

Natural capital used in this context covers a stock of environmental assets (such as water, soil, atmosphere, forests and wetlands) that provide goods and services to satisfy the needs of mankind. Morelli (2011: 6), looking at environmental sustainability from a broader perspective described it as:

a condition of balance, resilience, and interconnectedness that allows human society to satisfy its needs while neither exceeding the capacity of its supporting ecosystems to continue to regenerate the services necessary to meet those needs nor by our actions diminishing biological diversity.

Maintenance of the natural environment serves as central theme that dominates the discussions on environmental sustainability. This has created a debate on what exactly should be maintained in the natural environment. According to Sutton (2004), aspects of the natural environment that need to be maintained (sustained) include the natural beauty of the environment, high quality urban environments, ecosystem services (nutrient cycling, the water cycle, natural water) and the user value flowing from physical resources (e.g. minerals, energy, renewable resources, water purification, climate moderation, soil protection). Siraj-Blatchford et al. (2010) note that depleting natural resources, increased greenhouse gas

emissions, overflowing landfills, loss of biodiversity and polluted waterways are major environmental problems that should be addressed so that the natural state of the natural environment can be maintained.

Provision of different forms of green spaces such as parks, gardens, forests, woodlands and wetlands has been observed to maintain large portions of the natural environment (Fam et al., 2008), making green spaces have a strong linkage with environmental sustainability from this angle. The outcome of this linkage is the conservation of wide varieties of natural vegetation to provide numerous ecosystem services to support sustainable development (Cilliers et al., 2013; Dobbs et al., 2011; Escobedo et al., 2011; Niemela et al., 2010; Cho et al., 2008). Such ecosystem services include regulating microclimates, habitat provision, carbon sequestration and storage, gas cycles, rain water absorption, and control of environmental pollution (air, water and noise) (Niemela et al., 2010).

Relying on the 2005 Millennium Ecosystem Assessment Report, the United Nations Environment Programme [UNEP] (2011) demonstrated the strong connection between green spaces, environmental sustainability and sustainable development (Figure 2.10). The interconnections in this regard were traced from the maintenance of the natural environment (environmental sustainability) by way of creating many green spaces such as forests, trees, nature reserves and wetlands, resulting in the provision of a range of ecosystem services (such as food, clean water, carbon sequestration and reductions in erosion) to support the social and economic sectors of an economy. The green spaces connection with the economic sector was focused on the natural environment providing job avenues and other environmental inputs to support employment, ecotourism and business innovations, whilst their linkage with the social sector was centred on the natural environment providing inputs to support housing, transport,

energy, health and the recreational needs of the people to alleviate poverty. These connections end up improving human well-being and supporting sustainable development.

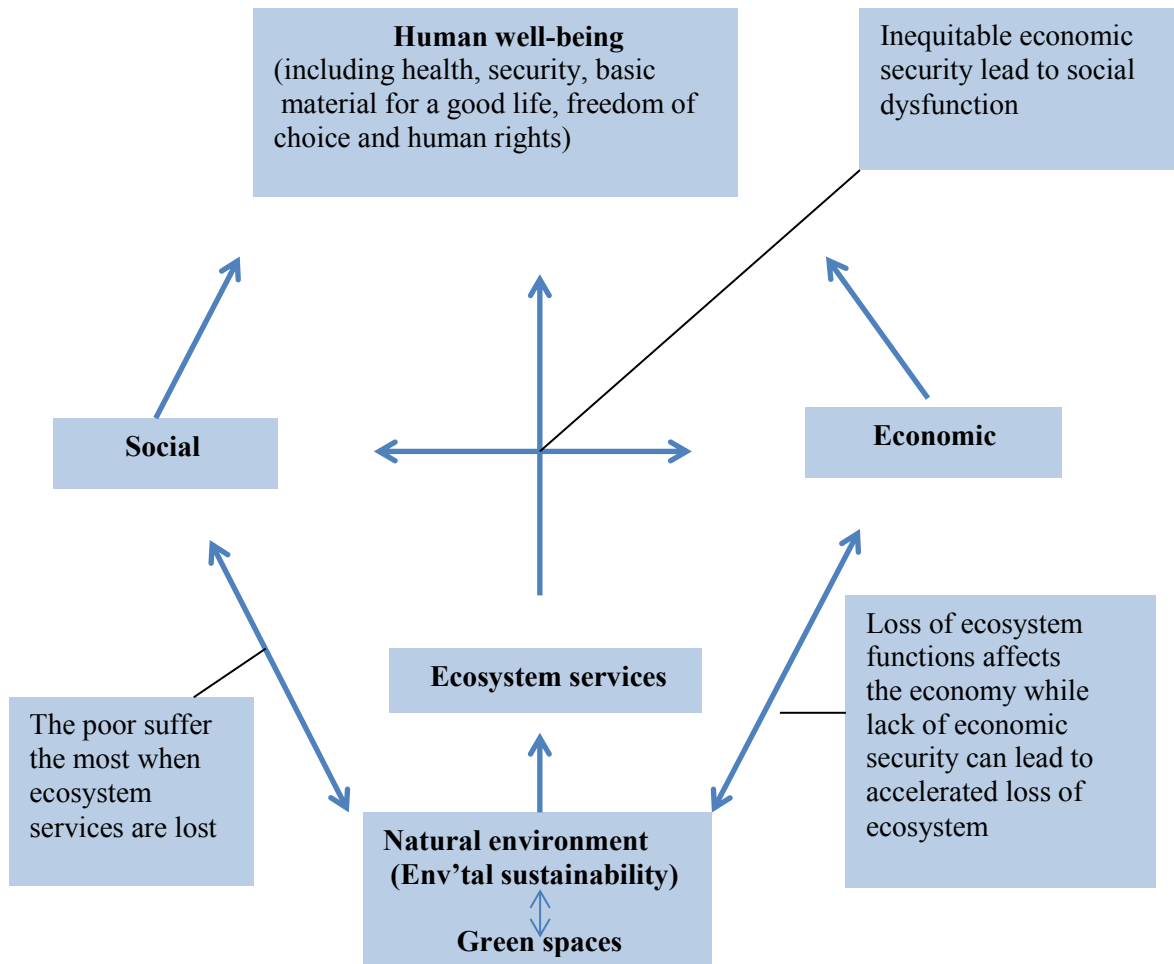


Figure 2.10: Linkages between green spaces, environmental sustainability and sustainable development

Source: Adopted from UNEP (2011)

Similarly, Chiesura (2004), relying on findings across both developed and developing countries, emphasised the strong linkages between green spaces and sustainable development of cities. Urban parks, which are an example of green spaces, were used in that study to illustrate such linkages with urban parks shown to provide a variety of services to enhance the

social, economic and environmental wellbeing of people, improve the quality of life of individuals, and in the long run enhance the overall sustainability of cities (Figure 2.11).

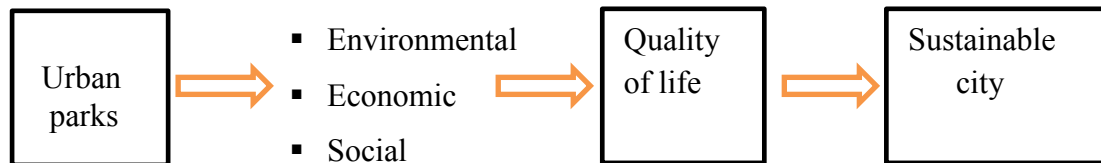


Figure 2.11: Urban parks and city sustainability

Source: Chiesura (2004)

These connections ensure that green spaces play a vital role in the concept of sustainable development. Their availability in a given area helps to maintain the natural environment, which is the central theme of environmental sustainability with resultant outcomes affecting all dimensions of sustainable development (economic, social, environmental). Various amounts of space created for parks and other green spaces in virtually all cities across the world as a means to provide different benefits to enhance urban development make the observations about the linkages between green spaces and sustainability of cities applicable or useful worldwide.

*2.5.2 Environmental justice and green spaces*³

The concept of environmental justice emerged as a grassroots social movement in the USA and it broadly deals with fairness in the distribution of environmental benefits and burdens (Agyemang, 2007). In developing countries, this concept is useful as it provides the opportunity to protect the poor who are predominant in this region from being subjected to numerous environmental problems and also enables them to participate actively in the

³ Some aspects of this sub-section have been published in a peer-reviewed journal by the author of this thesis (Mensah et al., 2013)

decision making process in activities on the natural environment. A landmark study in the USA by the United Church of Christ Commission for Racial Justice (1987) set the tone for the development of the concept of environmental justice as the study found toxic waste facilities located near minority groups, the less privileged and deprived societies. This finding raised concerns about racial and ethnic injustice with respect to the distribution of environmental problems (Boone et al., 2009). Efforts to address these concerns gave birth to the concept of environmental justice. The USA Environmental Protection Agency broadly defined environmental justice to cover the following:

The fair treatment and meaningful involvement of all people regardless of race, colour, national origin or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies. Fair treatment means that no group of people including racial, ethnic, or socio-economic group should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local and tribal programmes and policies (Bullard, 2004: 144).

The central theme underlying this concept is equity in the distribution of environmental problems and benefits. McLaran (2003) encapsulated this by indicating that the premise of the concept of environmental justice is to protect all kinds of people from bearing the consequences of a degraded or unhealthy environment, and in the case of environmental benefits, it should be equitably distributed among all social groups. Equity in this regard covers the notion that all people and communities are entitled to equal protection from environmental hazards and have the right to live in a clean and healthy environment (Stephen, 2007; Brulle & Pellow, 2006). Based on equity, Agyeman and Evans (2004) assert that environmental justice has procedural and substantive dimensions. The procedural aspect deals with the meaningful involvement of all people in decision making on the environment, whilst

the substantive facet is centred on the right to live in and enjoy a clean and healthy environment. This view makes the concept not only reactive to environmental hazards but also proactive to the distribution and achievement of environmental benefits (Agyeman, 2007: 175; Agyeman & Evans, 2004: 156; Agyeman et al, 2002: 84).

The issue of equity as a focal point of environmental justice is well grounded in the concept of sustainable development. Warner (2006) indicates that the Brundtland report's definition of sustainable development contains the notion of intragenerational equity and intergenerational equity which cover equity in the distribution of resources between the present and future generations. Hence concerns of environmental justice are well embedded in sustainable development. The connection between green spaces and environmental justice is built around the subject of equity, with the provision of green spaces helping to provide equitable access to natural vegetation (such as parks, gardens, forests, woodlands and other green vegetation), which form a substantial aspect of the natural environment (Kabischa & Haase, 2014; Wolch et al., 2014; Sister et al.,2010). In this case, even distribution of green spaces in communities enhances environmental justice as it helps all people, irrespective of their status, gender, race and ethnicity, to have fair access to natural vegetation and enjoy the qualities of the environment, whereas its uneven distribution creates injustice (Davis et al., 2012; Dai, 2011; Jennings et al, 2012).

For example, evidence from Europe, North America and Asia shows that unfair distribution of green spaces in favour of high income or affluent people over the poor, ethnic minorities or the less privileged has caused some environmental injustice (Jennings et al., 2012; Johnson-Gaither, 2011; Dahmann et al., 2010; Landry & Chakraborty, 2009; Abercrombie et al., 2008; Leslie et al., 2010; Sister et al., 2010). Such unfair distribution of green spaces means that the poor have reduced access to green spaces and thus denies them

the opportunity to enjoy the benefits of green spaces. In essence, lack of green spaces in a given locality undermines efforts towards achieving environmental justice as it creates inequity in accessing environmental benefits, whilst their availability contributes greatly to achieving environmental justice by giving individuals fair opportunity to enjoy the benefits of natural vegetation. Fair access to natural vegetation in effect enables all manner of people to enjoy the tripartite benefits (economic, social, environmental) of green spaces, and therefore promotes sustainable development in the long run, as pointed out by Wolch et al. (2014) and Jennings et al. (2012). Figure 2.12 gives a hypothetical example of the linkages between green spaces, environmental justice and sustainable development.

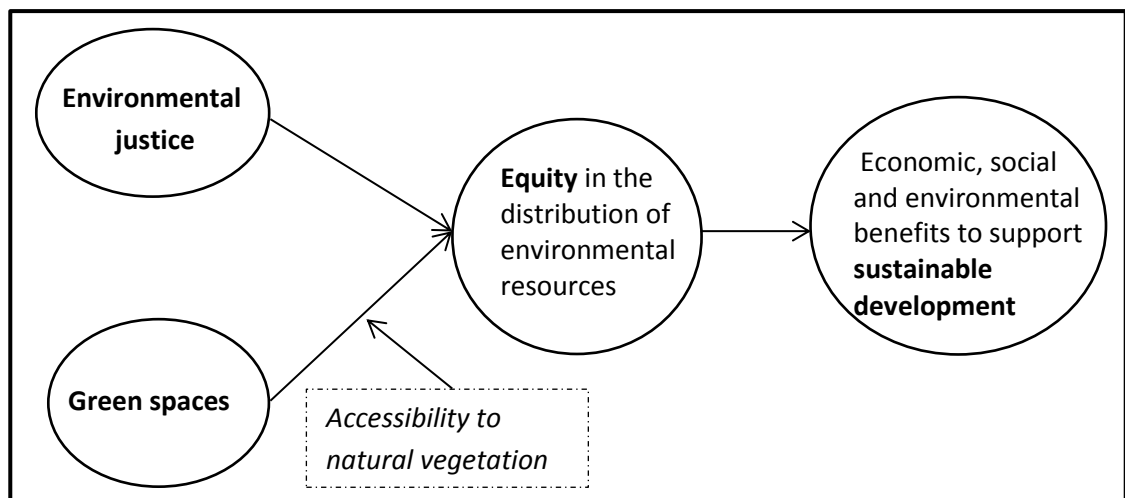


Figure 2.12: Connections between green spaces, environmental justice and sustainable development

Source: Based on insight from Wolch et al. (2014) & Jennings et al. (2012)

All in all, green spaces and environmental justice can be said to be closely connected. They all promote equity in the distribution of environmental resources. Failure to give attention to green spaces in the efforts to achieve environmental justice may cause injustice in access to environmental benefits. This is because substantial portions of the natural environment (such

as parks, gardens, wetlands and forests) that green spaces would preserve to make individuals (irrespective of their status) fairly enjoy the benefits of the natural environment will be lost. In developing countries, this connection can be utilised to fairly provide urban green spaces in various neighbourhoods to enhance environmental justice, especially in low income areas where most of the poor live and are often subjected to many environmental problems, such as environmental degradation and lack of green spaces.

2.6 Conclusion

In sum, urban green spaces are important natural assets in urban areas. In both developed and developing countries these spaces are conceptualised to commonly cover all vegetated land areas in urban areas such as parks, gardens, trees, forests, wetlands, farmlands, allotments and many others. The relevance of urban green spaces lies in the numerous contributions they offer to urban development. Socially, they provide places for leisure and recreation, support child development, offer health benefits, preserve national heritage and enhance social interaction and cohesion. The environmental contributions they provide include climate amelioration, conservation of biodiversity, the improvement of urban air quality and beautifying urban design whilst their economic contributions cover provision of employment opportunities, increasing property values, government revenue and boosting businesses and tourism.

Apart from the numerous contributions urban green spaces provide to support urban growth, a variety of urban development models/theories capture the creation of these spaces in their theoretical framework to further demonstrate how the integration of these spaces in the urban landscape can enhance the overall planning of cities. These models/theories include those that to a greater extent centred on planning around greens spaces, such as the garden

city, green urbanism and green planning models (green belt, green finger, green heart etc.) and those that focus on efficient urban land-use (compact city, smart growth and new urbanism). Urban green spaces were also found to be closely connected to sustainable development, with concepts like environmental sustainability and environmental justice clearly depicting such connections. The strong connection between urban green spaces, urban development models and sustainable urban development makes the conservation of urban green spaces important, because such conservation will help to maintain a substantial part of the natural environment, which can offer various benefits to enhance the sustainability of urban areas. However, achieving such a feat will demand well-structured measures or strategies to address the challenges affecting urban green spaces; but to date, studies on green spaces have been silent on this issue. This is one of the knowledge gaps that the study intends to address.

The above discussions strongly emphasise the relevance of green spaces in urban planning and sustainable urban development. This relevance can fully be realised when green spaces are well managed. This makes the overall governance and management of green spaces a prime concern. The next chapter therefore gives attention to the governance of urban green spaces to extend the discussion further to cover various issues surrounding the management of urban green spaces.

CHAPTER THREE

GOVERNANCE OF URBAN GREEN SPACES: THEORIES AND CONCEPTS

3.1 Introduction

This chapter is about the overall governance of urban green spaces. The growing global urban development pressures and their associated consequences on urban green spaces made the focus of this chapter essential. This is because such discussions help to provide a broader understanding of the various urban governance arrangements and their associated effects on the management of green spaces in the face of high development pressures in cities. The chapter aims at identifying various governance theories, concepts and practices that operate in the urban environment and also providing strong theoretical support for the governance of green spaces in urban areas. Since the whole thesis is centred on the sustainability of urban green spaces, the chapter starts by tracing the connections between governance and sustainability from the perspective of social sustainability which is associated with such matters. The chapter continues by narrowing the discussion to the urban environment where the current study is situated. Under this, different perspectives and theories of urban governance are discussed in detail to select the appropriate governance theory that best fits this study. The last sections of the chapter give emphasis to the theory of policy transfer to provide strong basis for the application of varied ideas, knowledge and concepts from different parts of the world into the current study which is situated in Africa and particularly Kumasi (Ghana). The conceptual frame for the study is also contained in this chapter.

3.2 Social sustainability and governance: two intertwined concepts

Conceptualising the term “social sustainability” to have a common meaning has been a problem in the academic and research circles as it has received different interpretations from different scholars. Dillard et al. (2009) defines social sustainability as the creation of social health and well-being through the operation of social institutions that facilitate environmental and economic sustainability now and future. In the estimation of McKenzie (2004), social sustainability is achieved through the working of formal and informal processes, systems, structures and relationships which actively support the creation of healthy and liveable communities for both current and future generations. From the UNESCO ‘MOST’ Program⁴, social sustainability is used to signify a kind of development that is compatible with the harmonious evolution and contribution of civil society, cultural and social diverse groups which promote social integration and improvement in the quality of life of people (Brennan, 2009). Apart from these varied definitions, conflicting ideas have also been expressed about the overall focus of social sustainability. Vallance et al. (2011) argue that social sustainability should address matters concerning underdevelopment, basic needs, and the promotion of stronger environmental ethics. Agyeman (2008) opines that social sustainability should be grounded in social justice, equality and democracy whilst others too claim that it should be focused on preservation of social values, culture, traditions and ways of human life (Koning 2002; Barbier, 1987).

Despite the plethora of ideas expressed on the concept of social sustainability, the latest broadly centres on major themes such as well-being, and human and social capital (Murphy 2012; Magee et al., 2012). In view of this, some common features have been identified to underlie the concept of social sustainability. For example, Colantonio (2007)

⁴ UNESCO MOST Programme refers to Management of Social Transformations programme commissioned on social sustainability of cities.

identified the following as some of the key features or thematic areas of social sustainability: participation and empowerment, justice and equality, access to resources, local networks and eradication of poverty. Similarly, features such as democratic representation, social justice, social networks and equity, provision of social infrastructure, community participation in governance, education, health and safety, and quality of life have broadly been highlighted in the literature to be among the major constituents of social sustainability (Boström, 2012; Dempsey et al., 2012; Murphy 2012; Cuthill, 2009; Colantonio, 2008; Chan & Lee, 2008; Bramley et al., 2006).

Although these features give a comprehensive idea about the scope of social sustainability it also shows how governance is closely linked to social sustainability as governance serves as a vehicle through which most of the features of social sustainability can be realised. This is because governance is basically about political participation in the decision making process to develop policies and strategies to manage a given resource with the ultimate goal often geared towards the enhancement of human well-being which social sustainability is about. For example, UNDP (2007:1) describes governance as “a system of values, policies and institutions by which a society manages its economic, political and social affairs through interactions within and among the state, civil society and the private sector”. To the World Bank (2007), governance broadly covers the way in which officials mandated to govern exercise their authority to shape public policy and provide public goods and services to enhance human welfare. The OECD conceptualised governance to denote the usage of political authority and exercise of control in the management of society’s resources to achieve social and economic development (Gisselquist, 2012). These views on governance clearly indicate how matters of social sustainability which generally centres on human welfare are strongly embedded in the concept of governance. Furthermore, elements of governance

which are often recognised to promote good governance such as democracy, accountability, transparency, responsiveness, and efficiency and effectiveness (Table 3.1) also support the realisation of social sustainability in different ways (Gisselquist, 2012; United Nations, 2006).

Table 3.1: Elements of good governance

<p>Democracy: Inclusive suffrage and a right of participation in the decision making process to select leaders to control government business and policies to provide common outcomes.</p> <p>Accountability: The ability and willingness of government officials to show the extent to which their actions and decisions are consistent with clearly-defined and agreed-upon objectives.</p> <p>Transparency: Government actions, decisions and decision-making processes are open to an appropriate level of scrutiny by other parts of government, civil society and in some instances by outside institutions and governments.</p> <p>Efficiency and effectiveness: Ability to produce quality public outputs, including services delivered to citizens at the best cost, and ensures that outputs meet the original intentions of policymakers.</p> <p>Responsiveness: The capacity and flexibility to respond rapidly to the needs of a given society or community which takes into account the expectations of the civil society in identifying the general public interest, and critically re-examining the role of government.</p>
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Source: Gisselquist (2012); United Nations (2006)

These elements of good governance provide opportunity for community participation, empowerment and trust in the decision making process. This among other things provides opportunity for various needs of the people to be communicated to the authorities at the helm of affairs to quickly respond to those needs to enhance the welfare of the people which social sustainability is anchored on. These governance elements make it easier to address diverse social needs such as social justice, equal access to resources, health needs, and social infrastructure that enhance the quality of life of the general public. This means that

governance is fundamental to the achievement of social sustainability because it serves as a means through which social sustainability is achieved.

Taking into consideration the connections between governance and social sustainability, and a broad overview about green spaces, it can be inferred that a strong relationship exists between these concepts. Governance policies on enhancing social sustainability often influence the development of green spaces. Emmett (2014) stressed this by indicating that good governance that gives attention to green spaces helps in the provision of many social and environmental benefits to improve the welfare of citizens. The policies set by the governing body of the European Union (2010) on achieving a clean, healthy and sustainable environment to improve the general welfare of urban dwellers had the preservation of green spaces as one of the strategies to realise this effort. A study by Chiesura (2004) linked the improvement of the quality of life of urban dwellers (social sustainability) to the provision of green spaces as these spaces provide several benefits (health, recreational, emotional etc.) to enhance the well-being of urban dwellers. In sum, a strong inter-relationship can be said to exist between governance, social sustainability and green spaces. Whilst governance provides a means to achieve social sustainability, green spaces on the other hand serve as important assets for the realisation of social sustainability through government initiatives. In this relationship, governance stands out clearly as the main concept because it directly influences social sustainability and indirectly affects the development of green spaces to achieve a broader policy centred on improving the well-being of citizens (social sustainability). Figure 3.1 illustrates this interrelationship in a diagrammatic form.

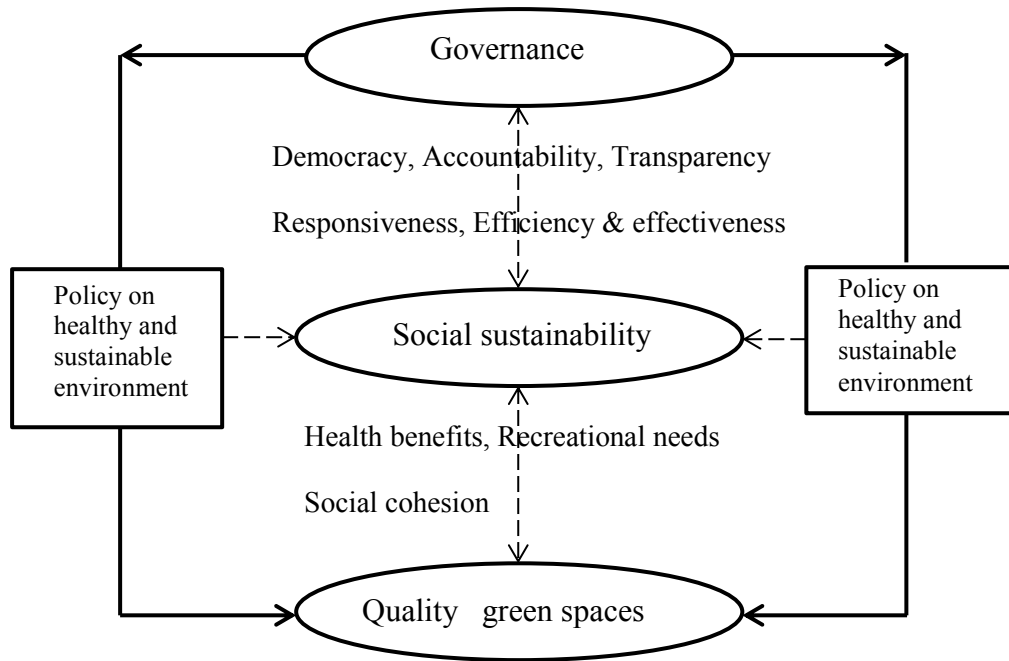


Figure 3.1: Relationship between governance, social sustainability and green spaces

Source: Author's construct (2014)

This relationship suggests that the elimination or poor functioning of governance will destabilise the whole process since it serves as a core pillar that both social sustainability and green spaces hinges on. This makes governance vital for the achievement of both social sustainability and successful management of green spaces. A detailed discussion of governance in the context of the urban environment where the current study is concentrated therefore serves as the main theme of the next section. This is to provide a broader overview of the nature of governance operating in urban areas and a strong theoretical support for the study.

3.3 The concept of urban governance

In managing urban development and its associated resources (natural and man-made resources), there has been a paradigm shift from the traditional system of “government” which emphasized hierarchy and clear demarcation lines between the state and society, to a

new system of “governance” where the organisational set-up encourage networks and overlapping roles of the state and different societal actors (Kjaer, 2009). Urban governance is conceptualised by UN-Habitat (2002: 9) as:

The sum of the many ways individuals and institutions, public and private, plan and manage the common affairs of the city. It is a continuing process through which conflicting or diverse interests may be accommodated and cooperative action can be taken. It includes formal institutions as well as informal arrangements and the social capital of citizens.

Building on this, DiGaetano and Strom (2003) defined urban governance as the process of coordinating political decision making process which is achieved through a series of intermediations across the structural, cultural, and agency levels of governance. This view structures the overall governance of urban areas to fall under three broad perspectives or schools of thought: structural, cultural and rational perspectives which are discussed below.

3.3.1 Structural perspective of urban governance

This perspective or school of thought is concerned with “historically rooted and materially based processes of distribution, conflict, power, and domination, thought to drive social order and social change” Lichbach (1997: 248). It traces its origin largely to the Marxian and Weberian political thought which stressed the relevance of social and economic relations in shaping political processes and policies. The structural perspective of urban governance is premised on the notion that urban politics is a product of the division of labour between state and market forces in city affairs. The main argument put up by this perspective is that the laid down governing structures of a given urban area and the interactions that go on among such structures (both government and private sectors) shape the contours of urban governance across countries. Katznelson (1997) claims that under this school of thought,

large-scale features of modernity such as capitalist development, market rationality, state-building, secularization, and political and scientific revolution serve as important processes that shapes human identities, interests, and interactions. Kantor et al.'s (1997) study on political economy of urban regimes, and Sellers (2002) explanation on intergovernmental systems in his study on nation-state and urban governance provide much structural analyses on urban governance. In addition to this, regulation theory which seeks to explain how social, cultural, and political modes of regulation maintain stability provides a more comprehensive structural analysis to urban governance. The major problem that militates against the structural perspective of urban governance is its inability to address variation among cities and nations. For example, DiGaetano and Klemanski (1999) assert that some cities with similar governing structures at times developed different modes of governance but this is not well catered for under the structural perspective. Similarly, Sellers (2002) emphasized that the intergovernmental explanation which is embraced in structural perspective of urban governance cannot account for differences among cities within a single nation.

3.3.2 Cultural perspective of urban governance

Unlike the structural perspective of urban governance, the cultural perspective is based on the assumption that culture is a primary indicator for comparing urban politics of different nations. This is linked to Rose's (1997) conception that culture is the basis of social and political identity that influences people behaviour and actions on a wide range of matters. This means that the culture of a given area or running through a particular city functions to influence local political and governing institutions, and practices with particular meaning and rationality for political actors (DiGaetano & Strom, 2003). Some cultural theorists hold a convergence view that the forces of globalization have brought about a new political culture globally (Clark, 2000). This new political culture in practical terms means that citizens, media

and other experts now play a stronger role in urban policy formulation than traditional political parties, unions and organised groups (Clark, 2000). The strength of the cultural perspective lies in its strong explanation of how historical and social embedded systems of values enable certain modes of governance to persist in the face of structural change. However, its resistance to changes in political rules, norms, and practices serve as its main shortcomings (Ferman, 1996; Ramsey, 1996).

3.3.3 Rational perspective of urban governance

The central focus of this perspective is on the role of self-interest in collective action which is underpinned by micro-economic theory. Under this perspective, overall governance of urban areas is premised to be influenced by rational or public choices (Basolo, 2000). Levy (1997) stressed that how rational and strategic individuals make choices within constraints to obtain their desired wants is of much interest to this perspective of urban governance. The rational perspective emphasized that choices made by political actors are based on cost and benefit analysis which is influenced by their self-interest. Dowding et al. (1999) criticised the rational perspective for just highlighting the differences that exist in urban governance across different countries and cities but fails to provide explanations about how such differences came about.

To have a comprehensive urban governance that addresses the challenges associated with using a single perspective of urban governance, different scholars have combined two urban governance perspectives to explain the pattern of urban governance. DiGaetano and Klemanski (1999), and John and Cole (1998) combined the structural and rational perspectives to explain the pattern of urban governance. Similarly, the structural and cultural perspectives were also integrated by John and Cole (2000), and Stoker and Mossberger

(1994). However, the amalgamation of two perspectives to the neglect of the remaining one perspective has been criticised by DiGaetano and Strom (2003) as incomprehensive as each of the perspectives has a role to play in urban governance. DiGaetano and Strom (2003) supported their argument by indicating that the structural perspective set the parameters of urban governance such as the market forces and economic structures, national, regional, and international governing structures. The cultural perspective helps to explain the differences and relations between the structures which may vary from one city to the other. The rational perspective also helps to explain changes within a city because such explanation requires understanding of how and why individuals act in a certain way and what consequences (be it institutional and policy) emerges from their actions.

Based on this view point, DiGaetano and Strom (2003) modelled urban governance to be a nested environmental entity in which the structural, cultural and rational perspectives of urban governance come into play. In their estimation, political actors influence urban governance decisions through the institutional milieu they find themselves in. This institutional milieu represents complex formal and informal political and governmental arrangements that mediate interactions among the structural context, political culture, and political actors (Figure 3.2). The political actors influenced by the structural and political culture they found themselves therefore take rational decisions to influence government decisions in a particular direction that benefit themselves and the interests that they represent.

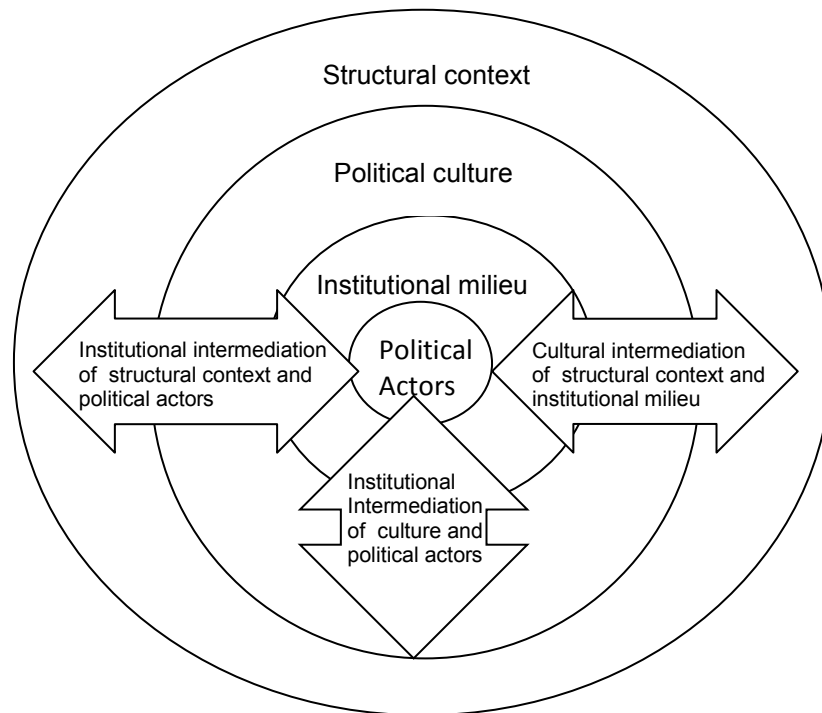


Figure 3.2: Integrated model of urban governance

Source: DiGaetano and Strom (2003)

Taking the above discussion into account, urban governance can be said to be broad in scope and complex in nature, embracing interwoven processes that are influenced by structural, cultural and rational perspectives. This means taken a narrow view of the governing arrangements of urban areas may result in missing out some elements or features that are essential to the urban governance processes.

3.3.4 Reflection on the three perspectives

All the three perspectives or schools of thought play a unique role to explain urban governance in different contexts. For example, the structural perspective explains urban governance from the political economy angle, laying emphasis on the laid down institutional structures to influence the governing process whilst on the contrary the cultural perspective

traces the differences in urban governance in different areas to be influenced by the kind of cultural norms and practices found in a particular area. The rational perspective on the other hand discounts both the structural and cultural perspectives view on urban governance and attributes self-interest or rational/public choices made by political actors as basis for differences in urban governance in different regions. Irrespective of the different stands taken by the various perspectives, each of them in its own capacity has some shortcomings that limit it from having a comprehensive explanation for urban governance. For example, the structural perspective fails to account for differences in governance among cities with similar governing structures; the resistance of the cultural perspective to changes in political norms and practices also makes it difficult to explain changing governing situations whilst the rational perspective is criticised for being narrowly focused and not able to give sufficient account of differences in urban governance in different areas.

Notwithstanding the differences that exist among the three broad perspectives of urban governance and the challenges associated with each of them, they together give a good overview of different elements that influence urban governance. This makes combining these perspectives into a single model to explain urban governance as indicated by DiGaetano and Strom (2003) vital. Such combination helps to compensate for the challenges associated with each of them and hence provides a holistic understanding of urban governance in a given area. In the management of urban green spaces, the integration of various perspectives is useful and for that matter adopted in the current study. This is because it provides analytical avenue for the structural arrangement (institutional arrangement), cultural dimensions and various decisions or initiatives undertaken on green spaces to be understood in broad terms. This helps one to have in-depth knowledge about the governance arrangements for urban green spaces in a particular area. Apart from these three broad perspectives or schools of thought

about urban governance, there are a variety of urban governance theories that are also worth knowing to have a broader idea about the theoretical underpinnings of urban governance. These theories are discussed in the next section.

3.4 Theories of urban governance

In theorising urban governance to have broader overview about how urban areas are governed and major political actors involved in urban politics, different modes of urban governance have been propounded. The mode of urban governance signifies the arrangements (often informal in nature) that describe the governing relationships among and within formal institutions associated with urban politics (DiGaetano & Klemanski, 1999). These modes include clientelistic, corporatist, managerial, pluralist and populist modes of urban governance (Shrestha, 2010; DiGaetano & Strom, 2003). The clientelistic mode of urban governance is built around personalized and exchange relationships between politicians and favoured interests or clients. Under this mode of governance, DiGaetano & Strom (2003) assert that different kinds of urban politicians arrange for political coalitions by maintaining systems of political patronage that confer favours to particular interests in return for political support. Its method of political decisions (governance logic) is based on pragmatic exchange with its main purpose geared towards the attainment of material benefits such as providing selective benefits for the politicians and constituents involved in the governance process.

Unlike the clientelistic mode of urban governance, the corporatist mode of governance supports programmatic public-private governing relations where the form of interaction between government and civic elites are based on negotiation and compromise as indicated by Schmitter (1977). The influence of government and private sector elites to seek a consensus on governing tasks to provide exclusionary ruling coalitions of powerful economic and/or

community interests constitute the governing logic of the corporatist mode of governance. The managerial mode of urban governance supports formal, bureaucratic, or contractual relations between government officials and private sector interests (Pierre, 1999). Its governance logic centres on authoritative decisions by government officials. It gives much emphasis to effectiveness or efficiency of government policy and program making its political orientation purposive in nature. Pierre (1999) echoed this by indicating that the aim of the managerial mode of governance is to enhance the efficiency of public service production and delivery, and also provide customers or the general public with a genuine choice of product and services.

The pluralist mode of governance formulated by Dahl (1961) and others highlights the strength of public leaders in bringing together mixed, diffuse, and competitive private actors. It is characterized by a high degree of competition among contending interests and its main focus is on conflict management with the willingness to bargain being a highly valued political style in the local political culture (DiGaetano & Strom, 2003). Politicians and private interest groups that form competing blocs or alliances to set a city's policy agenda constitute the key actors for this mode of governance. The populist mode of urban governance on the other hand is inclined to grassroots mobilization as a way of setting and implementing policy agendas. The governance approach pursued by the populist mode of governance centres on democratic inclusion and encourages individuals and groups to participate in the governing process. The principal purpose of this mode of governance is to infuse the governing process with greater attention to democratic procedures and practices. As a result of this, DiGaetano and Strom (2003) stressed that the political objective of this mode of governance is symbolic (non-tangible benefits). The major actors in populist mode of governance are politicians and community activists whose responsibilities are often confined to establishing mechanism to

enhance participation in the governance process. Table 3.2 summarises the various modes of urban governance.

Table 3.2: Modes of urban governance

	Clientelistic	Corporatist	Managerial	Pluralist	Populist
Governing relations	Particularistic personalised exchange	Exclusionary negotiation	Formal bureaucratic or contractual	Brokering or mediating among competing interest	Inclusionary
Governing Logic	Reciprocity	Consensus building	Authoritative decision making	Conflict management	Mobilization of popular support
Key Decision Makers	Politicians and clients	Politicians and powerful civic leaders	Politicians and civil servants	Politicians and organised interests	Politicians and community movements leaders
Political objectives	Material	Purposive	Material	Purposive	Symbolic

Material (selective tangible benefits), purposive (non-selective tangible benefits), or symbolic (non-tangible benefits)

Source: DiGaetano & Strom (2003)

These modes of urban governance give a fair idea about a cluster of political objectives, practices and patterns recurrent in urban politics. According to Pierre (1999), each of the modes of governance displays a different pattern of external dependencies and relations, and a form of governance that increases a city's capacity to manage the state of affairs in a given area. However, both DiGaetano and Strom (2003), and Pierre (1999) contend that these modes of governance only serve as ideal types of governance rather than empirically given precise accounts of urban governance in different regions, countries, and policy sectors. They also indicated that a hybrid of these modes of governance may also be present in a given urban setting. Due to a more complex development pattern, and sophisticated issues and problems

taken place in urban areas, attention is now given to governance theories that assume control through cooperation, partnership, and promote social networks such as urban regime theory, urban governance theory and of late the theory of collaborative governance. Hanson et al. (2010), and Auclair and Jackohango (2009) found out that such urban governance theories open a way to address complex urban issues by encouraging partnership between the state, private sector and civil society to share their views either through formal or informal channels, mediate their differences and exercise their legal rights and obligations.

Concerning urban regime theory, Stone (1989, 1993) who is often associated with this theory conceives regimes in this context as “the informal arrangements by which public bodies and private interests function together in order to be able to make and carry out governing decisions” (Stone 1989, 6). The fundamental goal of the regime theory is building coalitions where governing elites construct and maintain regimes by distributing resources to regime partners, with the resultant effect being establishment of support and cooperation around efforts to accomplish relatively manageable tasks. Stoker (1995) emphasized this by indicating that urban regime theory pays attention to the problem of cooperation and coordination between government, business community, and the civil society. Political power under regime theory is described as “power to” that is the capacity to act and such power to act is gained through cooperation among various actors (Stone, 1993). According to Mossberger & Stoker (2001), urban regime theory can be disintegrated into four different types: maintenance or caretaker regime, development regime, middle-class progressive regime, and lower-class opportunity expansion regime. The maintenance or caretaker regime centres on routine service delivery and low taxes, and the development regime is associated with changing land-use to promote growth. The middle-class progressive regime covers issues such as environmental protection, historical preservation, affordable housing and linkage

funds whilst emphasis on investment policy, and widened access to employment and ownership of assets constitute the focus of lower-class opportunity expansion regime.

The urban regime theory is purposively oriented as the benefits realized by participants are geared towards getting opportunity to achieve an organization's particular goal such as civil rights. Critics of the regime theory have identified some weaknesses associated this theory. Lauria (1997) pointed out that it under-theorizes the connections between economic and political agents, and their wider institutional contexts. He further indicated that it inadequately conceptualizes scale, underestimating the value of extra metropolitan spaces. Harding (1997) lamented that urban regime theory is narrow-based since it is much concentrated in the USA with little or no bearing outside the USA. This is because many countries have strong state tradition which is contrary to some of the claims of the regime theory such as the state regarded to have limited authority and for that matter encourages government officials to seek alliances with business and other interests with institutional resources. It is also criticized for giving much attention to individual agencies but fails to account for the impact of state structures (Goodwin & Painter, 1997).

As a means to address some of the challenges of urban regime theory and to meet the global trend of involving civil society in the pursuit of public goals, urban governance theory emerged. Under urban governance theory, power is contextualized and manifests itself in results but do not rest with only the central authority (Stoker, 2000). Kjaer (2009) reiterated this by indicating that urban governance theory accentuates a movement of power from the central authority or state downwards toward decentralised units of governance and upwards to supra-national units. It also focuses on the movement of power to non-government actors both locally and globally such as NGOs and civil society organisations. Gerber and Kollman

(2004) call such movement of power within the political system under the urban governance theory as authority migration (Figure 3.3).

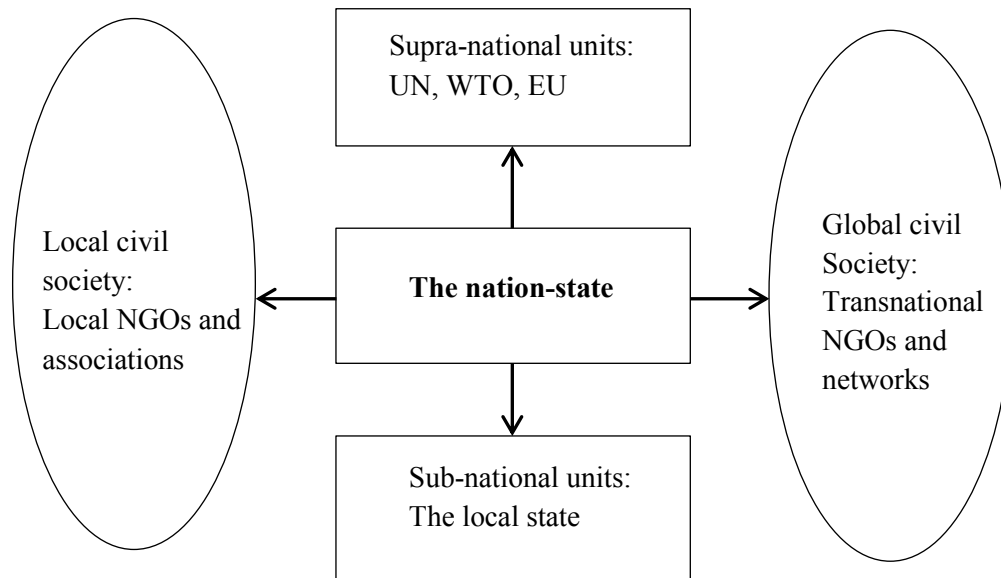


Figure 3.3: Authority migration

Source: Kjaer (2009)

Unlike urban regime theory, the major role of local political institutions under the urban governance theory is to coordinate “agency” across the local territory towards collective goals (Pierre, 2014). In view of this, urban governance theory suggests that “authority” and “agency” should not be pursued together but treated as separate entities so that the political institutions can function to ensure that decisions are implemented usually in collaboration with societal partners. The authority in this context means the formal right to make decisions whilst agency refers to the execution of those decisions (Pierre, 2014). Furthermore, urban governance theory focuses more on policy-implementation networks with the networks engineered by the central government. Kjaer (2009) found this as contrary to urban regime theory which focuses on agenda-setting coalitions operating on the input side of policy-making with societal actors often engineering the process.

In urban governance theory, efficiency and democracy are mutually enforcing, there is no trade-off between these elements. The reason is that the theory encourages consensus by involving key stakeholders such as citizens in the formulation and implementation of policies. Kjaer (2009) asserted that this arrangement support both democracy and efficiency since involvement of different stakeholders in the decision making process means that final decision undertaken are endorsed by wider group, and the cooperation from different stakeholders supports higher level of efficiency. Stoker (2003) reaffirmed this by emphasizing that involving stakeholders such as citizens in the implementation process promotes efficiency and democracy since it assumes certain level of trust and reciprocity in order to achieve public goals. Table 3.3 summarises the assumptions of urban governance theory.

Table 3.3 Assumptions and overview of urban governance theory

Key concepts	Assumptions in urban governance theory
Efficiency	Secured through cooperation and partnership
Democracy	Secured through participation. No analytical separation of politics and implementation process
Power	Fragmented and/or shared in consensus building networks
The role of the local state	The state facilitate network governance
The role of the urban Bureaucrat	Mediator and networker, driven partly by prospects of self-development in a dynamic working environment

Source: Kjaer (2009)

Notwithstanding these assumptions, Morgan et al. (1999) criticised this theory for favouring vertical networks that is formal networks among government agencies and bodies to the

neglect of minor groups. This gives rise to distrust and aggravates conflict among other groups (informal groups) since their concerns are not taken on board. Similar findings came up in a study by Rhodes (1997) which revealed that this theory side-lines special-purpose groups that neither belong to private organisations nor the public sector. Davies (2005) found out consensus building as captured in urban governance theory as difficult to achieve because underlying tensions in market economies makes it quite impossible. Furthermore, Ling (2002) indicated that the role of urban bureaucrats in urban governance theory pose resistance to changes as they tend to interfere policy decisions.

3.4.1 Summarising ideas on various theories of urban governance

The various modes or theories of urban governance discussed above situate the governance of urban areas under the control of either the central government or joint public-private management arrangements. Although these modes and theories highlight a cluster of governing relations, political objectives and the activities of different actors in urban politics to explain the complex nature of urban governance, they lack the capacity to involve wider stakeholders into the governing process and also they under theorise the processes that support broader stakeholder participation. This is very important for the management of urban green spaces which have been found to be better handled by wider stakeholder participation (Smith 2009; Carmona et al., 2004). The urban regime theory and urban governance theory came close in addressing this problem but the urban governance theory favours only vertical networks which are formal networks among government agencies to the neglect of minor groups and other special groups as echoed by Morgan et al. (1999) and Rhodes (1997). The urban regime theory also concentrates much on building coalitions championed by government elites and business actors which are not broad in scope, and it is also much attached to the economy of the USA with little or no influence in other countries or regions of

the world. These made none of the theories to be suitable for the current study. A further search was therefore undertaken to find a theory that is anchored on broad stakeholder participation, and clearly outline the processes that much participation can be achieved to suit the study. The search fished out the theory of collaborative governance which is discussed in detail in the next section to highlight its key features and principles.

3.5 The collaborative governance theory

In breaking down the theory of collaborative governance, the word “collaborative” is derived from the word “collaboration” which simply means many individuals or groups working together to achieve a purpose or goal. The term governance is derived from a Greek verb “kubernan” which means “to pilot or steer” (Kjaer, 2004: 3). Putting these ideas together, Ansell and Gash (2008: 544) described collaborative governance as “a governing arrangement where one or more public agencies directly engage non-state stakeholders in a collective decision making process that is formal, consensus-oriented and deliberative and that aims to make or implement public policy or manage public programmes or assets”. In simplifying the meaning of collaborative governance, Innes and Booher (2004), and Huxham (2000) describe it as governing process where a variety of stakeholders come together and work to achieve a common goal which often occurs through dialogue and good interaction. This form of governance involves joint relationship between stakeholders in the public, private and voluntary sectors, informal groups and individuals in communities to address diverse issues in a complex society (Durose & Rummery, 2006; Healey, 2006; Stoker, 1998). The level of collaboration that can take place under collaborative governance has been classified into three main forms (Sullivan & Skelcher, 2002). These are formal and legal contacts among the various stakeholders or actors; informal networks among the actors based on trust and

reciprocity; and partnership among the actors which is related to the formal type and often associated with long term mutual consensual decision making and implementation.

3.5.1 Who participates in collaborative governance?

According to Page (2008), the range of stakeholders who can participate in collaborative governance is important because who participates determines what is included in agendas, what facts are sought, and what solutions are suggested and agreed upon. In the views of Schuman (2006), and Crosby and Bryson (2005), all individuals and interest groups in all sectors of society have the right to meaningful participation in the decisions that affect them but for the legitimacy of the collaborative process to be achieved only stakeholders who are much associated with a problem under consideration should be included. Johnston et al. (2011) warns for careful selection of stakeholders to the collaborative process since it has influence on final collaborative outcomes. Attempts not to include key stakeholders can ultimately threaten the legitimacy of the process and make the whole idea unsuccessful (Kaner, 2006). In urban environmental issues such as green spaces which the current study is focused on, stakeholders often involved in collaborative governance include politicians, government agencies, local city authorities, civil society, private organisations, environmental organisations, media, policy makers, NGOs, and the local people (Abbott, 2012; Wheeler, 2004).

3.5.2 Features of collaborative governance

In the estimation of Innes and Booher (2004), the key features of successive collaborative governance are dialogue, networks and institutional capacity. They explained

these as follows. Dialogue⁵ encourages stakeholders to share ideas and respect the views of other partners to achieve good outcomes. Networks⁶ help stakeholders to build new professional and personal relationships among each other and create mutual trust among themselves. Institutional capacity which is a mixture of social, intellectual and political capital helps stakeholders to become more knowledgeable and competent in their activities. Apart from these features, the participation of the general public in the collaborative process is viewed as vital. Inclusion of the local people has been observed to provide a platform for the local people to share their practical knowledge and experiences on matters relating to their livelihoods and hence helps to shape collaborative decisions to meet realities on the ground (Newman et al., 2004; Coaffee & Healey, 2003; Healey, 1997). Sherry Arnstein's ladder of participation and Davidson's (1998) wheel of participation emphasize the need to include the general public in the decision making process. Features such as consultation, information, participation and empowerment have been highlighted by the Davidson wheel of participation (1998) as important when involving the general public in collaborative governance.

Power is also recognised as an important feature of collaborative governance. The success or failure of collaborative governance depends on how power is regulated among stakeholders. Three main sources of power have been identified in collaborative governance: authority, resource, and discursive legitimacy (Purdy, 2012; Hardy & Philips, 1998). Authority concerns the socially acknowledged right to make judgements, decisions or take actions (Greenwald, 2008). Resource-based power deals with the dependencies between organisations involved in collaboration and their ability to organise resources (Purdy, 2012). This resource power includes tangible resources such as financial resources, people, and

⁵ Dialogue is an organised conversation or discussion among stakeholders on a given entity.

⁶ Network represent a web of linkages between organisations or stakeholders on a given entity or resource.

technology; and intangible resources such as knowledge, culture, and capabilities. Discursive legitimacy on the other hand is a form of power that concentrates on ability of an organisation to be represented in a discourse or speak on an issue in the public sphere (Hardy & Phillips, 1998).

Two broad distinctions of power are also often used to classify power under collaborative governance: “power over” and “power to” (Healey, 2007, Njoh, 2007, Giddens, 1984). The authorities that individuals, bodies or organisations retain to perform specific duties constitute “power over” whilst the “power to” covers the resource base of organisations (man-power, finances, and equipment). Power when regulated well helps to advance joint efforts of stakeholders resulting in mutual gain, or empowering others to participate more effectively in the collaborative process leading to selfless gain (Purdy, 2012). Ansell and Gash (2008) pointed out that power imbalance between stakeholders is a key problem for a collaborative governance system. They elucidated this by indicating that it leads to insufficient participation of stakeholders and prevents them from contributing their skill, expertise, and other resources effectively to the collaborative process. It also makes wealthier stakeholders who have many resources to suppress the views of other stakeholders who lack the resources to participate actively in the collaborative process. Ansell and Gash (2008) modelled the theory of collaborative governance to highlight key elements that go into it (Figure 3.4). The model has five main features: starting conditions, collaborative process, institutional design, facilitative leadership and outcomes.

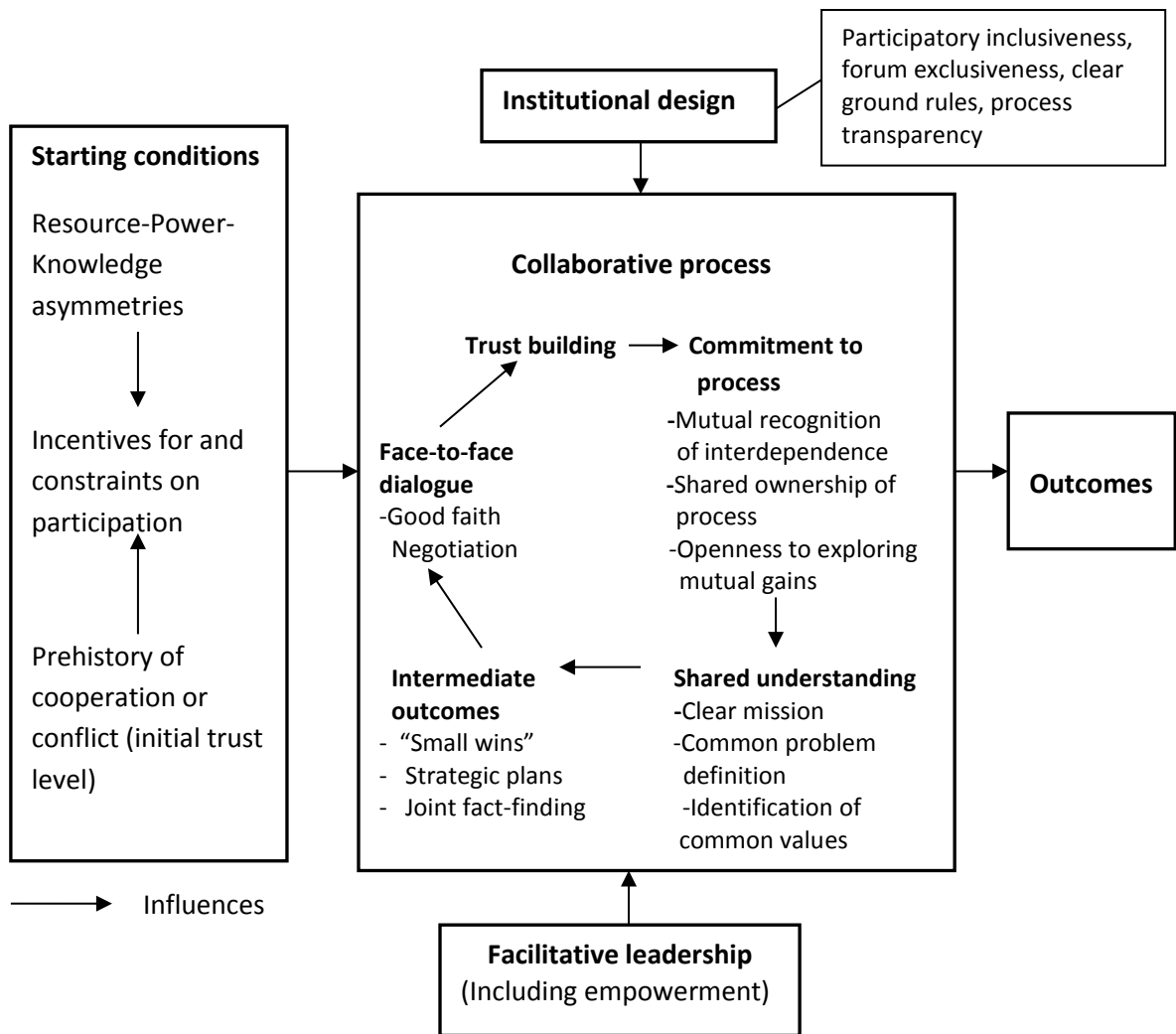


Figure 3.4: The model of collaborative governance

Source: Ansell & Gash (2008)

Starting conditions kick start the model and it facilitates or discourages cooperation among stakeholders and between agencies. This stage leads to collaborative process when there are incentives for the stakeholders to participate. The collaborative process serves as the main stage where many of the collaborative activities take place. Dialogue and interaction among different stakeholders take place here and it embraces key features such as face-to-face dialogue, trust building, commitment to process, shared understanding and intermediate outcomes. The collaborative process is influenced by two factors: institutional design and

facilitative leadership. The institutional design refers to basic protocols and ground rules for collaboration and is critical for the procedural legitimacy of the collaborative process. The facilitative leadership on the other hand is the element that brings all the stakeholders together in a round table discussion and controls them through the rough patches of the collaborative process. Outcomes are therefore the end result of the collaborative process.

In furtherance of Ansell and Gash's (2008) conceptualization of collaborative governance, Emerson et al. (2012) theorised collaborative governance to cover three nested dimensions: system context, collaborative governance regime (CGR), and collaborative dynamics and actions (Figure 3.5). The system context represents the surrounding condition within which collaborative governance strives. These surrounding conditions can be political, legal, socio-economic, or environmental and have effects on collaborative governance. The drivers for collaborative governance emerge from the surrounding conditions (system context) and these drivers include leadership, consequential incentives and interdependence. The central feature in Emerson et al.'s (2012) framework is the collaborative governance regime and it contains collaborative dynamics and actions (Figure 3.5). The collaborative dynamics represent the collaborative process which is made up of three components: principled engagement, shared motivation, and capacity for joint action. The working together of these components produces collaborative actions with the end result being collaborative outcomes (impacts).

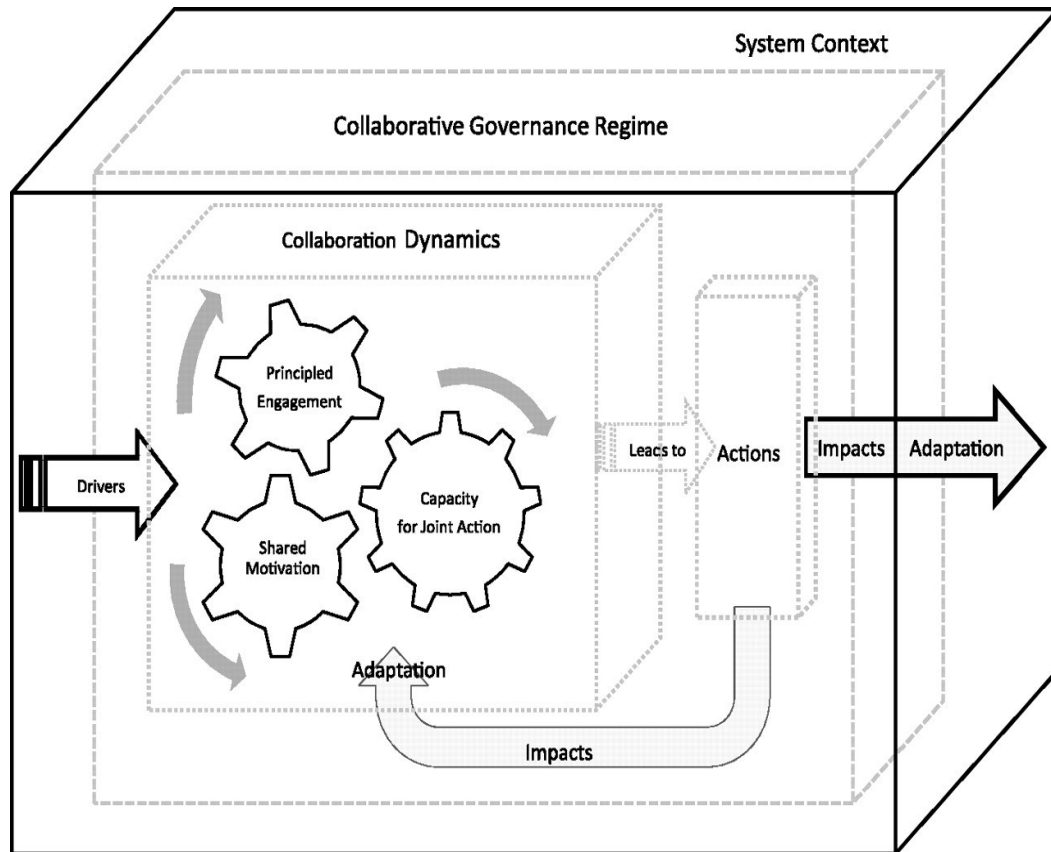


Figure 3.5: Integrative collaborative governance framework

Source: Emerson et al. (2012)

Like Ansell and Gash (2008), Emerson et al. (2012) stressed the need to have a variety of stakeholders, dialogue and shared understanding in the collaborative process. However, while Ansell and Gash (2008) emphasized more on formal collaboration (state initiated collaboration), Emerson et al. (2012), in addition to formal collaboration, throw more light on informal collaborative arrangements such as private-social partnerships and co-management regimes outside the formal sector.

Despite the diverse strategies that collaborative governance takes to arrive at consensus decisions, its critics suggest that conflicting institutional goals and missions, inflexible administrative and legal procedures, and constrained financial resources disrupt the

smooth operation of collaborative governance (Gerlak & Heikkala, 2005). Furthermore, concerns have been raised on improper legal support for collaborative processes likely to create problems about authority, transparency, and accountability (Bingham, 2009). Notwithstanding these suggested shortcomings of collaborative governance, it is still recognised as a governance approach that provides a higher responsiveness to complex situations and greater deliberation than traditional autocratic form of governance (Leach, 2006). It also helps to create more effective, efficient, and flexible policies (Sousa & Klyza, 2007) that are generally accepted by wider stakeholders such as the general public and civil society organisations. In summary, collaborative governance brings many stakeholders together into the decision making process to provide common decisions to manage a given situation. This is achieved through features such as dialogue, mutual understanding, facilitative leadership, regulation of power, consensus building, institutional design, and community participation.

3.5.3 Applications of collaborative governance

There have been successful applications of the theory of collaborative governance in a variety of studies that covered different areas beneficial to human well-being. A notable example is the application of collaborative governance in environmental management. A study by Salmon et al. (2008) revealed that in the Nordic countries such as Sweden, Denmark, and Finland, collaborative governance has been used in several ways to protect different elements of the natural environment. For example, in Denmark, based on the collaborative governance approach, government officials, technical experts and different stakeholder organisations came to a consensus on developing a number of policy recommendations for restoring and protecting biodiversity and water bodies in the Danish region. Similarly, in

Sweden, a collaborative decision making process provided an opportunity for seven political parties, government officials, businesses, trade unions, local governments and environmental representatives to work together to develop a set of national environmental quality objectives to be achieved by 2020. Moreover, an assessment of the Zimbabwe forest sector in Africa by Mutimukuru-Maravanyika and Matose (2013) found that the execution of the “CIFOR-led project”⁷ through the application of collaborative governance resulted in a range of stakeholders such as local resource groups, forest officers, researchers, and resource management committees coming together to develop visions and effectively implement action plans on the Mafungautsi State Forest.

Apart from natural resource management, collaborative governance has also been applied in matters of urban planning. A collaborative governance arrangement between the state and local government authorities in South East Queensland Metropolitan area in Australia produced a resilient urban governance framework to support the effective implementation of regional plans (Abbott, 2012). The findings of Smith (2009) on urban open space management in the USA indicated that collaborative networks enhanced interaction and cooperation among different stakeholders on open spaces and thus created a discernible policy on urban open spaces. A study by Kim (2010) in South Korea concluded that the application of collaborative governance principles such as community participation, facilitative leadership, and consensus building in South Korea’s urban planning system have led to sustainable urban planning practices in several urban areas.

All these studies give much insights and reflections of elements of collaborative governance such as consensus building, organisational networks and dialogue been applied in different contexts, in both developed and developing countries to provide useful outcomes.

⁷ CIFOR led project is a project undertaken by Centre for International Forestry Research.

This shows that locational differences do not serve as a barrier to the application of collaborative governance. Irrespective of differences in geographical environment, the ideas and features of collaborative governance can still be applied to achieve successful outcomes.

3.5.4 Concluding comments on collaborative governance theory

In all, collaborative governance encourages broader stakeholder participation and different forms of networks (both formal and informal), supports grass root participation, minimises unilateral decisions, and provides opportunities for much dialogue and consensus building among various stakeholders for a common decision to be achieved (Emerson et al., 2012; Ansell & Gash, 2008). The robust nature of collaborative governance theory, embracing different approaches to involve a wider category of people in the decision making process, makes it more friendly for a broader stakeholder participation. A paradigm shift that has now taken place in the town planning system of many developed and developing countries which support the involvement of the grassroots and many stakeholders in the decision making process (Opkala, 2009; Healey, 2007) makes the collaborative governance theory useful in the governance of urban areas. This together with the management of urban green spaces which centres on the actions and activities of wider stakeholders makes it appropriate for the collaborative governance theory to be used as the core theory underlying the current study. In addition to this, the governance arrangements operating in Kumasi (the study area of the current study) is built on bottom-up planning which supports the incorporation of grassroots and different stakeholders in the governing process. This also provides additional grounds to employ collaborative governance as the main theory for this study.

In using collaborative governance theory to assess the management of green spaces in the study area, features such as institutional design, community participation, power relations, and consensus building will be given much attention. This is because they form the nucleus of

collaborative governance and provide essential information from which informed conclusions can be drawn on the governance of green spaces. Such essential information includes the institutional arrangement for green spaces, various ways that the local people are involved in the decision making process, how power is regulated among the stakeholders on green spaces, and how final decisions on green spaces are arrived at. Focusing on green spaces, institutional design covers the organisational structure and networks available on the management of urban green spaces, and community participation refers to the involvement of the local people in the decision making process on urban green spaces. Power represents the authority given to organisations to manage green spaces (power over) and the available resources (manpower, finance and logistics) that those organisations possess to accomplish their mandates (power to). Consensus building on the other hand means common agreed decisions reached upon by stakeholders on urban green spaces.

In the context of Africa and the study area in particular, the application of the collaborative governance theory in green space management has not been well utilised and hence serve as a relatively new research approach. This makes it useful to draw ideas and concepts on the topic understudy from different places (policy transfer) to develop strong theoretical basis for the management of urban green spaces in the study area. The next section discusses the concept of policy transfer to provide justification for the incorporation of ideas and knowledge of different concepts and theories on green spaces and urban governance in the current study.

3.6 Concept of policy transfer

Policy transfer as a concept has now gained much currency in public policy, and in both theoretical and empirical research due to the globalised nature of the world, which makes sharing and exchange of ideals, policies and information much easier and more necessary. According to Dolowitz and Marsh (2000: 3), policy transfer is “a process by which knowledge of policies, administrative arrangements, institutions and ideas in one political system (past or present)” is used in the development of similar features in another political system. This, in simple terms, means transmission of knowledge and ideas about a given entity from one place to another.

The techniques used to transfer elements in policy transfer (such as ideas, theories, concepts, and programmes) include copying, adaptation, hybridity, inspiration and synthesis (Benson & Jordan, 2011; Jones & Newburn, 2006; Stone, 2004; James & Lodge, 2003; Newmark, 2002). *Copying* is adopting or enacting an intact programme which is in operation; *adaptation* deals with making adjustments to elements such as ideas and concepts to suit a given purpose or address contextual differences; whilst *hybrid* transfer refers to the combination of elements of programmes from two different places. The *synthesis* form of policy transfer covers merging similar elements from a given programme in a number of different places to create new a programme, with *inspiration* signifying the usage of knowledge and ideas from elsewhere as an intellectual stimulus to develop new ones.

The proponents of policy transfer stress that the overall transfer of various policy elements occurs under two broad modes of transfer: voluntary and coercive (Dolowitz & Marsh, 1996; Rose, 1993). The willingness of an individual, group, organisation or community to use ideas, concepts and policies from elsewhere to come up with their own innovations constitutes voluntary transfer. By comparison, coercive transfer contains an

element of “force”, and occurs when supra-national bodies force governments and organisations to adopt a set of policy elements or innovations, such as the conditions attached to loans offered by the IMF and the World Bank (Stone, 2010; Evans, 2009; Dolowitz & Marsh, 1996; Rose 1993). The benefits found to be associated with policy transfer include provision of cross-national experiences about a given phenomenon which serve as a source of policy advice (Page, 2000). For some policy-makers and academics, rich ideas and knowledge gained through policy transfer help to generate practical solutions to address specific problems in different political environments (Duncan, 2009; Rose, 2005). In the view of Benson (2009), this provides much information about policies, concepts, ideas, programmes and institutions in different places, which establishes the basis for both positive and negative lessons to be drawn. Despite these benefits, critics of policy transfer argue that challenges such as institutional and structural impediments, lack of ideological compatibility between transferring countries, and cultural incompatibilities inhibit smooth transfer of ideas and policies.

Based on the background and focus of the current study, with the exception of copying all the other techniques of policy transfer, including adaptation, hybrid, synthesis and inspiration, proved useful to the study and were utilised accordingly. This is due to the fact that those techniques support making adjustments and merging of concepts and knowledge on green spaces from other contexts to develop new ideas to address the problems facing urban green spaces in the study area. Building on the idea of policy transfer, the next section discusses the conceptual framework of the study, which dwells on different ideas and concepts on urban green spaces and collaborative governance.

3.7 Conceptual framework for the study

Based on the ideas of various theories and concepts on sustainable urban development, green spaces and urban governance discussed in both Chapters Two and Three, a conceptual framework for the study was developed. Emphasis was also given to Azadi et al.'s (2011) framework that centred on multi-stakeholder involvement (collaborative governance) and green space performance (Figure 3.6). The closeness of that framework to key subjects of the current study such as collaborative governance, urban green spaces and to some extent the sustainability of urban green spaces made it useful to receive much attention. However, the Azadi et al. (2011) framework had its shortcomings. It ends abruptly without any feedback loops to keep the process ongoing. It was silent on the bad performance of urban green spaces (poor functioning of urban green spaces) which often occurs as a result of some challenges. Performance in this context was conceptualised to mean the output of urban green space management and development to urban dwellers. In addition to this, the framework treated sustainability of urban green spaces as part of the indicators of urban green space performance but ideally sustainability should have been treated as the end result of good performance of urban green spaces. This is because it is when urban green spaces have been able to satisfy the needs of urban dwellers for a long period of time that it can be concluded to be sustainable or not.

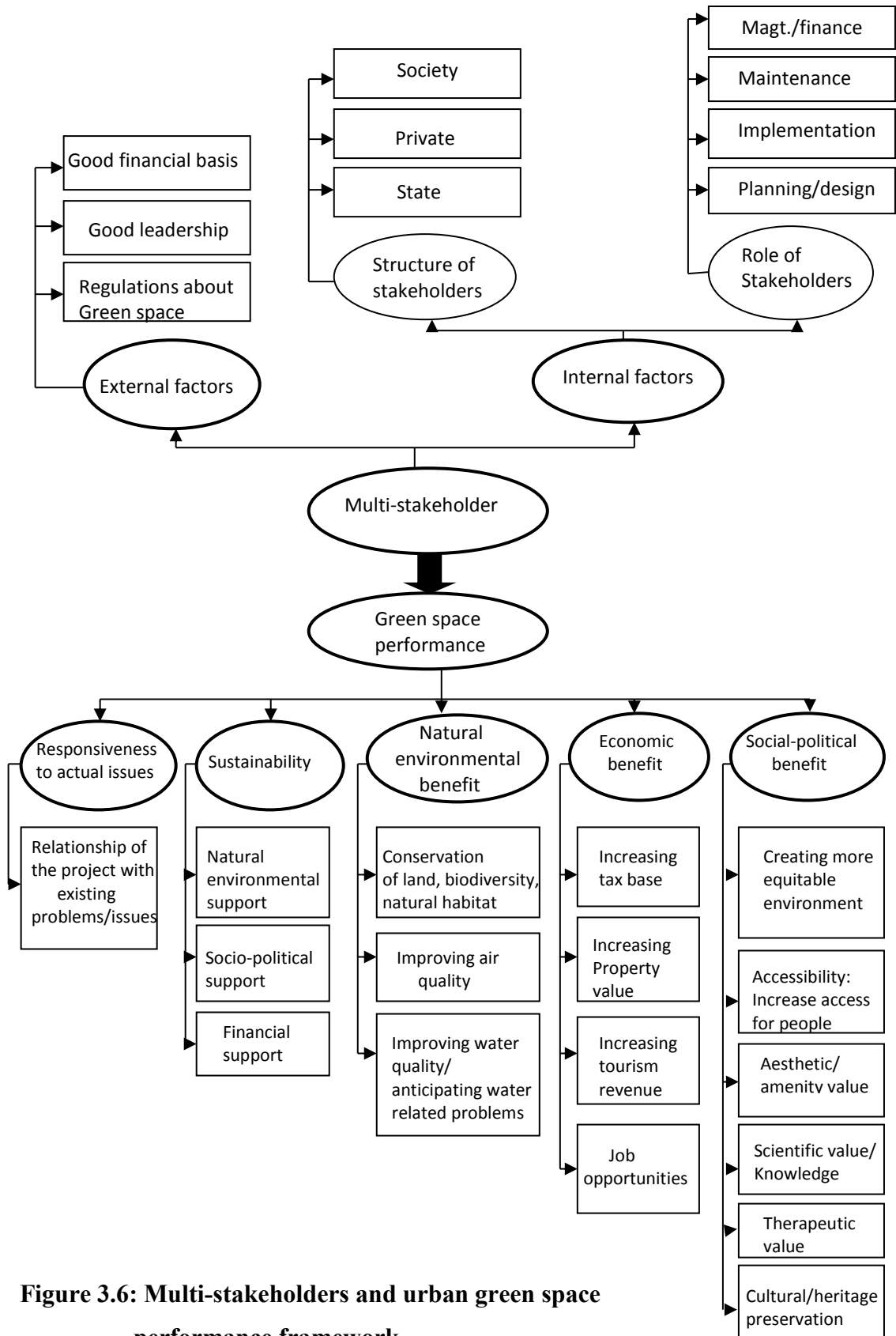


Figure 3.6: Multi-stakeholders and urban green space performance framework

Source: Azadi et al. (2011)

In view of the above challenges, some modifications were made to the Azadi et al.'s framework to develop a comprehensive conceptual framework that takes into account the core issues that the current study is anchored on. The conceptual framework for the study is underpinned by collaborative governance and conceives the overall management or governance of urban green spaces to fall under the control of three main actors: the state, private sector and the society (Figure 3.7). In such collaborative governance, institutional design, community participation, power relations and consensus building are paramount because of the numerous benefits they bring on board to enhance the collaborative process. For example, the institutional design provides opportunity for both government and private institutions to work together, and community participation helps to involve the local people, special groups and benevolent organizations into the governance process. Power relations show the sources of power available to stakeholders on a given resource and how such power affects the management of that resource, whilst consensus building helps various stakeholders to contribute their ideas in the management of a given resource.

These four elements of collaborative governance (institutional design, community participation, power relations, and consensus building) constitute the core elements of the conceptual framework of the study (Figure 3.7).

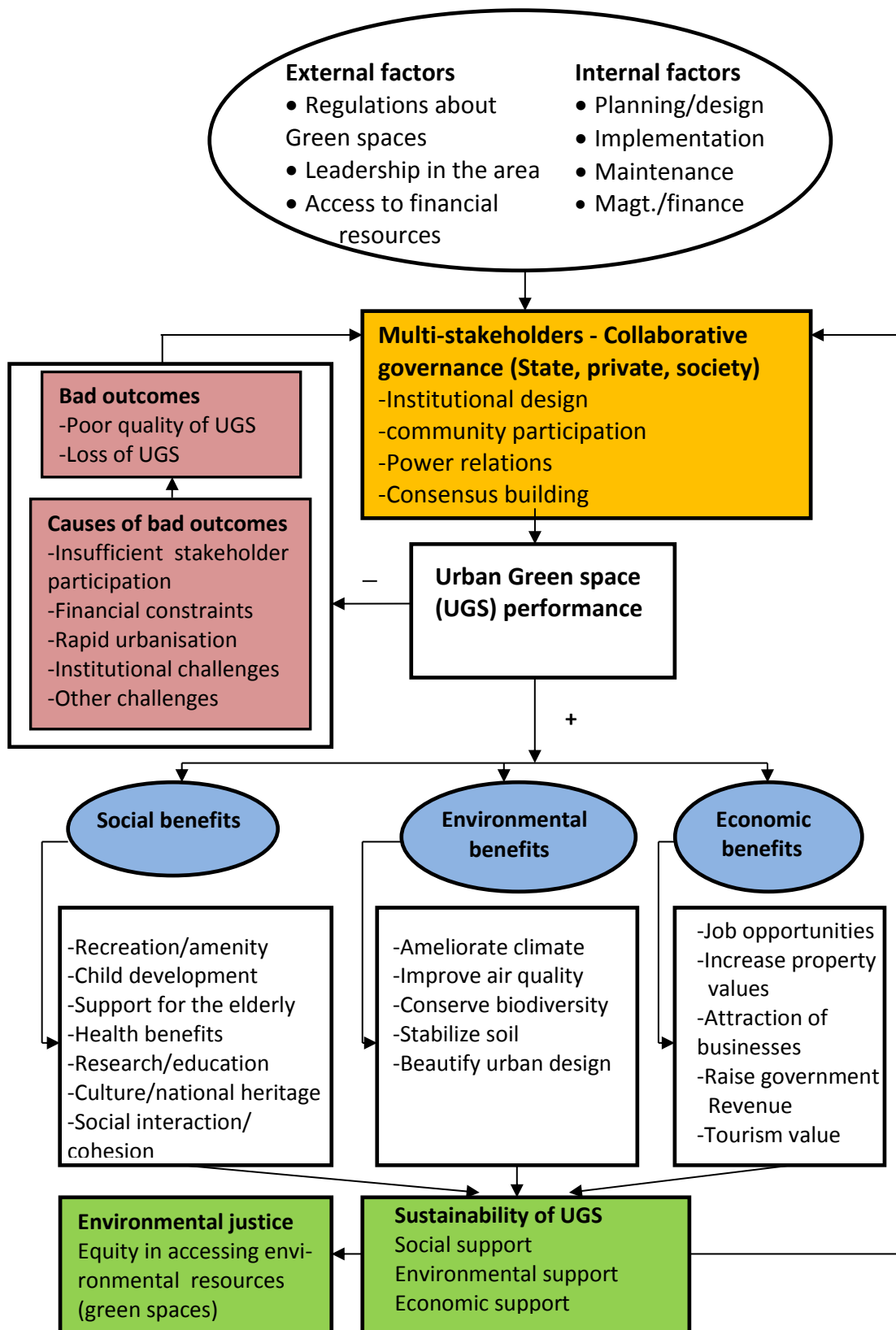


Figure 3.7: Conceptual framework for the study

Source: Author's construct (2014)

The activities of the three broad stakeholders are conceived to be influenced by internal and external factors. The internal factors concerns the roles that the stakeholders are expected to perform and this is related to issues such as planning, implementation, maintenance and finance/management of green spaces. The external factors are factors that fall outside the core roles of these stakeholders (the environment under which the stakeholders operate) and this includes the regulations on urban green spaces, the nature of leadership and access to financial resources in the area. The combination of the internal and external factors influences the overall output of the stakeholders on urban green spaces which impact on the overall performances of urban green spaces (Figure 3.7).

When the performance of the urban green spaces is good or positive (+), it will reflect in the provision of a range of social, environmental and economic benefits to meet the needs of urban dwellers. When these benefits occur for a long time then the green spaces can be said to be sustainable because it will support the overall well-being of urban dwellers economically, socially and environmentally. This in effect will influence the stakeholders of urban green spaces to go about their activities as expected of them and the process will go on again to enhance the sustainability of urban green spaces (Figure 3.7). The sustainability of the urban green spaces will help to promote environmental justice by helping urban dwellers irrespective of their status to easily access the benefits of green spaces, which in effect will promote equity in distribution of environmental resources.

On the contrary, poor or negative performance (-) of urban green spaces will result in bad outcomes such as poor quality of the green spaces and rapid loss of these spaces to other land-uses and urban developments. Insufficient stakeholder participation, financial constraints, rapid urbanisation, and institutional challenges serve as common causes of the bad outcomes. To address the bad outcomes and make urban green spaces sustainable, the

stakeholders of urban green spaces will have to re-strategize, correct their mistakes taken into consideration the internal and external factors, and perform their duties as expected of them until good performances of urban green spaces are achieved. This will keep the process ongoing as indicated in Figure 3.7 above.

3.8 Conclusion

In all, the concept of governance is crucial for the development of green spaces in the developing world. This is because policies which emerge from the broad governance framework to enhance the quality of life of the citizenry (social sustainability) often influence the development of green spaces, since green spaces provide several benefits to enhance the well-being of individuals. This creates a strong relationship between governance, social sustainability and green spaces, with governance being a prime concept in this relationship. In the context of the urban environment, different perspectives, modes and theories of governance operate. Among those discussed were structural, cultural and rational perspectives of urban governance, whilst the modes of urban governance comprised clientelistic, corporatist, managerial, pluralist and populist modes. Theories on urban governance, such as urban regime theory, urban governance theory and collaborative governance theory, were also discussed. The wide range of perspectives, modes and theories, and their unique assumptions about governance, coupled with their challenges make the overall governance of urban areas a complex one. This complexity often causes conflicting organisational roles and poor governance of many resources in urban areas. In relation to urban green spaces in developing countries, this problem has resulted in ineffective organisational arrangements and inadequate community participation in the management of such resources. An effective government system is therefore needed to protect these spaces from continuous depletion, but this is a

problem in many developing countries: a knowledge gap that informed the conduct of the current study.

Taking into consideration the strengths and weaknesses of the various urban governance theories and the nature of governance surrounding urban green spaces and operating in the study area, collaborative governance theory was adopted as the core theory for the current study. Its strengths, such as encouraging broad stakeholder participation and different forms of networks (both formal and informal), supporting grassroots participation, minimising unilateral decisions, and providing opportunities for much dialogue and consensus building to be achieved among various stakeholders made it suitable for the study. Relying on the theory of collaborative governance and the concept of policy transfer, different ideas and concepts on collaborative governance and green spaces were utilised to develop a conceptual framework for the study. The conceptual frame centred on the state, the private sector and society as the broad actors that manage urban green spaces with collaborative elements such as institutional design, community participation, power relations and consensus building constituting the core elements of the framework. Having developed a strong theoretical background for urban green spaces, sustainable urban development and urban governance, the next chapter situates the whole study in the context of Africa and specifically Ghana, where the study area is located.

CHAPTER FOUR

URBAN GREEN SPACES AND SUSTAINABLE DEVELOPMENT IN THE CONTEXT OF GHANA

4.1 Introduction

Africa as a continent is characterised by many rich and varied biological resources which form part of the region's natural resource base (UNEP, 2010). Among these biological resources are different kinds of urban green spaces (urban trees, forests, parks and gardens). However, very little is said about urban green spaces in Africa, and Ghana in particular. The objective of this chapter is to bridge this gap by highlighting the nature and challenges of urban green spaces in Africa. In addition to this, emphasis is given to the regulatory and institutional framework for town planning in Ghana, since it serves as a medium that controls the management of urban green spaces. The various sustainable development strategies of Ghana are also discussed, to ascertain how green spaces are catered for in such strategies.

By the end of this chapter, one would have in-depth knowledge of the dynamics of urban green spaces in Ghana, and Africa in general. Such understanding will provide an overview of the peculiarities of urban green spaces in Africa. The topics covered in this chapter are the nature and conditions of urban green spaces in Africa, challenges facing the growth of urban green spaces in Africa, the regulatory and institutional framework for town planning in Ghana, and sustainable development strategies in Ghana. The chapter provides background information on Africa's urban green spaces to inform the study's research questions on the destruction of urban green spaces and organisational arrangements surrounding the management of such spaces in the context of Africa.

4.2 The nature and conditions of urban green spaces in Africa ⁸

A review of the available literature revealed that the African sub-region has different forms of urban green spaces. In most African countries, the major forms of urban green spaces include the following (Fuwape & Onyekwelu, 2011):

- Semi-private spaces such as green spaces in residential, institutional and industrial areas;
- Designated parks, street trees and roadside plantations;
- Public green areas such as green parks, botanical gardens, recreational gardens, outdoor play areas etc.
- Public and private tree plantations on vacant lots, green belts, woodlands and peri-urban farming;
- Rangeland, and forests close to urban areas;
- Natural forest under urban influence, such as nature reserves, national parks, and forests for eco-tourism; and
- Trees planted for environmental protection and beautification.

Although a variety of green spaces exist in Africa, it came to the fore that among the various forms of urban green spaces much emphasis is given to urban trees. The governments of most African countries in collaboration with environmental agencies often embark on tree planning exercises in urban areas to enhance the greenery and air quality of those areas. The 2011 African Green City Report indicated that in cities such as Durban and Johannesburg (South Africa), Lagos (Nigeria), Maputo (Mozambique), Nairobi (Kenya) and Cairo (Egypt) more emphasis is given to the growing of trees than to other forms of green spaces. The report

⁸ Some aspects of this sub-section have been published in a peer-reviewed journal by the Author of this thesis (Mensah, 2014a)

revealed that over the last five years different governments have seriously embarked upon tree planting exercises to plant about 62000, 500000, and 2800 trees in Durban, Lagos and Maputo cities respectively (Langer & McNamara, 2011). Trees commonly found to be grown in African cities especially West African cities include the following: *Azadirachta indica*, *Eucalyptus* species, *Acacia* species, *Terminalia catapa*, *Gmelina arborea*, *Tectona grandis* (teak), *Polyathia longifolia* (Weeping willow), *Delonix regia* and different species of palm (Fuwape & Onyekwelu, 2011). The royal palm tree, *Acacia auriculiformis*, *Polyathia longifolia* (Weeping Willow), *Cassia siamea* (Siamese Cassia) and *Mangifera indica* (Mango tree) are among the dominant tree species found in most urban areas of Ghana (Mensah, 2010). The *Jacaranda Mimosifolia* popularly known as the Jacaranda tree is a common tree in east and southern parts of Africa whilst the royal palm tree is predominately grown in North Africa.

It was further discovered that the distribution of green spaces in Africa tend to be concentrated to West, East and Central Africa, and to some extent the southern part of Africa rather than in northern Africa. This distribution was found to be influenced by the vegetation or ecological zones of Africa (Figure 4.1). For example, the desert vegetation zone covering the northern part of Africa where countries such as Tunisia, Algeria, Morocco, Egypt and Libya are located was found to have unfavourable soil conditions which do not support the growth of green spaces. In view of this, many urban areas in northern Africa have limited green spaces (Food and Agricultural Organisation [FAO], 2000). On the contrary, many cities in the West, East, Central and Southern Africa (Sub-Saharan Africa) were found to have much green spaces compared to North African cities because most of the cities are located in the tropical rainforest and deciduous forest vegetation zones which have favourable soil and rainfall conditions that support green spaces (Figure 4.1).

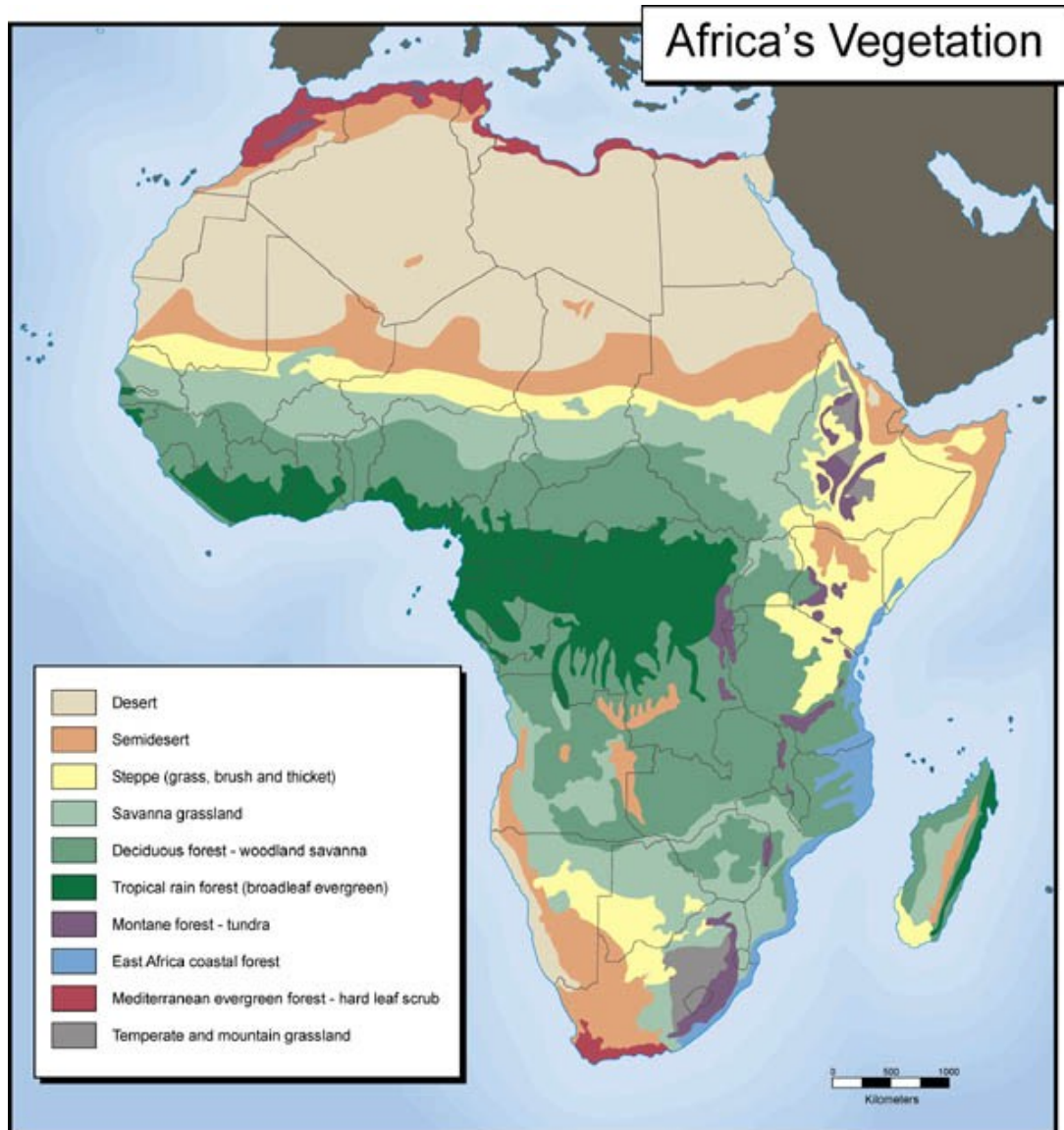


Figure 4.1: Vegetation map of Africa

Source: Exploring Africa (n.d.)

In the western part of Africa, seven broad vegetation zones can be found (Fuwape & Onyekwelu, 2011): Mangrove Forest, Fresh Water Swamp, Rainforest, Guinea Savanna, Sudan Savanna, Sahel Savanna and desert. Urban areas that lie in the desert and savanna vegetation zones of West Africa have a limited amount of urban green spaces due to unfavourable soil conditions. For instance, a study by FAO (2000) found urban areas in the northern part of Mauritania, Mali, and Niger to have limited amount of green spaces because

of the location of those areas within the desert vegetation zones of West Africa. Similarly, in Ghana where the study area is located, the northern part of the country has limited amount of urban green spaces because those areas fall within the savanna vegetation zones which have poor soil and vegetation conditions for the growth of green spaces (Figure 4.2).

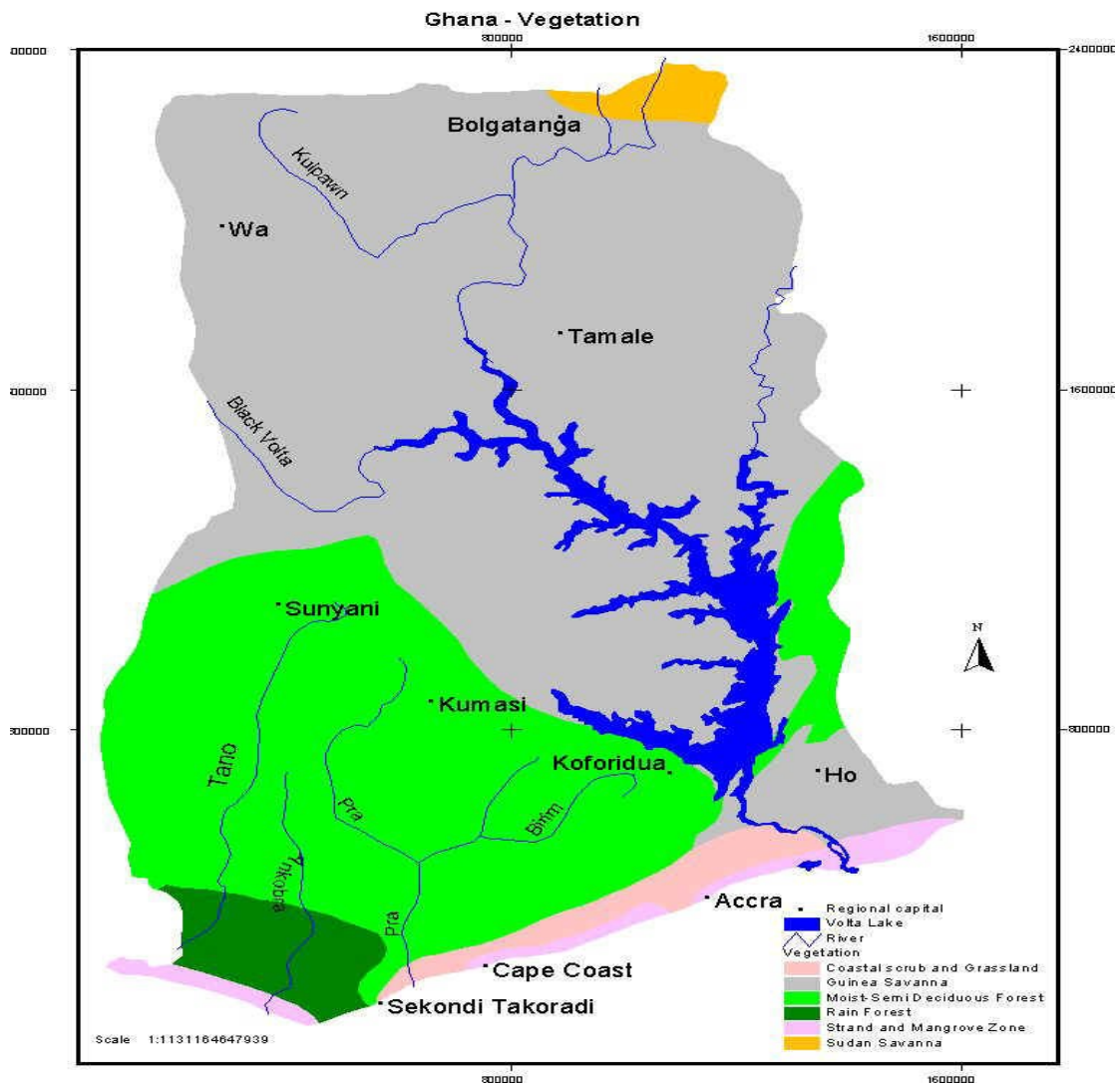


Figure 4.2: Map of Ghana showing various vegetation zones

Source: FAO (n.d.)

In addition to the vegetation zones, climate was also found to play significant role in the growth of urban green spaces in Africa. Most African countries especially those in Sub-

Saharan Africa have two major climate seasons: wet and dry seasons. The dry season is characterized by very high temperatures and hot weather conditions with average daily temperatures ranging between 18-30°C. This does not augur well for the development of urban green spaces because during the dry season, trees and grasses on many urban green spaces wither due to intense hot conditions. The dry season in Ghana often called “harmattan” is characterized with hot and humid conditions in the southern part of Ghana, and very hot and dry conditions in the northern part of the country (Canadian International Development Agency, 2011). During this period in Ghana (November – March) there is excessive dryness of the green vegetation of most urban areas especially the northern part of the country. This problem coupled with poor irrigation mechanisms to keep the green spaces especially gardens, shrubs and lawns in good condition worsen the situation causing excessive desiccation of such green spaces which often ends up in complete disappearance of such spaces.

4.3 Challenges facing the development of urban green spaces in Africa ⁹

Several factors were uncovered to impact negatively on the development and management of green spaces in Africa. For the purposes of clarity and easy understanding, these challenges have broadly been categorised under three main themes. These are the pressure of urbanisation, insufficient operation of urban planning regulations and, and socio-economic and political challenges.

⁹ Some aspects of this sub-section have been published in a peer-reviewed journal by the author of this thesis (Mensah, 2014a)

4.3.1 Pressure of urbanisation

The predominant challenge that was found behind the deterioration of urban green spaces in Africa was rapid urbanisation (Fuwape & Onyekwelu, 2011; Okpala, 2009; Tibaijuka, 2007). Cairo (Egypt) and Lagos (Nigeria) which are among the most populous cities in the world are found in this region. The 2010 State of African Cities Report by UN Habitat indicated that over one billion people are living in Africa and out of this figure, close to 50 per cent are dwelling in urban areas (UN Habitat, 2010). The statistics showed by the report on the intensity of urbanisation and its adverse effects in Africa was frightening. For example, in West Africa where countries such as Nigeria, Ghana, Togo, Cote D'Ivoire and Liberia are located, the total urban population in 2010 was 137.2 million compared to a mere 6.6 million in 1950. It is projected that by 2050 the total urban population in West Africa would reach 427.7 million. The urban population in East Africa (Kenya, Ethiopia, Tanzania etc.) increased from 6 million in 1960 to about 77 million in 2010. The situation in northern Africa and southern Africa was similar. Southern Africa (Republic of South Africa, Zimbabwe, Zambia etc.) remains the most urbanised region in Africa with close to 60 per cent of the human population living in urban areas. Similarly, more than half of the entire population in northern Africa (Egypt, Tunisia, Libya, Algeria, and Morocco) also lives in urban areas.

The rapid urbanisation in Africa was found to have resulted in excessive destruction of urban natural environment such as green spaces (Fuwape & Onyekwelu, 2011; Dubbale et al., 2010). This was manifested by the presence of many informal settlements (slums) and urban sprawl on lands reserved for green spaces (such as urban forest, parks, gardens and outdoor sport areas) to contain the high urban population. Sub-Saharan Africa has the highest number of slum population in the world with about 200 million slum dwellers (UN Habitat, 2011).

The high rate of urbanisation in Kenya with its corresponding increase in urban sprawl and slums destroying urban green spaces cannot be over emphasized. Kenya is noted for good wildlife and natural vegetation in Africa. The population of Nairobi which is the capital of Kenya has increased tremendously to the tune of over 3 million people in the mid 2005 as against 343,500 in 1962 (Tibaijuka, 2007). This soaring population has resulted in a high rate of informal settlements and urban sprawl causing intense destruction to many urban green spaces in Nairobi. It has been observed that slums or informal settlements in Nairobi cover nine (9) administrative areas and in each of these areas the amount of green vegetation lost is immense (Mutisya & Yarime, 2011).

In Addis Ababa, the capital city of Ethiopia, the consequences of rapid urbanisation on the development of green spaces is alarming. Most of the urban trees both exotic and local species that were grown to enhance the greenery of the city and also protect the natural environment have been destroyed or degraded due to rapid population growth of the city (Dubbale et al., 2010). The green vegetation of Addis Ababa now covers only 14.6 per cent of the total land area, this is because most of the urban trees have been cleared for housing purposes (Dubbale et al., 2010). Moreover, rapid urbanisation has caused many cities in West Africa such as Lagos, Ibadan, Kano, Kaduna, Sokoto (Nigeria), Dakar (Senegal), Freetown (Sierra Leone), Abidjan (Cote D'Ivoire), Accra, Kumasi and Tema (Ghana) to lose substantial amounts of urban green spaces to urban sprawl and infrastructural developments (Fuwape & Onyekwelu, 2011). In a related development, a study on urban sprawl in Abuja (the capital city of Nigeria) and its effect on the natural vegetation cover showed a considerable loss of the natural vegetation to the expansion of human settlements (Fanan et al., 2011). Specifically, the study revealed that in 2001 built-up areas covered 31 per cent of the total land area of Abuja whilst that of the natural vegetation was 21 per cent. However, in 2006 the

coverage of the built-up areas increased to 43 per cent whilst in contrast that of the natural vegetation (green spaces) decreased to 12 per cent. This was linked to increase in urban sprawl to contain the high population growth of the city (Fanan et al., 2011).

4.3.2 Insufficient operation of urban planning regulations

Planning of towns in Africa is underlined by laid down regulations which are often made by the central government. Although several land planning regulations that cover green spaces were found to be available in various African countries the operation of such regulations was problematic. The following issues were found to hinder the effective operation of urban planning regulations on green spaces in Africa: the dysfunctional nature of urban planning regulations; bureaucratic processes involved in issuing development permits and weakness of the planning institutions or organisations as result of insufficient resources to work with (Muderere, 2011; Awuah et al., 2010; UN Habitat, 2009).

The dysfunctional nature of urban planning regulations in Africa can be linked to the outdated nature of some of these regulations to address the current development trends in urban areas. It was revealed that some of the urban planning regulations operating in some countries in Sub-Saharan Africa were made about 60 years ago along the lines of the planning regulations of their colonial masters at that time such as the British, French and Germans (Awuah et al., 2010). For example, the 1946 Town Planning Ordinance of Nigeria, 1948 Town Planning Act of Malawi (Njoh, 2009), 1956 Town Planning Ordinance of Tanzania (Kironde, 2006) and 1945 Town and Country Planning Act of Ghana are still in operation. Little or no changes have been made to these regulations and this makes it difficult for such regulations to comprehensively address some of the current urban development problems such as rapid urbanisation and the fast depletion of green spaces.

In addition to this, most African countries over rely on master plans to manage urban areas. The master plan shows on a map the outlook of desired urban form to be achieved in future (UN Habitat, 2009). These master plans are not able to deal with new challenges associated with urban developments in Africa such as excessive destruction of green spaces. This is because most of these master plans are outdated, rigid and their preparation did not involve the participation of wider stakeholders including the local people. A study by UN Habitat (2009), found the physical development of Abuja (Nigeria) to be still based on a master plan which was prepared in the 1970s. The study further revealed that the master plan for Lusaka (Zambia) drawn up by Doxiadis in 1968, and the 1944 master plan for Accra (Ghana) revised in 1957 are still in operation. New development patterns in these cities make it difficult for these master plans to effectively guide the growth of these cities resulting in massive encroachment of many green spaces.

Delays in giving decisions on development permits by planning authorities with its associated bureaucratic processes was found to have consequences on the development of urban green space in Africa. It takes a very long period, about four years in Tanzania, for a developer to get all land documents such as detailed plans and building permit approved by the planning authorities (Kironde, 2006). Similarly, a study in Nigeria by Egbu et al. (2008) indicated that lengthy bureaucratic procedures have to be followed before one can get the necessary papers to proceed with any land development. The study showed that there are about thirty-two (32) processes that one has to go through before he/she can get the available land documents and this could last for a year or more. Furthermore, long bureaucratic processes in securing development permits from planning authorities have also been identified to take place in Ghana and Cameroun. Specifically, it came to the fore that it takes about two years, and between 2-7 years to get land titles and other development documents in Ghana

and Cameroun respectively (Awuah et al., 2010). All these long processes influenced developers and other individuals in urban areas to evade the required planning procedures to embark on land projects which are unauthorised. The outcome of this has been massive encroachment of green space lands for housing and commercial activities by private developers in many urban areas. Furthermore, lengthy bureaucratic processes were found to give rise to corrupt practices such as collection of bribes by planning authorities from private developers to speed up the process. For instance, a study on Festac Town in Lagos associated the poor physical development of the town to bribes which are collected by the city planning authorities (Ogundele et al, 2011). The findings of that study showed that some officials of the Federal Housing Unit in charge of Festac Town area collect bribes before granting development permits to developers. This was discovered to be a major cause of high growth of unauthorized building structures in Festac Town which have destructed much of the green vegetation in the town. This is because developers can pay bribes to get documents to encroach on lands reserved for green spaces.

In addition to corruption, misappropriation and embezzlement of state funds meant for socio-economic developments such as projects on green spaces by government officials was also found as a problem undermining the successful development of green spaces in Africa (Opkala, 2009). Embezzlement of funds strongly came up as an issue in Harare (capital city of Zimbabwe) to hamper the protection of sensitive natural sites (green spaces) and the integration of such sites into the overall plan and design of the city (Muderere, 2011). It was revealed that despite provision of some funds by donor agencies to incorporate ecological zones (green spaces) into the plan of Harare city such funds were diverted or embezzled by some government officials rendering the project to be in standstill (Muderere, 2011).

Compounding the problem of insufficient operation of urban planning regulations in Africa was poor enforcement of land planning regulations on green spaces. Inadequate skilled personnel, insufficient logistics, financial constraints, political interference and lack of coordination between planning authorities were found to be the cause this problem. Concerning poor coordination, this was found in Addis Ababa to impact negatively on the protection of urban parks as the coordination between government institutions, private organization and NGOs on green spaces is poor (Mpofu, 2013). The coordination and partnership between government and private institutions on green spaces in many West African countries were also found not to be in good condition (Fuwape & Onyekwelu, 2011). This is due to the fact that most city authorities in West Africa do not recognize private organisations as important stakeholders on green spaces and therefore often take decisions without the active involvement of the private sector. Poor coordination between the various planning institutions in Harare (capital city Zimbabwe) surfaced as a problem behind the destruction of green spaces and insufficient dialogue between the institutions was found as the cause for that (Muderere, 2011). With respect to political interference, it was found out that the activities of the Harare city authorities are often politically interfered with especially when it comes to taking necessary actions against individuals who encroach upon green space lands. Some of the offenders can go scot-free because of close links they have with top government officials (Muderere, 2011).

Lack of political will to undertake projects on green spaces also emerged as a dominant challenge. Policy makers were found to lack political will to initiate policies or measures to enhance the development of urban green spaces in many African cities. Factor analysis performed to ascertain the factors destructing green spaces in Lagos city pointed out lack of political will of the planning authorities to initiate policies on green paces as a major

factor for such destructions (Olaleye et al., 2013). The issue of lack of political will was also a major problem in Addis Ababa (Ethiopia). Beautification projects scheduled to be undertaken on about 300 hectares of land to enhance green spaces along the principal roads of Addis Ababa have not been accomplished for some years now due to lack of political will of the city authorities to get the project ongoing (Mpofu, 2013).

In probing further on the poor enforcement of planning regulations on green spaces in Africa, matters of unqualified skilled personnel, low staff strength, financial constraints and lack of logistics were discovered as predominant factors that worry most institutions on green spaces in Africa. These issues were among the key findings at Addis Ababa (Ethiopia) where the authorities on green spaces were hit with shortages of manpower and severe financial constraints (Mpofu, 2013). Similarly, in Abidjan, the body in charge of Parks and Gardens was crippled with unqualified personnel and financial inefficiencies (Djibril et al, 2012). The situation in Kumasi and other cities in Ghana was similar. The Department of Parks and Gardens, the official body in charge of the development and maintenance of green spaces in Ghana was found to be in crisis with woefully inadequate staff, lack of basic equipment for their activities, and limited funds to undertake their planned activities (Modern Ghana, 2006). These problems make it difficult for many organisations on green spaces in Africa to strictly enforce regulations on green spaces and also initiate policies to preserve these spaces.

4.3.3 Social-economic and political challenges

Poverty was a major factor that was found to contribute to the depletion of green spaces in Africa. The 2010 State of African Cities Report revealed that as at 2003, about 47 per cent of urban dwellers in Benin and 57 per cent of urban dwellers in Burkina Faso lived on less than one dollar (\$1) a day. In 2004 and 2005, about 66 percent and 65 percent of urban

dwellers in Niger and Nigeria lived below one dollar a day respectively. It was further revealed that about 30 per cent of urban dwellers in Ghana lived below one dollar a day in 2006. The report linked the high rate of urban poverty to the depletion of Africa's green environment as many of the poor tend to over rely on the green vegetation for their survival (UN Habitat, 2010). Similar findings came up in a study on South Africa which found many poor communities to rely extensively on the green environment for additional income or to improve their livelihood (Cilliers et al., 2013). The resultant effect has been excessive destruction of green spaces in many urban areas in Africa by the poor to satisfy their needs.

Lack of priority to green spaces in the development agenda of some cities in Africa has hindered the growth of green spaces. Green spaces were not found to be among the main priorities of many African countries. Matters of poverty reduction and provision of social amenities such as housing, schools, hospitals and pipe-borne water constitute the top priorities of many African countries. This has influenced national governments and city authorities not to give much attention and commit the needed funds for the creation and maintenance of green spaces. Bolnick et al. (2006) echoed this by indicating that in Africa much attention is given to a brown agenda to the neglect of the green agenda which focuses on preserving the green environment. Lugoe (2008) observed that low priority given to green spaces in Tanzania has resulted in poor implementation of urban land-use projects on green spaces. In Kisumu (third largest city in Kenya), it came to light that due to the low priority given to green spaces many of the urban parks have not received attention for long time causing most of the parks to lack basic facilities such as chairs, toilets, notice boards and playing facilities for children (Rabare et al., 2009). Similar results emerged in Abidjan (Cote D'Ivoire) where several parks and gardens were found in precarious condition with little or no maintenance activities due to the limited attention given to such spaces in the city (Djibril et al., 2012). The

low priority to green spaces was found to have resulted in many city authorities not providing good security on urban parks to enhance the safety of park visitors. In Kenya, some urban parks were found to be used by drug peddlers and often criminals with no security guards to keep the place safe for users (Rabare et al., 2009). The Kumasi Children's Park in Ghana is no go area for many residents of Kumasi because the place has been taken over by criminals with a whole lot of criminal activities taking place on the park especially at night. A study by Taylor (2010) confirmed this when poor security on the Kumasi Children's Park was found as a major factor hindering the usage of the park. This situation on some parks in Africa discourages many individuals from using public parks.

Uncooperative attitudes of urban dwellers towards the management of green spaces also came out as a predominant challenge. This was found to be the result of lack of involvement of the local people in green space management and poor awareness of the local people on the benefits of green spaces (Muhumuza & Balkwill, 2013; Djibril et al., 2012). For example, decisions on green spaces in many southern African countries (Malawi, Lesotho, Mozambique) were found to be undertaken mostly by city planning authorities without active involvement of the local people (Southern African Development Community, 2006). This problems was also seen in a study by Muhumuza & Balkwill (2013) which found the local people in different parts of Zambia, Cameroon and Benin not consulted and involved in the management of parks in their localities. The poor involvement of the local people together with their poor awareness of the benefits of green spaces (Djibril et al., 2012) have influenced most local people to perceive the protection of green spaces as the sole responsibility of the planning authorities and therefore do not take good care of these spaces in their neighbourhoods. These have resulted in the indiscriminate destruction of green spaces by the local people and conversion of some parts of many parks into refuse dump in cities such as

Freetown (Sierra Leone), Ibadan, Kaduna, Lagos (Nigeria), Kumasi and Accra (Ghana) (Fuwape & Onyekwelu, 2011).

Another major socio-economic and political challenge was political instability. Over the last two decades, several civil wars have taken place in many African countries such as Sudan, Somalia, Liberia, Chad, Mali, Cote D'Ivoire, Sierra Leone, Democratic Republic of Congo, Rwanda, Angola and Libya. The devastating effects of these civil wars on urban development as well as green spaces cannot be underestimated. For example, in Liberia, over 10 years civil war in the country destroyed a substantial amount of urban natural environment in areas such as Monrovia (capital city) and Bunchanan (UNEP, 2004). The Somalia civil war destroyed many urban trees. During that war some major urban areas such as Hargeisa, Borama, Berbera and Erigavo were hot spots and in view of that, both indigenous and foreign trees in these areas were destroyed through cross bombardments (Candlelight for Health, Education & Environment, 2006). Furthermore, urban green spaces in Rwanda also came under serious destruction by the civil war in Rwanda that occurred in the 1990s. It was estimated that the civil war in Rwanda destroyed about 50 per cent of Gishwati forest, much of Mukura forest, and about a 70 per cent loss of the Akagera National Park (Plumptre et al., 2001).

All in all, Africa as a region has diverse urban green spaces with much attention given to the growing of urban trees. Most of the green spaces in Africa are concentrated in Sub-Saharan Africa rather than North Africa because of unfavorable climate and soil conditions in the northern part of Africa. The overall development of urban green spaces in Africa was found to be hindered by many challenges. These challenges include urbanisation, the low resource base of institutions responsible for green spaces, lack of priority to green spaces, the influence of poverty, corruption, uncooperative attitudes of the local people and political

instability. The next section narrows the discussion to the town planning situation in Ghana to know the regulatory and institutional set up, and their linkages to the development of urban green spaces.

4.4 Regulatory and institutional framework for town planning in Ghana

In Ghana, there are several regulations that cover the planning and management of towns. Such regulations provide various principles and measures to guide orderly development of lands, settlements and conservation of the natural environment including green spaces. These regulations also assign powers to specific institutions¹⁰ to ensure that towns are well planned and managed. Among such regulations are the following:

- Town and Country Planning Act of 1945 (Cap 84)
- Local Government Act of 1993 (Act 462)
- National Development Planning Commission Act of 1994 (Act 479)
- National Development Planning System Act of 1994 (Act 480)
- Environmental Protection Agency Act of 1994 (Act 490)
- National Building Regulations of 1996 (LI 1630)
- The 1992 Constitution of Ghana

Ghana, formerly known as the Gold Coast, was once a British colony. As such, all developments in Ghana during the colonial period, including town planning, were engineered by the British. The first comprehensive Town and Country Planning Act in Ghana was established by the British in 1945 through the initiative of Maxwell Fry, who was the advisor to the British minister in charge of all the British colonies in West Africa (Njoh, 2007). The

¹⁰ Institution in this context refers to a government agency assigned specific roles to manage different resources in Ghana.

Town and Country Planning Act of 1945 (Cap 84) in Ghana came into force on 21st April, 1945 and was made to provide for orderly and progressive development of land, towns and other areas. This Act was promulgated among other things to preserve and improve the amenities of towns and other related matters. Although this act recognises the Town and Country Planning Department as a major institution to ensure the proper growth of towns in Ghana, it does not give that department the necessary rights to strictly enforce development controls on the ground. This obstructs effective planning of towns as it restricts the Town and Country Planning Department to playing only an advisory role in the management of towns. Another problem is that the Act adopts a top down or central-periphery approach, with planning powers concentrated among only government agencies (Adzi-Tay, 2012), which hinders effective participation of other stakeholders.

Aside from the Town and Country Planning Act of 1945 (Cap 84), the Local Government Act of 1993 (Act 462) became operational on 24th December, 1993 when it had presidential assent (Government of Ghana, 1993). It was passed to establish and regulate the local government system in accordance with the 1992 constitution of Ghana. This act gives legal backing to Metropolitan, Municipal and District Assemblies (MMDAs) as the highest political and administrative authorities in their districts to provide guidance, direction and supervision to other administrative authorities. This authority mandates the MMDAs to plan and ensure successful growth of their districts in all matters, including proper management of green spaces (Government of Ghana, 1993).

The next planning regulation is the National Development Planning Commission Act of 1994 (Act 479). This act established the National Development Planning Commission (NDPC). It created and specified the composition, roles, functions and authority of the NDPC as the highest co-ordinating body in charge of development planning in Ghana (Botchie,

2000). Following the National Development Planning Commission Act 479 came the National Development Planning System Act of 1994 (Act 480), which spells out the various institutions and bodies that constitute the planning authorities and indicate their roles and functions, as well as the procedures by which the planning authorities can carry out their development planning functions (Diaw, 1997).

Another important regulation that supports the planning and management of towns in Ghana is the Environmental Protection Agency Act of 1994 (Act 490), which became effective on 30th December, 1994. It gives power to the Environmental Protection Agency (EPA) to oversee and protect the natural environment of Ghana. The National Building Regulations of 1996 (LI 1630) was the next key regulation, to which much emphasis is often given when it comes to the planning and management of towns in Ghana. Through the joint efforts of the Ministry of Works and Housing and the Ministry of Local Government and Rural Development, the National Building Regulations of 1996 (LI 1630) was enacted and became operational on 27th September, 2006 (Ministry of Local Government and Rural Development, 2006a, b). This law was passed to guide the orderly erection of structures to enhance the physical planning of towns and also avoid encroachment of public lands such as green spaces. Apart from these regulations, the 1992 National Constitution of Ghana has some portions that emphasise the management of towns and their resources. For example, chapters twenty (Articles 240 - 256) and twenty-one (Articles 257 – 269) of the 1992 Constitution of Ghana focus on how towns and their related public lands and resources (such as green spaces) should effectively be managed.

Despite the availability of various town planning regulations in Ghana, some inefficiencies do not make the operation of these regulations effective in the management of green spaces. Green spaces are not much catered for in the provisions of these regulations.

There are neither specific clauses on green spaces nor standards to guide the management of these spaces. Furthermore, the enforcement of these regulations is questionable, since many developments in most towns in Ghana are contrary to some of the provisions of these regulations (WaterAid, 2009). Many individuals erect structures or undertake land developments that contravene the provisions of these regulations to destroy many green spaces with impunity. For example, there are several cases of encroachment of natural reserves, public green spaces and development of unauthorised structures with nothing being done to punish the offenders (Quagraine, 2011; Adarkwa & Owusu-Akyaw, 2001). In addition to this, the simultaneous operations of some of these planning regulations often make the planning process cumbersome and confusing. For instance, the operation of the Town and Country Planning Act of 1945 (CAP 80), the Local Government Act of 1993 (Act 462), the National Building Regulations of 1996 (LI1630) and other land laws at the same time have created confusion about the powers of some institutions such as the Town and Country Planning Departments, MMDAs, the Lands Commission and the Office of the Administrator of Stool Lands, which affect the smooth management of green spaces.

Beside the town planning regulations of Ghana, there is also a decentralised planning system which supports bottom-up planning (planning from below) instead of the orthodox top-down planning approach (Integrated Social Development Centre [ISODEC], 2001). The new decentralised development planning system of Ghana was designed to restructure the political and public administrative machinery for decision-making both at national and local levels, and to undertake development planning in a more collaborative way to attain functional efficiency and environmental harmony (Botchie, 2000). It was also made to enhance community participation, encouraging local people to participate actively in the

decision making process of town planning. The decentralised town planning system of Ghana operates through the following processes (ISODEC, 2001):

- It starts with Unit Committees and Area/Town Councils interacting with community members (local people) to come out with various social, economic and environmental problems facing various communities or neighbourhoods. The outcome of this is channelled to the District Assembly in charge of that area.
- The sub-committee of the executive committee of the District Assembly sits and deliberates on the problems. Afterwards they define, prioritise and submit the concerns of the local people to the executive committee.
- The various departments of the District Assembly, sectoral agencies, NGOs and other functional agencies confer and collaborate with one another to prepare the district plan, taking into account the problems and concerns of the district as raised by the local people.
- The District Planning Co-ordinating Unit integrates and co-ordinates the district sectoral plans into long term, medium term and short term plans. After this, the proposed plans are subject to public hearing and roundtable debate at the District Assembly.
- The approved plans are then sent to the Regional Coordinating Council (RCC) for co-ordination and harmonisation with the plans of other district assemblies at the regional level.
- The final document is sent to the NDPC, which is at the apex of the decentralised planning system, for the integration of such plans into national development plans and strategies.

Some challenges make the operation of this planning process ineffective. One of these challenges is political interference (Kasanga & Kotey, 2001). The national government appointing individuals to be part of the planning team affects the smooth operation of district assemblies to address the needs of their communities. Lack of expertise of the workers of Unit Committees, Town/Area Councils and other bodies also affects the decentralised planning process. Members of such bodies are supposed to have experience in community development, participatory governance and financial management to enable them to execute their duties effectively. However, most of these workers often lack these skills, and this on many occasions results in insufficient participation of local people, misappropriation of funds and other corrupt practices which affect the proper functioning of the planning process (Aryeetey, et al., 2007; ISODEC, 2001). These challenges do not allow the process to function well to address concerns about green spaces. Looking at the decentralised town planning system of Ghana, the overall institutional structure centres on major institutions such as the National Development Planning Commission (NDPC); Regional Co-ordinating Councils (RCCs); Metropolitan, Municipal and District Assemblies (MMDAs); and Sectoral Ministries, Departments and Agencies (SMDAs).

At the top of the institutional structure is the NDPC. Based on the NDPC Act of 1994 (Act 479), the NDPC is mandated to monitor, evaluate and co-ordinate all development policies, programmes and projects in Ghana. It is responsible for the preparation of broad national development plans; and making proposals for the protection of the natural and physical environment, including green spaces. It is also entrusted to formulate comprehensive national development planning strategies and ensure that these strategies, including consequential policies and programmes, are effectively carried out.

Following the NDPC are the RCCs. These institutions are positioned between the NDPC and MMDAs. Under the National Development Planning System Act of 1994 (Act 480), the functions of the RCCs are numerous. They are supposed to co-ordinate the plans and programmes at the district level and harmonise such plans and programmes with national development policies and priorities for consideration and approval by the NDPC. They have the authority to monitor and evaluate the implementation of the programmes and projects of MMDAs within the regions they administer. They are also expected to provide the MMDAs with information and data that are necessary to assist them in the formulation of district development plans.

One set of institutions that play an important role in the decentralised planning system of Ghana is the MMDAs. The Local Government Act of 1993 (Act 462) gives legal and executive powers to the MMDAs as the planning authorities in their respective areas of jurisdiction. They have powers relating to the granting of development permits and enforcement of development control measures and strategies including the power to alter, remove or demolish any development undertaken without a permit (WaterAid, 2009). It is also their responsibility to initiate and prepare district development plans and settlement structure plans in a manner prescribed by the NDPC. It is their mandate to ensure that the district development plans are prepared with full participation of the local people. The MMDAs are headed by Metropolitan/Municipal/District Chief Executives. Unit Committees and Area Councils are important elements of the MMDAs that help to enhance the participation of the local people in the planning process. The Unit committees ensure access to relevant information, and discuss issues concerning the development of their districts with the local people. The Area Councils serve as a medium through which plans, data, inputs and proposals from the Unit Committees are channeled to the authorities of the MMDAs

(ISODEC, 2001). Under the MMDAs, the activities of the Works Department and Department of Urban Roads are associated with the development of green spaces. For example, the Works Department is responsible for preventing the development of unauthorised building structures, such as those encroaching on green spaces, whilst the Department of Urban Roads is responsible for managing horticultural works along urban roads.

Sectoral Ministries, Departments and Agencies (SMDAs) are also major institutions that assist in the planning and management of towns in Ghana. They operate at the national level, and also have offices at the regional and district levels. Examples of the SMDAs are the Ministry of Finance, the Ministry of Local Governance and Rural Development and the Environmental Protection Agency (EPA). The SMDAs often prepare sectoral plans to support the growth of districts with guidance from the NDPC (Dagbui, 1997). Figure 4.3 shows the institutional framework for the decentralised planning system in Ghana.

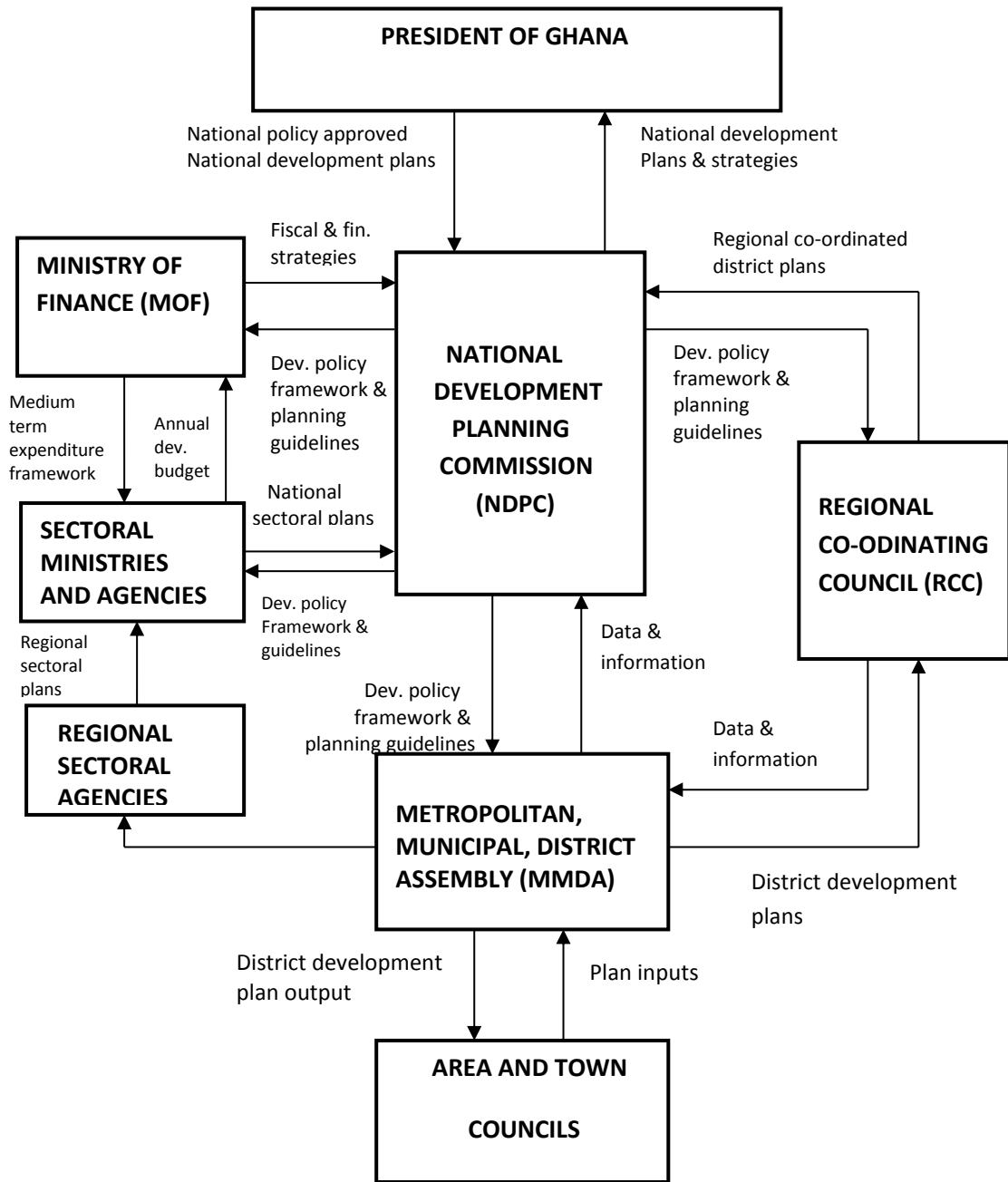


Figure 4.3: Institutional planning framework of Ghana

Source: Botchie (2000)

Taking into account the institutional framework for town planning in Ghana, some institutions perform vital roles for the growth of green spaces and overall planning of towns at the district level that needs to be recognised. These institutions include the Town and Country

Planning Department (TCPD), Department of Parks of Gardens, Forest Service Division, Wildlife Division, Lands Commission and Traditional Authorities. The roles played by these institutions are as follows.

The TCPD is one of the decentralised departments of the MMDAs and is responsible for the preparation of planning schemes and provision of planning standards to guide physical developments in Ghana (WaterAid, 2009). These planning schemes and standards are supposed to cater for the preservation of green spaces. The activities of the TCPD are supported by legal frameworks such as the Town and Country Planning Act of 1945 (Cap 84), the National Development Planning Commission Act of 1994 (Act 479), the National Development Planning (Systems) Act of 1994 (Act 480), the National Building Regulation of 1996 (LI 1630) and the Local Government Law of 1993 (Act 462). According to the TCPD (2007), the mandates of the TCPD include the following: preparation of land-use plans (structure plans) to guide the growth and sustainable development of human settlements at the district level; co-ordination of diverse physical developments promoted by departments, agencies of government and private developers; and the processing of development/building permit applications for consideration by Statutory Planning Committees.

The Department of Parks and Gardens, also a decentralised department of the MMDAs, was established in 1988. Its main responsibility is to ensure the development of Ghana's landscape and to beautify and preserve the natural environment of towns especially in the area of parks and gardens (Modern Ghana, 2006). The Forest Service Division and the Wildlife Division also work under the Forest Commission at the district level, to manage wildlife protected areas (such as zoos), and to regulate forest resources such as urban forests respectively. The roles played by the Lands Commission in Ghana's town planning cannot be underestimated. In accordance with the passing of the Lands Commission Act of 2008 (Act

767), the Lands Commission is a body that has four divisions: Public and Vested Lands Management Division; Survey and Mapping Division; Land Valuation Division; and Land Title Registration Division. The Land Title Registration Division registers titles to lands, registers deeds and maintains records on all public lands, whilst the Survey and Mapping Division is in charge of the surveying and demarcation of lands for the purposes of land-use and land registration (Ghana Land Administration Project, 2011 a, b). The Public and Vested Lands Management Division is responsible for managing state acquired and vested lands in conformity with approved land-use plans, whilst the Land Valuation Division helps in determining the value of lands purchased, rented or leased by or to the government (Ghana Land Administration Project, 2011 c d). Among the broad roles of the Lands Commission is the management of all public lands in Ghana, which covers the development of green spaces and is supported by the 1992 Constitution of Ghana. Traditional authorities are also important in the town planning process of Ghana. Traditional authorities, especially chiefs, are traditional heads of their communities and responsible for the overall well-being of the people within their jurisdictions. They are the custodians of their lands and play a key role in all land transactions in their area, such as lands allocated to green spaces.

The activities of all the institutions in Ghana's town planning system are fraught with many challenges. Difficulty in bringing about collaboration among these institutions to accomplish tasks is a key problem. Most often some of the town development activities take place without the participation or involvement of some key stakeholders. A study by Beldon (2010) revealed poor collaboration between traditional authorities and the government planning institutions in the management of lands in Ghana. This has resulted in a number of land disputes between the national government and traditional authorities. Aryeetey et al. (2007) indicate that there is fragmentation or overlapping of the functions of some of these

institutions which regularly creates confusion and lack of cooperation among them leading to unsatisfactory performance.

Insufficient logistics such as offices and equipment, also pose a serious challenge to the various institutions. Out of the 170 districts in Ghana, the TCPD has offices in only 80 districts, with no offices across the remaining districts (WaterAid, 2009). In addition to this, a study by Modern Ghana (2006) found lack of equipment to be a major problem preventing the Department of Parks and Gardens from performing satisfactorily. It has been found that the Department of Parks and Gardens, which is in charge of the creation and maintenance of green spaces, has very few tractors, water tankers, pick-ups and mowers for operation in Accra, Kumasi and Aburi (Modern Ghana, 2006).

Another major challenge is inadequate numbers of skilled personnel to run the activities of these institutions. The worst affected institution is the TCPD. Lack of skilled personnel has resulted in unqualified planners, who have little or no training running the activities of the TCPD (Ministry of Lands, Forestry and Mines, 2007). Low morale among the staff of the institutions as a result of poor incentives, excessive delays in processing documents for clients due to unnecessary bureaucratic processes and complex inter-agency relations have also been found by Aryeetey et al. (2007) to undermine the performance of the planning institutions. Added to these challenges are financial constraints which hinder the activities of the institutions. Most of these institutions largely depend on government subventions for their activities. The insufficient nature of the government subventions, and sometimes the delays in reaching the institutions, disrupts the planned activities of the institutions and makes them unable to undertake projects (WaterAid, 2009).

In conclusion, the many challenges faced by the town planning institutions have resulted in most of them performing below expectation. This has made the general public lose

confidence in these institutions and hence by-pass them so as to undertake land developments that suit their personal interests. This is causing many haphazard physical developments in urban areas which destroy or damage the development of green spaces. The continuous deterioration of Ghana's urban environment and the natural environment in particular raises concerns about the kind of sustainable development strategies that have been pursued over the years in Ghana and their effects on the urban environment, especially green spaces. The next section therefore treats the various sustainable development strategies of Ghana and their effects on green space management.

4.5 Sustainable development strategies in Ghana

The idea of sustainable development is receiving much attention in the world as a means of achieving economic, social and environmental growth for both present and future generations. In Ghana, the idea of sustainable development is understood to focus on some specific indicators. These are high economic growth, reduction of poverty and to a lesser extent protection of the natural environment. Over the years, Ghana has embarked on a number of strategies or policies to achieve sustainable development in various aspects of her economy. These strategies range from socio-economic development issues to environmental considerations. Among these strategies are Vision 2020, Renewable Natural Resource Sector Strategy, Comprehensive Development Framework, Poverty Reduction Strategy, Millennium City Initiative, Savanna Accelerated Development Project, and National Urban Policy which are discussed below.

4.5.1 Vision 2020

This is a long-term national policy framework envisaged to transform Ghana to the status of a middle income country by the year 2020. It was launched in 1996 and its main aim was to help Ghana build a balanced economy and change the country from a poor, low-income country into a prosperous middle income country (Organisation for Economic Co-operation and Development [OECD], 2001). The time frame of this policy is 25 years, that is from 1996 to 2020. This national policy is similar to Tanzania's Vision 2025 policy which is also a long-term national policy instituted to help Tanzania achieve a better country characterised by good governance; a well-educated and learning society; and a diversified economy capable of producing sustainable growth and shared benefits for its citizens (OECD, 2001).

Ghana's Vision 2020 has long term development objectives that concentrate on key thematic areas such as macro-economics, human development, rural development, urban development and an enabling environment (Vordzorgbe & Caiquo, 2001). Its preparation was done through the consultation and involvement of stakeholders such as government agencies (e.g. NDPC), universities, civil societies, the private sector, NGOs, and traditional authorities. The first medium-term development plan covering 1996-2000 has already been implemented whilst the second medium-term development plan is ongoing. The key problem affecting Vision 2020 as a national policy is insufficient government will to implement the core programmes of the policy. Osei-Bonsu (2012) found out that most often the government give much attention to the implementation of many other development programmes which are outside the core initiatives of Vision 2020. This often derails the country's efforts in pursuing Vision 2020. The policy also over-concentrates on the economic and social needs of Ghana to the neglect of many environmental issues such as preservation of green spaces. The

achievement of the goals of Vision 2020 is now in doubt since the country has limited time to achieve such efforts. Following Vision 2020 was a strategy on the protection of renewable natural resources.

4.5.2 Renewable Natural Resource Sector Strategy

Renewable Natural Resource Sector Strategy (RNRSS) came into force in 1996 and it covered the period between 1996 and 2000. Its main goal was to manage renewable natural resources to benefit the present and future generations. Among its objectives were to create an institutional and legislative framework for the management of renewable natural resources (RNR); promote the regeneration of RNR (including biodiversity); improve the value of RNR products; enforce the regulations on RNR; and design appropriate technologies for the utilization and management of RNR (Vordzorgbe & Caiquo, 2001).

The implementation of the RNRSS was not effective due to poor institutional arrangements. The proposed establishment of some institutions such as the Inter-Ministerial Committee to develop policy guidance and the District Environmental Management Committees (DEMCs) to cater for other aspects of RNR management at the district level remained on the drawing board. The RNRSS also had a conflicting focus with some interventions in the sector such as the Forest and Wildlife policy of 1994, Forest Development Master Plan (1996-2000), National Land Policy of 1999 and Environmental Sanitation Policy of 1999 since some of its initiatives or principles were the same as those interventions (Vordzorgbe & Caiquo, 2001). The RNRSS gave little attention to the growth of urban biodiversity such as urban green spaces because it did not concentrate much on urban areas. After the RNRSS came the strategy of Comprehensive Development Framework to mobilize resources to address the incidence of poverty in Ghana.

4.5.3 Comprehensive Development Framework

The Comprehensive Development Framework (CDF) was a policy framework that covered issues of poverty and inequality which are among the key concerns of the World Bank. Ghana initiated the CDF in 1999. Other countries in Africa which have also undertaken the CDF initiative include Uganda, Burkina Faso, Benin, Ethiopia, Niger, Cote D'Ivoire and Chad. Some of the objectives of Ghana's CDF were to improve inter-relationships, coherence and increased integration of sector policies and programmes; create a platform for donors to finance development programmes; minimise government efforts and resources in managing different donor systems; enhance the management of Ghana's development programme, and build stronger partnership with donors, civil society and the private sector (Vordzorgbe & Caiquo, 2001). The CDF was among other things to provide a support for development assistance necessary to reduce poverty under Ghana's Vision 2020 policy.

The CDF centred on the principles of long-term holistic development framework; country ownership; country-led partnership; and results orientation (Addae-Boahene, 2007). It was largely supported by the World Bank and also had support from countries such as Netherlands, United Kingdom and Denmark. The implementation of the CDF had some successes for Ghana. For example, it helped the World Bank and other donors to have a better focus and redefined their development assistance to Ghana, and also provided support for the World Bank new country assistance strategy for the country (Vordzorgbe & Caiquo, 2001). Ghana was able to get some funds from donors to embark on different development programmes. However, the overall impact of CDF on Ghana's economy was limited. In areas such as agriculture, decentralisation and economic development its success was unsatisfactory. The level of commitment of international donors and the national government in pursuing the principles of CDF in such areas were low (Boesen et al., 2002). In addition to

this problem was the country's over reliance on foreign donors. This increased Ghana's debt burden. Furthermore, it was much attached to the socio-economic development of Ghana and hence matters of protecting the natural environment such as green spaces fell outside its scope. Next to CDF were poverty reduction strategies to eradicate poverty.

4.5.4 Ghana Poverty Reduction Strategy

Ghana has undertaken two main poverty reduction strategy initiatives. These are Ghana Poverty Reduction Strategy I (GPRS I) and Ghana Poverty Reduction Strategy II (GPRS II). Unlike other poverty reduction strategy initiatives pursued by other developing countries (Uganda, Burkina Faso and Bolivia) which are not linked with long-term policies, Ghana's poverty reduction strategies were implemented as one of the measures to reduce poverty under the long-term policy of Vision 2020. The preparation and implementation of Ghana's poverty reduction strategies involved the participation of many stakeholders such as civil society organizations, district assemblies, the private sector, media, women's groups, community organization, the general public and government agencies and ministries.

The GPRS I was implemented from 2003 to 2005. It concentrated on five thematic areas: macro-economic stability; production and gainful employment; governance; human resource development and provision of basic services; and special programmes for the vulnerable and excluded. The GPRS I helped the poor to have access to legal services, involved persons with disabilities into mainstream production and employment, and provided easy access to credit for the marginalised and vulnerable (NDPC, 2005). Despite these achievements, it was associated with some bottlenecks. These included insufficient progress in primary school enrolment, limited engagement of local communities and district assemblies, and inadequate gender focus resulting in continual gender disparities in sectors

such as health, education, employment and access to land (NDPC, 2005). It also over emphasized on macro-economic measures with little focus on infrastructural development.

The GPRS II was initiated to address the shortcomings of GPRS I and at the same time focus on the implementation of growth-inducing policies and programmes which have the potential to boost wealth creation and sustainable poverty reduction (NDPC, 2005). It took place between 2006 and 2009. The successes of GPRS II included the following: improved macro-economic performance (increased GDP and stabilization of the currency); increased in employment as many jobs were created; a rise in basic school enrollment; easy access to transportation; and increased antenatal care for women (International Monetary Fund [IMF], 2009). However, it had limited benefits in the area of environment and natural resource management. The problem of environmental degradation (including loss of green spaces) was not effectively tackled (IMF, 2009). Cases of environmental degradation were still high during that period. Financial constraints also made it difficult for all the programmes under GPRS II to be implemented. After tackling the problem of poverty, the emphasis shifted to the development of towns with the introduction of the Millennium city initiative.

4.5.5 Millennium City Initiative

In 2010, the Accra Metropolitan Assembly (AMA) launched the Millennium City Initiative (MCI) to transform Accra to a befitting status to achieve the Millennium Development Goals (MDGs) by 2015. The MCI was a project of the Earth Institute at Columbia University instituted by a renowned development economist Jeffrey Sachs to help developed cities across Sub-Saharan Africa to meet the MGDs by 2015 (Earth Institute, 2012). Other cities in Africa that also are pursued the MCI included Segou, Bamako (Mali),

Akure, Kaduna (Nigeria), Louga (Senegal), Kisumu (Kenya), Tabora (Tanzania), Mekelle (Ethiopia), Blantyre (Malawi).

The MCI in Accra was jointly pursued by AMA and the Earth Institute of Columbia University in USA. Some of the problems of Accra that the MCI helped to address included flooding, congestion, water and sanitation issues; unplanned settlements; and education and health problems. A number of areas in Accra such as James Town, Mamobi, Mamprobi, new and old Dansoman, New Town, Osu and Adabraka benefited from the MCI by receiving some form of upgrading through the project (Ghana News Agency, 2010). The MCI was also undertaken in Kumasi. The MCI in Kumasi got underway around the same time like that of Accra in 2010 but there was much more attention on the Accra's MCI than the Kumasi one. Like the Accra MCI, the Kumasi MCI aimed among other things to solve problems concerning congestion, health, education, water and sanitation, and housing.

In Accra and Kumasi, the MCI achieved some successes. It assisted in training many health practitioners to improve the health conditions of the residents in both areas. It also helped to set up more educational institutions and improved basic education. In addition to this, it improved the rate of congestion, informal settlements and poor sanitation conditions in both Accra and Kumasi. Challenges such as inadequate funds, and lack of cooperation of residents in slum areas, and hawkers and squatters at the Central Business District especially in Accra affected the smooth operation of the MCI. The programme was also silent on the integration of urban green spaces into the overall development of the two cities. Furthermore, the MCI was limited in scope since it concentrated on only two cities to the neglect of other cities in Ghana. Following the MCI was the Savanna Accelerated Development Programme which is currently ongoing.

4.5.6 Savannah Accelerated Development Programme

The Savannah Accelerated Development Programme (SADP) is a long term development strategy initiated by the government of Ghana to stimulate economic growth and sustainable development in the northern part of Ghana which lags behind in terms of development. It was launched in 2010 and expected to end in 2030, covering a period of 20 years. The areas in northern Ghana that SADP covers are Northern Region, Upper East Region, Upper West Region and the northern parts of Brong Ahafo and Volta Regions. The SADP is based on the concept of “forested and green north” which is focused on improving agricultural productivity and creating a large market in Sahelian countries (SADA, 2010). The programme is envisaged to foster close links with neighbouring Sahelian countries such as Burkina Faso, Togo, Niger and Mali by way of opening regional markets with such countries.

The SADP has three basic objectives (SADA, 2010): reducing poverty; adaptation to climate change; and building human capital, economic infrastructure, investment and private sector base to manage social, economic and ecological transformation in northern Ghana. Enhancing agriculture and industrialization is also key to SADP. This programme is faced with the challenge of financial constraints. There are not enough funds to effectively get the programme going. There is also insufficient logistics such as offices, vehicles and equipment to enhance the implementation of SADP.

4.5.7 National urban policy

In April 2013, Ghana launched its first ever National Urban Policy which is ongoing (Citi Alliance, 2014). This policy is to address various social, economic and environmental challenges facing urban centres of Ghana. The goal of this policy is to “promote a sustainable, spatially integrated and orderly development of urban settlements with adequate housing,

infrastructure and services, efficient institutions and a sound living and working environment for all people to support the rapid socio-economic development of Ghana” (Ministry of Local Government and Rural Development, 2012: 21).

The policy is based on seven principles such as the promoting urban centres as engines of growth; enhancing participatory and accountable urban governance; and promoting development through an integrated settlement system. Although this policy is first of its kind in Ghana and touches on various aspect of Ghana’s urban environment, it is silent on the development of urban green spaces such as parks, gardens, and urban forest. This serves as one of the major challenges of the policy as an over-emphasis on infrastructural developments, transport networks and various investments to boost urban economic growth without a corresponding attention to green space development will put much pressure on green spaces and result in their subsequent destruction.

In sum, Ghana’s sustainable development strategies lay much emphasis on a brown agenda such as eliminating poverty, improving education, economic development programmes, infrastructural developments and gender issues at the expense of green agenda which concentrates on protecting the natural environment. Moreover, the strategies give little priority to the growth of urban areas. The MCI and the National Urban Policy were the only initiatives that focused mainly on the growth of urban areas but limited their attention to issues such as informal settlements, flooding, sanitation problems and infrastructural development with no concerns on the creation and preservation of urban green spaces. Urban green spaces are therefore not generally prioritized in the various sustainable development strategies of Ghana. Table 4.1 sums up the various sustainable development strategies of Ghana.

Table 4.1: Sustainable development strategies of Ghana

Strategy	Year	Key thought	Challenges
Vision 2020	1996 - 2020	A long term policy to transform Ghana to attain a middle income status by 2020	Concentration on other programmes outside the core issues of Vision 2020
Renewable Natural Resource Sector Strategy (RNRSS)	1996 - 2000	Implemented to sustain renewable natural resources	Poor institutional arrangement, conflicting focus with other programmes in the sector
Comprehensive Development Framework (CDF)	1999 - 2001	To strengthen development programmes through the coordination of donors	Insufficient commitment in pursuing it
Ghana Poverty Reduction Strategies (GPRSs)	GPRS I (2003-2005) GPRS II (2006-2009)	Initiated to reduce the level of poverty in Ghana; and to empower the poor to have good standard on living	Over emphasis on macro-economic measures, little emphasis on environment and natural resource management, inadequate funds
Millennium City Initiative (MCI)	2010 - 2015	Put in place to develop Accra and Kumasi cities to meet the Millennium Development goals by 2015	Lack of cooperation of urban residents and financial constraints
Savannah Accelerated Development Project (SADP)	2010 - 2030	Undertaken to stimulate economic growth and sustainable development in the northern part of Ghana by 2030	Financial constraints and inadequate logistics
National Urban Policy	2013 – to date	Promote sustainable urban development, settlements, infrastructure and services	Does not cover the development and preservation of urban green spaces

Source: Author's construct (2014)

4.6 Conclusion

Africa has a variety of urban green spaces, but most of them are concentrated in Sub-Saharan Africa because of favourable soil and vegetation conditions. By contrast, the predominance of the desert vegetation in the northern part of Africa makes countries in that region to have limited urban green spaces compared to those in the south. In general, more

emphasis is given to urban trees than other forms of urban green spaces in Africa. However, factors such as rapid urbanisation, insufficient enforcement of urban planning laws, lack of priorities to green spaces, political instability and financial constraints have destroyed the development of urban green spaces in Africa.

Ghana as a country has many town planning regulations instituted to ensure orderly growth of urban areas, but the enforcement of these regulations is a problem. Furthermore, numerous institutions established to oversee the successful growth of towns in Ghana face challenges such as lack of collaboration between the institutions, inadequate numbers of skilled personnel, insufficient funds, poor incentives and logistical constraints, which prevent them from performing satisfactorily. Furthermore, in an effort to enhance the overall development of Ghana, several sustainable development strategies have been perused over the years. These strategies include Vision 2020, RNRSS, CDF, GPRS I & II, MCI, SADP and the National Urban Policy. Although these strategies have set out guidelines to achieve sustainable development in different areas including urban areas, lack of political will to pursue these strategies, along with financial problems and institutional bottlenecks, have affected their smooth implementations. In addition to this, most of the strategies have focused on economic development and poverty reduction programmes, with little or no emphasis on protecting the urban natural environment, such as green spaces. This has therefore created a knowledge gap on the linkages between green spaces and sustainable development in the context of Ghana. Taking into account the declining nature of urban green spaces in Africa and the unsatisfactory realisation of sustainable urban development in Ghana, this raises a question about whether the destruction of green spaces contributes to hampering the sustainable development of urban areas. This serves as one of the research questions that the study intends to provide answers to, using Kumasi (Ghana) as the study area. The next

chapter concentrates on the research methodology and processes that the study followed to get primary data from the study area.

CHAPTER FIVE

RESEARCH METHODOLOGY

5.1 Introduction

Having set the stage for the study in the previous chapters by discussing the concepts and theories of green spaces and sustainability in urban planning practice including theories of urban governance; and urban green spaces and sustainable development in the context of Ghana, this chapter gives the study a methodological direction. It discusses the approach or processes that were followed to conduct the study. The various methods and techniques that were relied on to get data from the field and also perform the necessary analyses are provided in this chapter. The objective of this chapter is to outline the key methods and techniques used, provide justification for these methods and explain their usefulness to the study. Six broad topics are discussed. These are the research aim and objectives; the philosophical background of the study; the case study strategy and study area; ethical considerations; fieldwork experience and challenges; and the development of an analytical framework.

5.2 Research aim and objectives

Before discussing the various topics covered in this chapter, a brief description of the study's aim and objectives are reintroduced in this section to support and guide the exposition of the methodology of the study. The broad aim of this research is to assess the governance of urban green spaces and develop sustainable strategies to address problems affecting the development of urban green spaces in the context of Africa. The specific objectives are to:

- Explore the factors behind the current state of urban green spaces in the context of Africa.
- Assess the organisational arrangements surrounding the management of urban green spaces.
- Evaluate the participation of the local people in the management of urban green spaces.
- Recommend strategies to enhance the sustainability of urban green spaces.

The objectives of the study are guided by the following research questions.

- To what extent does the destruction of urban green spaces contribute to hampering the sustainable development of urban areas?
- How do inefficient organisational arrangements lead to a weak management of urban green spaces?
- To what extent are the local people involved in the management of urban green spaces?
- How can the challenges facing urban green spaces be addressed to enhance the sustainable development strategies of urban areas?

These questions were designed to address some of the gaps or major problems that have been identified in the literature to affect the development of urban green spaces. The first question was set up to understand the current condition of urban green spaces in the study area, the key factors hampering the development of green spaces, and how the poor nature of green spaces affects urban sustainability. The second question focuses on the governance of urban green spaces. It was designed to ascertain organisational linkages, power relations and resource

capacities of stakeholder organisations on green spaces, as well as the various inefficiencies in the management of green spaces in the study area. The third research question covers community participation in green space management, and is geared towards exploring the various ways that local people are involved in the planning and conservation of green spaces in their area. The last research question concentrates on the sustainability of urban green spaces. It deals with providing innovative measures to address the deteriorating conditions of urban green spaces to enhance the sustainability of these spaces in urban areas.

5.2.1 Propositions

The objective and research questions of the study are further guided by the following propositions:

- Development of urban green spaces is hindered by poor enforcement of town planning regulations.
- Local people are not actively involved in the management of urban green spaces.
- There is poor coordination among city authorities on the management of urban green spaces.
- Destruction of urban green spaces is beyond the influence of urbanisation.

5.3 Research philosophical background of the study

This study aligns itself to the interpretive or constructive research paradigm, which is qualitative in nature and perceives the social world as constructed, interpreted and experienced by people interacting with one another in a broad social system (Maxwell, 2006; Bogdan & Biklen, 1992). Characteristics of this research paradigm, such as being inductive (undertaken towards discovery and process), having high validity and being firmly centred on

gaining a deeper understanding of a research problem in its unique context, makes it a highly appropriate choice for the study (Tuli, 2010; Farzanfar, 2005; Ulin et al., 2004; Creswell, 2003). This is because the study aims at gaining a broader understanding of the governance and problems affecting the development of green spaces in the context of Africa in order for tailored sustainable measures to be provided to address the situation.

The underlying assumption of the interpretative paradigm, which focuses on reality as a human construct and being naturalistic in terms of interpreting real-world situations exactly the way they appear, further supports its usage in the study (Mutch, 2005; Ulin et al., 2004; Johnson & Onwuegbuzie, 2004; Neuman, 2003; Casey, 1993). This gives the study an opportunity to present the true condition of urban green spaces in the study area in their natural state without any manipulation, and to integrate varied human thoughts and experiences in in-depth discussions to get a better understanding of the topic under study. These strengths of the interpretative paradigm influenced its selection over the positivist research paradigm (quantitative research), which approaches social problems narrowly due to its belief that empirical facts or reality exist independent of human thoughts, social reality is controlled by laws of cause and effect (deductive logic) and quantification of variables is an objective way to understand social reality (Tuli, 2010; Marczyk et al., 2005; Sarantakos, 2005; Neuman, 2003; Cohen et al., 2000; Crotty, 1998).

Notwithstanding the many benefits the interpretative research paradigm provides for understanding social problems, some drawbacks have been associated with it. It is perceived by some as being subjective, since the researcher can be biased in interpreting real-life situations. It also tends to consume a great deal of time (Creswell, 2003). Much attention was therefore given to these drawbacks to make the current study as rich and varied as possible.

5.4 Case study strategy and the study area

In line with the constructive/interpretive research paradigm guiding the study, the case study design or strategy was used (Lewis-Beck et al., 2004; Yin, 2003). The nature of the objectives and the research questions of the study, which require different sources of data and a chain of evidence to establish the true condition and governing arrangements surrounding the management of green spaces in the study area, made the case study design a good choice. The case study design is well noted for serving as a robust means through which detailed and rich data from a variety of sources can be collected and analysed to give an in-depth account of a phenomenon or social problem (Zucker, 2009; Stake, 1995).

The case study design is one of the four broad research designs which are used in the Social Sciences (experimental, cross-sectional, longitudinal and case study) and is oriented towards providing a detailed understanding of a phenomenon which is within the broader trajectory of the interpretive research philosophy (Matthews & Ross, 2010; Given, 2008; Lewis-Beck et al., 2004). According to Yin (2003:13), case study “is an empirical enquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident”. Zaidah (2007) describes case study as a form of study that explores and examines contemporary real-life phenomena by analysing a number of events and their relationships. In a broader perspective, Woodside (2010) defines case study as an inquiry that focuses on describing, understanding, predicting and controlling a phenomenon so as to have as much knowledge as possible about it relying on different sources of data. Features of case study put forward by Mills et al. (2010) include the following:

- It focuses on the interrelationship that constitute the context of a specific entity (such as organisation, event, activity or individuals);

- It analyses the relationship between the contextual factors and the entity being studied; and
- It has explicit purpose of using insights from different sources of data to explain a given problem or contribute to an existing theory.

Relying on the case study design, a combination of explanatory and descriptive forms of case study was incorporated in the study (Hancock & Algozzine, 2006, Yin, 2003). The explanatory case study establishes the cause-and-effect relationships of a phenomenon with the ultimate goal of determining how events occur and which ones may influence particular outcomes; whilst descriptive case study provides an absolute description of a phenomenon within its real context (Hancock & Algozzine, 2006). These forms of case study were employed to enable the study to comprehensively describe the exact condition of urban green spaces in Kumasi in their natural context, give possible explanations for such conditions and suggest measures to sustain the green spaces accordingly.

Despite the many benefits that a case study approach offers in research, such as getting first-hand information and a detailed understanding of a phenomenon, and explaining the complexities of real life situations, some criticisms have been leveled against it. Among them are bias on the part of researchers using this method because of their close involvement in a study, taking longer time to finish, and the difficulty in using only a single case from which to generalize for broad issues (Zaidah, 2007; Yin, 1984). Much attention was therefore giving to these shortcomings to avoid their effects on the study.

5.4.1 Study area

The study was centred on Kumasi Metropolis, the second city of Ghana after Accra. The rationale for this was that Kumasi was once the Garden City of West Africa (Geurts, 2009; Kumasi Metropolitan Assembly [KMA], 2006) and used to have many green spaces in the past but now most of these green spaces are no more or are deteriorating at a faster rate due to some challenges. It is one particular city that represent almost all the common challenges facing many African cities such as rapid urbanisation, problems with town planning, urban sprawl and loss of urban biodiversity including green spaces (Cobbinah & Amoako, 2012; Geurts, 2009). This made Kumasi an appropriate choice for the study since the study aims at developing measures to sustain urban green spaces which are diminishing rapidly in many cities in African. The description of Kumasi is presented below:

(a) Location and size

Kumasi is the capital of Ashanti Region of Ghana and was founded in 1680 by the then Ashanti King, Osei Tutu I as the capital of the Ashanti Kingdom (Geurts, 2009). It is located between latitude 6.35° – 6.40° and longitude 1.30° – 1.35° and has a total land area of 254km^2 . It is about 270km north of Accra, the national capital of Ghana (see Figure 5.1). It is within the transitional forest zone of Ghana and has a concentric physical structure. Its location in Ghana is advantageous since it serves as a central point traversed by major road networks to other parts of Ghana and beyond. The central nature of Kumasi encourages large-scale migration in to the city. The 2010 Population and Housing Census of Ghana put the total population of Kumasi at 2,035, 064 making it the most populated city in Ghana (Ghana Statistical Service, 2012). The estimated annual population growth rate of the city is around 5.4 per cent (Cobbinah & Amoako, 2012).

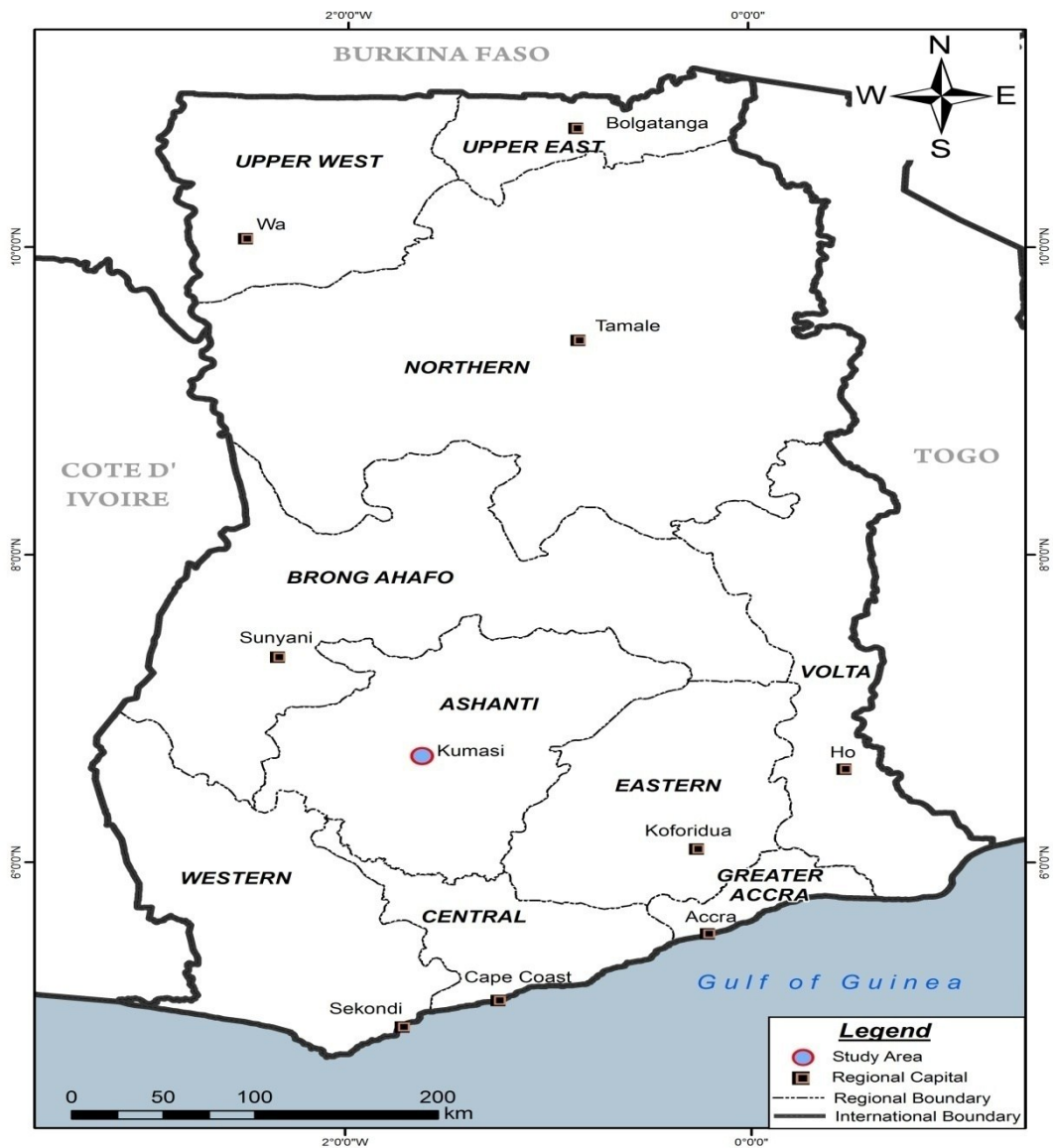


Figure 5.1: Map of Ghana showing the location of Kumasi

Source: Department of Geography and Regional Planning, University of Cape Coast (2013).

(b) Condition of the natural environment

Kumasi Metropolis falls within the moist semi-deciduous vegetation zone of Ghana which has favourable soil conditions that support farming and green vegetation. The rich vegetation cover of the city led to the development of the Kumasi Zoological Gardens.

However, rapid urbanisation and urban sprawl have depleted substantial aspect of the green vegetation of Kumasi. Patches of green vegetation along waterways have been cleared whilst most of the green spaces in other parts of the city have been encroached upon. Some rivers and streams in the city have dwindled or are near extinction due to uncontrolled human activities along the water bodies. The encroachment of the water bodies, and green spaces such as wetlands, and nature reserves by the high volume of houses often causes flooding in some parts of the city to destroy many properties (KMA, 2006).

(c)Condition of the built environment

The 1945 Town and Country Planning Act of Ghana served as a basis for organised development in Kumasi. Based on this plan, Kumasi was developed as a garden city with much natural environment interspersed with physical developments. The 1945 plan in addition to other plans provided a framework to guide the social, economic, physical, environmental growth of the city. In recent years, Kumasi Metropolis has been struck with both human and vehicular traffic congestion, especially in the Central Business District (CBD) due to high volume of trading activities that takes place in the city. The city is categorised into high-income, government, indigenous and tenement housing areas. Most of the houses in the area are ‘compound houses’ (Figure 5.2). This form of housing accommodates large family members or individuals and has an internal courtyard (Owusu-Ansah & O’Connor, 2010). The erection of wooden structures such as kiosks and metal containers along some principal streets and in several aspects of Kumasi are common phenomena which have wrecked the beauty of the city (KMA, 2006).



Some parts of the CDB of Kumasi



Example of Compound houses

Figure 5.2: Commercial activities and nature of houses in Kumasi

Source: Owusu-Ansah & O'Connor (2010), and Moro (2009)

5.4.2 Case selection

To have better understanding of the condition and governance of urban green spaces in Kumasi, the multiple case study approach, which gives emphasis to two or more observations of the same phenomenon in an area was adopted, with several neighbourhoods selected as cases for the study (Rowley, 2002; Hancock & Algozzine, 2006). This approach was employed to make the study robust and more reliable by getting a chain of evidence from different cases to make informed conclusions (Zaidah, 2007; Yin, 2003; Yin, 1994).

Five (5) neighbourhoods (Amakom, Ahodwo, Nhyiaso, Patasi and Denyami) were selected to serve as multiple cases for the study. In addition to this, the green spaces in the central business district were used as another case. The rationale was that these areas had different forms of urban green spaces and that most of the green spaces in these

neighbourhoods were in a deplorable state due to human activities, and hence needed to be saved from extinction. The selection of these neighbourhoods was done in consultation with the Department of Parks and Gardens in Kumasi in an effort to help address the rapid deterioration of the green spaces in those areas and in Kumasi in general. Figure 5.3 shows the location of the selected neighbourhoods for the study.

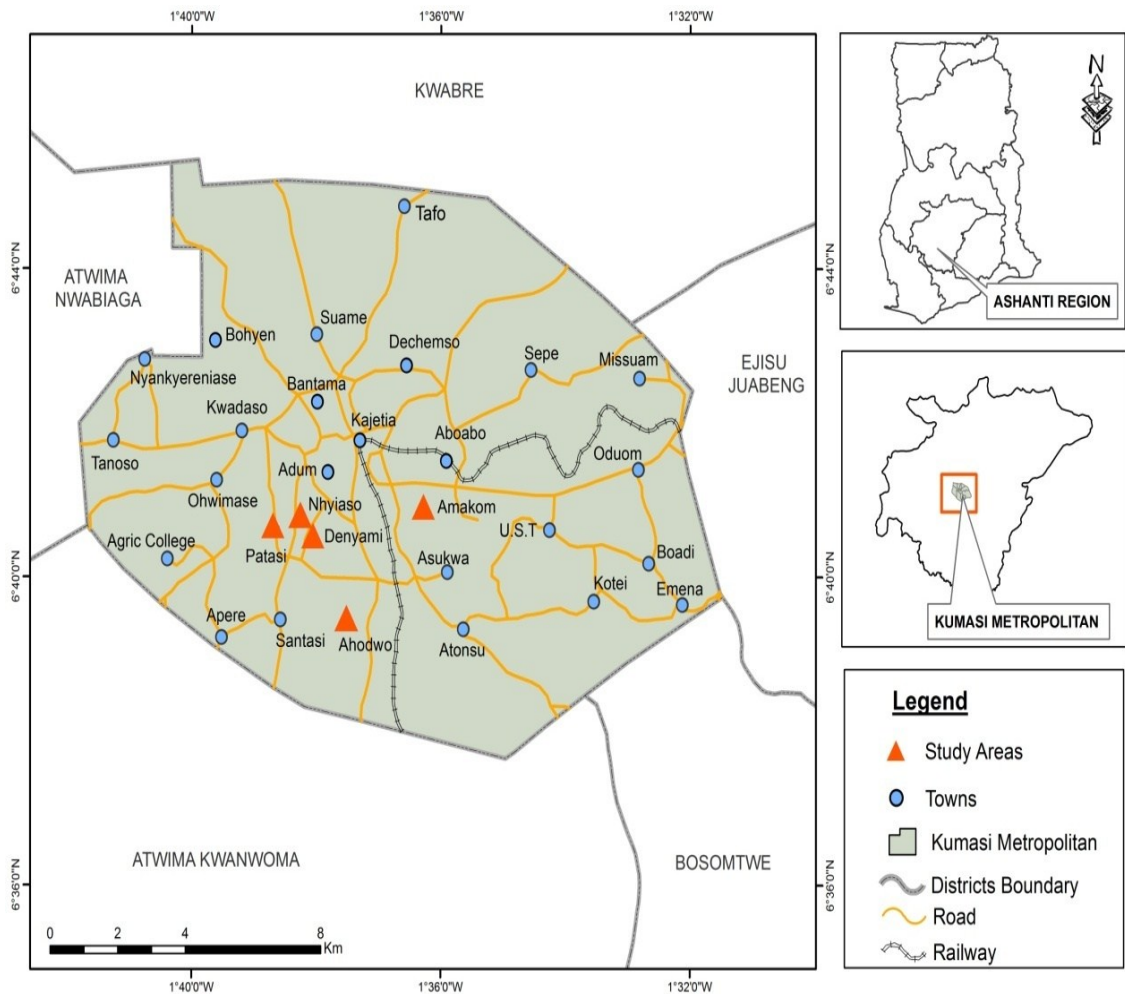


Figure 5.3: Map of Kumasi showing selected neighbourhoods for the study

Source: Department of Geography and Regional Planning, University of Cape Coast (2013)

5.4.3 Target/study population

Four categories of people constituted the target population for the study. These were the residents of Kumasi, city authorities, opinion leaders and officials of some miscellaneous bodies associated with town planning and green space management. The city authorities were involved in the study on the basis that they constitute the local government of Kumasi Metropolitan area and are entrusted with legal powers to ensure the overall development of the city, be it economic, social or environmental. Green spaces as part of the natural environment, were therefore under their control, making their participation in the study essential. The residents of Kumasi are the actual stakeholders who used the green spaces for different purposes. The success or failure of the green spaces to a greater extent depends on them, and this made their inclusion essential.

Various opinion leaders such as chiefs, assembly men and unit committee members were included due to the political structure of the study area. Based on the local government system and traditional set up of Ghana, these opinion leaders are very important in community development. The chiefs, for example, are the custodians of the lands in their area, and in view of that play an active role in all land matters under their jurisdiction, including green space management. These made it appropriate for them to participate in the study. The assembly men and unit committee members are key individuals in the local government structure of Ghana at the grassroots level. They are representatives of their communities and channel all the developmental problems of their communities to the district assembly. These roles warranted their participation in the study.

The miscellaneous bodies included in the study comprised research institutions, estate developers, the media, environmental NGOs and private organisations associated with green space management. These bodies contribute to the development of urban green spaces by way

of their activities, ranging from research, reports and infrastructural development to preservation of the natural environment directly or indirectly affecting green spaces. This also placed the officials in these bodies in a good position to be involved in the study.

5.4.4 Sampling technique and sample size

Theoretical or purposive sampling was used to select the respondents for the study. This kind of sampling is done to select respondents based on the theoretical background of a study or to select respondents who can serve the needs of a particular study (Mill et al., 2010). The usage of the purposive sampling technique in the study was not arbitrary, but based on its strength in helping select key individuals from whom detailed information could be obtained to have a better understanding of specific events and activities. This benefit therefore supported the primary motive of the case study design employed in the study (Mills et al., 2010; Yin, 2003; Leedy & Ormrod, 2001; Powell, 1997). For instance, in the words of Mills et al. (2010: 837), purposive sampling covers the following:

Sampling in case study research is largely purposeful, that is, it includes the selection of information-rich cases for in-depth study. Information-rich cases are those from which the researcher can learn a great deal about issues of central importance to the purpose and investigated phenomena of the study. The case study approach offers flexibility in terms of the justification of sampling choice, the number of investigated cases, and sampling techniques.

In applying the purposive sampling technique in the study, the selection of the participants for the study relied on the preference or judgment of the researcher taking into consideration the theoretical milieu and the needs of the study. In view of that, the city authorities of Kumasi whose activities were concentrated on town planning and the development of urban green

spaces were selected. Specifically, ten institutions that form part of the Kumasi city authorities were selected. These institutions were as follows: Town and Country Planning Department; Department of Parks and Gardens; Environmental Protection Agency; Forest Service Division; Wildlife Division; Lands Commission; Development Control Unit (Works Department); Development Planning Unit; Department of Urban Roads and Resource Management Support Centre. One official was selected from each of these institutions, adding up to 10 respondents. In addition to this, miscellaneous bodies or institutions whose activities are instrumental to the development of green spaces and town planning were also purposively involved in the study. These institutions comprised research institutions (Department of Horticulture, and Department of Planning at Kwame Nkrumah University of Science and Technology [KNUST]), an NGO (Friends of Rivers and Water Bodies), the media (one representative each from Fox FM, and Angel FM), an estate agency (Angel Estates and Construction Agency) and private horticultural developers (three private horticultural contractors). In all, nine (9) representatives from selected miscellaneous bodies were included in the study.

Furthermore, from the five study neighbourhoods, chiefs (traditional leaders), assembly men, unit committee members and key personalities were purposely included in the study as opinion leaders. A total of 21 opinion leaders were selected. Members of the general public also had their fair share of participating in the study. Specific categories of the residents of the five study neighbourhoods were purposively selected because of their close acquaintance with green space developments in their respective neighbourhoods. Among these residents, emphasis was given to the youth (17 – 44 years) and the elderly (45 years and above). The justification was that the youth are noted in the literature on urban green spaces for being key users of urban green spaces whilst the elderly were included on the grounds that

they have great insight and a good overview of the developments that have taken place on green spaces over a long period of time. In selecting the residents from the five selected neighbourhoods, preference was given to those who had lived in their neighbourhoods for a period of five years and more. This time frame was used as a means to get individuals who had lived in their neighbourhoods for some time and hence had much information about green space developments. Table 5.1 gives an overview of the sample size or total number of respondents that were involved in the study.

Table 5.1: Overview of the total sample involved in the study

City Authorities	Residents of Kumasi	Opinion leaders	Miscellaneous bodies
Town and Country Planning Department	Amakom (10 youth, 10 elderly)	Three (3) chiefs (Patasi, Amakom, Ahodwo)	Department of Planning (KNUST)
Department of Parks and Gardens	Denyami (9 youth, 7 elderly)	Assembly man for Ahodwo, Nhyiaso and Danyame electoral area	Department of Horticulture (KNUST)
Environmental Protection Agency	Patasi (9 youth, 8 elderly)	Assembly man for Patasi electoral area	NGO (Friends of Rivers and Water Bodies)
Forest Service Division	Ahodwo (10 youth, 8 elderly)	Assembly man for Amakom electoral area	Estate Agency (Angel Estates and Construction Agency)
Wildlife Division	Nhyiaso (9 youth, 9 elderly)	2 Unit Committee members each from the selected Neighbourhoods	Media (representative from Fox FM and Angel FM)
Lands Commission		1 key personality each from the selected Neighbourhoods	3 private horticultural contractors
Development Control Unit			
Development Planning Unit			
Department of Urban Roads			
Resource Management Support Centre			

Source: Fieldwork (2013)

5.4.5 Data sources and research instruments

One characteristic feature of case studies is the use of a variety of evidence or data to gain an in-depth understanding of a phenomenon, hence supporting the triangulation of research instruments (Yin, 2003). To achieve the objectives of the study and also provide sufficient answers to the study's research questions, four sources of data were relied upon. These were interviews, observations, archival records and documentary data as shown in Table 5.2. The main forms of documentary data used for the study were town planning regulations of Ghana, other secondary data, such as works, books, articles, reports, and conference papers on urban green spaces and sustainable urban development across the world. Archival data in the form of the 2010-2013 development plan of Kumasi, satellite images on land cover change in the study area and the layouts of the five shortlisted neighbourhoods were used. The layouts were obtained from the Town and Country Planning Department at Kumasi.

In getting the interview and observation data, research instruments (study protocols) were designed. The interviews were captured in two ways: *in-depth interviews* (IDIs) for the opinion leaders and officials of various departments/organisations on green spaces, and *focus group discussions* (FGDs) for the residents of selected neighbourhoods. Whilst the IDIs dealt with interviewing one participant at a time and lasted for a long time in order to acquire much information, the FGDs were a group form of interview where small group of people (often between 6-10 people) were interviewed in the same place at a particular point in time. Semi-structured in-depth interview guide and focus group discussion guide were designed to conduct the IDIs and the FGDs respectively (Lewis-Beck et al., 2004). The semi-structured interview guide was flexible in nature and allowed the researcher to probe further for un-

anticipated issues that emerged during the IDI and FGD proceedings (Matthews & Ross, 2010).

Table 5.2: Sources of data used in the study

Sources of data	Benefits to the study	Challenges
Documentary data	<p><i>Stable</i> – were available to be retrieved repeatedly.</p> <p><i>Exact</i>: provided precise and detailed information of different ideas used in the study.</p> <p><i>Broad coverage</i> – provided wider information on the topic understudy.</p>	<p>Difficult in getting access to some useful documents.</p> <p><i>Costly</i> – some monies had to be spent in other to acquire useful documents.</p>
Archival records	Assisted in getting accurate facts on the coverage and challenges facing urban green spaces in the study area.	Poor storage of these records made retrieving some of such data difficult.
Interviews (in-depth interviews & focus group discussions)	<p>Helped to acquire in-depth information from different stakeholders on urban green spaces.</p> <p><i>Flexible</i> – questions were able to be adjusted to probe further for additional information in the course of the interviews.</p> <p><i>Insightful</i> – promoted perceived casual inferences.</p>	<i>Time consuming</i> – conducting the interviews, transcribing and analysing the data was very involving and took much time.
Direct observation	<p><i>Reality</i> – helped to cover the current state of the green spaces in their true or real state.</p> <p>Provided first-hand information of the resources and activities of green space organisations.</p>	Restrictions on the times for the observation sessions. They had to be undertaken at day time in other to have clearer view of the resources and facilities on green spaces.

Source: Authors construct (2014)

The IDI guide (see Appendix I) was in five parts: general information; power relations; institutional design; consensus building; and factors affecting the development of green spaces. The FGD guide, on the other hand, had four sections (see Appendix II). These were general information on urban green spaces; conditions/state of urban green spaces; management of urban green spaces; and factors affecting the development of urban green spaces. The FGDs were undertaken in conducive physical settings free from noise; each was made up of 6-10 people, which was within the suggested number for FGD and the discussants were also arranged in a semi-circle to enable a clear audio recording of their voice (McLafferty, 2004; Bloor et al., 2001; Krueger & Casey, 2000). The IDIs, on the other hand, were carried out at quiet environment to avoid interruptions. Good transition was made between the questions and a high level of neutrality was maintained when posing questions to the interviewees to avoid bias (Turner, 2010). All the IDIs and the FGDs were audio recorded with tape recorders. Data from personal observation were collected using the observation guide (see Appendix III), which helped the researcher to observe and get first-hand information on the state of green spaces in Kumasi. Digital photographs were taken during the observation sessions as exhibits to give the exact condition of green spaces in Kumasi. The various research instruments used in the study are shown in Table 5.3.

Table 5.3: Overview of research instruments used in the study

Research Instrument	Individuals/phenomenon administered on
IDI guide	10 City authorities, 9 representatives from selected miscellaneous bodies and 21 opinion leaders.
FGD guide	10 FGDs which were made up of two FGDs each for residents in the 5 selected neighbourhoods.
Observation guide	Condition of the green spaces, facilities on these spaces and the resource capacities of the institutions mandated to manage green spaces in Kumasi.

Source: Fieldwork (2013)

5.5 Ethical considerations

In order to ensure the proper conduct of the study and also to protect the research participants from any harm or risk, some ethical issues were considered in the study (Mills et al. (2010). First, due processes were followed to get ethical approval from the University of Birmingham Ethical Review Board. This gave the study official backing to undertake the fieldwork at Kumasi Metropolis involving different categories of people. At Kumasi Metropolis, proper community entry was also sought before the fieldwork took place. Proper permission was obtained from the Kumasi Metropolitan Assembly to have the right to undertake the fieldwork in the area. At each of the selected neighbourhoods, permission was also sought from the traditional authorities before the participants were consulted.

Apart from the above ethical issues for securing legal permission to do the fieldwork at Kumasi, other ethical principles were followed to protect the participants. First among these principles was informed consent. This focused on making sure the participants of the study understand that they could accept whether or not to participate in the study. (Matthews and Ross, 2010). In accomplishing this ethical principle, a consent form clearly indicating the objective and purpose of the study was given to the respondents for them to indicate whether they were willing to participate in the study or not. Participation in the study was therefore voluntary.

The second ethical principle was anonymity, which deals with keeping all forms of identification of the participants or respondents anonymous or hidden. All forms of information that could clearly identify the respondents, such as names, telephone numbers and their personal addresses were avoided. Privacy and confidentiality were the next ethical principles that were upheld in the study. Information given by the respondents was treated confidentially and used in a manner that no one could clearly associate a particular respondent

with a given statement. The respondents' information was solely used for the purpose of this study and not given to anybody or organisation for any reason. The protection of the respondents from all risk and physical harm was also respected. The data were collected from respondents in safe places free from unhealthy and violent conditions. Quiet places were used. In addition to this, some strategies were undertaken to enhance the reliability, validity and generalisability of the study's findings. These strategies were in line with those stressed by Yin (2003) and Rowley (2002) as useful in case studies as shown in Table 5.4.

Table 5.4: Strategies used to enhance reliability, validity and generalizability in the study

Test	Strategy used
<i>Reliability:</i> Ability of the study procedure to be repeated and get similar results	Used case study protocols (research instruments). Developed a case study database.
<i>Construct validity:</i> The extent to which a procedure used in a study leads to an accurate observation of reality. It is normally associated with good linkage between research questions, propositions and questions on the research instruments such as interview guide, observation guide etc.	Used multiple sources of data. Established chain of evidence. Provided a draft case study report to the key informants and colleagues for accuracy.
<i>External validity:</i> Establishing a domain to which a study's findings can be generalised.	Used replication logic in the multiple cases.

Source: Yin (2003), and Rowley (2002)

5.6 Fieldwork experience and challenges

Pre-test of the research instruments was undertaken at Ridge, a suburb of Kumasi. This neighbourhood was selected because it has similar characteristics to the five neighbourhoods selected for the study in terms of its greenery. The pre-test took place from 24th – 29th

November, 2012. This was done to check the nature and structure of the questions on the research instruments and also to give an idea of the likely challenges that might face the study during the actual fieldwork. Two FGD and three IDI sessions were conducted to check the appropriateness of FGD and IDI guides respectively. Some observations were also made on urban green spaces in Ridge to check the viability of the observation guide. During the pre-test session, two field assistants were trained to help with the actual data collection exercise. The pre-test of the instruments therefore served as a good platform to make the necessary preparation for the actual fieldwork.

5.6.1 Data collection

The actual data collection exercise for the study took place between 2nd December, 2012 and 31st March, 2013. It lasted for a period of about four months. The first month of the actual data collection exercise was devoted to conducting IDIs for the selected individuals from the Kumasi city authorities, opinion leaders and from the selected miscellaneous bodies for the study. Collection of necessary archival data (development plan of Kumasi and layout of the five neighbourhoods) on green spaces was done during this period. The remaining three months were used to conduct FGDs for the residents (youth and the elderly) of the five neighbourhoods chosen for the study. Observations of green spaces in these neighbourhoods were done simultaneously with the organisation of the FGDs. Resource capacities of the institutions mandated to protect and develop urban green spaces in Kumasi were observed. Attention was further given to IDIs that could not take place in the first month.

The IDIs were mostly done in the evening, after 4:00 pm. It was around this time that most of the respondents were free. For example, for the city authorities and representatives from the miscellaneous bodies, it was around this time that they finished work and hence had

sufficient time to actively participate in the study. Similarly, the opinion leaders were also less busy with their day-to-day activities during this period. The FGDs were also undertaken in the evening (4:00 pm onwards) because most of the discussants were available around this time. Many of the FGDs were conducted during weekends since it was a rest period for most of the residents. The observation sessions, on the other hand, were done in the morning and afternoon, especially between the hours of 8:00 am and 2:00 pm. This was done to have a clearer view of the green spaces and various facilities on these spaces.

5.6.2 Challenges from the field

Two main challenges were encountered during the fieldwork. The major one was the problem of retrieving archival data in the form of the layouts of the study neighbourhoods from the Town and Country Planning Department in Kumasi. This problem arose from the fact that the department keeps most of its records manually, so tracing back such data was a big problem. Several visits were paid to the Town and Country Planning Department to press for those data, and much time was also spent with the staff in charge of those data before they were retrieved.

Another major problem was getting participants for the focus group discussions which required a minimum of six participants. Although much efforts was made in advance to get enough participants and booked appointments with them on agreed dates and specific times for the group interview, many of the agreed dates for the discussions were cancelled and rescheduled due to low turnout (in some cases two or three participants showed up). For example, the FGDs for Danyame and Nhyiase neighbourhoods were postponed on two different occasions due to this problem. To overcome this, new dates were set, frequent reminders were sent to the selected participants and on the new scheduled dates, about two

hours prior to the interview was spent going round and bringing the participants to the avenue for the interview.

5.7 Analytical framework

In analysing data in case studies, some strategies have been suggested: theoretical proposition, rival explanation and case description strategies (Leedy & Omrod, 2005; 2001; Yin, 2003). The study used the theoretical proposition strategy. With this strategy, the data obtained were analysed under key themes or topics derived from the study's research questions and propositions, which were based on the theoretical background of the study. The specific steps followed to analyse the data in this study were as follows:

- *Organising data about the case(s)*: Under this step, facts about the cases were arranged in logical order. Data from interviews were transcribed.
- *Categorisation of data*: Appropriate codes were first created on the transcribed data to identify major issues that emerged. Afterwards, ideal categories or themes were identified, and data from the field were put under these themes. This was done manually.
- *Interpretation of data*: Data under the themes were examined or pursued several times to have a better understanding of their content.
- *Identification of pattern*: The general trends or patterns of the data were identified and supported with theoretical views.
- *Synthesis and generalisation*: This was the final step and it dealt with integrating the findings obtained from various data collection techniques and drawing conclusions accordingly. Under this step, the secondary data obtained together with insights from personal observations carried out were integrated with the results from the interviews.

This helped to provide accurate conclusions on green spaces in Kumasi to reflect the true picture on the ground.

The overall approach that was followed from the inception of the study through data collection and analysis to the conclusion stage is summarised in Figure 5.4.

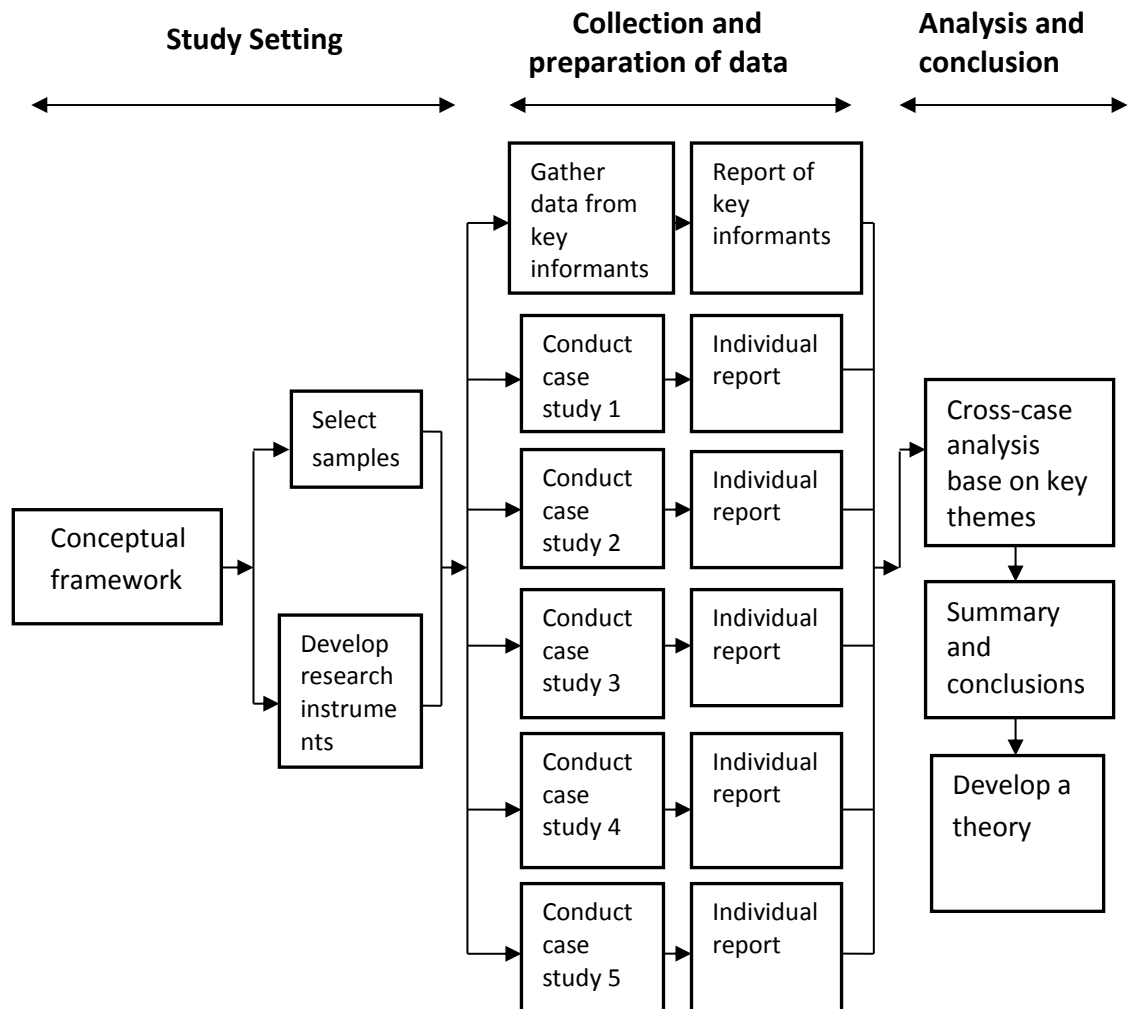


Figure 5.4: The approach followed to gather and analysed data

Source: Adapted from Yin (2003)

5.8 Conclusion

This chapter has explained and justified the various techniques and approaches that were followed to get data from the field and other documents. It has provided a justification for the usage of the interpretive/constructive research philosophy in the study. Case study research which guides the study has been thoroughly outlined. Different sources of data used in case studies have been highlighted, as well as the specific sources of data utilised in the current study, such as interviews (IDIs and FGDs), personal observation, archival records and documentary data. Neighbourhoods in Kumasi selected as case studies for the study and the different categories of people which constituted the study's target population have been discussed. Emphasis has further been given to the various challenges encountered during the data collection exercises in the study area and how such challenges were overcome. Ethical issues underlying the study and the study's analytical framework have also been captured in this chapter. The next three (3) chapters serve as empirical chapters of the study. They provide detailed analyses and discussions of the data obtained from the field.

CHAPTER SIX

THE CONDITION AND PERFORMANCE OF GREEN SPACES IN KUMASI

6.1 Introduction

Green spaces are one of the key elements in urban design and planning whose incorporation into the urban physical landscape has been endorsed internationally as a way to enhance the health and quality of life in urban areas (Gomez & Moretto, 2011; Baycan-Levent et al., 2009; Chiesura, 2004). There is now a growing interest among many city planners in integrating green space agendas in their development plans to satisfy the needs of their citizenry. However, the benefits associated with urban green spaces can fully be reaped when these spaces are in good condition. The goal of this chapter is to unveil the physical condition of urban green spaces in Kumasi and show how their condition affects sustainable development activities in the area. This chapter provides answers to the first research question underlying the study.

- To what extent does the destruction of urban green spaces contribute to hampering the sustainable development of urban areas?

The analyses made in this chapter are structured on three broad themes namely the state of green spaces in Kumasi, factors underlying the condition of green spaces in Kumasi and the contribution of green spaces to the sustainable development of Kumasi as a city. The chapter makes some reference to the theories of governance and the broad theoretical framework of the study to support the findings from the study area. By the end of the chapter, one would have a good overview of urban green spaces in Kumasi, the various destructive activities affecting such spaces, and how these issues relate to or deviate from the situation in other cities across the world. This effort will help policy makers, city authorities and bodies that

have an influence on green spaces come to grips with pertinent issues affecting the growth of green spaces in a broader context, and hence take informed decisions to shape the situation in their localities.

6.2 The state of green spaces in Kumasi

Green spaces play a pivotal role in the overall growth of cities. Beautiful and viable cities to some extent depend on how green spaces such as parks, gardens and green belts have been well kept and designed to intersperse with physical developments (Byrne & Sipe, 2010). Baycan-Levent and Nijkamp (2009) have found out that quality green spaces help to show the identity of cities and also make cities attractive for living, working, and to invest in. A variety of features or themes have been highlighted by different studies to constitute the indicators of ideal or quality green spaces (Dunnet et al., 2002; Gobster & Westphal, 2004; UGS Task Force, 2002, Harnik, 2004; Plymouth City Council, 2009). However, based on the extensive trawl of literature on the management of green spaces across the world, some themes came up consistently when assessing the quality of green spaces. These themes were accessibility, attractiveness, comfort, security/safety, conservation and cultural heritage, maintenance, publicity, and community participation. These themes were used to develop a model to structure the investigations and subsequent analyses of this section (Figure 6.1).

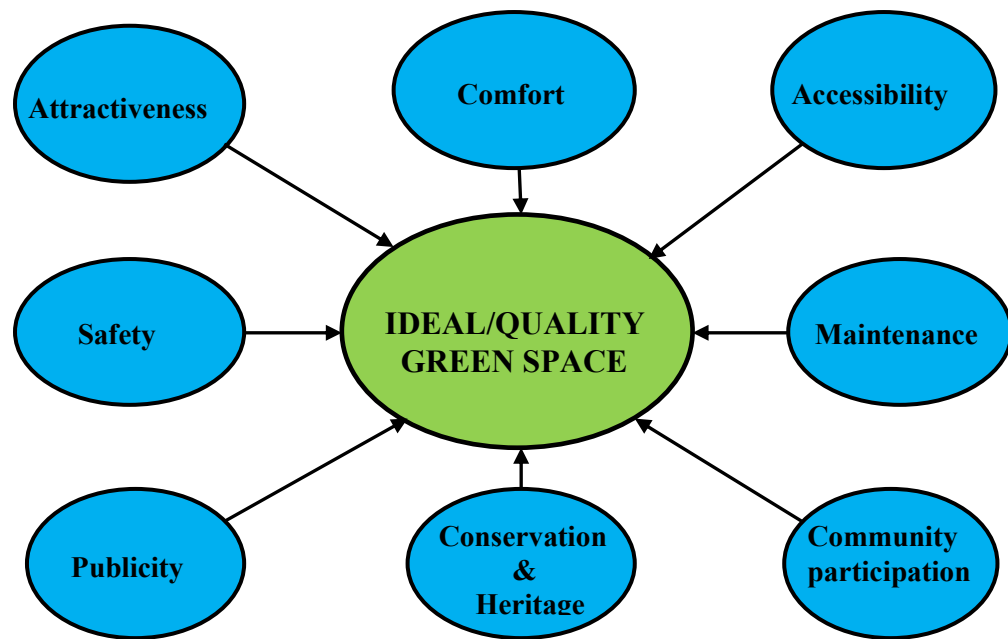


Figure 6.1: Themes for assessing the quality of green spaces

Source: Authors construct (2013)

The themes were settled on due to their broad scope in covering a wider spectrum of issues surrounding green spaces and the vital role that each of them plays to enhance the development of green spaces. Since the study was undertaken in the context of Africa and for that matter Ghana, the themes were operationalised to suit the focus of the study. In view of this, there may be slight changes in how some of the themes have been used elsewhere. The description of themes and their associated indicators in the context of this study was based on numerous studies which highlighted those themes and indicators as crucial in enhancing the state of green spaces (Plymouth City Council, 2009; Barbosa et al., 2007; Corner et al., 2006; Jim & Chen, 2006; Herzele & Wiedmann, 2003; Dunnett et al., 2002). The descriptions of the themes as used in the study are as follows:

- The attractiveness theme covered matters associated with the physical appearance of green spaces with specific focus on items such as signage, grasses on parks, walkways, and sanitation conditions of green spaces.
- The comfort theme focused on the provision of facilities on green spaces such as seats, playing facilities, toilet facilities and a serene environment.
- Green space per capita in square metres (m²) and proximity to green spaces constituted the accessibility theme.
- The conservation and heritage theme dealt with cultural artefacts, and plant and animal species on green spaces.
- The safety theme was contextualised to focus on matters of first aid and absence of criminal activities on parks.
- General upkeep of facilities on green spaces such as frequent repairs of worn out facilities was the focus of the maintenance theme.
- Matters on marketing and provision of information on green spaces made up the publicity theme.
- The community participation theme concerned itself with the involvement of neighbourhood residents in the management of green spaces.

The themes are not mutually exclusive; there are some overlaps or interdependencies that exist between them. The attainment of one may directly or indirectly influence the development of others. Detailed discussion of the themes in relation to the study's findings throws more light on such interconnections and the need to pay much attention to these interdependencies to effectively enhance the state of green spaces. The discussion under this section have been structured in a way to critically provide detail account of the state of green

spaces in Kumasi, and bring out the association or relationships that were found to exist between the themes.

6.2.1 Attractiveness and maintenance themes

High level of attractiveness of green spaces such as parks and gardens is very important since it gives good first impression to visitors and encourages subsequent visits (Herzele & Wiedemann, 2003). Concerns on attractiveness of the green spaces featured prominently in the in-depth interviews and the focus group discussions organised for the study participants. Widespread mentions were made in the focus group discussions on the absence of signage, walkways and the poor grown grasses on several parks and gardens in Kumasi. The respondents indicated that most of the parks are bare with few having some patches of grasses on them. The untidy nature of many parks and its accompanying bad odour was another major issue. This came up strongly in both the in-depth interviews and the focus group discussions. Specific parks and gardens such as Kumasi Children's Park, Adehyeman Gardens, Abbey's Park and Fante Newtown Park were mentioned as notable examples for having a filthy environment. The respondents (opinion leaders, city authorities and residents) expressed worries about the presence of many used polythene bags, solid waste and excreta of animals such as cattle, goats and sheep on the parks. Personal observations on some of the parks in Kumasi confirmed the seriousness of untidiness and the unpleasant odour that was hovering on many of the parks (Figure 6.2).



Kumasi Children's Park



Adehyeman Gardens

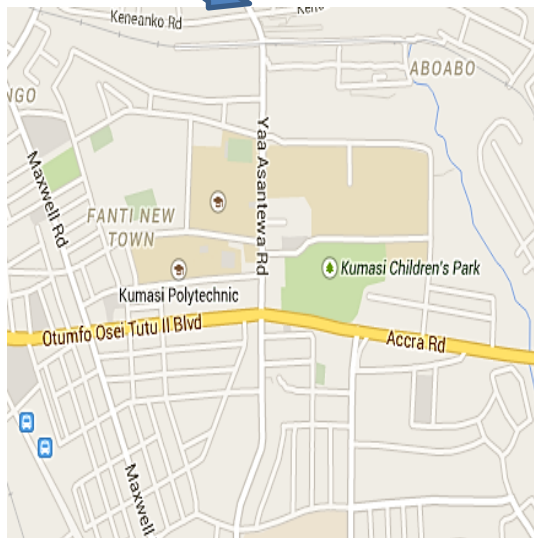


Figure 6.2: The poor level of cleanliness on some parks in Kumasi

Source: Fieldwork (2013)

On some of the parks, some parts were turned into a refuse dump. One of such parks was the Kumasi Children's Park. This observation supports the findings of Fuwape & Onyekwelu

(2011) on some parks and botanical gardens in African cities such as Ibadan, Lagos, Kano and Kaduna (Nigeria), Freetown (Sierra Leone) and Accra (Ghana) where most of these places were engulfed with much filth with some portions converted into refuse dumps.

The issue of much filth and unpleasant smell on some green spaces in Kumasi and other African cities is of great concern because it does not feature as a major problem in many European and Asian cities as observed by some researchers (Jim & Chen, 2006; Herzele & Wiedmann, 2003; Dunnett et al., 2002). This situation does not only substantially impinge detrimentally on the attractiveness of the green spaces, it has serious health implications for the visitors who use parks for recreation. It makes such places easy grounds for the contraction of diseases such as malaria and cholera which are associated with unhygienic environmental conditions. It also makes it difficult for common activities that take place on parks such as sitting, lying and sleeping on the grounds of parks to be undertaken. In all, the level of attractiveness of green spaces in Kumasi was poor because widespread unsatisfactory responses were obtained on many aspects of the attractiveness theme (Table 6.1). It was the KNUST Botanical Gardens, Parks and Gardens at “Patasi” and to some extent the Kumasi Zoo that had some good responses on the attractiveness theme. The others had widespread poor responses. This contradicts the findings of Conard (2013) on green spaces in the cities of some developing countries such as Lumpini Park (Bangkok), Ibirapuera Park (Sao Paulo) and Chapultepec Park (Mexico City). Those parks are well noted for their beautiful and attractive environment due to the presence of many features such as good nature of signage, well grown grasses, walkways, and good sanitation conditions.

Table 6.1: Summary of the respondents views on the attractiveness of green spaces in Kumasi

	Indicator					
	Signage	Walkways	FFL & AF	US	WGG	Dustbins
Adehyeman Gardens	Poor	Poor	Poor	Poor	Poor	Fairly good
Kumasi Children’s Park	Poor	Poor	Poor	Poor	Poor	Poor
Ridge Park	Poor	Poor	Poor	Fairly good	Poor	Poor
Parks and Gardens (Patasi)	Good	Good	Fairly good	Good	Good	Fairly good
Fante Newtown Park	Poor	Poor	Poor	Poor	Fairly good	Poor
Kumasi Zoo	Good	Good	Fairly good	Poor	Poor	Good
Abbey’s Park	Poor	Poor	Poor	Poor	Poor	Poor
KNUST Botanical Gardens	Good	Fairly good	Fairly good	Good	Poor	Good
Lawns at the CBD	Poor	Fairly Good	Poor	Poor	Poor	Poor

FFL & AF: Free from litter and animal fouling US: Unpleasant smell

WGG: Well grown grasses Source: Fieldwork (2013)

The assessment of the attractiveness of green spaces in Kumasi as shown in Table 6.1 was based on the qualitative nature of the study.

Aside from the poor attractiveness of the green spaces, the maintenance of facilities on green spaces was another problem in Kumasi. Interviews with the Kumasi city authorities revealed alienation or abandonment of some parks for several years without maintenance work undertaken on them. The Kumasi Children’s Park, Abbey’s Park, and Fante Newtown Park were among the major parks that were found in such situation. An official of the

Department of Parks and Gardens commented extensively on broken down facilities on many green spaces, and poorly maintained grasses, lawns, trees and shrubs in the CBD and along the principal streets of Kumasi. Figure 6.3 provides exhibits showing the level of maintenance on some of the green spaces in Kumasi.

(a)



(b)

(c)

Figure 6.3: The level of maintenance of green spaces in Kumasi

Source: Fieldwork (2013)

- (a) Abbey's Park
- (b) Kumasi Children's Park
- (c) Shrubs along the road at "Neoplan Station".

Responses by selected opinion leaders provided much evidence of wide spread poor maintenance of green spaces in Kumasi. For example, some remarked as follows:

Most of the facilities on Kumasi Zoo are very old and are not functioning properly. These facilities need to be repaired or replaced but nobody cares about it. Ridge Park and Fante Newtown Park are losing their grasses because of poor maintenance (Key informant, Ahodwo Neighbourhood, IDI: 11/12/2012).

The Kumasi Children's Park has been abandoned for many years without receiving any maintenance work. None of the facilities on it is functioning. Its pavilion has been turned into a church premise for some churches whilst its library structure is used as a place of abode for the homeless and social deviants (Unit Committee member, Amakom Neighbourhood, IDI: 02/12/2012).

Abbey's Park is not functioning properly because of poor maintenance. Due to poor maintenance it has lost all its grasses and trees that made the place lively. Similarly, irregular maintenance has caused Adehyeman Gardens to lose many facilities and its green environment (Opinion leader, Patasi Neighbourhood, IDI: 12/03/2013)

Lack of financial commitments towards the maintenance of green spaces was the substantive factor behind this problem. It was found that the Kumasi city authorities do not have stable funds allocated for the maintenance of green spaces due to financial constraints. These revelations on poor maintenance from the study confirmed the findings of Deneva et al. (2008) and the 2012 Global Garden Report which pointed out poor maintenance as a devastating problem that is undermining the growth of green spaces in cities worldwide (Husqvarna Group, 2012). However, the situation in Kumasi is quite different. Apart from financial hardships that could explain maintenance inefficiencies in the area, a poor culture of

maintenance was another cause of this problem. In Kumasi and Ghana as a whole, it was observed that the frequent maintenance of facilities on public spaces is not a habit that has been embraced by city authorities and other allied bodies. Even if the will is there, facilities on public spaces are often allowed to break down for a long period of time before actions are undertaken to remedy the situation. It has therefore become habitual for many environmental organisations not to regularly undertake maintenance works on green space facilities. Drawing on the findings of maintenance and attractiveness themes, the study found a relationship to exist between the two. Poor maintenance was found as the root cause for the absence of several facilities on green spaces in the area which make these spaces unattractive. These themes are vital and should be treated as such since failure to achieve them especially the maintenance theme have serious repercussion on the overall state of green spaces.

6.2.2 Comfort and safety themes

One of the fundamental goals of creating parks and other green spaces is to create spaces that people can rely on to enjoy and comfort themselves as indicated by Fredrick Law Olmsted who is often referred to as “the father of parks” (Xi-Zhang, 2009). However, for such comfort to be realized some facilities ought to be in place. Critical among these facilities are seats, toilet facilities, and playing facilities (Corner et al., 2006; Dunnett et al., 2002). Lack of or inadequate facilities on parks was a critical problem in Kumasi. The respondents (residents and opinion leaders) said categorically that lack of facilities such as seats, playing facilities and toilet facilities make many parks in Kumasi uncomfortable to them and hence deter many people from using such places. They also added the noisy condition of many parks as another major issue that undermines the level of comfort on the green spaces in the area. Overview of

the respondent's assessment on the level of comfort on some parks and gardens in Kumasi provided unsatisfactory results (Table 6.2).

Table 6.2: Respondents assessment of facilities on parks and gardens in Kumasi

	facilities			
	Seats	Playing fac.	Toilet fac.	Serene envt.
Adehyeman Gardens	Available	Available	Available	Bad
Kumasi Children's Park	Available	Absent	Absent	Bad
Ridge Park	Absent	Available	Absent	Bad
Parks and Gardens (Patasi)	Absent	Absent	Absent	Bad
Fante Newtown Park	Absent	Absent	Absent	Bad
Kumasi Zoo	Available	NA	Available	Bad
Abbey's Park	Absent	Absent	Absent	Bad
KNUST Botanical Gardens	Available	Absent	Absent	Good

Source: Fieldwork (2013) NA: Not Applicable

Personal observations affirmed the respondents' claims. Many of the green spaces lacked basic facilities such as seats and playing facilities. On some of the parks that had seats such as Kumasi Zoo and Childrens Park, the condition of the seats were poor. The problem of noisy environment was critical as most of the parks were located in commercial areas and along busy roads. For example, the Adehyeman Gardens, Kumasi Zoo, Fante Newtown Park and Abbey's Park were located at the heart of the CBD where noise from industries, vehicles and other commercial activities were very prevalent. Other parks such as Kumasi Children's Park, Ridge Park, and Parks and Gardens at Patasi Neighbourhood were also located along

busy roads. The loud noises on the parks prevent visitors from have quiet time to reflect on their wellbeing and also reduce stress as echoed by Blauvelt et al. (2008) in their study of parks in Puerto Rico. Inadequate or lack of seats on the parks was equally a big problem in Kumasi since seats are basic facilities that parks are expected to have (Dunnett et al., 2002). Studies in some African cities such as Nairobi (Makworo & Mireri, 2011) and Kisumu (Rabare et al., 2009) produced similar results with lack of seats found as a common problem of many urban parks. This problem denies visitors a good platform to sit and chat with friends or read materials which is a common activity that takes place on parks.

The issue of safety or security also received much attention in the study. The level of safety influences visitor's decisions in choosing and using green spaces such as parks and gardens because many visitors want places that they will feel safe from criminal activities (Ward et al., 2010). Cases of snatching of bags, undue attacks by criminals, and no lights on parks at night were the major misgivings that were highlighted in the focus group discussions that were carried out in Kumasi. An isolated case of murder was also reported on the Kumasi Children's Park by the respondents. There was a lack of first aid and security guards on all the parks but it received brief comments from the city authorities, opinion leaders and other allied bodies on green spaces. This might be due to the fact that such resources are not considered as important assets that can help to enhance the safety of parks and gardens. Some of the remarks of the respondents on poor safety conditions on green spaces in Kumasi were as follows:

You cannot use any park in Kumasi after 6pm because they do not have lights on them. If you do so, you do it at your own risk because at night most of the parks are used as hide outs for criminals (Community member, Patasi Neighbourhood, FGD: 24/02/2013)

My friend's mobile phone was snatched at Abbey's park some months ago when he was passing through the place. I have also personally been attacked by criminals at Fante Newtown Park before (Community member, Nhyiaso Neighbourhood, FGD: 12/02/2013)

It is not advisable for anybody to use the Kumasi Children's Park because of poor security reasons. The park is now a home for criminals. A lot of criminal activities take place there. Even about two weeks ago a student of Kumasi Polytechnic was killed there (Community member, Amakom, FGD: 13/01/2013)

Reported cases of snatching of bags and mobile phones have been taken place on the Kumasi Children's Park and some parks such as Ridge Park and Kumasi Golf Park at night. These parks and many others have no light (Community member, Amakom Neighbourhood, FGD: 20/01/2013)

The above comments clearly show the extent to which many green spaces in Kumasi are not safe to use especially at night. It supports Baycan-Levent et al.'s (2009) assertion that green spaces can be a place for criminal activities especially at night and a home for the homeless. It also corroborates studies in Bari (Italy), and Philadelphia (USA) where unsafe conditions of green spaces due to criminal activities emerged as a problem (Sanesi & Chiarello, 2006; Ho et al., 2005). The issue of darkness on parks was of great worry to the respondents. The dark condition of the parks at night was found to provide an atmosphere for criminal activities to take place and also limit the number of hours that visitors can spend on parks. A similar finding came up in a study at Guangzhou (China) where darkness of parks was found to cause problems to park visitors (Jim & Chen, 2006). The safety and comfort themes were found to have some interconnection. The study found out that poor safety condition of green spaces in Kumasi does not allow visitors to spend much time on parks to enjoy the available facilities. This therefore limits the level of comfort on many green spaces.

6.2.3 Accessibility and publicity themes

Access to green spaces in Kumasi was also assessed to bring out issues affecting the level of accessibility to green spaces in the area. Globally, two main approaches are often used to assess the level of accessibility to urban green spaces. These are the total amount of green spaces available to the residents (green spaces per head of urban dwellers) and the proximity to the green spaces. These two approaches constituted the study's criteria to determine the level of accessibility to green spaces in Kumasi. In estimating the per capita green spaces in Kumasi, the World Health Organisation's (WHO's) minimum standard of 9m² green space per city dweller was used (Fuady & Darjosanjoto 2012; Sanesi & Chiarello, 2006; Kuchelmeister, 1998). There was scant information about the quantity of green spaces in the study area so some deductions were made from the 2010 estimated total amount of open spaces in Kumasi which was 2375.4 hectares (Ministry of Lands and Natural Resources, 2010). This figure comprises many different spaces other than green spaces so further enquiry was undertaken to address the matter. A study by Tontoh (2011) and data from the Kumasi city authorities confirmed that green spaces occupy about 40 percent of the total amount of open spaces in the area. Taking into account the latest population of Kumasi 2,035,064 (Ghana Statistical Service, 2012) an estimated 4.7m² green space per head was obtained.

The above estimations showed that the per capita green space in Kumasi (4.7m²) is far below the minimum green space standard recommended by WHO (9m²) to make green spaces readily available. Although comparatively the per capita green space in Kumasi is higher than that of Tokyo (Japan) and Buenos Aires (Argentina), it is far behind that of Curitiba (Brazil), Rotterdam (Holland), New York (USA) and Madrid (Spain) as found by Vazques (2011). In the context of Africa, the per capita green space of Kumasi is far behind that of Johannesburg (South Africa), Nairobi (Kenya), and Addis Ababa (Ethiopia) (Lange & McNamara, 2011)

Figures 6.4 and 6.5 compares the per capita green space of Kumasi to other cities of the world.

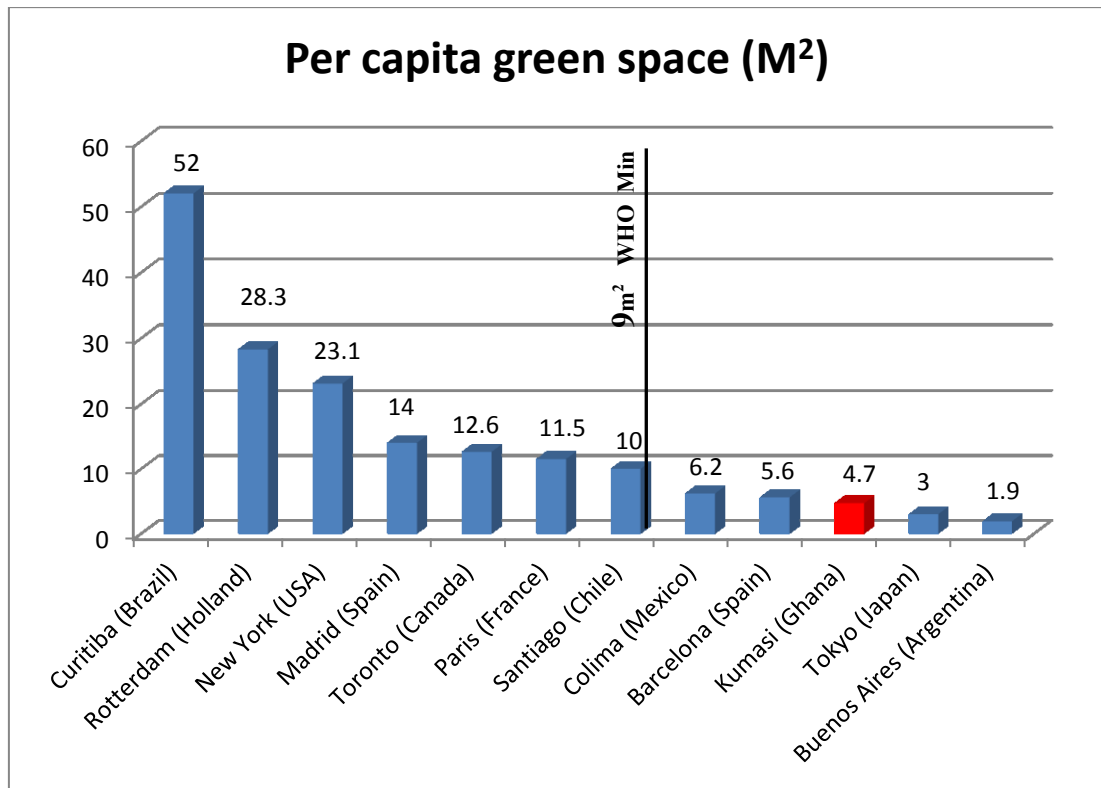


Figure 6.4: Green space per city dweller in Kumasi and some selected cities in the world

Source: Data analysis (2014) and Vazques (2011)

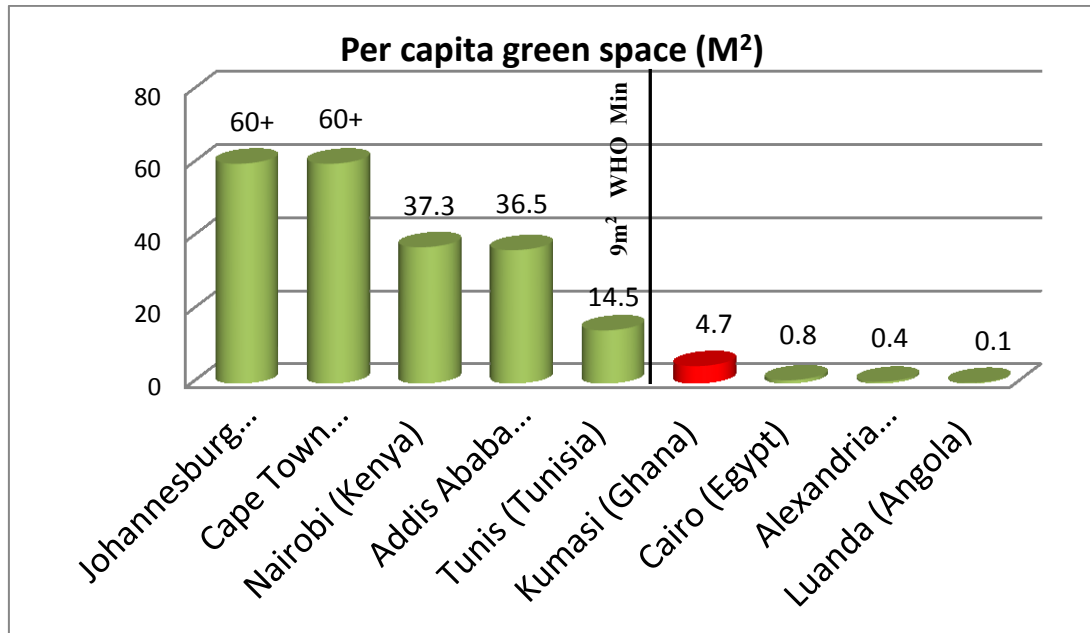


Figure 6.5: Green space per city dweller of Kumasi in the context of Africa

Source: Lange & McNamara (2011)

This shows that Kumasi needs more than 4m² green spaces to augment its per capita green space capacity to meet the WHO's standard and also have enough green spaces for the residents. Proximity to the green spaces by way of walking distance was also assessed. Unlike other cities such as Sheffield, Madrid, Paris, Milan, Brussels and Glasgow that public green spaces such as parks and gardens were found to be within 15 minutes walking distance (Barbosa et al., 2007; Stanners & Bourdeau, 1995), in Kumasi it takes an average of approximately 50 to 60 minutes for one to have access to a natural public park. This came up through the interactions with resident of selected neighbourhoods and personal observations that were carried out. It was found out that most of the neighbourhoods in Kumasi do not have their own parks so they have to travel long distances to use the ones in other neighbourhoods. This poor level of accessibility was observed to discourage the residents from using many parks in Kumasi and this is in consonance with the findings of Abkar et al. (2010) where poor

access to green spaces was among the major obstacles that discouraged residents from using urban parks.

Publicity as a theme was also examined. The publicity of green spaces does not only enhance the number of visits to these places but it has been identified by Konijnendijk (2010) as a useful tool that helps to brand cities as green cities or garden cities. Such branding evokes positive acclamations for a city such as good and healthy living environment. Resources such as website, leaflets on parks/gardens, and media advertisement helps to provide much information about green spaces. In Kumasi, the Kumasi Metropolitan Assembly (KMA) is supposed to promote the green spaces especially through the media such as radio, television and newspapers because of their wider coverage and large followers. A representative from the KMA through in-depth interview said that none of the parks and gardens has a website or leaflet to provide information to the general public. He pointed out further that for quite a long time his outfit has not been able to promote any park or garden through media advertisements to make such places well-known due to paucity of resources especially lack of funds.

An examination of the matter through interviews with selected media officials revealed low publicity of green spaces. It came out that Kumasi Zoo, Adehyeman Gardens and Kumasi Children's Park have lost the air waves they enjoyed in the past on radio stations due to poor maintenance of these places. This made the maintenance theme to have some relationship with publicity. Out of the numerous parks in Kumasi, Ridge Park was the only park that both the KMA and the officials from the media confirmed to have some publicity by way of advertisements on the radio because of some social events that are organised there. The low publicity makes the general public and visitors have little information about the green spaces which negatively affect visit to such places. This finding does not depart from the finding in Plymouth where limited publicity on green spaces was uncovered as a problem

(Plymouth City Council, 2009). Publicity is a powerful tool and can be utilised by the KMA. It can help to enhance the level of accessibility to green spaces because enough publicity by way of circulation of much information and programmes on the green spaces can inform visitors about the availability of such spaces for them to access those places.

6.2.4 Conservation and heritage, and community participation themes

The conservation and heritage theme focused on finding historical/cultural artefacts and the variety of plant and animal species on green spaces in Kumasi. Green spaces in general have been identified as a key vehicle that cities can rely on to demonstrate their cultural legacies and historical landmarks to the entire world (BOP Consulting, 2012). The 2012 World Cities Culture Report praised some public green spaces in cities such as London, Tokyo and New York for conserving a rich stock of cultural heritage. Conservation and heritage was one particular theme that had some positive responses from the focus group discussions and in-depth interviews. These positive responses stemmed from green spaces in Kumasi helping to preserve monuments of great personalities of the Ashanti Kingdom to monuments bearing some cultural features of the “Ashantis” who are the indigenes of Kumasi (Figure 6.6). For example, green spaces at some roundabouts such as “Suame” Roundabout and “Santasi” Roundabout had the monuments of Opoku Ware II and Osei Tutu I respectively. These were great kings of the Ashanti Kingdom. The “Gee” Roundabout, “Kejetia” Roundabout, Prisons Roundabout and some reserved lawns in the CBD also received much commendation from the study participants for having statues of key personalities and key cultural symbols of the Ashanti Kingdom (Golden stool, the Ashanti emblem etc.). The Kumasi Children’s Park was also observed to contain the statue of the reigning queen mother of the Ashanti Kingdom (Nana Afia Kobi Serwaa Apem).

(a)



(b)



(c)



(d)

Figure 6.6: Green spaces showing forms of cultural heritage at Kumasi

Source: Fieldwork (2013)

(a) A monument of Opoku Ware II at “Suame” Roundabout.

(b) A monument of Okomfo Anokye at “Gee” Roundabout.

(c) A monument of the Ashanti’s golden stool at “Kejetia” Roundabout.

(d) A man in a traditional cloth of the Ashanti’s at Prison’s Roundabout

Although these monuments on roundabouts and lawns at the CBD in Kumasi help to preserve some cultural heritage, their focus was narrow and was not exploited very much by visitors. They are concentrated on minor green spaces such as roundabouts and lawns, and centred greatly on statues. As a result of this they do not receive much patronage from

visitors. This is contrary to the findings of the 2012 World Cities Culture Report where many urban green spaces across the world were found to receive many visitors due to a variety of cultural heritage these spaces preserve (BOP Consulting, 2012). In terms of conservation of wildlife (plant and animal species), officials from the Wildlife Division, Environmental Protection Agency and the Forest Service Division in Kumasi rated the condition of green spaces in Kumasi as average. They cited Kumasi Zoo, Kumasi Children's Park and patches of forests at Nhyiaso, Danyame and Ridge neighbourhoods as some of the green spaces that harbour varieties of plant and animal species.

The last theme that was assessed was community participation. Studies show that community participation enhances effective management of green spaces and also promotes community stewardship for green spaces (Commission for Architecture and the Built Environment [CABE], 2010a; Enger, 2005). This theme looked at community participation from the viewpoint of direct involvement of neighbourhoods in preserving green spaces in their areas. A broader discussion of community participation in the overall planning and management of green spaces is treated in the next chapter. In assessing this theme, residents and opinion leaders in the study neighbourhoods (Patase, Danyame, Ahodwo, Nhyiaso and Amakom) were engaged in focus group discussions and in-depth interviews. The outcome of the focus group discussions showed a wide spread disengagement of these neighbourhoods in the preservation of green spaces in their areas. In all the study neighbourhoods, the residents emphatically expressed their non-involvement in the preservation of nature reserves, wetlands, parks and other green spaces in their neighbourhoods because they are considered as a non-important entity by the city authorities. Excerpts from the interactions with members of the study neighbourhoods are captured below.

I grew up in this neighbourhood and have lived here all my life but I have never seen any group or residents of this neighbourhood been involved in

green space preservation especially the Kumasi children's Park we have in this neighbourhood. The KMA does not regard us as important stakeholders, they do everything on their own and neglect the participation of this neighbourhood (Key informant, Amakom Neighbourhood, IDI: 14/03/2013).

We the community members can help to preserve and maintain green spaces in this area. Instead of the KMA to involve us in such activities they always sideline us and go on with their own initiatives on the green spaces (Community member, Patasi Neighbourhood, FGD: 26/02/13).

The KMA think we have nothing to offer so they do not consider us in green space preservation activities such as tree planting exercises and community gardening. Much of our nature reserves and other green spaces have been destroyed due to the selfish interest of the KMA and other land agencies. Members of this neighbourhood are not involved in any way to preserve green spaces in this neighbourhood (Assembly man, Ahodwo Neighbourhood, IDI: 18/12/2012).

The above comments provide insights about how the residents in the selected neighbourhoods are side-lined from green space preservation activities such as tree planting exercise and community gardening in their localities. The reason is that the Kumasi city authorities less value the local people and the benefits that the participation of the local people can help to conserve much green spaces. The foregoing gives a clear picture of poor community participation in the management of green spaces in Kumasi. Similar finding came up in a study by Fuwape and Onyekwele (2011) which found poor community participation in green space management as a common problem in many West African cities. Conversely, in many European cities especially cities in UK, residents and community groups are highly recognised by local city authorities and involved in the conservation of green spaces (CABE, 2010a). The

poor maintenance condition of green spaces in Kumasi was found to have some linkage with community participation that was lacking. This is because many conservation activities that the neighbourhoods could offer to maintain green spaces were found not tapped by the Kumasi city authorities. The maintenance and community participation themes are therefore very essential if a quality green space is to be achieved because the study found that they form a solid pedestal that the other themes hinge on. A study by CABE (2010a) highlighted maintenance and community participation as key themes critical for the successful growth of green spaces. Similarly, a study by Baycan-Levent and Nijkamp (2009) also gave credence to maintenance and community participation as essential for the planning and management of green spaces.

The interdependencies between the various themes that emerged from the study with maintenance and community participation themes as their core have been used to develop a flow chart (Figure 6.7) to contribute to the knowledge base of green spaces. The flow chart depicts the relationships among the themes, and shows how they can be used to shape the development of green spaces.

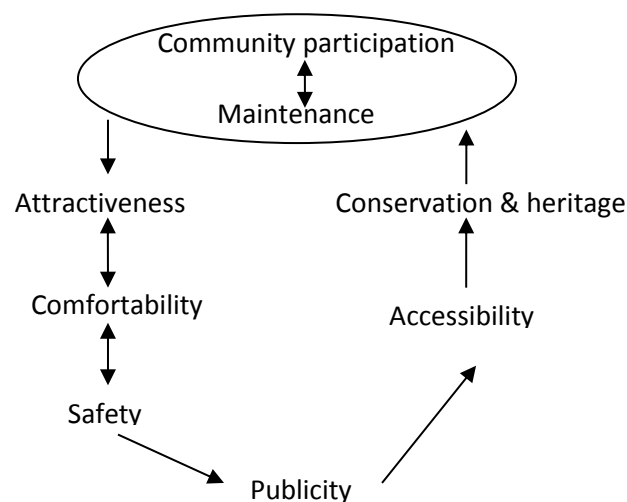


Figure 6.7: The interconnectedness between themes on the state of green spaces

Source: Fieldwork (2013)

From Figure 6.7, effective community participation would help to bring more people on board to contribute to the maintenance of green spaces whilst maintenance works on the other hand can be used as an opportunity to get communities to be involved in conserving green spaces in their area. The attainment of these two elements forms a solid platform that helps to provide facilities to enhance the attractiveness, comfort, and safety of green spaces. A strong relationship exists between attractiveness and comfort themes. Efforts to enhance the attractiveness of green spaces by providing different facilities provide avenue for individuals to use those facilities to comfort themselves whilst provision of comforters on green spaces such as seats and playing facilities also enhance the attractiveness of green spaces. A similar pattern exists between comfort and safety themes. When these are achieved it will boost publicity since there will be positive accreditations such as good attractiveness, comfort and better safety conditions that the green spaces can be marketed on (Figure 6.7). Subsequent publicity by way of circulation of much information on green spaces will boost access to these places as it will inform visitors the availability, location and prospects of such spaces for them to visit. Good accessibility to green spaces on the other hand will give people the opportunity to exploit the cultural heritage and the conserved environment of the green spaces.

Finally, rich cultural heritage and conservation potential of the green spaces will serve as a motivation for city authorities to undertake regular maintenance works to sustain that good fame and this will kick start the process again (Figure 6.7). Poor performance of these themes especially maintenance and community participation will undermine the quality of green spaces, as seen in Kumasi. The study further contributes to the existing knowledge on green spaces by drawing on the findings from the field to generate an assessment framework (Table 6.3) to guide the assessment of the state of urban green spaces especially in developing countries and Africa in particular.

Table 6.3: Green space assessment framework

THEME	INDICATOR
Attractiveness	Presence of signage, well grown grasses, walkways, free from litter and animal fouling, availability of dustbins, absence of unpleasant smell
Comfort	-Availability of seats, playing facilities, toilet facilities -Serene environment
Accessibility	-Enough availability of green spaces (minimum of 9m ² green space per city dweller as recommended by WHO) -Proximity to green spaces (public parks and gardens)
Safety	-Free from vandalism, criminal attacks -Not used as hide outs for criminals -Availability of first aid, availability of lights at night
Conservation and heritage	-Availability of historical/cultural artefacts -Variety of plant and animal species
Maintenance	-Absence of spoilt facilities -Facilities functioning for their purposes -Regular mowing of grasses and shaping of trees and flowers
Publicity	Promoting or marketing green spaces especially parks and gardens to attract visitors and educate them as well.
Community participation	-Involving neighbourhood residents in green space conservation activities such as tree planting exercise and community gardening.

Source: Fieldwork (2013)

In using this framework one must be mindful about the nature of the themes as some might demand more rigorous assessment than others, and careful about the framework itself since it was generated to suit the context of the study area. Caution should also be paid to the kind of method used for the assessment because this study was guided by a case study approach and for that matter qualitative analysis.

In all, relying on the themes and the findings of the studies, the green spaces in Kumasi can be said to be in a poor state. With the exception of the conservation and heritage theme where some satisfactory findings were obtained, in all the remaining seven themes, the

performances of the green spaces were poor. The level of attractiveness, comfort, safety, publicity, maintenance, community participation and accessibility were all in a poor state. This situation makes Kumasi one particular city that reflects various problems affecting the poor state of urban green spaces in Africa. The discussion in this section demonstrates that a multiplicity of themes come together to enhance the state of green spaces, and that each of the themes is important due to interdependencies that exist between them. This provides a good lesson for city authorities and other bodies on green spaces to give broad attention to all the themes that relate to the state of green spaces since failure to attain one would have serious repercussions on the overall state of green spaces. The next section of this chapter extends the discussion further by examining the factors that have accounted for the current poor state of green spaces in Kumasi.

6.3 Factors affecting the development of green spaces in Kumasi ¹¹

A variety of factors have been highlighted in the literature to affect the condition of green spaces worldwide. These factors cut across all aspects of town planning, be it economic, social, political, environmental and institutional (Gomes & Moretto, 2011; Awuah et al., 2010; Fuwape & Onyekwelu, 2011; Okpala, 2009; Alberti et al., 2007; Carmona et al., 2004). This section explores the factors behind the current poor condition of green spaces in Kumasi and situates the findings in a wider debate, so as to provide useful lessons to enhance the development of green spaces in cities across the world. Six broad factors were found as the major factors affecting the current condition of green spaces in Kumasi. These came out through analyses of secondary materials, personal observations and interviews with a variety of stakeholders on green spaces in Kumasi. These factors are discussed in detail below.

¹¹ Some aspects of this sub-section have been published in peer-reviewed journals by the author of this thesis (Mensah, 2014 b, c)

Laxity in the enforcement of development controls was the predominant factor that came out from the findings of the study. Development controls are tools used in town planning to guide the growth of cities to improve the quality of life of the residents (Philip, 2007). Planning schemes/layouts or master plans that were used as guidelines to control physical developments in Kumasi by the city authorities contained many provisions for green spaces that were non-existent on the ground. However, an examination of the study neighbourhoods and the actual physical developments that have taken place shows that areas demarcated on the layouts as parks, nature reserves, wetlands and forest reserves were either non-existent or were substantially encroached upon for different land-uses. This problem was apparent in all the study neighbourhoods, and was strongly highlighted in the focus group discussions. For example, in the Patasi Neighbourhood, a large proportion of land that had been delineated on the layout as a public park was in reality nowhere to be found (Figure 6.8).



Scale: 1:2500

Delineated park on layout not in existence

Figure 6.8: Layout of Patasi Neighbourhood showing a demarcated park which is not in existence

Source: Town and Country Planning Department (1978)

Similarly, a public park and nature reserve which were visible on the layout of the Danyame Neighbourhood were not actually implemented in the area (Figure 6.9). The park was merely there on paper, but not in existence on the ground, whilst the nature reserve was seriously encroached upon. This observation corroborates Saporiti's (2006) finding that in developing countries many public parks are found to exist on paper but not on the ground.

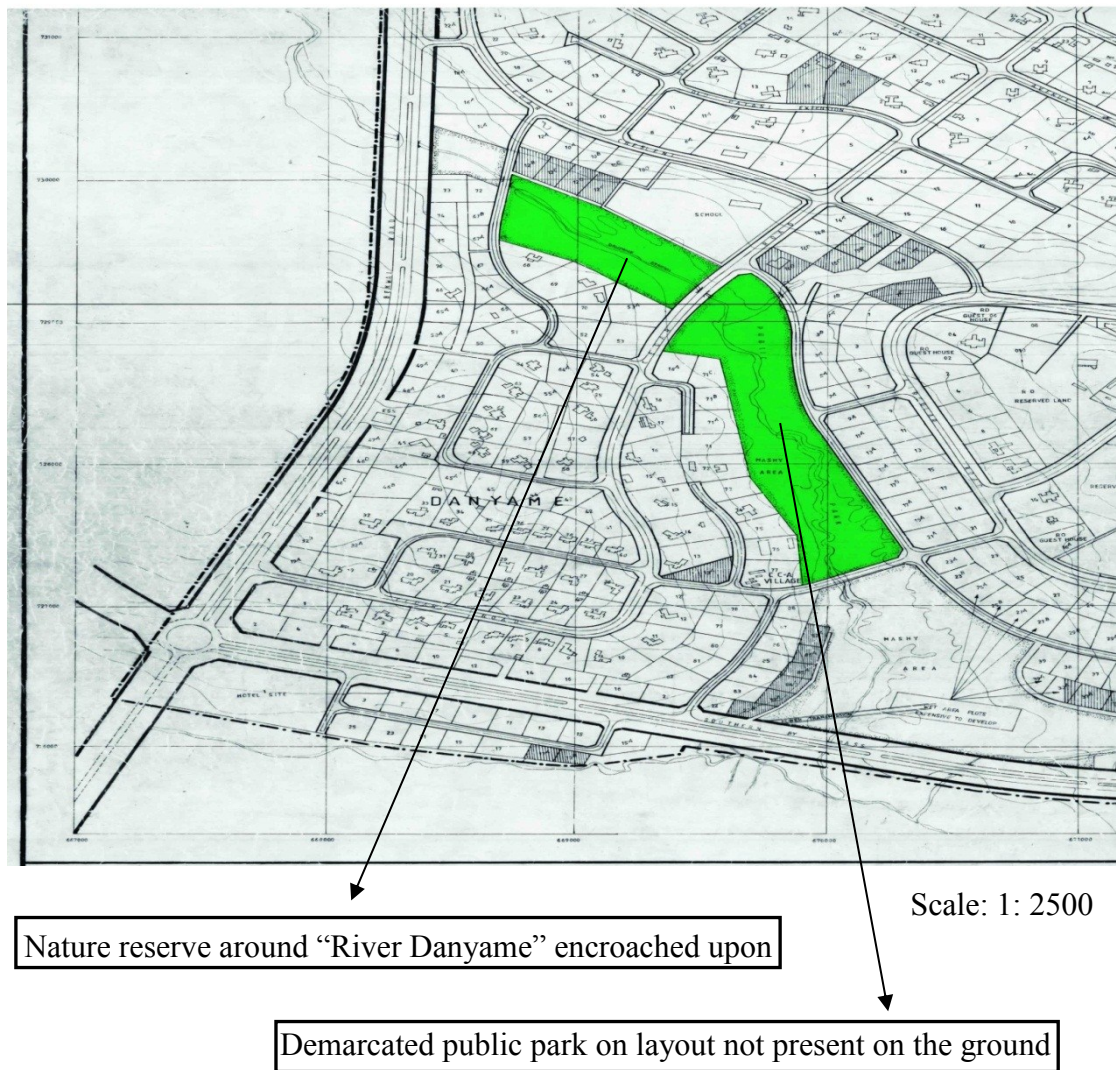


Figure 6.9: Layout of Danyame Neighbourhood showing green spaces which have not been implemented

Source: Town and Country Planning Department (1993)

Representatives from the Kumasi city authorities engaged in the study pointed out poor enforcement of development controls by their outfits as the cause of this problem, and attributed that to many reasons. One possible reason was the insufficient resource base available to the planning institutions. The various bodies that constitute the planning body of

Kumasi which were involved in the study pointed out the inadequate nature of resources of their outfits, especially weak finances and lack of working tools or equipment. For example, the Town and Country Planning Department, the Development Control Unit (Works Department) and the Development Planning Unit lamented the poor capacities of their outfits to control the physical development of Kumasi due to lack of resources. A similar finding came out in a study by Okpala (2009), which found planning organisations or agencies in many African countries such as Nigeria, Zimbabwe, Kenya, and Ghana to be weak in enforcing planning regulations due to limited finances, logistics and labour force.

Issues of political interference, nepotism and favouritism were other possible reasons for the poor enforcement of development controls as pointed out by many of the respondents. Such issues disrupt the organisations' capacity to strictly enforce development controls over green spaces because projects that should be halted for encroaching on green spaces are still allowed to progress because the owners of those projects have political or social ties with top government officials or leaders of the city authorities. This relates to the clientelistic mode of governance, where politicians favour some groups of people or specific clients with the aim of getting political support or material benefits, as stressed by DiGaetano and Strom (2003). This situation does not allow the organisations responsible for managing green spaces in Kumasi to exercise their mandates firmly on the ground to prevent encroachment of green spaces. This is because their efforts often end up being ineffective to restrain some people due to political reasons and the self-interest of some government officials. An observation by Muderere (2011) in Harare (Zimbabwe) found a similar problem, where the association of some high personalities with senior officials of the planning organisations was uncovered as a major problem militating against poor enforcement of development controls by the local planning authorities to protect the natural environment. These manifestations are crucial as they put the

integrity and credibility of the city authorities on the line and cause the general public to lose confidence in them. This has ended up in massive destruction of green spaces in Kumasi as there is no protection for these spaces.

Another factor that was very pervasive in Kumasi was the problem of ownership of green space lands. Who has absolute control over green space lands was a major problem. Three forms of land ownerships were found to operate in Kumasi (Hammond, 2011; KMA, 2010). The first one deals with “vested lands”, which are lands owned by the government of Ghana. All lands that fall within a one mile radius from the Kumasi main post office come under this category. The remaining lands, which cover the greater part of Kumasi’s land area, are called “stool lands”, and are held in trust by chiefs (for the Ashanti King) who are the custodians of the land. There is yet a third category, designated as “public lands”, which are parcels of land allocated within both the vested and stool lands that are acquired by the government of Ghana for public interests. Examples of such lands are public school lands, rights of way, sanitary sites, open spaces (grey and green spaces) and railway reservations. The green spaces fall under the “public lands”, and the constitution of Ghana delegates the Lands Commission to control and manage such lands together with other allied state lands agencies. However, an interview with a representative from the Lands Commission showed that in practice, they do not have much control over green spaces in Kumasi. The representative from the Lands Commission remarked as follows:

The constitution of Ghana and the law establishing my outfit give us the legal backing to manage all public lands including green spaces but this is not the reality on the ground. The traditional authorities (chiefs) also claim ownership of green space lands since most of these spaces fall within their area of authority. As a result of this, most of the green space lands such as nature reserves and wetlands have been sold out to private developers by

the chiefs without our knowledge (Official, Lands Commission, IDI: 04/02/2013).

A further probe into the matter through interviews with selected chiefs provided further evidence on the problem of ownership of green space lands. The interaction with selected chiefs revealed that many lands that should be preserved as nature reserves and public parks have been given out by the chiefs to private individuals for different land-uses. For example, one of the chiefs said this:

Due to immense social problems that my community was facing I released some portions of the community's land (nature reserves) to private individuals to get funds to enhance the growth of my community (Chief of Neighbourhood B, IDI: 15/01/2013).

It can be deduced from the comments above that some chiefs in Kumasi recognise public lands such as nature reserves and wetlands as the property of the neighbourhoods of which they are heads, but not the property of the government of Ghana (controlled by the Lands Commission and other government agencies). This conflict of ownership over green space lands is a peculiar problem in Kumasi and is having devastating effects on the development of green spaces. It has led to the destruction of several green spaces in Kumasi. This problem differs from the situation in many cities across the world, such as Paris (France), Curitiba (Brazil) and Tokyo (Japan), where the local city authorities (government) have much more effective control over green space lands (Carmona et al., 2004). Similarly, in cities in many African countries such as Nigeria, Kenya, Cote D'Ivoire and South Africa, green spaces are much more firmly under the control of city authorities. In Kumasi, by contrast, much of the city's green space lands (about 60 percent) are in the hands of chiefs (traditional authorities). This problem has its roots in the traditional and cultural set up of Kumasi, which is synonymous with the cultural perspective of urban governance in which cultural institutions

play a major role in the governance of an area, especially in a monarchical system (Rose, 1997; Ferman, 1996). In the past, the whole city was under the Ashanti kingdom, with the entire land in the area controlled by the Ashanti king and his sub-chiefs. This monarchical system still operates in Kumasi alongside the authority of the government of Ghana, which is underlined by laid down organisational and institutional structures that assign roles to specific government agencies to oversee the management of lands and green spaces in Kumasi (structural perspective of urban governance, Sellers, 2002). The poor integration of the cultural and structural perspectives of urban governance operating in the city makes the management of green spaces a problem in the area. This has made it difficult for the government of Ghana to reclaim green space lands from the traditional authorities of Kumasi. The situation allows the traditional authorities to still claim control over green space lands and to release such lands to private developers for their personal interests.

The third major factor that emerged from the study as causing destruction of green spaces was urbanisation. Kumasi has one of the highest levels of urban growth in Ghana, associated with much densification of activities within the city centre and high urban sprawl at its fringes (Hammond, 2011). The effects of urbanisation on green spaces in Kumasi cannot be over emphasised. Almost all the respondents made mention of it and gave classic examples of how urbanisation through infrastructural development has destroyed many green spaces. Table 6.4 gives some of the examples that the respondents raised on the destruction of green spaces caused by urbanisation.

Table 6.4: Respondents views on the effects of urbanisation on green spaces

<p>We use to have timber gardens at Asokwa Neighbourhood but the construction of the Asokwa interchange to meet the rising urban growth of Kumasi has destroyed this garden (Official from the media, IDI:20/12/2012)</p>	<p>Because of urbanisation many trees along the road from “Asafo to Tech” Neighbourhoods were cut down for the expansion of the road (Representative from Dept. of Horticulture [KNUST], IDI:07/02/2013)</p>
<p>A large public park in South Suntreso Neighbourhood was destroyed to make way for the construction of the “Sofoline” interchange.(Official, Dept. of Parks and Gardens, IDI:08/01/2013)</p>	<p>A public park that we played on about 15 years ago in Patasi Neighbourhood has been converted into housing apartments to absorb some of the increasing population of Kumasi (Unit Committee member, Patasi Neighbourhood, IDI: 04/12/2012)</p>
<p>Ahodwo Neighbourhood had a very green environment in the past. As a result of the intensity of activities in the area due to urbanisation, the majority of this green environment has been lost. All the nature reserves along the River Washy has also been lost to infrastructural development (Assembly man, Ahodwo Neighbourhood, IDI:18/12/2012)</p>	

Source: Fieldwork (2013)

Further analysis of secondary materials on Kumasi also revealed substantial loss of green spaces to rapid urbanisation. For example, Kumasi’s total land area in 1950 was 25km², but due to urbanisation it increased to 182km² in 1963 and by 2011 was 254km² (Poku-Boansi & Inkoom, 2011). Such expansion has caused massive destruction of Kumasi’s green belt and other essential green spaces. Urbanisation as a key factor destroying many green spaces in Kumasi supports the findings of many studies worldwide. For example, it corroborates the findings of Fuwape and Onyekwele’s (2011) study on West African cities, which revealed the massive destruction of green spaces in many cities such as Lagos and

Abidjan as a result of the high rate of urbanisation. It also supports studies in 274 metropolitan areas in the USA by McDonald et al. (2010), which found urbanisation to be the cause of the depletion of many green spaces. However, it contradicts Zhao et al.'s (2013) study in Chinese cities which instead showed an incremental growth in the number of green spaces in the wake of the rapid urbanisation that has taken place in many cities in China.

Kumasi's urbanisation takes the form of both intensification of activities in the city centre and urban sprawl at its periphery which makes it a serious problem. The 1986 and 2007 Landsat satellite images of Kumasi confirmed this, with the 1986 image showing numerous conserved green spaces as compared to the 2007 image, which gives an indication of rapid urbanisation both at the city's core and fringes (Figure 6.10). Observations by Tontoh (2011) showed that in 1986 the green spaces in Kumasi (indicated on the Landsat satellite image as forest land) covered approximately 41158.08ha (74.08%), whereas in 2007 it had reduced to 22513.41 ha (40.52%) because of continuing urbanisation (Figure 6.10).

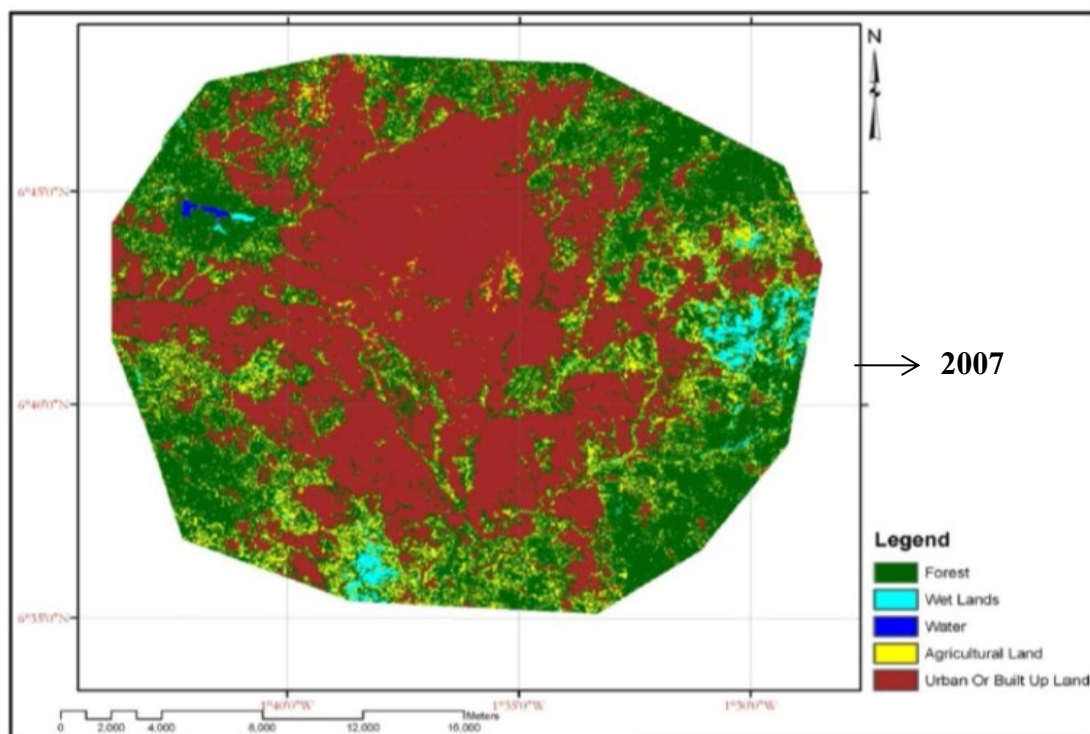
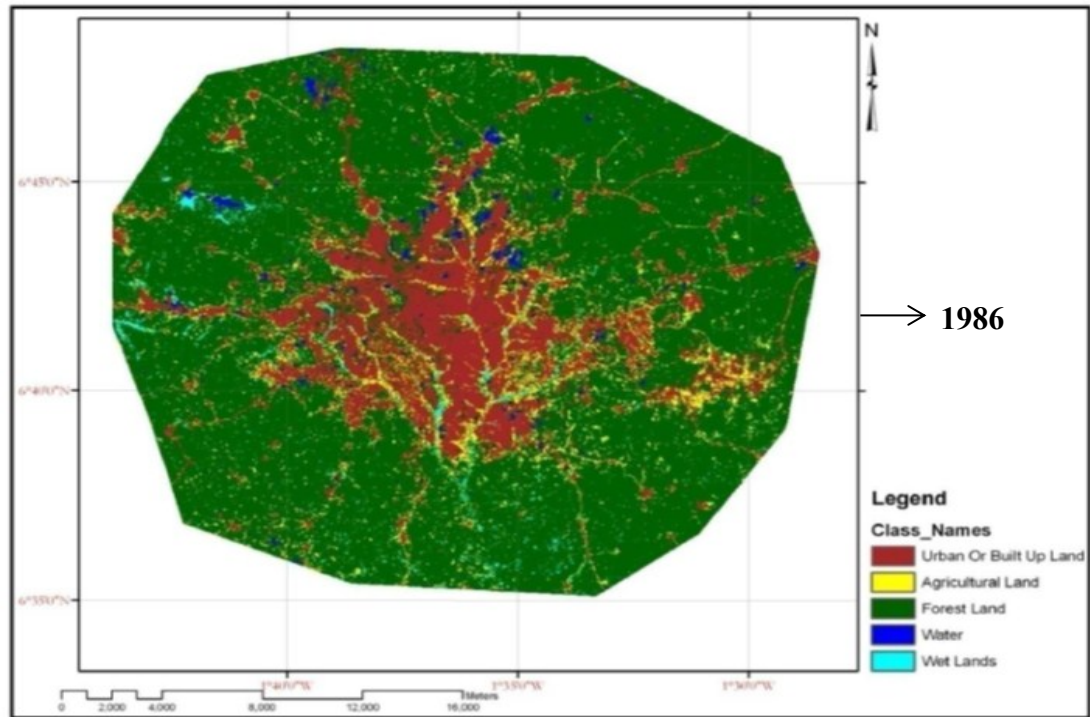


Figure 6.10: Landsat satellite images showing land cover change of Kumasi between 1986 and 2007

Source: Adopted from Tontoh (2011)

The strategic location of Kumasi is a contributory factor to this problem. The city is situated in an advantageous position where all roads leading to the southern and northern parts of Ghana converge. This makes the city a nodal point to attract many settlers from all parts of Ghana and neighbouring countries purposely for commercial activities.

The next factor that the study discovered was the uncooperative attitudes of the general public towards preservation of green spaces. In many parts of the world the good efforts shown by the general public to preserve green spaces are immense. For example, in Mexico, the enthusiasm and dedication shown by the general public in preserving public spaces such as green spaces in some towns has been acknowledged by Bonilla (2013). In Kumasi, a different phenomenon was observed. The level of commitment of the public towards preservation of green spaces was poor. Officials of all the allied bodies on green spaces expressed worries about the uncooperative behaviour of the residents of Kumasi on the preservation of green spaces. Some of the worries expressed by the officials are as follows:

The general public does not care about green spaces in Kumasi. They have destroyed most of the lawns and shrubs created at the Centra Business District to beautify the city. They use such places as walkways or spaces to sell their items (Official, Town and Country Planning Department, IDI: 09/01/2013)

The residents of this area make our work difficult for us. They always leave their animals on free range to destroy many lawns, shrubs and other green spaces in Kumasi (Official, Department of Parks and Gardens, IDI: 08/01/2013)

Uncooperative behaviour of the residents of Kumasi is causing serious threats to green spaces. They think the preservation of green spaces is the work of only the city authorities. Instead of them to help preserve the green spaces they are unconcerned and have destroyed many green spaces for commercial activities (Official, EPA, IDI: 17/12/2012).

Personal observations on the physical environment of Kumasi found widespread destruction of green spaces by the general public for their selfish interests. For example, a substantial part of Fante Newtown Park was destroyed by the general public for commercial activities (Figure 6.11). Trees, lawns and shrubs in many neighbourhoods were also destroyed by the general public.



Figure 6.11: Parts of Fante Newtown Park destroyed for commercial activities
Source: Fieldwork (2013)

These observations in Kumasi are similar to what was found in Nairobi city (Kenya) by Makworo and Mireri (2011), where the uncooperative attitudes of the general public resulted in the destruction of some of the city's public parks for commercial activities. Inadequate involvement of the general public in the management of green spaces, as highlighted in the previous section, is a probable cause for this problem in Kumasi. Another possible cause is the poor perception of the general public about green spaces, since they perceive green spaces as resources for whose upkeep they are not responsible for. This finding is contrary to the

concept of environmental sustainability, which encourages conservation of the natural environment such as green spaces to enable the natural vegetation to provide various ecosystem services for human wellbeing (Cilliers et al., 2013; Sutton, 2004).

Low priority given to green spaces by the Kumasi city authorities was another key factor that emerged from the study. Interaction with several departments or bodies that constitute the Kumasi city authorities confirmed this. For example, a representative from the Department of Parks and Gardens indicated that green spaces fall outside the top agenda of Kumasi officials. He said the top priorities of the Kumasi authorities were poverty issues, education, health, and commercial activities, with no budgetary allocation for green spaces. The Town and Country Planning Department, Wildlife Division, Forest Service Division and the EPA all stressed that little attention was given to green spaces and other environmental issues in Kumasi. This was found to arise from the fact that green spaces are not considered as an important resource that can offer many benefits to the city. That was not all, a further analysis of available secondary data on the matter also confirmed that limited attention was given to green spaces in Kumasi. There was no green plan or strategy to guide the development of green spaces. The planning authorities rely substantially on a broad development plan for Kumasi (prepared every 4 years) to address all the development needs of Kumasi, which is not appropriate.

A closer look at the current development plan of Kumasi, which spans from 2010 to 2013 found that there was no attention or concern for green spaces (KMA, 2010). Matters such as education, health and housing were the major themes of the plan. This finding is contrast to the situation in many African cities such as Johannesburg, Cape Town, Durban, Nairobi and Casablanca, where maximum priorities are given by city authorities on the development of green spaces (Lange & McNamara, 2011). This problem has led to poor

maintenance and even complete abandonment of many green spaces in Kumasi, which has eventually caused the destruction of most of these spaces there.

The last major factor that served as a setback to the development of green spaces in Kumasi was poor coordination among the government bodies on green spaces. This aspect of the study concentrates only on horizontal coordination (coordination among allied bodies on green spaces). A broader discussion involving vertical coordination among all the stakeholders on green spaces in Kumasi is contained in Chapter Seven. Good coordination of bodies on green spaces has been identified as a useful tool to promote a strong organisational alliance that provides for better management of green spaces both in the present and in the future (Caspersen et al., 2006; Carmona et al., 2004). Several government agencies that were engaged in the study were not satisfied with the level of coordination that exists between them and their sister organisations on green spaces in Kumasi. They rated the level of coordination between them and other bodies as poor (Table 6.5), and attributed the incoherence about their responsibilities and the poor recognition given to some of them as the causes of this problem. The incoherence of responsibilities in this context means responsibilities that are not well defined and have some level of ambiguities associated with them whilst lack of recognition refers to an entity or organisation not recognised for the purpose it was created for.

Table 6.5: The level of coordination among allied bodies on green spaces in Kumasi

Institution/bodies	Coordination with allied bodies	Reason
Dept. of Parks and Gardens	Poor	Lack of recognition Incoherent responsibilities
Wildlife Division	Poor	Lack of recognition
Forest Service Division	Poor	Lack of recognition
Lands Commission	Poor	Incoherent responsibilities
Department of Horticulture (KNUST)	Poor	Lack of recognition
Environmental Protection Agency	Fairly good	Incoherent responsibilities
Town and Country Planning Dept.	Fairly good	Incoherent responsibilities

Source: Fieldwork (2013)

This problem has led to disintegration and discontinuity of many projects on green spaces in Kumasi, as there is little or no coordination among the allied bodies on those projects. It was revealed that the unsuccessful rehabilitation of Kumasi Children’s Park over a decade now has some connection with the uncoordinated activities of the allied bodies on green spaces. Similarly, the poor coordination among the allied bodies on green spaces was also found to play a major role in the unachieved beautification project of Kumasi, which started in 2007, and many undeveloped parks and gardens in the area. Case studies in cities such as Hanover (Germany), Curitiba (Brazil) and Zurich (Switzerland) by Camorna et al. (2004) produced results that were entirely different from this situation in Kumasi. Those studies found strong and healthy coordination among the cognate bodies on green spaces, with the resultant effect

being comprehensive development of green spaces. The situation in Kumasi do not give the green spaces the necessary protection and support to withstand the changing urban development pattern that is confronting the city.

From the foregoing, the development of green spaces in Kumasi can be said to be under serious threat, with a variety of factors coming together to destroy the green spaces. These factors include laxity in the enforcement of development controls, the problem of ownership of green space lands, urbanisation, low priority given to green spaces, uncooperative attitudes of the general public and lack of coordination among the allied bodies on green spaces. It can therefore be concluded that depletion of green spaces is not only the result of rapid urbanisation, which has received a lot of concerns internationally. There are other factors which cause serious destruction of green spaces, as discovered by this study, and which must be given attention in order to enhance the growth of green spaces. The next section extends the discussion further to the area of sustainability by assessing the contribution of green spaces to the sustainable development of Kumasi.

6.4 Contribution of green spaces to the sustainability of Kumasi as a city

It is well established that green spaces are important contributors to the realisation of sustainable cities (Haq, 2011; Rydin, 2010; Baycan-Levent & Nijkamp, 2009). This is due to the multifunctional benefits they offer cities. The existence of green spaces in cities has been found to promote a healthy environment, enhance social wellbeing and stimulate economic growth. These tripartite benefits corresponds to the three pillars of sustainable development (environment, social and economic) that many cities are yearning to achieve to improve the livelihood of their dwellers. This aspect of the study is devoted to exploring the kind of contributions that green spaces provide to support the development of Kumasi and how this

relates to the situation elsewhere. This effort informs the existing theoretical frameworks on green spaces and sustainable development. The discussion is organised under social, environmental and economic contributions of green spaces in Kumasi.

6.4.1 Social contributions

One of the fundamental social benefits of green spaces is providing opportunities for recreational activities such as relaxing, walking, admiring nature and socializing with friends and loved ones (Lafortezza et al., 2009). The respondents indicated that they hardly use green spaces for these activities. The local people through the focus group discussions made it clear that green spaces such as parks and gardens are not among their preferred places for recreational activities because they are in poor condition. They cited drinking spots, restaurants, and hotels as the major places they rely on to satisfy their recreational needs. The representative from the Department of Parks and Gardens testified that thousands of the dwellers of Kumasi do not rely on green spaces for recreational activities because there are only few parks and gardens that are in existence now and even with these few ones they are not well kept. The official from Wildlife Division in Kumasi added that the patronage of the Kumasi Zoo has declined with few visitors making use of the zoo except on special occasions. These manifestations are not in consonance with studies in some cities in UK, USA, Italy and China which revealed parks and gardens as key places that are accessed predominantly for recreational purposes (Lafortezza et al., 2009; Xi-Zhang, 2009; Harnik, 2004).

Personal visits to some of the parks substantiated the responses from the respondents. From what was observed, green spaces especially parks and gardens were not among the important recreational sites for many people in Kumasi. Many of the parks and gardens were in poor condition and this discouraged individuals from using them. Drinking spots were the

key places that were observed to host many individuals for recreational activities such as relaxing, chatting with friends, and engaging in a variety of social activities.

Green spaces supporting the aged and children was another social contribution that was assessed in Kumasi. Studies by Konijnendijk et al. (2013), Milligan et al. (2004) and Takano et al. (2003) demonstrated the immense benefits that the aged get through frequent contact and usage of urban parks and other green spaces. Among these findings were the enhancement of the life span of the aged and reduction of some of the diseases associated with old age. Focus group discussions involving the aged conducted in Kumasi revealed that most of the elderly or aged do not use public parks because of the poor condition of the parks and their lack of provision for the aged. Some of the comments from the aged in relation to the support they get from green spaces are as follows:

I do not remember the last time I visited any public park or green space in Kumasi. I am always confined at home with no place to go. All the parks and gardens that were available in the olden days are no more and the few ones we have now are in very bad state. The parks do not provide any support for the aged. No provision is also made for the aged on the few parks remaining (Aged person, Patasi Neighbourhood, FGD: 26/02/2013).

At first I used to go to Adehyeman Gardens to relax and socialize with friends. More than 15 years now I have not step a foot there or any other public park or garden in Kumasi. This is because all these places are not pleasing, entertaining, hygienic, and safe for me to visit. The aged do not get any benefit from these spaces (Aged person, Nhyiaso Neighbourhood, FGD: 17/02/2013).

There is no better public park or garden for the aged to visit. The poor condition of the parks will not even attract you to visit them. In fact, we the elderly are really suffering because we do not get benefits from the green

spaces (parks, gardens) (Aged person, Amakom Neighbourhood, FGD: 20/01/13).

The above comments give an indication of how the green spaces in Kumasi are providing little or no support for the aged. It can be inferred from the responses from the aged that issues such as boredom, loneliness and physical inactivity that can be relieved through contact with green spaces are not realised in Kumasi. This is contrary to the findings by Payne et al. (2005) in USA which found the aged to be among the major users of public parks with many health related benefits and socialisation been derived from the parks by the aged. Concerning support for children's development, it is well documented that children learn a lot through playing and contact with the natural environment such as parks, gardens, trees and many others (Fam et al, 2008; Lowman, 2006; Cornell et al., 2001). This helps to enhance children's knowledge about nature, develop a sense of stewardship for the environment, improve their cognitive development and boost their analytical and strategic thinking. The green spaces support for children in Kumasi followed a similar pattern to that of the aged. Observation from the field found a handful of children using public parks and gardens because of insufficient facilities to provide enough playing options for children. Playing football was to a great extent the only play option available for the few children who use the parks. Even with the playing of football, the children do that under risk conditions of poor nature of playing turf and unhygienic environment (Figure 6.12). The limited play options do not help the children to fully reap the benefits that are supposed to be provided by green spaces.



Figure 6.12: Children playing on the Kumasi Children’s Park

Source: Fieldwork (2013)

The contribution of green spaces in the area of social interaction, cohesion and inclusion also received attention in the study. Fam et al. (2008) have observed that green spaces help to provide places for social gathering and events which promote social interaction, cohesion and inclusion to support the development of cities. The responses from the respondents (both the local people and the city authorities) showed otherwise. Out of the eight parks and gardens that were covered in the study it was only one park that the respondents claimed to get such benefits from. Most of the respondents indicated that it is only at the Ridge Park that occasionally some social events are organised for some families, friends and different categories of people to come together to interact and have fun. Concerning the remaining parks and gardens in Kumasi, the respondents made it clear that they do not get such benefits from them. This might be as a result of the uncondusive nature of these parks by way of not having large open areas and well maintained grounds for such activities. The study therefore realised that the benefit of green spaces in the area of social interaction, cohesion and inclusion is not wide spread in Kumasi. It is only concentrated on the Ridge Park which can satisfy a small fraction of people taking into consideration the total population of Kumasi which is over two million people.

The education and research benefits associated with green spaces were also ascertained. Satisfactory responses were obtained on this. For example, the respondent from the Department of Horticulture of KNUST enumerated many educational benefits that KNUST botanical garden provides. It was made known that university students especially those doing science and agriculture programmes, and other officials from research institutions rely greatly on the KNUST botanical gardens for research activities. The representative from the Department of Horticulture remarked:

Very often, many tertiary students especially university students and officials from other research institutions in Ghana visit the KNUST botanical gardens to undertake research activities for different purposes. Many residents from Kumasi and other parts of Ghana also visit the place to acquire knowledge on different plant species in the garden (Official, Dept. of Horticulture [KNUST], IDI: 07/02/2013).

The official from the Wildlife Division in Kumasi also emphasised the educational benefits of green spaces. He stressed that from time to time his outfit receives visitors from different public and private organisations who come to the Kumasi Zoo to use the plant and animal species there for research. Specific mentions were made of health institutions that occasionally use plant and animal species at the Kumasi Zoo for experiments and researches. In addition to this, the Department of Parks and Gardens was found to have allocated a section of their premises for the growing and exhibition of a variety of seedlings for public education. These findings showed how useful green spaces such as parks and gardens can be used as a tool to enhance educational activities. It confirms Conner's (2005) assertion of a strong association existing between green spaces and education/research.

The health and therapeutic contribution of green spaces to the sustainable development of cities were not left out in the study. Positive connections have been found between contact with nature and the improvement of health condition of individuals in many ways (Ernstson,

2012; Barton & Pretty, 2010; Maas et al., 2009; Maller et al., 2009). One of such ways is physical activity in the form of walking, cycling, running and jogging on public parks. The results from the focus group discussions with the local people showed that most of the residents do not rely much on the public parks in Kumasi for physical activities because provisions are not made on the parks for such activities. The local people categorically pointed out Ridge Park as the only place which people sometimes rely on for physical activities like walking and jogging. On the remaining parks that were covered in the study, it was observed that they are small in size and have no path or routes for jogging, cycling and walking. A typical example is the Fante Newtown Park (Figure 6.13). The Wildlife Division, and the Department of Parks and Gardens in Kumasi raised similar sentiments about the small size of the parks in Kumasi and poor provisions for physical activities on the parks.



Figure 6.13: Small size and absence of sports facilities on the Fante Newtown Park

Source: Fieldwork (2013)

This condition of the parks makes it difficult for them to be used for physical activities and hence limits many health benefits that could be derived from the parks through physical activities undertaken on them (CJC Consulting, 2005). This confirms the relationship that has been found to exist between provisions for sports facilities on parks and the quantity of

physical activities to be undertaken (Zlot & Schmid, 2005; Wendel-Vos et al., 2004). That is the more available sports facilities on parks, the greater physical activities can be undertaken on them and vice versa.

6.4.2 Environmental/ecological contributions

Amelioration of local climate is one major environmental contribution that green spaces have been found to provide to support the growth of cities (Fam et al., 2008). In assessing this contribution in Kumasi, a longitudinal survey comparing the temperature of Kumasi from 1991 to 2001 by Amos-Abanyie (2011) was utilised and this revealed a steady rise in temperature in the past two decades. The average maximum temperature of Kumasi was found to increase at a rate of 0.035°C per annum which is about 133 percent higher than the global warming rate of 0.0150°C per annum (Houghton et al., 2001 as cited in Amos-Abanyie, 2011). Apart from temperature, matters on humidity, heat waves and rainfall were also assessed. A diminishing rainfall pattern was observed (Owusu, 2009). The mean minimum humidity was discovered to be decreasing over the last 10 years whilst there was excessive increase in heat waves causing an urban heat island in Kumasi as observed by Amos-Abanyie (2011). These parameters show poor climatic condition in the area. One plausible conclusion that can be drawn from these analyses is that there is excessive increase in the hard surfaces of Kumasi (asphalt, pavement and other concrete surfaces) at the expense of green spaces. In other words, much green spaces have been destructed to make way for infrastructural developments. Although a strong position cannot be taken on this, it can be said that the limited nature of green spaces in Kumasi may be a contributing factor to the poor climatic condition of the area since the presence of many of such spaces have been found as good

stabilizers in enhancing the local climate of urban areas (Alexandri & Jones, 2008; Fam et al., 2008; McPherson & Muchnick, 2005).

Improving air quality was another environmental contribution that the green spaces in Kumasi were assessed on. Documentary analysis on the matter found that the tree canopy cover in the total land area of Kumasi which was about 20 per cent in the 1980s has reduced to only 7 percent in 2010 (Quagraine, 2011). A further assessment revealed that the total vehicular greenhouse emissions in Kumasi have increased from about 665 tonnes in 2005 to 860 tonnes in 2010 (Agyemang-Bonsu et al, 2010). Carbon dioxide was found to constitute over 90 percent of this total emission suggesting a high rate of air pollution. The commercial nature of Kumasi with its growing vehicular movements at the city centre is a major factor for this problem. The increasing pattern of air pollution in Kumasi compared to reduction in the tree canopy cover shows that there are not enough green spaces by way of trees to improve air quality of the area.

The architectural beauty that comes along with well-designed and maintained green spaces was also a focal point of the study. Interviews with the officials from the Town and Country Planning Department, and the Department of Parks and Gardens provided much insight about the contribution of green spaces to the architectural beauty of Kumasi. It came out that green spaces offer little benefits to enhance the architectural beauty of the area and this is different from the situation in cities such as Paris, Curitiba, Copenhagen, Madrid and Cape Town in South Africa (Bryne & Sipe, 2010) where green spaces contribute much to beautify the cities. Complaints were made on excessive destruction of the first set of parks that were created in Kumasi (Adehyeman gardens, Fante Newtown Park etc.) and the new ones that were added (Abbey's Park, Jackson Park now Jubilee Park etc.) and positioned at vantage points to enhance the beauty of Kumasi. The local people expressed dissatisfaction about the

loss of many trees along the principal streets and many neighbourhoods of Kumasi which have taken away the architectural beauty of the city. Some of the remarks of the local people were captured as follows:

Kumasi is no more a garden city as it used to be in the olden days. Most of the trees on our roads are lost. At the moment Kumasi do not have any attractive green environment to make it a beautiful city (Community member, Ahodwo Neighbourhood, FGD: 20/01/2013).

Most of the trees we had in the CBD which made Kumasi very nice are all gone. I remember that when I was young, the central market, Kejetia and Asafo Neighbourhood had much trees grown at vantage points to make Kumasi beautiful but now all of them have been cut down (Community member, Danyame Neighbourhood, FGD: 10/03/2013).

At first, walking through the corners of Kumasi was very nice because you will come across many green spaces especially trees beautifully designed at neighbourhoods such as Patase, Danyame, and Ahodwo. Now this beauty that made Kumasi a garden city is gone, most of the green spaces have been destroyed (Community member, Patasi Neighbourhood, FGD: 24/02/2013).

Since Kumasi is a major tourist centre in Ghana, this problem does not only take away the architectural beauty of Kumasi, it also has serious implications on tourism especially eco-tourism where many tourists prefer visiting places which have beautiful landscapes, and natural scenes such as well-planned green spaces.

The last environmental contribution of green spaces that was ascertained was conservation of biodiversity. Some isolated spots in Kumasi were acknowledged for containing different plant and animal species by the EPA, Forest Service Division, Wildlife Division, and the Department of Parks and Gardens. These spots included portions of the Kumasi Children's Park, Kumasi Zoo, and patches of forests at Ahodwo, Danyame and Nhyiaso neighbourhoods. Although these spots help to conserve some biodiversity, their impact is not substantial in Kumasi. They are concentrated on small pieces of land; a sum up

of these isolated spots will not produce a large scale biodiversity effects to provide much ecosystem services in the city. The richness level of the biodiversity in Kumasi was low as they consisted predominately of tree species. A different result was found by Cornelis and Hermy (2004) in Flanders (Belgium) where a rich stock of biodiversity made up of wild plants, birds and amphibians were discovered. Rapid urbanisation in Kumasi could be the cause for the small scale and low level of richness of biodiversity since it has destroyed much of the city's forest and nature reserves. A combination of different small spots (forests, park, garden) coming together to produce the biodiversity base of Kumasi is in contrast with Konijnendijk et al.'s (2013) evidence of urban parks containing the majority of cities stock of biodiversity. In summary, the environmental contribution of green spaces in Kumasi followed similar pattern of the social contributions. They were not substantial enough to support the environmental growth of Kumasi.

6.4.3 Economic contributions

In the realm of economic contribution of green spaces in Kumasi, matters on employment featured prominently. Bodies that deal directly with green spaces in Kumasi and expected to engage the services of many individuals gave an account of the jobs created by their outfits. For example, the Department of Parks and Gardens which is a major body responsible for the creation and maintenance of green spaces in Kumasi indicated that they have about 25 staff which to the department was woefully inadequate. The official from the Department of Parks and Gardens had this to say:

My outfit is on the verge of collapsing. We are not given the necessary attention by the local city authorities and the government as well. At the moment we have less than 25 workers to undertake all our activities in Kumasi. This total staff strength comprises drivers, security men and actual

skilled workers who are engaged in creation and maintenance of green spaces (Official, Department of Parks and Gardens, IDI: 08/01/2013).

In a similar fashion, the Wildlife Division and the Forest Service Division in Kumasi gave accounts of employing less than 30 staff in each of these organisations. Three leading private horticultural companies in Kumasi that were contacted put it on record that they have a small staff base for their activities. In some cases less than 10 workers were reported. This gives an indication that there are a handful of individuals that are employed on green spaces. Much destruction of green spaces, low coverage of green spaces and inadequate funds to hire the services of more workers were found as the reasons for this condition in Kumasi. This finding is different from the situation in some cities in Australia and UK where thousands of individuals have employment opportunities on green spaces (Blue Sky Green Space, 2011; Aldous, 2005).

Studies have shown that green spaces help to boost investment in cities by attracting businesses to locate around such places to enjoy the health benefits attached to them (Forest Research, 2010; Baycan-Levent & Nijkamp, 2009; Baycan-Levent & Nijkamp, 2004). The situation in Kumasi was far from this. The study found that investors, business men, co-operate bodies and organisations establish businesses in Kumasi not because of the green nature of the place but as a result of the strategic location of the area. A large customer base due to the large population of Kumasi and high commercial activities that takes place in the city were found to be the major factors that attract businesses to the area. This was confirmed through both in-depth interviews and focus group discussions that were conducted. Personal observations also revealed that key business areas in Kumasi (Adum, Bantama, Kofrom and Asafo neighbourhoods) had little or no green spaces to even suggest a possible influence of

green spaces on the allocation of the businesses in that area. This finding suggests that green spaces do not play an important role in the location decisions of businesses in Kumasi.

The contribution of green spaces to the revenue base of Kumasi and for that matter Ghana also received a fair share of the study's assessment. Information obtained at hand revealed that Kumasi Zoological Gardens (Kumasi Zoo) is one notable green space that generates a lot to revenue in Kumasi. In 2011, it generated a total revenue of GH¢111,312 (\$55,393); that for 2010 was GH¢110,746 (\$55,111) and 2009 was GH¢79,126 (\$39,376) (Ghana Broadcasting Corporation, 2012; Ghana News Agency, 2011). The Wildlife Division which is in charge of the zoo attested that these revenues accrued from the gate proceeds of the zoo and other income generating activities that the zoo is used for. The zoo had a variety of indigenous and foreign animal species which make it a key tourist attraction in Kumasi (Figure.6.14).



Figure 6.14: Exhibits on Kumasi Zoo

Source: Fieldwork (2013)

Despite the revenues provided by the Kumasi zoo, matters of poor maintenance continue to worry the zoo. The generation of revenue by green spaces in Kumasi was observed to concentrate on only the Kumasi Zoo. Response from the Department of Parks and Gardens made it clear that apart from the Kumasi Zoo no significant revenues are generated by the green spaces in other areas including taxes on properties close to parks and gardens. This makes the revenue generated by green spaces in Kumasi quite different from other cities elsewhere where tax increases in properties close to parks form substantial part of the revenue derived from green spaces. For example, in Denver (USA) a chunk of the revenue derived from green spaces are tax receipts from increased property values around the city's parks (The Trust for Public Land, 2010). The absence of such tax revenue from properties around green spaces in Kumasi is due to improper development of parks and gardens in the neighbourhoods to intermix with houses and other properties. In sum, although green spaces offer some economic benefits to Kumasi, these benefits concentrate predominantly on revenue from the Kumasi Zoo. It was not widespread to have much impact on Kumasi. Based on the findings of the study, green spaces provide inadequate social, economic, and environmental benefits to support the sustainable development of Kumasi. This is due to much destruction that the green spaces are subjected to.

6.5 Conclusion

In sum, the green spaces in Kumasi are in a poor state. With the exception of the conservation and heritage theme all the other themes that the current state of green spaces in Kumasi was assessed on had unsatisfactory responses: attractiveness, comfort, safety, maintenance, publicity, community participation and publicity were all in a poor state. It was revealed that this poor condition is the result of a combination of factors, which include the following: laxity in the enforcement of development controls, problem of land ownership,

urbanisation, low priority given to green spaces, uncooperative attitudes of the general public and lack of coordination among the allied bodies on green spaces. The poor condition of green spaces was further exacerbated by the poor integration of cultural and structural perspectives of urban governance which were in practice in Kumasi, and also the operation of a clientelistic mode of governance among the city authorities. These have created an organisational base that is ineffective in preventing encroachment of green spaces in the area. The poor nature of the green spaces was observed to have limited those spaces' potential social, economic and environmental benefits to support the sustainable development of the city.

Apart from these revelations, some significant contributions have been made by the study. The chapter discovered strong interconnections among the themes on the state of green spaces, with maintenance and community participation themes being core. A flow chart or model was developed to highlight such interconnections, and stressed the need for equal attention to be given to all the themes, as failure to achieve one may have repercussions on the overall state of green spaces. Furthermore, drawing on the findings of the study, an assessment framework was also generated to outline specific indicators that can be utilised or built upon to assess the state of green spaces, especially in the context of Africa and other developing countries. Lastly, it has been shown that factors other than urbanisation cause serious damage to green spaces, and for that matter broader efforts have to be made to address other pertinent challenges affecting their management. All these developments on green spaces in Kumasi have some implications in the legislative and institutional framework covering the management of green spaces in the area. This provides good grounds to instigate an inquiry into the governance of green spaces in Kumasi, which constitutes the next chapter of the thesis.

CHAPTER SEVEN

GOVERNANCE OF GREEN SPACES IN KUMASI CITY

7.1 Introduction

This chapter focuses on an assessment of the governing framework for green spaces in Kumasi city. It builds on the previous chapter which assessed the current state of green spaces in Kumasi and raised concerns about the governing arrangement underlying the management of such spaces. The chapter is structured around two broad research questions guiding the study.

- How do inefficient organisational arrangements lead to a weak management of urban green spaces?
- To what extent are the local people involved in the management of urban green spaces?

It utilises the theory of collaborative governance to which the study is anchored. Using the collaborative governance theory, some major themes which are core to the conceptual framework of the study were utilised. These themes were power relations, organisational networks and structures (institutional design), consensus building and community participation (James et al., 2009; Ansell & Gash, 2008; Healey, 2007, 1998; Booher, 2004; Newman et al., 2004). These themes were used to structure the discussion in this chapter because they help to assess features such as the mandates of planning bodies, dialogue, mutual understanding, shared information, institutional linkages and involvement of local communities which are the heart of collaborative governance.

The chapter begins with an enquiry into power relations revolving around the bodies engaged in the management of green spaces, followed by an assessment of the available

organisational networks for green spaces and an evaluation of consensus building affecting decisions on green spaces. It ends with an assessment of the level of involvement of the local people in the management of green spaces. The analyses in this chapter provide much insight into the nature of governance surrounding urban green spaces in Kumasi, and highlight the inefficiencies and lapses in the governing process which are thwarting effective collaborative governance for green spaces. The findings of the chapter serve as a stepping stone for the study to come up with practical measures to sustain green spaces in Kumasi, and to some extent, other African cities which is the ultimate goal of the study. In the context of this chapter “traditional authorities” cover all individuals or players that are well recognised in the traditional governance set up of Ghana, such as chiefs and queen mothers. A “chief” refers to an individual who hails from a particular lineage or family that has been validly elected in accordance with the laid down customary regulations to be a traditional leader of a group of people or a community.

7.2 Power relations and its effects of green space management

Power relations are major issues that have received much attention in urban planning and urban governance because of their complexity and how, if not properly handled, they can disrupt the whole planning process (Healey, 2007; 1997; Njoh, 2007; Giddens, 1984; Richardson, 1996, Foucault, 1990). The postmodern form of planning which is being pursued in many countries with its broad focus and participation of many stakeholders (government, local planning authorities, local people, policy makers, private organisations and NGOs) makes concern for power a prime issue within the urban landscape. This is because this new form of urban planning opposed to the rationalist planning system where planning decisions were undertaken by few planning officials and technocrats creates different networks and power structures which have some effects on the overall governance of urban areas. Two

broad distinctions of power (power to, and power over) as already highlighted in Chapter Three are used to structure the discussion under this section. By way of reference, the “power over” refers to the authority that individuals, bodies or organisations have to perform specific duties which normally is backed by laws. The “power to”, on the other hand, covers the resources (man-power, funds and equipment) that organisations need to perform their functions. The justification for using these distinctions of power is based on the fact that although collaborative governance emphasizes the importance of power relations in the decision making process, the nature of power retained by organisations in their activities and its effects in the collaborative process is not given much attention. These distinctions of power were therefore used address this problem.

7.2.1 “Power over” green spaces in Kumasi: Overview and inefficiencies

A closer look at the institutional framework for town planning in Kumasi and in-depth interviews with a variety of stakeholders on green spaces found different organisations to have some powers (authority) over the management of green spaces in Kumasi. Top among the list was the Kumasi Metropolitan Assembly (KMA) which acts as the local planning authority in the area. This is similar to the situation in many cities across the world where local planning authorities retain power over managing many resources and development projects in urban areas of which the management of green spaces is part (Carmona et al., 2004). Other bodies found also to have power over green spaces in Kumasi were the Department of Town and Country Planning, Lands Commission, Department of Parks and Gardens, Forestry Commission (Wildlife Division, and Forest Service Division), Environmental Protection Agency, and the traditional authorities (chiefs). This gives a clear picture that power over the management of green spaces in Kumasi is not held by one body or

department but rather by a host of organisations. This differs from what Baycan-Levent and Nijkamp (2009) found in cities like Birmingham, Zurich, Helsinki, and Antwerp where the planning and management of green spaces is mainly under the power of one department or body.

The power held over the management of green spaces by different bodies in Kumasi was found to be supported by many laws or legislative provisions. This arrangement can be linked to the changes in the system of urban governance in Ghana from a centralised autocratic system to a more decentralised form of urban governance (Inkoom, 2009). This has resulted in the devolution of power to many government agencies/departments to enhance wider participation in the governing process. The 1992 constitution of Ghana (Act 258) gives power to the Lands Commission to manage all public lands in Ghana of which green spaces are part. The local government Law of 1993 (Act 462) entrust planning powers to the KMA to oversee the overall planning of Kumasi covering the planning of green spaces. The Town and Country Planning Law of 1945(CAP 84) also delegates power to the Town and Country Planning Department to engage in the planning of physical developments of towns including the planning of green spaces. Other regulations such as the Forest and Wildlife Policy of 1994, Environmental Protection Act of 1994 (Act 490), and National Development Planning System Act of 1994 (Act 480) give powers to other bodies to engage in the management of green spaces. Although these regulations provide the agencies some autonomy (power) over the management of green spaces, the study established some problems which have created inefficiencies in the “power over” green spaces. These problems are discussed as follows.

7.2.1.1 Complexity of ownership and management of green spaces

This was a major problem that was found in connection with “power over” green spaces. Three broad bodies namely the Lands Commission, KMA and the traditional authorities (chiefs) claimed to have ultimate power over the ownership and management of green spaces in Kumasi. This problem was found to be caused by legislative provisions made by the government of Ghana. Representatives from these bodies through in-depth interviews stressed on the powers that their outfits have over green spaces and gave specific legal provisions to support their claims (Table 7.1).

Table 7.1: Conflict of power over green spaces

Body/Institutions	Claim of power	Source of power
Lands Commission	power over ownership and management of green spaces	-1992 Constitution of Ghana (Article 258) -Lands Commission Law of 1994(Act 480)
Kumasi Metropolitan Assembly (KMA)	Power over management of green spaces	-Local Government law of 1993 (Act 463)
Traditional Authorities (Chiefs)	Power over ownership and management of green spaces	-1992 Constitution of Ghana (Article 267)

Source: Fieldwork (2013)

These legislative provisions (Table 7.1) were found to have influenced each of the three bodies to believe that they have the main responsibilities for controlling urban green spaces. These positions became clear when the representatives from these bodies made emphatic

statements to express their organisation's views on the management and ownership of green spaces in Kumasi.

We are the body that is vested with the overall responsibility for managing all public lands including green spaces in Kumasi and Ghana as a whole. Nobody can dispute this fact. This is enshrined in the 1992 constitution of Ghana. We therefore have the absolute power over all matters concerning the ownership and management green spaces (Official, Lands Commission, IDI: 04/02/2013).

All the green spaces in Kumasi fall under the control of KMA. The KMA is the local planning authority of Kumasi and it has the power mandated by law to control all forms of developments in Kumasi. The Local Government Law of 1993 (Act 462) gives us the political and administrative powers over all physical developments of Kumasi which matters on green spaces fall under (Official, Development Planning Unit of KMA, IDI: 17/01/2013).

The traditional authorities have major powers over green spaces in Kumasi. Majority of the green spaces are part of "stool lands" (lands owned by the traditional ruler of Kumasi and held in trust by various sub-chiefs for the people of Kumasi) which the constitution of Ghana gives us authority over the ownership of such lands. No activity can be taken on stool lands without our prior consents and approval (Chief, Neighbourhood A, IDI: 28/01/2013).

The different views held by the above bodies on the ownership and management of green spaces makes it difficult for them to come together as a unifying body to manage green spaces. It has resulted in poor coordination among them as none of them want to submit to the authority of the other. This problem was found to be compounded by lack of clarity in the legal provisions underlying the powers of the three bodies over the management and ownership of green spaces. None of the legislative provisions as contained in Table 7.1 above clearly defines the powers of the three bodies on green spaces. Although the 1992 constitution

of Ghana (Article 258) and the Land Commission Law of 1994 (Act 480) give powers to the Lands Commission to manage public lands on behalf of the Government of Ghana. However, the study found that there is no clause or stipulation in the regulations that mandates the Lands Commission to register green spaces as government property and manage them accordingly. A senior official from the Land Commission remarked as follows:

The laws that give us authority to manage public lands such as green spaces lack clarity. They give us the authority to manage public lands (including green spaces) but there is no quotation in the laws which allow us to register green spaces as public lands. This has created confusion about our power over the management green spaces (Official, Lands Commission, IDI: 04/02/2013).

This serves as a major setback to the Lands Commission. It prevents them from having absolute control over the management of green spaces since they do not have in their custody registered land documents on green spaces to give them undisputed control over such lands. Furthermore, the constitutional provision in Article 267 of Ghana's constitution makes the traditional authorities in Kumasi to have maximum control over all "stool lands" which constitute the greater portion of the landmass in Kumasi (about 65 percent). By implication, this provision gives rights to the chiefs in Kumasi to take possession of green spaces on such lands and this conflicts with the mandates of the Lands Commission. However, as to how the green spaces on stool lands should be preserved, managed, and by whom remains elusive since the legal provision (Article 267) was silent on those matters.

Another area of complexity of power over green spaces was found to be contained in the Local Government Law of 1993 (Act 462). This law mandates the KMA to oversee the overall management and planning of Kumasi including green spaces. This compounds the problem of power over green spaces already contested by the Lands Commission and the

traditional authorities (chiefs). What was also critical was that like the Lands Commission, both the KMA and the traditional authorities were found not to have the right to register green space lands as property that belongs to their outfits and to exercise their absolute power over such lands accordingly. Representatives from these three bodies confirm this problem and express great concerns about it. This situation technically makes green space lands “no man’s land” in Kumasi since no one has legal registered documents covering those lands. This problem was very crucial, it came up in the interviews for creating some misunderstanding among the organisations in question with none of them taking maximum control over green spaces in Kumasi. The resultant effect has been undue encroachment and undeveloped nature of many green spaces since no one assumes full responsibilities in preserving the green spaces (Figure 7.1).



Figure 7.1: Examples of undeveloped park and encroached wetland in Kumasi

Source: Fieldwork (2013)

A: Undeveloped and encroached public park at Danyame Neighbourhood

B: Encroached wetlands along “River Washy” at Ahodwo Neighbourhood

Aside from the three broad bodies discussed above, a variety of agencies/departments were found performing different roles on green spaces in Kumasi. As many as seven government departments/agencies through in-depth interviews mentioned the various responsibilities that they are assigned to perform on green spaces (Table 7.2). Their activities ranged from the preparation or creation of green spaces to matters of maintenance and planning. The fragmentation of responsibilities among many government departments with each retaining some discrete authority on specific aspects of green spaces in Kumasi were found to have negative effects on the overall management of green spaces. The officials of those agencies indicated that the shared responsibilities of many government bodies on green spaces create cumbersome bureaucratic systems and incompatible decisions which slow planning strategies for green spaces in Kumasi. This is because individual departments/agencies may have their own agenda on green spaces which might be different to the other departments.

Table 7.2: Fragmented responsibilities on the management of green spaces

Body/organisation	Role on Green spaces
Department of Parks & Gardens <i>(an outfit of KMA)</i>	Develop and maintain green spaces (parks, gardens, shrubs, lawns etc.)
Wildlife Division <i>(an outfit of Forestry Commission)</i>	Manage wildlife protected areas and oversees the running of Kumasi Zoo
Forest Service Division <i>(an outfit of Forestry Commission)</i>	Regulate the use of forest and utilization of forest resources
Town and Country Planning Dept. <i>(an outfit of KMA)</i>	Prepare specific local planning schemes to delineate areas for green space development in Kumasi
Department of Urban Roads <i>(an outfit of KMA)</i>	Manage horticultural works along the roads of Kumasi
Works Department <i>(an outfit of KMA)</i>	Prevent illegal or unauthorised building structures on green spaces
Environmental Protection Agency	Prevent the encroachment of green spaces especially buffer zones

Source: Fieldwork (2013)

A similar finding came up in a study by Baycan-Levent and Nijkamp (2009) which linked the poor management of green spaces in Budapest (Hungary) and Genoa (Italy) to the fragmentation of powers between many departments. That study revealed that many departments managing green spaces in those cities caused problems such as complex organisational structure, bureaucratic processes and disagreements of decisions on green spaces which made the management of green spaces poor.

The involvement of many government agencies in the management of green spaces in Kumasi was further observed to have created complex inter-dependencies and relationships

among the agencies, hindering the smooth running of green spaces projects and collaboration between the agencies. For example, mapping the interdependencies among the agencies provided non-linear relationships with no clear cut boundaries of the roles of the agencies as captured in Figure 7.2.

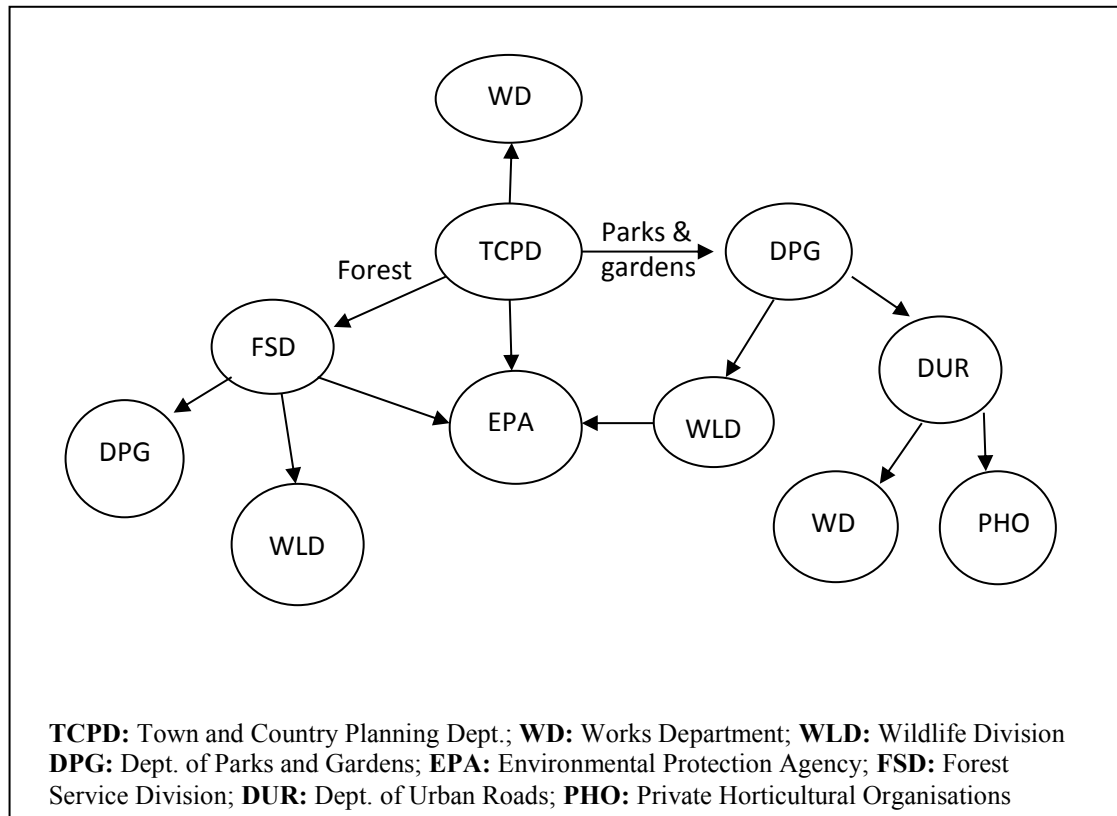


Figure 7.2: Inter-dependencies among allied government agencies on green spaces

Source: Fieldwork (2013)

A typical example of such complex relationships starts with the TCPD allocating areas for green spaces in the planning schemes or layouts that they prepare for various neighbourhoods in Kumasi. The DPG relies on such planning schemes to develop and maintain parks and gardens in areas delineated for such purposes. In alliance with the DPG, the WLD manages zoological gardens and other related issues associated with wildlife, whilst the DUR also controls horticultural works along the principal streets of Kumasi. The DUR, in going about

its activities, gives contracts on horticultural works to private horticultural organisations (PHOs) and also engages the services of WD to control physical developments that encroach on green spaces along the principal streets of Kumasi. Further relationships ensued between the TCPD and EPA to protect the natural environment, the TCPD and FSD to preserve forest reserves and the TCPD and WD to address illegal physical developments on green spaces. There were also relationships between the FSD, WLD, DPG and EPA to preserve the natural environment, protect biodiversity and enhance the greenery of the city to beautify the area. Although these inter-dependencies have created avenues for collaboration among the agencies, these are not utilised due to many obstacles. The multilateral relationships have rather caused conflicting organisational roles in the management of green spaces. An official from the DPG gave an example of this by indicating that part of their mandate which deals with horticultural works and managing zoological gardens is being performed by the DUR and WLD respectively.

Furthermore, the central government remains the dominant actor in the activities of the agencies, dictating the pace for the agencies to follow. The agencies have no choice than to conform to the development agenda of the central government, which restricts them from coming together to pursue initiatives different to those of the central government. This equates to the managerial mode of governance, which is underlined by autocratic decisions made by the central government, with the allied agencies having little or no power to take their own initiatives (DiGaetano & Strom, 2003; Pierre, 1999; Broadbent et al., 1996). The agencies serve as “agents” that only respond to the directives of the central government. This has led to a breakdown in the systematic coordination among the agencies, which Stoker (1998) opines does not enable organisations to jointly work together with their shared vision and mutual understanding to operate as self-governing bodies.

Moreover, the mandates of the agencies were found to have shaped their perceptions on green spaces. Different perceptions were held by the agencies on what green spaces should be used for, who should manage them and how such spaces should be managed (Table 7.3). This makes it difficult for collaboration to be forged among them. This was particularly felt when the officials of these agencies expressed their views on which bodies should be involved in the management of green spaces. The responses of the officials indicated that only one or two agencies should manage green spaces in Kumasi (Table 7.3), preferably the DPG and the TCPD. This suggests that among the seven government agencies that are involved in the management of green spaces some were seen as unimportant or less important when it came to the management of green spaces.

Table 7.3: Perceptions held on green spaces by agencies involved in managing such spaces

Body/Agency	What should green spaces be used for	Who should manage green spaces	How green spaces should be managed or preserved
Dept. of Parks & Gardens (DPG)	Parks, gardens, shrubs and lawns	DPG	Specific budgetary allocation for the creation and maintenance of green spaces, regular maintenance of parks and gardens
Wildlife Division (WLD)	Green belts to preserve wildlife, parks and gardens	DPG, WLD	Routine maintenance of green spaces such as parks, gardens, laws
Forest Service Division (FSD)	Green belts, parks and gardens	DPG, FSD	Engage much services of local communities to support government agencies on green spaces
Town & Country Plan. Dept. (TCPD)	Integration of trees, parks, gardens into the layout of cities	TCPD, DPG	Enforce land-use regulations to get rid of encroachment of green spaces,
Dept. of Urban Roads (DUR)	Shrubs and trees along roads, parks and gardens	DPG, TCPD	Regular maintenance of green spaces
Works Dept. (WD)	Parks, gardens, wetlands	DPG	Unauthorised land-uses on green spaces should be avoided, frequent maintenance of green spaces
Env'tal. Protection Agency (EPA)	Nature reserves to protect water bodies, trees, parks, gardens	DPG, TCPD	Enforcement of land-use regulations to preserve green spaces, agencies and bodies on green spaces should be well resourced

Source: Fieldwork (2013)

Apart from the multilateral relationships among government agencies creating complexity in the management of green spaces, vagueness of legislative support on the provision of green spaces compounded the problem of complexity. The various legislative blueprints such as the 1992 Constitution of Ghana, the Local Government Act 462, the 1994 Forest and Wildlife Policy, the Land Commission Law of 1994 (Act 483), the Town and

Country Planning Act of 1945 (CAP 84) and the 2013 National Urban Policy of Ghana, which regulate the management of urban areas, do not touch much on the provision of green spaces. These regulations merely highlight the bodies that have autonomy over green spaces, but are not explicit on the specific standards that can be applied to ensure sufficient provision of green spaces to meet the needs of the growing population. Matters relating to the provision of green spaces such as a suggested total area of green spaces for a given population and distance from the population to green spaces were missing. This manifested through content analysis of the legislative instruments that cover green spaces and interviews with regulatory bodies on green spaces in Kumasi. A representative from the local planning authority of Kumasi (KMA) had this to say about lack of legislative standards on the provision of green spaces.

To the best of my knowledge we do not have any laid down standards relating to specific size and distance to public green spaces that we are mandated to provide (Official, Development Planning Unit of KMA, IDI: 17/01/2013).

A similar comment was made by a representative from the Department of Parks and Gardens which is the official department in charge of green spaces in Kumasi. The official remarked:

My outfit is obliged to develop and maintain green spaces in the whole of Kumasi Metropolis. However, our mandates are not guided with explicit standards on the provisions of green spaces. This is a key problem we are confronting with because it does not help us to know whether we are providing enough green spaces to the local people or not (Official, Department of Parks and Gardens, IDI: 08/01/2013)

This relates to Okpala's (2009) finding on cities in Africa that in general little attention is given to green spaces in the town planning regulations. This does not give the regulatory bodies enough grounds to provide many green spaces as there are not enough legislative

standards to check them on the provision of green spaces. This finding contradicts the situation elsewhere where national standards have been set to guide the provision of green spaces. For example, in the UK, a national standard of providing at least 2 hectares of accessible natural green space per 1000 population is recognised (Handley et al., 2006). A national standard of 10 acres of park per 1000 residents is also used to guide the provision of green spaces in the USA as suggested by the National Recreation and Park Association (Bryne & Sipe, 2010). In Lagos (Nigeria), green spaces occupying 8-10 percent of the land area in a residential setting is set aside as a planning standard by the city authorities (Abegunde, 2011). Such standards at least serve as incentives and targets by which regulatory bodies can set their local priorities and evaluate their performance on the provision of green spaces (Handley et al., 2006). Incorporating such standards into the legislative framework would help to enhance the provision of green spaces in Kumasi.

The above findings present a classic case of complexity of governance, with activities and “power over” green spaces fragmented among different organisations, which is a problem of collaborative governance and urban governance theories (Bingham, 2009; Kjaer , 2009). The management of green spaces in Kumasi is fraught with problems such as vagueness of the legislative provisions on green spaces and a complex institutional structure on the management of green spaces. This finding in Kumasi is similar to the observations made by Mohammadi (2010) on the governance of some Iranian cities, which revealed complexity in the institutional arrangements and ambiguities in many legal provisions on urban governance. Revision of the various planning regulations to give attention to green spaces and also clarify the organisational mandates on green spaces will be a step in the right direction to salvage this situation in Kumasi.

7.2.2 “Power to” green spaces: resource capacities of institutions on green spaces

As indicated in the first section of this chapter, this category of power concerns itself with the resource base of the organisations on green spaces. Such resource power gives the organisations the capacity to function or go about their day to day activities as expected of them. Human resources, financial resources and logistics (equipment) were the broad thematic areas that the study used to assess the resource capacities of the organisations. These forms of resources have been found by Ansell and Gash (2008) to enhance collaborative governance as they help individual stakeholders to be committed to their mandates, gain recognition for their work and enable them to participate well in the collaborative process.

7.2.2.1 Human resource capacities of stakeholders on green spaces

The human resource base of the various bodies on green spaces was subjected to thorough assessment to know how it is impacting on the activities of those bodies and the collaborative governance for green spaces in Kumasi as a whole. First, the staff strength of government agencies and selected private organisations that were involved in the management of green spaces at the time of the study were assessed. The information obtained by the study revealed that there are discrepancies in the actual personnel on the ground and the amount of work to be done. In almost all the organisations that were investigated, shortages of staff were recorded. This problem is common among many organisations but the situation with the organisations on green spaces in Kumasi was more intense. In government agencies such as the Department of Parks and Gardens, and Forest Service Division, the representatives of those agencies indicated that their departments are running on a very low labour force and need an additional 50 percent of their current personnel to augment their staff strength to enable them perform their activities effectively. Similar was the story in the private organisations. In private landscape companies such as Flora Life, M. A. Charles and City

landscape companies their officials expressed serious sentiments about the low staff strength they were operating on. The main reason for the shortages of staff was deficiency in funds as all the organisations pointed out this and asserted that their limited financial base stifles them to engage the services of few personnel for their activities.

The problem of inadequate staff was worsened by the unqualified nature of some personnel or workers that do not have the requisite skill and knowledge for the position they hold. Many of the organisations complained about this problem with the situation in the Department of Parks and Gardens (DPGs), and the Town and Country Planning Department being critical. The Town and Country Planning Department was found to have many unqualified planners to undertake planning activities. Similarly, many workers who virtually had no knowledge or qualification in horticulture, landscaping, forestry and disciplines related to green space management were found at the Department of Parks and Gardens. Representatives of the two departments remarked as follows:

At the moment, my department has three qualified planning officers. Kumasi is divided into 9 sub-metros with each sub-metro having many neighbourhoods under them. Due to limited planning officers we rely on individuals who are not planners to control the physical planning activities in many sub-metros in Kumasi (Official, Town and Country Planning Department, IDI: 09/01/2013).

We have four skilled professionals who are into landscaping and horticultural works but they are at the administration level. Most of our grounds/field men are not qualified personnel who are into parks and gardens (Official, Department of Parks and Gardens, IDI: 08/01/2013).

The low status of the organisations exacerbated by poor conditions of service such as poor remuneration, lack of incentives and lack of in-service training to upgrade the knowledge of staff on green spaces were the main factors that were found not to attract qualified personnel

into those organisations. These factors were also found to lower the morale of current staff not to give of their best. This problem has been observed to be pervasive in many African cities where many town planning organisations are manned by few technical and administrative staff with a host of unqualified personnel taken up different positions (Okpala, 2009). A similar finding came up in a study at Abidjan city (Cote D'Ivoire) where the body in charge of Parks and Gardens was found to be crippled by poor conditions of service for staff and very limited professionals in landscape planning and design (Djibril et al., 2012). This situation not only causes poor performance of the organisations on green spaces in Kumasi but was found also to be inimical to the collaborative governance process. It was observed that as a result of an insufficient staff base, many organisations on green spaces in Kumasi have a heavy work load and find it difficult to delegate qualified skilled personnel to represent them in the collaborative governance process. This supports Warner's (2006) finding that low and unskilled human resources make it difficult for organisations to delegate personnel with the requisite expertise to engage in collaborative discussion on highly technical issues, hence limiting effective collaborative governance.

7.2.2.2 Availability of equipment (equipment of the organisations)

Interviews with a number of organisations on green spaces in Kumasi showed that those organisations are relying on inadequate and overall poor condition of logistics for their activities. The condition of logistics of the Department of Parks and Gardens for instance was found to be very poor. An official from that department made it clear that the department is in crisis with inadequate and non-availability of basic equipment such as mowers, hedge trimmers, water tankers and tipper trucks to develop and maintain green spaces. The official said this:

The Department of Parks and Gardens is really facing equipment problems. As I am talking to you, most of our equipment has broken down and the few that we are operating on are in a precarious condition. The department has no tipper trucks, water tankers and tractors for our activities (Official, Department of Parks and Gardens, IDI: 08/01/2013).

Other government agencies that were engaged in the study such as the Forest Service Division and the Wildlife Division also complained of the unavailability of equipment such as tractors, tipper trucks, and inadequate vehicles to run the operations of their agencies. The situation of the private organisations especially landscape companies that were involved in the study was similar. With the exception of lawn mowers and hedge trimmers that they claimed not to have problems with, they expressed similar sentiments of poor condition of equipment like their counterparts in the public sector. A further probe on the matter revealed that due to inadequate and shortage of equipment, the organisations on green spaces often rely on hired logistics from private entrepreneurs to undertake their activities. For example, representatives from two of the agencies noted:

My department is handling a case involving encroachment of green spaces at “Kwapra” Neighbourhood in Kumasi but since my outfit lack vehicles we had to take hired taxis to the neighbourhood to check the situation. (Official, Town and Country Planning Department, IDI: 09/01/2013).

Due to lack of logistics when my department is undertaken landscaping projects which deals with growing of trees and flowers, we borrow equipment from some private individuals. We often relied on hired tipper trucks from a private entrepreneur called “Poku transport” to convey sand and seedlings to project sites, and also water tankers for our activities (Official, Department of Parks and Gardens, IDI: 08/01/2013).

This finding parallels Olaleye et al.'s (2013) observation on green space management in Sub-Saharan Africa which pointed out the lack of tools as a critical problem preventing organisations on green spaces from performing their responsibility effectively. What was equally worrying was inadequate office equipment such as computers, storage devices and office space to run the administrative works of the organisations. Due to limited computers, in most of the organisations many of the workers were found using their personal laptop computers to perform administrative duties for their organisations. This is causing ineffective administrative activities, confidentiality of data problems, and poor keeping of records as many data of the organisations are still kept manually. The respondent from Forest Service Division remarked:

My unit is hard pressed when it comes to computers. We have only two desktop computers for performing all our administrative duties. This is greatly affecting our administrative activities and records keeping as we still keep many of our records manually (Official, Forest Service Division, IDI:04/01/2013).

The poor condition of logistics was found to be the result of limited funds to secure adequate logistics and poor maintenance culture of not frequently repairing available instruments or equipment to be in good shape. This situation was found to have negative effects on the management of green spaces as it prevent the organisations from undertaking their core responsibilities on green spaces effectively and also contribute equipment to the collaborative process to undertake joint tasks on green spaces that require equipment like the creation of new parks. Yaffee and Wondolleck (2003) have found this as one of the major problems affecting collaborative governance. They asserted that many times stakeholders lack logistics to participate well in the collaborative process and this makes it difficult for enough resources to be pulled together to address major problems on green spaces.

7.2.2.3 Financial capacities of stakeholders on green spaces

The financial position of the stakeholder organisations on green spaces received much criticism from the study participants. The officials from all the study organisations indicated that their organisations are financially incapacitated and gave accounts of their weak financial status (Table 7.4). The government agencies were found to predominantly rely on government subventions which are quarterly or yearly disbursed to them for their activities. Government subvention is basically financial aid or endowment given by the government of Ghana to its agencies to support their activities. Information on the ground showed that these subventions are insufficient and do not come regularly. The private organisations on the other hand depend on their own financial capital which was found to be limited.

Table 7.4: Financial capacities of organisations on green spaces

Yearly, we are allocated GH318 (\$160) by the central government. We also get small funds from internally generated funds from the KMA. These funds are woefully inadequate to even cater for the stationery needs of the department let alone projects and major activities of the department (Official, Town and Country Planning Department, IDI: 09/01/2013).

My unit is financially constrained. Normally, the funds we get from the government of Ghana cater for only one-third of our budget leaving the rest unattended to (Official, Forest Service Division, IDI: 04/01/2013).

Our financial situation is very bad. The local planning authorities (KMA) do not give us funds for our projects. Budget sent to KMA for our activities on yearly basis are always not responded to. As a result of this, my outfit relies solely on insufficient quarterly subventions that we get from the government of Ghana for repairs and maintenance of equipment to undertake some of our projects (Official, Department of Parks and Gardens, IDI: 08/01/2013).

As a private company, we do not have substantial capital for our operations. Some of my workers have stopped work due to accumulated salary arrears. The landscape contracts we undertook on some principal streets of Kumasi have not been paid for by the KMA for over two years now (Manager, M. A. Charles Landscape Company, IDI: 29/01/2013).

Source: Fieldwork (2013)

This problem was aggravated by poor financial support from financial organisations, donor agencies and benevolent organisations as reckoned by the respondents. This finding confirms earlier studies in Ghana by Botchie (2000) and ISODEC (2001) which revealed financial constraints as a key problem militating against the proper functioning of town planning organisations such as those on green spaces. In the context of Africa, studies in Addis Ababa (Ethiopia), Nairobi (Kenya) and west African cities such as Dhaka (Senegal), Freetown (Sierra Leone) and Abuja (Nigeria) produced similar results by pointing out limited funds as an outstanding problem confronting town planning organisations on green spaces (Mpofu, 2013; Fuwape & Onyekwele, 2011). This condition in Kumasi has resulted in projects on green spaces being in standstill and others remaining on shelves as there are little or no funds to accomplish those projects. This is hampering the collaborative governance for green spaces in Kumasi and Ghana as whole because the funds that are needed to jointly take initiatives on green spaces are lacking. Many of the organisations therefore drag their feet in joining the collaborative process owing to this problem because they think at the end due to financial constraints nothing substantial can practically be undertaken on the ground.

In sum, the overall findings on the resource capacities of the organisations on green spaces revealed that limited resources do not give such organisations the necessary power to manage green spaces in Kumasi and hence participate effectively in the collaborative process accordingly. This supports Ansell and Gash's (2008) findings on problems affecting collaborative governance. They concluded that resource constraints are a disincentive to effective participation in collaborative governance because they do not make organisations committed to the collaborative process. Similarly, Yaffee and Wondolleck (2003) stressed that poor condition of resources retrench organisations to performing only their core mandates without indulging in other activities, a condition that does not support collaborative

governance. A strong resource base for the organisations on green spaces in Kumasi is therefore needed to enhance collaborative governance in the area.

7.3 Network relations on green space management in Kumasi (institutional design)

In principle, the overall governance of Kumasi city is supposed to be based on policy implementation networks, which is the main ideology held by both urban governance and collaborative governance theories as a means to achieve efficiency and democracy in the decision making process (Kjaer, 2009; Ansell & Gash, 2008; Coaffee & Healey, 2003). These networks are intended to create several interconnections and organisational structures that bind together state agencies, private organisations and civil society organisations, enhancing governance by way of providing arenas for sharing knowledge and information, building up trust in the planning machinery and legitimising urban policy decisions (Booher, 2004; Healey, 1998; Healey et al., 1997). In line with the conceptual framework guiding the study, the institutional design for town planning in the study area was evaluated. This was done to have a complete overview of the nature of networks available for town planning and their impact on the management of green spaces at the national, regional and district levels.

7.3.1 National level planning

Ghana as a country instituted decentralized town planning in 1988 to provide greater participation in town planning to encourage bottom-up planning. This was also done to establish effective channels of communication between the central government and the local communities, and town planning organisations (Inkoom, 2009). This decentralised nature of planning was designed to operate on organisational networks at the national, regional and district levels. Analysis of the available literature and personal observation found four bodies

to be at the helm of affairs for planning at the national level: the Office of the President, National Development Planning Commission (NDPC), Ministry of Finance, and sectoral ministries and agencies. The NDPC is at the heart of the decentralised planning system at the national level. There is an organisational structure (Figure 7.3) backing planning at the national scale with much planning activities revolving around NDPC which coordinates, monitors and oversees planning developments in the country. However, it was noticed that the organisational structure at this level is intermittently disrupted with changes in the leadership of the various organisations.

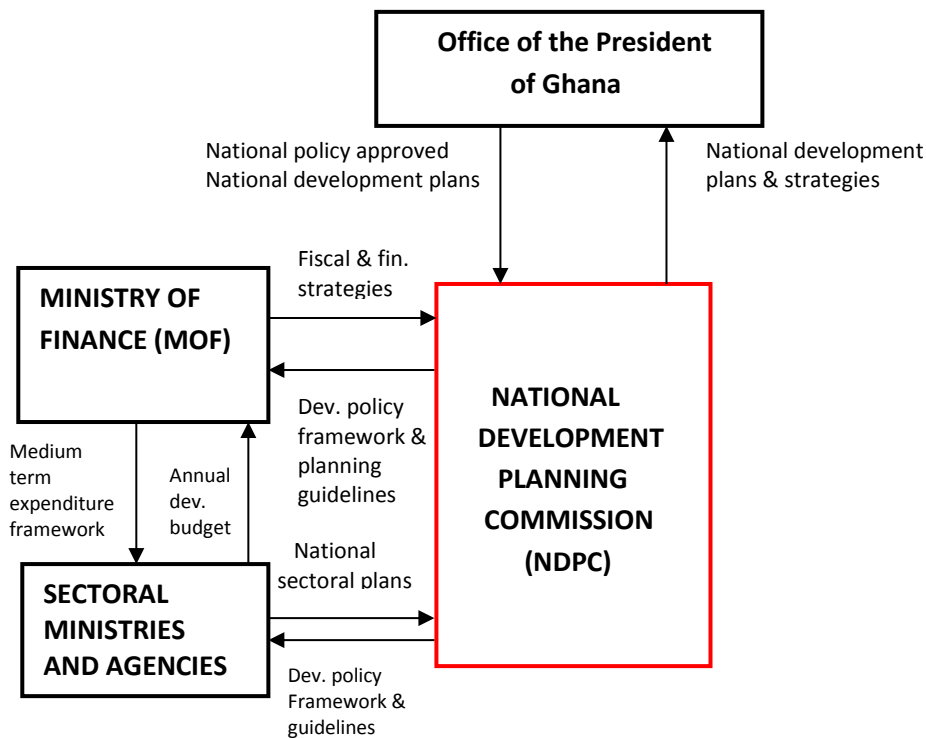


Figure 7.3: Organisational network for town planning at the national level

Source: Fieldwork (2013)

In a space of ten years, the leadership of the organisations at the national level have changed hands often. Different Presidents of Ghana upon coming into office appoint new leaders to head those organisations to suit their political ideologies. This was found to be causing

intermittent breakages in communications among the organisations as new leaders come up with new agenda different from those which were pursued by their predecessors. An official from the Resource Management Support Centre remarked:

Ghana as a country has a problem with the way development plans are handled. Development plans prepared at the national level are always fraught with inconsistencies. They are always half-way implemented because leaders of organisations who control those plans always change hands to different people who do not continue the plans already started but instead come up with a different set of plans. This is crippling the country as it ends up with nothing better implemented on the ground (Official, Resource Management Support Centre, IDI: 20/12/12).

This problem has ended up with discontinuity of development plans and improper functioning of the available organisational networks at this level to come out with initiatives that suit the planning needs of the country such as those that focus much on the development of green spaces. A similar finding came up in an earlier study by Botchie (2000) which found planning at the national level in Ghana to be less effective due to the lack of continuity of planning programmes caused by frequent changes in the leadership of the organisations. Planning at the national level does not operate in isolation but together with regional and district levels of planning. In view of that the challenges at the national level have some effects on the other levels of planning which are discussed below.

7.3.2 Planning at the regional level

It emerged from the study that planning at the regional level is under the control of the Regional Coordinating Council (RCC). This body provides draft development plans at the regional level to the NDPC at the national level for consideration and approval. Similar to the findings of planning at national level discussed above, the study uncovered a lack of

continuity of development projects at the regional level due to frequent changes of leaders of the organisations at this level. This problem was found to be influenced by the continual changes of leaders at the national level which forces similar changes at the regional and district levels so as to have officials who share the same ideologies to work towards a common goal. The outcome of the changes in the leadership of planning organisations at the regional level with its accompanying discontinuity of projects was found to be detrimental as it often changes the overall development focus of the area which sometimes deviates from the pressing needs of the region which often centres on green spaces.

At this stage of planning, the RCC has an oversight responsibility of monitoring, integrating, evaluating and harmonising development plans of all districts within Ashanti Region of which Kumasi Metropolis is part. The RCC is supposed to liaise with the Kumasi Metropolitan Assembly (KMA) and regional sectoral agencies giving them guidelines and supervision for the preparation of development plans as illustrated in Figure 7.4.

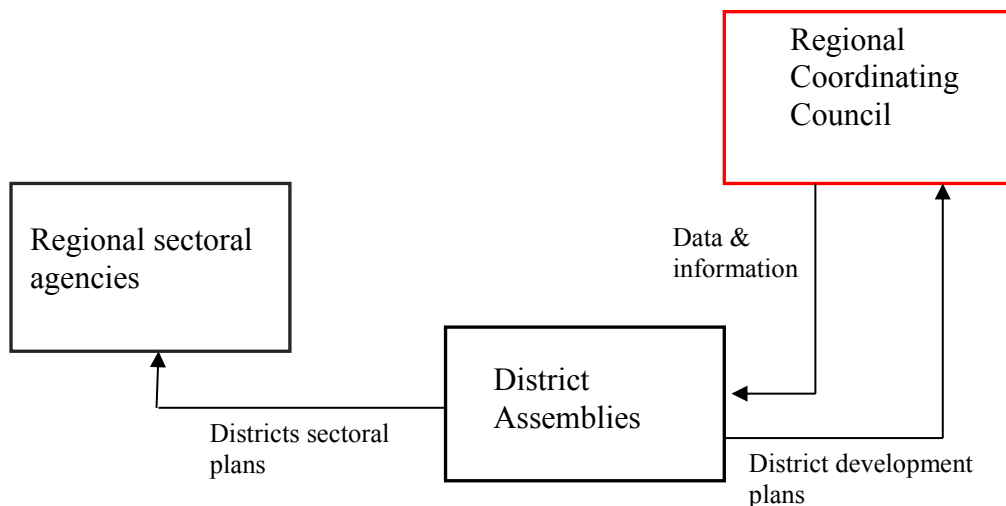


Figure 7.4: Organisational structure for town planning at the regional level

Source: Fieldwork (2013)

Concerns raised by the respondents indicated that there is a weak linkage between the RCC and the KMA. It came to the fore that the activities of the RCC are at times suppressed by the Metropolitan Chief Executive (MCE) of Kumasi who also supervise and coordinates all planning activities in Kumasi (district level). This weak linkage does not allow the RCC to provide much input into the planning affairs of Kumasi and perform its coordinating roles effectively. The effect has been poor coordination and collaboration among the organisations at this level resulting in development plans which do not cover much of the needs of various districts such as provision of green spaces. The issue of poor collaboration was found to have transcended to the planning at district level which serves as direct link to planning at the regional level.

7.3.3 Planning at the district level

Many of the organisational networks and structures for town planning were found at district level. This was because this stage served as the foundation for town planning and as a point where the local people (the grassroots) participate in the planning process. The views expressed by the local people about the needs of their localities are expected to kick start the planning process, and have to pass through many structures (processes) before those needs are integrated into the district development plan as observed by the study (Figure 7.5)

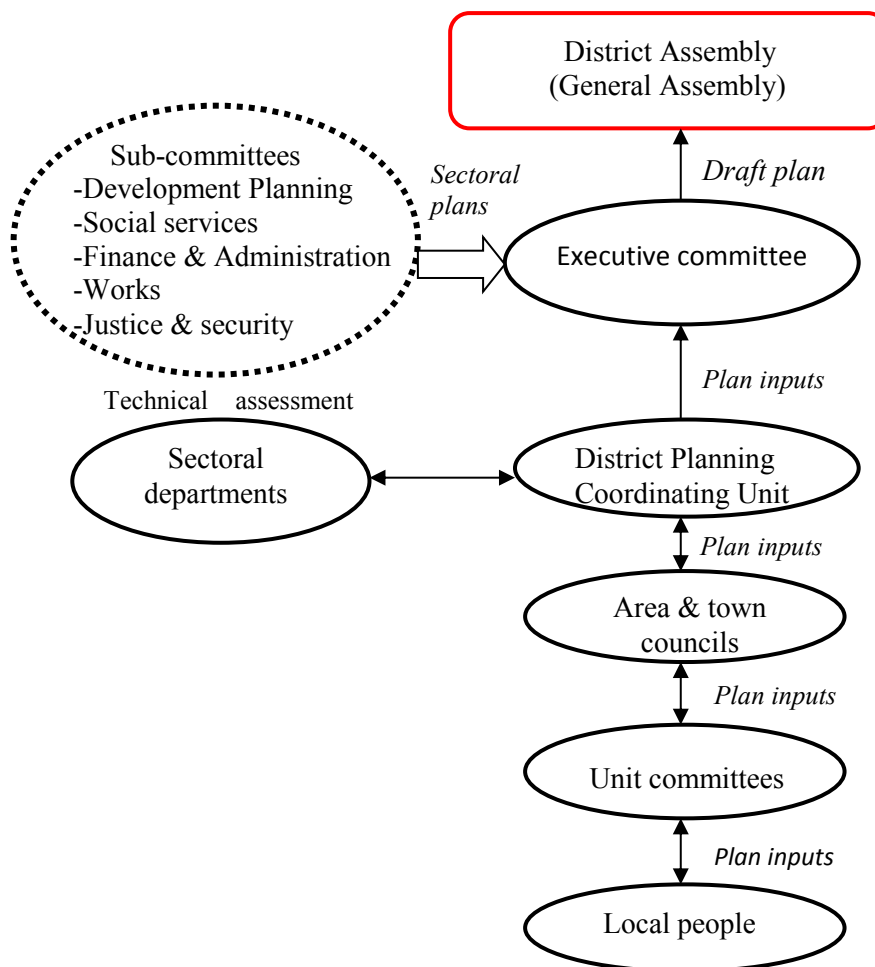


Figure 7.5: Organisational structure for town planning at the district level

Source: Fieldwork (2013)

Although on paper the organisational structures at the district level appeared to be well laid out, the study discovered several inefficiencies that do not allow the structures to function appropriately. Poor coordination, which was a problem at the regional level, was also a problem at the district level. This problem was more intense at this level since the sub-structures are many, with poor interconnections between them. The study participants were emphatic on this problem and indicated that the views of the local people, unit committees and town councils are often downplayed and hence poorly integrated into the planning

process. Many of the respondents gave some examples of poor coordination among the organisations at this level causing excessive destruction of green spaces in Kumasi.

Table 7.5 Respondents concerns about poor coordination at the district level

<p>Lack of coordination is a big problem among the organisational structure for town planning at the district level. Many environmental problems confronting this neighbourhood such as destruction of our green spaces are often left unattended because the various bodies in charge do not coordinate their activities well (Assembly man, Ahodwo Neighbourhood, IDI: 18/12/12)</p>	<p>Concerns of the local people on encroachment of green spaces do not get anywhere. The unit committees are often not invited by the area councils or the District Planning Coordinating Unit to present the concerns of the local people (Unit Committee member, Danyame Neighbourhood, IDI: 22/12,2012).</p>
<p>The District Planning Coordinating Unit does not perform its roles well. Activities of the unit committees and the area councils are not well connected to the agendas of government agencies (Assembly man Amakom Neighbourhood, IDI: 02/01/2013).</p>	

Source: Fieldwork (2013)

This problem is synonymous with weak social or organisational ties, which Oh et al. (2004) and Scheffer and Westley (2007) found to break organisational networks and disrupt collaborative governance since they break up close group thinking and deliberation on social problems.

Related to the problem of poor coordination was the poor functioning of some of the structures, especially unit committees. Ideally, the unit committees are supposed to form a vibrant body connecting the plan inputs of the local people through the town councils to the KMA but this was not the case. Problems such as lack of resources (financial and logistics)

and insufficient skills to mobilise the local people and elicit their concerns on planning in their areas were among the major issues affecting the operations of unit committees in Kumasi. Those study participants who were members of unit committees confirmed this and remarked as follows.

At the moment, in this neighbourhood our unit committee is not functioning well. We do not get financial and logistical support from anybody, our job is just sacrificial. As a result of this, most of the members have virtually quit the unit committee. For a long time now, we have not been able to mobilize the local people and solicit their views about the planning needs of this neighbourhood (Unit committee member, Nhyiaso Neighbourhood, IDI: 22/12/2012).

We find it very difficult to go about our activities as a unit committee. Most of our members lacked knowledge and expertise in assembling and communicating with people. Apart from this, we are not given any incentives for our work. This has led to a virtual collapse of the unit committee in this area (Unit committee member, Amakom Neighbourhood, IDI: 02/12/2012).

The above problems have led to a break in the feedback mechanism between the unit committees, the local people and other organisational structures in the planning process. It has also made it difficult for the planning aspirations of the local people to be well connected to the final development plan of Kumasi, as many of the local people through focus group discussions expressed worries about the planning needs of their neighbourhoods such as maintenance and provision of green spaces not being met.

Furthermore, there was a serious problem of partisan politicisation affecting the organisational networks for planning at the district level. The respondents registered their displeasure about partisan influence in the planning process. The appointments of MCEs by

the President of Ghana to be the heads of district assemblies were of great worry to many of the respondents, especially the planning organisations. The MCEs are supposed to have two-thirds approval from the members of the district assemblies to authenticate their positions, but the nomination of the MCEs by the President brings partisan influence to bear in the organisational sub-structures for planning. This is because individuals appointed by the President as MCEs are mostly from the same political party as the President. Some of the comments that came out of the in-depth interviews on partisan politics included the following.

There is much partisan politics in the organisational structures for town planning. If you are not in the same political party as the President of Ghana you will not be appointed as a MCE (Assembly man, Ahodwo Neighbourhood, IDI:18/12/2012).

Partisan politics is destroying the town planning process of Kumasi and Ghana as a whole. Whenever there is a new President of Ghana, members of his political party are appointed to head planning organisations at the district, regional and national levels (Official, Development Control Unit, IDI: 14/01/2013).

If you are not even competent to be part of the planning process, so far as you belong to the same political party of the President of Ghana you will be selected to take part in local town planning so that you can get some money (Assembly man, Patasi Neighbourhood, IDI; 12/03/2013).

Apart from the MCEs, about 30 percent of the assembly members who are responsible for planning at the district level are also appointed by the presidents of Ghana, and this is supported by the 1992 Constitution of Ghana (Article 242). The findings of the study revealed that many of those people appointed are from the same political party as the President, suggesting an act of favouritism took place in giving positions to such people due to their

political affiliation with the President of Ghana. This gives an indication of the clientelistic mode of governance (DiGaetano & Strom, 2003), which is built on politicians favouring their clients for political support, being in practice in Kumasi. The politicisation of the planning process does not allow the organisational networks to operate independently to address the planning needs of the people. The organisational networks are controlled mainly from the centre by the district assembly, regional coordinating councils and the NDPC, which have government appointees as heads. This corroborates the findings of Inkoom (2011), ISODEC (2001) and Botchie (2000), which found town planning in Ghana to be engulfed with partisan politics ruining the free operation of the system.

Another major problem that was conspicuous in the organisational networks for town planning was the poor involvement of civil society organisations such as donor agencies, NGOs and private organisations. This problem cut across all levels of town planning in Ghana. The available organisational network for town planning at the district level (Kumasi) is silent on the involvement of civil society organisations. It concentrates much on government agencies. This arrangement has limited the inclusion of varied organisations into town planning, hence making the whole organisational structure not diverse. Booher (2004) found this as a major hindrance to organisational networks as it does not encourage incorporation of a wide range of ideas and support to address social problems such as the depletion of green spaces.

In conclusion, the above inefficiencies in the organisational networks for town planning in Kumasi hinder organisational interdependencies that such networks ought to have to effectively address problems on green spaces (Ernstson et al., 2010; Booher & Innes, 2002). This has led to much distrust of the available town planning process by the local people because poor coordination among the organisations in the planning process and much

politicisation of the planning system does not allow the organisational networks to produce good outcomes as stressed by Ansell & Gash (2008) and Healey et al. (1997).

7.4 Consensus building on decisions on green spaces

Matters of consensus building feature predominantly within the theory of collaborative governance. It is strongly embedded in the collaborative governance process because it has been found to enhance collaborative governance by helping various stakeholders to come up with commonly agreed decisions (Innes, 2004; Booher & Innes, 2002). In accordance with the conceptual framework of the study it was necessary to assess the level of consensus reached by various stakeholders on decisions surrounding the management of green spaces in Kumasi. Studies by Innes (2004) revealed that some conditions underlie consensus building with dialogue, shared information and mutual understanding been crucial. These conditions were used to assess the situation in Kumasi.

7.4.1 Narrative and dialogues on green spaces

Concerning dialogue, the various stakeholders involved in the management of green spaces are expected to engage in collaborative dialogue facilitated by the KMA (the local planning authority in Kumasi). The study revealed that round-table dialogue involving all the stakeholders on green spaces is lacking in Kumasi. It was found out that dialogues organised purposely on green spaces in Kumasi hardly take place. Although some form of dialogue takes place at the area/town council and executive committee levels as well as at the various sub-committees of the KMA, it was observed that such dialogue does not focus purposively on green spaces or factor in concerns about green spaces. Matters on poverty reduction, infrastructural developments and human settlements dominate such discussions to the neglect

of green spaces. Dialogues organised purposely for green spaces in Kumasi were found to take place only occasionally, especially prior to the celebration of important environmental festivities such as the World Environment Day and National Arbor Day (a day set aside in Ghana to encourage tree planting). It was in relation to these two events that many of the stakeholder organisations admitted to having invitations from KMA to participate in a round table discussion to share ideas on how to celebrate those events and also to deliberate on the green environment of Kumasi (Table 7.6).

Table 7.6: Responses from officials of various organisations on dialogue on green spaces

Stakeholders	Dialogue purposively on green spaces	Frequency of dialogue on green spaces
Department of Parks & Gardens	prior to NAD & WED	poor
Forest Service Division	prior to NAD & WED	poor
Wildlife division	prior to WED	poor
Town and Country Planning Department	prior to NAD & WED	poor
Environmental Protection Agency	prior to WED	poor
Urban roads	prior to NAD & WED	poor
Friends of Rivers & Water Bodies (NGO)	prior to NAD & WED	poor
Local people (opinion leaders)	prior to NAD & WED	poor

WED (World Environment Day), NAD (National Arbor Day)

Source: Fieldwork (2013)

The responses from the officials (Table 7.6) show that there are very few organised dialogues on green spaces in Kumasi. Those few dialogues are only sparked off by occasional environmental events, which indicate that the dialogues among the green space organisations

are temporary undertaken to address a specific agenda. This finding serves as a key feature of the urban regime theory, which focuses on temporary coalition or alliance between public and private organisations to get support in order to accomplish a given task or agenda (Stone, 1993). However, the situation in Kumasi is quite different, since the temporary coalition for the few dialogues on urban green spaces concentrates much on government agencies and neglect private organisations. All the private landscape companies and major media agencies involved in the study testified that they have not been invited to take part in dialogues that border on green spaces. This problem is very critical since it has been found that dialogues which lack broad stakeholder involvement make it difficult for feasible and legitimate outcomes to be developed to address a given problem (Innes, 2004). The overall poor collaborative dialogues suggest that the KMA, which is supposed to play a facilitative leadership role in bringing all the stakeholders together to have a fruitful discussion with collaborative spirit, is not up to its task. It further indicates that essential facilitative leadership skills such as promoting effective dialogues, facilitating broad and active participation of stakeholders, and encouraging weaker stakeholders to participate in a discussion to enhance collaborative dialogue as suggested by Ansell and Gash (2008) and Lasker and Weiss (2003) are lacking in Kumasi. This brings into play an element of autocratic decisions on green spaces by the KMA. This is because the inadequate dialogues on green spaces make the KMA use its authority as the local planning authority in Kumasi to independently take decisions on green spaces.

7.4.2 Sharing of information among stakeholders on green spaces

In consensus building, access to and sharing of information among stakeholders is needed to enable the stakeholders take informed decisions on issues under consideration. In relation to this study, access and sharing of information on green spaces by the allied

organisations is required to enhance interdependencies between such organisations and also creates effective consensus building process. Transfer of information on green spaces among the organisations on green spaces was not the best. It came to light that it takes much longer time for various organisations on green spaces to get responses to their requests for key information on green spaces from other sister organisations. In some cases, feedback on such requests is not even provided. The officials of some of the organisations on green spaces explained the challenges facing them on access to information on green spaces (Table 7.7)

Table 7.7: Challenges facing stakeholders of green spaces on information sharing

Stakeholder	Challenge on information sharing on green spaces
Environmental Protection Agency (EPA)	My unit has sent a request to sister organisations asking them to provide some information to enable us undertake an initiative on green spaces. It is over two months and we have not got any response from them. If it is today that they will respond, I do not know (Official, EPA, IDI:17/12/2012).
Department of Parks & Gardens (DPG)	Circulation of information on green spaces among sister organisations is very poor. Up till now my outfit stores data manually, this causes much delays in sending information to other organisations (Official, DPG, IDI: 08/01/2013).
Wildlife Division (WLD)	Sharing of information on green spaces is really poor. It takes several months for one to access information from sister organisations (Official, WLD, IDI: 05/02/2013).
Works Department (WD)	Due to the nature of our work, we often require urgent information to prevent intruders from encroaching on green space lands but we find it difficult to get such information from the organisations concerned (Official, WD: IDI: 14/01/2013).
Media	We do not have access to major information on green spaces such as required standards on the provision of parks. We have been pursuing the appropriate bodies for such information but all our efforts have proved futile. (Official, Angel FM, IDI: 20/12/2012).

Source: Fieldwork (2013)

Poor logistical support as discussed in earlier sections especially inadequate communication devices such as computers, fax machines and internets are major factors for this problem. As

at the time of the study, many of the organisations were keeping records manually due to insufficient computers and electronic data storage devices. These make it difficult for easy dissemination of information on green spaces among the organisations.

7.4.3 Mutual understanding of decisions on green spaces

Mutual understanding also a condition for consensus building covers common agreement reached in the collaborative process by stakeholders on issues under discussion. Meaning outcomes of the collaborative process should be endorsed or have joint approval of the stakeholders. What was found in Kumasi was far from this. The study found that decisions taken on green spaces by KMA on many occasions do not have the approval of major organisations on green spaces. The official from the Department of Parks and Gardens stressed that apart from major environmental events that they are called upon to participate in, the KMA do not invite them to take an active part in decisions on green spaces let alone giving approval to decisions on green spaces. Similar was the response from the Forest Service Division.

The situation with civil society organisations such as private landscape companies, NGOs and estate developers was even worse. Representatives of these bodies indicated that their approvals are not sought on decisions on green spaces by the KMA because they are seen as non-important entities on green spaces. It appeared that commonly agreed decisions on green spaces if any are not reflective of the concerns of the stakeholders. Decisions on green spaces seem to be undertaken solely by the KMA and a few government agencies. This was found as one of the major problems hindering collaborative governance in Kumasi. It validates Choi and Robertson's (2011), and Ansell and Gash's (2008) observations of

government agencies and larger organisations dominating and manipulating the collaborative decision making process to their favour which distracts from commonly agreed decisions.

7.5 Participation of local communities in the management of green spaces

Within the context of collaborative governance which underscores this study, some features have emerged as imperative for the attainment of effective community participation. These themes include empowering the local people to manage resources within their neighbourhoods, consulting them for their views and concerns, informing them about planning decisions and involving them in the decision making process on issues that impact their livelihood (Rydin, 2010; Healey 2007, 2003, 1997; Wheeler, 2004; Coaffee & Healey, 2003). These features correspond to Davidson's (1998) wheel of participation framework (Figure 7.6) which is designed to enhance community planning and development (Karsten, 2011). This study therefore utilised the Davidson's wheel of participation framework to assess the extent to which the local people in Kumasi participate in the management of green spaces within their neighbourhoods.

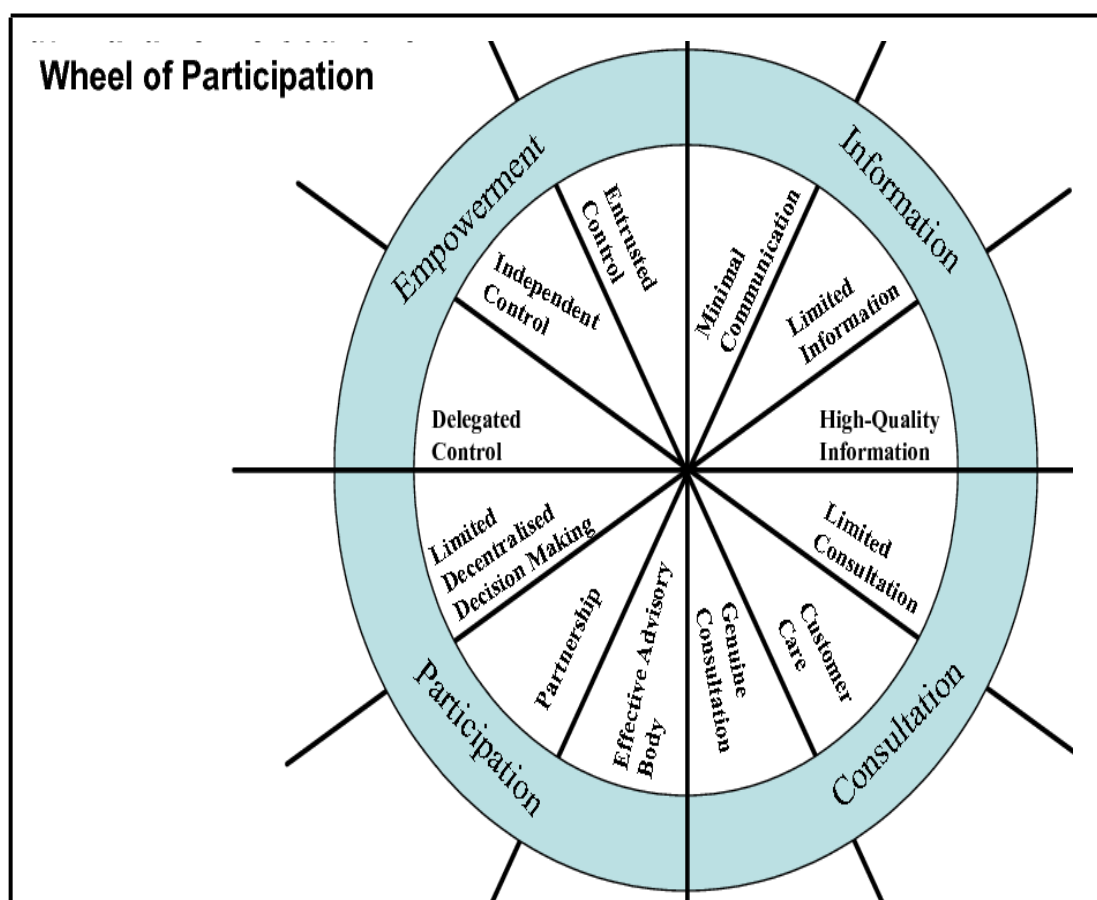


Figure 7.6: Wheel of participation framework

Source: Davidson (1998)

7.5.1 Consultation of local communities on green space initiatives

Under this level of community participation, city authorities or planning bodies are expected to have genuine consultation with the local people by seeking their views and concerns and afterwards to factor such issues into planning decisions to meet the needs of the people (Davidson, 1998). The decentralised town planning system of Ghana is supposed to use this form of participation to enable city authorities to come up with development plans that address problems in their localities and also meet the needs of the local people. The responses from the focus groups discussions that were organised for the local people in different neighbourhoods in Kumasi suggested that the level of consultation between the

planning authorities of Kumasi and the local people is inadequate. It came out that the unit committees and other sub-structures that are mandated to undertake the consultation responsibility were not up to the task due to problems such as ineffectiveness of many unit committees, and lack of support from the KMA. The local people complained of little or virtually no consultative discussions taking place within their neighbourhoods to solicit their views on problems affecting them such as excessive destruction of green spaces for housing and commercial purposes. Some of the local people remarked as follows:

Limited community discussions are organised for us to identify the problems affecting us in this neighbourhood. Over five years now, I can confirm of only three community fora taken place in this area for us to express our views on the well-being of this community. Even in those fora the problem of excessive encroachment of green spaces that was raised among other things has not received any attention as at now (Community member, Ahodwo Neighbourhood, FGD: 27/01/2013).

Our unit committee is not functioning properly. For a long period now, no community durbars or discussions have been organised to channel the problems of this neighbourhood to the planning authorities of Kumasi (Community member, Danyame Neighbourhood, FGD: 17/03/2013).

This neighbourhood is suffering from many environmental problems with destruction of green spaces being a major problem. However, we are not consulted for us to give our concerns and ideas to address this problem (Community member, Patasi Neighbourhood, FGD: 26/02/2013).

This problem was found to have resulted in many neighbourhoods not having community action plans which by the planning standards of Ghana are supposed to be a basic planning document at the local level where the outcomes of consultative discussions with the local people are feed into. This finding was found to be a major problem in Ghana, it corresponds

with studies by Inkoom (2011) which revealed poor consultation of the local people as one of the principal problems militating against effective grassroots participation in town planning in Ghana as those forms of consultation hardly take place. The above discussions point to the fact that there is a serious problem of poor consultation of the local people on matters affecting their localities such as the encroachment of green spaces. This problem is synonymous with what Davidson (1998) calls minimal consultation as enshrined in the wheel of community participation framework. It restricts the incorporation of local knowledge into planning decisions which according to Brody et al. (2003) and Healey (1998) is a critical requirement for effective planning since such ideas held by the local people contain detail and rich information about their localities which can best be provided only by the local people themselves.

7.5.2 Informing local communities on green space initiatives

This aspect of community participation deals with flow of information from planning authorities to the local people on planning decisions or initiatives. In other words, the planning authorities have to keep the local people informed about the planning decisions they intend to take. This has been highlighted in WHO's healthy cities project as vital as it helps to keep the local people abreast with planning initiatives within their area and enable them to participate in strengthening those initiatives (Heritage & Dooris, 2009). The local people in Kumasi expressed dissatisfaction about the flow of information from the Kumasi city authorities to them. This problem came up in all the focus group discussions that were carried out in the five neighbourhoods involved in the study. The sentiments expressed by the local people on this issue centred mostly on Kumasi city authorities keeping information on development projects to themselves and often releasing such information only to a few prominent individuals. The local people further asserted that many green spaces in their

neighbourhoods by way of nature reserves have been rezoned and released to private developers without their prior notice. One of the local people had this to say:

Within the Ahodwo, Danyame and Nhyiaso neighbourhoods, there used to be many green spaces but now most of them are no more. The Kumasi city authorities have rezoned most of these lands and released them for commercial and residential land-uses without informing the local people about such decisions. If the local people were briefed on those initiatives at the initial stages of those projects we would have resisted the city authorities because the green spaces give us a lot of benefits (Unit Committee member, Nhyiaso Neighbourhood, IDI: 15/12/2012).

This problem was found to be very critical since it deviates from the statutory planning provisions of Ghana. For example, section 3 of the National Development Planning Commission Act of 1994 (Act 480) makes it clear that planning authorities should inform the local people on any proposed development plans to address the concerns of the local people before those plans should finally be considered for implementation. In addition to this, sections 12 and 14 of the Town and Country Planning Act of Ghana (CAP 84) oblige local planning authorities to place notices of intended initiatives on planning schemes in two daily newspapers and on public notice boards for a period of 2 months. These measures are to give the general public information on planning initiatives within their area and allow them to express their views on such proposal accordingly. However, investigations on the field revealed that these legal provisions are not strictly adhered to due to the personal interest of some planning officials of KMA and disruption of the process by key personalities for their personal gains. That is the planning officials connive with some top personalities to rezone such lands for different purposes and for the fear that the local communities will resist such initiatives, information on those projects are kept away from the local people.

Another issue that emerged from the study was the sub-structures of the city authorities of Kumasi (unit committees and area councils) not keeping the local people informed of the development activities of the city authorities. By the organisational framework for town planning in Ghana, unit committee and area councils are supposed to serve as a link between the local people and the city authorities, and remain in constant communication with the local people. Apart from their consultation mandate they are also to keep the local people constantly informed of the activities of the city authorities through community fora and workshops. Conversely, comments from the focus group discussions indicated that these sub-structures do not update or give the local people frequent feedbacks on the activities of the city authorities. This was as a result of very limited open community meetings carried out in various neighbourhoods for such purposes. The above findings suggest that the planning authorities uphold or keep much information on planning initiatives to themselves, denying the local people access to valuable information which does not augur well for community participation as asserted by Newman et al. (2004) and Davidson (1998). This situation is causing the conversion of many green spaces in Kumasi to different land-uses since decisions on such initiatives are made by a few top personalities secretly without the knowledge of local people.

7.5.3 Participation of local communities in decision making process on green spaces

In line with the wheel of participation framework, the participation of local people in the decentralised town planning of Kumasi was assessed from two angles. These were the extent to which the local people are represented in the decision making process, and how the city authorities partner with the local people to undertake activities on green spaces. An interesting finding came out from the study. The decentralised planning system of Ghana was instituted to enhance community participation in the planning process. However, the study

revealed that participation of the local people was only confined to the bottom half of the organisational structure or hierarchy for town planning at the district level. This was because at the top half of the organisational structure (various sub-committees, executive committees and the general assembly) where much deliberation and final decisions on development projects take place, there are few or no representatives of the local people. Interactions with the representatives of the local people in the decision making process and ordinary individuals within the study neighbourhoods confirmed this. It was realised that the residents of the study neighbourhoods have representatives to a greater extent only in the unit committees and the area councils. These are the lower sub-structures of the organisational framework for town planning, which are supposed to channel the concerns of the neighbourhoods to the top structures for final decisions. This arrangement was of concern to the local people as shown in Table 7.8.

Table 7.8: Responses by the local people on their poor representation at the top management level

<p>The planning decisions that the Kumasi city authorities take on this neighbourhood often tends to fall outside the priorities of the neighbourhood. This is because all such decisions are taken by top officials without the involvement of our representatives (Community member, Amakom Neighbourhood, FGD:13/01/2013)</p>	<p>The Kumasi city authorities take us for granted. They take final decisions on development projects for this neighbourhood without our active involvement (Assembly man, Patasi Neighbourhood, FGD: 12/03/2013).</p>
<p>We are not involved in decision making at the top management level. This is because the current institutional structure for town planning cuts us off from decision making at that level.(Assembly man, Nhyiaso Neighbourhood, IDI: 18/12/2012)</p>	<p>The Kumasi city authorities often impose planning initiatives on us. This is due to the fact that such initiatives are deliberated upon and final decisions undertaken by only top officials without the involvement of our representatives (Community member, Ahodwo Neighbourhood, FGD: 27/01/2013)</p>

Source: Fieldwork (2013)

Green spaces such as parks and gardens were pointed out by the local people as among the major priorities of their neighbourhoods, but they indicated that this has not been acknowledged for a very long time. This relates partly to the fact that they do not have representatives at the top half of the organisational structure for town planning in Kumasi who can press earnestly for that. This finding provides clear evidence of environmental injustices in the management of urban green spaces in Kumasi. This is due to the fact that the

inadequate involvement of the local people in the decision making process is in contrast to the principles of the concept of environmental justice, which stresses equity and fair involvement of all people irrespective of their status in taking decisions on the natural environment (Agyeman, 2007; Agyeman & Evans, 2004; Bullard, 2004). In addition to this, there were also problems deriving from poor partnership between the city authorities of Kumasi and the local people in undertaking development projects on green spaces. Persistent complaints were raised on this matter by the local people. Many unsuccessful green space projects in Kumasi were found to have some connection with this problem. Among these projects is the Kumasi beautification project, which lacks the necessary contribution of the local people. For example, observations on the project by Boadu (2010) were that it has not been able to achieve the desired results for a long time due to factors such as poor partnership between the city authorities and other stakeholders, especially the local people, in the execution of the project. This revelation shows that the local people are only passively involved in the planning process. This equates to Selman's (2004) assertion that local people are treated as passive participants in landscape management in many developing countries because many decisions are taken without their involvement.

7.5.4 Empowering the local communities to control green space projects

Matters of empowerment are strongly subsumed in collaborative governance and community participation. Under this aspect of community participation, the extent to which the local people are empowered to self-facilitate and control development projects on green spaces within their neighbourhoods were the focus of the study. Investigations from the field revealed that the local people have limited rights to control projects on green spaces in Kumasi. The government of Ghana through its local planning authorities and decentralised government agencies were found to retain almost all the rights in controlling projects on green

spaces. This hindered the active participation of the local people and to some extent makes the involvement of the local people in the planning process questionable. This is because the local people have to be in their neighbourhoods with virtually no control even on projects that may have negative effects on their livelihood and the general welfare of their neighbourhoods. For example, at Patasi, Danyame and Nhyiaso neighbourhoods, personal observation and interaction with the local people revealed that some private developers have been authorised by the Kumasi city authorities to undertake housing projects on nature reserves and wetlands which the local people were against those projects (Figure 7.7). The local people stressed that due to their limited rights, several attempts made by them to halt those projects have not yielded any results as those projects still continue to progress.

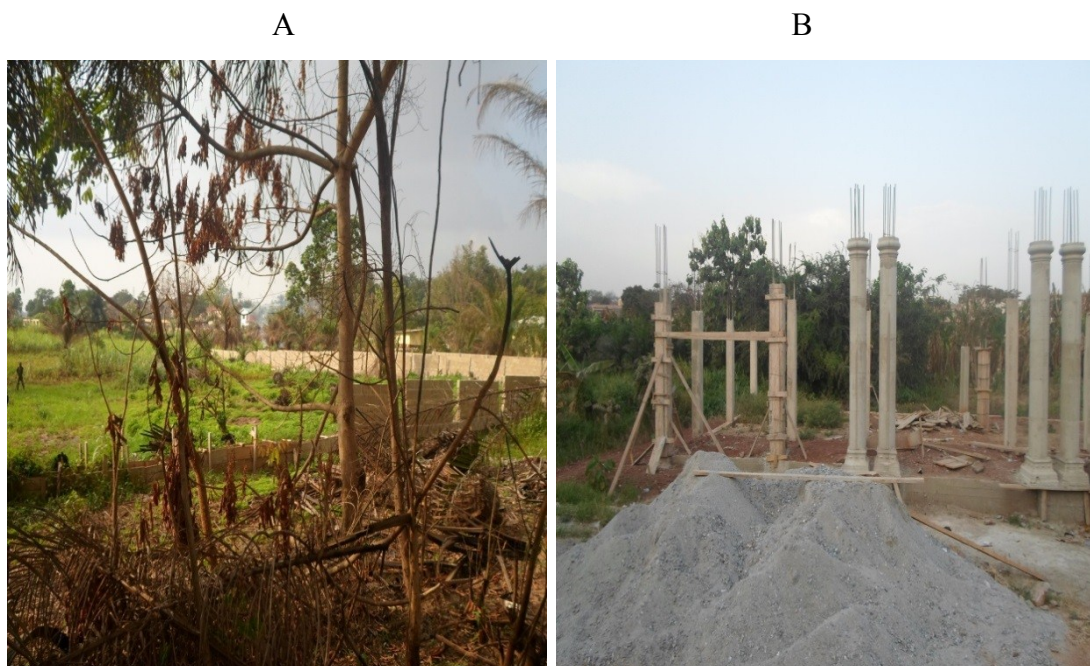


Figure 7.7: Projects which local communities are not empowered to control

Source: Fieldwork (2013)

A: Housing project on wetlands in Danyame Neighbourhood behind Danyame Primary School.

B: Housing project on nature reserve at “Mango Down” in Patasi Neighbourhood

This was found to be the result of insufficient legal backing on the rights of the local people in the decentralised town planning system of Ghana. The Local Government Act of 1993 (Act 462) and other legislation which supports decentralised planning in Ghana do not delegate much autonomy to the local people. Similar findings came up in a study by Shackleton et al. (2002) on 8 southern African countries where central governments continue to dominate and control projects on the natural environment with little or no rights to the local people.

Apart from this, it also came to light that the local people do not often self-facilitate initiatives on green spaces. The only initiative that was found to be periodically undertaken by the local people in their neighbourhoods was organising communal labour to keep their environment clean. Initiatives such as frequent tree planting exercises and preservation of the green environment that can be engineered by the local people to enhance green spaces in their area were conspicuously missing. The underlying reasons for this were lack of motivation of the local people to pursue that course due to their limited autonomy, inadequate support by the Kumasi city authorities (financial and logistics), and poor perception of the local people on those initiatives since they think such initiatives are the responsibility of the city authorities. Another important reason was the lack of educational campaigns by the Kumasi city authorities to upgrade the skills and knowledge of the local people on community development initiatives and green space management. These factors make the local people less empowered to undertake projects to develop green spaces in their neighbourhoods. This is contrary to Bonilla's (2013) observation on selected cities in Mexico where the local people were found at the forefront championing their own initiatives such as constructing local playing grounds to enhance green spaces in their communities.

7.6 Conclusion

This chapter has given an overview and assessment of the governance of green spaces in Kumasi metropolis. The assessment of “power over” and “power to” green spaces produced varied results. Whilst complexity of power by different organisations on green spaces and insufficient legislative support on the provision of green spaces emerged as major issues affecting “power over” green spaces, financial constraints, an insufficient human resource base and lack of logistics were also uncovered as problems that undermined the capacities (“power to”) of various organisations to manage green spaces effectively. Although the decentralised town planning system in Ghana was found to be backed by a laid down institutional structure (organisational network), it came to the fore that poor coordination among the organisations, the ineffectiveness of some of the organisations and the politicisation of the planning process make it difficult for the organisational network to achieve the desired results.

Consensus building on decisions on green spaces in Kumasi remains a problem. This was found to be hampered by limited dialogue, lack of mutual understanding and poorly shared information among the stakeholders on green spaces. A decentralised planning system which supports effective community participation operates in Kumasi metropolis and Ghana as a whole, but the study revealed that the participation of the local people in the management of green spaces is not the best. Based on the wheel of participation framework that was used for the assessment, it was found that the local people are minimally consulted, not informed, passively involved in the decision making process, and not empowered to self-facilitate initiatives to enhance green spaces.

Despite the fact that collaborative governance theory is the main form of governance theory underlying the management of green spaces in Kumasi, features of other governance

theories were found in this chapter to operate in different ways, and in some cases create problems for the management of green spaces. For example, the autocratic nature of the managerial mode of governance by the central government controlling many matters surrounding on green spaces was pre-eminent. In addition to this, the clientelistic mode of governance which supports the self-interest of politicians was glaring, with a typical example being the appointment of many individuals into the planning and management of urban green spaces based on their political affiliation with the President of Ghana. Temporary coalition, which is a feature of urban regime theory, was also observed to be in practice for few organised dialogues undertaken on green spaces to plan for occasional environmental events. This shows that the management of a given resource underlined by the operation of different modes of governance can create ineffective managerial activities to cause a weak governance system for that resource, such as the situation in the management of urban green spaces in Kumasi.

The overall governance of green spaces in Kumasi can be said to be wrecked by over-concentration of power to the central government, a complex organisational structure, poor networking and lack of collaboration among allied agencies on green spaces, and inadequate participation of local communities and the private sector. These deviate from the principles of collaborative governance, which is built on wider stakeholder participation, consensus building, organisational networks, dialogue and mutual understanding among various stakeholders in the governing process. The next chapter dwells on these inefficiencies together with the challenges affecting the physical development of green spaces (as revealed in the previous chapter) to come up with strategies to address the problems facing green spaces in Kumasi.

CHAPTER EIGHT

TOWARDS SUSTAINABILITY: OVERCOMING THE BARRIERS TO MANAGING GREEN SPACES IN KUMASI

8.1 Introduction

The previous analytical chapters (chapters 6 and 7) highlighted the current state and the level of destruction of green spaces in the study area, as well as various inefficiencies affecting the management of green spaces. The objective of this chapter is to provide strategies to address the challenges affecting the management of green spaces in the study area. It is built around the concept of sustainability, and provides useful ideas to strengthen the theoretical frameworks on the sustainability of green spaces. It answers the research question: “how can the challenges facing urban green spaces be addressed to enhance the sustainable development strategies of urban areas?” This chapter is divided into four sections. The first section focuses on addressing the physical challenges affecting the management of green spaces, and it contributes to the overall aim of the chapter by proposing measures to enhance the environmental management of green spaces. The second section is about improving the socio-economic factors affecting effective management of green spaces. It takes care of the social and economic challenges whilst the third section addresses the political challenges that obstruct the management of green spaces. The last section discusses sustainable management of green spaces in Kumasi. All these sections together offer a variety of suggestions that can be utilised to enhance the sustainable management of green spaces.

The chapter sets out by first identifying the key barriers to managing green spaces in Kumasi, providing tailored suggestions that can be implemented to address those barriers and highlighting how collaborative governance can contribute to more sustainable solutions. Expert advice from professionals on green spaces who were interviewed in the study and

ideas from the literature on green spaces were employed. The findings of this chapter provide specific guidelines to address the declining condition of green spaces in Kumasi, as well as more generic recommendations to enhance the sustainability of green spaces in urban areas.

8.2 Addressing the physical challenges to green spaces in Kumasi

Some of the physical challenges that the study found to affect the management of green spaces in Kumasi were encroachment on green spaces by infrastructure developments, limited accessibility and poor maintenance of green spaces. To address these challenges, the following management solutions have been provided: improving accessibility to green spaces; enhancing maintenance of green spaces; and controlling encroachment on green spaces.

8.2.1 Improving accessibility to green spaces

The per capita green space of Kumasi found to be 4.7m² is far below the minimum green space requirement of WHO which is 9m² green space per head. This problem was found to be underpinned by unavailability of many green spaces due to inadequate parks, gardens and limited green vegetation in the total land area of Kumasi. Creating of additional green spaces such as parks and gardens to augment the existing ones is one particular strategy that could be implemented to address this problem. This strategy corroborates the findings of Jim (2004) on the provision of additional green spaces in cities and the expert advice from the representatives of green space organisations who were professionals in green space management (Table 8.1).

Table 8.1: Advice from professionals on green spaces management in Kumasi

Agency/organisation	Response
Department of Parks and Gardens (DPG)	Additional parks have to be created to make Kumasi greener. The land in front of the Golden Tulip Hotel is a good area that can be used for a public park (Official, DPG, IDI:08/01/2013).
Town and Country Planning Department (TCPD)	More parks have to be created. Areas demarcated as parks on the layouts or planning schemes of various neighbourhoods have to be implemented (Official, TCPD, IDI: 09/01/2013).
Forest Service Division (FSD)	To address the problem of limited green spaces in Kumasi, the city authorities have to resort to massive tree planting exercises and the creation of more parks and gardens in the city (Official, FSD, IDI:04/01/2013).
Department of Horticulture (KNUST)	Many parks have to be designed to enhance the beauty of Kumasi. Kumasi has lost most of its parks and gardens (Official, Dept. of Horticulture [KNUST], IDI: 07/02/2013).
Environmental Protection Agencies (EPA)	Kumasi needs additional parks and gardens. Currently, the city has very few natural parks to serve the over two million human population of the city (Official, EPA, IDI: 17/12/2012).

KNUST: Kwame Nkrumah University of Science and Technology.

Source: Fieldwork (2013)

Such parks and gardens can easily be created on lands that have already been preserved as nature reserves. A typical example is the land (about 3 acres of land) in front of Kumasi Golden Tulip Hotel. This land has a flat lying surface with some amount grasses and trees (Figure 8.1). It is also located at an advantageous position with much serene environment. These qualities have already resulted in some festivities been organised at the place by private organisations such as the “Luv FM Family Party in the Garden”. Transforming this place into a well-designed garden with availability of many facilities will enhance access to green spaces in the study area.

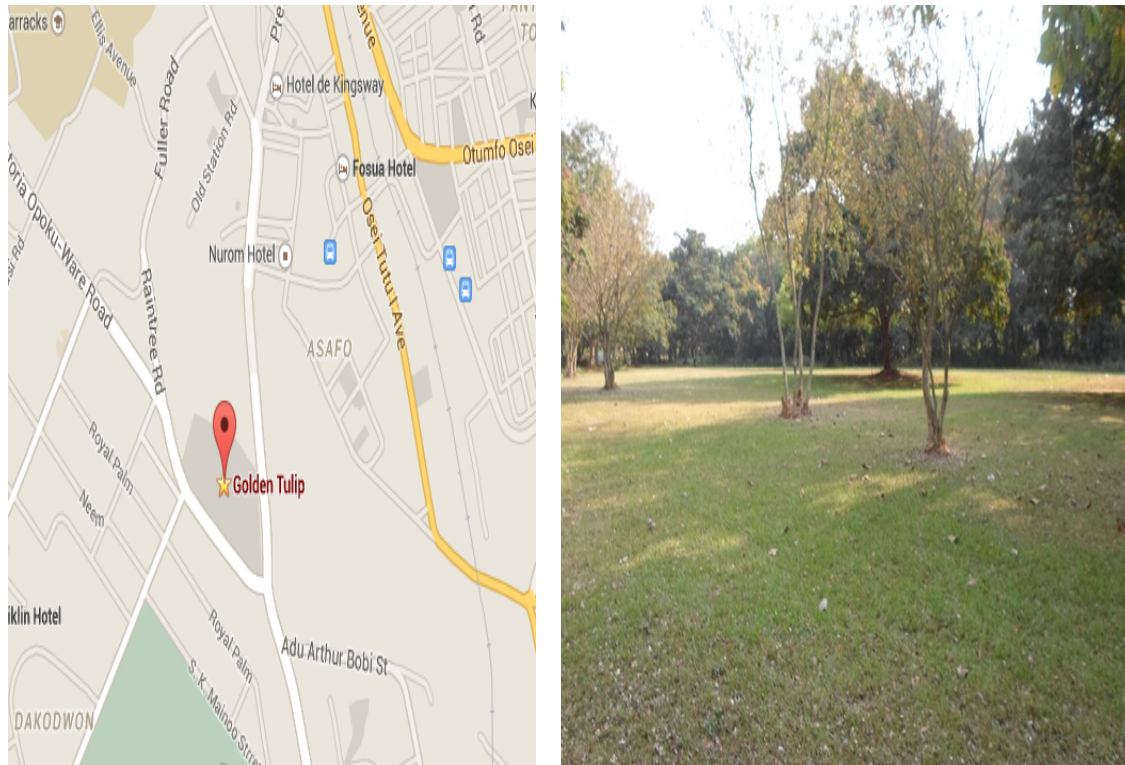


Figure 8.1: An ideal site for a public garden in front of Golden Tulip Hotel, Kumasi

Source: Fieldwork (2013)

Similarly, about 22 acres of land around the premises of the Department of Parks and Gardens offers another good site for the creation of a new park. The findings of the current study revealed that this land is part of about 32 acres of land allocated for the development of parks and gardens at Patasi Neighbourhood. Personal observations and interaction with an official from the Department of Parks and Gardens found out that only about 10 acres of that land has been used as a public garden. The remaining 22 acres is not used for its actual purpose (park) but rather for the cultivation of oil palms. Reverting that land to serve its intended purpose (public park) will be a step in the right direction. Furthermore, a close examination of the planning schemes/layouts of some of study neighbourhoods found as many as 9 areas delineated on the layouts as sites for the development of parks/gardens but

they remain undeveloped on the ground (Table 8.2). This was due to lack of funds and poor enforcement of these provisions by the city authorities.

Table 8.2: Sites demarcated on planning schemes for parks/gardens but not developed

Neighbourhood	Park/garden not developed	Location
Amakom	1	Around Kumasi Technical Institute
Danyame	1	Opposite New Orleans Hotel
Nhyiaso	2	Adjacent to and in front of Golden Tulip Hotel,
Patasi	5	Around the premises of Dept. of Parks and Gardens, opposite former micro-wave station, between blocks “K and I” at North Patasi, O. S. garden around “block G” at South Patasi, 2 land areas at “block J” at North Patasi.

Source: Fieldwork (2013)

A collaborative effort by the Kumasi city authorities, the allied agencies on green spaces, and the local people in developing those parks/gardens as emphasized by the concept of collaborative governance (Healey, 2006; 1997) can help in the realisation of these projects. Such collaboration in Kumasi will offer a platform for joint discussions where shared ideas on how the identified locations can be developed as green spaces can be tapped. It will also open avenues for contribution of wider resources and technical expertise from various stakeholders, and “local knowledge” (knowledge gained through practical experience in a given locality) especially from the local people to develop those green spaces to meet the needs of the residents in Kumasi.

Furthermore, developing the proposed site for the creation of a new children’s park at Dakodjom Neighbourhood (Figure 8.2) can also help to improve accessibility to green spaces in Kumasi. Inventory analysis of the proposed site by Taylor (2010) confirmed the suitability

of that site for a children's park. The site among other things has fairly flat surface with a gentle slope of about 10 degrees, readily availability of essential services on the site (water, electricity and telephone lines), easy access to transport, serene environment and good natural vegetation (much trees and grasses). This project is being championed by an NGO called Friends of River and Water Bodies. An in-depth interview with an official from this NGO showed that since the acquisition of the proposed site in 2008, work has not begun on the site due to limited support from the allied bodies on green spaces and donor agencies. Pulling resources together among the organisations on green spaces with additional support from donor agencies under the spirit of collaboration can help to make this project a success. Such efforts to enhance the availability of green spaces conform to Rydin's (2010) sustainable urban development theory that stressed on joint organisational efforts to preserve green spaces because these spaces serve as important resources that provide much natural environment to enhance urban growth in different ways.

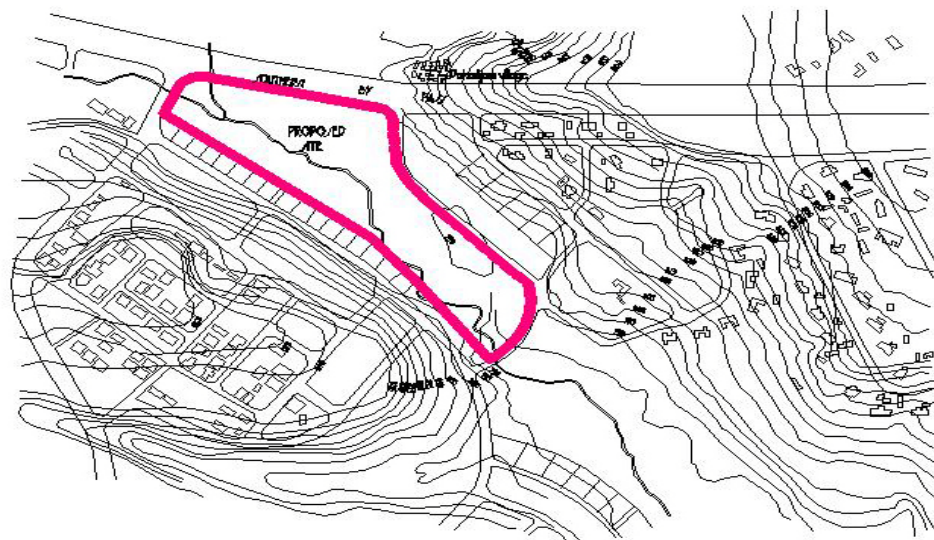


Figure 8.2: A proposed site for the development of a new children's Park (Indicated in Pink) at Dakodjom

Source: Taylor (2010)

Another strategy found to be a good initiative to enhance access to green spaces in Kumasi was the conversion of brownfield sites into green spaces, which will require modification of the land form of Kumasi to include more green spaces. This is in line with the principles of the new urbanism theory, which believes that changes in the physical land form are preconditions for urban economic, social and ecological changes (Knaap & Talen, 2005). Brownfield sites are typically abandoned lands previously used for industrial, commercial or other specific activities but are now available for redevelopment. This strategy did not receive widespread comments from the respondents because they were not very aware of it. Officials from the Departments of Parks and Gardens, and the Horticulture and Planning departments of KNUST were the only respondents who lent their support for this strategy. This might be due to the fact that the idea of converting brownfields into green spaces is not very popular in Ghana or many African countries.

However, personal observations and a review of the available literature found this strategy to be ideal for Kumasi. Successes and benefits that conversion of brownfield sites into green spaces have produced in many cities in both developing and developed countries, such as New Delhi (India), Lam Tin (Hong Kong), Toronto (Canada), Chicago, Wisconsin and Minnesota (USA), provide good lessons for the implementation of this strategy in Kumasi (Ashok & Bhatnagar, 2013; Ecoist, 2009; Siikamaki & Wernstedt, 2008; De Sousa, 2006, 2004, 2003). One particular brownfield site in Kumasi that can be converted into green space is the former race course ground. This land, over the past decade, has been turned into an open market place where traders sell their items, but at the time of the fieldwork (March, 2013) it was found to be cleared and earmarked for redevelopment (Figure 8.3).



Figure 8.3: A brownfield site (Kumasi race course) being cleared to make way for redevelopment

Source: Fieldwork (2013)

Conversion of substantial part of this land into green spaces will help to improve access to green spaces in Kumasi, especially in surrounding neighbourhoods such as Bantama, Adum, Suame, the old military barracks (4BN), KO and Kofrom, which were observed to have limited access to green spaces. Other major benefits such as easing of physical development pressures, conserving of the ecological habitat, increasing of recreational activities and enhancing public health, as stressed by De Sousa (2006; 2003) can be derived from this strategy when implemented. Incorporation of this strategy into the development plan and policy of Kumasi can help in the provision of more green spaces. This can be achieved through the application of collaborative leadership techniques such as activation, framing and synthesising (Silvia, 2011; McGuire, 2006; Agranoff & McGuire, 2001). Activation deals with identifying and integrating the right people and resources needed

to achieve a specific goal. Framing refers to outlining specific roles and activities that have to be undertaken to accomplish a given mission, whilst synthesising covers the amalgamation of ideals derived from interactions among stakeholders in the collaborative process.

In applying these principles in Kumasi, a green space committee comprising representatives from all the allied bodies on green spaces can be formed. The committee can be charged with the responsibility for identifying all brownfield sites in Kumasi and providing an assessment of their suitability to be converted into green spaces in the future. As part of the committee's mandates, a report outlining the plans and arrangements, and production of a road map to convert the identified brownfield sites into green spaces both in the short term and long term can be provided. The city authorities can afterwards synthesise the ideas contained in the green space report into specific themes and develop a set of action plans to achieve them. Finally, such action plans can be incorporated into the development plan of Kumasi. The additional parks when created will help to improve environmental justice in Kumasi by helping the residents gain a fair access to urban green spaces. It will enable neighbourhoods that are unfairly treated in terms of having no public park or garden to have one.

Extensive tree planting exercise also presents another strategy that can be harnessed by the Kumasi city authorities to increase the amount of green spaces in the area. Almost all the officials from the selected green space organisations involved in the study and many opinion leaders recommended this strategy. Some of their remarks included the following:

The city authorities have to embark on massive tree planting exercises. The city has lost most of its trees especially at the CBD and along the principal streets that makes the city beautiful. The tree planting exercise will help to provide many trees in Kumasi (Official, Environmental Protection Agency, IDI:17/12/2013).

One measure that can be pursued to improve the lost green spaces in Kumasi is undertaken tree planting exercises. This exercise should be frequent and involve all the local communities in Kumasi (Opinion leader, Nhyiaso Neighbourhood, IDI:13/12/2012).

There is a need for intensive tree planting exercises in Kumasi. This exercise will help the city to reclaim its past glory of having much green spaces especially urban trees along various streets in Kumasi (Official, Department of Planning [KNUST], IDI: 08/02/2013).

Although some form of tree planting exercise periodically takes place in Kumasi, the respondents indicated that it is not comprehensive and had not to date yielded much benefit. Those projects lacked the involvement of the local people who are important stakeholders in the collaborative governance process. In view of this, a comprehensive tree planting exercise involving active participation of the local people can be pursued by the city authorities. Carlson (2007) views such active engagement of the local people as critical to collaborative governance as it helps to enlarge perspectives, opinions and get many people on board to accomplish a given task. This active participation can be achieved by informing the local people of Kumasi about the tree planting exercise, consulting them to know various ways they can help, and on the actual day of the tree planting exercise getting them involved by assigning specific roles to them. The involvement of the local people in tree planting exercises will make them feel part of the project, develop a sense of ownership for trees in their areas and take good care of the trees accordingly. Implementation of intensive tree planting exercises with much participation of the local people have helped some African cities such as Durban, Lagos and Maputo to get about 62000, 500000, and 2800 trees to enhance their green vegetation respectively (Langer & McNamara, 2011). This initiative will help to enhance the greenery of Kumasi which the concept of green urbanism supports.

Incorporating quantitative standards into regulations on green spaces was also found as another strategy that can help to enhance access to green spaces in Kumasi. Content analysis of the available town planning regulations in Ghana such as Town and Country Planning Act of 1945(Cap 84); Local Government Act of 1993 (Act 462); National Development Planning Commission Act of 1994 (Act 479), National Development Planning System Act of 1994 (Act 480), Environmental Protection Agency Act of 1994 (Act 490) and the National Urban Policy found this as a problem with no specific quantitative guidelines on the provision of green spaces.

Elsewhere, quantitative standards such as 9m² per capita green spaces by WHO, 900 metres distance to green spaces in most European countries (about 15 minutes walk), and 300 metres distance to green spaces in UK (about 5 minutes walk) have been incorporated into various land-use regulations to guide the development of green spaces (Barbosa et al., 2007). The absence of such standards in Kumasi is a major problem as some officials of green space organisations indicated that this makes it difficult to evaluate the provision of green spaces in Kumasi since there is no quantitative standard to serve as a guide. For example, the representative from the Department of Town and Country Planning made it clear that the absence of such standards makes it difficult for his outfit to know the amount of green spaces to be incorporated in the layouts/planning schemes of a given neighbourhood to make green spaces in that neighbourhood easily accessible. Providing specific quantitative standards on the provision of green spaces by the Kumasi city authorities (i.e. using the WHO standard 9m²) will serve as benchmark that can be used to at least assess the provision of green spaces and hence improve upon where they fall short to make such spaces easily accessible in Kumasi.

8.2.2 Enhancing maintenance of green spaces in Kumasi

As part of measures to make green spaces sustainable, regular maintenance of the available facilities on green spaces have been recommended by many scholars (Baycant-Levent & Nijkamp, 2009; Harnik, 2004; Jim, 2004; Dunnett et al; 2002). Such maintenance works range from repairing worn-out facilities to providing new facilities to augment the existing ones. Personal observations on green spaces in Kumasi found widespread broken down facilities (chairs, signage), filthy environment, and absence of many playing facilities on several parks and gardens that demand urgent maintenance works (Figure 8.4).

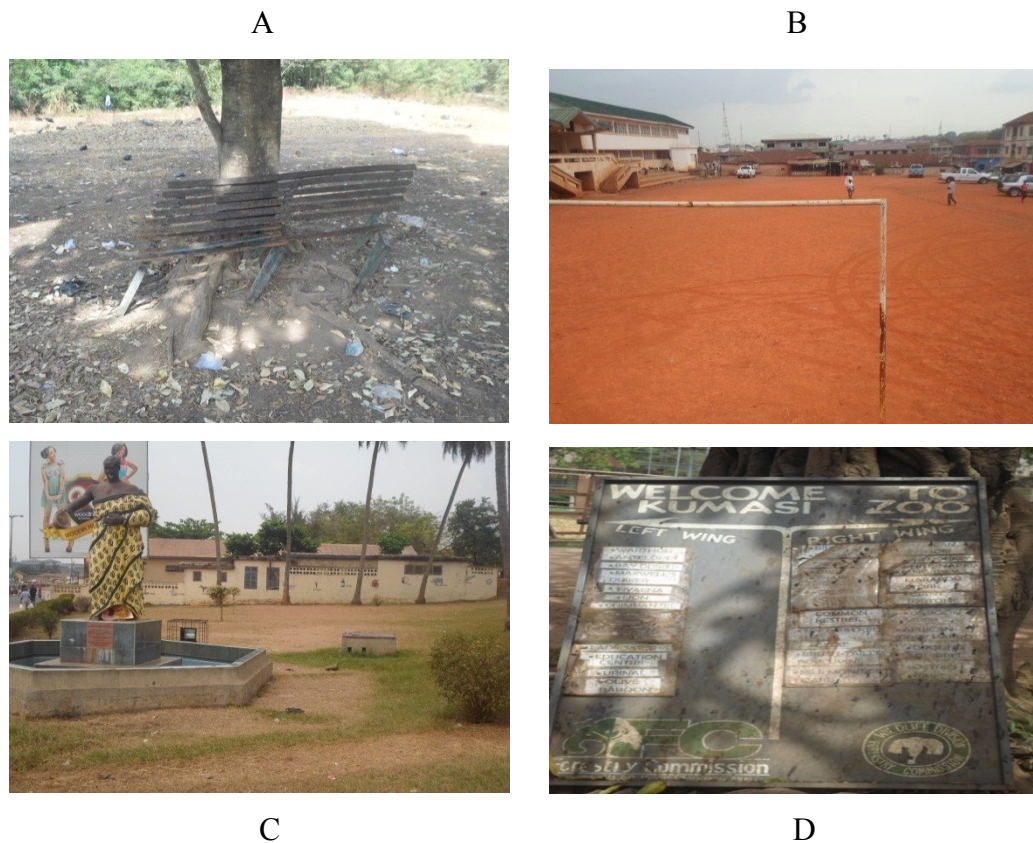


Figure 8.4: Poor state of facilities on green spaces in Kumasi

Source: Fieldwork (2013)

- A: Broken down seats and filthy environment at Kumasi Children's Park
- B: Abbey's Park with bare surface and without playing facilities
- C: Fante Newtown Park without playing facilities
- D: Broken down signpost at Kumasi Zoological Gardens (Kumasi Zoo)

To improve the maintenance of facilities on green spaces in Kumasi, a funding scheme purposely set aside for maintenance works especially rehabilitation works and provision of facilities on green spaces can be established by the city authorities. This scheme can be managed by a team of professionals selected from the allied government and private bodies on green spaces in Kumasi. Some portions of city's annual budget could be channelled into this funding scheme. Financial assistance from individual philanthropists, benevolent organisations and international and local environmental agencies can also be sought to get more funds into the scheme. The managers of the funding scheme as part of their activities can take frequent surveys on the available green spaces to get first-hand information on the exact conditions of such spaces, decide on appropriate maintenance works to be applied and hence allocate desirable funds to execute those projects. The maintenance funding scheme when managed in a transparent way devoid of political interference and embezzlement of funds will lead to trust building which Ansell and Gash (2008) found to be critical in collaborative governance. Such trust in the management of the proposed maintenance funding scheme in Kumasi can be built by the managers of the funding scheme given regular accounts of various maintenance projects financed through the coffers of the scheme. This level of accountability will enhance the collaborative process by enabling individuals and bodies who contribute to the collaborative process develop much trust and remain committed to the process.

Stronger partnership arrangements between government agencies on green spaces, private organisations and local communities can also be utilised to enhance the maintenance of green spaces. Poor partnership between these bodies was found to be a major cause of poor maintenance of green spaces in Kumasi. This is because it served as a disincentive for local communities and private organisations to willingly contribute their quota to the maintenance

of green spaces in the area. For example, representatives from private organisations and the study neighbourhoods had this to say:

Private organisations on green spaces especially those of us who are into horticultural and landscape works are not much involved by the KMA in their decision making process on green spaces. They do not consider us as important stakeholders. This does not motivate us to willingly involve ourselves in the maintenance activities of green spaces (Manager, private landscape organisation, IDI: 10/02/2013).

Members of this community are treated as aliens in our own community. The Kumasi city authorities do not partner with us to maintain green spaces in this area. Officials from KMA periodically come and monitor the Children's Park in this area without engaging with us to see how best we can help to maintain the park (Community member, Amakom Neighbourhood, FGD: 20/01/2013).

Frequent invitation of private bodies and local communities by the KMA to participate and deliberate on matters covering maintenance of green spaces can help to address this problem. This effort will help to get more people for maintenance activities on green spaces. Innes and Booher (2004) found this at the heart of collaborative governance as strong public-private partnership provides a sense of inclusiveness, shared ownership and a wider network that can be exploited to address a given problem. For example, strong partnership between the Kumasi city authorities and the private sector will provide a wider scope to source funds to embark on maintenance activities. It will also provide an opportunity for the city authorities to out-source some of the maintenance works to private bodies to bring their expertise on board. With respect to the local communities, this will give them a high sense of community stewardship to take the green spaces as their own and contribute in diverse ways to maintain such spaces.

Institutionalisation of an award scheme purposely for green spaces such as the green flag award in UK for well-conditioned green spaces can also be adopted to improve the level of maintenance of green spaces in Kumasi. This recommendation comes in a wake of resentments expressed by the respondents about poor motivation for maintenance of green spaces in Kumasi. For example, some of the respondents noted as follows:

The Kumasi city authorities lack vision and foresight to put in place measures to motivate people to maintain green spaces in the various neighbourhoods. The city authorities are just sitting idle and looking at the green spaces to continually get destroyed without doing anything (Official from the media, IDI: 15/01/2013).

There is nothing beneficial attached to the maintenance of green spaces in Kumasi. If even some neighbourhoods, individuals or a group contribute immensely to the development and maintenance of green spaces, their efforts are not recognised or rewarded (Unit committee member, Patasi Neighbourhood, FGD: 12/03/2013).

This award scheme can be used as a precursor to get people involved in maintaining green spaces in Kumasi. To accomplish this, experts or professionals from the allied bodies on green spaces in Kumasi together with independent members with rich experience on green spaces can be selected to constitute the panel of judges for the award. Application of collaborative governance techniques such as high sense of mutual understanding and consensus in arriving at decisions by the panel of judges will enable them to collaborate well to steer the affairs of the award scheme. Specific laid down criteria which comprehensively cover all aspects of green spaces such as the one developed by the current study in Chapter Six (attractiveness, comfort, accessibility, safety, maintenance, publicity, community participation, and conservation and heritage) can be designed to serve as baseline criteria to

select specific parks and other green spaces as winners for the award. This green flag award and the benefits that come along with it such as opening up areas to boost tourism, pride and reputation will serve as incentives to motivate various neighbourhoods in Kumasi to actively participate in maintaining green spaces in their areas.

8.2.3 Controlling encroachment on green spaces

One particular factor that was found to cause encroachment onto many green spaces in Kumasi was urban sprawl. This was basically as a result of lateral expansion of houses into reserved lands and the periphery of Kumasi as observed from the field. To address this problem, application of the greenbelt concept into the land-use planning of Kumasi is recommended. The current study revealed that the green belt concept played an important role in the earliest development plans of Kumasi (such as the 1945 and 1988 development plans) and, this helped the city to attain fame as the Garden City of West Africa.

However, recently this concept has completely faded out from the land-use planning of Kumasi because little or no attention has been paid to it. Thorough examination of the development plan of Kumasi (2010 - 2013) which was in operation at the time of the study found complete abandonment of the green belt concept, with no clause or provision for it. Committed efforts by the Kumasi city authorities, with maximum support and cooperation of allied bodies on green spaces in re-introducing the green belt concept into the development plan of Kumasi, can help to control the situation. Smith (2009) echoed this in his study on collaborative governance and open space management when he found that the commitment of city authorities to green space initiatives can draw many stakeholders into the collaborative process. Such commitment by way of the city authorities being responsive and dedicating their resources (time, man-power, knowledge, skills, funds) to green space agendas will set the tone for allied agencies on green spaces to do the same and preserve green spaces. Such

commitment can be supported with the green belt concept being embedded into the by-laws of the city, since such an arrangement can help in the quick realisation of this initiative in the physical development of Kumasi. The greenbelts, when created will serve as checks or boundaries to prevent neighbourhoods from extending outwards into the periphery to destroy many green spaces, as was the case for the study neighbourhoods (Patasi, Amakom, Ahodwo, Nhyiaso and Danyame). This in effect will help to create a compact city land form which supports the conservation of green spaces especially at the periphery with many development activities confined to the centre of Kumasi (Kotharkar, 2012; Burton, 2000; Williams, 1999). The application of the green belt concept has contributed immensely to controlling unnecessary encroachment into green spaces in various cities in both developed and developing countries, such as Makati City (Philippines), Bangkok (Thailand), Washington DC, Chicago, Ottawa, Tokyo, Seoul, Berlin, Barcelona, Budapest and London (Amati, 2008; Tang et al., 2007).

Strict adherence to or implementation of development controls enshrined in the various planning regulations offers another strategy to control the encroachment onto green spaces in Kumasi. This strategy was highly recommended by those respondents who were experts in green space management as well as by the general public. Some of the respondents had this to say (Table 8.3).

Table 8.3: Recommendations for enforcement of development controls by the respondents

<p>The city authorities should be firm on the implementation of planning laws. They should not condone any activity that encroaches on lands reserved for green spaces (Official, Dept. of Parks & Gardens, IDI: 08/01/2013).</p>	<p>Strong implementation of the planning regulations by the city authorities is the way forward for conservation of green spaces in Kumasi (Official, Forest Service Division, IDI: 04/01/2013).</p>
<p>There should be strict enforcement of planning laws. People should not be allowed to build their houses on green spaces (Official, Development Control Unit, IDI: 14/01/2013).</p>	<p>Lack of enforcement of land-use regulations is what is destroying the green spaces in Kumasi. To conserve green spaces the city authorities have to enforce the various land-use regulations (Community member, Danyame Neighbourhood, FGD: 10/03/2013).</p>
<p>Some people have taken the planning laws into their own hands and put up houses anyhow to encroach on green spaces. The city authorities have to strictly enforce the planning laws to punish all those people. This will help to conserve many green spaces (Official, EPA, IDI: 17/12/2012).</p>	

Source: Fieldwork (2013)

These responses clearly show the extent to which land-use regulations are poorly enforced in Kumasi. Routine monitoring exercises of physical development activities in Kumasi by the Development Control Unit (Works Department) with collaborative efforts by the local people and environmental agencies (such as the Department of Parks and Gardens, EPA, Forest Service Division and estate agencies) can help to relieve Kumasi from the excessive green space encroachment the city is currently grappling with. Such routine

monitoring exercises will help to check whether developers are conforming to the laid down regulations, and if not bring the defaulters to book. It will help the city authorities to easily identify and prevent physical developments that encroach on green spaces at an early stage so that they will not degenerate into something worse. Individuals who contravene the land-use regulations should be given a specific time frame to do the necessary corrections; and those who fail to do so should be subjected to the necessary sanctions to serve as a deterrent, preventing others from doing the same.

However, matters on this initiative have to be handled fairly devoid of political interference and favouritism so that all individuals who encroach on green spaces can be dealt with equally. This will enable the city authorities to demonstrate good leadership skills, which is one of the features that promote collaborative governance. Emerson et al. (2012) recognise exemplary leadership as a first essential driver for collaborative governance. This is due to the fact that such leadership helps to initiate good policies, manage resources effectively and provide sincere commitment to a good course, which often serves as incentives to draw more stakeholders into the collaborative process. In the case of Kumasi, the KMA exhibiting exemplary leadership skills by firmly enforcing the available land-use regulations on green spaces will serve as a good driver for collaborative governance for the management green spaces. This initiative will motivate various environmental agencies to participate in the collaborative process to preserve the green environment, which Lehmann (2010b) stresses as being a major component of green urbanism that helps cities to conserve most of their natural environment.

In sum, the above suggestions provide some useful ways that can help to overcome the physical or environmental problems affecting urban green spaces in Kumasi. Key among these suggestions were the creation of additional parks and gardens, conversion of brownfield

sites into green spaces, extensive tree planting exercise and the incorporation of quantitative standards into the provision of green spaces. Others were maintenance of facilities on green spaces, institutionalisation of an award scheme purposely for green spaces, application of a green belt concept and strict adherence to or implementation of development controls to protect green spaces.

Implementing all these strategies will not be feasible in the short term due to the huge tasks required to be met by some of the strategies and the many challenges that have to be overcome. For example, many financial commitments will be needed to convert brownfield sites into urban green spaces and also to create additional parks to augment the existing ones. A stronger political is needed to implement the green belt concept and institute an award scheme for urban green spaces, whilst revisions of some of the town planning regulations have to be done to make those regulations more focused on urban green spaces, especially providing some set standards on green spaces. These are demanding, and will require quite a long time for the necessary measures and preparations to be done to achieve those strategies. However, in the short term, the Kumasi city authorities can create a strong relationship with the local people, private organisations and civil society organisations to implement strategies such as extensive tree planning exercises, regular maintenance of green spaces and strict enforcement of development controls to avoid encroachment on such spaces. Even with these strategies, efforts must be made to control the uncooperative attitudes of the local people and political interference which are other key challenges. The next section extends the discussion further to address the social and economic challenges facing green spaces in Kumasi.

8.3 Overcoming the socio-economic challenges of managing green spaces in Kumasi

The strategies that address challenges obstructing the development of green spaces from socio-economic perspective in Kumasi are discussed in this section. These strategies are aligned to the major socio-economic challenges that came out from the study to affect the management of green spaces in Kumasi, such as lack of priority given to green spaces, financial constraints of allied bodies on green spaces, inadequate staff of organisations on green spaces, lack of coordination among allied bodies on green spaces and lack of community participation. The strategies are discussed in detail below.

8.3.1 Prioritising green spaces in development agendas

The findings of the study as discussed in the previous empirical chapters revealed that matters such as alleviating poverty, housing, water supply and provision of educational facilities and other social amenities remain the top priorities in the development agenda of the Kumasi city authorities. Matters on green spaces are often relegated to the bottom or not given much attention. The city also lacks a comprehensive policy on the creation of new green spaces. Developing a green plan or green space strategy by the Kumasi city authorities to specifically focus on the development concerns on green spaces will help to firmly position green spaces among the top priorities of the city's development agenda. The green space strategy or plan presents a comprehensive policy plan that sets out long-term visions for green spaces, and the appropriate goals, resources, methods and time needed to achieve such visions (CABE, 2006a). A well-structured process built on shared vision of stakeholders on green spaces such as the one proposed in Table 8.4 can be utilised by the Kumasi city authorities to develop a successful green space strategy for Kumasi. Extensive dialogue especially roundtable discussions involving a wide range of stakeholders on green spaces will help to create this strategy or plan from the rich ideas of various stakeholders. Within the concept of

collaborative governance, Inness and Booher (2010) classify dialogue as one of the essential features for successful collaborative outcomes because it provides a platform for stakeholders to share ideas to achieve good results.

Table 8.4: Proposed process to develop green space strategy or plan for Kumasi

Process	Purpose	Action
Purpose of the strategy	To clearly identify the focus and scope of the strategy	Dialogue among stakeholders on green spaces for their inputs
Current reality	To assess the current situation of green spaces	Gathering information and assessing various green spaces to have much knowledge about their current condition (demand and supply of green spaces)
Future possibility	To provide directives in framing the content of the strategy	Drafting the visions, objectives and policies of the green space strategy
Drivers of Change	To identify areas and activities that can be utilised to protect future development of green spaces	Providing the final draft of the strategy with action plans attached to it

Source: Adapted from CABE (2006a)

In line with the above table, a green space strategy/plan can be designed for Kumasi by the city authorities organising a series of consultative meetings with allied bodies on green spaces. Such meetings can seek from the stakeholders their experiences and concerns about the poor state of green spaces as well as appropriate measures to address the problems in future. Through the meetings common agreed visions and objectives to preserve green spaces can be reached by the stakeholders. Such ideas can be put together to develop green space strategy or plan for Kumasi. The green space strategy or plan has been found by Bryne and

Sipe (2010), and CABE (2006a) as one of the main initiatives behind the success story of many cities which have much green spaces such as Copenhagen, Stockholm, Paris and London. In Africa cities like Johannesburg and Cape Town which are noted for having well planned green spaces also have green space strategies/plans. The attainment of the green space plan by the Kumasi city authorities will help the city to get a comprehensive policy framework for the protection, enhancement, accessibility and usage of green spaces. It will also help to ensure that the green spaces are preserved to meet the needs of the local people now and in the future.

8.3.2 Stable financial support for allied bodies on green spaces

The need for stable financial support emerged strongly from the responses from the study participants especially the officials of organisations on green spaces. They cited this strategy in response to lack of funds of their organisations to manage green spaces in Kumasi. Some of the respondents had this to say:

Our financial situation is very bad. As a government agency (Department of Parks and Gardens) we send all the revenue we raise to the central government whilst in return we do not get any funds to undertake our projects on green spaces. The financial hardship of our department is disrupting our activities and causing most of our projects to be on drawing board. The government should support us to have a strong financial base for our activities (Official, Department of Parks and Gardens, IDI: 08/01/2013).

Enough financial support will really help my agency (Forest Service Division) to undertake its activities effectively. At the moment we lack funds for our activities. This problem cuts across our sister government agencies

on green spaces. The funds my outfit get from the government of Ghana often cater for only one-third of our annual budget. My agency relies on government subventions (funds) for its activities which are woefully inadequate (Official, Forest Service Division, IDI: 04/01/2013).

My organisation (private landscape organisation) is seriously hard pressed when it comes to finances. The various contractual works we have undertaken for Kumasi city authorities remains outstanding. They have not been paid for about 2 years now. My organisation together with other private organisations that face the same problem have decided to have a crisis meeting with the Kumasi city authorities soon. If something better does not come from the meeting we will seek legal actions for our monies (Manager, private landscape organisation, IDI: 10/02/2013).

Based on the findings of the study, it is recommended that the government of Ghana give directives to its agencies on green spaces to retain some percentage of the funds they raised to support their activities. In addition to this, specific budgetary allocation from the annual budget of the Kumasi city authorities can be assigned to green spaces. This will enable the various organisations on green spaces to get stable funds for their activities and hence perform their activities effectively. This is synonymous to traditional local funding strategy which CABE (2006b) has identified as one of the stable avenues that funds can be sourced to manage green spaces. Although some of the government agencies were found to engage in income-generating activities (Department of Parks and Gardens, Forest Service Division, Environmental Protection Agency etc.) but these activities were not focused on public parks due to the poor state of the parks. Measures can be put in place to assess the conditions of the available parks and identify appropriate income generating potentials that can be pursued on the parks to generate additional funds. The income-generating activities on Mile End Park in London offer a good example for this initiative (CABE, 2006b). However, much care has to

be taken so that the income-generating initiatives on the parks will not limit the number of visits to parks in the area.

8.3.3 Strengthening coordination among allied bodies on green spaces

Poor coordination among the allied bodies on green spaces manifested as one of the major problems behind poor management of green spaces in Kumasi. To have a good coordination among the organisations, this research has designed a coordination model that can be utilised by the Kumasi city authorities to control the situation. This model took into consideration issues that were observed to undermine proper coordination among allied bodies on green spaces in Kumasi such as lack of recognition of some of the organisations as important stakeholders, incoherent responsibilities, and poor communications among the allied bodies. The model drew some insights from the work of Abbott (2012). It has four main pillars which promote coordination: creating connectivity among the bodies, keeping channels for communication open, facilitating joint action, and avoiding unilateral decisions (Figure 8.5).

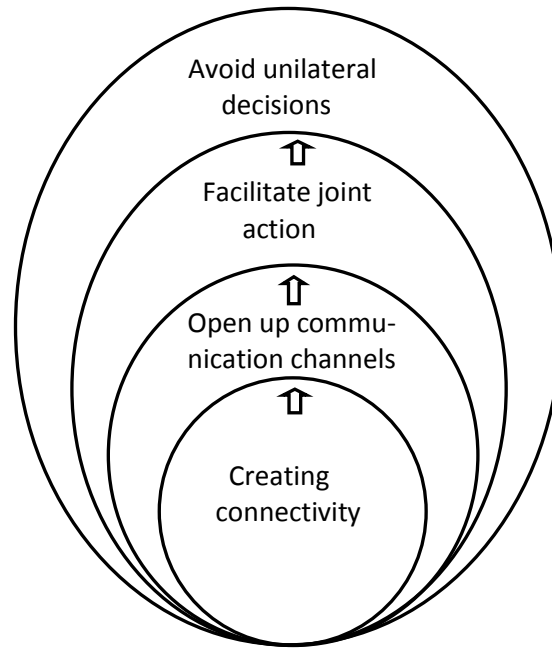


Figure 8.5: Coordination model for green space management in Kumasi

Source: Author's construct, 2014

- Under creating connectivity pillar, the responsibilities of the government agencies on green spaces in Kumasi such as the Department of Parks and Gardens, and the Wildlife Division have to be well defined to avoid conflicting responsibilities. In addition to this, the various linkages between the various green space organisations can be well structured and also give room for private sector participation. This arrangement will create strong organisational network and interdependencies to effectively manage green spaces in Kumasi.
- With respect to the second pillar (keeping channels for communication open), the allied bodies on green spaces have to well-resourced with various communication devices and office equipment to easily share information, ideas, and also give fast responses or feedbacks to request on vital information tendered in by their sister organisations. This will help to enhance easy flow of information and communication among the allied bodies on green spaces in Kumasi.

- Facilitating joint action pillar deals with the organisations on green spaces coming together to undertake joint projects and initiatives on green spaces. Such joint action can be built on the available avenues established under pillar 2 with the organisations pulling together resources and skills to accomplish a given task. The district planning coordinating unit in Kumasi can play a supervisory and monitoring role to facilitate smooth coordination among the allied bodies.
- Concerning the final pillar, the allied bodies avoiding taking unilateral decision that solely satisfy their personal interests will be a worthy course as such decisions have been found by Abbott (2012) to undermine collaboration and joint commitment. Each of the stakeholders should be recognised as an important entity with decisions on green spaces based on consensus agreement.

8.3.4 Strengthening the human resource base of allied agencies on green spaces

Strong alliance between allied government agencies on green spaces and educational institutions which offer programmes on green spaces can be pursued to achieve this initiative. For example, strong alliance with tertiary institutions such as KNUST in Kumasi can be very useful. Such alliance will help the agencies on green spaces to easily have refresher courses for their staff in various schools/departments of universities such as the College of Architecture and Planning, and College of Agriculture and Natural Resources of KNUST which offer many green space related programmes. This will help to upgrade the skills of the staff to solve the problem of unqualified personnel which was eminent among the agencies on green spaces. Furthermore, this alliance backed by exchange programmes will allow students from tertiary institutions who are into green space management to undertake internship training in the green space agencies to get practical experience in their field of study. Such exchange programmes will enable the agencies to easily recruit qualified staff directly from

the universities to address the problem of shortage of qualified working labour force which was a problem in almost all the agencies on green spaces that were involved in the study. All these can successfully be achieved when the agencies on green spaces open up their activities, and design appropriate channels and practices to collaborate with the educational and research institutions that are associated with them. This equates to what Ansell and Gash (2008) refer to as institutional design in collaborative governance which deals with developing basic protocols and ground rules to collaborate with other stakeholders. Motivational packages such as enhancement of remuneration and incentives to workers can also help to boost the morale of the workers and also attract additional personal to augment the staff strength of the allied bodies on green spaces.

8.3.5 Enhancing community participation and private sector involvement in green space management

Matters of lack of community participation and private sector involvement in the decision making process and the overall management of green spaces emerged from the findings of the study. This was particularly critical when the organisational structure for town planning in Kumasi was silent on the participation of the private sector. It also limited the participation of the local people to the lower half of the organisational structure with final decisions on green spaces virtually undertaken without the involvement of the local people as already discussed in Chapter 7. The active involvement of the local people and private organisations by the Kumasi city authorities in all matters relating to green spaces provides a major solution to this problem. This can be achieved through adherence to a number of features of collaborative governance, such as frequent dialogue and consultation (fora, workshops, seminars) of the local people and private organisations to seek out their knowledge and expertise on green spaces, and consensus building to arrive at decisions that

factor in the views of various stakeholders. Healey (2007, 1997), and Innes and Booher (2004) have found these features to be vital boosters for wider stakeholder participation in collaborative governance. Expert advice from an official of a private landscape organisation highlighted most of these features as essential to improve participation of the local people and the private sector in green space management. The official remarked:

To address lack of participation of the local people and private organisations in green space management, the city authorities of Kumasi should have to change the way they take decisions on green spaces. They have to consult us and get our views and concerns, and factor in our ideas in the final decisions on green spaces (Manager, private landscape organisation, IDI: 29/01/2013).

In addition to this, principles embedded in the wheel of participation framework (Davidson, 1998) such as making information on green spaces widely accessible to the local people and private organisations and empowering these people to take initiatives on green spaces can also be adopted to enhance the participation of these stakeholders in the management of green spaces in Kumasi.

8.3.6 Educational campaigns on conservation of green spaces

Intensive educational campaigns on the conservation of green spaces offer another strategy to enhance the management of green spaces in Kumasi. Both the responses from the respondents and insights from the literature recognised educational campaigns as one particular strategy that can be used to conserve green spaces in Kumasi. For example, the representatives from all the allied bodies highlighted it as an initiative that can be used to create much awareness about the need to preserve green spaces among the general public. To make the educational campaigns more intensive, apart from frequent community fora,

seminars and workshops on wider social platforms such as radio shows and TV programmes on green space conservation can be explored. This effort will help to create much awareness about the value of green spaces and sensitised the general public to put in much effort into preserving these spaces. It will help change the uncooperative behaviour of the general public on the management of green spaces due to their wrong perceptions. A similar educational campaign embarked upon in Florida (USA) produced positive results by improving environmental knowledge, attitudes and behaviours of the general public towards the conservation of green spaces (Hostetler et al., 2008). As part of the educational campaign, the KMA can collaborate with green space organisations and the Ghana Education Service to introduce courses around green spaces into the educational curriculum at the basic level. This will help to inculcate into school children the spirit of environmental stewardship and help them grow up to develop a love for the preservation of green spaces. All these efforts will lead to significant inclusiveness in the management of green spaces, which the theory of collaborative government supports. It will influence many members of the general public to come on board to contribute in diverse ways to conserve green spaces now and in future.

In all, a variety of tailored suggestions to enhance the socio-economic challenges affecting green spaces in Kumasi have been discussed in this section. These suggestions include prioritising green spaces in the development agenda, providing stable financial support to allied bodies on green spaces, strengthening coordination among allied bodies on green spaces and strengthening the human resource base of allied agencies on green spaces. Enhancing community participation and private sector involvement in green space management as well as embarking on educational campaigns on the conservation of green spaces also provided additional avenues to improve the management of green spaces from a socio-economic angle. Poor value for green spaces in Kumasi and Ghana in general serves as

a major challenge to the implementation of these strategies, as this will not motivate the city authorities or the government of Ghana to put in much effort to pursue the above strategies. Having addressed the physical and socio-economic challenges of green spaces, the next section provides solutions to address the political barriers that hinder the management of green spaces in Kumasi.

8.4 Overcoming the political challenges of managing green spaces in Kumasi

This section provides strategies to overcome various political challenges that were observed to militate against the management of green spaces in Kumasi. Such challenges include conflicting ownership rights on green spaces, complexity of the organisational framework for managing green spaces, and political interference in the activities of government bodies on green spaces. To overcome these challenges, the discussion in this section is organised around three broad strategies: addressing conflicting ownership of green spaces, controlling complexities in the management of green spaces, and avoiding political interference in green space management.

8.4.1 Addressing conflicting ownership of green spaces

In addressing conflicting ownership problems on green spaces in Kumasi especially between government agencies and traditional authorities, the complete reclamation of lands designated as green spaces from the traditional authorities by the government of Ghana is highly recommended. This can be achieved through comprehensive engagement/dialogue between the government of Ghana and the traditional authorities of Kumasi. This is synonymous with the principled engagement element in collaborative governance that Emerson et al. (2012) stressed as important in addressing conflicts or disagreements among stakeholders to provide successful collaborative outcomes. In line with principled

engagement, the root problem or concerns of the traditional authorities which influence them to claim ownership of green spaces and release such lands for different land-uses in Kumasi have to be discovered and attended to accordingly. After this, strong deliberations between the two parties, taking into consideration the concerns of the traditional authorities and reclamation of green spaces, have to take place. For example, one of the interviewees remarked:

The government of Ghana should have to sit down with the traditional authorities of Kumasi (chiefs) and have a fruitful discussion on how most of the green spaces which are in the hands of the chiefs now can properly be reclaimed as a property of the central government. Other than that lands reserved as green spaces in Kumasi will continue to be sold by the chiefs for different land-uses (Official, Lands Commission, IDI: 04/02/2013).

Through dialogue a common agreement can be reached by the two parties for all the green spaces to be reclaimed by the government of Ghana. This agreement can be supported with the government of Ghana completing of all the necessary arrangements for compensation and financial burdens associated with the reclamation of all green space lands. Furthermore, to give the reclamation process a legal backing, there can also be appropriate transfer of land documents on the green spaces and signing of a memorandum of understanding by the traditional authorities and the government of Ghana. This arrangement will create fair and civil discourse, and open and inclusive communications which have been found by Emerson et al. (2012) and Carlson (2007) to promote collaborative outcomes.

8.4.2 Controlling complexities in the management of green spaces

The organisational framework for managing green spaces in Kumasi was engulfed with a multiplicity of organisations engaged in different activities on green spaces. Examples

of these organisations were the Lands Commission, Department of Parks and Gardens, Forest Service Division, Wildlife Division, Environmental Protection Agency, Town and County Planning Department, Department of Urban Roads, Works Department and Kumasi's traditional authorities. This research discovered three broad measures that can be pursued to control complexities in the management of green spaces in Kumasi. The measures are: properly outlining the structures for managing green spaces; restructuring or downsizing the number of organisations on green spaces; and retaining organisations that play critical roles on green spaces. These measures parallels the model put forward by Streich (2007) to handle complexity in spatial planning (Figure 8.6).

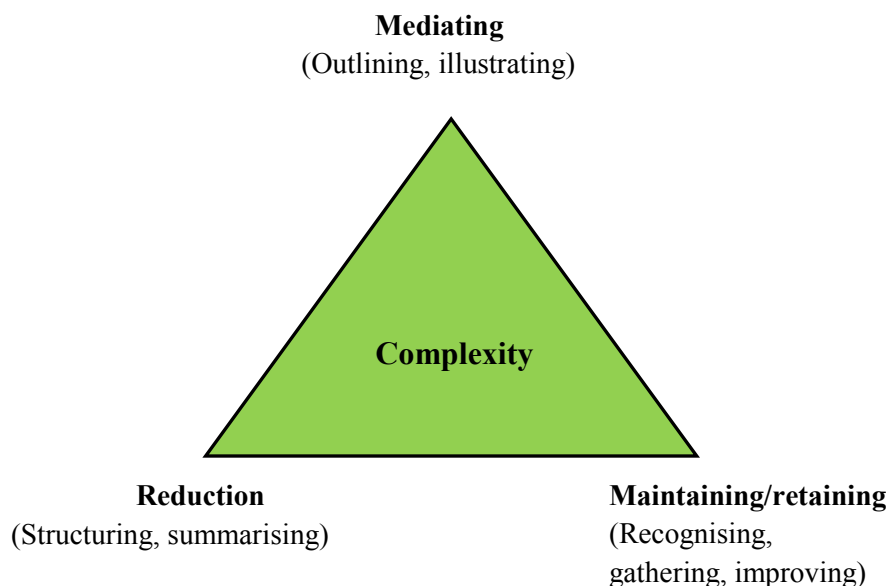


Figure 8.6: Dimensions of handling complexity in spatial planning

Source: Streich (2007)

In applying this initiative, policy makers have to play a mediating role by clearly outlining and identifying the bodies that are supposed to manage green spaces, their specific mandates, and the limit of their mandates on green spaces in the various land-use regulations. This will help to resolve the uncertainties and ambiguities in the power struggle for ownership of green

spaces which this study found to have ensued between three main bodies: the Lands Commission, Kumasi Metropolitan Assembly and the Kumasi traditional authorities. Worsening the complexity of green space management in Kumasi was the engagement of numerous government agencies (more than 6). Following Streich's (2007) model (Figure 8.6), the number of these agencies can be downsized or restructured to make them more effective. This can be done either by eliminating or merging some of the agencies to provide a more efficient management body. A typical example would be making the Wildlife Division come under the Department of Parks and Gardens to form one body, as recommended by some professionals during in-depth interviews. This would help to address the fragmented and non-linear relationships that were observed to thwart collaborative governance for green spaces in Kumasi.

In addition to this, measures can be put in place by the government of Ghana and Ministry of Local Government and Rural Development to retain/maintain only core agencies that play critical roles on green spaces. Based on the findings of the study, the agencies that can be retained include the Department of Parks and Gardens and the Town and Country Planning Department. The Department of Urban Roads, which was found awarding contracts on the creation of shrubs, lawns and other green spaces along the roads in Kumasi, can be made to step aside, with such activities subsumed under the mandates of the Department of Parks and Gardens. Limiting the number of bodies on green spaces will pave the way for easier coordination and avoid conflicting responsibilities in order for successful collaborative outcomes to be achieved. Baycan-Levent and Nijkamp (2009) attributed the successful management of green spaces in cities such as Helsinki, Marseille, Zurich and Birmingham to fewer agencies in the management process, which helped to control the problem of organisational complexities.

8.4.3 *Avoiding political interference in green space management*

To minimise or completely avoid undue interference in the activities of green space organisations in Kumasi, some bold measures have to be undertaken. In the first place the involvement of the government of Ghana, government officials and high profile individuals in the activities of green space organisations has to be restricted. The appointment of individuals to head various town planning agencies relating to green spaces by the central government should not be used as an opportunity to favour people who have the same political party affiliation as the government in power, as found out in this study. Appointment of leaders to run the affairs of green spaces should be based on the experiences and competences of individuals, and such individuals should not be subjected to frequent changes whenever there is a change in government at the national level. This will help to address the problem of lack of continuity of projects on green spaces, which was found to arise from frequent changes in the leadership of government agencies on green spaces. Expert advice from an official from the Department of Parks and Gardens in Kumasi stressed the need for green spaces to be managed devoid of political interference. The official remarked:

Getting rid of political interference from the activities of agencies on green spaces will help to preserve many green spaces in Kumasi. Absence of political interference from especially government officials and top personalities will allow the bodies on green spaces to work effectively and take bold decisions to preserve green spaces (Official, Department of Parks and Gardens, IDI: 08/01/2013).

The above comment clearly shows that eliminating undue political interference will enable the agencies to perform their activities effectively and efficiently, as is expected of them. This is in line with CABE's (2010b) finding that absence of political interference helps green space agencies to attain high level performance, which is recognised as the topmost ingredient for

successful management of green spaces. The good performance of the government agencies will act as key driver for collaborative governance, as echoed by Smith (2009) and Press (2002). This is because good performance will symbolise a good administrative base for green spaces, which in effect will help to draw many stakeholders to the collaborative process since many stakeholders often want to be part of a team where their input will yield positive and concrete outcomes. Hence the high performance of the core organisations such as government agencies on green spaces in Kumasi can be a key factor to draw other stakeholders to participate in the management of green spaces.

Although the political strategies provide useful ideas to enhance the management of urban green spaces in Kumasi, some challenges may affect the smooth implementation of these strategies. The strong attachment of the residents of Kumasi to their cultural norms, especially having much respect for their kingship system and traditional land ownership rights, may create some resistance to the transfer of green space lands from the traditional authorities of Kumasi to the government of Ghana. Furthermore, controlling the complex organisational framework on urban green spaces will also require effective organisational reforms; that is, restructuring of the government agencies on green spaces to retain fewer agencies and equipping them with well-defined roles. However, the policy makers in Ghana being over burdened with many health and poverty problems may find it very difficult to devote much attention to such tasks, and this may result in poor implementation of the above suggested strategies.

8.5 Sustainable management of urban green spaces in Kumasi

Taking into account the findings of the study and concepts on green space management, a sustainable green space management model has been designed by the study at

this section to enhance the management of green spaces in Kumasi. The model begins with the organisational arrangements for the management of green spaces in Kumasi been built on the theory of collaborative governance. This will enable government agencies on green spaces, private organisations and the local people to come together to take joint projects on green spaces. Using collaborative governance features such as consensus building, dialogue, mutual understanding, community participation, and organisational networks as recommended by Ansell and Gash (2008) will enhance such collaboration. The joint efforts by the stakeholder organisations will help in the formulation of policies and regulations to provide strong institutional and legislative framework for green spaces which is another important feature of the model (Figure 8.7). This will enhance the provision and accessibility of green spaces, and at the same time serve as benchmarks for the green space organisations to frequently review their activities to achieve good outcomes as it is the case in some South African cities such as Johannesburg and Cape Town (Lange & McNamara, 2011).

The enforcement of the institutional and legislative framework will provide an avenue for various strategies (physical, socio-economic or political in nature) to be undertaken to conserve green spaces which is the third feature of the model (Figure 8.7). Comments from almost all the officials of the allied bodies on green spaces that were interviewed in the study were in support of this point. For instance, the officials from the Department of Parks and Gardens, Town and Country Planning Department and the Forest Service Division made it clear that the enforcement of available regulations on green spaces will serve as basis for further strategies to be undertaken to conserve these spaces. Such strategies will help to address challenges facing green spaces in different ways such as lack of priority to green spaces, financial constraints, political interference, poor access to green spaces, inadequate community participation, absence of green space plans, poor maintenance of facilities and

excessive encroachment of green spaces that emerged in the study. The end result will be sustainable green spaces that will provide social, economic and ecological benefits to support the development of urban areas. This outcome will motivate the green space organisations to continue to work together to conserve green spaces and it will keep the process on-going. Figure 8.7 gives a schematic illustration of the sustainable green space management model to show the linkages between various features that go into the model.

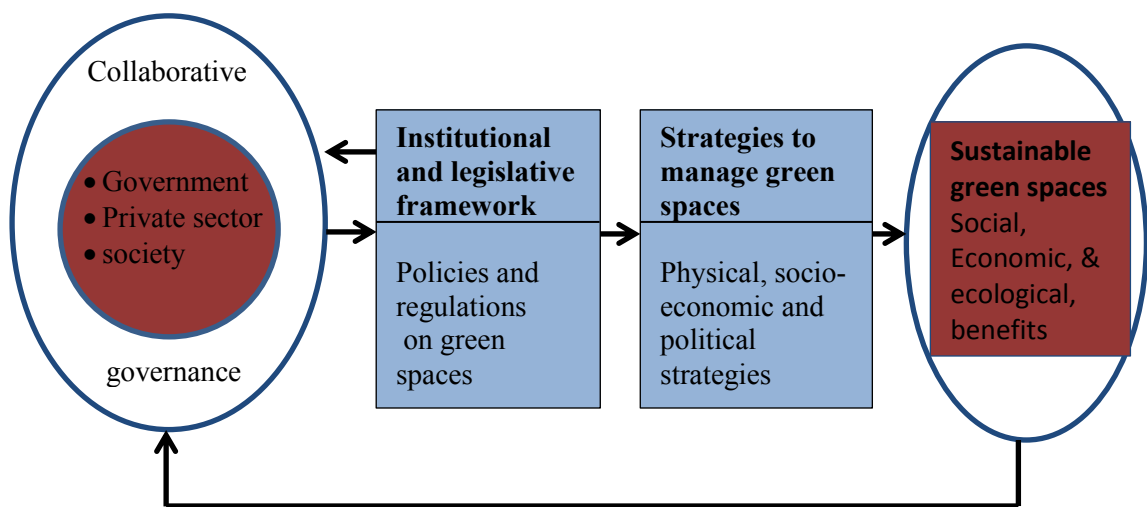


Figure 8.7: A sustainable green space management model

Source: Authors construct (2014)

8.6 Conclusion

The overall management of green spaces in Kumasi was found to be hindered by various challenges which are broadly physical, socio-economic and political in nature. These challenges act as barriers that impede the sustainability of green spaces in Kumasi. To address the physical challenges of managing green spaces, some strategies were found viable. These were enhancing maintenance of green spaces, controlling encroachment of green spaces, and improving accessibility of green spaces by way of converting brownfield sites into green

spaces, embarking on extensive tree planting exercises, incorporating quantitative standards into regulations of green spaces, and creating parks already delineated on the various planning schemes or layouts of Kumasi. Concerning the socio-economic challenges, the suggested strategies to overcome these challenges included the following: Kumasi city authorities prioritising green spaces, allied bodies on green spaces having stable funds for their activities, strengthening of the human resource base and coordination among green space organisations, enhancing community participation and private sector involvement, and embarking on educational campaigns to create much awareness on the need to preserve green spaces. In addressing the political challenges, solving conflicting ownership problems on green spaces, controlling complexities and political interference in the management of green spaces came out as vital strategies.

Collaborative governance was found as the approach through which the above strategies can easily be realised. This was because it was found to provide among other things a platform for wider stakeholder participation, dialogue among stakeholders, strong organisational networks, consensus building, shared ideas, and effective leadership which can be utilised to effectively manage green spaces in Kumasi. Putting all these ideas together, a model to enhance sustainable management of green spaces in Kumasi was designed and this was supported with a diagram illustrating the linkages among the features in the model. Building on the findings of this chapter together with that of the previous chapters, the next chapter concludes the overall study which focused on sustaining urban green spaces in Africa: a case study of Kumasi metropolis (Ghana).

CHAPTER NINE

CONCLUSION

9.1 Introduction

There have been several concerns about the rapid deterioration of urban green spaces across the entire African continent (Mpofu, 2013; Fuwape & Onyekwelu, 2011; Makworo & Mireri, 2011). These concerns mostly focus on the destruction of urban green spaces as a major environmental problem, since such spaces are poorly managed and most often not used for their intended purpose. This chapter concludes the whole study, which focused on sustaining urban green spaces in Africa, a case study of Kumasi metropolis in Ghana. The chapter sets out by first giving a summary of the entire thesis to highlight the objectives, methodology and general overview of the study. It continues by providing the study's major findings to answer the various research questions that were set to guide the study. The chapter further highlights the significant contributions made by the study to the knowledge on urban green space management and related policy implications. The concluding section gives credence to the limitations of the study and areas for future research that can be pursued to enhance the sustainability of urban green spaces in the study area and in developing countries as a whole.

9.2 Summary of thesis

The thesis was informed by various knowledge gaps surrounding urban green spaces in the context of Africa. These gaps included a dearth of literature on Africa's urban green spaces, lack of emphasis on the governing arrangements for these spaces, inadequate focus on factors behind the current state of Africa's urban green spaces, and limited concentration of studies on the sustainability of urban green spaces in Africa. The broad aim of this study was

to assess the governance of urban green spaces and develop sustainable strategies to address problems affecting the development of urban green spaces in the context of Africa. The specific objectives were to:

- Explore the factors behind the current state of urban green spaces in the context of Africa.
- Assess the organisational arrangements surrounding the management of urban green spaces.
- Evaluate the participation of the local people in the management of urban green spaces.
- Recommend strategies to enhance the sustainability of urban green spaces.

In all, the study covered nine chapters with the first part (Chapters 1-4) serving as introduction and providing strong theoretical support. Chapter one introduced the whole study and provided the problem and objectives of the study whilst chapters two, three and four served as literature review chapters and gave well-structured literature on the topic under study. The discussions under the literature review chapters were broadly categorised under three main themes with each being the topic of discussion for each chapter. These themes were green spaces and sustainable urban planning (chapter two), theories and concepts on governance of urban green spaces (chapter three), and urban green spaces and sustainable development in the context of Ghana (Chapter four). The empirical analysis of the study covered chapters six, seven and eight, and focused on issues such as the condition and performance of urban green spaces, governance of urban green spaces and measures to sustain urban green spaces in the context of the study area. The methodology and conclusion of the study were considered in chapters five and nine respectively.

The study was qualitative in nature and utilised the case study research strategy. Kumasi Metropolis in Ghana (formerly regarded as the garden city of West Africa) was therefore selected as the study area. This was due to the city's current problems on urban green spaces which represent all the issues affecting urban green spaces in Africa. Neighbourhoods in Kumasi such as Patasi, Danyame, Ahodwo, Nhyiaso, Amakom were used as specific cases for the study. The green spaces in the central business district were also used as another case. In line with the principles of case study research strategy, different sources of data were relied upon, namely interviews (in-depth interviews and focus group discussions), personal observation, archival records, and documentary data. The study population were selected residents of Kumasi; city authorities; opinion leaders; and officials of some miscellaneous bodies associated with town planning and green space management. The major findings of the study are summarised in the next section along with the various research questions that guided the study.

9.3 Major findings of the study

This section summarises the major findings of the study. For clarity and easy understanding, these findings have been presented along with the different research questions that guided the study.

(a) To what extent does the destruction of urban green spaces contribute to hampering the sustainable development of urban areas?

In answering this research question, an assessment of the present condition of urban green spaces was first undertaken to have first-hand information of the current condition of urban green spaces in the study area, better understanding of the factors responsible for that

condition, and the nature of destructions that the green spaces are subjected to. The green spaces were found to be in poor condition with unsatisfactory results obtained on almost all the themes used for the assessment (attractiveness, maintenance, comfort, safety, accessibility, publicity, and community participation) except only the conservation and heritage theme. The level of attractiveness of the green spaces was poor with matters of absence of signage, walk ways, and poor sanitation conditions being major issues responsible for that. Maintenance of the urban green spaces was also a problem as many of the green spaces were found to have lost almost all their facilities especially Abbeys Park and Kumasi Children's Park. Similar results came up in the comfort and safety themes that were used to assess the present state of the green spaces. Whilst lack of seats, playing facilities, toilet facilities and noisy environment made many urban green spaces in Kumasi uncomfortable to visitors, the level of safety on many parks was bad as problems of criminal activities and lack of lighting facilities on parks emerged in the study.

The poor state of urban green spaces in the study area was also influenced by poor accessibility and low publicity of the green spaces. It was revealed that it takes longer walking distance (approximately an hour) for one to get access to a public park due to many neighbourhoods not having public parks in their areas. The limited green spaces in Kumasi has resulted in the city having a per capita green space of 4.7m^2 which is far below the minimum required standard of 9m^2 recommended by WHO. The poor state of the green spaces was further observed to have made these spaces have low publicity (media advertisement, website, leaflets etc.) because there are not much good features to market the green spaces on. Conservation and heritage was the only area where some successes were made by urban green spaces in Kumasi. The green spaces in many roundabouts and lawns at

the CDB had monuments of great kings and cultural artefacts of the Ashanti people who are the indigenes of the study area.

Six broad factors emerged from the study to be the main causes for the poor state and destruction of urban green spaces in Kumasi. Top among such factors was laxity or poor enforcement of development controls by the Kumasi city authorities. This has caused encroachments of several urban green spaces and resulted in provisions made on green spaces in the planning schemes of many neighbourhoods (such as Patasi, Danyame, and Nhyiaso) not implemented. Insufficient resource base of agencies on green spaces and political interference of the activities of these agencies were behind this factor. Conflicting ownership rights on green space lands by the Lands Commission, Kumasi Metropolitan Assembly and the traditional authorities served as another factor for the poor state of the green spaces. This confusion among the three main bodies has claimed the destruction of many urban green spaces because it does not make the green spaces get the necessary management attention they need. Another major factor was urbanisation. This has led to conversion of many green spaces at the city centre and periphery of Kumasi to different land-uses to contain the growing population of the city.

Other major factors were uncooperative attitudes of the general public towards the preservation of green spaces, low priority to green spaces, and poor coordination among allied bodies on green spaces. The uncooperative attitudes of the general public was found to be influenced by inadequate community participation and the general public's wrong perception of maintenance of green spaces being the sole responsibility of the city authorities and green space organisations. With respect to low priority to green spaces, the study revealed that urban green spaces are not among the top priorities of Kumasi which were found to cover matters of poverty reduction, education, health, and commercial activities. The poor

coordination among organisations on green spaces on the other hand was found to be the result of the functions of some organisations not well structured which makes it difficult for them to collaborate to undertake projects on green spaces.

These factors were found to have caused severe destructions to the green spaces that these spaces are not able to support sustainable development of Kumasi. Socially, it was revealed that the green spaces do not provide enough services to support the aged, child development, recreational activities, social cohesion and health needs of the people. Economically, they do not create much employment opportunities, raise enough revenue, and attract many businesses to locate in Kumasi to support the sustainable development of the area. From ecological perspective, it came to the fore that the green spaces have been destroyed to the extent that they do not provide many benefits to ameliorate the local climate, improve air quality, conserve biodiversity, and enhance the architectural beauty of the study area.

(b) How do inefficient organisational arrangements lead to a weak management of urban green spaces?

The management of green spaces in the study area was covered by the broad decentralised planning system of Ghana. At the national level, the National Development Planning Commission develops national policies that take into account concerns on green spaces. At the regional level, the Regional Coordinating Councils have oversight responsibilities of harmonising development plans of the districts that fall under them to see whether the plans address various needs of the districts such as provision of green spaces before such plans are sent to the national level for final consideration. Much of the management activities on green spaces take place at the district level with different

organisations on green spaces forming part of the organisational framework for town planning at this level. District assemblies (in the context of this study, Kumasi Metropolitan Assembly) control much of the affairs at this level and collaborate with other organisations to ensure that green spaces are properly managed. The organisational structure or network formed by various organisations in the town planning system of Ghana was found to be characterised with weak organisational linkages, poor collaboration, poor involvement of civil society organisations and lack of community participation which was observed to obstruct successful management of green spaces.

The resource base of several organisations on green spaces was not strong. Different government and private organisations on green spaces engaged in the study were seriously faced with problems of financial constraints, lack of logistics (equipment), lack of skilled personnel and inadequate human resources. These problems were very critical at the Department of Parks and Gardens, Town and Country Planning Department, and the Forest Service Division. This does not allow various organisations on green spaces to go about their activities as expected of them.

The overall management of urban green spaces was also observed to be fraught with complex organisational arrangements. This complexity was created by variety of legislative provisions or laws which give legal rights to different bodies to have the ultimate power to manage green spaces in Kumasi. For example, Article 257 of the 1992 Constitution of Ghana gives powers to the Lands Commission to have the ultimate power to manage all public lands including green spaces. Article 267 of the same 1992 Constitution of Ghana also entreats the traditional authorities of Kumasi to control green spaces in their localities. In addition to this, Local Government Law of 1993 (Act 462) designates the Kumasi Metropolitan Assembly to have the highest political authority at the district level and retains much power to manage all

resources in Kumasi including green spaces. These inefficiencies in the legal arrangements have created weak organisational management base for urban green spaces.

Compounding the problem of complexity in the management of urban green spaces was many government agencies being involved in the management of these spaces. Seven government agencies were found performing different roles on green spaces. These agencies included Department of Parks and Gardens, Forest Service Division, Wildlife Division, Environmental Protection Agency, Town and Country Planning Department, Department of Urban Roads and the Works Department. This situation has created complex inter-dependencies, bureaucracies, conflicting roles, and different perceptions among these agencies on green spaces which hinder smooth management of green spaces.

Furthermore, the management of urban green spaces was associated with lack of consensus of decisions on green spaces by various stakeholders. Decisions on green spaces are often undertaken solely by Kumasi Metropolitan Assembly without involving the views of other stakeholder organisations on green spaces. This was found to be influenced by inadequate organised dialogues on green spaces for different stakeholders to share their views and poor sharing of information by the allied agencies on green spaces. The overall governance of urban green spaces was found to be underlined by different types of governance such as the clientelistic and managerial modes of governance, urban regime and urban governance theories, and collaborative governance theory which were in practice in Kumasi. These forms of governance and their associated inefficiencies have created weak governance base for the management of green spaces. They have created poor collaboration among the organisations on green spaces and inadequate enforcement of town planning regulations to preserve such spaces.

(c) To what extent are the local people involved in the management of urban green spaces?

Using indicators such as consultation, information, participation, and empowerment as enshrined in Davidson's (1998) wheel of participation framework, the level of involvement of the local people in the management of urban green space was found to be very low. There was inadequate consultation of the local people to get their needs and concerns about green spaces in their areas. Various bodies responsible for organising such consultations such as Unit Committees and Area Councils were ineffective. Most of these bodies were not functioning and platforms such as community durbars and fora which are supposed to be organised to get the views of the local people on green spaces do not take place in many neighbourhoods.

There was poor flow of information from the Kumasi city authorities to the local people on matters concerning green spaces. In all the five neighbourhoods that were involved in the study, several lands reserved for green spaces were rezoned and released to private developers for different projects by the Kumasi city authorities without the prior notice or idea of the local people. These revelations are contrary to the Town and Country Planning Act (CAP 84) and National Development Planning Commission Act of 1994 of Ghana which oblige local city authorities to inform the local people on any intended project to be undertaken in their neighbourhoods to get their concerns before such projects commence.

Participation of the local people in terms of their representatives being involved in the decision making process on green spaces was unsatisfactory. It came to the fore that participation of the local people are only confined to the bottom half of the organisational structure or hierarchy for town planning at the district level. However, the top half of the organisational structure (various sub-committees, executive committees and the general assembly) where much deliberation and final decisions on development projects such as green

spaces take place had few or no representatives of the local people. This makes it difficult for the concerns of the local to be addressed in final decisions taken on green spaces. There was also limited partnership between the city authorities and the local people in undertaken projects on green spaces as many projects on green spaces were observed to be initiated solely by the Kumasi city authorities.

The extent to which the local people are empowered to self-facilitate and control development projects on green spaces within their neighbourhoods was also poor. This was as result of the local people having limited rights to initiate and control projects on green spaces in Kumasi. The Local Government Act of 1993 (Act 462) and other legislations which support town planning in Ghana do not delegate much rights to the local people in self-facilitating projects on green spaces. Much of such powers are retained by the city authorities and other government bodies on green spaces. This together with inadequate financial support and logistics do not motivate the local people to put in much effort in preserving green spaces in their neighbourhoods.

(d) How can the challenges facing urban green spaces be addressed to enhance the sustainable development strategies of urban areas?

In line with the various challenges that were found to cause deteriorating condition and poor management of urban green spaces in Kumasi, some measures were found appropriate to enhance the sustainability of these spaces in the study area and also provide good lessons for other cities elsewhere. These measures addressed the physical, socio-economic, and political challenges affecting the management of urban green spaces. In addressing the physical challenges, enhanced collaboration between the local city authorities, green space organisations and the local people to undertake maintenance activities on green

spaces came out as a good measure. Such joint efforts can help the stakeholders to easily pull resources together to repair or provide various facilities on green spaces, and also get more people to undertake frequent maintenance works to enhance the sustainability of these spaces.

Other good physical measures were controlling encroachment of urban green space by enforcing laid down development controls on green spaces by local city authorities and also institutionalising an award scheme on green spaces to motivate neighbourhoods to conserve green spaces in their areas. Another important physical measure was enhancing access to urban green spaces by way of creating additional green spaces such as parks and gardens. This could be achieved by incorporating quantitative standards into the regulations on green spaces, embarking on extensive tree planting and greening campaigns, converting brownfield sites into green spaces, and developing sites demarcated on planning schemes for green spaces.

Under the socio-economic measures, prioritising urban green spaces in development agendas came out as a major strategy. Such prioritisation could take the form of much emphasis given to green spaces in the city's development plan, developing policies on urban green spaces, and creating green space strategy or plan to set out long-term visions for green spaces through dialogue with various stakeholders on green spaces. The government providing stable financial support for green space development through budgetary allocations, and agencies on green spaces engaging in income generation activities to support the development of green spaces also served as important measures. Another major socio-economic measure was strong coordination among allied bodies on green spaces. This can be realised by the allied bodies keeping their channels for communication open, facilitating joint action, avoiding unilateral decisions, and having strong linkages among them. In addition to this, strengthening the resource base of agencies on green spaces (qualified workers,

equipment etc.) to go about their activities effectively, promoting community participation and intensive educational campaigns on the conservation of green spaces also emerged as key socio-economic measures that can be pursued by the Kumasi city authorities to enhance the management of green spaces.

Concerning the political challenges, different measures also offered themselves as appropriate to enhance the sustainability of urban green spaces in the study area. These measures included the government of Ghana addressing conflicting ownership rights on green spaces by amending the available laws on green spaces to specify clearly the body that has absolute authority to manage green spaces in Kumasi. Restructuring or downsizing the number of organisations on green spaces, and retaining organisations that play critical roles on green spaces also came out as good measures that can be pursued to control complex organisational arrangements on the management of green spaces. Avoiding political interference offers another political measure to get rid of government officials unduly interfering in the activities of cognate agencies on green spaces which was found to disrupt effective management of green spaces in the study area.

9.4 Major conclusions from the study

Based on the general findings and objectives of the study, the following major conclusions can be drawn.

- Urban green spaces in Kumasi can be said to be in precarious condition. Different features that give an indication of good-condition urban green spaces such as attractiveness, comfort, safety, accessibility, maintenance, publicity and community participation are all in a poor state. Only in the area of conservation and heritage that the green spaces produced some satisfactory results, with some of them containing different

cultural artefacts. This generally poor state of urban green spaces is a result of a multiplicity of factors coming together. These factors include laxity in the enforcement of development controls, conflicting ownership rights on green spaces, urbanisation, uncooperative attitudes of the general public, low priority to given urban green spaces in development agendas, and poor coordination among allied bodies on green spaces.

- The collaborative governance theory which underlines the management of urban green spaces in Kumasi is ineffective on the ground. Decisions on urban green spaces are not based on consensus ideas of all the stakeholders but are rather undertaken independently by the city authorities. The local people are willing to actively participate in the management of green spaces, but they are neither consulted nor informed on matters concerning urban green spaces by the Kumasi city authorities. They are also not properly represented in the decision making process on green spaces and furthermore not empowered by the city authorities and available laws to self-facilitate green space projects in their neighbourhoods. A complex organisational structure and poor regulation of “power” among various organisations on green spaces, due to unstructured organisational networks and fragmentation of roles among the organisations on green spaces, makes it difficult for them to collaborate well to manage green spaces. These problems are compounded by limited dialogue, poor sharing of information and lack of mutual understanding among the allied organisations on decisions concerning green spaces.
- The overall governance in practice on the management of green spaces in Kumasi is a mixed one, bearing features of different modes and theories of urban governance. At the national level, the managerial mode of governance is used by the central government to control most of the affairs on urban green spaces, with the allied bodies on green spaces

not having much power to take their own initiative. At the district level (Kumasi metropolis), the clientelistic mode of governance is visible, with decisions on urban green spaces interrupted by the self-interest of some city officials, and the appointment of many individuals into roles governing the planning and management of urban green spaces is based on their political affiliation with the President of Ghana. Temporary coalition of organisations, which is a feature of urban regime governance theory, is applied by the city authorities to get some organisations together for a few dialogues on green spaces. The problems caused by these types of governance, together with the parallel operation of the traditional monarchical system of the Ashanti Kingdom and the authority of the Government of Ghana in Kumasi, have resulted in weak governance base for the management of urban green spaces in the area.

- Looking at the garden city model from the perspective of green spaces, Kumasi can be said to have lost its garden city status. Excessive depletion of urban green spaces and encroachment into them for different human activities has resulted in Kumasi having very few parks and gardens, and an inadequate number of urban trees. The city has lost all of its green belt due to urban sprawl. Urban green spaces now occupy a small proportion of the landmass of Kumasi (4.7m^2 per capita green space which is far below the minimum standard of WHO which is 9m^2), which is contrary to the principles of the garden city model that the city was built on.
- The sustainable development of Kumasi is hindered by the deteriorating conditions of urban green spaces in the area. Poor commitment by the city authorities and the general public toward the conservation of urban green spaces has resulted in widespread depletion of these spaces to the extent that they do not provide enough social, economic or environmental benefits to support sustainable development activities in the area. This

gives the idea that the concept of environmental sustainability, which encourages the maintenance of environmental resources such as green spaces, is not seriously pursued in Kumasi. This conclusion shows how lack of attention to urban green spaces can hamper the sustainability of cities, and hence makes it quite imperative for such spaces to be prioritised in the development agenda of cities so that many benefits can be derived from them to enhance the sustainable activities of cities.

- A number of factors influencing the decline of urban green spaces in Kumasi show that the depletion of urban green spaces is not only the result of urbanisation, which is receiving much attention world-wide. This provides a lesson to cities elsewhere, especially in Africa (where there is much pressure on urban green spaces) that the destruction or loss of urban green spaces should be treated as a multi-dimensional problem, where broad efforts should be made to address the problem from different perspectives. A narrow approach to handling the depletion of urban green spaces with much emphasis given to urbanisation may worsen the problem since other major challenges may not be attended to.

9.5 Contributions of the study

The study has made some significant contributions to enhance the knowledge base of urban green spaces and the sustainability of these spaces in the physical landscape of urban areas. Key among such contributions is the development of a green space assessment framework by the study to improve the condition of green spaces in urban areas. This assessment framework puts together eight broad themes of an ideal urban green space (attractiveness, comfort, safety, publicity, accessibility, community participation, maintenance, and conservation and heritage) and their well-structured indicators. The

framework serves as a guide for city authorities and green space organisations to frequently assess the condition of urban green spaces and undertake measures in areas where the green spaces are in a poor state. The geographical context from which this framework was developed makes its application more suitable in Africa and other developing countries which face similar problems of the study area.

Theoretically, the study strengthens the theoretical underpinnings on the management of green spaces. It has established strong linkages between the concepts of green spaces, governance and sustainability, and how such linkages can lead to a successful management of urban green spaces (Wolch et al., 2014; Gisselquist, 2012; UNEP, 2011; Chiesura, 2004). Different illustrations of the study on the relationships between green spaces, sustainable development and governance clearly exemplified these inter-connections, and well situate green spaces in a broader debate on sustainability and governance that is useful for an integrated approach to conserve green spaces. In addition to this, the study has expanded the application of the theory of collaborative governance from a more business management perspective to cover issues of green space management. This has helped to highlight how various principles or features of collaborative governance such as consensus building, facilitative leadership, dialogue, power relations and institutional design (Emerson et al., 2012; Ansell & Gash, 2008) can contribute to enhance the management of urban green spaces. Building on Azadi's (2011) multi-stakeholders framework on green spaces, different concepts and ideas were assembled by the study to create a conceptual framework to assess the management of urban green spaces. The study further contributes to the theoretical perspectives on green spaces by relying on the findings from the study area to design a sustainable green space management model. The model highlights the linkages between

various features that have to be given attention in order to enhance the sustainability of urban green spaces.

The study also makes relevant contributions in different respects which have wider policy implications. By designing a coordination model, it provides strategies to address complex organisational arrangements which often hinder effective management of urban green spaces. The model, which is an extension of Abbott's (2012) views on urban management provides innovative ideas to address organisational complexities on green spaces around four broad themes: creating connectivity among organisations on green spaces; opening up channels for communication; facilitating joint action; and avoiding unilateral decisions. Furthermore, the processes developed by the study to aid the preparation of green space plan, or strategies in the study area provide a useful approach that policy makers in developing countries, especially Africa, can dwell on to prepare a green space plan or strategy in their areas. Moreover, the variety of strategies proposed by the study to enhance the sustainability of urban green spaces offer a wider range of measures that can be utilised to successfully manage urban green spaces. Such strategies provide the Kumasi city authorities and other city authorities elsewhere, a broader range of ideas that can be incorporated into development agendas and different planning strategies to support sustainable development initiatives of cities.

Finally, the study has also expanded the existing knowledge on urban green spaces in Africa where there is limited literature. It provides a comprehensive discussion on the nature and challenges of Africa's green spaces (especially Chapter 5), which offers a good reference material for subsequent studies on green spaces in the context of Africa. Four peer-reviewed papers have already been published out of this study to augment the literature on urban green spaces in Africa.

9.6 Limitations of the study and areas for future research

The study gives a comprehensive assessment of the governance of urban green spaces, and provides sustainable strategies to address problems affecting the development of urban green spaces in the context of Africa. However, it has some limitations in different areas. For instance, although the study covers a variety of urban green spaces, attention was not given to cemeteries, which also constitute an important aspect of urban green spaces. This was a result of the fact that cemeteries are not treated as important urban green spaces in the study area, and their management falls outside the core responsibilities of the organisations on green spaces in the study area. This limits the scope of the study in that direction.

Furthermore, health and safety issues emerged as a problem in the study but were not given thorough scientific analysis from the perspective of health sciences. This was due to background of the whole thesis, which was undertaken from the angle of urban planning and human geography. The use of case study design also made the study concentrate more on the study area, which to some extent limits the generalisability of the study's findings to the context of Africa and other developing countries which have similar problems like the study area.

Taking into account the limitations of the study, and a broad overview of the literature on urban green spaces, some areas offer opportunities for future research. With matters on health and safety now dominating the global agenda on human development and environmental safety, especially in developing countries, future research can focus on health and safety issues of urban green spaces. Such studies can broadly explore various health and safety challenges of urban green spaces, provide thorough scientific analysis and help in creating strategies to address such problems in the context of developing countries. This will help to protect the lives and well-being of visitors who use urban green spaces.

Another important area on which future research on urban green spaces can concentrate is the conversion of brownfield sites into green spaces. This idea appears in the literature as one important initiative that can be exploited to create additional parks and gardens to improve accessibility of green spaces, but it has not received much attention in Africa and other developing countries. The current study fairly discussed this idea, so future studies can build on this to conduct a comprehensive assessment of how brownfield sites can be utilised to create additional green spaces in the context of Africa.

In addition to this, the limited attention given to cemeteries as important urban green spaces in many developing countries opens another area for future research. Studies can concentrate on integrating cemeteries into the broad green infrastructure of urban areas. Such efforts will help in upgrading urban cemeteries so that they have many green space facilities. From a theoretical perspective, behavioural theories can be applied to study the behavioural dimensions on the destruction of urban green spaces. This will help to find out how the behaviours of the users and managers of urban green spaces contribute to depleting such spaces.

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APPENDICES

APPENDIX I

IN-DEPTH INTERVIEW GUIDE FOR THE KUMASI CITY AUTHORITIES AND BODIES ON GREEN SPACES

Date of interview:

Place of interview:

Interviewee Gender:

Organisation/Institution:

Position/title:

Introduction

This study is in partial fulfillment of the requirement for award of PhD degree in Geography, Earth and Environmental Science at the University of Birmingham, UK. The main objective of this research is to devise strategies to develop and sustain urban green spaces in the Kumasi Metropolis. This in-depth interview guide is designed to elicit information on the governance of urban green spaces in Kumasi. You are assured of full confidentiality, privacy and anonymity of all the information that will be given by you. You should therefore feel free to give me the right information to ensure the success of this work. Thanks for your cooperation.

PART ONE: GENERAL INFORMATION

- Give examples of green spaces common in Kumasi. Ask further for specific green spaces that they are involved in its management?
- What is the current state or condition of green spaces in Kumasi? Probe further on for information on specific issues such as attractiveness, comfort, safety, maintenance, accessibility, publicity, community participation, and conservation and heritage.
- Are the green spaces able to support the sustainable development of Kumasi? Tailor your answer to the economic, social and environmental development of Kumasi.

PART TWO: POWER RELATIONSHIPS

Authority

- What roles do your outfit performs in relation to the management of green spaces in Kumasi? Comment on the where you draw you source of authority from.
- How does your institution or organisation perform these roles?
- Among these roles which one(s) does your institution perform best?
- In general, how do see the roles of your institution? Probe whether they are rigid, insufficient, not well structured etc.
- How do you see the town planning regulations of Ghana on the management of urban green spaces? Probe further to assess the enforcement of such regulations.
- What challenges affects the regulation of power on green space management?

Involvement

- To what extent is your institution represented in any dialogue/discussion on green spaces in Kumasi? Probe for examples of such discussion and the objectives of these discussions.
- How frequent are these discussions organized?
- What challenges are affecting the involvement of your outfit in the management of green spaces in Kumasi?

Resources

- What is the financial situation of your institution? Probe further for how they finance their activities and the effect of their financial situation on the development of urban green spaces in Kumasi.
- What is the staff strength of your institution? Probe further on the performance of the staff, and the general effects of the staff strength of the institution on the development of urban green spaces in Kumasi.
- What is the situation of logistics of your institution? Probe for examples of the logistics, their state and the effects of the condition of the logistics on the development of green spaces.

- What are some of the initiatives that your outfit has come up with or do you think can be put in place to enhance the development of green spaces in Kumasi?

PART THREE: INSTITUTIONAL DESIGN

- Mention some institutions or bodies that your outfit collaborates with to manage green spaces in Kumasi.
- What contribution does your outfit give to these institutions and they also in turn provide to you to manage the green spaces?
- How can you classify the kind of relationship that exists between your outfit and other sister institutions associated with the management of green spaces? Probe for specific institutions that the institution in question is in good or bad terms with.
- Comment on some of the good and bad outcomes of the collaboration of the institutions on the management of green spaces in Kumasi.
- How will you rate the level of involvement of the local people in the management of the green spaces? Probe for specific stage(s) that the local people are involved in the management of green spaces?
- In your opinion, which institutions are doing well and also not doing well concerning the management of green spaces in Kumasi?
- What is your perception on green spaces? Your answer should be focused on what green spaces should be used for, which institution should manage it, and how green spaces should be managed.

PART FOUR: CONSENSUS BUILDING

- How do you see the flow of information between the institutions mandated to manage green spaces in Kumasi?
- To what extent are the views of your outfit taken into account on decisions on the management of green spaces in Kumasi?
- In your opinion, can you say that initiatives or decisions on the management of green spaces in Kumasi are based on common agreed decision of all the stakeholders on green spaces. Give explanation for your answer?

- Are decisions on green spaces based on mutual understanding of stakeholders on green spaces?

PART FIVE: FACTORS AFFECTING THE DEVELOPMENT OF GREEN SPACES

- Several factors have been identified in the literature to obstruct the development of urban green spaces, in Kumasi which specific factors are affecting the poor development of green spaces?
- Among these factors which one(s) are the most pressing and why?
- Which institutions do you think need to improve their activities to enhance the development of urban green spaces in Kumasi?
- What is the way forward for successful development of urban green spaces in Kumasi?

THANK YOU

APPENDIX II

FOCUS GROUP DISCUSSION GUIDE FOR THE RESIDENTS OF KUMASI

Name of the interviewer:

Name of Neighbourhood:

Date:

Introduction

This study is in partial fulfillment of the requirement for award of PhD degree in Geography, Earth and Environmental Science at the University of Birmingham, UK. The main objective of this research is to devise strategies to develop and sustain urban green spaces in the Kumasi Metropolis. This focus group discussion guide is designed to obtain information on the development of green spaces in this neighbourhood and Kumasi as a whole. You are assured of full confidentiality, privacy and anonymity of all the information that will be given by you. You should therefore feel free to give me the right information to ensure the success of this work. Thanks for your cooperation.

PART ONE: GENERAL INFORMATION ON URBAN GREEN SPACES

- Give some general examples and benefits of green spaces (environmental, social and economic) you know.
- Mention some of the green spaces present in this neighbourhood?
- What specific benefits do this neighbourhood get from the green space found here?
- Are the green spaces able to support the sustainable development of Kumasi? Tailor your answer to the economic, social and environmental development of Kumasi.

PART TWO: CONDITION/STATE OF URBAN GREEN SPACES

- How will you rate the condition of the green spaces in this neighbourhoods based on the under listed themes?

Theme	Good	Fairly good	Bad	Reason
Attractiveness				
Comfort				
Accessibility				
Safety				
Comfort (facilities)				
Maintenance				
Community participation in their management				
Conservation and heritage				
Publicity				

- How will you rate overall condition of green spaces in this neighbourhood and why?

PART THREE: MANAGEMENT OF URBAN GREEN SPACES

- How do you see the town planning regulations of Ghana on the management of urban green spaces? Probe further to assess the enforcement of such regulations.
- To what extent are members of this neighbourhood represented in any dialogue/discussion on green spaces in Kumasi? Probe for examples of such discussion and the objectives of these discussions.
- To what extent are the views of this neighbourhood taken into account on the decisions regarding the management of green spaces in this neighbourhood?

- In your opinion, initiatives or decisions on the management of green spaces in Kumasi are based on common agreed decision of all the stakeholders on green spaces?
- How can you assess the involvement of the local people in the management of green spaces in this neighbourhood? Probe for their involvement along the various stages of community participation such as consultation, information, participation and empowerment issues on green spaces.
- In your opinion, which institutions are doing well and also not doing well concerning the management of green spaces in this neighbourhood?
- What is the level of collaboration between the city authorities of Kumasi and the local people in this neighbourhood on the management of green spaces in this area? Probe for specific bodies the neighbourhood is in good or bad terms with.

PART FOUR: FACTORS AFFECTING THE DEVELOPMENT OF GREEN SPACES

- Several factors have been identified in the literature to obstruct the development of urban green spaces, in this neighbourhood and Kumasi in general which specific factors are affecting the poor development of green spaces?
- Among these factors which one(s) are the most pressing and why?
- Which institutions do you think need to improve their activities to enhance the development of urban green spaces in this neighbourhood?
- What measures do you recommend for successful development of urban green spaces in this neighbourhood?

THANK YOU

APPENDIX III

OBSERVATION CHECKLIST/GUIDE

Observation checklist on the condition and activities on urban green spaces in Kumasi			
Date	Time	Area	Event or activity observed