

PUBLIC GREEN SPACE IN TWENTIETH CENTURY POST-COLONIAL CAPITAL
CITIES: A CASE STUDY OF ABUJA

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ABSTRACT

PUBLIC GREEN SPACE IN TWENTIETH CENTURY POST-COLONIAL CAPITAL CITIES: A CASE STUDY OF ABUJA

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This thesis analyzes the provision of public green spaces in twentieth century post-colonial capital cities that were shaped according to modernist city planning ideals. The purpose-built capital cities in question are located in former colonial territories of Africa, Asia and Latin America. In Asia and Latin America, Chandigarh and Brasilia are the new postcolonial capital cities erected in the aftermath of their various country's independence. The master plans of these cities incorporate extensive landscaping and exhibit a well-thought hierarchy of open spaces which was successfully implemented along with the more functionalist components of urban development schemes. This is in contrast to the purpose-built postcolonial capital cities of Africa such as Abuja, Dodoma, Lilongwe and Gaborone which were also shaped according to modernist planning ideals, but failed to implement their plans especially public green spaces due to lack of adequate funds and other political issues involved. In the case study of Abuja, the public green spaces provided in the 1987 master plan of Phase I were not completely implemented. A time frame analysis of PGS conducted from 2003-2017 revealed several lands allocated to parks are converted into buildings, dumping sites or commercial trade spaces.

Keywords: Public green spaces, Master plan, Post-colonial capitals, Abuja, Nigeria.

ÖZET

YİRMİNCİ YÜZYILIN SÖMÜRGE SONRASI BAŞKENTLERİNDE KAMUSAL YEŞİL ALAN: ABUJA VAKA ÇALIŞMASI

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Bu tez, 20. yüzyılın sömürge sonrası başkentlerinde, modernist şehir planlama ideallerine göre şekillendirilen kamusal yeşil alanların sağlanmasını analiz etmektedir. Amaca yönelik inşa edilen başkentler Afrika'nın, Asya'nın ve Latin Amerika'nın eski kolonyal bölgelerinde bulunuyor. Asya ve Latin Amerika'da, Chandigarh ve Brezilya, çeşitli ülkelerin bağımsızlığının ardından kurulan yeni sömürge sonrası başkentlerdir. Bu şehirlerin masterplanları kapsamlı peyzaj düzenlemeleri içermekte ve kentsel gelişim şemalarının daha işlevsel bileşenleri kullanılarak başarılı bir şekilde uygulanan açık alanların iyi düşünülmüş bir hiyerarşisini sergilemektedir. Afro, Dodoma, Lilongwe ve Gaborone gibi Afrika'nın amaca yönelik olarak inşa edilmiş sömürge sonrası başkentleri de modernist planlama ideallerine göre şekillendirilmiş ancak uygun finansal desteğin bulunmaması ve diğer politik konular nedeniyle bu planların uygulanması özellikle halka açık yeşil alanların hayata geçirilmesi başarısızlıkla sonuçlanmıştır. Abuja vaka incelemesinde, 1987 masterplanının birinci evresinde sağlanan kamusal yeşil alanlar tamamen uygulanmamıştır. PGS'nin 2003-2017 zaman dilimi analizindeki sonuçlar, parklara tahsis edilen birkaç arazinin, yapı alanı, atık alanı veya ticari ticaret alanlarına dönüştürüldüğünü gösteriyor.

Anahtar Kelimeler: Ana plan, kamusal yeşil alanlar, Post-kolonyal, Abuja, Nijerya.

To My Parents

TABLE OF CONTENT

ABSTRACT	vi
ÖZET.....	viii
LIST OF TABLES	xii
LIST OF FIGURES	xiii
1. INTRODUCTION	1
1.1 Research Questions	4
1.2 Methodology	5
2. TWENTIETH CENTURY PURPOSE-BUILT POST-COLONIAL CAPITAL CITIES	7
3. PUBLIC GREEN SPACES IN TWENTIETH CENTURY POST-COLONIAL CAPITALS.	20
4. PUBLIC GREEN SPACES IN PURPOSE-BUILT POST-COLONIAL CAPITAL CITIES OF AFRICA	30
4.1 Gaborone, Botswana.	32
4.2 Lilongwe, Malawi.	34
4.3 Dodoma, Tanzania.	36
5. A CASE STUDY: ABUJA	39
5.1. Destruction of Public Green Spaces in Implementing the Master Plan	44
5.2. Provision of Public Green Spaces in 1987 land-use map of Abuja	47
5.2.1 The Mall in Central Business District (CBD).....	48
5.2.2 Residential Areas	52

5.3 Changes that Occurred in P.G.S from Modernist plan (1987) - Contemporary Urban Form (2017).....	52
6. DISCUSSIONS & CONCLUSION	63
BIBLIOGRAPHY	67

LIST OF TABLES

1. Showing the new capital cities in Africa, Asia and Latin America since 1960 (Hall, 2006)..... 10
2. List of Public Green Spaces from the 1987 plan and 2017 satellite map showing what was implemented.54
3. List of Public Green Spaces in phase 1 from 2017 satellite map and their uses.....57

TABLE OF FIGURES

1.	Le Corbusier’s Master plan of Chandigarh showing Green spaces (Avasak, et al., n.d.).....	14
2.	Showing Afforestation (Buffer zone) and major open spaces in Dodoma (Myers, 2011).....	17
3.	Showing the location of Lilongwe within Malawi (Myers, 2011).....	18
4.	Showing Eagle Square in Abuja (Obike, 2015).....	23
5.	Showing the planned capital city of Chandigarh (Krier, n.d.).....	25
6.	Showing Rajendra Park spread over a sprawling area of 400acres designed by Le Corbusier as part of the Capitol Park (Anon., 2017).	26
7.	Showing Rose Garden as it spreads over an area of 27acres, it is largest of its kind in Asia (Mangalore, 2017).	27
8.	Showing the vast open green space in Brasilia (Anon., n.d.).....	28
9.	Showing vegetation and new post-colonial capital cities in Africa (Anon., n.d.)...31	31
10.	Showing destroyed green playground (Mosha, n.d.)	33
11.	Showing cows and goats roaming freely eating up the green pasture (Mosha, n.d.).	33
12.	Showing green spaces in Lilongwe (Anon., 2016).	35
13.	Showing the location of Federal Capital Territory of Abuja within Nigeria	41
14.	Showing Master Plan for Abuja designed by the IPA associates and other firms (IPA, 1979).	42
15.	Showing Thomas Todd, IPA and WRT study of how Abuja’s urban form compares to other purpose built capitals (Elleh, 2017).....	44
16.	Showing the development of Abuja in several phases (Ikejiofor, 1998).	46
17.	Showing the 1989 landuse map of Phase 1. Source FCDA	47

19.	Tange’s design for the 1960 Tokyo Bay master plan (Elleh, 2017).	49
20.	Showing a closer view of the mall (Tange, et al., 1998).....	50
21.	Kenzo Tange’s plan for the Central Area showing open spaces, landscaping and vista (Tange, et al., 1998).	51
22.	Showing the 2017 map taken from Google earth.....	53
23.	2003 map shows the area allocated as Afro-Asian Park, development began in 2010 and then converted into a building in 2017. From (left-right).....	55
24.	Showing the undeveloped Glaval Park in 2003, park began to develop in 2010 and turned into a vacant land 2017. From (left-right).	56
25.	Showing the development of park development from a settlement in 2003 to designed park in 2017. From (left-right)	56
26.	Showing Ecowas Park gradually developing into built environment from 2003- 2010-2017.....	56
27.	Showing the location of the never existing Dream Park from 2003-2017 (left- right).	57
28.	Showing a conversion from a green sapce in 2003,2010 to a built space in 2017 ..	57
31.	Showing people enjoying millennium park on Weekends.....	60
32.	Showing the entrance gate of millennium park.....	61
34.	Showing a chart of 2017 PGS in Phase 1, Abuja.....	61

CHAPTER 1

INTRODUCTION

Public Green spaces are significantly important issues in cities. This is not only related to their aesthetics value but also with sustainability and health benefits. There is an increased recognition that enhancing public green spaces in cities provides a strategy to make those cities more sustainable, more livable, and more equitable. This involves a new approach to public spaces that integrates infrastructure needs, takes equity into account and reexamines range of uses public spaces offer. (Pincetl & Gearin, 2005: 367). Mainly the distribution of green spaces in cities is tend to be concentrated near commercial core or rich residents. Public green spaces are important for the physical and psychological wellbeing of urban residents, especially in poor neighborhoods with high population density (McConnachie & Shackleton, 2006)

Although cities cover less than 5% of the earth's landscape, substantial amount of green spaces can be found in them. Urban planning does not only cover built environment such as housing and transportation network but also the integration of green spaces into the physical urban landscapes. These green spaces include all public and private green areas mostly covered by vegetation which are directly passive recreational or indirectly has positive influences on the urban environment available for use. These include parks, gardens, allotments, wetlands and urban trees. Planning concepts such as garden city, greenbelts, green fingers and greenways aim at preserving the natural environment in urban areas by incorporating many green spaces into the design of cities. Statistics show that green spaces are depleting at a fast rate in urban areas across the world. For example,

European cities found between 7.3 and 41% of land reserved as green spaces have been lost to different land uses. This is even more alarming in developing countries, but the situation in Africa is even worse. Studies on several African counties reveal that there is an intense pressure on green spaces due to urban development and various related human activities (Mensah, 2014). Lack of adequate planning strategies are amongst the factors that lead to the negligence of public green spaces in most developing countries (Adjei, 2014).

Most post-colonial cities faced high rates of urbanization after gaining their independence which in turn led to the mushrooming of informal settlements in and around urban greens. According to African green city index there is an estimate of less than 10% coverage of green spaces in the land area of many African countries like Nigeria, Rwanda, Ghana, Somalia and South Africa while some cities like Cairo and Angola fall below 1m square per person. Urban green is under threat in these cities, faced with several challenges and deteriorating conditions. These challenges are as a result of high rate of urban poverty, lack of priority to green spaces in development agenda, uncooperative attitude of local people and lack of political stability which causes wars in countries like Nigeria Somalia, Sudan, Rwanda and other developing countries (Adjei C. M., 2014: 2).

This study aims to examine the provision of public green spaces in purpose-built twentieth century post-colonial capital cities in terms of their urban design and planning approaches. The focus will be on the relationship between post-colonial nation building efforts, and the adoption of modernist approach in the design of their public green spaces. The cities in question are located in the former colonial territories of Latin America and Asia, with specific focus on African cities. The African search for modernity and national identity in the context of decolonization serves as an interesting case study for an analysis of modern planning ideals as they relate to the design of public green spaces. My particular focus here will be on the design, changes and land-abuse of public green spaces in Nigeria's purpose-built capital city of Abuja.

I developed interest in this topic in order to merge different topics of my interest; public green spaces, post-colonialism, purpose-built capital cities and modernist planning ideals.

Another influential factor that led to this thesis is lack of adequate scholarly attention given to the developed world in the context of public green spaces. As Carl Death argues that most research on the drivers and implications of the emergence of green state tend to focus on a set of usual suspects of Nordic countries like Germany, Netherland, Japan, Canada, Australia, UK and the USA while ignoring the developed world (Death, 2016: 117). There are some scholars like Jose Mauel Fernandes (2002), Ana Magalhaes and Ines Govencalves (2009), Brian McLaren's (2006) and many others conduct studies on former colonial territories. This is to show how these authors have their sphere of familiarities along lines that follow the domains of former colonizing power.

To understand the public green spaces in purpose built post-colonial capital cities capital that were shaped by modernist planning ideals, I would suggest some things to be kept in mind beyond how the pictures of urban green spaces are achieved. First, we should consider that the twentieth century witnessed the end of colonialization that led to the emergence of new capital cities around the globe more especially in countries of formerly colonial territories in order to shore up the empirical power. Again early twentieth century have witnessed the emergence of modernist city planning based on rational comprehensive model that emphasizes grand plans and programs developed by experts and implemented using a top-down approach to planning in order to break with traditional and initiate social change (Abubakar & Doan, n.d.). We also need to consider how these projects of creating new post-colonial capital cities were done: who actually built them? How did the people responsible for building the new capital cities portray their modernist approach and integrate public green spaces in creating their master plans? Purpose-built capitals like Abuja, Brasilia, Dodoma, Chandigarh and Gaborone represent a huge political influence in moving their capitals to wipe away colonial imprints on their older capitals and serve administrative functions. These newly created capital cities were designated along with a huge provision of urban green spaces and other public green spaces similar to the earlier created capital cities of Washington, Canberra and Ottawa (Gordon & Scott, 2008: 137).

The building of these new capital cities began after the end of colonization around the globe between 1947-1977. Of course the later new town building was in Africa because it was the last continent to be decolonized.

Second we should consider what influences the move of these capital cities and how the green spaces provided in the master plan were shaped according to modernist ideals. As a case study of Abuja it is necessary to understand whether the green spaces provided in the master plan were implemented or not and also analyze changes that occurred over a time frame of the modernist plan to contemporary urban form (1987-2017). Although this study tackles postcolonial capitals cities from different geographies of Asia and Latin America, my specific emphasis on African cities is to understand how African cities in general deal with public green spaces. This is also because I am coming from an African city and I understand and have witnessed several abuses of public green spaces, used either as commercial, parking lot or even deterioration because of inadequate governmental care.

1.1 Research Questions

In order to analyze public green spaces in the twentieth century postcolonial capital cities in Asia, Latin America and Africa, the following research questions have been asked:

1. What are the continents impacted by colonialism and how did post-colonialism impact the development of post-colonial capital cities?
2. What are public green spaces and how are they shaped according to modernist planning ideals in the twentieth century purpose-built post-colonial cities?
 - i) How did modernist plan shaped the public green spaces shaped in post-colonial capitals of Chandigarh and Brasilia (1947-1955)?
 - ii) How are the post-colonial capitals in Africa shaped according to modernist ideals? And what are the state of green spaces? (1950's late modernist planning).
3. How are the public green spaces shaped in the 1987 modernist plan of Abuja?
 - i) How much green spaces were implemented from the 1987 master plan? And what are the changes that took place from 1987-2017

- ii) Why are public green spaces abused in Abuja and what are their benefits?

1.2 Methodology

The analyses of public green spaces in twentieth century postcolonial capital cities is based on the study of relevant literatures and an extensive examination on post-colonialism, modernist planning and public green spaces. This assessment was conducted in accordance with variety of secondary data, maps, google maps, sources from planning and governmental documents, books, journal articles and various websites.

Descriptive Case Study Research Method is utilized in this thesis; which is a reference theory or model that directs data collection and case description (Scholz and Tietje 2002, 12). A descriptive case study can either reflect an embedded or holistic method. A holistic case study involves a quantitative method that consists of the narrative description of a case; whereas in the embedded type of case study research, the research is not only conducted through qualitative evaluations but also it comprises of several cases or several units in one case where the case is described through data collections (Scholz and Tietje 2002). Moreover, if the background of the research brings together multiple disciplines, the case studies can suggest new understandings for the language of architecture by enlarging the research resources of the discipline (Groar, L., Wang, D. 2002).

In this thesis, different cases were selected from different geographies through multiple data collection obtained from architectural description. The overall research is based on four parts each of which is interrelating to each other in sequence. Chapter 2 will discuss the term post-colonialism which is only concerned with the end of colonialism that led to the capital city planning across the globe. These purpose-built capital cities are termed as post-colonial capital cities where modernist approach was adapted the new capitals of formerly colonial territories of India, Brazil, Tanzania, Malawi and Nigeria. This is because modernist planning ideals, which developed in the first half of the twentieth century, were only tested out on a large scale precisely at the end of colonialism. The lack of ornamentation of the modernist that served well for the developing world where people are struggling with lack of sufficient funds.

In Chapter 3, I will discuss public green spaces, its importance in cities and specifically examine the public green spaces in well-known examples of the twentieth century modernist planned capital cities of Chandigarh and Brasilia. Both the capital cities of Brasilia and Chandigarh were built by well-known modernist architects consisting of abundant green spaces. Following this brief review of the green spaces in these two cities located in the decolonized territories of Asia and Latin America, Chapter 4 will discuss green spaces in the purpose-built post-colonial capital cities of Africa. This will help provide a comparison and contrast between different purpose-built capitals cities located in different geographies. The study will help understand the importance given to green spaces in African cities.

In Chapter 5, will discuss the move of the Nigeria's seat of government from Lagos to Abuja. The commissioning of the International Planning Associates to plan the new capital and the later selection of Kenzo Tange design the central area. The focus on this chapter will discuss the green spaces provided from the 1987 masterplan, analyze the implemented public green spaces and observe the changes that have occurred from 2003-2017.

CHAPTER 2

TWENTIETH CENTURY PURPOSE-BUILT POST-COLONIAL CAPITAL CITIES

The semantic meaning of the term ‘post-colonial’ is concerned only with the national culture after the departure of imperial power from colonized territory. Post-colonial is also a term used for the new cross-cultural criticism which has emerged in recent years and the discourse through which this was constituted. Most literatures written on African countries, Australia, Bangladesh, Canada, Caribbean countries, India, Malaysia, Malta, New Zealand, Pakistan, Singapore, South Pacific Island countries, and Sri Lanka are all post-colonial literatures. These countries share some common characteristics beyond their special and distinctive regional characteristics, they emerged in their present form out of the experience of colonization and tend to relief themselves from the tension of imperial power (Bill, et al., 2002).

Recent studies by new generations of scholars suggest colonialism is too often generalized and unified which reduces its differences and ambiguities. While generalization can be valuable they also obscure important differences between time and space. For instance, Indonesian architect and scholar Abidin Kusno asked “To what extent have studies centered on European imperialism themselves colonized ways of thinking about colonial and post-colonial space...the standpoint or focus from which these works are written still tends to be that of Europe”. Kusno is concerned with the late 1980s “post-colonial critique”, an analysis of colonial discourse that questions western knowledge’s categories and assumptions (King, 2015).

Colonialism has existed throughout history. Ania Loomba describes colonialism not merely as an expansion of European empires to Africa, Latin America and Asia but as a recurrent and widespread feature of human history (Loomba, 1998). Most colonized cities by European empires were built on the port for slave trades and other commodities. These cities have eventually grown into major cities which today dominates most coastal regions of world's continents. Example of such cities are Rio De Janeiro, Buenos Aires, Lagos, Cape Town, Colombo, Mumbai, Kolkata, Chennai, Singapore and Shanghai. Most of these colonial port developed and served as the first colonial capitals before independence (King, 2015).

Most of the port capitals built during colonial periods were transferred from the early port cities to an inland site. Such changes provided a new space for the symbolic construction, through planning, architecture, and urban design, of a national cultural identity and the development of national policy (King, 2015). Countries in South America, Asia and Africa found a solution of relocating their capital cities from the port to a more accommodating site to serve the country. In making the move, governments were motivated by various factors ranging from problems related to urban congestion and inefficient infrastructure to newly emerging political priorities (Hall, 2006). These newly created capitals cities are termed as post-colonial capital cities.

Almost precisely, in 1900 there were only forty capital cities with nation states in Latin America, but things changed dramatically in the aftermath of World War I and II. The wars brought the end of British and French colonial rule in overseas geographies and lead to many large-scale building campaigns for the construction of capital cities in various countries across Latin America, Asia and Africa. As a result, the political role of the capital as the seat of government grew in importance (Hall, 2006).

Table 1. Showing the new capital cities in Africa, Asia and Latin America since 1960 (Hall, 2006)

<i>Year</i>	<i>Country</i>	<i>New Capital</i>	<i>Old Capital</i>
1956	Brazil	Brasilia	Rio de Janeiro
1957	Mauritania	Nouakchott	Saint Louis (Senegal)
1959	Pakistan	Islamabad	Karachi
1961	Botswana	Gaborone	Mafeking
1963	Libya*	Beida	Tripoli/Benghazi
1965	Malawi	Lilongwe	Zomba
1970	Belize	Belmopan	Belize City
1973	Tanzania	Dodoma	Dar es Salaam
1975	Nigeria	Abuja	Lagos
1982	Liberia*	? TBA	Monrovia
1983	Ivory Coast	Yamoussoukro	Abidjan
1987	Argentina*	Viedma/Carmen de Patagones	Buenos Aires

New town planning and city planning largely developed in Europe and Northern America in the early twentieth century as a reaction to the rapid and chaotic growth of towns and cities caused by capitalist industrialization. Another phase of town planning developed in the early twentieth century which coincided with the early twentieth century town planning theory, legislation, ideology and professional knowledge. In the British colonies, up to the early twentieth century settlements, camps, towns and cities were laid out according to codes and principles that were designed to ensure military and political dominance (King, 2015).

New town development in Africa was adopted after independence (obtained between 1956 and 1977) as part of national planning policies that formed the basis of establishing post-colonial capital cities like Abuja, Dodoma, Gaborone, Lilongwe and Yamoussokro. These new capital cities were established not only to serve their administrative functions but also to decongest and wipe away the colonial imprints on the older capitals, and also provide adequate housing and basic urban services to spur regional development (Abubakar & Doan, n.d.). These projects of building new capital cities in former colonial territories symbolized the new found political power embedded in modernist designs (Vale, 2008).

Former colonial territories like India was forced to build a new capital as a result of political changes stemming from independence after the country was partitioned the into

different states. These new capitals were viewed to represent the people and the victory against and independence from British colonial rule. The Indian government saw urban planning as a tool for modernization, economic growth and social change, and as a result, Chandigarh and many other capital cities were erected. It was hoped that with the building of these brand new cities, the governing authorities would be able to improve communication systems, raise economic standards, bring law and order and provide social mobility to the economically depressed classes. Similarly, In Latin America, Brazilian government decided to move their capital from Rio de Janeiro to a more accommodating center because the capital city had witnessed high rates of urbanization around its port. This led to building the new capital city of Brasilia (Hall, 2014).

As Anthony King points out, the distinction between colonial and post-colonial cities was first theorized by American geographer Ronald Horvarth and predominantly western-based urban professionals, planners and architects concerned with urban development planning following the end of colonial rule. Despite the political independence of seventy nations after 1945, the persistence of colonial structures was an insult to democratic aspiration of newly independent nations. This is because the structures were not based on “modern city” in the West but a demand of the colonial elite who held an inflated representation of those standards. Decades after independence in many post-colonial cities, the urban areas allocated to indigenous people crumbled with the pressure from rapid urbanization, and the former colonial structures were occupied by the indigenous elites (King, 2015).

The early twentieth century town planning development was linked with the emergence of modernist planning that were adopted in the planning of postcolonial capitals. The ideals of modernist city planning were laid out by CIAM (Congrès internationaux d'architecture modern), an organization founded in 1928 with the purpose of advancing and disseminating the principles of Modern Movement in architecture. This organization consisted of Le Corbusier, Walter Gropius, Sigfried Giedion and many other well-known modernist architects of the twentieth century who were interested in shaping the urban environment in the rapidly changing world (Eric, 2002).

Lu Duanfang states modern movement developed a new set of design and aesthetic principles to correspond to technical conditions and unify the position of modernist architecture among avant gardes. Modernism was associated with purifying traditional restrictions and decoration, reconceptualizing space-time, following the theme of functionalism and modulizing its components. Modernist architecture is however considered to embody modern modes of living, thinking and production based on rational, efficiency, calculation, abstraction as well as advancing social and political goals through design practices (Lu, 2011).

In planning, modernist architecture is characterized by technical, social reform and social justice. Social reform was not only developed out of concern with the social ills of industrialization but it was developed with such issues of social welfare as health, crime, pollution. In modern history, technical reform was developed out of concern with physical inefficiencies in the organization of the new industrial economy, inefficiencies which inhibited economic growth and prosperity aspect. “The concern for issues of social justice can be traced back to a realization of the negative effects of rapid urbanization and industrialization on ordinary people living in burgeoning cities and slums” (Fainstein, Susan S; Defilippis, James, 2016: 125).

With this, modernism became international and is viewed as a positive aspect of globalism where the interest of the entire world was placed above individual nations. The form, special principals, and technologies of modernism were a matter of global knowledge and the expression of zeitgeist which held a strong force that no society could escape (Lu, 2011). So when we see a typical twentieth century city, we see an expression of power, beauty of modern technology and most enlightened ideas of social justice. It is no surprise that the influential figures of twentieth century urban planning such as Ebenezer Howard, Frank Lloyd Wright and Le Corbusier, proceeded in planning with the belief that their societies needed new kind of cities. They also believed that the construction of new cities will solve urban crises as well as social crises. Their ideal cities embodied comprehensive programs and a total rethinking of the principles of urban planning. The modernists did not seek to improve the old cities but to transform urban environment. This transformation

meant extensive rebuilding or total abandonment of the cities of their time (Fainstein & Defilippis, 2016).

Indeed, modernist architecture developed at a time when late colonialism was at its peak. Although colonialism is mostly associated with classical form and modernism was viewed as its opposition. Studies have shown that modernism is not necessarily a denial of colonialism. Instead former colonies were often employed as laboratories of the newest design ideas, through which the metropolis imposed political and cultural influence upon the rest of the world (Lu, 2011, p. 4). Lu further claims that after independence, a modernist vision for a rational progressive history persisted that all nations were headed to the same destination, and with the awareness of temporary lag that turned into national aspiration for the development of modernization project became the national agenda of many third world countries. Infrastructures such as housing, administrative and educational buildings were constructed to accommodate new functions, new organizations and new citizens. It is in this context that modernist architecture was tied to the mission of third world nation buildings. “The design ideals of the modernist “form follows function” and “building = functions x economics” served particularly well for the developing world where people struggle with lack of resources and insufficient funds” (Lu, 2011, p. 10).

The development of modern tropical architecture exemplifies such modernist building in British colonial territories of third world modernism. “Tropics” in colonial discourse was often use to refer to “colonies”, as if the latter could be termed as homogenous climate zone. The modern tropical architecture developed by Otto Koenigsberger, Maxwell Fry, Jane Drew, Fello Atinkon and others who regarded an adaptation of modernist design principles for hot and humid climate conditions by incorporating passive solar design and ventilation systems and vernacular building elements (Lu, 2011).

Certainly modernism achieved victory in the design of capital cities of formerly colonial territories. For example, Chandigarh, the new capital city of the state of Punjab, India, was designed by Le Corbusier, a Swiss national and a leading figure of the modern movement. Le Corbusier was a founding member of the international modern planning congress

CIAM (Congres Internationaux d'Architecture Moderne). He was given the task to plan Chandigarh after the architect responsible had died in a plane crash. Le Corbusier portrayed his modernist approach in the master plan of the new capital city for the partitioned state of Punjab (Kalia, 2006). As seen in Fig 1, Le Corbusier's master plan envisioned the design of Chandigarh as a human body. The capitol complex represented the head, the city center represented the heart, the leisure Valley, numerous spaces and sector green represented the lungs, the network of roads represents the circulation system and the industrial area represented the Viscera (Avasak, et al., n.d.).

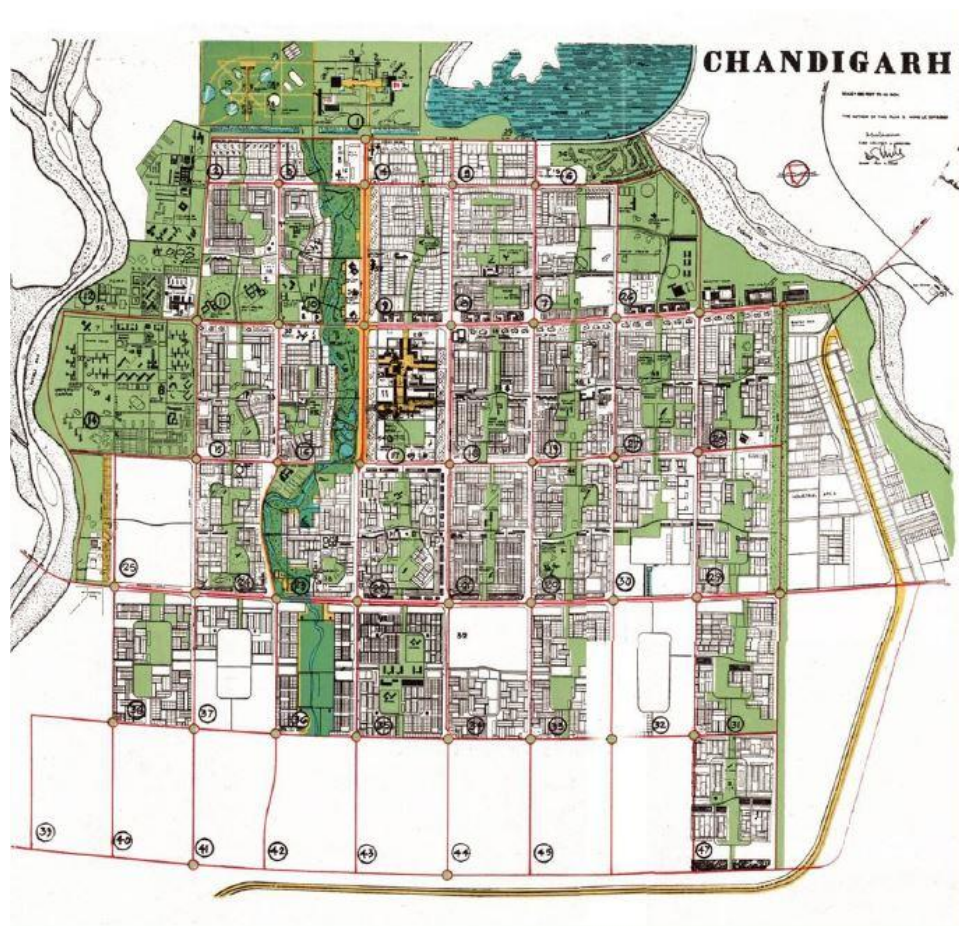


Fig 1. Le Corbusier's Master plan of Chandigarh showing Green spaces (Avasak, et al., n.d.).

Antony Moulis writes that Le Corbusier's plan is a fusion of Albert Mayer's plan and his own ideas regarding planning which developed over the three decades since his 1924

Radiant City scheme. The master plan of Chandigarh was a fusion of Mayer's earlier garden city picturesque plan with the previous schemes of Le Corbusier himself (Moulis, 2012).

Brasilia was another modernist Corbusian city built in a formerly colonial territory of Portugal. The design of the new Brazilian capital was entrusted to Lucio Costa, a leading figure of the modern movement in the country. Peter Hall argues Costa's drawings for competition made it clear that the upcoming capital city would be done according to an architect's vision rather than a planner. Costa as a modernist, proposed and applied the Modernist city prototype in his design of the new capital city locating all the administrative and commercial activities in the center. The pilot plan often likened to be an airplane, bird or dragonfly, with a body consisting of a monumental axis defined by public buildings and offices on both sides and two stretched out wings containing the residential blocks and other functions. A series of uniformly designed office building lined a wide central mall leading to the governmental complex. A group of buildings were to have an identical design consisted of the Corbusian-inspired apartment superblocks where different social class were expected to live together. Brasilia is renowned for its modernist architecture and broad avenues; it is considered as one of the greatest twentieth century urban planning experiment (Hall, 2014).

The newly constructed city is most complete and successful architectural and planning put forward in CIAM's manifesto, therefore making Brasilia a political achievement of the modern movement of CIAM. The city demonstrates that modernism harbored a radical, social and political agenda, as the modernists were out to replace capitalism. The city was built on a clean slate land for a new society without any historical reference just as the modernist idealized. Moreover, the modernist emphasis on breaking the traditional barriers between public and private spaces is exemplified by the way in which the blocks were laid out as dwelling units designed to receive maximum amount of light and air envisioned to be machines for living in (Hall, 2014).

Modernist planning was also adapted directly or indirectly in post-colonial buildings of African capital cities. For instance, the postcolonial city of Gaborone is the new

independent capital city of Botswana that has been built in 1966 in the aftermath of British colonization. The city was set up on concentric grid with demarcated zones of governmental offices, public transportation hubs, and different types of residential area generally classified by the value, size and location of each area (Boidus, 2010). The location of governmental building in the core of the city is an evidence of modernist planning.

Fig 2 shows another post-colonial capital city planning in Africa, Dodoma. The spatial planning of this city is not directly linked with the ideals of modernism, but what is interesting is the idealistic planning of a postcolonial nation state. After Tanzania's independence in 1961, the first president, Julius Nyerere presented an idea for the new capital city to promote decentralization from the new central seat of government. The move to the new post-colonial capital city symbolized Tanzania's new political order. Nyerere's government made *ujamaa* (often translated as 'socialism') mean 'family-hood' the philosophy which will guide national development. *Ujamaa* articulated a vision of eliminating exploitation, control of major means of production and other elements of African democratic socialism (Myers, 2011).

Dodoma's designed layout and plans were keeping with the ideals of *ujamaa* philosophy. As such, the 1976 master plan proposed a non-monumental capital city, what the city now calls Nyerere Square. This is in contrast to the purpose built post-colonial capitals of Chandigarh, Brasilia, Gaborone discussed earlier. The modernist plans for these cities always proposed a master plan with monumental core probably to symbolize the new found freedom, but Nyerere saw things differently. Nyerere's square was meant to call Ujamaa Square where the master plan envisioned a large sculpture of an acacia tree to commemorate traditional gathering place of Tanzanians villagers and townspeople. Garth A. Myers assumes that Dodoma's master would have created a model of African socialist urbanism had it being it was completely implemented in its ten-year process. Dodoma's spatial plan was designed to enable the open space of landscape flow through it as the design was meant to mimic an idealized the notion of Tanzanian rural communal life (Myers, 2011).

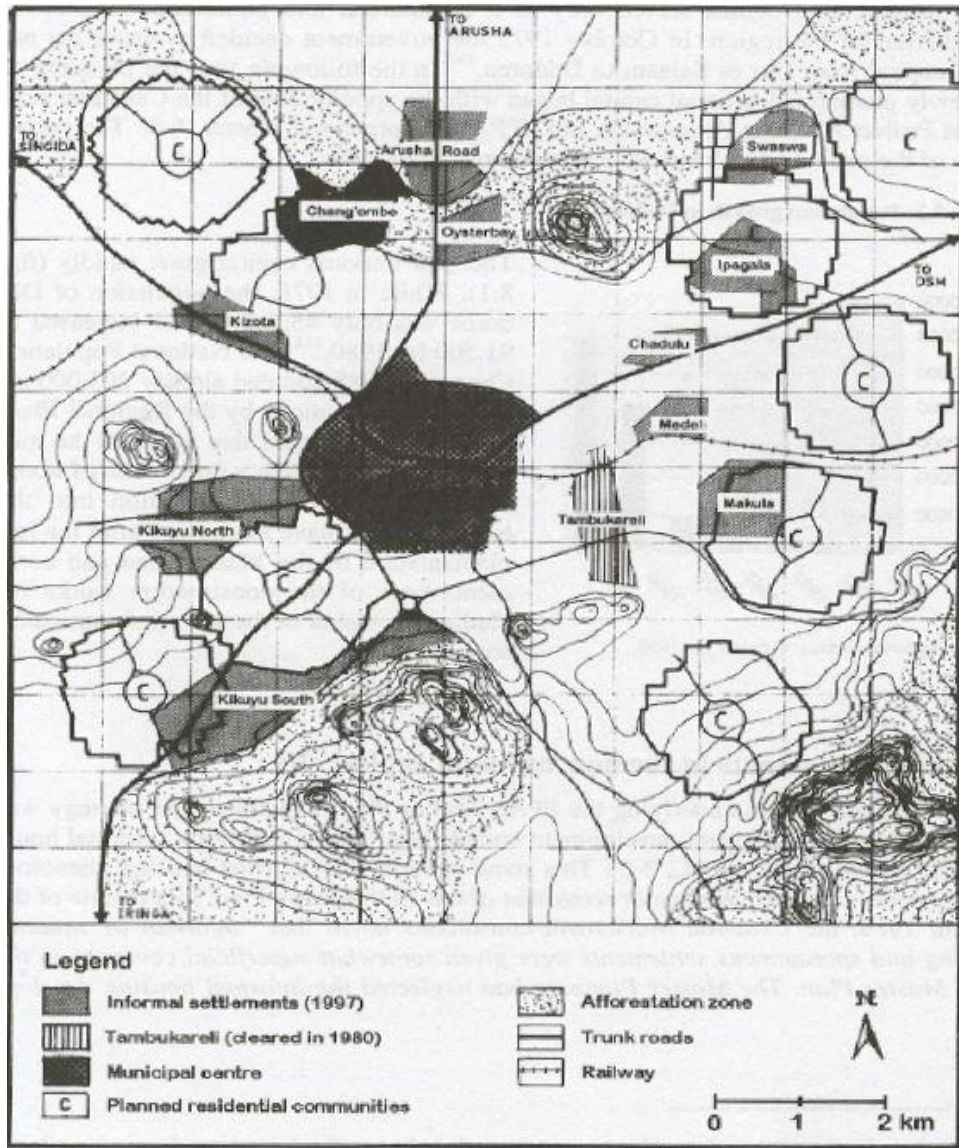


Fig 2. Showing Afforestation (Buffer zone) and major open spaces in Dodoma (Myers, 2011)

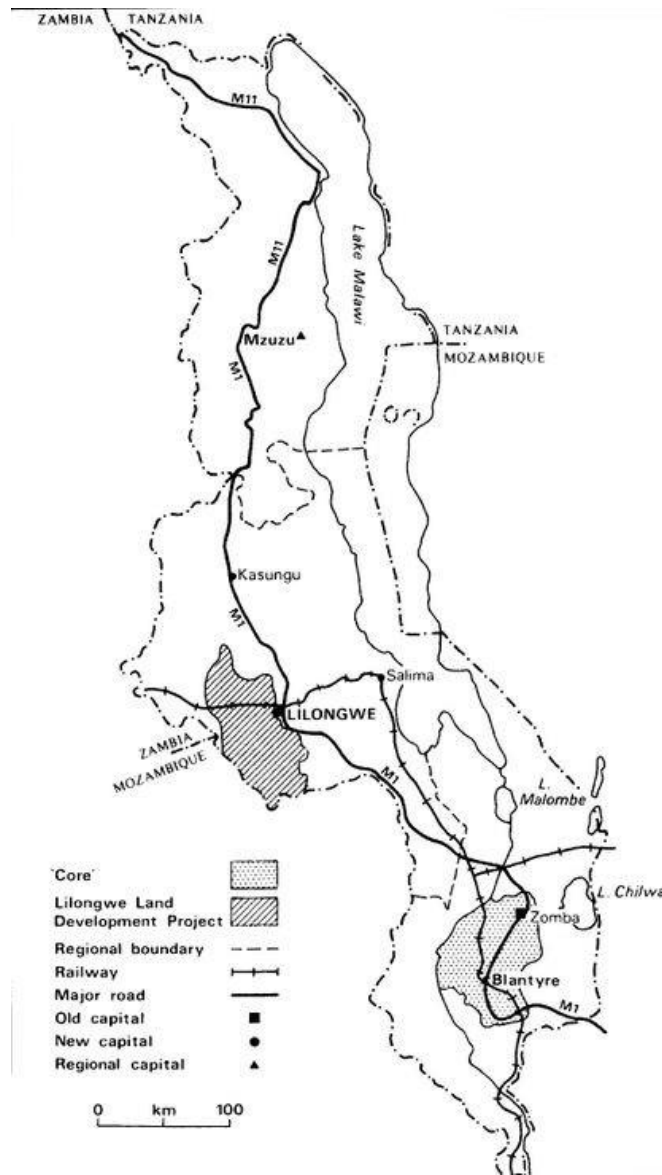


Fig 3. Showing the location of Lilongwe within Malawi (Myers, 2011).

In contrast, Lilongwe, the capital of Malawi, presents a somewhat different conception of what a ‘post-colonial capital city’ should be about. Lilongwe was a small district administration center built by the British during the colonial regime in 1904. Unlike Beida and Dodoma, Lilongwe was not created on a clean slate land, the decision to relocate the capital to Lilongwe from the colonial capital of Zomba came in the first week of independence. Garth Myers argues that rather than moving past colonialism, Hastings Kamuzu Banda’s Malawi presumes the imaginative model of a ‘post-colony’ as a place

“characterized by a distinctive style of political improvisation, by a tendency to excess and lack of proportion’ that is ‘also made up of a series of corporate institutions and a political machinery that, once in place, constitute a distinctive regime of violence” (Myers, 2011).

The capital plan for Lilongwe was not a grand leap from colonialism because the planners were foreigners residing in South Africa from a firm in Johannesburg, supervised by a European (Myers, 2011). The master plan was created in 1967 and the city officially became the capital in 1975 (Abubakar & Doan, n.d.). The plan for the new capital city separates different residential zones from one another by physical and natural barriers, in order to establish clear distinctions between different social classes (Myers, 2011). Years after relocation to the new capital city, Lilongwe suffers from problems associated with many of the colonial capitals as it lacks well defined urban core and central location within the country (see fig 3).

This chapter has provided the relationship between the post-colonial city building effort and the adaption of modernist planning ideals. I have discussed the term post-colonial which is concerned with the end of colonialism that led to capital city planning across the globe. These purpose-built capital cities are termed as post-colonial capital cities where modernist planning ideals were adopted in building the new capitals of formerly colonial territories of India, Brazil, Tanzania, Malawi and Nigeria. This is because modernist planning ideals, which had been developed in the first half of the twentieth century, were only being tested out on a large scale precisely at the end of colonialism. As such the planning ideals of modernist that follows lack of ornamentation which is economical served well for the developing world where people are struggling with lack of sufficient funds. The next chapter will discuss public green spaces, its importance in cities and specifically examine the public green spaces in well-known examples of the twentieth century modernist planned capital cities of Chandigarh and Brasilia.

CHAPTER 3

PUBLIC GREEN SPACES IN TWENTIETH CENTURY POST-COLONIAL CAPITALS.

The aim of this chapter is to discuss the provision of public green spaces in the modernist planning of the twentieth century purpose built post-colonial capital cities. I will discuss twentieth century green schemes and the model that emerged in the design of capital cities. I will then look at how modernists integrate these green schemes into urban design and planning of post-colonial capital cities after the end of colonization in various cities. The capital cities chosen to be examined are Chandigarh and Brasilia, purpose-built capitals located in former colonial territories of Asia, Latin America. These cities are amongst the greatest twentieth century modernist city planning achievements. First, it is important to understand the importance of public green spaces and its benefits.

Green spaces have proven to act as factors of climate features related to heat stress, reducing their effects and providing comfortable outdoor setting for people (Laforteza, et al., 2009, p. 80). Urban green spaces such as parks, forests, green roofs, streams, and community gardens provide critical ecological benefit. Green spaces promote physical activity, psychological well-being, and the general public health of urban residents (Wolch, et al., 2014). In addition to the important environmental services they provide such as air and water purification, wind and noise filtering, or microclimate stabilization, natural areas provide social and psychological services, which are significance for livability of modern cities and wellbeing of urban dwellers. A park experience may reduce stress, provide sense of peacefulness and tranquility. Nature encourages the use of outdoor, increase social integration and interaction among neighbors (Chiesura, 2004).

Physical activities carried out in parks reduce risk and causes of many chronic diseases. Studies have reveal children and adults with access to parks and recreational facilities are more active than those without (Wolch, et al., 2014, p. 236). This is because nature has the ability to function as a natural tranquilizer that particularly proves beneficial in urban areas where stress is a common aspect of daily living.

Open spaces such as streets, parks, playgrounds, waterfronts areas, passageways, rooftops are all places where the communal life of the city takes place. Parks have evolved in their design, function, and size as cities have grown and changed, reflecting different priorities in societies. This is from understanding cities in accordance with race and class, to landscape and human-nature relationship. Urban parks and open spaces have been a part of town planning in varied and consisted ways. Prior to the growth of large metropolitan areas in the United States there was little commitment to creating urban open space and little consideration as to what an urban park should be. The notion of public parks and what it entails have changed since the days they were first conceived and public parks have come to accommodate evolving societal and recreational needs (Pincetl & Gearin, 2005).

Different spaces in the city such as battlefields, woods, meadows, gardens, overlooks, playgrounds, lakes and lakeshore, seas shores, riversides, wetlands, picnic areas, memorial grounds, historic sites, trails, greenways, parkways, boulevards, commons, plazas, squares, quadrangles and courtyards are grouped under the term “park”. There is a variety of spaces ranging from insect-filled wetlands that have no human visitors to center-city brick plazas that have no grass and sometimes even no trees called parks. Harnik claims that the two classification of parks as passive and active have caused countless hours of confusion and wasted analysis. Traditionally there are two types of parks; passive and active. He describes sitting, strolling, walking, power-walking, jogging, running as examples of some passive activities. While activities that causes sweat and heavy breathing like basketball, tennis, golf and lawn-bowling are categorized as active activities people carry out in parks (Harnik, 2010).

Green spaces are not always equally distributed within cities. Access to green spaces is mostly based on income, ethno-racial characteristics, age, gender, disability and other axes of differences. This problem has become an issue of environmental justice due to public health benefit of green spaces (Wolch, et al., 2014). McConnachie & Shackleton (2006) share the same concern related to the uneven distribution of green spaces within cities. They claim that green spaces are mostly concentrated near commercial cores or rich residential area, poorer neighborhoods are denser tend to be built up with housing (McConnachie & Shackleton, 2006). It is important to recognize the poorer neighborhoods with higher population density need more public green for the physical and psychological wellbeing of urban residents.

The uneven distribution of green spaces across the city might is one factor that inform the thinking about park design, history of land development, evolving ideas about leisure and recreation, histories of class and ethno-racial inequality and state oppression. For example, in the United States, people of color and low-income earners typically occupy the urban core or low-income inner ring suburbs where green space is scarce and poorly maintained. Whereas the wealthier households reside on the suburban periphery where green space is abundant, well-serviced and well maintained (Wolch, et al., 2014).

Paddinson Ronan and Sharp Joanne (2007) claim that public spaces are socially constructed, they can be inclusive or exclusive base on the design and interests of others. Public spaces are designed for people but when controlled by others might deny democratic publicness of the spaces (Paddinson & Sharp, 2007). Political public space aims to provide firm grounds for criticizing democratic engagement. According to Parkinson a particular space can be public on the one hand and have both public and private features. The political definition of public space follows 'open and accessible' approach on the other hand. Such political public spaces include monuments, spaces of performing political roles, streetscape, education, recreation and activities and so on. On the other hand, democratic public space defines spaces where roles like articulating interests, opinions, experiences, making and addressing public claims are emphasized (Parkinson, 2013).

Example of such political space is seen in Abuja. (fig 5), shows the eagle square happens to be the only surviving public space in the central district from the original master plan, but unfortunately is used as a political space where governmental ceremonies take place. The claim of every public space is to be open and accessible, but this public space consists of so many restriction including wired fence, security guards and keep off signs. Such places shouldn't be termed public spaces.



Fig 4. Showing Eagle Square in Abuja (Obike, 2015)

2.1 Public Green Spaces in Twentieth Century Post-Colonial Capital Cities.

Twentieth century has witnessed the emergence of a variety of urban green schemes such as parklands, parkways, greenways and green belts. Green belts, in particular became an essential component of modernist planning policies. In twentieth century, planners used green belts as a tool to define the natural limits of cities, separating satellite towns from urban core, safeguarding land for recreation, agriculture and forestry. They also employed green belts as boundary makers in layering out evenly spaced and well-balanced settlements. “Green belts were also used to contain unchecked growth and contingencies of urban growth in different cities around the world” (Amati, 2008, p. 1).

By mid-1950s the notion of the green belt became part of the international planning vocabulary. Europe adopted the idea of green belt to preserve the existing greenery around cities such as Frankfurt, Berlin and Vienna. The federal government of the USA adopted the green belt concept to build its greenbelt towns during the early 1930s. Green belt schemes rapidly spread through the propagandizing work of British planners in the post-WWII period (Amati, 2008). Previously, the design of public parks in American cities emerged during 19th century with the philosophical and theoretical belief that nature restores the human spirit (Low, et al., 2005).

Most cities, especially capital cities have a large supply of open spaces to provide impressive settings for public institutions, monuments and other symbolic content. Urban plans of political capitals like Ottawa, Canberra, Brasilia and Washington consist of extensive park systems which were built over long term periods. “Most national governments had acquired lands for parks in capital cities very early on which meant that they had paid relatively small sums of cash in exchange for agricultural lands” (Gordon and Scott, 2008: 130).

In the early twentieth century, Frederick Law Olmsted Jr’s 1902 plan for Washington provided a model for park system planning in capital cities around the world. This plan provided an interconnected system of open spaces throughout the District of Columbia. Although Olmsted’s plan became a model for capital cities, an equally influential model of urban green network emerged by 1945. This model was proposed by Sir Patrick Abercrombie in his 1944 Greater London Plan which was influenced by Ebenezer Howard’s Garden City schemes where green belts were used to contain growth in the periphery of newly built towns. This plan also became a model for many other capital cities in the twentieth century including Stockholm, Helsinki, Seoul and Ottawa (Gordon and Scott, 2008).

In term of public green spaces in the twentieth century purpose built capital cities, the discussion can be best carried out towards the examples of Chandigarh in India and Brasilia in Brazil. In planning the capital city of Chandigarh, Le Corbusier provided extensive landscaping in the city layout. He designed a well-structured and provided order

in the hierarchy of open spaces in the city ranging from neighborhood level to the city level. Chandigarh is one of few cities of twentieth century in the world whose original urban plan has been meticulously planned (Plan-2031, n.d.). Le Corbusier exhibited his modernist approach in the planning of the new capital city for the partitioned state of Punjab (Kalia, 2006).

Antony Moulis writes that Le Corbusier's plan is a fusion of Albert Mayer's plan and his own ideas regarding planning developed over the three decades since his 1924 Radiant City scheme. The fusions of the plans are of Mayer's earlier garden city picturesque plan with the previous schemes of Le Corbusier himself (Moulis, 2012). In Le Corbusier's plan, he provided large open spaces, wide avenues aligned with trees, green belts that run across the length and breadth of the city, city parks, neighborhood parks and tropical forest along the periphery of the city. In fig 5, one can observe how buildings and built form nestle in close communion with the elements of nature where the residents of the city enjoy direct and immediate access to nature. Chandigarh is the greenest city in India consisting of more than two thousand parks and gardens (Chaudhry and Tewari, 2009).



Fig 5. Showing the planned capital city of Chandigarh (Krier, n.d.)

Rajendra Park Garden in Fig 6 is an example of some major public green spaces in the city that were designated by Le Corbusier and other later additions include the Rose Garden shown in fig 7, Memory Park, Garden of Silence, The Leisure Valley, The Rock Garden and Green Belts along main avenues. Memory Park was created by the government in order to keep the area free from encroachment and safeguard Le Corbusier's concept of green parkland. Rose Garden is the largest of its type in Asia built as part of the cities green belt spreading over an area of 27 acres. The garden has large variety of roses and a fountain to relax the soul.

Rajendra Park in fig 6 was designed by Le Corbusier himself as part of the capitol park spreading over an area of 400 acres. Trees with round canopies and evergreen foliage have been planted but did not follow the original plan. The leisure valley is a continuous 8km parkland consisting of various gardens that extends from the north-eastern tip to the city to its south-western tip and further extends to the Punjab region. This parkland was developed as one of the original landscape features of Corbusier's plan, whereas the rock garden as an open-air museum was a later addition designated by Padam Shri Nek Chand (Plan-2031, n.d.).



Fig 6. Showing Rajendra Park spread over a sprawling area of 400 acres designed by Le Corbusier as part of the Capitol Park (Anon., 2017).



Fig 7. showing Rose Garden as it spreads over an area of 27 acres, it is largest of its kind in Asia (Mangalore, 2017).

Today, Chandigarh still stands for its high quality of life and it is relatively pollution free when compared to other growing urban centers throughout the country. The city provides abundant access to green spaces where its citizens enjoy a direct relationship between the built forms with nature (Plan-2031, n.d.). Chandigarh stood as the only real planning achievement of Corbusier on ground (Hall, 2014).

Similarly, the design of Brasilia, the purpose-built in capital city of Brazil, by Lucio Costa strictly followed modernist planning ideals. In his pilot plan, Costa proposed a central mall like that of Washington D.C which is perhaps significant in the design of capital cities. Brasilia is known for its modernist architecture and broad avenues; it is considered as one of the greatest twentieth century urban planning experiments. Fig 9 shows the capitol complex designed along two wide avenues that stretch alongside a vast green space. This open green space with large blocks of residential building along the monumental axis embodies Le Corbusier's 'city in the garden' idea (Hall, 2014).



Fig 8. Showing the vast open green space in Brasilia (Anon., n.d.).

Although Brasilia is known for its urban planning, fig 8 shows the distance created in the city denies the possibility of articulating public life (Christian, 2008). For instance, green spaces were designed in the outskirts of town that was meant to be places where all social classes will gather and mingle, rather these spaces were divided by the wealthy building luxurious homes while low-income families were relegated to satellite cities (Macedo and Tran, 2013)

Even if Brasilia has many accessible open spaces very few people use it because its citizens do not participate in an outdoor public domain of social life. By designing a city for automobile, Brasilia eliminated the spontaneity, openness, and democratic feeling of Jane Jacobs' street. As a result, social life is confined to private spaces, accessible only to those considered equals, and stratified according to social class or economic well-being. Much in the same way there exists a division in north American cities between the suburbs and the inner city. Brasilia's public life is confined to interior spaces where noncommercial activities such as protest or celebration occurs between and within different social groups (Christian, 2008).

Another issue of distance in Brasilia's plano piloto is the large green belt surrounding the city, making the closest satellite town 12 miles away from the city center. In this sense Brasilia reproduces and maximizes the distinction between the privileged center of plano

piloto and unprivileged periphery of the satellite towns. Brasilia's income differences between center and periphery are far greater than in other Brazilian cities. All these factors contradict the plan's egalitarian intentions (Christian, 2008).

Therefore, Brazil's symbol for modernity was to eradicate all squatter settlements in the new capital city but this failed as a squatter settlement, Taguatinga was built by construction workers outside the city. By mid-1960s, more than one-third of the Federal District population lived in the newly formed squatters of Taguatinga. Authorities tried to demolish these squatters but a law was passed permitting the squatters to remain. This saw the end of the dream of creating a classless society in a country where the poor and rich have always been segregated (Hall, 2014).

Both the capital cities of Brasilia and Chandigarh were built by well-known modernist architects consisting of abundant green spaces. However, the city of Brasilia has relatively poor land use due to the distorted and wide avenues which makes it harder for people to grasp public life. Meanwhile, the citizens in the city of Chandigarh till today enjoy the quality of life and pollution free the green in the city brings. The government of Chandigarh played an important role to save-guard the green spaces in the city to ensure Le Corbusier's Garden city idea is maintained. Although both Chandigarh and Brasilia provide abundant accessibility to green spaces, Brasilia's public green spaces remain as mere images in the absence of active users. Brasilia also failed to achieve classless society as what they termed to be a symbol of modernity due to the maximum distance created by green belt from pilano ploto.

Following this brief review of the green spaces in these two cities located in the decolonized territories of Asia and Latin America, I would like to examine how green spaces are shaped in the purpose-built post-colonial capital cities of Africa. This will provide a comparison and contrast between different geographies with purpose-built capitals cities designed by modernist city planning ideals. Also it will help to layout the importance that African cities place on public green spaces.

CHAPTER 4

PUBLIC GREEN SPACES IN PURPOSE-BUILT POST-COLONIAL CAPITAL CITIES OF AFRICA

Countries in African sub-regions have different forms of urban green spaces ranging from semi-private space such as green spaces in residential, institutional and industrial areas, designated parks, street trees and roadside plantations. Other types of public green areas found in Africa are green parks, botanical gardens, recreational gardens, outdoor play areas. Most African countries embark on public and private tree plantations on vacant lots for environmental protection and beautification, green belts, woodlands and peri-urban farming (Adjei, 2014). For instance, the government in Uganda embarked on selective tree planting on the street in order to reduce flood and control erosion (Lwasa, 2016). Other forms of green spaces such as Rangeland and forests are found close to urban areas. Although a variety of green spaces exists in African city emphasis is given to urban trees. Governments of most African countries collaborate with other environmental agencies on urban tree planting to enhance greenery and improve the quality of air. The 2011 African green city index indicated that cities such as Johannesburg, Lagos, Maputo, Nairobi and Cairo give emphasis to growing trees than another form of urban green. (Adjei, 2014).

The significant majority of green spaces in Africa concentrated in the western, eastern and southern Africa. More green spaces are found in the southern regions when compared to northern regions. Climate plays an important role in the development of urban green spaces in Africa, i.e. the soil condition in the desert vegetation of northern part of Africa that covers countries such as Tunisia, Morocco, Egypt and Libya do not support the sustenance of green spaces. This is in contrast to the East, West, South and Central Africa

where most of the cities are located in the tropical rainforest and deciduous forest vegetation zones. In addition, most countries especially in Sub-Saharan Africa have two major climate seasons which are wet and dry. The dry season is characterized with very high temperature while wet with average daily temperature of about 18-30 degrees (Adjei, 2014)

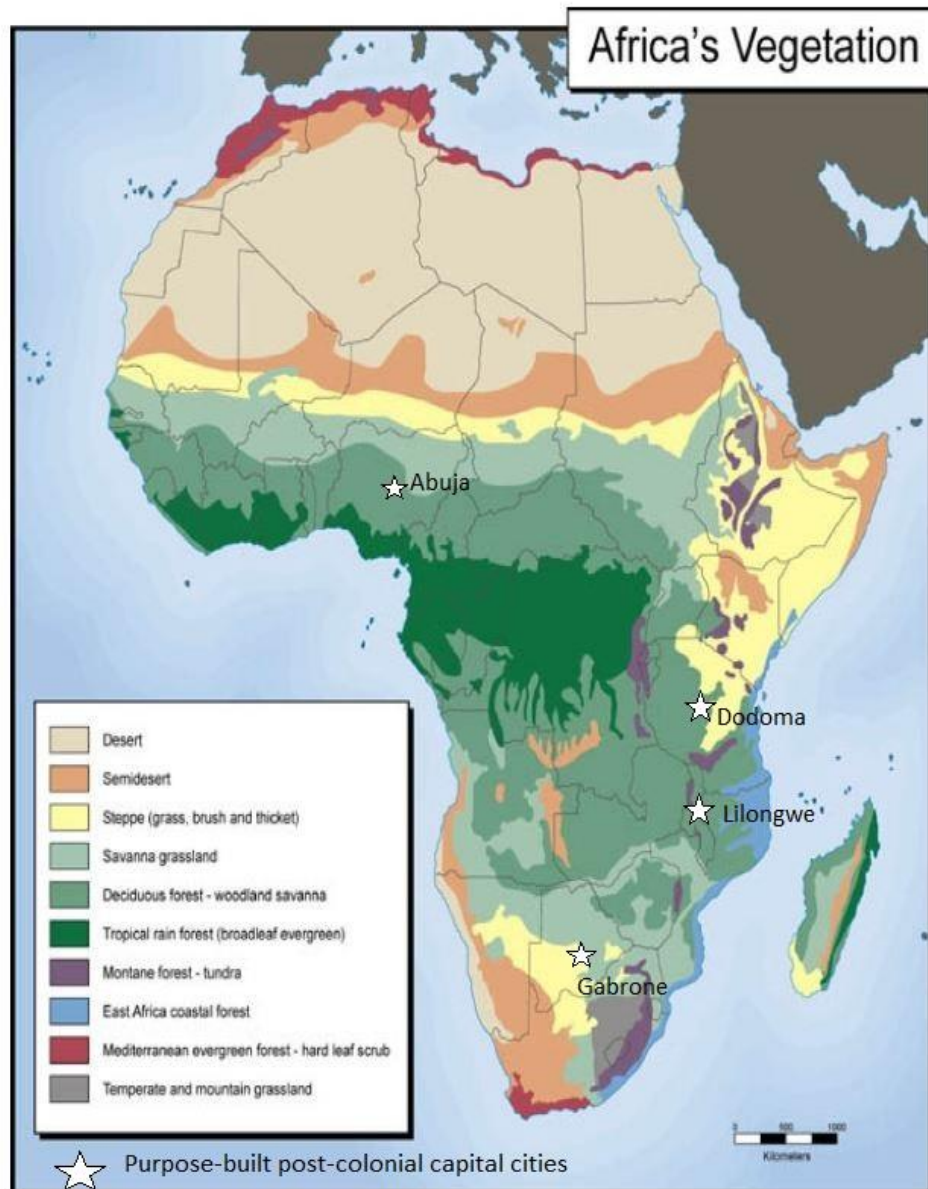


Fig 9. Showing vegetation and new post-colonial capital cities in Africa (Anon., n.d.)

New town development in Africa was adopted after independence (obtained between 1956 and 1977) as part of national planning policies that formed the basis of establishing post-colonial capital cities like Abuja, Dodoma, Gaborone, Lilongwe and Yamoussokro shown in fig 9. These new capital cities were established not only to serve their administrative functions but also to decongest and wipe away the colonial imprints on the older capitals, and also provide adequate housing and basic urban services to spur regional development (Abubakar & Doan, n.d.). These projects of building new capital cities in former colonial territory symbolized the newfound political power embedded in modernist designs (Vale, 2008). This chapter of the thesis will focus on the provision of green spaces in purpose-built capital cities of Africa by examining the public green spaces planning in the newly built cities of Gaborone, Lilongwe and Dodoma.

4.1 Gaborone, Botswana.

Gaborone is the new independent capital city of Botswana that has been built in 1966 following the British colonial rule. Gaborone was planned as a garden city but unfortunately not appropriate for a country that is regularly afflicted with drought. This drought has major impact on trees, shrubs, landscapes forests and other green bodies. As a result, Fig 10 and Fig 11 showing how the city's open spaces ended up being used for purposes other than the originally intended ones either parking lots, dumping site, driving schools, driveways, or refuge for criminals. It goes as far as people using green spaces as open air toilets, informal vending and other informal uses. Mosha suggests that such abundant open spaces can be improved through bio-diversity and protection of limited urban habitats. They change micro-climate through shading, cooling, absorption of air pollutants in addition to being aesthetically pleasing and facilitating human comfort. However, open spaces in Gaborone are rare and their protection, maintenance and upgrading becomes a matter of urgency. Not all bad, some open spaces in the city are also used for some good purposes like recreation and leisure, where children play and socialize in neighborhoods (Mosha, n.d.)



Fig 10. Showing destroyed green playground (Mosha, n.d.)

Green spaces in Gaborone include Gaborone Game Reserve, Parks, Playgrounds, stadiums, football ground, and other forestry plantations in village. According to Gaborone City Development plan of 2007-2021, the city accommodates 5564.8 hectares of open spaces in addition to 757.8 hectares of land accommodating sports and recreation. The 2007-2012 plan proposed the provision of green spaces and other open spaces by providing more recreational parks, converting trash dumping sites to other useful green spaces. The plan included the involvement of private sectors in the development of recreational parks and other open spaces, but unfortunately none of these plans have been implemented (Mosha, n.d.).



Fig 11. Showing cows and goats roaming freely eating up the green pasture (Mosha, n.d.).

According to the plan's statistics, there are more than 528 designated open spaces in the city out of which 499 of them are owned by the central government. Only 4 of the government owned spaces have been fully developed and functioning while the rest remain vacant and undeveloped. Some privately owned open spaces include hotel grounds, golf course or institutional open spaces that are developed and well managed (Mosha, n.d.).

The hot semi-arid steppe climate plays an important role in the development of green in Gaborone. The annual temperature ranges between 32 to 40 degrees with an average daily temperature of 30degrees. With this unfavorable climate condition, the city experiences irregular rainfall which causes water shortage. Other factors that leads the dearth of green spaces in the city are lack of adequate governmental funding, lack of environmental awareness, lack of adequate equipment, facilities and infrastructure (Mosha, n.d.)

4.2 Lilongwe, Malawi.

Despite economic development around the world, food security remains a major problem in most African countries. This is more persistent in the case of Malawi where poverty, HIV/AIDS and rapid urbanization have brought the poor and the unemployed to cities in large numbers (Mkwambisi, 2009). The Malawian government's approach to national development has always favored efficiency over equity. In the 1907-81 plan, health and education have received a small portion of government expenditure compared to the large investments in productive economic terms. The rise in agricultural production in Malawi had to be achieved quickly and effectively by the most economical means. This rise led to two approaches in agricultural development, one was the emphasis on large-scale projects and second was estate agriculture. The large-scale agricultural development projects were expected to increase the national income at a greater rate compared to the development achieved by endorsing small-scale farming (Potts, 1985).

On the other hand, as David Mkwambisi argues that urban agriculture is not seriously taken by Malawian government is evidenced by the 'Town and Country Planning Act' where there is no practical regulations as to how to guide and support urban food production (Mkwambisi, 2009)

Lilongwe is known as garden city of forests, savannah woodlands and botanical gardens that breaks up urban space and give home to diverse species. In recent years, the green spaces face increasing pressure due to rapid urbanization, weak governmental framework as well as inadequate financing. Fig 12 showing the green spaces in the capital city is facing massive environmental problems such as degradation, pollution, deforestation and uncontrolled development which is threatening biodiversity in the city. The city has not completely implemented its original vision of development plans that includes open space for arboretums and recreation parks in every residential area (Anon., 2016).



Fig 12. Showing green spaces in Lilongwe (Anon., 2016).

Critics however blame Malawi's government for the deterioration of Malawi's parks and botanical gardens seen in fig 13. Several change of government in Malawi has led encroachment on public land allocated for recreational activities while other spaces were left to deteriorate. Lilongwe Natural Sanctuary and Lilongwe Botanical Gardens are the

only two public recreational centers that exist in Lilongwe. Some private sectors established some recreational facilities like Lilongwe Wildlife Centre, Ufulu Gardens and Four Seasons Garden among others. Reasons behind this deterioration ranges from negative personal service machinery to Lack of understanding the job of a landscape architect and lack of financial resources (Mkula, 2015).

4.3 Dodoma, Tanzania.

Dodoma's designed layout and plans were keeping with the ideals of *ujamaa* philosophy. The 1976 master plan proposed a non-monumental capital city, what the city now calls Nyerere Square. Nyerere's square was meant to call Ujamaa Square where the master plan envisioned a large sculpture of an acacia tree to commemorate traditional gathering place of Tanzanians villagers and townspeople. Garth A. Myers assumes that Dodoma's master would have created a model of African socialist urbanism had it being it was completely implemented. Dodoma's spatial plan was designed in such a way that the vast open landscape with the design mimicking an idealized notion of Tanzanian rural communal life (Myers, 2011).

Dodoma was almost empty consisting of scattered trees and shrubs on the surrounding mountains when it was declared the new capital city in 1974. The landscape was not very convenient for living due to the hot and uncomfortable climate conditions. The environment was very dusty and has poor scenic view. The strategy behind improving greenery in the city was designing and developing a hierarchical open space system and devising practical measures for their implementation. Despite the draw back in the implementation of two master plans of 1976 and 1988, some achievements have been made through tree planting programmes and nurturing natural species within the city. Due to limited livelihood opportunities in the country, some activities such as cattle keeping, tree felling for fuel wood, charcoal burning, urban farming and squatting have negatively affected greening initiatives by the government (Lupala and Lupala, 2003).

Most of the Landscape and open spaces system proposed in the master plans were implemented. This includes an afforestation belt, Mlimwa Hill Park, street landscape in several neighborhoods, and the development of sports fields and walkway areas. The

landscape was successfully implemented in many parts of Dodoma until 1988 where failure occurred in construction of roads leading into the town, this led to the loss of the city's image. The 1976 and the revised 1988 master plans recommended open space systems that were intended to perform among other functions, such as recreational and agricultural activities, conservation of soil and vegetation, drainage and storage of rain water along with the introduction of country-side characteristics into the city (Lupala and Lupala, 2003).

A number of conflicts have arisen between greening initiatives and people's livelihoods. Some of them are results of the gap between planning intentions and actual realities. For instance, local livestock keepers and resident practice free-range grazing within municipal land, open spaces and afforestation areas as a result of failure of cattle resettlement scheme. The cattle herds feed on crops cultivated under urban farming as the cattle are grazed. The spaces municipalities have maintained for recreation is being used by traders for some commercial activities such as the selling of groceries, fruits, kiosks and clothes (Lupala and Lupala, 2003).

Both the post-colonial capitals of Gaborone and Lilongwe couldn't function as garden cities because the hot climate wasn't convenient to sustain green spaces. In contrast, the post-colonial capital city of Dodoma was envisioned with the ideals of Ujaama, where the open space was meant to mimic Tanzania's communal life, with a large sculpture of an acacia tree in a square meant to be called the Ujaama square. The master plans of all cities were not completely implemented. Green spaces in Dodoma, Lilongwe and Gaborone all face increasing pressure and are deteriorating due to several reasons, such as lack of adequate governmental care, urbanization and several land abuse by its urban residents. Due to low livability in most Africa cities, Malawi's government initiated large scale agriculture to sustain people from hunger. Similarly, in Dodoma, people cut off trees and feed their cattle's in green spaces due to low livability.

The public green spaces in the postcolonial capital cities of Africa are in contrast to the post-colonial capital cities of capitals Brasilia and Chandigarh. The master plans of both Brasilia and Chandigarh are the most successfully implemented twentieth century plans,

which are in contrast to the master plans of Gaborone, Dodoma and Lilongwe that haven't all witness the complete master plan implementation. The green spaces in capital cities of Africa are facing serious deterioration due to lack of governmental care, while Brasilia and Chandigarh today consist of the well planned green spaces from their original master plan.

These capital cities of Africa, Latin America and Asia share some common characteristics; they all are twentieth century purpose-built postcolonial capital cities design according to the modernist planning ideals. But Brasilia and Chandigarh are more concrete examples, might be because they were designed in the early twentieth century by the leading figures of modernist architecture rather than the latter of designs of Gaborone, Dodoma and Lilongwe.

CHAPTER 5

A CASE STUDY: ABUJA

Many governments of newly independent nation state view urban design as a mechanism to shore up their rule (Gordon, 2006). This is seen in government's decision to build capital cities after the end of colonial rule. In Nigeria too, governing authorities decided to construct a new capital city in the aftermath of the country's independence from Great Britain. In, 1975 Aguda's panel suggest the removal of the government from Lagos to a more inland location closer to the geographical center of Nigeria. Lagos was found no longer fit to serve as both the federal and state capital (IPA, 1979). Soon after independence, Lagos's resource as an urban center were strained due to rapid urbanization. Lagos, just like Rio de Janeiro grew around its port and was not able to contain its growing population. An urgent need to create a new federal capital city emerged because Lagos by then become unmanageable due to the pressure from increasing population and other urban problems associated with population growth. Lagos also suffered acutely from traffic congestion, poor drainage and single ethnic influence that was unbearable by other ethnicity in the country (Olufemi, 2009).

Soon after Nigeria gained her independence on October 1st, 1960 Civil War occurred as a result of the rift the British left behind from dividing Nigeria into three different ethnic regions. The war began in July 6, 1967 and ended in January 12, 1970, and in the aftermath a decision was reached to build a new capital city as an effort from the war (Copeland, 2013). David Gordon explains that cities must respond to unexpected traumatic events of wars and natural disasters, because this disasters often provide significant opportunities to

address pre-trauma shortcomings in urban form (Gordon, 2006). Likewise, the new capital city was envisioned as a place that would provide justice to the people from different social, religious, ethnic and political backgrounds. The violence in the country raised a number of questions, one of which was whether the planners of the new capital city knew that they were using architectural and urban design to provide peace and unity to Nigerians; or whether they believed that their plans could provide a center of unity to prevent the country from disintegrating (Elleh, 2016).

In 1976, the Federal Capital Development Authority (FCDA) was created to plan, manage and develop the new capital city. Soon after, FCDA commissioned an International Planning Association (IPA) to create a master plan for the new capital of Nigeria, and later selected Kenzo Tange in collaboration with other associates to create an urban design plan for the central area. The IPA committee carried out an extensive examination on the dual government role in Lagos, toured other African capital cities and visited all Nigerian state capitals. They came up with the key conclusions that Lagos as a city is incapable of functioning both as a federal capital and state capital due to its lack of sufficient space, and its lack of central accessibility from other parts of the country. The new capital city needed to be a symbol of the Nigerians aspiration for peace and unity in the aftermath of the war (IPA, 1979).

In choosing the site for the new capital, the IPA committee was inspired by the way in which the country's three large plateaus were divided from one another by the troughs of the Niger and Benue Rivers seen in Fig 14 (IPA, 1979). The IPA firm strategically located the site for the new capital within the center of Nigeria to prevent major tribal ownership. Most purpose built capitals cities search for centrality within the country to locate their national capital. For Instance, countries like Brazil, Malawi and Tanzania all moved their capital cities from the coastline to a more central location within the country.

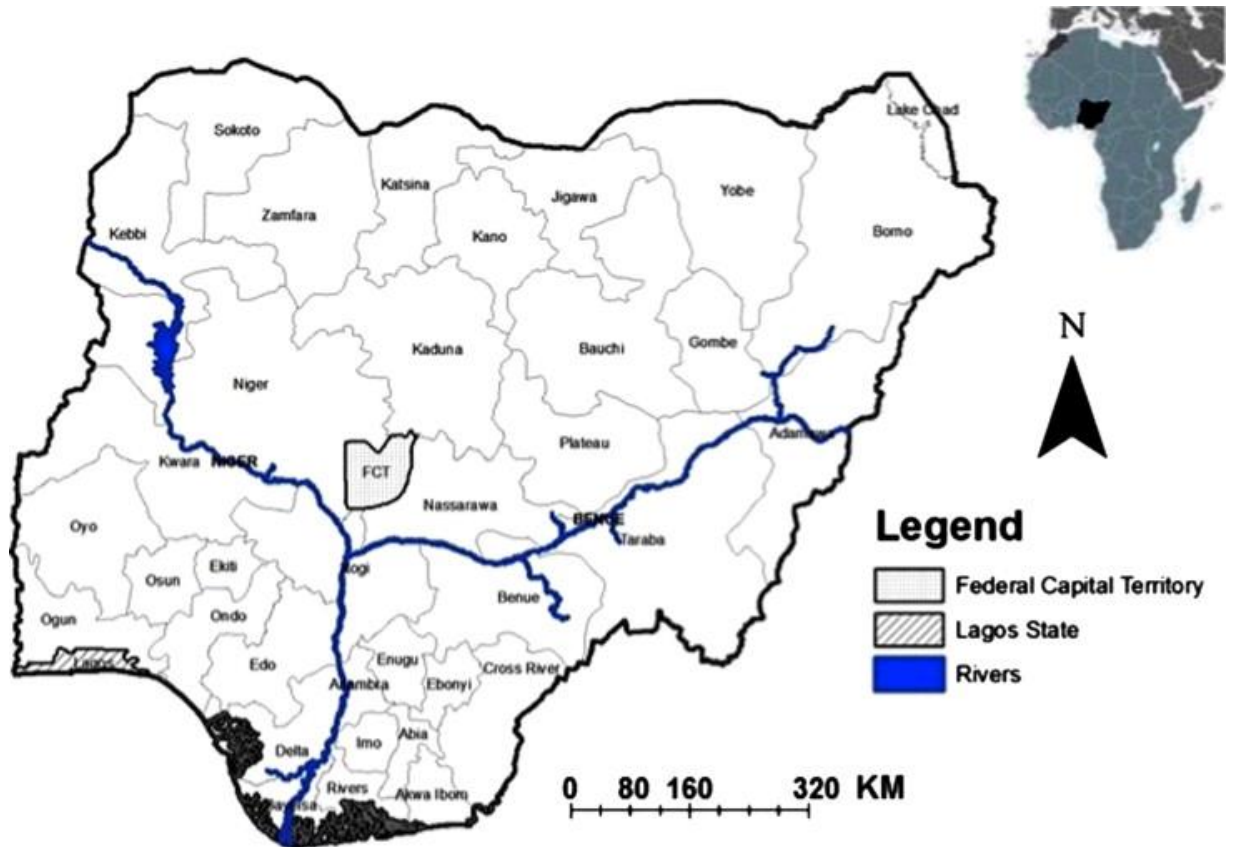


Fig 13. Showing the location of Federal Capital Territory of Abuja within Nigeria

Fig 13 shows the location of the new capital of Nigeria which lies north of the equator between latitude 8.25 and 9.20 and longitude 6.45 and 7.39 east of the Greenwich meridian. The centralization of the capital aims to provide easy access to all state capitals and their great diversity. The Federal Capital Territory was carved out of four other states: Kaduna, Plateau, Kwara, and Benue. It has a landmass of about 8,000 sq. km out of which the city itself occupies about 250sq km (Olufemi, 2009). The new capital aims to be more secure, provides ethical neutrality, allows room for new controlled development and possess adequate natural resources to provide a good base for urban development. Abuja serves as a symbol of peace, unity and the greatness for all Nigerians (Oyewale, 2013).



**THE MASTER PLAN FOR ABUJA
THE NEW FEDERAL CAPITAL OF NIGERIA**

- National Government
- Major Cultural and Institutional
- Major Public Facilities
- Major Institutional Networks
- Central Business District — Office
- Central Business District — Shopping
- Central Market
- Supporting Commercial
- Major Centre Commercial — Business
- District Centre
- Mixed Use Residential — Government
- Mixed Use Residential — Commercial
- Mixed Use Residential — Office
- Mixed Use Government — Commercial
- Mixed Use Institutional — Commercial
- Residential High Density
- Residential Medium Density

Fig 14. Showing Master Plan for Abuja designed by the IPA associates and other firms (IPA, 1979).

Nnamdi Elleh describes Abuja's master plan as partly a Nigerian modernist architectural production; and partly an international modernist production. (Elleh, 2017). What Elleh meant by international modernist production is the task of designing the master plan itself was commissioned to international firms, the International Planning Associate (IPA) firm from New York in collaboration with other firms. While Kenzo Tange and Associates provided the urban design of the Central Area of Abuja. The master plan was supposed to be the basis for progressive development of Abuja in six phases, where the expected population target was 150,000 persons in 1986. The Capital was to permit growth to a maximum population of approximately 5million inhabitants, after which the growth will be permitted to satellite towns (IPA, 1979).

A casual observer might view Abuja's plan as a distant African project without the knowledge of the original roots of the documents. In planning the master plan of Abuja, Thomas Todd took inspiration from his comparative study of purpose-built national capitals which includes Chandigarh, Brasilia, Ottawa, Washington, D.C and Canberra. He also analyzed the circulation patterns of other capitals like Montreal, Washington, D.C, Chicago, Berlin, Houston and Moscow. But what did Todd learn from placing Abuja's map next to the maps of other capital cities? Although Paris, Montreal, Washington D.C and Chicago have their various long histories, they however have certain modernist infrastructures such as circulation patterns, railroad, drainage, open space, business district, and residential area that inform Todd on how modern metropolises work. He certainly based his research on purpose built capital cities in an attempt to delineate the best possible modern urban master plan for Abuja (Elleh, 2017).

Abuja's plan just like some other capital cities showcase a typical modernist urban plan. This is evident in the way in which the master plan concentrated all governmental sectors in the central core with the expectation of further growth to take place outwards from the center. Fig 13 shows the common characteristics shared by the cities in terms of their urban form, such as the broad open malls designed along an axis terminating at the capitol buildings, Viceroy's Complex in the case of India, and national assembly building in Abuja. Government ministries and civic buildings lined the sides of the malls and defined the promenades leading to the capitol buildings and major landmarks like the Washington

monument or independent memorials are located on elevated landscapes on prominent sites within or in close proximities to the malls (Elleh, 2017).

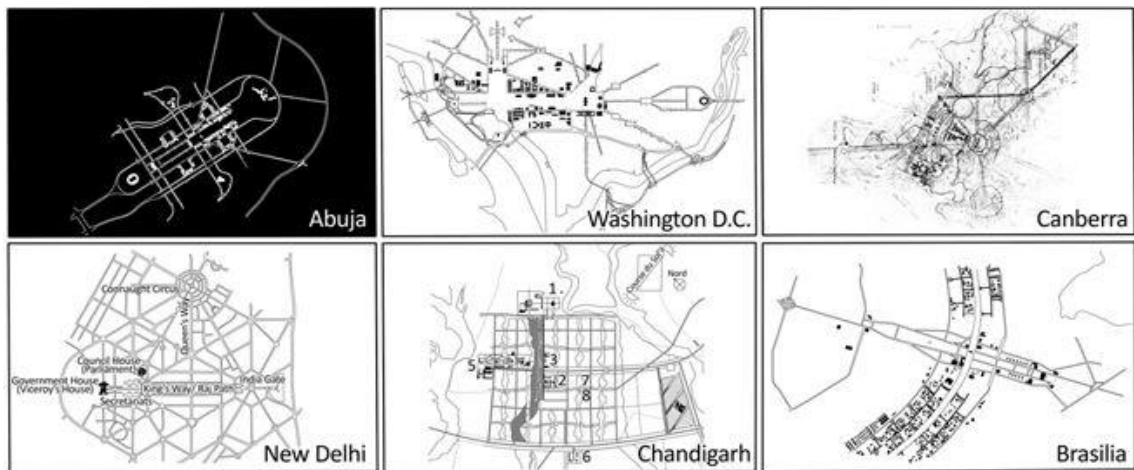


Fig 15. Showing Thomas Todd, IPA and WRT study of how Abuja’s urban form compares to other purpose built capitals (Elleh, 2017).

In Abuja, the axis in the central area was designed to create an interactive central area by concentrating facilities along it to portray a sense of complete urban area. The central core of Abuja was planned to be a hub for both the nation and the city in both symbolic and physical senses; it was meant to serve as a center of focus and representation (IPA, 1979). In contrast to the malls of the Washington and Brasilia, Tange designed the federal capital city mall taking into consideration the natural landscape of the site (Tange, et al., 1998).

5.1. Destruction of Public Green Spaces in Implementing the Master Plan

Several political, economic and social factors led to the distortion of public green spaces and lack of master plan implementation. Some might argue politics played the important role that led to draw backs in implementation. The automatic dismissal of Tange’s project was because the government of Shehu Shagari that commissioned the project was overthrown by military coup in 1985. This. Meanwhile, Shagari’s successors, General Buhari and his deputy then suspended most of the building work at Abuja with the claim of fighting corruption in the country (Elleh, 2017).

The dismissal of Tange's project is also due to economic problems. The master plan prepared by Kenzo Tange was not affordable for the government and private developers, because the master plan asked for Super-Block with two levels of mechanically ventilated, dark parking garages all over each the central area before any building could be erected (Elleh, 2017). Initially, there were two types of development to be undertaken in the city, one development by the Federal Government or the Municipal Administration and the second by private individuals and companies or other organizations (Tange, et al., 1998). Private developers got away with drawing walls around their property and putting a building in the middle of it. This became a matter of concern to the government and led to the commissioning of Albert Speer and Partner of Germany (AS & P) in 1986 to review Tange's urban design (Elleh, 2017).

The government officially moved from Lagos to Abuja in 12, December 1991 after the initial inauguration date of 1983 failed. By then, there were only few buildings completed, the presidential palace and other major infrastructures (Elleh, 2017). The delay was mainly due to financial resources which has largely affected the realization of the master plan's vision.

Rapid urbanization in Abuja is another factor that led to the distortion of the plan. Abuja attracted large number of people, during construction and after inauguration. The 22,000 houses built by FCDA in addition to 1,571 dwelling provided by the Federal Housing Authority between 1980-1994 were not able to cope with the increasing demand. Therefore, the excess demand was met by private developers in squatter settlements in the FCT and nearby states (Benna, 2009). By then implementing green spaces were not a matter of discussion because governmental and residential buildings were priorities in order to accommodate the moving population.

In 1999, new democratic government came to power and was determined to correct the distortion of the master plan and stop the land abuse. It was successful in demolishing some illegal structures and computerized land administration (Benna, 2009). But the case is still critical today. In general Abuja still suffers from lack of well-designed public green spaces as many envisioned were not implemented due to the factors mentioned above.

In this chapter, I will study the public greens spaces from 1987 plan observe the implemented parts, observe the changes that have occurred in from 2003-2017. I developed interest in phase 1 because it includes the central area or the monumental core of Abuja. This study will be subdivided into three parts; the first part will discuss the public green spaces provided in the 1987 master plan. And discuss Kenzo Tange;s design of the Mall and other public green spaces in residential area within the Central Business District. The second part will examine the 2017 satellite map of PHASE1 obtained from Google Earth to understand the implemented green spaces. This analysis will help understand the changes that had taken place in the city’s network of public green spaces overtime. This will enable understand the ongoing land abuse from different years from satellite maps and other visuals. This will provide evidence of land encroachment by government or other private developers in Abuja.

Phase 1: Study Area of Public Green Spaces

Fig 16 shows the master plan of Abuja was planned to be developed in six progressive phases, PHASE 1, PHASE 2, PHASE 3, PHASE 4, PHASE 5 AND PHASE 6 (Ikejiofor, 1998).

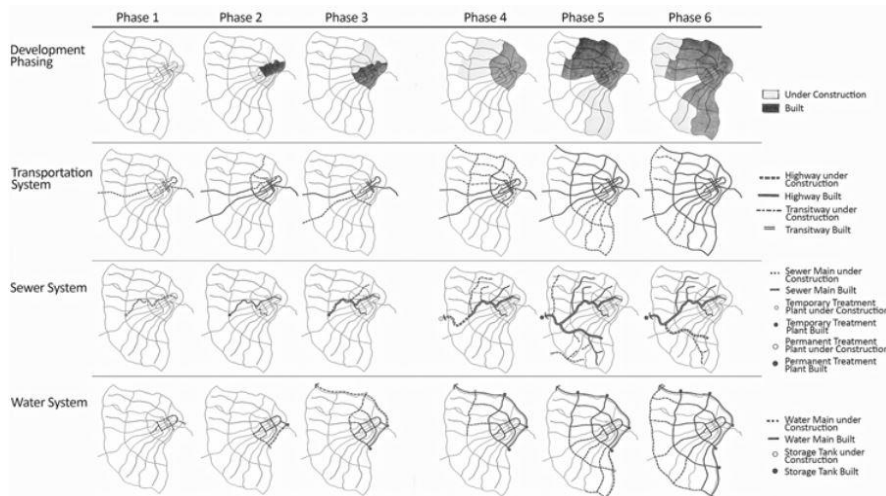


Fig 16. Showing the development of Abuja in several phases (Ikejiofor, 1998).

5.2. Provision of Public Green Spaces in 1987 land-use map of Abuja

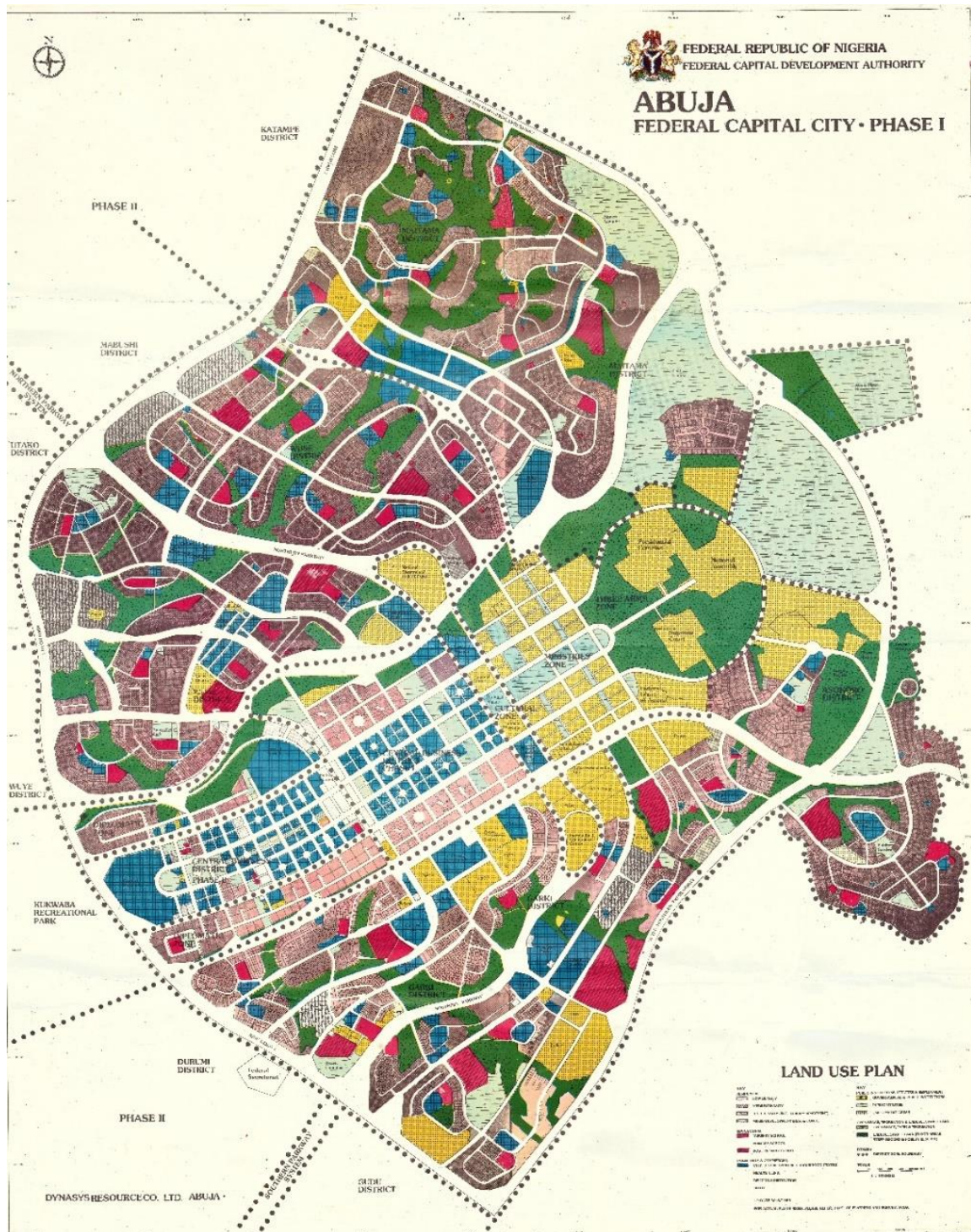


Fig 17. Showing the 1989 landuse map of Phase 1. Source FCDA

The overall map of Phase I includes the Central Business District (CBD) and Residential Districts such as Maitama District, Wuse District, Garki District and Asokoro District. From a glance at the map, one can observe the provision of vast undevelopable lands allocated for flood, steep lands and forest reserve. This undevelopable area protects the land, preserves soil, prevent erosion and retention of water surface. During the design of the master plan, the IPA committee recommend the provision of food production within the FCT to benefit the nation's economy, but they discovered that up-to one-third of the area is only suitable for protective forestry and a very small portion suitable for productive forestry (IPA, 1979).

The green zone along the expressway opens onto the central area, provide a vista to several zones and separates the central area from the residential area. The green zone along the Northern express was suggested to be left in their natural states. A stream valley runs parallel to the central area that was expected to develop as a curvilinear park along with a parallel parkway drive. Large tree-lined boulevards and wide pedestrian pathway like that of Champs Elysees in Paris connect to the major streets and important points of entry to the central area. Highways and major arterials from residential sectors reach the central area and become boulevards forming a gateway to the city. This gateway is neither marked by an enclosure, nor buildings, it is an appropriate symbolic structure echoing the traditional gateway of historic Nigerian cities (IPA, 1979).

5.2.1 The Mall in Central Business District (CBD)

Kenzo Tange submitted the detailed Urban Design-Final Report to FCDA in May 1981. This documents contains Tange's project for the National Assembly Complex, the Supreme Court Complex, and the design of the Presidential place. Tange was given the commission after his two successful projects, the master plan for the reconstruction of Hiroshima after World War II and the design for the 1964 Olympic Village in Tokyo. These projects gave him the recognition to work abroad. Elleh claims that for the design of the mall of Abuja, Tange was particularly inspired by the civic axis he created for his 1960 Tokyo Bay project just like the axis of the mall of Abuja, the civic axis that forms the backbone of the Tokyo Bay area extends to the future seat of Japan's government seen in fig 18 and fig 19. Tange, a member of CIAM was inspired by Le Corbusier and his

architectural practice was shaped by the effect of World War II in Japan. His design ideologies originated from Le Corbusier's urban design for the city of three million inhabitants, and from the Revolutionary work of Ludwig Hiberseimer. He assumed that urban form has the power to reform human behavior and the functioning of the government (Elleh, 2017).



Fig 18. Model of Tange's axial concept of CBD at Abuja (Elleh, 2017).



Fig 19. Tange's design for the 1960 Tokyo Bay master plan (Elleh, 2017).

Tange's design of open spaces in the central area are based on natural character of the landscape in surrounding areas with formal treatment in urban spaces. The open space system in CBD contains the mall as the most important open space placed along Tange's central axis (Tange, et al., 1998). Unlike Todd's vision of Abuja's mall as a possible culture taken from the United States to Nigeria, Tange envisioned the mall as an esplanade that is framed on both sides by structural conduits operating as information corridors for the specific purpose of developing twenty-first-century capitalist interest in Nigeria. In contrast to Todd's low-rise buildings flanking the mall like that of Washington, D.C, Tange's mall is delineated on both sides by high-rise megastructure inspired by his 1960s plan for Tokyo (Elleh, 2017).

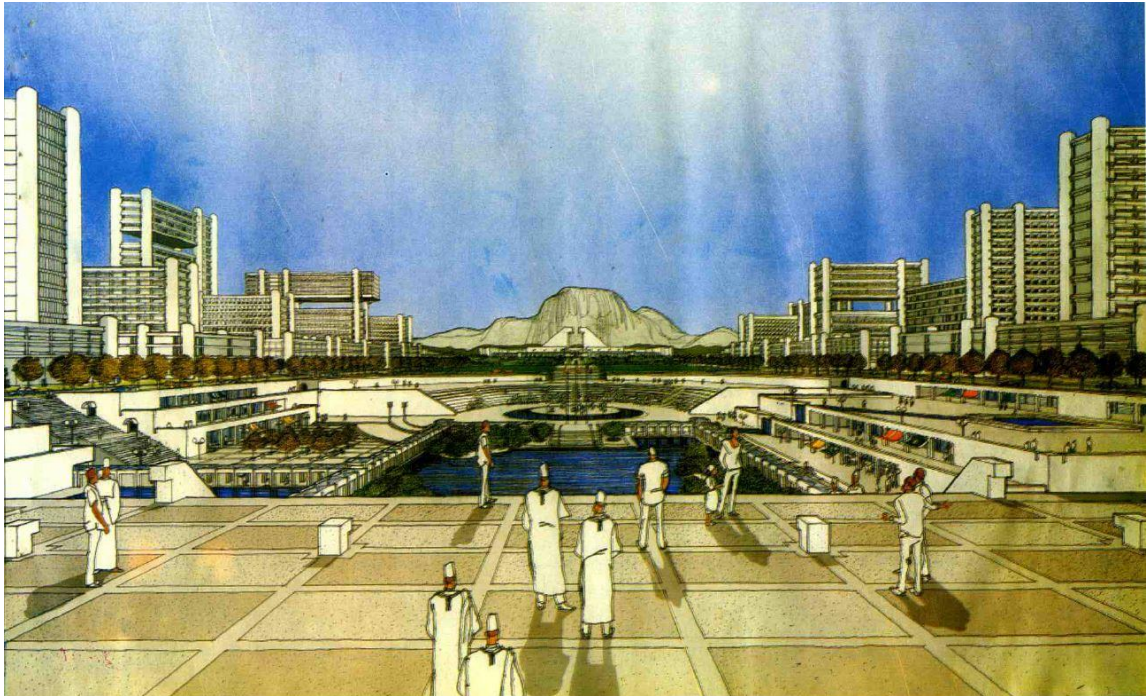


Fig 20. Showing a closer view of the mall (Tange, et al., 1998).

For Tange, the principal challenge for designing the mall and its adjoining buildings was to keep the area lively after working hours, so he divided the mall into two parts. Fig 20 shows the first part of the national mall featuring sunken gardens and the second part was designed as the state plaza incorporating the state gardens (Elleh, 2017). Both the National Mall and State Gardens act as continuous environment because of their ceremonial nature and function. Small, shading trees were to be planted to protect the pedestrians from solar heat and avoid to block the vista to the National Assembly (Tange, et al., 1998). Fig 21 shows Tange's design of nineteen gardens in the central area to represent the nineteen states (then, now 36 states) of the Nigerian federation according to the reform agenda of the era (Elleh, 2017).

Other Open Spaces in CBD

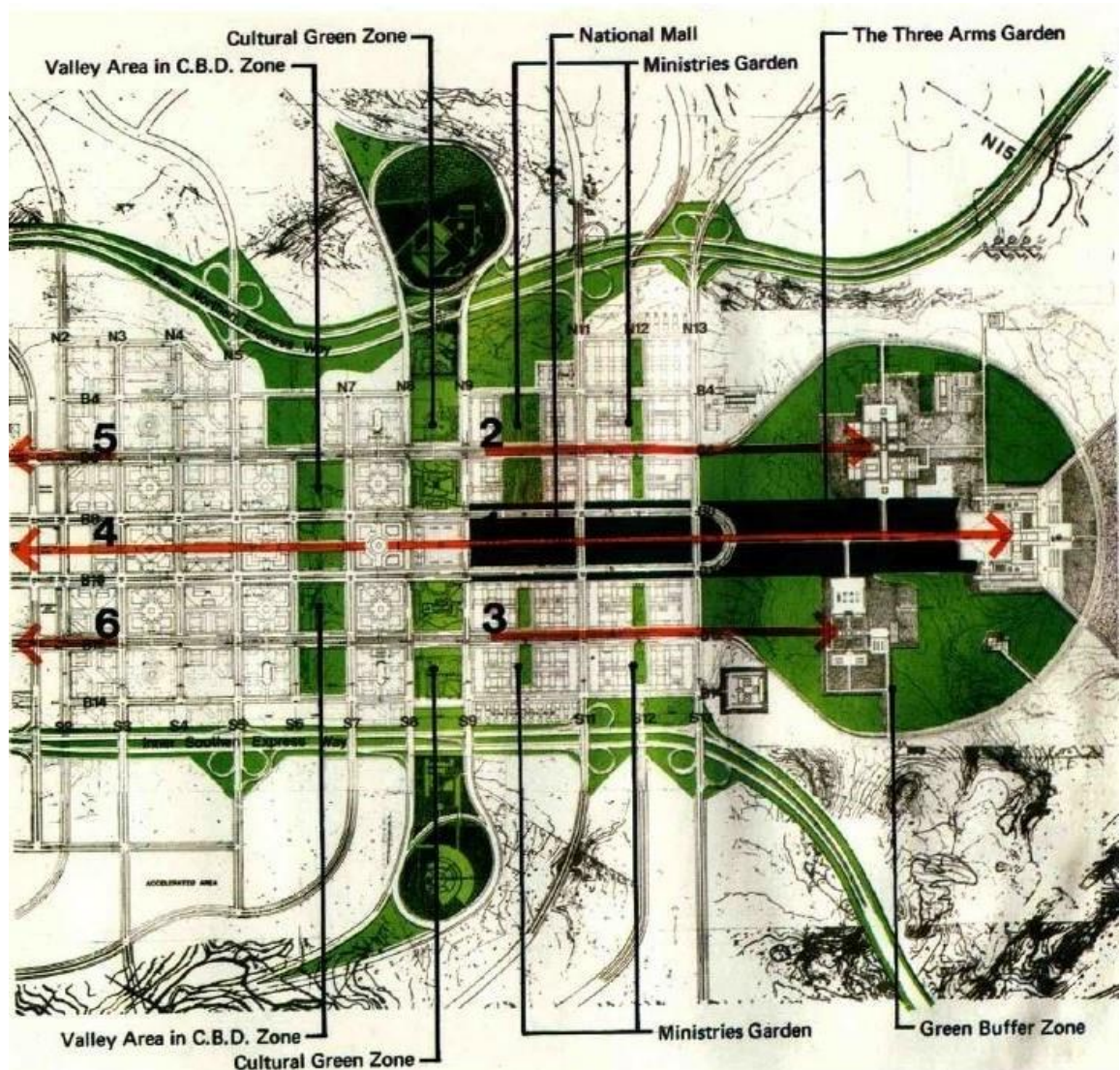


Fig 21. Kenzo Tange's plan for the Central Area showing open spaces, landscaping and vista (Tange, et al., 1998).

According to the 1989 land-use map, the CBD consists of different zones, the three Arms Zone (the Capitol Complex), the Ministries zone, the Cultural zone and the Central business zone. Public green spaces are provided within each of these zones. Fig 21 shows the Three Armed Zone of the National Assembly, Presidential complex and Supreme Court consisting of a large park designed for recreation activities while the undevelopable green area serves as a security buffer zone. The Ministries Zone includes ministries garden

and an extension of the national mall. The green area in the ministries zone was designed to complement the working environment with recreational uses for employees. The cultural zone includes green areas in the national square designed to strengthen its monumentality. National Square is a symbolic plaza that provides the necessary transition from the governmental center to commercial and business center in the city. Minor squares at various locations in central area aim to provide open space relief and serve as a formal organizing devices by serving as a nuclei around which new public buildings would be placed as the city grows (Tange, et al., 1998).

5.2.2 Residential Areas

The residential areas are designed with variety of green spaces located within each district. This includes parks, garden, undevelopable green spaces designed as forest reserves and probably provide natural ventilation. Amusement park is designed within the central area for recreational purposes. A golf course which is isn't a famous game in Nigeria is located in Maitama district which is now known as the elite district. Perhaps the international planning firms brought an international elite sport to this district as it was expected the elites of the new modern capital city. If the point of planning this new capital city as the government claim is to bring together different religious and ethnic groups together, I would argue it rather beneficial to provide a ground for traditional performance sports, dance and other activities to enable people learn from one another. Each function within the residential area became a repetition just differing in size and number of provided green spaces.

5.3 Changes that Occurred in P.G.S from Modernist plan (1987) - Contemporary Urban Form (2017).

Preparation of master plan for a city does not ensure complete implementation, however proper allocation of financial and institutional resources ensures successful implementation of master plan (Hameed & Nadeem, 2014). Abuja encountered serious problems in implementing its master plan ranging from political to economic, financial to institutional and from physical to social-cultural problems.

Below is a comparison of two maps, from the 1987 modernist plan to the present map gotten from google earth. This is to enable understand what has been implemented from the master plan and the present situation of the urban form.

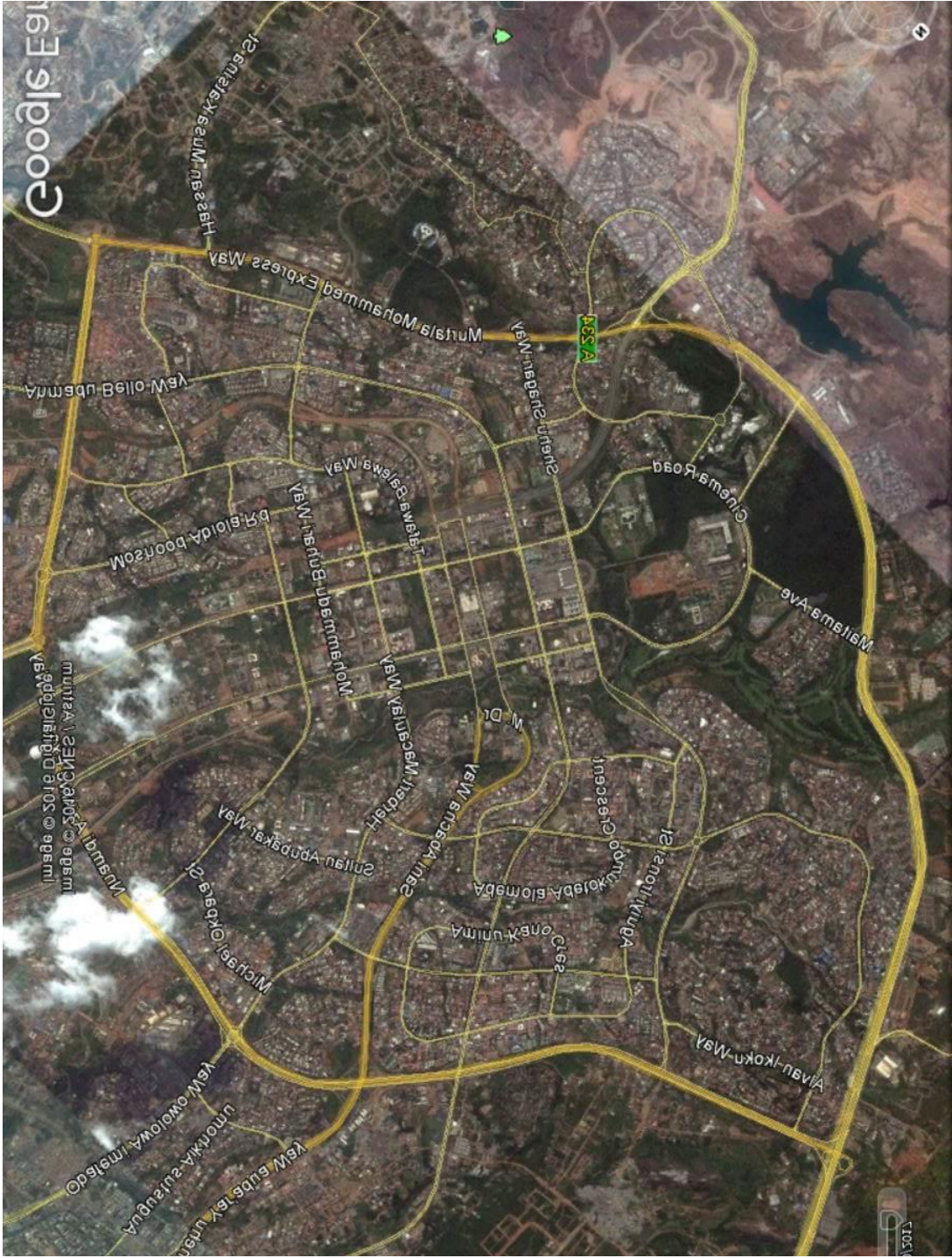


Fig 22. Showing the 2017 map taken from Google earth.

According to the 2017 satellite map in fig 22, the overall outline of Abuja phase 1 along with the vast undevelopable green spaces were implemented. But unfortunately this undevelopable green spaces becomes smaller in size according to the 2017 map which is in contrast to the 1987 map. Some of the undevelopable green spaces have been converted into building and the districts appear to be more populated in the 2016 as opposed to the 1987 map. Asokoro district located in the south-east of Phase I extends out of its allocated boundary (see right map) in comparison with the map on the left. This is to show that the present population in Abuja far exceeded its targeted population of 1987.

According to the 1987 master plan consist of almost 35 parks and gardens. Which is in contrast 2017 satellite map, with a number 29 parks and gardens located in residential area of phase 1. In 2017 satellite map, the central business district consists of no parks, which that none of the open spaces and landscaping designed by Kenzo Tange and the 1987 map were implemented. Most of these parks from 2017 map were not from the original master plan of 1987. The impressive idea behind the mall was completely eliminated, thus leaving only one square which is now called the Eagle square that serves as a venue for governmental ceremonies. For this the idea behind creating public space for the Nation was completely shattered.

Table 2. List of Public Green Spaces from the 1987 plan and 2017 satellite map showing what was implemented.

P.G.S from 1987 land master plan	P.G.S from 2017 satellite map
The Mall (Central Business District)	Not implemented
Parks within the Three Arms zone (CBD)	Not implemented
Ministries Gardens (CBD)	Not implemented
Golf course (Residential Area)	Implemented
Amusement park (Residential Area)	Not implemented
Sport complex	Implemented
Undevelopable green areas	Implemented

Abuja is witnessing a multitude of land abuse and master plan distortion; land speculators distort land records making huge profits through illegal market. Mechanics and vulcaniser shops are converted to other spaces rented out to businesses. Some abuse of land and violation of master plan could go as far as encroachment by private developers into public lands or extension of allocated private land into public domain and annexation of public land by private or public developer. Illegal structures, services and utility lines are built on green areas. 30 neighborhood parks were converted to 84 plots subdivided and allocated as residential. 70 plots have been built on sewer lines, 166 plots on water pipeline, 216 built in to highway corridor and 22 plots are development of residence on plot allocated for educational institution. This have contributed to the lack of effective implementation of the master plan which tends to affect the quality of life and efficient functioning of the city (Benna, 2009).

The images below in Fig 23, 24, 25, 26, 27 & 28 derived from satellite images shows the changes that occurred in land use of parks. These images show some lands allocated to parks are converted to car parks, some never existed as parks and some are being converted into residential or commercial buildings and some are just green spaces termed as parks but mainly serve commercial purposes.

2003

2010

2017

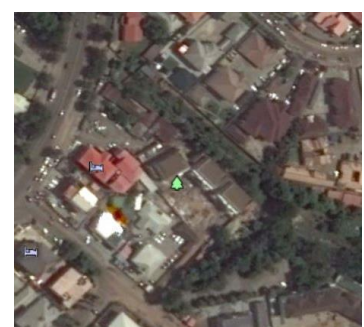


Fig 23. 2003 map shows the area allocated as Afro-Asian Park, development began in 2010 and then converted into a building in 2017. From (left-right).



Fig 24. Showing the undeveloped Glaval Park in 2003, park began to develop in 2010 and turned into a vacant land 2017. From (left-right).



Fig 25. Showing the development of park development from a settlement in 2003 to designated park in 2017. From (left-right)



Fig 26. Showing Ecowas Park gradually developing into built environment from 2003-2010-2017.



Fig 27. Showing the location of the never existing Dream Park from 2003-2017 (left-right).



Fig 28. Showing a conversion from a green sapce in 2003,2010 to a built space in 2017

Table 3. List of Public Green Spaces in phase 1 from 2017 satellite map and their uses

P.G.S in phase 1	Current State
Millennium Park	park
Maitama Amusement park	park + commercial and event center
Lobito Car Park	commercial
Circle Garden	Park
Durban St Neighborhood Park	Green space
Calypso Park	Never a park
Afro-Asian garden	Developed into a building
Dreams recreation park	Building
Wuse Rock Park	commercial
Giwa park	Vacant space
Linear park	Park

One Nigeria Center	Vacant space
Oroni Garden	Vacant land
Unique Garden	Illegal furniture dumping sites
Useni Park	Commercial + Park
Glaval Park	Vacant land
Park Development	Vacant land
Children Development Park	Commercial green space
Accra street park	Commercial
Zone 6 Neighborhood Park	Vacant land
Julius Berger Neighborhood Park	Vacant green land
Unique World	Commercial + Park
Orange Garden	commercial
Emmeh park	Junk space
Galead Park	Vacant green spaces

Fig 29 shows Unique World as one of many examples of parks in Abuja that are just designed as parks but their main functions are commercial activities. Most fast food in Abuja sell in parks, especially traditional eateries. People usually visit parks to buy, eat and drink after working hours and especially during weekends. Fig 30 showing the J. Useni Park as another well designed park the lots of green and pathways with unfortunately a restaurant built (see fig 31).



Fig 29. Showing a hut restaurant in Unique World park.



Fig 30 Showing a concrete built restaurant in J. Useni park

Millennium park is the biggest and no doubt the best park in Abuja. The park was inaugurated in 2003 and since then urban residents of Abuja have enjoyed spending time with friends and family. But since the terror attack of Boko Haram began in nearly 2011, people became scared to spend time in a public place, thus the park became empty and people couldn't visit anymore. I haven't visited millennium park in a very long time until recently in July, 2017, where I found out the park has been renovated to its original function as a public green space. I observe that people tend to spend more time during the weekends especially on Sunday after church hours seen in fig 31. As much as people enjoy going to millennium park, the park includes some accessibility restrictions of gate and fencing shown in fig 33. There are also signs which includes restriction of items such as games, balls, drone which makes your stay in the park more enjoyable.



Fig 31. Showing people enjoying millennium park on Weekends



Fig 32. Showing the entrance gate of millennium park

Results

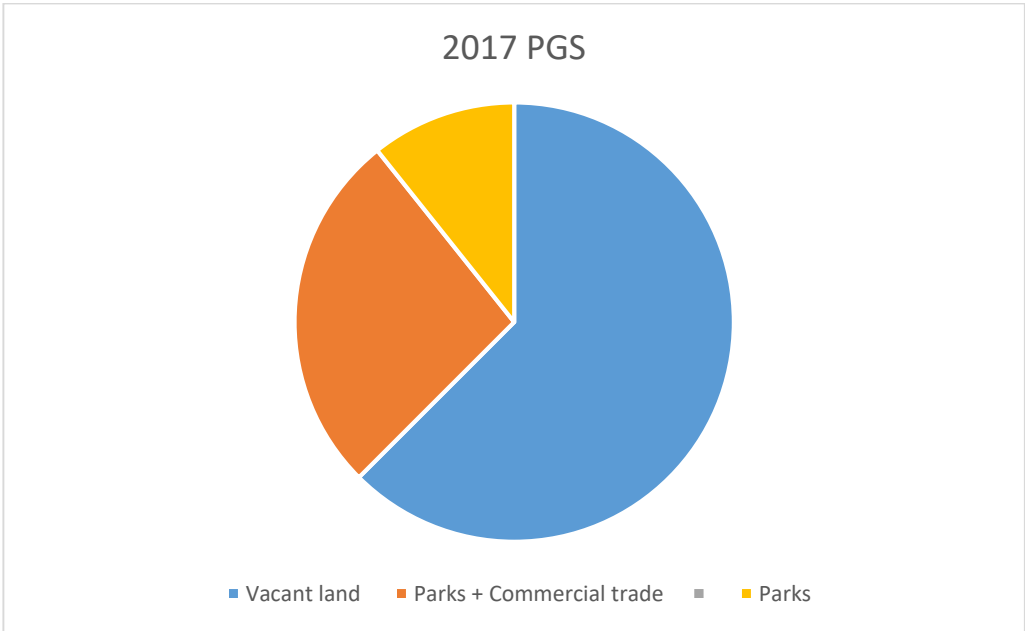


Fig 33. Showing a chart of 2017 PGS in Phase 1, Abuja

The results of this analysis of public green spaces within the three years' study, 2003, 2010 and 2017 of parks in phase1 shows that only few green spaces develop from empty spaces to parks. Most of the spaces have either been converted from parks to built environment or vice versa. Some parks were found to remain empty and undeveloped. This shows that within a time frame of 2003-2017 green spaces in Abuja are only depreciating, rather than improving. According to the satellite map 2017, the public green spaces within Phase1 were found to be undergoing several abuses such as parks use for other purposes of commercial activities, some parks were found to be vacant, some were found to be dumping sites and others don't exist but labeled as parks. This might be as a result of land conversion from land allocated for parks to other developments. Millennium park is the best park but the entire capital to relax and carryout some recreational activities.

CHAPTER 6

DISCUSSIONS & CONCLUSION

This thesis has examined the provision of public green spaces in twentieth century post-colonial capital cities and the adaptation of modernist planning ideals. I have laid down the foundation and understanding of the relationship between post-colonial building efforts and the adaptation of modernist planning ideals in formerly colonial territories of Asia, Latin America and Asia. Both the capital cities of Brasilia and Chandigarh were built by well-known modernist architects and they'd consist of abundant green spaces. However, the city of Brasilia has relatively poor land use due to the wide avenues which makes it harder for people to grasp public life. Meanwhile, the citizens in the city of Chandigarh enjoy the quality of life and pollution free the green in the city brings. The government of Chandigarh played an important role to save-guard the green spaces and to ensured Le Corbusier's Garden city idea is maintained. Although both Chandigarh and Brasilia provide abundant accessibility to green spaces, Brasilia's public green spaces remain as mere images in the absence of active users. Brasilia also failed to achieve a classless society they seek to be a symbol of modernity due to the maximum distance created by green belt from pilano ploto.

In the post-colonial capitals of Africa, less attention is given to public green spaces and most of the cities haven't completely implement their master plans. This has largely contributed to the deterioration and lack of adequate green spaces in the cities. The hot weather in Africa was not also convenient for green spaces. For example, the capital cities of Gaborone and Lilongwe were designed as garden city but couldn't function due to the hot climate which couldn't sustain green spaces.

Interestingly, only the government of Tanzania had different view point of post-colonial building, where they seek to eliminate exploitation using the philosophy of Ujamaa, often translated as socialism. And the masterplan was prepared accordingly. For example, the government proposed a non-monumental capital and the main square in Dodoma were meant to mimic Tanzania's communal life, which was meant to consist of an acacia tree and be called the Ujaama square. Dodoma's philosophy could have served well as great example to other post-colonial capitals in Africa had it been this philosophy as implemented.

Green spaces in African cities of Abuja, Dodoma, Lilongwe and Gaborone all face increasing pressure and are deteriorating due to several reasons, such as lack of adequate governmental care, urbanization and several land abuse by its urban residents or land encroachments by some political powerful figures. Due to low livability in most Africa cities, urban agriculture should be a priority in most cities, but this cannot be achieved without most of the governments input. For example, in Malawi's government initiated large scale agriculture in the city but couldn't follow through with. Lack of governmental input could result to several destruction of green spaces such as people cutting off trees and feeding their cattle's in green spaces as seen in Dodoma.

The decision to build the new capital city of Abuja, just like the capital cities of Chandigarh, Brasilia, Dodoma, Lilongwe and Gaborone were led by the decisions of their government with no inputs by the democratic citizens. But aren't the new capitals supposed to symbolize the new found freedom of people but yet they couldn't be integrated into the decision, nor contribute in any aspect that leads to building new capitals that symbolize freedom from the empirical power.

The new capital city buildings in Africa, Latin America, and Asia were not designed by their own citizen, perhaps these new capital cities aspire and look up to the modern living in the metropolises of their colonized empires. In Abuja, it was Federal Capital Development Authority of Nigeria that commissioned the International Planning Associates (IPA) of New York and Kenzo Tange to design their new capital cities. Such influences could be seen in Kenzo Tange's design of central area which was inspired by

his 1960 Tokyo Bay project. Tange took his civic axis from Tokyo to Abuja. The mall in Abuja is located along this axis as the most important open spaces leading straight to the seat of government. So to say this civic axis and every design element Tange brought to Abuja has nothing to do with Nigeria or its people, is this really what was intended by the government or was they governing power desperate search for modern living in the metropolitan cities of the colonizers?

According to the analyses of public green spaces in Phase 1 of Abuja using the 1987 map and GOOGLE MAPS, the undevelopable green areas are the only green spaces implemented 2017 from the 1987. A close study of the satellite images from 2017 revealed, while the entire outline of Phase I had been implemented, some parts within Phase I designed as public green space in 1987 plan, are been built up, abuse or vacant. The reason behind this is the rampant land abuse that contributed in violating Abuja's master plan. None of the open spaces and landscaping of CBD outlined in the 1987 map were implemented and the district presently consist of governmental offices and other undevelopable green areas designed earlier as buffer zones. This was because during the master plan implementation process, the government changed several times and priorities were only given to buildings as the inauguration date was far exceeded. Also the master plan provided by Kenzo Tange was very expensive and the government lacked sufficient funds.

The master plans of both Brasilia and Chandigarh were successfully implemented, in contrast to the master plans of Abuja, Gaborone, Dodoma and Lilongwe that haven't complete implement their master plans. While the green spaces in capital cities of Africa are facing serious deterioration, Brasilia and Chandigarh today consist of the well planned green spaces from their original master plan.

All the post-colonial capital cities from different geographies share some common characteristics of being twentieth century purpose-built postcolonial capital cities design according to the modernist planning ideals. But Brasilia and Chandigarh are the most concrete examples of the modernist city planning, they were designed in the early

twentieth century by the leading figures of modernist architecture rather than the later designs of Gaborone, Dodoma and Lilongwe and Abuja.

It is rather unfortunate for Brasilia to have such a well designated public green spaces that are not in use but at least Chandigarh benefits from its outdoor and pollution free and high quality of life. African cities can provide better green space atmosphere, but the governments of various nations must prioritize green spaces. Also awareness on health benefits of green space must be raised in order to improve the quality of lives.

Also, if the parks in Abuja must have commercial trade in them due to the economic situation in the country, then it can be achieved through proper zoning. A zoning that will separate commercial zone from interfering with the leisure time in parks. So people can be able to buy and eat in the park while having good time with family and friends.

Also the Nigerian government must revive the central area of Abuja to its original vision as the public space of the nation by creating squares, parks, open air cinema's that will bring people of different ethnical background together.

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